**Chapter 13**Traffic and Transport

#### Chapter 13: Traffic and Transport

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# 13 Traffic and Transport

### Introduction

- 13.1 This chapter presents the findings of the assessment of the likely significant construction effects of the proposed Kendoon to Tongland 132 kilovolt (kV) Reinforcement Project ('the KTR Project') on traffic and transport, details of which are provided in **Chapter 4: Development Description** and **Chapter 5: Felling, Construction, Operational Maintenance and Decommissioning**. Cumulative effects associated with committed projects which are likely to generate traffic that will utilise local public roads within the KTR Project Study Area at the same time as traffic generated by the KTR Project have also been assessed.
- 13.2 This chapter details the traffic that is likely to be generated during the construction phase of the KTR Project (including the decommissioning of N and R routes) and assesses the effect upon the local and trunk road network and identifies measures to reduce network disruption.
- 13.3 A Transport Assessment (TA) has not been undertaken as a TA is not generally considered to be required for temporary construction works and the traffic movements associated with the operational phase of the KTR Project are not high enough to warrant a formal TA. In addition, the statutory consultees for the KTR Project did not request that a formal TA was undertaken.
- 13.4 It should be noted that **Chapter 14: Noise, Chapter 15: Socioeconomics, Tourism and Recreation,** and **Chapter 16: Other Issues** also consider other environmental effects related to traffic and transport.
- 13.5 Planning policies of relevance to this assessment are provided in **Chapter 6: Planning Policy Context**.
- 13.6 The following appendices accompany this Chapter:
  - Appendix 13.1: Framework Construction Traffic Management Plan; and
  - Appendix 13.2: Construction Access Routes & Temporary Access Locations Review.

### Scope of the Assessment

13.7 This section outlines the effects which have been considered to be potentially significant under this assessment and the reasons for excluding from the assessment other effects. The scope of the assessment remained under review as the Environmental Impact Assessment (EIA) progressed, with account taken of the scoping responses and other additional consultation responses received as part of this process.

#### **Effects Assessed in Full**

- 13.8 The three categories of potential effects listed below have been considered for the individual connections comprising the KTR Project within the Study Area during the construction phase, for the KTR Project in isolation and cumulatively with committed schemes which are likely to utilise local roads at the same time as traffic generated by the development as detailed further in **Table 13.1** below:
  - driver delay;
  - road safety; and
  - community effects (severance, pedestrian amenity / fear and intimidation, and pedestrian delay).

#### **Effects Scoped Out**

- 13.9 The following effects have been scoped out of this assessment as detailed further in **Table 13.1** below:
  - Operational and maintenance phase effects. Traffic associated with the operation and maintenance of the new connections is limited and infrequent. Operational overhead lines (OHL) are subject to an

annual maintenance inspection with any further visits generally being the result of unplanned outages on the lines. These visits are infrequent and are unlikely to generate significant volumes of traffic. On the basis of the professional judgement of the EIA team, the effects of traffic associated with the operational phase are not likely to be significant and have not been considered in detail.

- Construction traffic noise. This has not been assessed in detail as traffic movements will be
  distributed over the existing road network. In addition, the proposed new accesses to be formed
  during the construction phase are of temporary/short duration, therefore no significant noise effects
  are anticipated to arise. Further details are provided in **Chapter 14**.
- Potential effects on air quality resulting from construction traffic. These effects have not been
  assessed in detail on the basis that the KTR Project will be accessed via a number of geographically
  distinct roads and access points and therefore traffic related emissions will be diffused throughout
  the Study Area. Further details are provided in **Chapter 16**.

Table 13.1: Effects Assessed in Full and Scoped Out

Connection	Effects Assessed in Full	Effects Scoped out
Polquhanity to Glenlee (via Kendoon) (P-G via K) including:  • the removal of the 'N' route towers between Polquhanity and Kendoon, and part of the' R (north) towers between Kendoon and Glenlee	<ul> <li>Effects of felling and construction traffic on existing traffic flows and the local and trunk road network (driver delay and road safety).</li> <li>Effects of felling and construction traffic on communities (severance, pedestrian amenity / fear and intimidation, and pedestrian delay) and users of the Southern Upland Way and the 'core path' network and 'offroad tracks' which service associated worksites.</li> <li>Cumulative effects with other developments, including on traffic flows.</li> </ul>	<ul> <li>Effects of operational and maintenance vehicles on existing traffic flows and the local road network.</li> <li>Noise and air quality/dust effects associated with construction traffic on the basis that the KTR Project will be accessed via a number of geographically distinct roads and access points.</li> </ul>
Carsfad to Kendoon (C-K)	As for P-G via K	As for P-G via K
Earlstoun to Glenlee (E-G)	As for P-G via K	As for P-G via K
BG Route Deviation (BG Deviation)	As for P-G via K	As for P-G via K
Glenlee to Tongland (G-T) including the removal of the R (south) towers between Glenlee and Tongland	As for P-G via K	As for P-G via K
KTR Project as a Whole	As for P-G via K	As for P-G via K

