Chapter 16: Traffic, Access and Transport - Contents

List of Figures

List of Appendices

16. Traffic, Access and Transport

16.1 Executive Summary

16.1.1 Access during the construction and operation of the Proposed Development would utilise the existing B862 public road and Dell Estate forestry tracks which are to be upgraded and extended, as well as the creation of a new access track to the powerhouse site on the eastern shore of Loch Ness.

16.1.2 It is proposed that access will be taken from a new access junction from the existing B862 public road, approximately 700 m southwest of the Whitebridge Hotel. The access junction would be designed to accommodate all predicted loads and traffic to be delivered by road for both the construction and operational phases of the Proposed Development.

16.1.3 The Caledonian Canal would be used for the delivery of abnormal load components of Electrical and Mechanical (E&M) equipment associated with the lower reservoir works of the Proposed Development, removing a large number of potential Abnormal Indivisible Load (AIL) movements from the road network. The use of the canal for the delivery of further equipment and materials associated with the construction of the lower reservoir works would also be explored by the appointed Principal Contractor (in consultation with the Highland Council (THC) and other relevant stakeholders) but is not considered as part of this assessment, which considers a reasonable worst-case scenario where most deliveries reach the site by road.

16.1.4 The Proposed Development would lead to a temporary increase in traffic volumes on the study area road network during the construction phase. Traffic volumes would fall considerably outside the peak period of construction.

16.1.5 The maximum traffic impact associated with construction is predicted to occur in Month 16 of the indicative 5 year construction programme. The greatest impact would occur along the B851 and the B862.

16.1.6 The Proposed Development traffic, at the peak of construction, would result in 68 HGV movements per day (34 inbound and 34 outbound) and 316 Cars & Lights (158 inbound and 158 outbound).

16.1.7 No significant capacity issues are expected on any of the roads within the study area due to the additional construction traffic movements associated with the Proposed Development as background traffic movements are low and appropriate mitigation is proposed.

16.1.8 The assessment of significance suggests that drivers along the B862 and B851 as well as residents in Dores, Errogie and Gorthleck would experience significant effects, prior to the application of mitigation measures.

16.1.9 With the implementation of appropriate mitigation, no significant residual effects are anticipated in respect of traffic and transport issues. The residual effects are all assessed to be slight or insignificant but as they will occur during the construction phase only, they are temporary and reversible.

16.1.10 It is predicted that during the operation of the site there would be up to three vehicle movements per day for maintenance purposes as well as the 25 staff working at the Site. Also, there is potential for very occasional abnormal load movements to deliver replacement components.

16.2 Introduction

16.2.1 This Chapter considers the potential effects, including cumulative effects, of the Proposed Development on Traffic, Transport and Access during construction and operation. As described in **Chapter 3: Description of Development**, with proper maintenance the Proposed Development should remain functional indefinitely. If the project were to be decommissioned, it is anticipated that the potential effects on Traffic, Transport and Access would be equal to or lesser than the construction impacts. As such, a separate assessment of potential decommissioning effects on Traffic, Transport and Access is not included in this Chapter. Where likely significant effects are predicted during construction and operation, appropriate mitigation measures are proposed, and the significance of predicted residual effects are assessed.

16.2.2 This Chapter is supported by the following figures and technical appendices:

- Figure 16.1: Study Area Road Links;
- Figure 16.2: Traffic Count Locations;
- Figure 16.3: Accident Locations; and
- Figure 16.4: Delivery Routes.
- Technical Appendix 16.1: Transport Assessment.

16.2.3 This assessment has been carried out by Elaine Moran BEng (Hons), MSc, MCIHT, Pell Frischmann. She has over eight years' experience preparing transport assessments for new developments. The technical reviewer of the traffic and transport assessment is Gordon Buchan BEng (Hons), MSc, CMILT, FCIHT, Divisional Director of Pell Frischmann. He has over 25 years' of undertaking transport assessment associated with new developments and has worked on renewable energy and energy distribution projects across the UK, Ireland and Northern Europe. A table presenting relevant qualifications and experience of key staff involved in the preparation of this Chapter is included in **Appendix 4.1: EIA Team**, contained within **Volume 4** of this EIA Report.

16.3 Scope of Assessment

Study Area

16.3.1 The Study Area encompasses the area over which all desk-based and field data were gathered to inform the assessment presented in this Chapter.

16.3.2 The Study Area comprises local roads that are likely to experience increases in traffic flows resulting from the Proposed Development and is described in **Volume 4, Appendix 16.1: Transport Assessment**. The geographic scope was determined through a review of Ordnance Survey (OS) plans and an assessment of the potential origin locations of construction staff and supply locations for construction materials.

16.3.3 The Study Area road links comprise:

- A82(T), between Inverness and Fort William;
- B852, between its junction with the B862 Bailebeag and B862 Dores;
- B862, between Fort Augustus and Holms Roundabout;

- B851, between its junction with the B862 and the A9; and
- A9(T), between Inverness and Aviemore.

16.3.4 The Study Area road links are shown in **Volume 2, Figure 16.1: Study Area**.

16.3.5 The Caledonian Canal would be used for the delivery of abnormal load components of Electrical and Mechanical (E&M) equipment associated with the lower reservoir works of the Proposed Development. The use of the canal for the delivery of further equipment and materials for the construction of the lower reservoir works would also be explored by the appointed Principal Contractor (in consultation with The Highland Council (THC) and other relevant stakeholders) but is not considered as part of this assessment, which considers a reasonable worst-case scenario where most deliveries reach the site by road.

Consultation Responses

16.3.6 To inform the scope of the assessment for the Proposed Development, consultation was undertaken with statutory and non-statutory bodies. **Table 16.1: Consultation Responses** summarises the scoping and consultation responses relevant to the Traffic, Access and Transport Assessment and provides information on where and / or how points raised have been addressed in this assessment.

16.3.7 Full details on the consultation responses and scoping opinion can be reviewed in **Chapter 5: Scoping and Consultation**, and associated appendices.

Table 16.1 Consultation Responses

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
The Highland Council	Pre-Application Advice	8th June 2022	THC advise that any application will need to: • identify the local public roads likely to be impacted during the construction and ongoing operation of the proposed development; • quantify the scale, type and duration of the impacts; • justify the improvements and management measures needed to adequately mitigate those impacts, whilst keeping the routes safe for use by other road users; and • clarify how those improvements will be delivered and how the improved routes will be protected from inappropriate damage. • This should be set out within the following documents and should provide all the detail sought through the response to the EIA Scoping Consultation Ref. 22/00300/SCOP. o Transport Assessment (TA) o Construction Traffic Management Plan (CTMP) o Abnormal Load Assessment (e.g., cranes, powerhouse equipment)	**Appendix 16.1: Transport Assessment** (**Volume 4**) and the Baseline Conditions section of this Chapter outline the Study Area for construction traffic associated with the Proposed Development. The number of vehicle trips and duration of work activities are presented in **Volume 4, Appendix 16.1: Transport Assessment**. Mitigation measures, including an indicative Construction Traffic Management Plan (CTMP) are outlined in **Volume 4, Appendix 16.1: Transport Assessment** and in the Mitigation section of this Chapter (**Section 16.11**). A TA is provided as **Volume 4, Appendix 16.1: Transport Assessment**. The CTMP and Route Survey Report (RSR) for abnormal loads are provided as part of **Volume 4, Appendix 16.1: Transport Assessment**.
			THC advise that the type and quantum of mitigation required and how that is then delivered should be developed in accordance with the current South Loch Ness Road Improvement Strategy and our published Roads and Transport Guidelines for New Developments. Early engagement with Officers involved with the South Loch Ness Strategy is encouraged.	Mitigation measures where required will be agreed with THC officers prior to implementation.

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
			THC advise that when quantifying the predicted traffic impacts, need to ensure that any assumptions made about reducing vehicular trips to and from the site (e.g. moving plant and/or materials on Loch Ness) are clearly set out and justified. Also, any submission should set out what the implications would be of not achieving such measures, including what that would mean for impacts on the local public roads serving this site.	It is proposed that E&M equipment would be delivered to the Site via the Caledonian Canal. The construction traffic generation provided in **Volume 4, Appendix 16.1: Transport Assessment** is considered a robust assessment. There is potential to further reduce traffic figures by measures such as the delivery of construction materials via Loch Ness as well as utilising buses to transport workers. These are provided in **Section 16.11: Mitigation** of this Chapter.
			THC advise that any submission should identify and justify the adequacy of all proposed temporary and ongoing operational access proposals required from the local public roads. This should be done in accordance with the requirements from our published Roads and Transport Guidelines for New Developments and cover all issues set out within the response given to the EIA Scoping Consultation Ref. 22/00300/SCOP. That should include demonstrating adequate clear visibility distances and retaining the integrity of any roadside drainage along that stretch of the B862.	An indicative access junction, which shows visibility splays, is presented in **Volume 4, Appendix 16.1: Transport Assessment.** Regular maintenance will be undertaken to keep the site access track drainage systems fully operational and to ensure there are no run-off issues onto the public road network, as outlined in **Section 16.11 Mitigation** of this Chapter.
Transport Scotland	Pre-Application Advice	8th June 2022	TS would seek a Transport Statement be provided which identifies the construction vehicle trip generation and distribution and the potential impact on the surrounding trunk road network.	A Transport Assessment is provided in **Volume 4, Appendix 16.1.**
			TS advise that, in the event that abnormal loads will be required during construction, Transport Scotland will require to be satisfied that the size of loads proposed can negotiate the selected route and that their transportation will not have any detrimental effect on structures within the trunk road route path.	An abnormal load Route Survey Report (RSR) is provided as part of **Volume 4, Appendix 16.1: Transport Assessment.**

