Volume 2: Chapter 14 - Traffic and Transport

VOLUME 2, CHAPTER 14: TRAFFIC AND TRANSPORT

Appendices (Volume 5 of this EIAR)

Figures (Volume 3 of this EIAR)

14. TRAFFIC AND TRANSPORT

14.1 Introduction

14.1.1 This Chapter considers the potential traffic and transport effects of the Proposed Development during the construction, operation and decommissioning phases.

14.1.2 The specific objectives of the Chapter are to:

- describe the existing access network and transport baseline;
- describe the assessment methodology and significance criteria used in completing the impact assessment;
- describe the potential effects, including direct, indirect and any potential cumulative effects;
- describe the mitigation measures proposed to address likely significant effects; and
- assess the residual effects remaining following the implementation of mitigation.

14.1.3 A high-level overview of the effects of the traffic movements has been conducted in accordance with the Institute of Environmental Management and Assessment (IEMA) Environmental Assessment of Traffic and Movement[1]. The document is referred to as the IEMA Guidelines in this Chapter.

14.1.4 This Chapter should be read in conjunction with **Volume 1, Chapter 3: Project Description** of the Environmental Impact Assessment Report (EIAR) for full details of the Proposed Development.

14.1.5 The traffic and transport assessment was undertaken by Pell Frischmann Consultants Limited.

14.1.6 The Chapter is supported by **Volume 5, Appendix 14.1: Transport Assessment**, which this Chapter should be read in conjunction with.

14.1.7 The following terminology is referred to throughout this Chapter:

- Annual Average Daily Traffic (AADT): The average over a full year of the number of vehicles passing a point in the road network each day;
- Personal Injury Accident (PIA): An accident on public roads which has been reported to the police and whereby someone has been injured; and
- Transport Assessment (TA): Comprehensive report which identifies and addresses transport issues in relation to the Proposed Development[2].

14.2 Scope of the Assessment

Effects Assessed in Full

14.2.1 This assessment focusses on the effects of construction of the Proposed Development upon those receptors identified during the review of desk-based information and field surveys.

14.2.2 The assessment has fully considered the traffic and transport issues arising from the construction phase (which includes the dismantling and removal of short sections of existing overhead line (OHL)) as part of the Proposed Development. This Chapter considers the following:

- direct effects during construction on traffic flows in the surrounding study area;
- direct effects upon local road users; and
- effects upon local residents due to an increase in construction traffic.

14.2.3 Where the predicted traffic-related changes meet the criteria set out in the IEMA Guidelines, a review of their effects on severance, driver delay, pedestrian delay, non-motorised user amenity, fear and intimidation and accidents/road safety has been undertaken.

[1] Institute of Environmental Management and Assessment (IEMA) Guidelines, 2023. Environmental Assessment of Traffic and Movement.
[2] Transport Scotland, 2012. Transport Assessment Guidance. "*Transport Assessment is a comprehensive and systematic process which aims to identify and address the transport issues relating to a proposed development.*".

14.2.4 Given the length of the proposed overhead line (OHL), which extends for approximately 105.2 kilometres (km) between Tealing and Kintore, the Proposed Development has been subdivided into six sections from south to north. These are referenced in **Volume 3, Figure 14.1: Transport Assessment Survey Locations and Sections for Transport Assessment** as Sections A – F (described further in the Chapter as the Proposed Development's subsections). The design process has also included the appointment by SSEN Transmission of two Principal Contractors (one Contractor for the Sections A to D from Emmock to Hurlie and another for the Sections E to F from Hurlie to Kintore), who have been working collaboratively with SSEN Transmission to inform the design process and the constructability of the Proposed Development.

14.2.5 For the purpose of the transport assessments in **Volume 5, Appendix 14.1: Transport Assessment** and this Chapter, the Proposed Development has been split into three geographically defined 'Transport Sections', which have been chosen to assist the Councils, as some of the Proposed Development is located in Angus Council area and some is within Aberdeenshire Council area.

14.2.6 The Transport Sections which have been used in this assessment are described as follows (also see **Volume 3, Figure 14.1: Transport Assessment Survey Locations and Sections for Transport Assessment**):

- Transport Section i – Tealing to Inchbare (Towers S205 to S83, within Angus Council area and includes Sections A, B and some of Section C of the Proposed Development subsections);
- Transport Section ii – Inchbare to Drumlithie (Towers S82 to S7, within the Kincardine and Mearns area of Aberdeenshire Council area and includes part of Section C and the majority of Section D of the Proposed Development's subsections); and
- Transport Section iii – Drumlithie to Kintore (Towers S6 to N1, within the Garioch area of Aberdeenshire Council area and includes a small part of Section D and all of Sections E and F of the Proposed Development's subsections).

14.2.7 This assessment considers the traffic and transport impacts on the relevant receptors within the study area of each Transport Section separately. As there will be an overlap of construction activities between each of the Transport Sections, the total combined development traffic trips are considered on the A90 (T) trunk road when assessing the impact on each of the Transport Sections' study areas because this major road forms a continuous north to south link through the study area.

Effects Scoped Out

14.2.8 On the basis of the desk based and field survey work undertaken, the professional judgement of the EIA team, experience from other relevant projects and policy guidance or standards, and feedback received from consultees, the following topic areas have been 'scoped out' of detailed assessment, as proposed in the Scoping Report.

14.2.9 Once operational, it is envisaged that the level of traffic associated with the Proposed Development would be minimal. Regular maintenance visits by SSEN Transmission engineers would be made to tower sites along the OHL typically using 4x4 vehicles. It is predicted that the effects of operational traffic would be negligible and therefore no detailed transportation assessment of the operational phase of the development is presented in this Chapter.

14.2.10 The traffic generation levels associated with the decommissioning phase are predicted to be less than those for the construction phase as some elements may be left in place. As such, the construction phase is considered to be representative of the worst-case scenario for assessment of traffic and transport effects in the study area. An assessment of the decommissioning phase of the Proposed Development is therefore not undertaken, however, prior to decommissioning of the Site, a traffic assessment would be undertaken, and appropriate traffic management procedures followed. This would be undertaken in accordance with the principles set out in **Volume 5, Appendix 3.6: Outline Decommissioning Mitigation Strategy**.

Study Area

14.2.11 The study area comprises the public roads that are expected to experience increased traffic flows associated with the construction of the Proposed Development. 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.

14.2.12 The highway links assessed as part of this assessment are outlined below and the Transport Section that the links lie within are identified. These are shown in **Volume 5, Appendix 14.1: Transport Assessment, Plate 14.1.2: Study Area (and in more detail in Annex B).**

Transport Sections i, ii and iii

- the A90 (T), between Kingsway and the A96 (T).

Transport Section i

- the Zc6 C-class road near Tealing, between the A90 (T) and Zc7 (north of South Balluderon);
- the A928 between the A90 (T) at Petterden Junction and Milton of Ogilvie;
- the A94 between the A90 (T) at Glamis Junction and Glamis;
- the A926 between the A90 (T) at Kirriemuir Junction and Kirriemuir;
- the B9128 between the A90 (T) (signed for Forfar) and Zc29;
- the Zc29 C-class road between the B9128 and B957;
- the B957 between the Zc29 and the A90 (T) (near Finavon);
- the Zc31 between U400 (south of Memus) and the C33 (near Careston, Breshin);
- the C33 between the A90 (T) and Kirkton of Menmuir;
- the Zc30 between Kirkton of Menmuir and the underpass with the A90 (T);
- the B966 between the A90 (T) and Edzell; and
- other minor roads/tracks providing local access (including Zu322, Zu360, Zu360-2, U364, Zu364.Zc29, Zc373, Zc374, Zu370, C32, Zu408, U407, Zu412, Zu413, Zu413-1, Zu414, Zu415, Zu418, Zu417, Zu417-1, Zu429 and Zc35).

Transport Section ii

- the B974 between the A90 (T) and the B966;
- the unclassified road between the B974 and B966/B9120 junction;
- the B966 between the B966/B9120 junction and Old Aberdeen Road;
- the B9120 between the B966/B9120 junction and Blackiemuir Farm, Laurencekirk;
- the Old Aberdeen Road between the B966 and the A90 (T);
- the C19K between the junction of Glenbervie Road/unclassified road (leading to C1K) and the east of Auchenblae Golf Course; and
- other minor roads/tracks providing local access (including C2K, Inverury Wood unclassified road, C6K, Primrosehill, U095K, Landends, C11K, U109K, C1K, C7K, C3K, C111K,73K and 72K).

Transport Sections ii and iii

- the C1K between the A90 (T) and Tipperty.

Transport Section iii

- the A957 (Slug Road) between the A93 and A90 (T);
- the B979 between the A90 (T) and the A957/B9077 junction;
- the B9077 between the B9077/B979 junction and the A957/B9077 junction;
- the A93 between the B979/A93 junction and A957/A93 junction;
- Couper's Road between its junction with the B9125 and its junction with the A93;
- the B9125 between its junction with the B977 and B9119,at Garlogie;
- the B9119, between Echt and Garlogie;
- the B977, between the B977/B9125 and Kintore;
- the A944 between Old Kinnernie and the South Kingswell Roundabout; and
- other minor roads/tracks providing local access (including C5K, Kirkton Wood to Free Church Wood unclassified road, Upper Park unclassified access road, unclassified Old Wood or Forest of Drum road, C150C, U150C, U137C and Castle Fraser unclassified road).

14.3 Assessment Methodology

Legislation, Policy and Guidance

Legislation

14.3.1 The assessment has been undertaken in accordance with *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017*.

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

Policy

14.3.3 The following policies of relevance to the assessment have been considered:

- National Planning Framework 4[3] (NPF4);
- Aberdeenshire Local Development Plan (2023)[4]; and
- Angus Local Development Plan (2016)[5].

Guidance

14.3.4 This assessment is carried out in accordance with the principles contained within the following documents:

- Environmeontal Assessment of Traffic and Movement (IEMA Guidelines), (IEMA, 2023)[6];
- The Guidelines for the Environmental Assessment of Road Traffic (IEMA, 1993)[7];
- Guidelines for Environmental Impact Assessment (IEMA, 2005)[8];
- LA 104 Environmental Assessment and Monitoring (Revision 1) of the Design Manual for Roads and Bridges (Highways England, Transport Scotland, Welsh Government, Department for Infrastructure, 2019)[9];
- Design Manual for Roads and Bridges, Volume 15, Part 5 "The NESA Manual" (Transport Scotland, 2013)[10];
- Planning Advice Note (PAN) 75 (The Scottish Government, 2005)[11]; and
- Transport Assessment Guidance (Transport Scotland, 2012)[12].

Consultation

14.3.5 In undertaking the assessment, consideration has been given to the scoping and pre-consultation responses which has been undertaken as detailed in **Table 14.1: Summary of Consultation.** A full summary of consultation is provided in **Volume 1, Chapter 6: Scope and Consultation.**

[3] The Scottish Government, 2024. National Planning Framework 4. [Online] Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf

[4] Aberdeenshire Council, 2023. Aberdeenshire Local Development Plan 2023. [Online] Available at: https://online.aberdeenshire.gov.uk/ldpmedia/LDP2021/AberdeenshireLocalDevelopmentPlan2023IntroductionAndPolicies.pdf

[5] Angus Council, 2016. Angus Local Development Plan. [Online] Available at: https://www.angus.gov.uk/sites/default/files/Angus%20local%20development%20plan%20adopted%20September%202016.pdf

6 Institute of Environmental Management and Assessment (IEMA) 2023. IEMA Guidelines: Environmental Assessment of Traffic and Movement. [Online] Available at: https://www.iema.net/media/5mrmquib/iema-report-environmental-assessment-of-traffic-and-movement-rev07-july-2023.pdf

[7] Institute of Environmental Assessment, 1993. The Guidelines for the Environmental Assessment of Road Traffic. [Online] Available at: https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer_public/dc/df/dcdfa287-b475-4fbb-bd4e-a1e96b06be5d/cd71-guideline-for-the-environmental-assessment-of-road-traffic-institute-of-environmental.pdf

[8] IEMA, 2005. Guidelines for Environmental Impact Assessment.

[9] Highways England, Transport Scotland, Welsh Government, Department for Infrastructure, 2019. LA 104 Environmental Assessment and Monitoring. [Online] Available at: https://www.standardsforhighways.co.uk/tses/attachments/0f6e0b6a-d08e-4673-8691-cab564d4a60a

[10] Transport Scotland, 2013. The NESA Manual.

[11] The Scottish Government, 2005. Planning Advice Note (PAN) 75. [Online] Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2005/08/planning-advice-note-pan-75-planning-transport/documents/0016795-pdf/0016795-pdf/govscot%3Adocument/0016795.pdf

[12] Transport Scotland, 2012. Transport Assessment Guidance. [Online] Available at: https://www.transport.gov.scot/media/4589/planning_reform_-_dpmtag_-_development_management__dpmtag_ref__17__-_transport_assessment_guidance_final_-_june_2012.pdf

Table 14.1: Summary of Consultation

Consultee and Date	Scoping/Other Consultation	Issue Raised	How Issue has been Addressed
The Scottish Government _ Energy Consents Unit (ECU) 15 October 2024	EIA Scoping Consultation Response	Roads Development have previously commented on the previous enquiry and have met with Contractors.	Matters raised as part of the ECU's response are as those provided by Aberdeenshire Council and as such are addressed within the Aberdeenshire Council responses outlined further in this table.
Aberdeenshire Council – Infrastructure Services Roads Development 24 September 2024	EIA Scoping Consultation Response	Parking will be required within each site as appropriate during the construction period, following delivery parking provision will be required in perpetuity for operation and maintenance as appropriate to the specific piece of infrastructure. This information should be detailed as part of any formal Planning application(s).	During construction, the construction compounds will have a safe area for parking away from public roads. These will form part of a separate planning application.
		Access to the proposal will be via many roads within Aberdeenshire, these roads will have contrasting road makeup and road widths, as part of any subsequent applications full details should be provided of construction traffic to each site from adjoining trunk road network. Full details should be provided of the following, vehicle types and frequency of the access and egress, junction dimensions, drainage, gradients, materials, swept path analysis, visibility splays, and proposed construction traffic routes. The internal construction traffic route should be detailed from the public road including the turning and passing provisions.	Access junctions from the public highway will be designed in accordance with the relevant design standards. **Volume 5, Appendix 3.5: Public Road Improvement Works** presents high-level information which will be progressed further at the detailed design stage, including environmental information and mitigation. Location plans and construction methodology and specification is also provided in **Volume 3, Figures 3.8.1 to 3.8.19: Indicative Public Road Improvement Works** and **Volume 3, Figures 3.9.1 to 3.9.3: Passing Places Indicative Design.** Proposed works on the public highway will be agreed with the appropriate Council prior to any works commencing in the public highways. It is proposed that this would form an appropriately worded planning condition. Construction trip generation and composition information is provided in **Volume 5, Appendix 14.1: Transport Assessment**.
		Full details of how the construction traffic interaction with the existing public roads will be managed, passing provision, visibility windows, road widening, and any associated improvements should be provided. An appraisal of the roads from the trunk road network will also be required as part of any future applications.	This is presented in **Volume 5, Appendix 3.5: Public Road Improvement Works** It is proposed that the Applicant will enter into a Wear and Tear agreement. A condition survey will be undertaken and it is proposed that the condition of the roads will be monitored during the construction phase. Any necessary repairs would be coordinated with the Roads Authority. It is considered that this would form a planning condition of consent.