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
The Highland Council	Scoping	11 March 2022	Construction Traffic Management Plan THC Transport Planning will require any application for planning permission associated with this proposal to submit a Construction Traffic Management Plan (CTMP) for the approval of the Planning Authority.	An indicative CTMP has been prepared and is provided in **Volume 4, Appendix 16.1: Transport Assessment**.
			Transport Assessment – THC Transport Planning would generally expect a Transport Assessment to be submitted with any future planning application and a High National Traffic Forecast be applied.	A National Road Traffic Forecast (NRTF) high growth factor has been used in the assessment to estimate future year flows.
			The information below is not exhaustive and should be used as a guide to submitting all relevant information in relation to roads, traffic and transportation matters arising from the development proposals, which should be in the form of a Transport Assessment forming part of the EIAR: 1. Identify all public roads affected by the development. In addition to transportation of all abnormal loads & vehicles (delivery of components) this should also include routes to be used by local suppliers and staff. It is expected that the developer submits a preferred access route for the development. All other access route options should be provided, having been investigated in order to establish their feasibility. This should clearly identify the pros and cons of all the route options and therefore provide a logical selection process to arrive at a preferred route.	The Study Area for the Proposed Development is shown in **Volume 2, Figure 16.1: Study Area** and the delivery routes are shown in **Volume 2, Figure 16.4: Construction Vehicle Delivery Routes**.
			2. Establish current condition of the roads. This work which should be undertaken by a consulting engineer acceptable to the Council and will involve an engineering appraisal of the routes including the following: • Assessment of structural strength of carriageway including construction depths and road formation where this is likely to be	A roads condition survey will be prepared prior to the commencement of construction and will include the requested information.

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
			significant in respect of proposed impacts, including non-destructive testing and sampling as required. Road surface condition and profile. • Assessment of structures and any weight restrictions • Road widths, vertical and horizontal alignment and provision of passing places • Details of adjacent communities	It is anticipated that this would be secured through a planning condition. The baseline established from the condition survey will inform any change in the road condition during the construction phase. Any necessary repairs attributed to the Proposed Development will be coordinated with the relevant authority.
			3. Determine the traffic generation and distribution of the proposals throughout the construction and operation periods to provide accurate data resulting from the proposed development including • Nos. of light and heavy vehicles including staff travel • Abnormal loads • Duration of works	Information regarding traffic generation and distribution is provided within **Volume 4, Appendix 16.1: Transport Assessment**.
			4. Current traffic flows including use by public transport services, school buses, refuse vehicles, commercial users, pedestrians, cyclists and equestrians.	Baseline total traffic flows are provided Volume 4, Appendix 16.1: Transport Assessment.
			5. Impacts of proposed traffic including: • Impacts on carriageway, structures, verges etc. • Impacts on other road users • Impacts on adjacent communities	The impact of the Proposed Development on roads within the study area are presented in **Table 16.8: 2025 Future Baseline + Construction Development – Flows and Impact** of this chapter. It is proposed that a Section 96 agreement is entered into to cover the costs of repair for any abnormal wear and tear to roads within the study area as a result of the Proposed Development's construction traffic.

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
			• Swept path and gradient analysis where it is envisaged that transportation of traffic could be problematic • Provision of Trial Runs to be carried out in order to prove the route is achievable and/or to establish the extent of works required to facilitate transportation.	The impacts of the Proposed Development on receptors such as road users and residents within communities are assessed as part of this chapter. The Route Survey Report (RSR) in **Volume 4, Appendix 16.1: Transport Assessment** outlines any locations along the Abnormal Loads delivery routes where mitigation measures are required. Consultation will be undertaken with THC's abnormal loads and structures team and Transport Scotland prior to any Abnormal Load deliveries being made which is in line with the Abnormal Load permitting process. Swept path assessment of Abnormal Load deliveries are presented as part of the RSR in **Volume 4, Appendix 16.1: Transport Assessment**.
			6. Cumulative impacts with other developments in progress and committed developments including other Renewable Energy projects.	Details of committed developments considered in the assessment are presented in **Volume 4, Appendix 16.1: Transport Assessment**. A Sensitivity Review has been undertaken in the Predicted Cumulative Sensitivity Review during Construction section of this chapter in order to inform the planning authorities of possible issues if the consented onshore wind farm sites and other energy developments were to be constructed concurrently with the Proposed Development.
			7. Proposed mitigation measures to address impacts identified in 5 above, including: • Carriageway strengthening • Strengthening of bridges and culverts	Details of mitigation measures to address impacts of proposed traffic are presented in **Section 16.11: Mitigation** of this chapter. The RSR addresses required mitigation to the road network to facilitate Abnormal Loads (see **Volume 4, Appendix 16.1 Transport Assessment**).

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
			• Carriageway widening and/or edge strengthening • Provision of passing places • Road safety measures • Traffic management including measures to be taken to ensure that development traffic does not use routes other than the approved routes.	Existing passing places are located along B851 and B862. Road safety measures and traffic management measures will be presented in the CTMP.
			8. Details of residual effects.	Details of residual effects are presented in **Table 16.12: Combined Scheme Sensitivity Traffic Impact Summary** of this Chapter.
			The scope of effects on the Trunk Road Network should be considered following consultation with Transport Scotland.	Transport Scotland has been consulted and their consultation responses are outlined in this table (**Table 16.1: Consultation Responses**).
The Highland Council	Scoping - Sustainability	11 March 2022	THC encourage the inclusion of electric car charging facilities within all new developments. A strategy for the provision of charging points should be submitted with the application.	Electric charging points could be provided as part of the Proposed Development.
The Highland Council	Scoping – Socio Economic, Tourism and Recreation	11 March 2022	THC advise that all existing paths like core paths, public rights of way Long Distance Routes and trails like the Great Glen Way, Great Glen Canoe Trail and National Cycle Network should be accommodated before, during and after construction and any damage done to their surfaces be protected and/or repaired at regular intervals throughout an extended construction period and reinstated on or by completion of the project to the satisfaction of those managing those routes.	Potential impacts on public access have been assessed in the **Chapter 9: Land Use and Recreation** and **Volume 4, Appendix 9.1: Draft Outdoor Access Management Plan**. A commitment for the appointed Principal Contractor to the prepare a final Outdoor Access Management Plan will also be included in the EIA Report. Great Glen Way: The Great Glen Way is mainly traffic-free, however there are sections in Drumnadrochit, Invermoriston, Fort Augustus and Invergarry where pedestrians use the

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
				footways beside the highway and at these locations cyclists and horse riders travel along the road. At these locations vehicles will reduce their speed to a maximum of 20 mph. Great Glen Canoe Trail: A Canal Management Plan will be produced in collaboration with Scottish Canal and other relevant stakeholders, which will outline the proposed deliveries which will take place along the canal. National Cycle Network: The B862 between Fort Augustus and B862 / B852 junction, and the B852 are designated as on-road routes not on the NCN. It is proposed that HGV construction vehicles travelling along these routes will reduce to a voluntary maximum speed limit of 15 mph in villages along the access routes. It should also be noted that signage to alert users within the study area of construction traffic will be provided in line with the CTMP.
Transport Scotland – Term Consultants	Scoping	18 February 2022	The SR states that the study area will include (in addition to local roads) the A82(T) (between Inverness and Fort William) and the A9(T). Base traffic data will be obtained from Department for Transport (DfT) traffic count data and the Traffic Scotland database for the trunk road network. We also note that National Road Traffic Forecast (NRTF) Low Traffic Growth assumptions will be used to provide a common future year baseline to coincide with the expected peak level of construction traffic.	The Study Area road links are shown in **Volume 2, Figure 16.1: Study Area.** Details of baseline information that was obtained from the DfT and Transport Scotland databases are provided in **Volume 4, Appendix 16.1: Transport Assessment**. NRTF high growth factors have been used to establish the future year baseline at the request of The Highland Council. Traffic information obtained from DfT and TS databased are estimated from 2019 counts, with the exception of Count Point 12 A82(T), south of Kirkton (see **Volume 2, Figure 16.2: Traffic**

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
			Transport Scotland is satisfied with this approach but would add that traffic flows from an appropriate year should be used, avoiding any influence of the COVID19 Global Pandemic. Data is also available from Transport Scotland and we would ask that the use of DFT "estimated" traffic flows from previous counts is avoided.	**Count Locations**). 2019 flows are unaffected by travel restrictions relating to the Covid 19 Pandemic. Traffic flows at Count Point 12 were estimated from flows obtained from the DfT database's estimated 2019 flows. The 2019 flows were estimated from an automatic count undertaken in 2017. A review of the TS database does show a count point in a similar location (ATC01040) however there is no information available regarding vehicle classification. It is therefore considered that the DfT point is appropriate.
			We note that the Transport Assessment Guidance (Transport Scotland, 2012) and the thresholds as indicated within the Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Road Traffic are to be used as a screening process for the assessment. The SR also indicates that potential trunk road related environmental impacts such as driver delay, pedestrian amenity, severance, safety etc will be considered and assessed where appropriate (i.e. where IEMA Guidelines for further assessment are breached). These specify that road links should be taken forward for assessment if: • Traffic flows will increase by more than 30%, or • The number of HGVs will increase by more than 30%, or • Traffic flows will increase by 10% or more in sensitive areas. This approach is considered acceptable, and we are content that no further assessment is required if the above thresholds are not exceeded.	The Assessment has been undertaken in accordance with the approach outlined in the Scoping Report.

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
			The SR states that a Construction Traffic Management Plan (CTMP) will be developed as part of the proposed development. This is welcomed and we would ask that a copy of this be forwarded when it becomes available.	A CTMP will be submitted as part of the Proposed Development.
			Abnormal Loads Assessment – The SR states that where Abnormal Indivisible Loads (AIL) are required on site, a Route Survey Report will be provided to outline the access routes and associated mitigation required to physically accommodate movement of these loads. This is acceptable, however, we would add that Transport Scotland will require to be satisfied that the size of AILs proposed can negotiate the selected route and that their transportation will not have any detrimental effect on structures within the trunk road route path. Swept path analysis should be undertaken and details provided with regard to any required changes to street furniture or structures along the route. We would ask that this information is submitted as a technical appendix to the EIA.	The RSR in **Volume 4, Appendix 16.1: Transport Assessment** outlines any locations along the AIL delivery routes where mitigation measures are required. Consultation will be undertaken with THC's abnormal loads and structures team and Transport Scotland prior to any AIL deliveries being made which is in line with the Abnormal Load permitting process.
Stratherrick & Foyers Community Council	Scoping	21 October 2022	Roads and Transport – Both the B862 and the B851 are narrow and mostly single track roads as one would expect from B category roads in the Highlands and as such, were never designed for heavy construction vehicles and high levels of traffic. The adverse impact that large amounts of construction traffic will have on the structural integrity of these routes and the road safety standards encountered by local residents must be considered. Many sections already suffer from significant verge deterioration.	A roads condition survey will be prepared prior to the commencement of construction (to ensure that a fair and accurate assessment of condition is undertaken) and will include the requested information. It is anticipated that this would form a planning condition. The baseline established from the condition survey will inform any change in the road condition during the construction phase. Any necessary repairs attributed to the Proposed Development will be coordinated with the relevant authority.

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
Transport Scotland	Gate Check Report Response	15th Sept 2023	We note that the comments provided in our February 2022 response are presented as Items 175 to 180 in the Matrix. The responses to each of these items confirms that the points raised at Scoping will be dealt with in the EIA Report as requested. Transport Scotland is, therefore, satisfied that no further comment is required form us at this time and we look forward to receiving the EIA Report in due course.	Noted

Issues Scoped Out of Assessment

16.3.8 The traffic effects during the operational phase of the Proposed Development are likely to be insignificant as expected traffic flows would be less than three vehicle movements per day, far below the recognised thresholds for triggering a formal transport assessment. As such, the effects during the operational phase are scoped out of the assessment.

16.3.9 With proper maintenance, it is anticipated that the Proposed Development will remain functional indefinitely. Therefore, the effects of the decommissioning phase are scoped out of the assessment.

16.4 Legislation, Policy and Guidance

Legislative Context

16.4.1 There is no legislation which is specific to Traffic, Access and Transport that is required to be considered as part of this assessment.

Policy Context

16.4.2 The following policy has been considered in the assessment:

- National Planning Framework 4 (2023);
- Highland-wide Local Development Plan (2012); and
- The Highland Council Local Transport Strategy (LTS) (2010).

Technical Guidance

16.4.3 The following technical guidance has been considered in the assessment:

- The Guidelines for the Environmental Assessment for Road Traffic (Institute of Environmental Assessment (IEA), 1993);
- Planning Advice Note (PAN) 75 (2005);
- Transport Assessment Guidance (2012); and
- Guidance on the Preparation of Transport Assessments (2014).

16.5 Methodology

Desk Study

16.5.1 The desk study involved reviews and identification of the following:

- Relevant transport planning policy;
- Accident data;
- Sensitive locations;
- Any other traffic sensitive receptors in the area (core paths, routes, communities, etc.);
- OS plans;

- Potential origin locations of construction staff and supply locations for construction materials to inform extent of local area roads network to be included in the assessment; and
- Constraints to the movement of abnormal loads through a Route Survey Report which includes swept path assessments.

Field Study

16.5.2 Field surveys were also undertaken and comprised:

- Site visit; and
- Collection of traffic flow and speed data.

Assessment Methodology

16.5.3 The methodology adopted in this assessment involved the following key stages:

- Determine baselines;
- Review development for impacts;
- Evaluate significance of effects on receptors;
- Identify mitigation; and
- Assess residual effects.

Criteria for Assessing the Sensitivity of Receptors

16.5.4 The IEMA 'Guidelines for Environmental Impact Assessment' (2005) notes that the separate 'Guidelines of the Environmental Assessment of Road Traffic' (1993) document should be used to characterise the environmental traffic and transport effects (off-site effects) and the assessment of significance of major new developments. The guidelines intend to complement professional judgement and the experience of trained assessors.

16.5.5 In terms of traffic and transport impacts, the receptors are the users of the roads within the study area and the locations through which those roads pass.

16.5.6 The IEMA Guidelines includes guidance on how the sensitivity of receptors should be assessed. Using that as a base, professional judgement was used to develop a classification of sensitivity for users based on the characteristics of roads and locations. This is summarised in **Table 16.2: Classification of Receptor Sensitivity**.

Table 16.2 Classification of Receptor Sensitivity

Receptor	Sensitivity			
	High	Medium	Low	Negligible
Users of Roads	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.	Where the road is a local A or B class road, capable of regular use by HGV traffic.	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.	Where roads have no adjacent settlements. Includes new strategic trunk roads that would

	Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.	Includes roads where there is some traffic calming or traffic management measures.	Includes roads with little or no traffic calming or traffic management measures.	be little affected by additional traffic and suitable for Abnormal Loads and new strategic trunk road junctions capable of accommodating Abnormal Loads.
Users / Residents of Locations	Where a location is a large rural settlement containing a high number of community and public services and facilities.	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.	Where a location is a small rural settlement, containing few community or public facilities or services.	Where a location includes individual dwellings or scattered settlements with no facilities.

16.5.7 Where a road passes through a location, road users (pedestrian, cyclists, drivers, etc.) are considered subject to the highest level of sensitivity defined by either the road or location characteristics.

Criteria for Assessing the Magnitude of Change

16.5.8 The following rules, also taken from the IEMA Guidelines are used to determine which links within the study area should be considered for detailed assessment:

- Rule 1 – include highway links where traffic flows are predicted to increase by more than 30% (or where the number of heavy goods vehicles is predicted to increase by more than 30%); and
- Rule 2 – include any other specifically sensitive areas where traffic flows are predicted to increase by 10% or more.

16.5.9 The IEMA Guidelines identify the key impacts that are most important when assessing the magnitude of traffic impacts from an individual development. The impacts and levels of magnitude are discussed below:

- Severance – the IEMA Guidance states that, “severance is the perceived division that can occur within a community when it becomes separated by a major traffic artery.” Further, “Changes in traffic of 30%, 60% and 90% are regarded as producing ‘slight’, ‘moderate’ and ‘substantial’ [or minor, moderate and major] changes in severance respectively”. However, the Guidelines acknowledge that “the measurement and prediction of severance is extremely difficult”.
- Driver delay – the IEMA Guidelines note that these delays are only likely to be “significant [or major] when the traffic on the network surrounding the development is already at, or close to, the capacity of the system.”;
- Pedestrian delay – the delay to pedestrians, as with driver delay, is likely only to be major when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. An increase in total traffic of approximately 30% can double the delay experienced by pedestrians attempting to cross the road and would be considered major;
- Pedestrian amenity – the IEMA Guidelines suggests that a tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or its lorry

component) is halved or doubled. It is therefore considered that a change in the traffic flow of -50% or +100% would produce a major change in pedestrian amenity;

- Fear and intimidation – there are no commonly agreed thresholds for estimating levels of fear and intimidation, from known traffic and physical conditions. However, as the impact is sensitive to traffic flow, changes in traffic flow of 30%, 60% and 90% are regarded as producing minor, moderate and major changes respectively; and
- Accidents and safety – professional judgement would be used to assess the implications of local circumstances, or factors which may elevate or lessen risks of accidents.

16.5.10 While not specifically identified as a more vulnerable road user, cyclists are considered in similar terms to pedestrians.

Criteria for Assessing Cumulative Effects

16.5.11 In traffic and transport terms, only developments that have been consented can be assumed to be committed developments.

16.5.12 Trips associated with committed developments which are deemed to be permanent on the road links within the Study Area have been included as part of the future year baseline.

16.5.13 Trips associated with consented developments which are considered to be temporary or transitory on road links within the Study Area have been included in a sensitivity review.

16.5.14 The sensitivity review is undertaken as part of the cumulative assessment to inform the planning authorities of possible issues if all consented developments were to be constructed concurrently.

16.5.15 The use of National Road Traffic Forecast (NRTF) high growth factors for background traffic is considered robust for addressing smaller, non-significant traffic generation caused by smaller developments within the study area. As such, a robust assessment case has been provided in this report.

Criteria for Assessing Significance

16.5.16 To determine the overall significance of effects, the results from the receptor sensitivity and magnitude of impact assessments are correlated and classified using a scale set out in the Design Manual for Roads & Bridges (DMRB) LA 104 Environmental Assessment and Monitoring (Revision 1) and summarised in **Table 16.3: Significance of Effect**.

16.5.17 The DMRB defines the potential changes in effect as follows:

- Large: These effects are considered to be material in the decision-making process;
- Moderate: These effects may be important but are not likely to be material factors in decision making. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a receptor;
- Slight: These effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in improving the subsequent design of the project; and
- Neutral: No effects or those that are imperceptible.

Table 16.3 Significance of Effects

Sensitivity	Magnitude of Change			
	Major	**Moderate**	**Minor**	**Negligible**
High	Large	Large / Moderate	Moderate / Slight	Slight
Medium	Large / Moderate	Moderate	Slight	Slight / Neutral
Low	Moderate / Slight	Slight	Slight	Slight / Neutral
Negligible	Slight	Slight	Slight / Neutral	Neutral

16.5.18 In terms of the EIA Regulations, effects would be considered of significance where they are assessed to be large or moderate. Where an effect could be one of Large/Moderate, Moderate or Moderate/Slight, professional judgement would be used to determine which option is applicable.