Consultee and Date	Scoping/Other Consultation	Issue Raised	How Issue has been Addressed
			Construction traffic will be managed through implementation of a Construction Traffic Management Plan (CTMP) which will be secured through an appropriately worded planning condition and will be a contractual requirement for the Principal Contractors. Measures which will be included in the final CTMP are provided in the Additional Mitigation section of this Chapter and **Volume 5, Appendix 14.1: Transport Assessment**.
		Applicant should engage with Roads Department via the Planning Service in advance of any future applications as appropriate, this will allow an opportunity to discuss further detail as it is established.	Comment noted.
Angus Council – Team Leader – Traffic 7 October 2024	EIA Scoping Consultation Response	Angus Council's roads service considers the assessment scope and methodology to be acceptable. It notes that it is proposed that consultation responses, together with feedback awaited from the relevant local authority roads departments will be addressed in the Traffic and Transport EIAR chapter and will inform the proposed mitigation measures which may be required to address potentially significant adverse impacts as a result of construction traffic. Discussions will be undertaken with the appropriate roads authorities with regards to any proposed changes to the local or trunk road network which will be addressed in EIAR. The traffic and transport assessment to be presented in the EIAR will also take account of any further relevant guidance and standards advised by the local roads and planning authorities.	Comment noted. Details of proposed road improvement works are presented in **Volume 5, Appendix 3.5: Public Road Improvement Works.** Proposed works on the public highway will be agreed with the appropriate Council prior to any works commencing in the public highways. It is proposed that this would form an appropriately worded planning condition.
		Roads located within, or in proximity to, the Proposed Route are shown in Figure 10.1 Transport Network and have the potential to be impacted by construction related traffic. These routes are to be included in the study area as well as roads outwith the Proposed Route which are anticipated to be used by construction delivery vehicles.	The study area has been refined since the scoping report and for the purpose of the Traffic and Transport Chapter comprises three Transport Sections. The extent of the study area is defined in the Study Area subsection within the Chapter and shown in **Volume 3, Figure 14.1: Transport Assessment Survey Locations and Sections for Transport Assessment.**
		Mitigation measures will be applied as considered relevant including: • The design of suitable access arrangements with full consideration given to the road safety of all road users; • Production and implementation of a Construction Traffic Management Plan (CTMP);	Comment noted. The suggested mitigation measures are included in the mitigation proposals for the Proposed Development in terms of Traffic and Transport. Details of these mitigation measures are provided as part of the Embedded Mitigation, Applied Mitigation and

Consultee and Date	Scoping/Other Consultation	Issue Raised	How Issue has been Addressed
		• A Wear and tear Agreement; • An Access management Plan; and • A Staff Sustainable Access Plan.	Additional Mitigation sections of this Chapter.
		A full review of the potential effects will be undertaken once the Proposed Alignment has been confirmed and once the full access strategy for construction activities has been confirmed.	Comment noted.
		Any residual effects predicted following the implementation mitigation measures are anticipated to be localised and most likely to occur on smaller 'B' & 'C' class or unclassified roads within the study area. Potential further additional mitigation measures to avoid or reduce any such predicted effects may include: • Enhanced pedestrian crossing facilities; • The avoidance of HGV traffic moving past key sensitive receptors such as primary schools at certain times of the day; and • Localised road improvements schemes such as improvements in forward visibility and possible layby provision. All relevant mitigation measures are proposed to be discussed and agreed with the relevant local authority where appropriate, noting that the potential effects would be temporary and associated with the construction phase only.	Construction phase traffic-related effects are to be mitigated by mitigation measures outlined in the Embedded Mitigation, Applied Mitigation and Additional Mitigation sections of this Chapter.
		A focused Transport Assessment (TA) will be provided to review the impact of transport related matters associated with the Proposed Development. This will be appended to the EIAR and will be summarised into a Traffic and Transport chapter within the EIAR. This is acceptable.	This is provided as **Volume 5, Appendix 14.1: Transport Assessment**.
		The rules taken from the IEMA Guidelines will be used as a screening process to define the scale and extent of the assessment: • Rule 1 – Include highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%); and • Rule 2 – Include highway links of high sensitivity where traffic flows have increased by 10% or more. Increases below these thresholds are generally considered to be insignificant given that daily variations in	Comment noted. The assessment has been undertaken in line with these thresholds which are presented as part of the Magnitude of Impact section of this Chapter.

Consultee and Date	Scoping/Other Consultation	Issue Raised	How Issue has been Addressed
		background traffic flow may fluctuate by this amount. Changes in traffic flow below this level predicted as a consequence of the Proposed Development will therefore be assumed to result in no significant environmental impact and as such no further consideration will be given in the EIAR to the associated environment effects. This is acceptable.	
		Once operational, it is envisaged that the level of traffic associated with the Proposed Development would be minimal. Regular maintenance visits would be made typically using Light Goods Vehicles (LGV) or 4x4 vehicles. It is considered that the effects of operational traffic would be negligible and therefore no detailed transportation assessment of the operational phase of the development is proposed. It is acceptable for the operational aspects to be scoped out.	Comment noted. The Operational Phase has been scoped out of the Traffic and Transport Assessment.
		Overall, the assessment scope and methodology is acceptable.	Comment noted.
Transport Scotland (TS) 8 October 2024	EIA Scoping Consultation Response	**Assessment of Environmental Impacts** Chapter 10 of the Scoping Report presents the proposed methodology for the assessment of Traffic and Transport. This states that the assessment will be carried out in accordance with both Transport Scotland's *Transport Assessment Guidance* (2012) and the Institute of Environmental Management and Assessment (IEMA) Guidelines, entitled Environmental Assessment of Traffic and Movement (July 2023). Chapter 10 states that the study area will include, amongst various local roads, the A90(T) between Aberdeen and Dundee. We also note that the Traffic and Transport chapter will: • consider potential disruption to pedestrians, cyclists and existing road users during the construction phase; • assess likely changes to local road traffic flows during the construction phase; • assess the effect of the changes on the transport network and the level of significance of any effects established; and • take account of the objectives of relevant local and strategic policy and guidance.	Comment noted. The assessment has been undertaken in line with the noted guidance and methodology.

Consultee and Date	Scoping/Other Consultation	Issue Raised	How Issue has been Addressed
		We note that the thresholds as indicated within the IEMA Guidelines will be used as a screening process for the assessment. These specify that road links should be taken forward for further detailed assessment of environmental effects where the following two rules are breached: • Rule 1: Include road links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%); and • Rule 2: Include road links of high sensitivity where traffic flows have increased by 10% or more. This is considered appropriate.	
		Chapter 10 indicates that base traffic data will be obtained from Transport Scotland, the Department for Transport (DfT) and relevant local authorities. This is considered acceptable, however, we would ask that "estimated" data from the DfT site is not used. We also note that Low National Road Traffic Forecasts (NRTF) will be used to forecast future year traffic flows. This is considered acceptable.	Comment noted. With regards to DfT data used within the assessment, where available 2023 data from the DfT has been used and the survey year is provided along with the source. Where 2023 information is not available, historic data has been used and 2024 future year traffic has been estimated using NRTF growth factors. Further details are provided in **Volume 5, Appendix 14.1: Transport Assessment**.
		It is noted that any impacts associated with the operational and decommissioning phases of the development are to be scoped out of the EIA. We would consider this to be acceptable in this instance.	Comment noted. The operational and decommissioning phases have been scoped out of the assessment.
		Abnormal Loads Assessment The Scoping Report makes no mention of the need for Abnormal Indivisible Load (AIL) deliveries during construction. Should these be required, we would state that 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.	Plant such as cranes may be abnormal due to their width or weight. This would be confirmed post consent with appropriate reviews and BE16 applications made at the time.
		If abnormal loads are envisaged then a full Abnormal Loads Assessment report should be provided that identifies key pinch points on the trunk road network. Swept path analysis should be undertaken, and details provided with regard to any required changes to street furniture or structures along the route.	As above.
		We would reiterate our comment made in our previous response that any proposed changes to the trunk road	It is not proposed that any changes are made to the trunk road.

Consultee and Date	Scoping/Other Consultation	Issue Raised	How Issue has been Addressed
		network, with particular reference to access points etc., must be discussed and approved (via a technical approval process) by the appropriate Area Manager prior to any works being carried out.	
Aberlemno and District Community Council 9 October 2024	EIA Scoping Consultation Response	Traffic and Transport – all transport routes to and within the project area, including to individual towers. Laying down space and traffic impact on residents and businesses.	The impact of the construction phase traffic has been assessed as part of this Chapter (see **Section 14.6 Assessment of Likely Significant Effects - Construction)**. Following the implementation of appropriate mitigation (as proposed within this Chapter), the effects are assessed to be **Minor** and **Not Significant.**
British Horse Society (BHS) 8 October 2024	EIA Scoping Consultation Response	I am pleased to note the Applicant has identified known rights of way and designated core paths. It should also be acknowledged in the EIAR and Access Management Plan that these routes may be used by a variety of non-motorised users, including horse-riders, and appropriate consideration given to how access for all path users will be managed during both construction and ongoing maintenance. The Applicant also notes there are many areas of woodland scattered throughout the Proposed Route. Woodland tracks and rides are often ideal routes for equestrians and the Applicant should be aware of their potential use. The BHS is here to help and can provide guidance on suitable surfaces and infrastructure to accommodate equestrians and other access takers. We would be very willing to work with the Applicant on these aspects.	An Outline Outdoor Access Management Plan is provided as **Volume 5, Appendix 7.1: Outline Outdoor Access Management Plan** and will contain measures to address the impact of construction vehicles on the Core Path network and other tracks regularly used by walkers, cyclists and horse riders.
Crathes Drumoak Durris Community Council	EIA Scoping Consultation Response	Traffic and Transport: Scoped out during operation and maintenance. Opinion: This should remain within scope as operational and maintenance activities will require heavy machinery and access to the towers, with the associated noise, ground disturbance and CO2 pollution.	The operational phase is restricted to occasional maintenance operation which generates significantly lower volumes of traffic that are not considered to be in excess of daily traffic variation levels on the road network. These vehicles would mainly comprise light traffic such as 4x4 vehicles. As such, the operational phase has been scoped out of this Chapter.
Network Rail 20 September 2024	EIA Scoping Consultation Response	A Traffic Assessment should be included to assess the effects of construction traffic on existing traffic flows and the public road network. Preferred construction traffic routes should be indicated. This will enable Network Rail to assess the possible impacts where/if the traffic crosses over/under our infrastructure and the suitability of these crossings.	A Transport Assessment is provided as **Volume 5, Appendix 14.1: Transport Assessment** and shows the study area for the purposes of this assessment. It is not anticipated that the rail infrastructure will be impacted as a result of the construction of the Proposed Development. The proposed alignment would not cross any operational railway lines.

Consultee and Date	Scoping/Other Consultation	Issue Raised	How Issue has been Addressed
		Details of proposed construction and engineering works in the vicinity of the railway line. This should include the location, design and construction of the proposed buried cable route where it will cross underneath the railway.	As above.

Desk Based Research and Data Sources

14.3.6 To inform the baseline assessment and to establish the nature of the surrounding road and footway infrastructure, the following desktop reviews have been undertaken:

- review of relevant transport policy;
- collection of existing traffic data from Department for Transport[13] and Transport Scotland[14] databases;
- review of personal injury accident data[15];
- identification of sensitive locations (as defined by IEMA such as settlements, schools, tourist attractions etc.) using freely available online mapping;
- identification of any other traffic sensitive receptors in the area (core paths, routes, communities, etc.) using freely available online mapping and relevant agency websites;
- review of OS plans; and
- identification of potential origin locations of construction staff and supply locations for construction material to inform the extent of the local area roads network to be included in the assessment from online searches and mapping.

Field Survey

14.3.7 The following field surveys were carried out to inform the assessment:

- site visit; and
- collection of traffic flow and speed data from Automatic Traffic Count (ATC) surveys.

Sensitivity of Receptors

14.3.8 The IEMA '*Guidelines for Environmental Impact Assessment*' (2005) notes that the separate IEMA Guidelines should be used for characterising the environmental traffic and transport effects (off-site effects) and the assessment of significance of major new developments. Recent Guidelines published by the IEMA, namely *'Environmental Assessment of Traffic and Movement'* (2023) provides an update to the previously used guidance, *'Guidelines for the Environmental Assessment of Road Traffic'* (IEMA, 1993) document, that 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.

14.3.9 The receptors which have been considered in this assessment are the users of the roads (comprising vehicles, cyclists, pedestrians and equestrians) within the study area and the locations through which those roads pass which may be susceptible to effects as a result of changes to traffic flows and compositions on these routes.

14.3.10 The 2023 IEMA Guidelines include 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 14.2: Classification of Receptor Sensitivity**.

[13] UK Government, Road Traffic Statistics. [Online] Available at: https://www.gov.uk/government/collections/road-traffic-statistics
[14] Transport Scotland, Traffic Data. [Online] Available at: https://www.transport.gov.scot/our-approach/statistics/
[15] CrashMap, 2025. [Online] Available at: https://www.crashmap.co.uk/Search.

Table 14.2: Classification of Receptor Sensitivity

Receptor	Sensitivity			
	High	**Medium**	**Low**	**Negligible**
Users of Roads (pedestrians, cyclists, equestrians and drivers)	Where the road is a minor rural road, not constructed to accommodate frequent use by Heavy Goods Vehicles (HGVs). Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.	Where the road is a local A or B class road, capable of regular use by HGV traffic. Includes roads where there is some traffic calming or traffic management measures.	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.	Where roads have no adjacent settlements. Includes new strategic trunk roads that would be little affected by additional traffic.
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, few community or public facilities or services.	Where a location includes individual dwellings or scattered settlements with no facilities.

14.3.11 It is acknowledged that there will be locations both in terms of users of roads or users / residents of locations that may not fit within one of the sensitivity classifications highlighted above. In these situations professional judgement has been applied in the assignment of sensitivity and justification for any changes provided.

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

Magnitude of Impact (Change in Traffic Flows and Composition)

14.3.13 The magnitude of change (of traffic flows and composition) has been assessed in accordance with the following rules which are outlined in the 2023 IEMA Guidelines, and are used to inform a screening exercise to determine which links within the study area are to be considered for detailed analysis of their traffic-related environmental effects in the assessment:

- *Rule 1 – Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles (HGV) will increase by more than 30%); and*
- *Rule 2 – Include highway links of high sensitivity where traffic flows have increased by 10% or more.*

14.3.14 Examples of sensitive locations are presented in the 2023 IEMA Guidelines as hospitals, churches, schools, historical buildings and tourist attractions, for example. These locations are to be assessed in relation to "Rule 2".

Traffic-Related Environmental Impacts

14.3.15 The IEMA Guidelines identify the key impact types that are most important when assessing the implications of traffic and transport impacts from an individual development. The impacts and any relevant criteria used to inform determination of levels of magnitude of these changes are discussed below:

- Severance – the IEMA Guidelines advises that, *"The Department for Transport has historically set out a range of indicators for determining the significance of severance. Changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law. However, caution needs to be observed when applying these thresholds as very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic."* (Paragraph 3.16). The Guidelines acknowledge that changes in traffic flows should be used cautiously, stating that *"the assessment of*

severance should pay full regard to specific local conditions, eg sensitivity of adjacent land uses, prevalence of vulnerable people, whether or not crossing facilities are provided, traffic signal settings, etc." (Paragraph 3.17);

- Driver delay – the IEMA Guidelines note that these delays are only likely to be *"significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system"* (Paragraph 3.20);
- Pedestrian delay (incorporating delay to all non-motorised users) – the IEMA Guidelines advises that *"pedestrian delay and severance are closely related effects and can be grouped together. Changes in the volume, composition or speed of traffic may affect the ability of people to cross roads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the development site." (Para 3.24).* Furthermore, the guidance advises that *"…it is not considered wise to set down definitive thresholds. Instead it is recommended that the competent traffic and movement expert use their judgement to determine whether pedestrian delay constitutes a significant effect."* (Paragraph 3.26);
- Non-motorised user amenity - the IEMA Guidelines advise that, (Paragraph 3.30). *"The 1993 Guidelines suggest that a tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or HGV component) is halved or doubled. Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law."*;
- 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 considered to be sensitive to traffic flow, changes in traffic flow of 30%, 60% and 90% are regarded as producing minor, moderate and substantial changes respectively in the guidelines. (Paragraph 2.19). As such, this has been used to assess the potential impacts associated with construction activities around fear and intimidation on people in close proximity to the Proposed Development;
- Road safety – professional judgement would be used to assess the implications of local circumstances, or factors which may elevate or lessen risks of accidents. In line with the IEMA Guidelines, those areas of collision clusters would be subject to detailed review;
- Road safety audits – It would be proposed to undertake any necessary Road Safety Audits (RSA) post consent and it is considered that this can be secured via a planning condition; and
- Large loads – Plant such as cranes may be abnormal due to their width. This would be confirmed post consent with appropriate reviews and BE16 applications made at the time.

14.3.16 While not specifically identified as more vulnerable road users, cyclists are considered in similar terms to pedestrians.

14.3.17 Table 3.7 of LA104 Environmental Assessment Methodology of the Design Manual for Roads and Bridges (DMRB)[9] sets out four levels against which the magnitude of these impacts should be assessed – major, moderate, minor and negligible. The impacts and levels of magnitude are described in **Table 14.3: Magnitude of Impact**.

Table 14.3: Magnitude of Impact

Magnitude	Description
Major	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.
Minor	These effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but may be important in improving the subsequent design of the project.
Negligible	No effects or those that are imperceptible.