Assumptions and Limitations

16.5.19 The assessment is based upon average traffic flows in one month periods. During the month, activities at the site may fluctuate between one day and another and it is not possible to fully develop a day by day traffic flow estimate as no Balance of Plant (BoP) contractor has been appointed and external factors can impact upon activities on a day by day basis (weather conditions, availability of materials, time of year, etc.).

16.6 Baseline Conditions

Existing Baseline

16.6.1 Access during the construction and operation of the Proposed Development would utilise the existing B862 public road and Dell Estate forestry tracks which are to be upgraded and extended, as well as the creation of a new access track to the powerhouse site on the eastern shore of Loch Ness.

16.6.2 **Volume 2, Figures 16.1: Study Area** and **Figure 16.4: Delivery Routes** illustrate the study area road network and routes to site.

16.6.3 It is proposed that access would be taken from a new access junction from the existing B862 public road, approximately 700 m southwest of the Whitebridge Hotel. The access junction would be designed to accommodate all predicted loads and traffic for both the construction and operational phases of the Proposed Development.

16.6.4 Automatic Traffic Count (ATC) surveys were undertaken at a total of three locations along the B852 and the B862 over a seven-day period between 5th and 11th July 2022. While these dates are outside of the school holiday period, they are deemed acceptable as the pupil roll numbers at nearby primary schools Aldourie Primary School and Foyers Primary School are 31 and 10, respectively, and trips associated with these pupil roll numbers are not considered significant in terms of overall traffic flows. Also, it should be noted that a lower baseline will result in a greater impact of construction traffic producing in a more robust assessment.

16.6.5 The ATC surveys were complimented with existing traffic data obtained from the Transport Scotland (TS) database, and traffic data was obtained from the Department for Transport (DfT) database at locations where traffic data (including vehicle classifications).

16.6.6 Existing traffic data from 2019 was used to estimate existing traffic flows, as this data was not affected by Covid 19 travel restrictions. NRTF high growth factors were applied to the 2019 data to estimate 2022 flows. The high growth factor for 2019 to 2022 is 1.042.

16.6.7 The traffic survey locations are as presented in **Volume 2, Figure 16.2: Traffic Count Locations** and are described as follows:

1. B862, south of Holm Roundabout (ATC survey);
2. B862, Dores (ATC survey);
3. B852, Bailebeag (ATC survey);
4. B851, Inverarnie (planning documents);
5. B862, Errogie (planning documents);
6. B862, at Site access (planning documents);
7. B862, east of Fort Augustus (planning documents);
8. A9(T), between Longman Roundabout and Raigmore Interchange (DfT Count Point 80012);
9. A9(T), south of Inshes Wood (DfT Count Point 90024);
10. A9(T), east of Moy (TS Count Point JTC00367);
11. A9(T), south of A9(T) / A938 (TS Count Point ATC01005);
12. A82(T), south of Lochybridge (TS Count Point ATC01035);
13. A82(T), west of Aberchalder (DfT Count Point 10760);
14. A82(T), south of Drumnadrochit (TS Count Point JTC00145); and
15. A82(T), south of Kirkton (DfT Count Point 20765).

16.6.8 The traffic count data allowed the traffic flows to be split into vehicle classes and the data have been summarised into cars/ light goods vehicles (Lights) and heavy goods vehicles (HGVs) (buses and all goods vehicles > 3.5 tonnes gross maximum weight).

16.6.9 The 2022 Existing Baseline Flows are presented in **Table 16.4: Existing Traffic Conditions (Weekday Average Two Way Flows).**

Table 16.4 Existing Traffic Conditions (Weekday Average Two Way Flows)

Site Ref	Count Point Location	Cars & LGV	HGV	Total
1	B862, south of Holm Roundabout	2,009	355	2,364
2	B862, Dores	312	104	416
3	B852, Bailebeag	270	67	337
4	B851, Inverarnie	908	246	1,154
5	B862, north of Errogie	489	204	692
6	B862, at Site access	579	186	765
7	B862, east of Fort Augustus	616	226	842
8	A9(T), between Longman Rbt and Raigmore Interchange	36,735	2,570	39,304
9	A9(T), south of Inshes Wood	12,317	1,101	13,419
10	A9(T), east of Moy	9,426	1,533	10,959
11	A9(T), south of A9(T) / A938	6,822	1,934	8,756
12	A82(T), south of Lochybridge	7,487	524	8,011
13	A82(T), west of Aberchalder	2,591	243	2,834
14	A82(T), south of Drumnadrochit	3,061	790	3,851
15	A82(T), south of Kirkton	6,224	728	6,952

Please note minor variances due to rounding may occur.

16.6.10 The two-way seven-day average and 85th percentile speeds observed as the count sites are summarised below in **Table 16.5: Speed Summary (2022).**

Table 16.5 Speed Summary (2022)

Site Ref	Count Point Location	Mean Speed (mph)	85th %ile Speed (mph)	Speed Limit (mph)
1	B862, south of Holm Roundabout	46.0	53.5	60.0
2	B862, Dores	34.5	43.6	60.0
3	B852, Bailebeag	27.4	34.9	60.0
4	B851, Inverarnie	30.5	38.5	40.0

Site Ref	Count Point Location	Mean Speed (mph)	85th %ile Speed (mph)	Speed Limit (mph)
5	B862, north of Errogie	40.9	48.5	60.0
6	B862, at Site access	47.1	57.7	60.0
7	B862, east of Fort Augustus	19.7	24.1	60.0
8	A9(T), between Longman Roundabout and Raigmore Interchange	No Data Available		70.0
9	A9(T), south of Inshes Wood	No Data Available		70.0
10	A9(T), east of Moy **	53.5	59.0	70.0
11	A9(T), south of A9(T) / A938 * **	54.7	59.6	60.0
12	A82(T), south of Lochybridge **	No Data Available		60.0
13	A82(T), west of Aberchalder	No Data Available		60.0
14	A82(T), south of Drumnadrochit **	48.0	55.8	60.0
15	A82(T), south of Kirkton	No Data Available		60.0

* Trial 50 mph speed limit for HGVs

** From available 2022 speed information sourced 12/12/2022

16.6.11 The Caledonian Canal is approximately 60 miles in length and connects Corpach to Inverness. The canal is controlled by locks along its length, which comprises 29 locks in total.

16.6.12 The canal is mainly used by leisure craft and is managed by Scottish Canals.

Accident Review

16.6.13 Road traffic accident data along the B851, B852 and B862, within the Study Area, for the three-year period commencing 1st January 2017 through to the 31st December 2021 was reviewed. This information was sourced from the online resource CrashMap.co.uk which uses data collected by police about road traffic incidents occurring on British roads where an accident occurred and a casualty is recorded.

16.6.14 A summary analysis of the incidents indicates that:

- A total of 12 accidents were recorded along the B851, B852 and B862 within the five-year period;
- Of the 12 accidents, two were recorded as serious, one as fatal and the remainder being slight (damage only);
- The fatal accident occurred on the B851 and involved two vehicles, one of which was driven by a young driver;

- HGV traffic was involved in two accidents, one involving a young driver. Young drivers were involved in a further five accidents;
- No pedal cycle accidents and only one motorcycle accident were recorded; and
- No accident was recorded in the vicinity of the proposed site access.

16.6.15 **Volume 2, Figure 16.3** illustrates the locations of recorded incidents.

16.6.16 The data from CrashMap does not suggest any apparent trends in relation to accidents on the local road network.

Pedestrian And Cyclist Network

16.6.17 The Highland Council's Core Paths interactive map indicates that there are no Core Paths located within the Development Area for the Proposed Development (See **Volume 2, Figure 9.1: Land Use and Recreation**), although the Dell Lodge – Foyers (IN25.01) Core Path, which runs along Dell Estate road, would be routed through the Site. The Dell Lodge – Foyers Core Path commences at Dell Estate's Keeper's Cottage and continues northbound for 4.20 km.

16.6.18 A review of Sustrans' National Cycle Network (NCN) map shows that while there are no National Cycle Routes (NCRs) in the vicinity of the site, the B862 between Fort Augustus and B862 / B852 junction, and the B852 are designated as on-road route not on the NCN.

16.6.19 The Great Glen Way is a 127 km waymarked route between Inverness and Fort William on the opposite (western) side of Loch Ness to the Proposed Development. The Great Glen Way is mainly traffic-free, however there are sections in Drumnadrochit, Invermoriston, Fort Augustus and Invergarry where pedestrians use the footways beside the highway and at these locations cyclists and horse riders travel along the road.

Future Baseline

16.6.20 Construction of the Proposed Development could commence during 2025 if consent is granted and is anticipated to take up to 5 years depending on weather conditions and ecological considerations.

16.6.21 To assess the likely effects during the construction and typical operational phase, base year traffic flows were determined by applying a NRTF high growth factor to the surveyed traffic flows.

16.6.22 The traffic flows were brought to a common year of 2025 using NRTF by applying high growth estimates for 2022 to 2025 is 1.037.

16.6.23 Permanent traffic flows associated with committed developments were added to the 2025 baseline traffic flows in order to calculate the 2025 Future Baseline Traffic Flows. Further details of the committed developments are provided in **Volume 4, Appendix 16.1: Transport Assessment**.

16.6.24 The 2025 Future Baseline Traffic Flows are presented in **Table 16.6: 2025 Future Traffic Flows (Weekday Average Two Way Flows)** and these flows will be used in the construction traffic impact assessment.