Effect Significance

14.3.18 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 DMRB LA 104 Environmental Assessment and Monitoring and summarised in **Table 14.4: Matrix for Determination of Significance of Effects**. Major and moderate effects are considered significant in the context of the EIA Regulations.

Table 14.4: Matrix for Determination of Significance of Effects

Magnitude of Impact	Sensitivity of Receptor/Receiving Environment to change				
	High	**Medium**	**Low**	**Negligible**
Major	Major	Major/ Moderate	Moderate/Minor	Minor
Moderate	Major/ Moderate	Moderate	Minor	Minor/ Negligible
Minor	Moderate/Minor	Minor	Minor	Minor/ Negligible
Negligible	Minor	Minor	Minor/ Negligible	Negligible

14.3.19 Where an effect could be one of **Major/Moderate** or **Moderate/Minor** significance, professional judgement has been used to determine which option should be applicable. Effects judged to be of **Minor** or **Negligible** significance are considered **Not Significant** in the context of the EIA Regulations.

Assessment Assumptions and Limitations

Assessment Assumptions

14.3.20 The following assumptions have been made when undertaking the assessment of effects:

- the assessment has assumed that all construction traffic which has been assigned to the A90 (T) in the trip generation for each of the Transport Sections, would travel to the Site via the A90 (T), however in reality there are quarries in Angus Council area and Aberdeenshire Council area where aggregate materials would be sourced. This is considered a sufficiently robust assessment;
- the origin points for materials have been made to provide a worst-case assessment scenario. Should these origin points change, the effects on surrounding areas may alter to those presented in the assessment;
- it is anticipated that the removal of timber will take place in 2026 and 2027 before the peak construction activities of the Proposed Development;
- National Road Traffic Forecasts (NRTF) low growth assumptions have been used to develop future year baseline traffic flows. The NRTF low growth factor for 2024 to 2026 is 1.011; and
- variances may occur in the calculations due to rounding. These variances are not considered significant.

Assessment Limitations

14.3.21 The assessment is based upon average traffic trips from information obtained from the Principal Contractors based on their experience of similar projects. Construction activities at the Site may fluctuate between one day and another and it is not possible to fully develop a day-by-day traffic generation estimate as no Balance of Plant (BoP) contractor has been appointed at this time and external factors can impact upon activities on a day by day basis (weather conditions, availability of materials, time of year, etc).

14.3.22 Whilst some information gaps have been identified, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant effects on traffic and transport.

14.4 Baseline Conditions

Summary of Baseline Conditions for each Transport Section

Transport Section i: Tealing to Inchbare (Towers G1 to S83)

Existing Traffic Conditions – Transport Section i

14.4.1 The survey data gathered from traffic counters allowed the traffic flows to be split into vehicle classes. The data was summarised into Cars/Large Goods Vehicles (LGVs) and HGVs (all goods vehicles >3.5 tonnes gross maximum weight and also including buses). A summary of the results for the average two-way 24-hour daily period in Section i is provided in **Table 14.5: 24-hour Average Daily Traffic Flow Data (2024) – Transport Section** i. The locations of the count points are presented in **Volume 3, Figure 14.1: Transport Assessment Survey Locations and Sections for Transport Assessment.**

Table 14.5: 24-hour Average Daily Traffic Flow Data (2024) – Transport Section i[16]

Site Ref	Survey Location	Cars & LGV	HGV	Total
1	A90 (T), south of Inveraldie	20,211	3,284	23,495
2	Zc6, west of Kirkton of Tealing	466	153	619
3	A928, southeast of Glenogilvy	690	198	888
4	A90 (T), north of Gateside	17,656	4,925	22,581
5	A94, west of Douglastown	3,667	1,080	4,747
6	A90 (T), north of Halfpennyburn	18,899	3,322	22,221
7	A926, west of Padanaram	4,928	1,045	5,973
8	Zc29, Forfar	1,945	373	2,317
9	B957, northeast of Angus Milling	269	66	335
10	Zc31, northeast of Baldoukie Farm and north of Tannadice	91	33	124
11	A90 (T), northeast of Finavon	18,445	18,445	18,445
12	A90 (T), east of Nether Careston	15,517	5,743	21,260
13	C33, west of Findowrie Farm, Brechin	3,214	793	4,007
14	Zc30, northwest of Highbrea Boarding, Brechin	199	70	268
15	A90 (T) South of Brechin Golf Course	15,332	2,376	17,708
16	B966, north of Inchbare	1,725	486	2,211
17	A90 (T), southwest of North Water Bridge	15,477	2,952	18,429
20	A90 (T), southwest of Laurencekirk	18,856	2,697	21,553
25	A90 (T), southwest of Stonehaven	11,793	1,714	13,507
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	22,610	1,782	24,392
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	32,069	2,775	34,843

14.4.2 The two-way seven-day average and 85th percentile speeds[17] observed at the ATC and Transport Scotland count sites within the Transport Section i study area are summarised below in **Table 14.6: Speed Data (2024) – Transport Section i**. There is no speed data available at DfT count sites.

Table 14.6: Speed Data (2024) – Transport Section i

Site Ref	Survey Location	Mean Speed (mph)	85 %ile Speed (mph)	Speed Limit (mph)
1	A90 (T), south of Inveraldie	62.6	71.3	70.0
2	Zc6, west of Kirkton of Tealing	43.0	51.3	60.0
3	A928, southeast of Glenogilvy	45.7	51.5	60.0
4	A90 (T), north of Gateside	58.8	71.3	70.0
5	A94, west of Douglastown	55.7	63.2	60.0
6	A90 (T), north of Halfpennyburn	64.7	71.3	70.0
7	A926, west of Padanaram	47.5	53.8	60.0
8	Zc29, Forfar	45.0	51.7	60.0

[16] Please note minor variances due to rounding may occur
[17] Speed at which 85% of vehicles on a road are travelling at or below.

Site Ref	Survey Location	Mean Speed (mph)	85 %ile Speed (mph)	Speed Limit (mph)
9	B957, northeast of Angus Milling	44.2	50.3	60.0
10	Zc31, northeast of Baldoukie Farm and north of Tannadice	45.8	54.4	60.0
11	A90 (T), northeast of Finavon	-	-	70.0
12	A90 (T), east of Nether Careston	64.8	71.9	70.0
13	C33, west of Findowrie Farm, Brechin	33.9	38.7	60.0
14	Zc30, northwest of Highbrea Boarding, Brechin	44.4	51.9	60.0
15	A90 (T) South of Brechin Golf Course	-	-	70.0
16	B966, north of Inchbare	40.2	45.4	40.0
17	A90 (T), southwest of North Water Bridge	64.5	71.3	70.0
20	A90 (T) southwest of Laurencekirk	-	-	70.0
25	A90 (T), southwest of Stonehaven	-	-	70.0
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	-	-	70.0
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	-	-	70.0

14.4.3 The available speed information shown in **Table 14.6: Speed Data (2024) – Transport Section i** indicates that there is compliance with the current speed limit with the exception of the following locations:

- A90 (T), south of Inveraldie;
- A90 (T), north of Gateside;
- A94, west of Douglastown;
- A90 (T), north of Halfpennyburn;
- A90 (T), east of Nether Careston;
- B966, north of Inchbare; and
- A90 (T), southwest of North Water Bridge.

14.4.4 This indicates that traffic management measures will likely be required at these locations and that Police Scotland may wish to consider enforcement spot checks in this area.

Pedestrian and Cyclist Networks – Transport Section i

14.4.5 A review of the online mapping available from the UK Government's *Core Paths – Scotland*[18] found that the following Core Paths are located within the Proposed Development's Limit of Deviation (LOD):

- the Kirkton of Tealing to Balnuith core path will be crossed by an access track between Balnuith Farm and the existing Tealing Substation;
- the Kirkton of Auchterhouse to Balluderon core path will be crossed by an access track to the west of North Balluderon;
- the Prieston to Glen Ogilvie core path will be crossed by the Proposed Alignment to the east of Prieston Hill and to the north of Coldstream;
- the Jericho core path will be crossed by the Proposed Alignment to the west of Nether Hayston; and
- the Drumgley to Glamis Station core path will be crossed by the Proposed Alignment to the east of Haughs of Cossans Cottage.

[18] UK Government, 2025. Core Paths – Scotland. [Online] Available at: https://www.data.gov.uk/dataset/f69babe5-6ac7-4292-92ab-012fe82906b8/core-paths-scotland.

14.4.6 There are also a number of Public Right of Ways (PRoWs) located along the Proposed Development and include the following:

- TC/TA34/1 (PRoW);
- TC/TA31/1 (PRoW);
- TA/TA156/1 (PRoW);
- TA/TA154/1 (PRoW);
- TA/TA151/1 (PRoW);
- TA/TA171/1 (PRoW); and
- TA/TA185/1 (PRoW).

14.4.7 A review of Sustrans' map of the National Cycle Network[19] indicates that there are no National Cycle Network routes in the vicinity of the Proposed Development within Transport Section i.

14.4.8 Recreational routes identified in each Section of the Proposed Development are shown on **Volume 3, Figures 7.2.1 to 7.2.7: Recreational Assets**.

Accident Review – Transport Section i

14.4.9 UK TA Guidance[20] requires an analysis of Personal Injury Accident (PIA) data on the road network in the vicinity of any development to be undertaken for at least the most recent 3-year period, or preferably a 5-year period, particularly if the site has been identified as being within a high accident area. Whilst the study area has not been identified as having a high accident rate, a five-year review has been undertaken to ensure a comprehensive assessment has been undertaken.

14.4.10 Road traffic accident data for the five-year period commencing 1 January 2019 through to the 31 December 2023 was obtained from the online resource CrashMap[15] which uses data collected by the police about road traffic accidents occurring on British roads.

14.4.11 During the five-year period between 1 January 2019 and 31 December 2023, the following accident data was recorded along roads in the locality of Transport Section i (as shown in **Volume 5**, **Appendix 14.1: Transport Assessment, Plate 14.1.4: Accident Locations**):

- a total of 96 PIAs were recorded on the local and trunk road network within the Section i study area, of which 62 (65%) were recorded as slight, 31 (32%) were recorded as serious and three fatalities (3%) were recorded;
- a PIA that resulted in a fatality was recorded at the A928/A90 (T) priority junction and involved an HGV and a bus, and resulted in a total of 19 casualties. Within the five year assessment period, another two PIAs which were recorded as slight occurred at the junction;
- a PIA that resulted in a fatality occurred at the Zu408/C32 junction and involved cars. A young driver was involved in the incident. A total of seven casualties were documented;
- a PIA that resulted in a fatality was recorded on the A90 (T), approximately 500 m to the east of C33/A90 (T) priority junction in the vicinity of a parking area along the A90 (T). The PIA involved a car and an HGV and resulted in one casualty which was a fatality;
- two slight PIAs were recorded at the Claverhouse Road/A90 (T)/Fountainbleau Drive signalised junction. One of the PIAs involved cars and the other PIA involved a car and an HGV;
- six PIAs which included two slight PIAs and four serious PIAs were recorded at the A90 (T) Emmock Roundabout. Four of the PIAs were documented as single vehicle accidents, of which three car accidents were recorded as serious and one HGV accident was recorded as serious. Two of the PIAs were documented as multi-vehicle accidents, of which one serious PIA involved a motorcycle and car and one slight PIA involved a car and an HGV;

[19] Sustrans, n.d. The National Cycle Network. [Online] Available at: https://www.sustrans.org.uk/national-cycle-network.
[20] UK Government, 2014. Guidance Travel Plans, Transport Assessments and Statements. [Online] Available at: https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements.

- four PIAs were recorded in the vicinity of the Zc6/A90 (T) priority junction, of which three were recorded as slight and one was recorded as serious. One serious PIA and one slight PIA accident involved cars, one slight PIA involved HGVs and one slight PIA involved a car and an HGV;
- four PIAs were recorded at the A932 (Dundee Road) of which two were recorded as slight and two were recorded as serious. All four PIAs involved collisions between cars and HGVs;
- four PIAs were recorded on the A94 at the A94/A90 (T) junction, to the west of the underpass. Three of the PIAs were documented as single vehicle accidents which included one bicycle accident recorded as serious, one motorcycle accident recorded as serious and one car accident recorded as slight. The remaining accident involved two cars and was recorded as slight;
- two PIAs were recorded at the Fairview/A90 (T) junction which resulted in slight accidents. Both accidents involved cars; and
- two PIAs were recorded at the A90 (T)/C35/Zc35 staggered junction which both resulted in slight PIAs and involved cars.

14.4.12 A summary of the PIA location's casualty types and vehicle types within Transport Section i is shown in **Table 14.7: Casualty Types (2019 – 2023) – Transport Section i** and **Table 14.8: Vehicle Types (2019 – 2023) – Transport Section i**, respectively.

Table 14.7: Casualty Types (2019 – 2023) – Transport Section i

Section i – Road Type	Casualty Types			
	Pedal Cycle	Child	Motorcycle	Pedestrian
Local Road Network	1	4	3	0
Trunk Road Network	0	3	5	1

Table 14.8: Vehicle Types (2019 – 2023) – Transport Section i

Section i – Road Type	Vehicle Types					
	Pedal Cycle	Motorcycle	Car	HGV	Bus	Young Driver
Local Road Network	1	3	26	5	1	13
Trunk Road Network	0	5	57	26	4	14

Future Baseline in the Absence of the Proposed Development – Transport Section i

14.4.13 The projected future baseline flows (2026) for the traffic count points located within the study area of Transport Section i are shown in **Table 14.9: 24-hour Average Daily Traffic Data (2026) - Transport Section i**. These have been estimated by applying low NRTF growth factors to the 2024 Baseline flows. These two-way flows have been used in the Construction Peak Traffic Impact Assessment for Section i (see **Section 14.6**).

Table 14.9: 24-hour Average Daily Traffic Data (2026) – Transport Section i

Site Ref	Survey Location	Cars & LGV	HGV	Total
1	A90 (T), south of Inveraldie	20,433	3,320	23,753
2	Zc6, west of Kirkton of Tealing	471	155	626
3	A928, southeast of Glenogilvy	697	201	898
4	A90 (T), north of Gateside	17,850	4,979	22,829
5	A94, west of Douglastown	3,707	1,092	4,799
6	A90 (T), north of Halfpennyburn	19,107	3,359	22,465
7	A926, west of Padanaram	4,982	1,057	6,038
8	Zc29, Forfar	1,966	377	2,343
9	B957, northeast of Angus Milling	272	67	339
10	Zc31, northeast of Baldoukie Farm and north of Tannadice	92	34	126
11	A90 (T), northeast of Finavon	18,648	18,648	18,648
12	A90 (T), east of Nether Careston	15,688	5,806	21,494
13	C33, west of Findowrie Farm, Brechin	3,249	802	4,051
14	Zc30, northwest of Highbrea Boarding, Brechin	201	70	271
15	A90 (T) South of Brechin Golf Course	15,501	2,402	17,903
16	B966, north of Inchbare	1,744	491	2,236
17	A90 (T), southwest of North Water Bridge	15,647	2,984	18,632
20	A90 (T), southwest of Laurencekirk	19,063	2,727	21,790
25	A90 (T), southwest of Stonehaven	11,923	1,733	13,656
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	22,859	1,801	24,661
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	32,421	2,805	35,227

Please note minor variances due to rounding may occur.

Summary of Receptor Sensitivity – Transport Section i

14.4.14 A review of sensitive receptors has been undertaken within the study area of Transport Section i. **Table 14.10: Summary of Receptor Sensitivity – Transport Section i** details the receptors and their sensitivities for use within the Transport Section i assessment.

14.4.15 A justification for the sensitivity has been provided, based upon the details contained in **Table 14.2: Classification of Receptor Sensitivity**.

Table 14.10: Summary of Receptor Sensitivity – Transport Section i

Receptor	Sensitivity	Justification
A90 Road Users	**Low**	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Residents/visitors of Tealing	**Low**	Where a location is a small rural settlement, few community or public facilities or services.
Zc6 Road Users	**High**	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors along the Zc6 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
A928 Road Users	**Medium**	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along the A928 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
A94 Road Users	**Medium**	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along the A94 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents/visitors of Douglastown	**Low**	Where a location is a small rural settlement, few community or public facilities or services.
Residents/visitors of Glamis	**Low**	Where a location is a small rural settlement, few community or public facilities or services.
A926 Road Users	**Medium**	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along the A926 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents/visitors of Padanaram	**Low**	Where a location is a small rural settlement, few community or public facilities or services.
Residents/visitors of Kirriemuir (including Maryton)	**Medium**	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
B9128 Road Users	**Medium**	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors of B9128 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
Zc29 Road Users	**High**	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors of Zc29 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
B957 Road Users	**Medium**	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors of B957 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents/visitors of Tannadice	**Low**	Where a location is a small rural settlement, few community or public facilities or services.
Zc31 Road Users	**High**	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.