Table 16.6 2025 Future Traffic Flows (Weekday Average Two Way Flows)

Site Ref	Count Point Location	Cars & LGV	HGV	Total
1	B862, south of Holm Roundabout	2,083	368	2,451
2	B862, Dores	324	108	431
3	B852, Bailebeag	280	69	349
4	B851, Inverarnie	942	255	1,197
5	B862, north of Errogie	507	212	718
6	B862, at Site access	600	193	793
7	B862, east of Fort Augustus	639	234	873
8	A9(T), between Longman Rbt and Raigmore Interchange	38,094	2,665	40,758
9	A9(T), south of Inshes Wood	12,773	1,142	13,916
10	A9(T), east of Moy	9,775	1,590	11,364
11	A9(T), south of A9(T) / A938	7,074	2,006	9,080
12	A82(T), south of Lochybridge	8,272	543	8,815
13	A82(T), west of Aberchalder	3,195	252	3,447
14	A82(T), south of Drumnadrochit	3,682	819	4,501
15	A82(T), south of Kirkton	7,779	755	8,534

Please note minor variances due to rounding may occur.

10.3.17 In the absence of the Proposed Development, it is anticipated that traffic growth throughout the network would occur as these links would experience increased traffic flows from other development pressures, tourism traffic and population flows.

Summary of Sensitive Receptors

10.3.18 A review of sensitive receptors has been undertaken within the study area. **Table 16.7: Summary of Receptor Sensitivity** details the receptors and their sensitivities for use within the following assessment. A justification for the sensitivity has been provided, based upon the details contained in **Table 16.2: Classification of Receptor Sensitivity**.

Table 16.7 Summary of Receptor Sensitivity

Receptor	Sensitivity	Justification
Users of B851	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.
Users of B862	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.
Users of B852	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.
Users of A9(T)	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.
Users of A87(T)	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.
Users of A82(T)	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.
Residents along the B851	Low	Where a location is a small rural settlement, containing few community or public facilities or services
Residents along the B862	Low	Where a location is a small rural settlement, containing few community or public facilities or services
Residents along the B852	Low	Where a location is a small rural settlement, containing few community or public facilities or services
Foyers Residents (inc Foyers Primary)	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services
Dores Residents (inc Aldourie Primary)	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services
Whitebridge Residents	Low	Where a location is a small rural settlement, containing few community or public facilities or services
Inverarnie Residents (inc Farr Primary)	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services
Errogie Residents	Low	Where a location is a small rural settlement, containing few community or public facilities or services

Receptor	Sensitivity	Justification
Gorthleck (inc Stratherrick Primary School)	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services
Fort Augustus Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services
Lochend / Dochgarroch Residents	Low	Where a location is a small rural settlement, containing few community or public facilities or services.
Drumnadrochit Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Invermoriston Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Invergarry Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Spean Bridge Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.

16.6.25 Based on the indicators which are stated within the IEMA Guidelines, the following are identified as sensitive receptors in this assessment:

- Users of B851;
- Users of B862;
- Users of B852;
- Foyers Residents (including Foyers Primary School);
- Dores Residents (including Aldourie Primary School);
- Inverarnie Residents (including Farr Primary School);
- Gorthleck Residents (including Stratherrick Primary School);
- Fort Augustus Residents;
- Drumnadrochit Residents;
- Invermoriston Residents;
- Invergarry Residents; and
- Spean Bridge Residents.

16.6.26 These locations will therefore be subject to ‘Rule 2’ of the IEMA Guidelines which requires a full assessment of effects if the traffic count locations are anticipated to be subject to an increase in 10% of total traffic.

16.6.27 All other locations within the study area are subject to 'Rule 1' and are assessed if traffic flows (or HGV flows) on highway links are anticipated to increase by more than 30% as a result of the construction of the Proposed Development.

16.7 Assessment of Likely Effects

16.7.1 The assessment is based upon the construction effects that may occur within the study area. In order to assess the effects, it is necessary to determine the likely traffic generation associated with the Proposed Development.

16.7.2 During the up to 5 year construction period, the following traffic would require access to the site:

- Staff transport, in either cars or staff minibuses;
- Import of material to produce concrete and to a lesser extent shotcrete;
- Import of fuel for construction plant;
- Import of material to create the initial stages of the access;
- Daily movements associated with servicing a large construction site and compound; and
- Occasional delivery of larger items of plant.

16.7.3 The primary traffic movements within the site would be the transportation of rock in the form of tunnel spoil, which would be used to construct the dams around Loch Kemp and associated landscaping works.

16.7.4 The traffic estimates include for the export of felled timber from the Site as part of the enabling works.

16.7.5 Abnormal Indivisible Load (AIL) would be required to facilitate the Proposed Development. E&M components would be imported to site via the canal, removing a large number of potential AIL movements from the road network.

16.7.6 AIL deliveries by road would be required for certain plant deliveries required during the construction period. Crane sections and large capacity dump trunks are the largest items to be imported to site and these have been considered in **Volume 4, Appendix 16.1: Transport Assessment**, via a Route Survey Report appended to the Transport Assessment

16.7.7 Average daily traffic flow data were used to establish the construction trips associated with the site based on the assumptions detailed in the following sections. The calculations assume that there are 50 working weeks per year, and work would take place six days per week. Daily construction work practices at the tunnels and shafts would be over 24-hours.

16.7.8 Daily construction traffic estimates have been developed and are detailed in **Volume 4, Appendix 16.1: Transport Assessment**. The maximum traffic effect associated with construction of the Proposed Development is predicted to occur in Month 16 of the programme. During this month, an average of 34 HGV movements is predicted per day and it is estimated that there would be a further 158 car and light van movements per day to transport construction workers to and from the Site.

16.7.9 The distribution of development traffic on the network would vary depending on the types being transported. Full details of the access strategy and distribution of trips is provided in **Volume 4, Appendix 16.1: Transport Assessment**.

16.8 Potential Construction Effects

16.8.1 To estimate the total trips through the study area during the peak of the construction phase, traffic was distributed through the network and combined with the 2025 Baseline traffic data. The resulting figures were compared with the 2025 Baseline traffic to provide a percentage change in movements and are demonstrated in **Table 16.8: 2025 Future Baseline + Construction Development – Flows and Impact.**

Table 16.8: 2025 Future Baseline + Construction Development – Flows and Impact

Site Ref	Count Point Location	Cars & LGV	HGV	Total	% Increase Cars & LGV	% Increase HGV	% Increase Total
1	B862, south of Holm Roundabout	2,231	368	2,599	7.07%	0.00%	6.00%
2	B862, Dores	456	108	564	40.95%	0.00%	30.71%
3	B852, Bailebeag	295	69	364	5.26%	0.00%	4.21%
4	B851, Inverarnie	1,002	323	1,325	6.37%	26.66%	10.70%
5	B862, north of Errogie	700	280	979	38.06%	32.14%	36.37%
6	B862, at site access	916	261	1,177	52.63%	35.25%	48.41%
7	B862, east of Fort Augustus	736	234	970	15.15%	0.00%	11.09%
8	A9(T), between Longman Rbt and Raigmore Interchange	38,094	2,725	40,818	0.00%	2.25%	0.15%
9	A9(T), south of Inshes Wood	12,833	1,202	14,036	0.47%	5.26%	0.86%
10	A9(T), east of Moy	9,775	1,598	11,372	0.00%	0.50%	0.07%
11	A9(T), south of A9(T) / A938	7,074	2,014	9,088	0.00%	0.40%	0.09%

Site Ref	Count Point Location	Cars & LGV	HGV	Total	% Increase Cars & LGV	% Increase HGV	% Increase Total
12	A82(T), south of Lochybridge	8,472	543	9,015	2.42%	0.00%	2.27%
13	A82(T), west of Aberchalder	3,215	252	3,467	0.63%	0.00%	0.58%
14	A82(T), south of Drumnadrochit	3,722	819	4,541	1.09%	0.00%	0.89%
15	A82(T), south of Kirkton	7,819	755	8,574	0.51%	0.00%	0.47%

Please note minor variances due to rounding may occur.

16.8.2 The total traffic movements are not predicted to increase by more than 30% on all of the study network, the maximum impact being experienced on the B862 at the site access being 24.2%. Total traffic increases along the trunk road network are all below 0.44%.

16.8.3 It should also be noted the construction phase is transitory in nature and the peak of construction activities is short-lived.

16.8.4 A review of existing road capacity has been undertaken using the DMRB, Volume 15, Part 5 "The NESA Manual". The theoretical road capacity has been estimated for each of the road links for a 12-hour period. The results are summarised in **Table 16.9: 2025 Link Capacity Review.**

Table 16.9: 2025 Link Capacity Review

Site Ref	Location	2025 Baseline Flow	2025 Base + Development Flows	Theoretical Road Capacity	Spare Road Capacity %
1	B862, south of Holm Roundabout	2,451	2,599	21,600	87.97%
2	B862, Dores	431	564	3,360	83.22%
3	B852, Bailebeag	349	364	3,360	89.16%
4	B851, Inverarnie	1,197	1,325	21,600	93.87%
5	B862, north of Errogie	718	979	3,360	70.87%
6	B862, at Site access	793	1,177	19,200	93.87%
7	B862, east of Fort Augustus	873	970	21,600	95.51%

Site Ref	Location	2025 Baseline Flow	2025 Base + Development Flows	Theoretical Road Capacity	Spare Road Capacity %
8	A9(T), between Longman Rbt and Raigmore Interchange	40,758	40,818	81,600	49.98%
9	A9(T), south of Inshes Wood	13,916	14,036	81,600	82.80%
10	A9(T), east of Moy	11,364	11,372	28,800	60.51%
11	A9(T), south of A9(T) / A938	9,080	9,088	28,800	68.44%
12	A82(T), south of Lochybridge	8,815	9,015	21,600	58.26%
13	A82(T), west of Aberchalder	3,447	3,467	28,800	87.96%
14	A82(T), south of Drumnadrochit	4,501	4,541	21,600	78.97%
15	A82(T), south of Kirkton	8,534	8,574	28,800	70.23%

Please note minor variances due to rounding may occur.

16.8.5 The results indicate that the Proposed Development would not affect road capacity and ample spare capacity exists within the trunk and local road network to accommodate construction phase traffic.