Receptor	Sensitivity	Justification
Residents/visitors of Zc31 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
C33 Road Users	**High**	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors of C33 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
Zc30 Road Users	**High**	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors of Zc30 road (including Kirkton of Menmuir)	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
B966 Road Users	**Medium**	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors of B966 road	**Negligible**	Where a location includes individual dwellings or scattered settlements with no facilities.
A90 (T) Road Users near Stracathro Hospital	**Low**	Where the road is Trunk or A-class, constructed to accommodate significant traffic.
Minor Roads and Access Tracks Road Users	**High**	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Core Path Users	**High**	Minor paths/tracks used by walkers, not constructed to accommodate HGV traffic flows.

14.4.16 As previously noted in the **'Magnitude of Impact'** section of this Chapter, examples of sensitive locations are presented in the IEMA Guidelines as locations which include hospitals, churches, schools, historical buildings, tourist attractions for example. Based on these indicators which are stated within the IEMA Guidelines, the following locations within the study area have been identified as sensitive locations in this assessment:

- Zc6 (church);
- Tealing (school and tourist attractions);
- Kirriemuir (including Maryton) (veterinary clinic);
- Tannadice (church and cemetery);
- Zc30 (including Kirkton of Menmuir) (community hall);
- A90 (T) near Stracathro Hospital;
- Minor Roads and Access Tracks (including Zu322, Zu360, Zu360-2, U364, Zu364.Zc29, Zc373, Zc374, Zu370, C32, Zu408, U407, Zu412, Zu413, Zu413-1, Zu414, Zu415, Zu418, Zu417, Zu417-1, Zu429 and Zc35); and
- Core Paths.

14.4.17 As such, these will be subject to IEMA "Rule 2" (see paragraph **14.3.13**) assessments, where the predicted road traffic increase due to the construction phase of the Proposed Development is equal to or in excess of 10%.

14.4.18 All other locations within the study area are subject to "Rule 1" (see paragraph **14.3.13**) 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.

Transport Section ii: Inchbare to Drumlithie (Towers S82 to S7)

Existing Traffic Conditions – Section ii

14.4.19 The survey data gathered from traffic counters allowed the traffic flows to be split into vehicle classes. The data was summarised into Cars/LGVs and HGVs (all goods vehicles >3.5 tonnes gross maximum weight and also including buses). A summary of the results for the average two-way 24-hour daily period in Transport Section ii is provided in **Table 14.11: 24-hour Average Daily Traffic Flow Data (2024) – Transport Section** ii. The locations of the count points are presented in **Volume 3, Figure 14.1: Transport Assessment Survey Locations and Sections for Transport Assessment**.

Table 14.11: 24-hour Average Daily Traffic Flow Data (2024) – Transport Section ii

Site Ref	Survey Location	Cars & LGV	HGV	Total
1	A90 (T), south of Inveraldie	20,211	3,284	23,495
4	A90 (T), north of Gateside	17,656	4,925	22,581
6	A90 (T), north of Halfpennyburn	18,899	3,322	22,221
11	A90 (T), northeast of Finavon	18,445	18,445	18,445
12	A90 (T), east of Nether Careston	15,517	5,743	21,260
15	A90 (T) South of Brechin Golf Course	15,332	2,376	17,708
17	A90 (T), southwest of North Water Bridge	15,477	2,952	18,429
18	B974 Burnside Road	306	103	410
19	B9120 northwest of Laurencekirk	637	139	777
20	A90 (T) southwest of Laurencekirk	18,856	2,697	21,553
21	B966, north of Fordoun	147	99	247
22	Glenbervie Road	197	60	257
23	Unclassified Road, north of Glenbervie Road and south of C1K	70	36	106
24	C1K, northwest of Tannachie	250	103	353
25	A90 (T), southwest of Stonehaven	11,793	1,714	13,507
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	22,610	1,782	24,392
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	32,069	2,775	34,843

Please note minor variances due to rounding may occur.

14.4.20 The two-way seven-day average and 85th percentile speeds observed at the ATC and Transport Scotland count sites within the Section ii study area are summarised below in **Table 14.12: Speed Data (2024) – Transport Section ii**. There is no speed data available at DfT count sites.

Table 14.12: Speed Data (2024) – Transport Section ii

Site Ref	Survey Location	Mean Speed (mph)	85 %ile Speed (mph)	Speed Limit (mph)
1	A90 (T), south of Inveraldie	62.6	71.3	70.0
4	A90 (T), north of Gateside	58.8	71.3	70.0
6	A90 (T), north of Halfpennyburn	64.7	71.3	70.0
11	A90 (T), northeast of Finavon	-	-	70.0
12	A90 (T), east of Nether Careston	64.8	71.9	70.0
15	A90 (T) South of Brechin Golf Course	-	-	70.0
17	A90 (T), southwest of North Water Bridge	64.5	71.3	70.0
18	B974 Burnside Road	48.1	57.4	60.0
19	B9120 northwest of Laurencekirk	53.4	62.0	60.0
20	A90 (T) southwest of Laurencekirk	-	-	70.0
21	B966, north of Fordoun	47.5	56.4	60.0
22	Glenbervie Road	40.3	47.8	60.0
23	Unclassified Road, north of Glenbervie Road and south of C1K	35.8	43.0	60.0

Site Ref	Survey Location	Mean Speed (mph)	85 %ile Speed (mph)	Speed Limit (mph)
24	C1K, northwest of Tannachie	48.6	56.9	60.0
25	A90 (T), southwest of Stonehaven	-	-	70.0
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	-	-	70.0
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	-	-	70.0

14.4.21 The available speed information shown in **Table 14.12: Speed Data (2024) – Transport Section ii** indicates that there is compliance with the current speed limit with the exception of the following locations:

- A90 (T), south of Inveraldie;
- A90 (T), north of Gateside;
- A90 (T), north of Halfpennyburn;
- A90 (T), east of Nether Careston;
- A90 (T), southwest of North Water Bridge; and
- B9120 northwest of Laurencekirk.

14.4.22 This indicates that traffic management measures will be required at these locations and that Police Scotland may wish to consider enforcement spot checks in these areas.

Pedestrian and Cyclist Networks – Transport Section ii

14.4.23 A review of the online mapping available from the UK Government's Core Paths – Scotland found that the following Core Paths are located within the Proposed Development's LOD:

- the Edzell to Westside core path will be crossed by an access track to the southeast of Edzell Wood.
- Fordoun: Monboddo Link Road will be crossed by the Proposed Alignment and by access tracks between Fordoun and Auchenblae and to the north of the Woods of Redhall.

14.4.24 There are also a PRoW and a Scottish Hill Track located along the Proposed Development and include the following:

- GK/GK67/1 (PRoW); and
- SHT(6) 197 (Scottish Hill Track).

14.4.25 It should be noted that there are footways and pedestrian facilities located within villages and towns within the study area.

14.4.26 A review of Sustrans' map[19] of the NCN indicates that there are no NCN routes in the vicinity of the Proposed Development within Transport Section ii.

14.4.27 Recreational routes identified in each Section of the Proposed Development are shown in **Volume 3, Figures 7.2.1 to 7.2.7: Recreational Assets**.

Accident Review – Transport Section ii

14.4.28 UK TA Guidance requires an analysis of PIA data on the road network in the vicinity of any development to be undertaken for at least the most recent 3-year period, or preferably a 5-year period, particularly if the site has been identified as being within a high accident area. Whilst the study area has not been identified as having a high accident rate, a five-year review has been undertaken to ensure a comprehensive assessment has been undertaken.

14.4.29 Road traffic accident data for the five-year period commencing 1 January 2019 through to the 31 December 2023 was obtained from the online resource CrashMap[15] which uses data collected by the police about road traffic accidents occurring on British roads. During the five-year period between 1 January 2019 and 31 December 2023, the following PIA data was recorded along roads in the locality of Section ii (as shown in **Volume 5**, **Appendix 14.1: Transport Assessment, Plate 14.1.4: Accident Locations**):

- a total of 38 PIAs were recorded on the local and trunk road network within the Section ii study area, of which 16 (42%) were recorded as slight, 20 (53%) were recorded as serious and two fatalities (5%) were recorded;
- one fatal PIA was recorded approximately 300 m to the southwest of Landends. The PIA involved a single car accident.
- one fatal PIA was recorded at the Station Road/A90 (T) priority junction which involved a bus and a car. A total of seven casualties were documented. One serious vehicle accident was also recorded at the junction within the 5-year survey period and involved two cars;
- four PIAs were recorded at the Zc37/A90 (T) priority junction of which three were recorded as slight and one was recorded as serious. One slight PIA involved a motorcycle and an HGV, one slight PIA involved a car and an HGV, and two PIAs involving cars were recorded as slight and serious, respectively;
- four PIAs were recorded at the priority junction of the A90 (T) and the road leading to Dovecoat Caravan Park which were all recorded as serious and involved cars;
- two PIAs were recorded at the A937/A90 (T) staggered junction of which one was recorded as slight and one as serious. Both of the PIAs involved cars;
- two serious PIAs were recorded at the priority junction of the road leading to Upper Powburn and the A90 (T), of which one of the PIAs involved cars and one involved a car and an HGV; and
- two serious PIAs were recorded at the Old Aberdeen Road/A90 (T) priority junction, of which one of the PIAs involved cars and one involved a car and an HGV.

14.4.30 A summary of the PIA casualty types and vehicle types within Section ii is shown in **Table 14.13: Casualty Types (2019 – 2023) – Transport Section ii** and **Table 14.14: Vehicle Types (2019 – 2023) – Transport Section ii,** respectively.

Table 14.13: Casualty Types (2019 – 2023) – Transport Section ii

Section ii – Road Type	Casualty Types			
	Pedal Cycle	Child	Motorcycle	Pedestrian
Local Road Network	1	1	0	0
Trunk Road Network	0	1	4	0

Table 14.14: Vehicle Types (2019 – 2023) – Transport Section ii

Section ii – Road Type	Vehicle Types					
	Pedal Cycle	Motorcycle	Car	HGV	Bus	Young Driver
Local Road Network	1	0	9	1	0	3
Trunk Road Network	0	4	24	9	1	8

Future Baseline in the Absence of the Proposed Development – Transport Section ii

14.4.31 The projected future baseline flows (2026) for the count points located within the study area of Transport Section ii are shown in **Table 14.15: 24-hour Average Daily Traffic Flow Data (2026) – Transport Section ii**. These have been estimated by applying low NRTF growth factors to the 2024 Baseline flows. These two-way flows have been used in the Construction Peak Traffic Impact Assessment for Transport Section ii (see **Section 14.6**).

Table 14.15: 24-hour Average Daily Traffic Flow Data (2026) – Transport Section ii

Site Ref	Survey Location	Cars & LGV	HGV	Total
1	A90 (T), south of Inveraldie	20,433	3,320	23,753
4	A90 (T), north of Gateside	17,850	4,979	22,829
6	A90 (T), north of Halfpennyburn	19,107	3,359	22,465
11	A90 (T), northeast of Finavon	18,648	18,648	18,648
12	A90 (T), east of Nether Careston	15,688	5,806	21,494
15	A90 (T), South of Brechin Golf Course	15,501	2,402	17,903
17	A90 (T), southwest of North Water Bridge	15,647	2,984	18,632

Site Ref	Survey Location	Cars & LGV	HGV	Total
18	B974, Burnside Road	310	104	414
19	B9120, northwest of Laurencekirk	644	141	785
20	A90 (T), southwest of Laurencekirk	19,063	2,727	21,790
21	B966, north of Fordoun	149	100	249
22	Glenbervie Road	199	61	260
23	Unclassified Road, north of Glenbervie Road and south of C1K	70	36	107
24	C1K, northwest of Tannachie	253	104	357
25	A90 (T), southwest of Stonehaven	11,923	1,733	13,656
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	22,859	1,801	24,661
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	32,421	2,805	35,227

Summary of Receptor Sensitivity – Transport Section ii

14.4.32 A review of sensitive receptors has been undertaken within the study area of Transport Section ii. **Table 14.16: Summary of Receptor Sensitivity – Transport Sections ii** shows the receptors and their sensitivities for use within the Section ii assessment.

14.4.33 A justification for the sensitivity has been provided, based upon the details contained in **Table 14.2: Classification of Receptor Sensitivity**.

Table 14.16: Summary of Receptor Sensitivity – Transport Sections ii

Receptor	Sensitivity	Justification
A90 Road Users	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
B966 Road Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along B966 road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
B974 Road Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along B974 Road (including Luthermuir School)	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
B9120 (Thorton Castle) Road Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along B9120 road (Thorton Castle)	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents/visitors of Fordoun	Low	Where a location is a small rural settlement, few community or public facilities or services.
Glenbervie Road Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors along Glenbervie Road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Unclassified Road Users, north of Glenbervie Road and south of C1K	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors along the Unclassified Road, north of Glenbervie Road and south of C1K	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.

Receptor	Sensitivity	Justification
C1K Road Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors along C1K	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Minor Roads and Access Tracks Road Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Core Paths	High	Minor paths/tracks used by walkers, not constructed to accommodate HGV traffic flows.

14.4.34 As previously noted in the **'Magnitude of Impact'** section of this Chapter, examples of sensitive locations are presented in the IEMA Guidelines as locations which include hospitals, churches, schools, historical buildings, tourist attractions for example. Based on these indicators which are stated within the IEMA Guidelines, the following locations within the study area have been identified as sensitive locations in this assessment:

- A90 (T) near Stracathro Hospital;
- B974 (including Luthermuir School);
- B9120 (Thornton Castle) (tourist attraction);
- Glenbervie Road (church);
- Unclassified Road Residents, north of Glenbervie Road and south of C1K (church);
- Minor Roads and Access Tracks (including C2K, Inverury Wood unclassified road, C6K, Primrosehill, U095K, Landends, C11K, U109K, C1K, C7K, C3K, C111K,73K and 72K); and
- Core Paths.

14.4.35 As such, these will be subject to IEMA "Rule 2" (see paragraph **14.3.13**) assessments, where the predicted road traffic increase due to the construction phase of the Proposed Development is equal to or in excess of 10%.

14.4.36 All other locations within the study area are subject to "Rule 1" (see paragraph **14.3.13**) 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.

Transport Section iii: Drumlithie to Kintore (Towers S6 to N1)

Existing Traffic Conditions – Transport Section iii

14.4.37 The traffic counters allowed the traffic flows to be split into vehicle classes. The data was summarised into Cars/LGVs and HGVs (all goods vehicles >3.5 tonnes gross maximum weight and also including buses). A summary of the results for the average two-way 24-hour daily period in Section iii is provided in

14.4.38 **Table 14.17: 24-hour Average Daily Traffic Flow Data (2024) – Transport Section iii**. The locations of the count points are presented in **Volume 3, Figure 14.1: Transport Assessment Survey Locations and Sections for Transport Assessment**.

Table 14.17: 24-hour Average Daily Traffic Flow Data (2024) – Transport Section iii

Site Ref	Survey Location	Cars & LGV	HGV	Total
1	A90 (T), south of Inveraldie	20,211	3,284	23,495
4	A90 (T), north of Gateside	17,656	4,925	22,581
6	A90 (T), north of Halfpennyburn	18,899	3,322	22,221
11	A90 (T), northeast of Finavon	18,445	18,445	18,445
12	A90 (T), east of Nether Careston	15,517	5,743	21,260
15	A90 (T) South of Brechin Golf Course	15,332	2,376	17,708
17	A90 (T), southwest of North Water Bridge	15,477	2,952	18,429
20	A90 (T) southwest of Laurencekirk	18,856	2,697	21,553

Site Ref	Survey Location	Cars & LGV	HGV	Total
24	C1K, northwest of Tannachie	250	103	353
25	A90 (T), southwest of Stonehaven	11,793	1,714	13,507
26	A957 Slug Road, west of Rickarton	901	309	1,210
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	22,610	1,782	24,392
28	B9077, west of Durris	2,750	595	3,345
29	A93, east of Crathes	4,073	817	4,890
30	A93, northeast of Drumoak	6,201	474	6,675
31	Couper's Road	193	90	283
32	B9125, Cullerlie	3,677	809	4,485
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	32,069	2,775	34,843
34	B9119, west of Garlogie	1,270	546	1,816
35	A944, west of junction with B9126	11,162	1,553	12,714
36	A944, west of Dunecht	3,214	793	4,007
37	B977, south of Leylodge	2,930	246	3,176

Please note minor variances due to rounding may occur.

14.4.39 The two-way seven-day average and 85th percentile speeds observed at the ATC and Transport Scotland count sites within the Section iii study area are summarised below in **Table 14.18: Speed Data (2024) – Transport Section iii**. There is no speed data available at DfT count sites.

Table 14.18: Speed Data (2024) – Transport Section iii

Site Ref	Survey Location	Mean Speed (mph)	85 %ile Speed (mph)	Speed Limit (mph)
1	A90 (T), south of Inveraldie	62.6	71.3	70.0
4	A90 (T), north of Gateside	58.8	71.3	70.0
6	A90 (T), north of Halfpennyburn	64.7	71.3	70.0
11	A90 (T), northeast of Finavon	-	-	70.0
12	A90 (T), east of Nether Careston	64.8	71.9	70.0
15	A90 (T), South of Brechin Golf Course	-	-	70.0
17	A90 (T), southwest of North Water Bridge	64.5	71.3	70.0
20	A90 (T) southwest of Laurencekirk	-	-	70.0
24	C1K, northwest of Tannachie	48.6	56.9	60.0
25	A90 (T), southwest of Stonehaven	-	-	70.0
26	Slug Road, west of Rickarton	49.4	57.0	60.0
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	-	-	70.0
28	B9077, west of Durris	47.6	53.3	50.0
29	A93, east of Crathes	53.3	59.8	60.0
30	A93, northeast of Drumoak	-	-	60.0
31	Couper's Road	32.6	39.7	60.0
32	B9125, Cullerlie	50.1	56.2	60.0

Site Ref	Survey Location	Mean Speed (mph)	85 %ile Speed (mph)	Speed Limit (mph)
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	-	-	70.0
34	B9119, west of Garlogie	49.8	56.3	60.0
35	A944, west of junction with B9126	-	-	60.0
36	A944, west of Dunecht	45.4	52.6	60.0
37	B977, south of Leylodge	-	-	60.0

14.4.40 The available speed information shown in **Table 14.18: Speed Data (2024) – Transport Section ii** indicates that there is compliance with the current speed limit with the exception to the following locations:

- A90 (T), south of Inveraldie;
- A90 (T), north of Gateside;
- A90 (T), north of Halfpennyburn;
- A90 (T), east of Nether Careston; and
- A90 (T), southwest of North Water Bridge.

14.4.41 This indicates that traffic management measures may be required at these locations and that Police Scotland may wish to consider enforcement spot checks in these areas.

Pedestrian and Cyclist Networks – Transport Section iii

14.4.42 A review of the online mapping available from the UK Government's *Core Paths – Scotland*[21] found that the following Core Paths are located within the Proposed Development's LOD:

- the Deeside Way – Drumoak to Crathes.

14.4.43 A review of Sustrans' map[19] of the National Cycle Network (NCN) indicates that NCN Route 195 passes through the Proposed Development LOD, to the northwest of Nether Park Quarry, within Transport Section iii. NCN Route 195 comprises a combination of a traffic-free route and on-road route at this location. NCN 195 (known as the Deeside Way) is located along traffic-free paths and short sections of on-road along the former Deeside Railway line between Aberdeen and Ballater.

Accident Review – Transport Section iii

14.4.44 UK TA Guidance requires an analysis of PIA data on the road network in the vicinity of any development to be undertaken for at least the most recent 3-year period, or preferably a 5-year period, particularly if the site has been identified as being within a high accident area. Whilst the study area has not been identified as having a high accident rate, a five-year review has been undertaken to ensure a comprehensive assessment has been undertaken.

14.4.45 Road traffic accident data for the five-year period commencing 1 January 2019 through to the 31 December 2023 was obtained from the online resource CrashMap[15] which uses data collected by the police about road traffic accidents occurring on British roads.

14.4.46 During the five year period between 1 January 2019 and 31 December 2023 the following PIA data was recorded along the roads in the locality of Transport Section iii (as shown in **Volume 5**, **Appendix 14.1: Transport Assessment, Plate 14.1.4: Accident Locations**):

- a total of 53 PIAs were recorded on the local and trunk road network within the Section iii study area, of which 17 (32%) were recorded as slight, 31 (58%) were recorded as serious and five fatalities (9%) were recorded;
- a fatality was recorded at the on-slip from the A92 to the A90 (T) which involved a car and an HGV;
- a PIA was recorded on the A90 (T) at the junction leading to Midtown of Barras Cottages which resulted in a fatality involving three cars;

[21] UK Government, 2025. Core Paths – Scotland. [Online] Available at: https://www.data.gov.uk/dataset/f69babe5-6ac7-4292-92ab-012fe82906b8/core-paths-scotland.

- a fatal PIA was recorded on a bend on the A944 which involved three cars;
- a PIA involving a fatality was recorded along the A93 at the junction with the access road leading to Drum Castle. The fatal PIA involved a motorcycle and a car;
- a PIA was recorded on the B9077 which resulted in a fatality and involved two cars;
- two serious PIAs were recorded at the A944/B9126 junction. One PIA involved a collision between two cars and the other PIA involved a collision between a car and cyclist; and
- two separate PIAs were recorded on a bend along the A957 Slug Road of which both were classified as serious. Both PIAs were recorded as single vehicle accidents of which one involved a car and one involved a motorcycle.

14.4.47 A summary of the PIA casualty types and vehicle types within Section iii is shown in **Table 14.19: Casualty Types (2019 – 2023) – Transport Section iii** and **Table 14.20: Vehicle Types (2019 – 2023) – Transport Section iii**, respectively.

Table 14.19: Casualty Types (2019 – 2023) – Transport Section iii

Section ii – Road Type	Casualty Types			
	Pedal Cycle	Child	Motorcycle	Pedestrian
Local Road Network	3	1	6	0
Trunk Road Network	0	2	1	1

Table 14.20: Vehicle Types (2019 – 2023) – Transport Section iii

Section ii – Road Type	Vehicle Types					
	Pedal Cycle	Motorcycle	Car	HGV	Bus	Young Driver
Local Road Network	1	6	36	2	0	9
Trunk Road Network	0	1	13	7	0	2

Future Baseline in the Absence of the Proposed Development – Transport Section iii

14.4.48 The projected future baseline flows (2026) for the traffic count points located within the study area of Transport Section iii are shown in **Table 14.21: 24-hour Average Daily Traffic Data (2026) – Transport Section iii**. These have been estimated by applying low NRTF growth factors to the 2024 Baseline flows. These two-way flows have been used in the Construction Peak Traffic Impact Assessment for Section iii (see **Section 14.6**).

Table 14.21: 24-hour Average Daily Traffic Flow Data (2026) – Transport Section iii

Site Ref	Survey Location	Cars & LGV	HGV	Total
1	A90 (T), south of Inveraldie	20,433	3,320	23,753
4	A90 (T), north of Gateside	17,850	4,979	22,829
6	A90 (T), north of Halfpennyburn	19,107	3,359	22,465
11	A90 (T), northeast of Finavon	18,648	18,648	18,648
12	A90 (T), east of Nether Careston	15,688	5,806	21,494
15	A90 (T) South of Brechin Golf Course	15,501	2,402	17,903
17	A90 (T), southwest of North Water Bridge	15,647	2,984	18,632
20	A90 (T) southwest of Laurencekirk	19,063	2,727	21,790
24	C1K, northwest of Tannachie	253	104	357
25	A90 (T), southwest of Stonehaven	11,923	1,733	13,656
26	Slug Road, west of Rickarton	911	312	1,223
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	22,859	1,801	24,661
28	B9077, west of Durris	2,781	601	3,382
29	A93, east of Crathes	4,118	826	4,944

Site Ref	Survey Location	Cars & LGV	HGV	Total
30	A93, northeast of Drumoak	6,269	480	6,749
31	Couper's Road	195	91	286
32	B9125, Cullerlie	3,717	817	4,535
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	32,421	2,805	35,227
34	B9119, west of Garlogie	1,284	552	1,836
35	A944, west of junction with B9126	11,284	1,570	12,854
36	A944, west of Dunecht	3,249	802	4,051
37	B977, south of Leylodge	2,962	249	3,211

Please note minor variances due to rounding may occur.

Summary of Receptor Sensitivity – Transport Section iii

14.4.49 A review of sensitive receptors has been undertaken within the study area of Transport Section iii. **Table 14.22: Summary of Receptor Sensitivity – Transport Sections iii** the receptors and their sensitivities for use within the Section iii assessment.

14.4.50 A justification for the sensitivity has been provided, based upon the details contained in **Table 14.2: Classification of Receptor Sensitivity**.

Table 14.22: Summary of Receptor Sensitivity – Transport Sections iii

Receptor	Sensitivity	Justification
A90 (T) Road Users	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
A90 (T) Road Users near Stracathro Hospital	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
C1K Road Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors of C1K Road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
A957 Slug Road Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along A957 Slug Road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
B9077 Road Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along the B9077 road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
A93 Road Users	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Residents/visitors along the A93road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents/visitors of Peterculter	High	Where a location is a large rural settlement containing a high number of community and public services and facilities.
Residents/visitors of Drumoak (including Mains of Drum)	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents/visitors of Crathes	Low	Where a location is a small rural settlement, few community or public facilities or services.

Receptor	Sensitivity	Justification
Residents/visitors of Kirkton of Durris	Low	Where a location is a small rural settlement, few community or public facilities or services.
Couper's Road Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents/visitors of Couper's Road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
B9125 Road Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along the B9125 road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
B9119 Road Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along the B9119 road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents/visitors of Echt	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents/visitors of Garlogie	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents/visitors of Westhill/Skene and Elrick	High	Where a location is a large rural settlement containing a high number of community and public services and facilities.
A944 Road Users	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Residents/visitors along the A944 road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents/visitors of Dunecht	Low	Where a location is a small rural settlement, few community or public facilities or services.
B977 Road Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
Residents/visitors along the B977road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents/visitors of Lyne of Skene	Low	Where a location is a small rural settlement, few community or public facilities or services.
Minor Roads and Access Tracks Road Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Core Paths	High	Minor paths/tracks used by walkers, not constructed to accommodate HGV traffic flows.
National Cycle Network Routes	High	On-road and off-road cycle route.

14.4.51 As previously noted in the '**Magnitude of Impact**' section of this Chapter, examples of sensitive locations are presented in the IEMA Guidelines as locations which include hospitals, churches, schools, historical buildings, tourist attractions for example. Based on these indicators which are stated within the IEMA Guidelines, the following locations within the study area have been identified as sensitive locations in this assessment:

- A90 (T) near Stracathro Hospital;
- A957 Slug Road (tourist attractions);
- B9077 (tourist attractions);
- Peterculter (medical practice, church, tourist attraction);
- Drumoak (including Mains of Drum) (tourist attraction);

- Kirkton of Durris (visitor attraction);
- B9125 (industrial area);
- Echt (school, church, community hall);
- Garlogie (village hall);
- Westhill/Skene and Elrick (industrial area, retail area and nursing home);
- Dunecht (school);
- Lyne of Skene (village hall);
- Minor Roads and Access Tracks Road Users;
- Core Path; and
- National Cycle Network.

14.4.52 As such, these will be subject to IEMA "Rule 2" (see paragraph **14.3.13**) assessments, where the traffic increase is equal to or in excess of 10%.

14.4.53 All other locations within the study area are subject to "Rule 1" (see paragraph **14.3.13**) 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.

Implications of Climate Change for Baseline Conditions

14.4.54 The climate change projections for the United Kingdom, highlight that Summer and Winter temperatures are likely to be greater than the current baseline, with Winter rainfall increasing and Summer rainfall decreasing.

14.4.55 It is considered that climate change projections will not have a discernible impact on the baseline conditions for road traffic within the timescales of the construction of the Proposed Development.

14.4.56 It is assumed that, at the regional level, appropriate measures will be put in place to ensure flood risk is managed and does not have long-term effects on transport infrastructure.

14.5 Mitigation and Monitoring

Embedded Mitigation

14.5.1 Topic specific embedded mitigation (mitigation achieved through design) is outlined below. A comprehensive schedule of embedded mitigation is provided in **Volume 2, Chapter 17: Schedule of Mitigation.**

- TA1: Basic traffic management measures would be implemented, including the provision of direction signage at the proposed site access junction; and
- TA2: Local material suppliers will be used wherever practicable to reduce traffic impacts and overall project mileage.

Applied Mitigation

14.5.2 Applied mitigation measures which will be implemented on the Site during construction (and as relevant, dismantling and decommissioning) of the Proposed Development are detailed in **Table 14.23: Applied Mitigation**.

Table 14.23: Applied Mitigation

Mitigation Measure	Project Stage/Timing	Responsibility
• TA3: Provision of an industry standard Construction Traffic Management Plan (CTMP), incorporating simple measures such as road cleaning facilities at the Site access and basic warning signage. The plan will also include access routeing to be observed by traffic which will be agreed with the relevant local roads authorities. Detailed development and implementation of the CTMP will be a contractual requirement of the Principal Contractors.	Prior to the start of, and throughout construction	Principal Contractors
• TA4: Provision of an Outdoor Access Management Plan (OAMP) which will include measures for the management of existing public access during the construction and operation of the Proposed Development. Further details are provided in **Volume 2, Chapter 7:**	Enabling works Construction Site Restoration	Principal Contractors

Mitigation Measure	Project Stage/Timing	Responsibility
Land Use and Prime Agricultural Land, and in **Volume 5, Appendix 7.1: Outline Outdoor Access Management Plan.**	Commissioning	
• TA5: A Staff Travel Plan will be prepared and implemented to manage the arrival and departure profile of staff and to encourage sustainable modes of transport, especially car-sharing.	Construction	Principal Contractors

Further Survey Requirements and Monitoring

14.5.3 Monitoring of the proposed mitigation measures will include those items noted in **Table 14.24: Monitoring Requirements.**

Table 14.24: Monitoring Requirements

Monitoring Measure	Project Stage/Timing	Responsibility
TA6 The construction staff Travel Plan (TA5) will be monitored to ensure that staff use van sharing or construction site minibuses to access the Site.	Throughout the construction phase	Principal Contractors
TA7 The CTMP (TA3) will be monitored to ensure that the plan is implemented during the construction phase.	Throughout the construction phase	Principal Contractors
TA8 The Principal Contractors will undertake checks to ensure that approved access routes agreed with the relevant roads authorities are adhered to by drivers of all workforce and construction material supply vehicles.	Throughout the construction phase	Principal Contractors

14.6 Assessment of Likely Significant Effects - Construction

Predicted Construction Effects

Traffic Generation and Trip Distribution – Traffic Sections i to iii

Traffic Generation

14.6.1 Construction traffic generation information for Sections i to iii has been estimated by the Principal Contractors based upon their experience from similar projects. The estimations provided by the Principal Contractors include staff trips and those trips associated with the movement and delivery of construction materials and plant etc. These estimations, as well as indicative construction programmes are presented in **Annex A of Volume 5**, **Appendix 14.1: Transport Assessment.**

14.6.2 With regards to Sections A to D (covering the whole of Transport Sections i, ii and a short part of Transport Section iii, see **Volume 3, Figure 14.1: Transport Assessment Survey Locations and Sections for Transport Assessment**), the Principal Contractors provided average construction traffic generation for activities listed within the indicative construction programme. These vehicle movements have been distributed through the construction programme to estimate the peak construction month, which is month 29 in the construction programme. The construction works for sections A to D are expected to run from 2026 to 2031, with peak construction movements expected in 2028. Average peak daily movements are expected to result in a total of 198 vehicle movements (99 inbound trips and 99 outbound trips) across Sections A to D which comprise 108 HGV movements (54 inbound trips and 54 outbound trips) and 90 Car/LGV trips (45 inbound trips and 45 outbound trips).

14.6.3 For Sections E to F (covering the majority of Transport Section iii, see **Volume 3, Figure 14.1: Transport Assessment Survey Locations and Sections for Transport Assessment**) average daily vehicle movements were provided by the respective Principal Contractors. The construction works for sections E to F is expected to run from 2026 to 2029. Average daily movements for these works are anticipated to result in a total of 354 movements across the corridor for Section iii (177 inbound trips and 177 outbound trips), which comprise 134 HGV (67 inbound trips and 67 outbound trips) and 220 Car/LGV trips (110 inbound trips and 110 outbound trips).