16.9 Mitigations by Design / Embedded Mitigation

16.9.1 The site is large enough to warrant on-site batching of concrete and given its location and length of access, onsite batching would be undertaken. All concrete would be mixed on-site, with deliveries of cement powder and water being delivered by HGV tankers. Sand would be delivered by tipper HGV and is expected to originate at local quarries. On-site borrow pits would be able to meet the aggregate material required for the concrete.

16.9.2 Wherever possible, all excavated material would be used within the site for the construction of the Proposed Development or associated works.

16.10 Potential Significant Effects

16.10.1 This section considers the potential impacts and associated effect significance of the construction, and operation of the Proposed Development based on the typical activities described in **Chapter 3: Description of Development.**

Construction Effects

16.10.2 The significance of the potential effects has been determined using the rules and thresholds discussed previously. Detailed assessments have been undertaken on the following sensitive receptors:

- Users of B862 (High Sensitivity);
- Users of the B851;
- Inverarnie Residents;
- Errogie Residents
- Foyers Residents (including Foyers Primary) (Medium Sensitivity); and
- Gorthleck (including Stratherrick Primary School) (Medium Sensitivity).

16.10.3 Summaries of the construction phase effects are presented in the following sub-sections:

Table 16.10 Construction Phase Effects

Receptors	Potential Effect	Sensitivity	Impact	Magnitude of Effect	Significance of Effect	Comment
Users of the B862	Severance	High	48.4%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 48.4%. The effect is therefore considered slight.
	Driver Delay	High	48.4%	Moderate	Moderate (Significant)	There is ample spare capacity along the B862, however there are some locations where road narrows and there and there are dedicated passing places. As such the effect is considered moderate.
	Pedestrian Delay	High	48.4%	Minor	Slight (Not Significant)	There are no pedestrian facilities along the majority of the B862 and it is therefore assumed that the pedestrian flows would be very low. The effect is therefore considered slight.
	Pedestrian Amenity	High	48.4%	Minor	Slight (Not Significant)	There are no pedestrian facilities along the majority of the B862 and it is

Receptors	Potential Effect	Sensitivity	Impact	Magnitude of Effect	Significance of Effect	Comment
						therefore assumed that the pedestrian flows would be very low. The effect is therefore considered slight.
	Fear & Intimidation	High	48.4%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 48.4%. The effect is therefore considered slight.
	Accidents & Safety	High	48.4%	Minor	Slight (Not Significant)	There are no apparent accident trends along the B862 and the effect is considered slight.
Users of the B851	Severance	High	10.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 10.7%. The effect is therefore considered slight.
	Driver Delay	High	10.7%	Moderate	Moderate (Significant)	There is ample spare capacity along the B851, however there are some locations where road narrows and there and there are dedicated passing places. As such the effect is considered moderate.
	Pedestrian Delay	High	10.7%	Minor	Slight (Not Significant)	There are no pedestrian facilities along the majority of the B851 and it is therefore assumed that the pedestrian flows would be very low. The effect is therefore considered slight.
	Pedestrian Amenity	High	10.7%	Minor	Slight (Not Significant)	There are no pedestrian facilities along the majority of the B851 and it is therefore assumed that the pedestrian

Receptors	Potential Effect	Sensitivity	Impact	Magnitude of Effect	Significance of Effect	Comment
						flows would be very low. The effect is therefore considered slight.
	Fear & Intimidation	High	10.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 10.7%. The effect is therefore considered slight.
	Accidents & Safety	High	10.7%	Minor	Slight (Not Significant)	There are no apparent accident trends along the B851 and the effect is considered slight.
Dores Residents	Severance	Medium	30.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 30.7%. The effect is therefore considered slight.
	Driver Delay	Medium	30.7%	Minor	Slight (Not Significant)	There is ample available spare road capacity o the road at this location and as such the effects is considered slight.
	Pedestrian Delay	Medium	30.7%	Major	Moderate (Significant)	There are pedestrian facilities in Dores. The effect is therefore considered moderate.
	Pedestrian Amenity	Medium	30.7%	Moderate	Moderate (Significant)	There are pedestrian facilities in Dores. The effect is therefore considered moderate.
	Fear & Intimidation	Medium	30.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 30.7%. The effect is therefore considered slight.
	Accidents & Safety	Medium	30.7%	Minor	Slight (Not Significant)	There are no apparent accident trends along the road network at this location and the

Receptors	Potential Effect	Sensitivity	Impact	Magnitude of Effect	Significance of Effect	Comment
						effect is considered slight.
Inverarnie Residents	Severance	Medium	10.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 10.7%. The effect is therefore considered slight.
	Driver Delay	Medium	10.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 10.7%. The effect is therefore considered slight.
	Pedestrian Delay	Medium	10.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 10.7%. The effect is therefore considered slight.
	Pedestrian Amenity	Medium	10.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 10.7%. The effect is therefore considered slight.
	Fear & Intimidation	Medium	10.7%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 10.7%. The effect is therefore considered slight.
	Accidents & Safety	Medium	10.7%	Minor	Slight (Not Significant)	There are no apparent accident trends along the road network at this location and the effect is considered slight.
Errogie Residents	Severance	Low	36.4%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 36.4%. The effect is therefore considered slight
	Driver Delay	Low	36.4%	Minor	Slight (Not Significant)	Whilst there are narrow sections within the settlement, the

Receptors	Potential Effect	Sensitivity	Impact	Magnitude of Effect	Significance of Effect	Comment
						increase in traffic is considered slight.
	Pedestrian Delay	Low	36.4%	Moderate	Slight (Not Significant)	There are pedestrian facilities in Errogie. The effect is therefore considered moderate.
	Pedestrian Amenity	Low	36.4%	Moderate	Slight (Not Significant)	There are pedestrian facilities in Errogie. The effect is therefore considered moderate.
	Fear & Intimidation	Low	36.4%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 36.4%. The effect is therefore considered slight.
	Accidents & Safety	Low	36.4%	Minor	Slight (Not Significant)	There are no apparent accident trends along the road network at this location and the effect is considered slight.
Gorthleck Residents	Severance	Medium	36.4%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 36.4%. The effect is therefore considered slight
	Driver Delay	Medium	36.4%	Minor	Slight (Not Significant)	Whilst there are narrow sections within the settlement, the increase in traffic is considered slight.
	Pedestrian Delay	Medium	36.4%	Major	Moderate (Significant)	There are pedestrian facilities in Gorthleck. The effect is therefore considered moderate.
	Pedestrian Amenity	Medium	36.4%	Moderate	Moderate (Significant)	There are pedestrian facilities in Gorthleck. The effect is

Receptors	Potential Effect	Sensitivity	Impact	Magnitude of Effect	Significance of Effect	Comment
						therefore considered moderate.
	Fear & Intimidation	Medium	36.4%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 36.4%. The effect is therefore considered slight.
	Accidents & Safety	Medium	36.4%	Minor	Slight (Not Significant)	There are no apparent accident trends along the road network at this location and the effect is considered slight.
Fort Augustus Residents	Severance	Medium	11.1%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 11.1%. The effect is therefore considered slight.
	Driver Delay	Medium	11.1%	Minor	Slight (Not Significant)	There is ample available spare road capacity at this location and as such the effect is considered slight.
	Pedestrian Delay	Medium	11.1%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 11.1%. The effect is therefore considered slight.
	Pedestrian Amenity	Medium	11.1%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 11.1%. The effect is therefore considered slight.
	Fear & Intimidation	Medium	11.1%	Minor	Slight (Not Significant)	Total traffic is expected to increase by 11.1%. The effect is therefore considered slight.
	Accidents & Safety	Medium	11.1%	Minor	Slight (Not Significant)	There are no apparent accident trends along the road network at this

Receptors	Potential Effect	Sensitivity	Impact	Magnitude of Effect	Significance of Effect	Comment
						location and the effect is considered slight.

16.10.4 The assessment confirms that the temporary effects experienced during construction would not be significant on the majority of receptors within the Study Area.

16.10.5 With regards to receptors in locations along the Proposed Construction Traffic Route, it is anticipated that the following potential effects are considered significant prior to the application of mitigation measures:

- B862 Users – driver delay;
- B851 Users – driver delay;
- Dores Residents – pedestrian amenity and delay:
- Errogie Residents - pedestrian amenity and delay; and
- Gorthleck Residents – pedestrian amenity and delay.

16.10.6 It should be noted that the effects considered relate solely to the peak of construction activities, and that the construction period is temporary and the effects transitory in nature.

Operational Effects

16.10.7 It is predicted that during the operation of the site there would be up to three vehicle movements per day for maintenance purposes. Also, there may be very occasional abnormal load movements to deliver replacement components. As such, the operational phase has been scoped out of the assessment.

Cumulative Effects

16.10.8 Committed development flows which are to be permanent on the traffic network have been included in the 2025 Future Baseline Flows.

16.10.9 Temporary traffic flows associated with other consented development proposals are considered as cumulative developments in this assessment. To inform the consenting authorities of possible issues if all of the sites whose construction traffic would impact the study area were considered concurrently, a combined scheme sensitivity review has been undertaken.

16.10.10 A review of the consented developments, including onshore wind farm developments, to be included as cumulative developments in the traffic and transport assessment are presented in **Volume 4, Appendix 16.1: Transport Assessment.**

16.10.11 As noted in **Volume 4, Appendix 16.1: Transport Assessment,** there are five other developments which have been granted planning consent and whose temporary construction traffic are anticipated to impact on the Proposed Development's study area, which are:

- Bhlaraidh Wind Farm Extension;
- Aberarder Wind Farm;

- Dell Wind Farm;
- Red John Hydro Scheme; and
- Coire Glas Pumped Storage Scheme.

16.10.12 While it is unlikely that these all of these developments would be constructed concurrently and that their peak construction months would align, a combined sensitivity review has been undertaken to inform of possible issues if all six of the sites (including the Proposed Development) were to be constructed concurrently.