14.6.4 It is anticipated that the removal of timber in areas where the Operational Corridor crosses standing woodland (including management felling) will take place before the peak construction activities of the Proposed Development in 2026 and 2027.

Trip Distribution

14.6.5 Materials for the construction of the access tracks are assumed to be sourced from local quarries within Angus and Aberdeenshire Council areas.

14.6.6 The construction supply contracts have not yet been let and the Applicant will confirm exact sources of material with the Councils prior to construction works commencing.

14.6.7 Peak construction activities for Sections A to D will overlap with construction activities for Sections E to F in 2028. As it is not yet known which direction the Proposed Development will be built, a worst-case assessment has been undertaken which assumes that all trips are assigned to count points through the Proposed Development's entire study area.(Sections i, ii and iii). It has been assumed that all of the trips for construction materials will arrive from the A90 (T). As it is not known at this stage where along the A90 (T) construction trips will travel along, the construction trips have been distributed along the total length of the A90 (T) for Sections A to F (Transport Sections i, ii and iii) within the study area.

14.6.8 It has been assumed that construction staff will be based locally to the Site and trips have been distributed in the same manner as the construction trips for plant and materials.

14.6.9 The estimated Daily Construction Phase Trips for each of the three Transport Sections are presented in **Volume 5, Appendix 14.1: Transport Assessment** in **Section 6. Traffic Generation and Distribution**.

Predicted Construction Traffic and Transport Effects – Transport Section i

14.6.10 The predicted traffic impact of construction activity within the study area has been estimated by comparing the predicted daily construction phase trips with the baseline traffic flows. The traffic impact as a percentage change over the baseline daily flows for Section i is presented in **Table 14.25: 2026 Future Baseline + Construction Traffic Daily Impact Summary – Transport Section i**.

Table 14.25: 2026 Future Baseline + Construction Traffic Daily Impact Summary – Transport Section i

Site Ref	Survey Location	Cars & LGV	HGV	Total	Cars & LGV % Impact	HGV % Impact	Total % Impact
1	A90 (T), south of Inveraldie	20,743	3,563	24,305	1.52%	7.29%	2.32%
2	Zc6, west of Kirkton of Tealing	561	263	824	19.09%	69.96%	31.65%
3	A928, southeast of Glenogilvy	787	309	1,096	12.91%	53.89%	22.06%
4	A90 (T), north of Gateside	18,160	5,221	23,382	1.74%	4.86%	2.42%
5	A94, west of Douglastown	3,797	1,200	4,997	2.43%	9.90%	4.13%
6	A90 (T), north of Halfpennyburn	19,417	3,601	23,018	1.62%	7.21%	2.46%
7	A926, west of Padanaram	5,072	1,165	6,237	1.81%	10.23%	3.28%
8	Zc29, Forfar	2,056	485	2,541	4.58%	28.70%	8.46%
9	B957, northeast of Angus Milling	362	175	537	33.09%	162.37 %	58.52%
10	Zc31, northeast of Baldoukie Farm and north of Tannadice	182	142	324	97.67%	322.65 %	157.66 %
11	A90 (T), northeast of Finavon	18,958	18,890	19,200	1.66%	1.30%	2.96%
12	A90 (T), east of Nether Careston	15,998	6,048	22,046	1.98%	4.17%	2.57%
13	C33, west of Findowrie Farm, Brechin	3,339	910	4,249	2.77%	13.48%	4.89%
14	Zc30, northwest of Highbrea Boarding, Brechin	291	178	469	44.83%	153.71 %	73.08%
15	A90 (T) South of Brechin Golf Course	15,811	2,644	18,455	2.00%	10.08%	3.08%
16	B966, north of Inchbare	1,834	599	2,434	5.16%	22.01%	8.86%
17	A90 (T), southwest of North Water Bridge	15,957	3,227	19,184	1.98%	8.11%	2.96%
20	A90 (T) southwest of Laurencekirk	19,373	2,969	22,342	1.63%	8.88%	2.53%
25	A90 (T), southwest of Stonehaven	12,233	1,975	14,208	2.60%	13.97%	4.04%

Site Ref	Survey Location	Cars & LGV	HGV	Total	Cars & LGV % Impact	HGV % Impact	Total % Impact
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	23,169	2,044	25,213	1.36%	13.44%	2.24%
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	32,731	3,047	35,779	0.96%	8.63%	1.57%

Please note minor variances due to rounding may occur.

14.6.11 On road links within the Transport Section i study area, total daily traffic movements are expected to increase by over 30% on the following road links due to construction traffic for the proposals:

- Zc6, west of Kirkton of Tealing: increase of 31.65% (198 total movement, 99 inbound trips and 99 outbound trips);
- B957, northeast of Angus Milling: increase of 58.52% (198 total movement, 99 inbound trips and 99 outbound trips);
- Zc31, northeast of Baldoukie Farm and north of Tannadice: increase of 157.66% (198 total movement, 99 inbound trips and 99 outbound trips); and
- Zc30, northwest of Highbrea Boarding, Brechin: increase of 73.08% (198 total movement, 99 inbound trips and 99 outbound trips).

14.6.12 Over a 12-hour construction period, it is estimated that this would equate to, on average, approximately 17 two-way movements per hour (for example, nine inbound trips and eight outbound trips) along the above four locations, which is not considered substantial in terms of overall traffic flows.

14.6.13 On road links within the Section i study area, daily HGV movements associated with construction traffic for the Proposed Development are expected to increase by over 30% on the following road links:

- Zc6, west of Kirkton of Tealing: increase of 69.96% (108 total HGV movements, 54 inbound trips and 54 outbound trips);
- A928, southeast of Glenogilvy: increase of 53.89% (108 total HGV movements, 54 inbound trips and 54 outbound trips);
- B957, northeast of Angus Milling: increase of 162.37% (108 total HGV movements, 54 inbound trips and 54 outbound trips);
- Zc31, northeast of Baldoukie Farm and north of Tannadice: increase of 322.65% (108 total HGV movements, 54 inbound trips and 54 outbound trips); and
- Zc30, northwest of Highbrea Boarding, Brechin: increase of 153.71% (108 total HGV movements, 54 inbound trips and 54 outbound trips).

14.6.14 Over a 12-hour construction period, it is estimated that this would equate to, on average, approximately nine two-way movements per hour on the five local road network locations (for example, five inbound trips and four outbound trips), and it is estimated that this would equate to approximately 20 two-way movements per hour on one trunk road location (for example, ten inbound trips and ten outbound trips), which is not considered substantial in terms of overall traffic flows.

14.6.15 A review of existing theoretical road capacity has been undertaken using The NESA Manual[10], formerly part of the DMRB, Volume 15, Part 5[9]. The theoretical road capacity has been estimated for each of the road links for a 12-hour period that makes up the study area for Section i. The results shown in **Volume 5**, **Appendix 14.1: Transport Assessment, Table 14.1.21: Theoretical Road Capacity – Section i** indicate there are no road capacity issues with the addition of construction traffic predicted for the Proposed Development's construction and ample spare capacity exists within the trunk and local road network to accommodate all construction phase traffic.

14.6.16 In accordance with IEMA Guidelines "Rule 2" (see paragraph **14.3.13**), which states that traffic passing through the following sensitive locations will increase by more than 10% and should therefore be assessed further. It should be noted that there is no available traffic information on the Core Paths and Minor Roads and Tracks, therefore as a worst-case assessment it is assumed that percentage increase in total flows and HGV flows would equate to at least 100%, and these locations have been assessed as such:

- Tealing Residents/Visitors (Low Sensitivity);

- Zc6 Residents/Visitors and Road Users (High Sensitivity);
- Tannadice Residents/Visitors (Low Sensitivity);
- Zc30 Residents/Visitors and Road Users (High Sensitivity);
- Minor Roads and Access Tracks (High Sensitivity); and
- Core Paths (High Sensitivity).

14.6.17 The anticipated impacts in **Table 14.25: 2026 Future Baseline + Construction Traffic Daily Impact Summary – Transport Section i** suggests that the predicted increase in either total flows or HGVs from construction phase traffic would exceed 30% ("Rule 1" (see paragraph **14.3.13**)) for the following additional receptors and as such, they are subject to further assessment:

- Zc31 Residents/Visitors and Road Users (High Sensitivity);
- B957 Residents/Visitors and Road Users (Medium Sensitivity); and
- A928 Residents/Visitors and Road Users (Medium Sensitivity).

14.6.18 The significance of the predicted construction traffic-related environmental effects has been determined for the receptors identified in Transport Section i. The assessment has been based on the rules and thresholds outlined in **Section 14.3** informing consideration of the impact magnitude of each type of effect, and the sensitivity of the receptors which were identified in locations where the traffic flow change assessment thresholds based on Rules 1 or 2, as outlined above were predicted to be exceeded.

14.6.19 For the purposes of undertaking the assessment, where both the users of a road and residents in the vicinity of the road require to be assessed, these have been done together to avoid repetition. The highest level of sensitivity (listed in the points above) has been used to provide a worst-case assessment.

14.6.20 **Table 14.26: Construction Phase Effects – Transport Section i** summarises the significance of predicted traffic-related effects on the receptors for the construction phase identified for Transport Section i.

Table 14.26: Construction Phase Effects – Transport Section i

Section i: Receptor	Severance	Driver delay	Pedestrian delay	Non-motorised user Amenity	Fear and intimidation	Road safety
Tealing Residents/ Visitors	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
Zc6 Residents/ Visitors and Road Users	**Moderate/ Minor**	**Minor**	**Minor**	**Moderate/ Minor**	**Moderate/ Minor**	**Moderate/ Minor**
Tannadice Residents/ Visitors	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
Zc30 Residents/ Visitors and Road Users	**Major/ Moderate**	**Moderate**	**Moderate**	**Major/ Moderate**	**Major/ Moderate**	**Moderate**
B957 Residents/ Visitors and Road Users	**Moderate**	**Minor**	**Minor**	**Moderate**	**Moderate**	**Moderate**
Zc31 Residents/ Visitors and Road Users	**Major**	**Major/ Moderate**	**Major/ Moderate**	**Major**	**Major**	**Major**
A928 Residents/	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**

Section i: Receptor	Severance	Driver delay	Pedestrian delay	Non-motorised user Amenity	Fear and intimidation	Road safety
Visitors and Road Users						
Minor Roads and Access Tracks Users	**Major**	**Major**	**Major/ Moderate**	**Major**	**Major**	**Major**
Core Path Users	**Major**	**N/A**	**Major/ Moderate**	**Major**	**Major**	**Major**

14.6.21 The assessment of significance shows that the following receptors within Transport Section i would be predicted to experience significant traffic-related environmental effects prior to the application of additional mitigation measures:

- Zc6 Residents/Visitors and Road Users;
- Zc30 Residents/Visitors and Road Users;
- B957 Residents/Visitors and Road Users;
- Zc31 Residents/Visitors and Road Users;
- Minor Roads and Access Tracks Users; and
- Core Path Users.

14.6.22 It should be noted that the effects of the construction period are transitory in nature and the peak of construction activities is short lived. Whilst it is acknowledged that other months within the construction programme may cause Significant effects, these would be less than those assessed and for which mitigation measures have been proposed.

Predicted Construction Traffic and Transport Effects – Transport Section ii

14.6.23 The predicted traffic impact of construction activity within the study area has been estimated by comparing the predicted daily construction phase trips with the baseline traffic flows. The traffic impact as a percentage change over the baseline daily for Transport Section ii is presented in **Table 14.27: 2026 Future Baseline + Construction Traffic Daily Impact Summary - Transport Section ii.**

Table 14.27: 2026 Future Baseline + Construction Traffic Daily Impact Summary – Transport Section ii

Site Ref	Survey Location	Cars & LGV	HGV	Total	Cars & LGV % Impact	HGV % Impact	Total % Impact
1	A90 (T), south of Inveraldie	20,743	3,563	24,305	1.52%	7.29%	2.32%
4	A90 (T), north of Gateside	18,160	5,221	23,382	1.74%	4.86%	2.42%
6	A90 (T), north of Halfpennyburn	19,417	3,601	23,018	1.62%	7.21%	2.46%
11	A90 (T), northeast of Finavon	18,958	18,890	19,200	1.66%	1.30%	2.96%
12	A90 (T), east of Nether Careston	15,998	6,048	22,046	1.98%	4.17%	2.57%
15	A90 (T) South of Brechin Golf Course	15,811	2,644	18,455	2.00%	10.08%	3.08%
17	A90 (T), southwest of North Water Bridge	15,957	3,227	19,184	1.98%	8.11%	2.96%
18	B974 Burnside Road	400	212	612	29.05%	103.68%	47.84%

Site Ref	Survey Location	Cars & LGV	HGV	Total	Cars & LGV % Impact	HGV % Impact	Total % Impact
19	B9120 northwest of Laurencekirk	734	249	983	13.97%	76.85%	25.23%
20	A90 (T) southwest of Laurencekirk	19,373	2,969	22,342	1.63%	8.88%	2.53%
21	B966, north of Fordoun	239	208	447	60.38%	107.86%	79.47%
22	Glenbervie Road	289	169	458	45.22%	178.65%	76.33%
23	Unclassified Road, north of Glenbervie Road and south of C1K	160	145	305	127.69%	297.04%	185.36%
24	C1K, northwest of Tannachie	563	346	909	122.51%	233.47%	154.77%
25	A90 (T), southwest of Stonehaven	12,233	1,975	14,208	2.60%	13.97%	4.04%
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	23,169	2,044	25,213	1.36%	13.44%	2.24%
33	A90 (T) Aberdeen Western Peripheral Route, south of Kindsford	32,731	3,047	35,779	0.96%	8.63%	1.57%

Please note minor variances due to rounding may occur.

14.6.24 On road links within the Transport Section ii study area, total daily traffic movements are expected to increase by over 30% on the following road links:

- B974, Burnside Road: increase of 47.84% (198 total movement, 99 inbound trips and 99 outbound trips);
- B966, north of Fordoun: increase of 79.47% (198 total movement, 99 inbound trips and 99 outbound trips);
- Glenbervie Road: increase of 76.33% (198 total movement, 99 inbound trips and 99 outbound trips);
- Unclassified Road, north of Glenbervie Road and south of C1K: increase of 154.77% (198 total movement, 99 inbound trips and 99 outbound trips); and
- C1K, northwest of Tannachie: increase of 154.77% (552 total movement, 276 inbound trips and 276 outbound trips).

14.6.25 Over a 12-hour construction period, it is estimated that this would equate to, on average, approximately 17 two-way movements per hour (for example, nine inbound trips and eight outbound trips), on the road links excluding the C1K, which is not considered substantial in terms of overall traffic flows.

14.6.26 Along the C1K, it is estimated that this would equate to approximately 46 two-way movements per hour (for example, 23 inbound trips and 23 outbound trips), which equates to less than one movement per minute, assuming a flat profile.

14.6.27 On road links within the Transport Section ii study area, daily HGV movements are expected to increase by over 30% on the following road links:

- B974, Burnside Road: increase of 103.68% (108 total HGV movements, 54 inbound trips and 54 outbound trips);
- B9120, northwest of Laurencekirk: increase of 76.85% (108 total HGV movements, 54 inbound trips and 54 outbound trips);
- B966, north of Fordoun: increase of 107.86% (108 total HGV movements, 54 inbound trips and 54 outbound trips);

- Unclassified Road, north of Glenbervie Road and south of C1K: increase of 178.65% (108 total HGV movements, 54 inbound trips and 54 outbound trips); and
- C1K, northwest of Tannachie: increase of 233.47% (242 total HGV movements, 121 inbound trips and 121 outbound trips).

14.6.28 Over a 12-hour construction period, it is estimated that this would equate to approximately, on average, nine two-way HGV movements per hour on the B974, B9120, B966 and the unclassified road, north of Glenbervie Road and south of C1K, (for example, five inbound trips and four outbound trips), and it is estimated that this would equate to approximately 20 two-way movements per hour on the A90 (T) and C1K (for example, ten inbound trips and ten outbound trips), which is not considered substantial in terms of overall traffic flows.

14.6.29 A review of existing theoretical road capacity has been undertaken using The NESA Manual, formerly part of the DMRB, Volume 15, Part 5[9]. The theoretical road capacity has been estimated for each of the road links for a 12-hour period that makes up the study area for Transport Section ii. The results shown in **Volume 5**, **Appendix 14.1: Transport Assessment, Table 14.1.23: Theoretical Road Capacity - Sections ii** indicate there are no road capacity issues with the addition of construction traffic predicted for the Proposed Development's construction and ample spare capacity exists within the trunk and local road network to accommodate all construction phase traffic.