16.10.13 The peak flows for the sites were obtained from their respective application documents (see **Table 16.11: Combined Scheme Sensitivity Review Peak Traffic Summary**) and then compared to the 2025 future baseline year in **Table 16.12: Combined Scheme Sensitivity Traffic Impact Summary.**

Table 16.11 Combined Scheme Sensitivity Review Peak Traffic Summary

Site Ref	Count Point Location	Kemp Pumped Storage		Bhlaraidh Extension Wind Farm		Aberarder Wind Farm		Dell Wind Farm		Red John Hydro		Coire Glas Pumped Storage	
		Cars & LGV	HGV	Cars & LGV	HGV	Cars & LGV	HGV	Cars & LGV	HGV	Cars & LGV	HGV	Cars & LGV	HGV
1	B862, south of Holm Roundabout	147	0	0	0	0	0	0	0	634	186	0	0
2	B862, Dores	132	0	0	0	0	0	0	0	634	186	0	0
3	B852, Bailebeag	15	0	0	0	0	0	0	0	634	186	0	0
4	B851, Inverarnie	60	68	0	0	83	40	18	36	634	186	0	0
5	B862, north of Errogie	193	68	0	0	0	0	18	36	0	0	0	0
6	B862, at site access	316	68	0	0	0	0	18	36	0	0	0	0
7	B862, east of Fort Augustus	97	0	0	0	0	0	18	36	0	0	0	0
8	A9(T), between Longman Rbt and Raigmore Interchange	0	60	0	0	83	40	18	36	634	186	0	0
9	A9(T), south of Inshes Wood	60	60	0	0	83	40	18	36	634	186	0	0
10	A9(T), east of Moy	0	8	0	0	0	0	18	36	0	0	0	0

Site Ref	Count Point Location	Kemp Pumped Storage		Bhlaraidh Extension Wind Farm		Aberarder Wind Farm		Dell Wind Farm		Red John Hydro		Coire Glas Pumped Storage	
		Cars & LGV	HGV	Cars & LGV	HGV	Cars & LGV	HGV	Cars & LGV	HGV	Cars & LGV	HGV	Cars & LGV	HGV
11	A9(T), south of A9(T) / A938	0	8	0	0	0	0	18	36	0	0	0	0
12	A82(T), south of Lochybridge	200	0	12	17	0	0	18	36	0	0	24	119
13	A82(T), west of Aberchalder	20	0	12	17	0	0	18	36	0	0	18	182
14	A82(T), south of Drumnadrochit	40	0	35	17	0	0	18	36	0	0	18	182
15	A82(T), south of Kirkton	40	0	35	17	0	0	18	36	0	0	18	182

Please note minor variances due to rounding may occur.

Table 16.12 Combined Scheme Sensitivity Traffic Impact Summary

Site Ref	Count Point Location	Cars & LGV	HGV	Total	% Increase Cars & LGV	% Increase HGV	% Increase Total
1	B862, south of Holm Roundabout	2865	554	3419	37%	51%	39%
2	B862, Dores	1090	294	1384	237%	172%	221%
3	B852, Bailebeag	929	255	1184	232%	268%	239%
4	B851, Inverarnie	1737	585	2322	84%	129%	94%
5	B862, north of Errogie	718	316	1033	42%	49%	44%
6	B862, at site access	934	297	1231	56%	54%	55%
7	B862, east of Fort Augustus	754	270	1024	18%	15%	17%
8	A9(T), between Longman Rbt and Raigmore Interchange	38829	2987	41815	2%	12%	3%
9	A9(T), south of Inshes Wood	13568	1464	15033	6%	28%	8%
10	A9(T), east of Moy	9793	1634	11426	0%	3%	1%
11	A9(T), south of A9(T) / A938	7092	2050	9142	0%	2%	1%
12	A82(T), south of Lochybridge	8526	715	9241	3%	32%	5%
13	A82(T), west of Aberchalder	3263	487	3750	2%	93%	9%
14	A82(T), south of Drumnadrochit	3793	1054	4847	3%	29%	8%
15	A82(T), south of Kirkton	7890	990	8880	1%	31%	4%

Please note minor variances due to rounding may occur.

16.10.14 The combined traffic flows indicate a large increase in traffic flows on the B851, B852 and B862, there however would be more than sufficient spare road capacity to accommodate this in the event of all six sites being constructed at the same time.

16.10.15 Any effects of all six sites being constructed at the same time would be mitigated through the use of an overarching Traffic Management and Monitoring Plan for all six sites and by introducing a

phased delivery plan which would be agreed with the local council roads department and Police Scotland.

16.10.16 Furthermore, it is not predicted that the potential traffic flow increases could ever occur on the study area for the following reasons:

- It is extremely unlikely that the peak traffic conditions would occur at the same time due to differences in construction programmes, material supplies and developer resources; and
- All abnormal load deliveries cannot occur at six separate sites on the same day due to restrictions on the numbers of loads moving on the network at the same time set by Police Scotland.

Associated Works

16.10.17 A 275kV air insulated switchgear (AIS) switching station is to be provided at the site. This development is the subject to a separate planning application to be made in the future by Scottish & Southern Electricity Networks Transmission (SSEN Transmission).

16.10.18 The proposed switching station is required to enable the operation of the Proposed Development and as such, is considered as Associated Works, as described in **Section 3.7** of **Chapter 3: Description of Development**. The switching station is proposed to be constructed between months 30 and 48 of the construction programme, although this has yet to be confirmed.

16.10.19 The traffic generation associated with the Associated Works is not yet known as the assessment has yet to be undertaken by SSEN Transmission. An estimate of traffic has been made from similar schemes and would assume that peak traffic for the site would comprise of 20 Car & LGV and 16 HGV movements at its peak.

16.10.20 The distribution and assignment of Associated Works traffic would be made using the same assumptions as per the Proposed Development.

16.10.21 A review of the impact that construction the Associated Works would have on the network if it is constructed concurrently to the peak of the Proposed Development traffic has been undertaken and is summarised in **Table 16.13.**

Table 16.13 Combined Proposed Development & Associated Works Traffic Impact

Site Ref	Count Point Location	Cars & LGV	HGV	Total	% Increase Cars & LGV	% Increase HGV	% Increase Total
1	B862, south of Holm Roundabout	2,243	368	2,611	7.64%	0.00%	6.49%
2	B862, Dores	468	108	576	44.66%	0.00%	33.49%
3	B852, Bailebeag	307	69	376	9.54%	0.00%	7.65%
4	B851, Inverarnie	1,016	339	1,355	7.86%	32.93%	13.20%
5	B862, north of Errogie	714	296	1,009	40.82%	39.71%	40.55%

Site Ref	Count Point Location	Cars & LGV	HGV	Total	% Increase Cars & LGV	% Increase HGV	% Increase Total
6	B862, at site access	936	277	1,213	55.96%	43.55%	52.94%
7	B862, east of Fort Augustus	742	234	976	16.09%	0.00%	11.77%
8	A9(T), between Longman Rbt and Raigmore Interchange	38,106	2,725	40,830	0.03%	2.25%	0.18%
9	A9(T), south of Inshes Wood	12,835	1,202	14,038	0.49%	5.26%	0.88%
10	A9(T), east of Moy	9,777	1,598	11,374	0.02%	0.50%	0.09%
11	A9(T), south of A9(T) / A938	7,076	2,014	9,090	0.03%	0.40%	0.11%
12	A82(T), south of Lochybridge	8,474	543	9,017	2.44%	0.00%	2.29%
13	A82(T), west of Aberchalder	3,217	252	3,469	0.69%	0.00%	0.64%
14	A82(T), south of Drumnadrochit	3,724	819	4,543	1.14%	0.00%	0.93%
15	A82(T), south of Kirkton	7,821	755	8,576	0.54%	0.00%	0.49%

Please note minor variances due to rounding may occur.

16.10.22 The maximum impact being experienced on the study area network is 52.94%. Total traffic increases along the trunk road network are all below 2.3%.

16.10.23 It should also be noted that it would be unlikely that the peaks of both the Proposed Development and Associated Works would coincide and that the Applicant would ensure that this scenario would not occur in practice.

16.11 Mitigation

Mitigation during Construction

16.11.1 The following measures would be implemented through a Construction Traffic Management Plan (CTMP) during the construction phase. The CTMP would be agreed with The Highland Council prior to construction works commencing:

- Where possible the detailed design process would minimise the volume of material to be imported to site to help reduce HGV numbers;

- A site worker transport and travel arrangement plan, including transport modes to and from the worksite (including pick up and drop off times);
- A Traffic Management Plan;
- All materials delivery lorries (dry materials) should be sheeted to reduce dust and stop spillage on public roads;
- Specific training and disciplinary measures should be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway;
- Wheel cleaning facilities may be established at the site entrance, depending the views of The Highland Council;
- Normal site delivery hours would be limited to between 0700 and 1900 (Monday to Saturday) and 07.00 to 15.00 hours (Sundays);
- Appropriate traffic management measures would be put in place on the B862 to avoid conflict with general traffic, subject to the agreement of the roads authority. Typical measures would include HGV turning and crossing signs and/ or banksmen at the site access and warning signs;
- Provide construction updates on the project website and or a newsletter to be distributed to residents within an agreed distance of the site;
- Adoption of a voluntary speed limit of 15 mph for all construction vehicles through Dores, Inverarnie, Gorthleck and Errogie;
- Adoption of a voluntary HGV speed limit of 10 mph when passing schools such as Farr Primary School and Stratherrick Primary School on the proposed route and wherever possible for bulk materials not to be delivered during school drop off and pick up times;
- All drivers would be required to attend an induction to include:
- A tool box talk safety briefing;
- The need for appropriate care and speed control;
- A briefing on driver speed reduction agreements (to slow site traffic at sensitive locations through the villages); and
- Identification of the required access routes and the controls to ensure no departure from these routes.