14.6.30 In accordance with IEMA Guidelines "Rule 2" (see paragraph **14.3.13**), which states that traffic passing through the following sensitive locations will increase by more than 10% and should therefore be assessed further. It should be noted that as there is no available traffic information on the Core Paths and Minor Roads and Tracks, as a worst-case assessment it is assumed that percentage increase in total flows and HGV flows equate to 100%, and these locations have been assessed as such:

- B974 Residents/Users (Medium Sensitivity);
- B9120 (Thornton Castle) Residents/Users (Medium Sensitivity);
- Glenbervie Road Residents/Users (High Sensitivity);
- Unclassified Road Residents, north of Glenbervie Road and south of C1K Residents/Users (High Sensitivity);
- Minor Roads and Access Tracks (High Sensitivity); and
- Core Paths (High Sensitivity).

14.6.31 The results in **Table 14.27: 2026 Future Baseline + Construction Traffic Daily Impact Summary – Transport Section ii** suggests that the increase in either total flows or HGVs exceed 30% ("Rule 1", see paragraph **14.3.13**) for the following receptors and as such, they are subject to further assessment:

- Fordoun Residents (Low Sensitivity);
- B966 Residents/Users (Medium Sensitivity); and
- C1K Residents/Users (High Sensitivity).

14.6.32 The significance of the predicted construction effects has been determined for the receptors identified in Transport Section ii. The assessment has been based on the rules and thresholds outlined in **Section 14.3** and the sensitive receptors which were identified as exceeding the assessment thresholds based on Rules 1 or 2, as outlined above.

14.6.33 For the purposes of undertaking the assessment, where both the users of a road and residents in the vicinity of the road require to be assessed, these have been done together to avoid repetition. The highest level of sensitivity (listed in the points above) has been used to provide a worst-case assessment.

14.6.34 **Table 14.28: Construction Phase Effects – Transport Section ii** summarises the significance on the receptors for the construction phase identified for Section ii.

Table 14.28: Construction Phase Effects – Transport Section ii

Section ii: Receptor	Severance	Driver delay	Pedestrian delay	Non-motorised user Amenity	Fear and intimidation	Road safety
B974 Residents/ Visitors and Road Users	**Moderate**	**Minor**	**Minor**	**Moderate**	**Moderate**	**Moderate**

Section ii: Receptor	Severance	Driver delay	Pedestrian delay	Non-motorised user Amenity	Fear and intimidation	Road safety
B9120 (Thornton Castle) Residents/ Visitors and Road Users	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
Glenbervie Road Residents/ Visitors and Road Users	**Major/ Moderate**	**Moderate/ Minor**	**Moderate/ Minor**	**Moderate/ Minor**	**Major/ Moderate**	**Moderate/ Minor**
Unclassified Road, north of Glenbervie Road and south of C1K Residents/ Visitors and Road Users	**Major**	**Major/ Moderate**	**Major/ Moderate**	**Major/ Moderate**	**Major**	**Major/ Moderate**
Fordoun Residents/ Visitors	**Moderate/ Minor**	**Minor**	**Minor**	**Minor**	**Moderate/ Minor**	**Minor**
B966 Residents/ Visitors and Road Users	**Major**	**Major/ Moderate**	**Major/ Moderate**	**Major/ Moderate**	**Major**	**Major/ Moderate**
C1K Residents/ Visitors and Road Users	**Major**	**Major/ Moderate**	**Major/ Moderate**	**Major/ Moderate**	**Major**	**Major/ Moderate**
Minor Roads and Access Tracks Users	**Major**	**Major**	**Major/ Moderate**	**Major**	**Major**	**Major**
Core Path Users	**Major**	**N/A**	**Major/ Moderate**	**Major**	**Major**	**Major**

14.6.35 The assessment of significance shows that the following receptors within Transport Section ii would experience **Significant** traffic-related environmental effects prior to the application of additional mitigation measures:

- B974 Residents/Visitors and Road Users;
- Glenbervie Road Residents/Visitors and Road Users;
- Unclassified Road north of Glenbervie Road and south of C1K Residents/Visitors and Road Users;
- B966 Residents/Visitors and Road Users;
- C1K Residents/Visitors and Road Users;
- Minor Roads and Access Tracks Users; and
- Core Path Users.

14.6.36 It should be noted that the effects of the construction period are transitory in nature and the peak of construction activities is short lived. Whilst it is acknowledged that other months within the construction programme may cause Significant effects, these would be less than those assessed and for which mitigation measures have been proposed.

Predicted Construction Effects – Transport Section iii

14.6.37 The predicted traffic impact of construction activity within the study area is estimated by comparing the daily construction phase trips with the baseline flows. The traffic impact as a percentage change over the baseline daily for Transport Section iii is presented in **Table 14.29: Peak Construction Traffic Network Impact - Transport Section iii.**

Table 14.29: Peak Construction Traffic Network Impact – Transport Section iii

Site Ref	Survey Location	Cars & LGV	HGV	Total	Cars & LGV % Impact	HGV % Impact	Total % Impact
1	A90 (T), south of Inveraldie	20,743	3,563	24,305	1.52%	7.29%	2.32%
4	A90 (T), north of Gateside	18,160	5,221	23,382	1.74%	4.86%	2.42%
6	A90 (T), north of Halfpennyburn	19,417	3,601	23,018	1.62%	7.21%	2.46%
11	A90 (T), northeast of Finavon	18,958	18,890	19,200	1.66%	1.30%	2.96%
12	A90 (T), east of Nether Careston	15,998	6,048	22,046	1.98%	4.17%	2.57%
15	A90 (T) South of Brechin Golf Course	15,811	2,644	18,455	2.00%	10.08%	3.08%
17	A90 (T), southwest of North Water Bridge	15,957	3,227	19,184	1.98%	8.11%	2.96%
20	A90 (T) southwest of Laurencekirk	19,373	2,969	22,342	1.63%	8.88%	2.53%
24	C1K, northwest of Tannachie	563	346	909	122.51%	233.47%	154.77%
25	A90 (T), southwest of Stonehaven	12,233	1,975	14,208	2.60%	13.97%	4.04%
26	Slug Road, west of Rickarton	1,131	446	1,577	24.15%	42.89%	28.94%
27	A90 (T) Aberdeen Western Peripheral Route, north of Cleanhill Roundabout	23,169	2,044	25,213	1.36%	13.44%	2.24%
28	B9077, west of Durris	3,001	735	3,736	7.91%	22.28%	10.47%
29	A93, east of Crathes	4,338	960	5,298	5.34%	16.23%	7.16%
30	A93, northeast of Drumoak	6,489	614	7,103	3.51%	27.94%	5.25%
31	Couper's Road	415	225	640	112.67%	147.74%	123.79%
32	B9125, Cullerlie	3,937	951	4,889	5.92%	16.39%	7.81%
33	A90 (T) Aberdeen	32,731	3,047	35,779	0.96%	8.63%	1.57%

Site Ref	Survey Location	Cars & LGV	HGV	Total	Cars & LGV % Impact	HGV % Impact	Total % Impact
	Western Peripheral Route, south of Kindsford						
34	B9119, west of Garlogie	1,504	686	2,190	17.13%	24.29%	19.28%
35	A944, west of junction with B9126	11,504	1,704	13,208	1.95%	8.54%	2.75%
36	A944, west of Dunecht	3,469	936	4,405	6.77%	16.70%	8.74%
37	B977, south of Leylodge	3,182	383	3,565	7.43%	53.83%	11.03%

Please note minor variances due to rounding may occur.

14.6.38 On road links within the Section iii study area, total movements are expected to increase by over 30% on the following road links:

- C1K, northwest of Tannachie: increase of 154.77% (552 total movement, 276 inbound trips and 276 outbound trips); and
- Couper's Road: increase of 123.79% (354 total movement, 177 inbound trips and 177 outbound trips).

14.6.39 Over a 12-hour construction period, it is estimated that this would equate to, on average, approximately 46 two-way movements per hour (for example, 23 inbound trips and 23 outbound trips), on C1K which equates to less than one movement per minute, assuming a flat profile, which is not considered substantial in terms of overall traffic flows.

14.6.40 Along the Couper's Road, it is estimated that this would equate to approximately 30 two-way movements per hour (for example, 15 inbound trips and 15 outbound trips), which equates to approximately two movements per minute, assuming a flat profile, which is not considered substantial in terms of overall traffic flows.

- On road links within the Transport Section iii study area, HGV movements are expected to increase by over 30% on the following road links:C1K, northwest of Tannachie: increase of 233.47% (242 total HGV movements, 121 inbound trips and 121 outbound trips);
- Slug Road, west of Rickarton: increase of 42.89% (134 total HGV movements, 67 inbound trips and 67 outbound trips);
- Couper's Road: increase of 147.74% (134 total HGV movements, 67 inbound trips and 67 outbound trips); and
- B977, south of Leylodge: increase of 53.83% (134 total HGV movements, 67 inbound trips and 67 outbound trips).

14.6.41 Over a 12-hour construction period, it is estimated that this would equate to, on average, approximately 20 two-way HGV movements per hour on the A90 (T) and C1K, while it is estimated that this would equate to 11 two-way HGV movements per hour on Slug Road, Couper's Road and the B977,which is not considered substantial in terms of overall traffic flows.

14.6.42 A review of existing theoretical road capacity has been undertaken using The NESA Manual, formerly part of the DMRB, Volume 15, Part 5[9]. The theoretical road capacity has been estimated for each of the road links for a 12-hour period that makes up the study area for Sections iii. The results shown in **Volume 5**, **Appendix 14.1: Transport Assessment, Table 14.1.25: Theoretical Road Capacity – Section iii** indicate there are no road capacity issues with the addition of construction traffic associated with the Proposed Development and ample spare capacity exists within the trunk and local road network to accommodate all construction phase traffic.

14.6.43 **Table 14.30: Construction Phase Effects – Transport Section iii** suggests that traffic passing through the following sensitive locations will increase by more than 10% ("Rule 2", see paragraph **14.3.13**) and so road users passing through these locations and residents of these locations should be assessed further:

- A957, Slug Road Residents/Users (Medium Sensitivity);
- B9077 Residents/Users (Medium Sensitivity);
- Kirkton of Durris Residents (Low Sensitivity);

- Echt Residents (Medium Sensitivity);
- Garlogie Residents (Low Sensitivity);
- Lyne of Skene (Low Sensitivity);
- Minor Roads and Access Tracks Users (High Sensitivity); and
- Core Paths/NCN Users (High Sensitivity).

14.6.44 The results in **Table 14.29: Peak Construction Traffic Network Impact – Transport Section iii** suggests that the increase in either total flows or HGVs exceed 30% ("Rule 1", see **paragraph 14.3.13**) for the following receptors:

- C1K Residents/Users (High Sensitivity);
- Couper's Road Residents/Users (High Sensitivity); and
- B977 Residents/Users (Medium Sensitivity)

14.6.45 The significance of the predicted construction effects has been determined for the Transport Section iii. The assessment has been based on the rules and thresholds outlined in **Section 14.3** and the sensitive receptors which were identified as exceeding the assessment thresholds based on Rules 1 or 2, as outlined above.

14.6.46 For the purposes of undertaking the assessment, where both the users of a road and residents in the vicinity of the road require to be assessed, these have been done together to avoid repetition. The highest level of sensitivity (listed in the points above) has been used to provide a worst-case assessment.

14.6.47 **Table 14.30: Construction Phase Effects – Transport Section iii** summarises the significance on the receptors for the construction phase identified for Transport Section iii.

Table 14.30: Construction Phase Effects – Transport Section iii

Section iii: Receptor	Severance	Driver delay	Pedestrian delay	Non-motorised user Amenity	Fear and intimidation	Road safety
A957, Slug Road Residents/Users	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
B9077 Residents/Users	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
Kirkton of Durris Residents	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
Echt Residents	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
Garlogie Residents	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
Lyne of Skene Residents	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
A90 (T) South of Brechin Golf Course	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
C1K Residents/Users	**Major**	**Major/ Moderate**	**Major/ Moderate**	**Major/ Moderate**	**Major**	**Major/ Moderate**
Couper's Road Residents/Users	**Major**	**Major**	**Major/ Moderate**	**Major**	**Major**	**Major**
B977 Residents/Users	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**	**Minor**
Minor Roads and Access Tracks Users	**Major**	**Major**	**Major/ Moderate**	**Major**	**Major**	**Major**
Core Path/NCN Users	**Major**	**N/A**	**Major/ Moderate**	**Major**	**Major**	**Major**

14.6.48 The assessment of significance shows that the following receptors within Transport Section iii would experience **Significant** traffic-related environmental effects prior to the application of additional mitigation measures:

- C1K Residents/Visitors and Road Users;
- Couper's Road Residents/Visitors and Road Users;
- Minor Roads and Access Tracks Users; and
- Core Path Users/NCN Users.

14.6.49 It should be noted that the effects of the construction period are transitory in nature and the peak of construction activities is short lived. Whilst it is acknowledged that the other months within the construction programme may cause Significant effects, these would be less that those assessed and for which mitigation measures have been proposed.

Additional Mitigation

14.6.50 The preceding assessment of traffic-related environmental effects identified predicted significant adverse effects for a range of receptors in each transport section during construction of the Proposed Development. Whilst the assessment presents a worst-case in that the effects would not be anticipated to occur throughout the whole period of construction activity, the findings indicate that further consideration of mitigation is necessary to reduce the key adverse effects further where possible. This section sets out the additional mitigation that has been considered in response to the assessment findings and which is proposed as further committed mitigation by the Applicant. It recognises that some road user and roadside receptors, particularly those along minor and lightly trafficked routes leading to the construction working areas, would be particularly susceptible to adverse effects. The mitigation measures set out below would be developed in site-specific detail by the Principal Contractors prior to construction and agreed with all relevant consultees and regulatory authorities. All measures would form part of relevant construction contracts which would require that they are implemented fully on site. Adherence to the committed mitigation would be regularly audited during construction by the Principal Contractor, by appointed representatives of the Applicant and wherever requested by the relevant local authority roads and environmental health departments.

Enhanced Construction Traffic Management Plan (Mitigation Measure TA9)

14.6.51 The following measures would be implemented through development of a more detailed and project-bespoke CTMP for the construction phase. The CTMP would be required as a condition of the Principal Contractors and it is anticipated would also be required and agreed with Angus Council, Aberdeenshire Council and Transport Scotland, through a condition to the Section 37 Consent prior to construction works commencing:

- the detailed design process will minimise the volume of material required to be imported to Site to help reduce HGV numbers;
- the use of helicopters may be used during the construction of the Proposed Development to minimise vehicular access, where practicable;
- a Site worker transport and travel arrangement plan, including transport modes to and from the work site (including pick up and drop off times) will be implemented to minimise the overall number of car, van and mini-bus trips required to transport construction site workers to and from the Proposed Development working area each day;
- construction working is likely to be during daytime periods only. Working hours are currently anticipated to be between approximately 07:00 to 19:00 during British Summer Time (BST) and 07:00 to 18:00 during Greenwich Mean Time (GMT), seven days a week. Special measures and arrangements would be made for works in proximity to sensitive receptors. Any out of hours working would be agreed in advance with the relevant local authority;
- all materials delivered by HGVs (dry materials) will be sheeted to reduce dust and stop spillage on public roads;
- where practical, the scheduling of HGV traffic along access routes past key sensitive receptors such as primary schools at certain times of the day will be avoided;
- specific training and disciplinary measures for drivers of all site-related vehicles will be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway and for non-compliance with general measures;
- wheel cleaning facilities may be established at the Site entrance, depending on the views of the Local Authorities;

- appropriate traffic management measures would be put in place near site accesses. Typical measures would include HGV turning and crossing signs and a banksman at the Site access and warning signs;
- provision of construction updates on the project website and other agreed communications to be distributed to residents within an agreed distance of the Site and access routes (integrated with relevant overall stakeholder communications plans required as part of the construction contracts);
- adoption and enforcement of a voluntary speed limit of 20 mph for all construction vehicles travelling through rural villages and towns on the study area network; and
- all drivers would be required to attend an on-site induction to include:
  - a toolbox talk safety briefing (and weekly toolbox talks, thereafter);
  - the need for appropriate care and speed control;
  - a briefing on driver speed reduction agreements (to slow Site traffic at sensitive locations such as through urban areas and other communities); and
  - identification of the required access routes and the controls to ensure no departure from these routes.