16.11.2 THC may require an agreement to cover the cost of abnormal wear and tear on the B862 within 500 m of the site access junction.

16.11.3 Video footage of the pre-construction phase condition of the abnormal loads access route and the construction vehicles route would be recorded to provide a baseline of the state of the road prior to any construction work commencing. This baseline would inform any change in the road condition during the construction stage of the Proposed Development. Any necessary repairs would be coordinated with the Roads Authority. 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.

16.11.4 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.

16.11.5 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.

Abnormal Load Management Plan

16.11.6 Before the AIL traverse the route, the following tasks would be undertaken to ensure load and road user safety:

- Ensure any vegetation which may foul the loads is trimmed back to allow passage;
- Confirm there are no roadworks or closures that could affect the passage of the loads;
- Check no new or diverted underground services on the proposed route are at risk from the abnormal loads; and
- Confirm the police are satisfied with the proposed movement strategy.

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

16.11.8 All abnormal load deliveries would be undertaken at appropriate times (to be discussed and agreed with the relevant roads authorities and police) with the aim to minimise the effect on the local road network. It is likely that the abnormal load convoys would travel in the early morning periods, before peak times while general construction traffic would generally avoid the morning and evening peak periods.

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

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

- On the A9(T) or A82(T) where the loads may straddle the centre line, where fast moving oncoming traffic may be encountered, etc.;
- Where loads turn from the A9(T) onto the B851 or from the A82(T) onto the B862;
- Where traffic turns at a road junction, requiring other traffic to be restrained on other approach arms; and
- In locations where high speeds of general traffic are predicted.

16.11.11 Advance warning signs would be installed on the approaches to the affected road network.

16.11.12 This signage will assist in helping improve driver information and allow other road users to consider alternative routes or times for their journey (where such options exist).

16.11.13 The location and numbers of signs would be agreed post consent and would form part of the wider Traffic Management Proposal for the project.

16.11.14 The Abnormal Load Transport Management Plan would also include:

- Procedures for liaising with the emergency services to ensure that police, fire and ambulance vehicles are not impeded by the loads. This is normally undertaken by informing the emergency services of delivery times and dates and agreeing communication protocols and lay over areas to allow overtaking;
- A diary of proposed delivery movements to liaise with the communities to avoid key dates such as local events;
- A protocol for working with local businesses to ensure the construction traffic does not interfere with deliveries or normal business traffic; and
- Proposals to establish a construction liaison committee to ensure the smooth management of the project / public interface with the applicant, the construction contractors, the local community, and if appropriate, the police forming the committee. This committee would form a means of communicating and updating on forthcoming activities and dealing with any potential issues arising.

Public Information

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

16.11.16 Information would relate to expected vehicle movements from the port of entry through to the site access junction. This will assist residents becoming aware of the convoy movements and may help reduce any potential conflicts.

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

Public Road Enhancements

16.11.18 Improvements to the single carriageway section of the B851 and B862 from the A9 to the development access could be made to improve access to the site for HGV traffic, noting that the impact is temporary and only associated with the construction phase.

16.11.19 THC has previously noted a strategy for the improvements of the road network in the South Loch Ness area, however this document is still in draft (from 2014), has not been approved by committee nor approved a supplementary planning guidance.

16.11.20 In the absence of approved policy, it is proposed that additional passing places and limited road widening works are provided as part of the mitigation proposals for the project. In addition, works to enhance the pedestrian facilities in Gorthleck are suggested.

16.11.21 It is proposed that a financial contribution for such works would be made to THC. All works would be located within the limits of the adopted road boundary and would not be located in areas of a sensitive ecological value. The Council would then be responsible for the delivery of the necessary works, following receipt of the funds, the value of which would be set via discussion with the Applicant and agreed through the planning process.

Canal Management Plan

16.11.22 A Canal Management Plan would be produced in collaboration with Scottish Canals to manage the Proposed Development's construction traffic which will be delivered to the Site via the Caledonian Canal. This would include:

- Advertising the proposed canal traffic movements on a monthly basis on the Scottish Canlas website;
- Providing an information pack to canal users, local clubs and businesses which provides details of the proposed construction traffic movements along the canal, as well as directing users to the project website;
- Details of maximum permitted speeds along sections of the canal;
- Measures to ensure that both construction canal traffic and other canal users can use the canal simultaneously during the construction period;
- Operating barge lookouts to detect other users along the canal;
- Providing signage along the canal's bank in order to alert other canal users of the presence of barges along the canal at the Applicant's expense;
- The use of enhanced barge navigation lighting;
- Designating route paths along Loch Lochy and Loch Ness which will aim to avoid the paths of other canal users; and
- Setting up a Canal Liaison Group in collaboration with Scottish Canals which would include other interested stakeholders.

Mitigation during Operational

16.11.23 Site entrance roads will be well maintained and monitored during the operational life of the development. Regular maintenance will be undertaken to keep the site access track drainage systems fully operation and to ensure there are no run-off issues onto the public road network.

16.12 Residual Effects

16.12.1 This section considers the potential residual effects and associated effect significance of the construction and operation of the Proposed Development, following the implementation of the mitigation measures proposed in **Section 16.11**.

Construction Residual Effects

16.12.2 An evaluation of the potential effects of the increase in traffic on roads within the study area is presented in **Table 16.14: Summary of Residual Effects.**

Table 16.14 Summary of Residual Effects

Receptors	Potential Effect	Significance of Effect	Mitigation	Significance of Residual Effect
Users of the B862	Severance	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Driver Delay	Moderate (Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)

Receptors	Potential Effect	Significance of Effect	Mitigation	Significance of Residual Effect
	Pedestrian Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Pedestrian Amenity	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Fear & Intimidation	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Accidents & Safety	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
Users of the B851	Severance	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Driver Delay	Moderate (Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Pedestrian Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Pedestrian Amenity	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Fear & Intimidation	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
	Accidents & Safety	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Enhanced passing place provision and AIL management plan.	Minor (Not significant)
Dores Residents	Severance	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Driver Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Pedestrian Delay	Moderate (Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)

Receptors	Potential Effect	Significance of Effect	Mitigation	Significance of Residual Effect
	Pedestrian Amenity	Moderate (Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Fear & Intimidation	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Accidents & Safety	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
Inverarnie Residents	Severance	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Driver Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Pedestrian Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Pedestrian Amenity	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Fear & Intimidation	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Accidents & Safety	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
Errogie Residents	Severance	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Driver Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Pedestrian Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Pedestrian Amenity	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Fear & Intimidation	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
	Accidents & Safety	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. AIL Management Plan.	Minor (Not significant)
Gorthleck Residents	Severance	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Proposed contribution to improve pedestrian facilities and AIL management plan.	Minor (Not significant)

Receptors	Potential Effect	Significance of Effect	Mitigation	Significance of Residual Effect
	Driver Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Proposed contribution to improve pedestrian facilities and AIL management plan.	Minor (Not significant)
	Pedestrian Delay	Moderate (Significant)	CTMP, including temporary road signage and agreed access routes. Proposed contribution to improve pedestrian facilities and AIL management plan.	Minor (Not significant)
	Pedestrian Amenity	Moderate (Significant)	CTMP, including temporary road signage and agreed access routes. Proposed contribution to improve pedestrian facilities and AIL management plan.	Minor (Not significant)
	Fear & Intimidation	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Proposed contribution to improve pedestrian facilities and AIL management plan.	Minor (Not significant)
	Accidents & Safety	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes. Proposed contribution to improve pedestrian facilities and AIL management plan.	Minor (Not significant)
Fort Augustus Residents	Severance	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes.	Minor (Not significant)
	Driver Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes.	Minor (Not significant)
	Pedestrian Delay	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes.	Minor (Not significant)
	Pedestrian Amenity	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes.	Minor (Not significant)
	Fear & Intimidation	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes.	Minor (Not significant)
	Accidents & Safety	Slight (Not Significant)	CTMP, including temporary road signage and agreed access routes.	Minor (Not significant)

16.12.3 The assessment confirms the residual effects would be minor in nature and they would be *not significant*. The traffic effects are transitory in nature. No long-lasting detrimental transport or access issues are associated with the construction phase of the Proposed Development.

Operational Residual Effects

16.12.4 No residual decommissioning effects are predicted as part of the Proposed Development.

Cumulative Residual Effects

16.12.5 No residual cumulative effects are predicted as part of the Proposed Development.

16.13 Conclusion

16.13.1 The Proposed Development would lead to a temporary increase in traffic volumes on the study road network during the construction phase. Traffic volumes would fall considerably outside the peak period of construction.

16.13.2 The maximum traffic impact associated with construction is predicted to occur in Month 16 of the indicative construction programme. The greatest impact would occur along the B851 and the B862.

16.13.3 The Proposed Development traffic, at the peak of construction, would result in 68 HGV movements per day (34 inbound and 34 outbound) and 316 Cars & Lights (158 inbound and 158 outbound).

16.13.4 No significant capacity issues are expected on any of the roads within the study area due to the additional construction traffic movements associated with the Proposed Development as background traffic movements are low, the links are of reasonable standard and appropriate mitigation is proposed.

16.13.5 The assessment of significance suggests that that drivers along the B862 and B851 and residents in Dores, Errogie and Gorthleck would experience significant effects, prior to the application of mitigation measures.

16.13.6 With the implementation of appropriate mitigation, no significant residual effects are anticipated in respect of traffic and transport issues. The residual effects are all assessed to be slight or insignificant but as they will occur during the construction phase only, they are temporary and reversible. No residual cumulative effects are predicted as part of the Proposed Development.

16.13.7 It is predicted that during the operation of the site there would be up to three vehicle movements per day for maintenance purposes. Also, there may be very occasional abnormal load movements to deliver replacement components.