14.6.52 Angus Council and Aberdeenshire Council may require an agreement to cover the cost of abnormal wear and tear on roads within the study area. Video footage of the pre-construction phase condition of the construction vehicles routes 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 Council. Any damage caused by traffic associated with the Proposed Development, during the construction period that would be hazardous to public traffic, would be repaired immediately.

14.6.53 The Principal Contractors would perform 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.

Public Information (Mitigation Measure TA10)

14.6.54 The Applicant and appointed Principal Contractors would also ensure information was distributed through its communication team via the project website, local newsletters and social media. An information telephone line will be established and communicated by the Principal Contractors to affected communities in the vicinity of the Proposed Development working area to allow for enquiries and complaints to be registered by local residents and other road users. The telephone number will be answered by a suitably trained representative of the Principal Contractors at all times during working site hours and an answering machine service will operate during other periods. All complaints registered through this service will be logged and appropriately responded to by the Contractor teams. Corrective actions identified from complaint responses will be fed back to the site management teams and required changes to practices and procedures implemented in live site management plans and communicated to all relevant site staff and operatives through weekly briefings and toolbox talks.

Pedestrian Management (Mitigation Measure TA11)

14.6.55 The Principal Contractors would ensure that speed limits are always adhered to by their drivers and associated subcontractors. This is particularly important within close proximity to the core path network and generally where pedestrians are in close proximity to public roads, including at path/road crossing points and along footways etc. Advisory speed limit signage would also be installed on approaches to areas where pedestrians including core path users may interact with construction traffic. Signage will be provided to warn drivers of the presence of public paths and cycling routes. Accordingly, appropriate signage advising of dates and hours of construction activity will be installed on the 'core path network' in advance of road crossing locations to warn users of the potential of construction traffic.

14.6.56 Signage would be installed on the Site exit that makes drivers aware of local speed limits and reminding drivers of the potential presence of pedestrians and cyclists in the area. This would also be emphasised in weekly toolbox talks.

Access Management Plan (Mitigation Measure LU2)

14.6.57 Consideration would be given to pedestrians and cyclists due to potential interactions between construction traffic and users of the core path network. These measures would be formulated into an Outdoor Access Management Plan. An Outline Outdoor

Access Management Plan is provided in **Volume 5: Appendix 7.1: Outline Outdoor Access Management Plan** as part of **Volume 2, Chapter 7: Land Use and PAL**.

Access Improvements (Mitigation Measure TA12)

14.6.58 All new access junctions would be designed and constructed in accordance with the appropriate design standards.

Public Road Improvements (Mitigation Measure TA13)

14.6.59 Public Road Improvements (PRI) will be provided along some construction access routes to facilitate construction traffic travelling along existing public roads. These works may comprise upgrades such as road widening, installation of temporary or permanent passing places, new or upgraded road junctions, and upgrades to or replacement of existing bridges. Indicative PRI works have been identified through early design work undertaken pre-application by the Principal Contractors and these are set out in **Volume 5, Appendix 3.5: Public Road Improvement Works**.

14.6.60 The provision and proposed locations of PRIs would be discussed with Angus Council and Aberdeenshire Council prior to the detailed design stages of the works. Layby improvement works would ensure that expanded or new laybys on single carriageway and single track road sections would be suitable for two HGVs and would accord with the appropriate standards.

14.6.61 **Volume 5, Appendix 3.5: Public Road Improvement Works** presents high-level information which will be progressed further at the detailed design stage, including environmental information and mitigation. Location plans and construction methodology and specification is also provided in **Volume 3, Figures 3.8.1 to 3.8.19: Indicative Public Road Improvement Works** and **Volume 3, Figures 3.9.1 to 3.9.3: Passing Places Indicative Design.**

14.6.62 It is proposed that prior to work commencing that the form, location, and reinstatement of PRI works will be agreed with Angus and Aberdeenshire Councils. It is anticipated that this would be secured through an appropriately worded planning condition.

14.6.63 The mitigation measures described above are summarised in **Table 14.31: Committed Additional Mitigation Construction.**

Table 14.31: Committed Additional Mitigation Construction

Mitigation Measure	Rationale	Project Stage/Timing	Responsibility
LU2: Outdoor Access Management Plan (OAMP)	To improve road safety, efficiency and management	Prior to start of construction	Principal Contractors
TA9: Enhanced Construction Traffic Management Plan	To improve road safety, efficiency and management	Prior to start of construction	Principal Contractors
TA10: Public Information	To enhance the public's route choice and to enhance safety	During the construction phase	The Applicant
TA11: Pedestrian Management	To improve road safety	Prior to start of construction	Principal Contractors
TA12: Access Improvements	To provide access to the Proposed Development	Prior to start of construction	Principal Contractors
TA13: Public Road Improvements	To facilitate access to the Proposed Development	Prior to start of construction	Principal Contractors

Residual Construction Effects

14.6.64 The assessment in **Table 14.34: Summary of Significant Effects (Sections i to iii)** confirms the significance of residual effects would be **Minor** in nature and therefore **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.

14.7 Assessment of Likely Significant Effects - Operation

Predicted and Residual Operational Effects

14.7.1 The assessment of operational effects has been scoped out of the assessment. No significant operational effects are predicted as a result of the traffic and transport activity anticipated for routine maintenance and inspections required for the installed OHL.

14.8 Assessment of Likely Significant Effects – Decommissioning

14.8.1 The assessment of decommissioning effects has been scoped out from detailed assessment. The activities and transportation requirements for decommissioning of the OHL, if implemented, would be similar to those described in this Chapter for the construction phase. However, they would be anticipated to be of lower magnitude and for a shorter timescale as traffic volumes would be lower than the construction phase. No significant decommissioning effects are therefore predicted.

14.9 Assessment of Likely Cumulative Effects

Summary of Predicted Effects for Emmock and Hurlie substations

Emmock substation

Residual Construction Effects

14.9.1 The traffic and transport assessment of Emmock substation[22] confirmed the significance of residual effects would be **Minor** in nature and therefore **Not Significant**. The peak construction month of Emmock substation and the Proposed Development are not likely to overlap, therefore the combined residual effects will remain **Minor** in nature and **Not Significant** provided that all committed mitigation set out in this EIAR and the EIAR for Emmock substation is fully implemented on site.

14.9.2 The traffic effects would be temporary and no long-lasting detrimental transport or access issues are associated with the construction phase of the substation.

Residual Operational Effects

14.9.3 The assessment of operational traffic and transport effects was scoped out as no significant operational effects are predicted.

Hurlie substation

Residual Construction Effects

14.9.4 The traffic and transport assessment of Hurlie substation confirmed the significance of residual effects would be **Minor** in nature and therefore **Not Significant**. The peak construction month of Hurlie substation and the Proposed Development are not likely to overlap, therefore the combined residual effects will remain **Minor** in nature and **Not Significant** provided that all committed mitigation set out in this EIAR and the EIAR for Hurlie substation is fully implemented on site.

14.9.5 The traffic effects would be temporary and no long-lasting detrimental transport or access issues are associated with the construction phase of the substation.

Residual Operational Effects

14.9.6 The assessment of operational traffic and transport effects was scoped out as no significant operational effects are predicted.

Sensitivity Assessment of Likely Future Development (in Combination) Effects

Introduction

14.9.7 A review of the cumulative effects associated with potential future developments has been undertaken. Projects connected with the Proposed Development (identified as Intra Projects) and other developments (Inter Projects) that may use the study area road network have been considered and the potential effects are noted in **Table 14.32: Likely Future Development Sensitivity Review – Intra Developments .**

[22] SSEN Transmission, 2024. Emmock substation EIAR Planning Application Reference: 24/00699/FULN. [Online] Available at: https://planning.angus.gov.uk/online-applications/caseDetails.do?caseType=Application&keyVal=SN6VOFCFMUA00

14.9.8 It should be noted that traffic flows from both Intra and Inter Developments can only be included to the baseline when the assessment is undertaken. As such, the percentage impact of the Proposed Development will be diluted by the inclusion of other projects. The only exception to this would be where effects are considered in congested networks. The results noted in **Volume 5**, **Appendix 14.1: Transport Assessment, Table 14.1.21: Theoretical Road Capacity - Section i, Table 14.1.23: Theoretical Road Capacity – Section ii** and **Table 14.1.25: Theoretical Road Capacity – Section iii** indicate that none of the study area roads are considered to be congested.

Predicted Intra Developments Cumulative Effects

14.9.9 TA Guidance[23] from the UK Government advises that only those projects with extant planning permission or local development plan allocations within an adopted or approved plan require to be included in any assessment. Those projects in scoping or at the application stage should not generally be included in cumulative assessments as they have yet to be determined. However, as the Applicant has a number of other proposed schemes in the vicinity of the Proposed Development, they have been considered in the sensitivity review for this assessment.

14.9.10 A sensitivity review has been undertaken of associated SSEN Transmission projects in the vicinity of the Proposed Development's study area. These are shown in **Table 14.32: Likely Future Development Sensitivity Review – Intra Developments.**

Table 14.32: Likely Future Development Sensitivity Review – Intra Developments

Potential Future Development	Intra SSEN Transmission Projects	Sensitivity Review
Emmock 400 kV substation	x	This Intra project is unlikely to generate significant traffic flows on the Proposed Development's study area. Given the nature of the Intra project, its peak of construction traffic will not coincide with that of the Proposed Development. As such, the effects associated with the Proposed Development will not be exacerbated by the Intra project.
Hurlie 400 kV substation	x	This Intra project is unlikely to generate significant traffic flows on the Proposed Development's study area. Given the nature of the Intra project, its peak of construction traffic will not coincide with that of the Proposed Development. As such, the effects associated with the Proposed Development will not be exacerbated by the Intra project.

14.9.11 Any effects of the multiple sites being constructed at the same time would be mitigated through the use of an overarching Traffic Management and Monitoring Plan and by introducing a phased delivery plan which would be agreed with other Applicants, contractors and the appropriate local council roads department and, potentially, Transport Scotland.

Operation

14.9.12 The assessment of operational effects has been scoped out. No operational effects are anticipated.

Decommissioning

14.9.13 The assessment of decommissioning effects has been scoped out.

Predicted Inter Developments Cumulative Effects

14.9.14 A sensitivity review has been undertaken of other SSEN **Transmission** projects and consented third party projects in the vicinity of the Proposed Development's study area. These are shown in **Table 14.33: Likely Future Development Sensitivity Review – Inter Developments**.

Table 14.33: Likely Future Development Sensitivity Review – Inter Developments

Potential Future Development	Other SSEN Transmission Projects	Other Third Party Projects	Sensitivity Review
Tealing to Westfield OHL 400 kV Upgrade	x		This project is unlikely to generate significant traffic flows on the Proposed Development's study area. Given the nature of

23 https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements

Potential Future Development	Other SSEN Transmission Projects	Other Third Party Projects	Sensitivity Review
(Reconductoring) Project			the proposed project, its peak of construction traffic will not coincide with that of the Proposed Development. As such, the effects associated with the Proposed Development will not be exacerbated by the proposed project.
Alyth to Tealing OHL to Emmock substation	x		This project is unlikely to generate significant traffic flows on the Proposed Development's study area. Given the nature of the proposed project, its peak of construction traffic will not coincide with that of the Proposed Development. As such, the effects associated with the Proposed Development will not be exacerbated by the proposed project.
Emmock and Tealing Overhead Line Tie-Ins and Tie Backs	x		This project is unlikely to generate significant traffic flows on the Proposed Development's study area. Given the nature of the proposed project, its peak of construction traffic will not coincide with that of the Proposed Development. As such, the effects associated with the Proposed Development will not be exacerbated by the proposed project.
Balnuith BESS		x	This project is unlikely to generate significant traffic flows on the Proposed Development's study area. Given the nature of the proposed project, its peak of construction traffic will not coincide with that of the Proposed Development. As such, the effects associated with the Proposed Development will not be exacerbated by the proposed project.
Glendye Wind Farm Grid Connection	x		The proposed wind farm would create an additional 117 Car / LGV movements and 63 HGV movements on the B966, C2K and the A90. This increase in traffic is unlikely to have a significant impact on the operation of the above roads, given the existing recorded traffic levels and the capacity of the road. With regards to the Grid Connection, no traffic details are available for this project. The only works that will coincide with the Proposed Development study area will be those associated with a short length of OHL. As such, traffic volumes are considered to be minor in the study area and are likely to occur outwith the peak of traffic generation. As such, the effects associated with the Proposed Development will not be exacerbated by the proposed project.
Craigneil Wind Farm		x	The proposed wind farm would create an additional 72 vehicle movements on the A957 Slug Road. This increase in traffic is unlikely to have a significant impact on the operation of the road, given the existing recorded traffic levels and the capacity that the road has. As such, the effects associated with the Proposed Development will not be exacerbated by the proposed project.
Curlerlie Solar PV Facility		x	This project is unlikely to generate significant traffic flows on the Proposed Development's study area. Given the nature of the proposed project, its peak of construction traffic will not coincide with that of the Proposed Development. As such, the effects associated with the Proposed Development will not be exacerbated by the proposed project.
Kintore Battery Storage Facility		x	No traffic details are available for this project. However, traffic volumes are considered to be minor in the study area and are likely to occur outwith the peak of traffic generation.
Battery energy storage facility and associated infrastructure at land adjacent to the		x	No traffic details are available for this project. However, traffic volumes are considered to be minor in the study area and are likely to occur outwith the peak of traffic generation.

Potential Future Development	Other SSEN Transmission Projects	Other Third Party Projects	Sensitivity Review
Kintore Substation, Kintore			
Kintore Hydrogen Production Facility	x		The proposed hydrogen plant would create an additional 258 vehicle movements on the B977. However, this increase in traffic is unlikely to have a significant impact on the operation of the road, given the existing recorded traffic levels and the capacity of the road.

14.9.15 Any effects of the multiple sites being constructed at the same time could be mitigated through the use of an overarching Traffic Management and Monitoring Plan and by introducing a phased delivery plan which would be agreed with Principal Contractors and the appropriate local council roads department.

Operation

14.9.16 The assessment of operational effects has been scoped out. No operational effects are anticipated.

Decommissioning

14.9.17 The assessment of decommissioning effects has been scoped out.

14.10 Summary of Significant Effects

14.10.1 **Table 14.33: Summary of Significant Effects (Sections i to iii)** below summarises the predicted residual effects of the Proposed Development on traffic and transport prior to and following the application of additional mitigation.

Table 14.33: Summary of Significant Effects (Sections i to iii)

Predicted Effects	Significance Prior to Additional Mitigation	Mitigation	Significance of Residual Effects Following Additional Mitigation
Construction Phase			
Transport Section i			
Zc6 Residents/Visitors and Road Users	**Moderate/Minor (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
Zc30 Residents/ Visitors and Road Users	**Major/Moderate (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
B957 Residents/Visitors and Road Users	**Moderate (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
Zc31 Residents/Visitors and Road Users	**Major (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed	**Minor (Not Significant)**

Predicted Effects	Significance Prior to Additional Mitigation	Mitigation	Significance of Residual Effects Following Additional Mitigation
		mitigation measures to be secured via planning conditions.	
Transport Section ii			
B974 Residents/Visitors and Road Users	**Moderate (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
Glenbervie Road Residents/Visitor and Road Users	**Major/Moderate (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
Unclassified Road Residents, north of Glenbervie Road and south of C1K Residents/Visitors and Road Users	**Major (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
B966 Residents/Visitors and Road Users	**Major (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
Transport Sections ii and iii			
C1K Residents/Visitors and Road Users	**Major (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
Transport Section iii			
Couper's Road Residents/Users	**Major (Significant)**	Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
Transport Sections i, ii and iii			
Minor Roads and Access Track Users	**Major (Significant)**	OAMP (Mitigation Measure LU2), Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**

Predicted Effects	Significance Prior to Additional Mitigation	Mitigation	Significance of Residual Effects Following Additional Mitigation
Core Path Users/NCN Users	**Major (Significant)**	OAMP (Mitigation Measure LU2), Enhanced CTMP (Mitigation Measure TA9), public information (Mitigation Measure TA10), pedestrian management (Mitigation Measure TA11), and access public road improvements (Mitigation Measures TA12 and TA13). Proposed mitigation measures to be secured via planning conditions.	**Minor (Not Significant)**
Operation			
None	None	None	None
Cumulative			
None	None	None	None