### Assessment Methodology

13.10 This assessment has been undertaken as a combination of desk-top study, field survey and consultation with statutory agencies in line with current good practice and policy advice. Predicted volumes of felling and construction vehicle movements (and decommissioning movements for N and R routes) have been compared with baseline traffic flows to identify if there are likely to be periods where the increase in general traffic (or HGV traffic) exceeds standard thresholds. Likely effects arising as a result of the additional traffic (i.e. on driver delay, road safety and community effects) have been identified and their significance assessed.

#### **Guidance**

- 13.11 This assessment is carried out in accordance with the principles contained within the following documents:
  - Institution of Highways and Transportation (IHT) (1994), Guidelines for Traffic Impact Assessment.

- Institute of Environmental Assessment (now the Institute of Environmental Management and Assessment (IEMA) (1993), Guidelines for the Environmental Assessment of Road Traffic, Guidance Notes No. 1 (referred to as 'the IEMA Guidelines')).
- Transport Scotland (2012), Transport Assessment Guidance.
- Scottish Government (2005), NESA Manual, DMRB, Volume 15, Economic Assessment of Road Schemes in Scotland.
- ROSPA Road Safety Engineering Manual, 2007.
- 13.12 The IEMA Guidelines are intended for the assessment of the effect of road traffic associated with new developments. It is common and established practice that they are applied to energy related developments and as such these guidelines are defined as suitable to assess the construction phase of a high voltage overhead line.

#### Consultation

13.13 Consultation was undertaken with Transport Scotland (TS), Dumfries and Galloway Council (D&GC) Roads Department, Avrshire Roads Alliance and the South of Scotland Timber Transport Officer to ascertain their views on the assessment methodology, environmental effects relating to access, traffic and transport, any particular concerns they may have and any proposed road works. A summary of the consultation is provided in **Table 13.2.** 

**Table 13.2: Summary of Consultee Responses** 

Consultee	Scoping Response / Additional Consultation	Response/Action Taken
Transport Scotland, Trunk Road and Bus Operations (TRBO)	<ol> <li>Stated that any trunk road access requirements will need to be with the agreement of Transport Scotland and asked that details are supplied with the EIA Report.</li> <li>Stated that the assumption that the KTR Project is unlikely to result in an intensification of use</li> </ol>	1. Requirements for agreements acknowledged. Two existing accesses off the A75 will require to be upgraded (Access No. 63 and 64) to facilitate construction of the KTR Project. Details of the two accesses are
	exceeding 10% of the existing Annual Average Daily Traffic (AADT) on any link section of the A75 (T) shall be verified through the EIA process.	included in <b>Appendix 13.2</b> .  2. This chapter considers potential effects on the A75(T), A76 (T) and
	3. Confirmed that effects associated with the operational and maintenance phase could be scoped out of the assessment.	A77 (T).  3. Noted
	4. Agreed that noise and air quality/dust effects associated with construction traffic could be scoped out of this assessment.	4. Noted
Transport Scotland (TS), Area Manager (South West Trunk Road Network)	Date: 28 <sup>th</sup> June 2019  Advised that TS are not aware of any future development proposals on the A75, A76 and A77 (within the Study Area) which will affect construction traffic.	Noted. No further action required.
D&GC Roads Department	Requested to provide details of all works compounds and site access points on public roads.      Indicated that it would be appropriate that all access routes be assessed in full and the extent of	Requirement acknowledged, all proposed construction worksite access locations have been identified and shown on Figures 5.5.1. and 5.5.2.      Appendix 13.2 provides information on each location along with a typical construction access design plan and typical temporary signage arrangement.
	any accommodation works (such as widening, strengthening, provision of suitable passing places, etc. along any proposed access routes necessary to permit construction traffic and the passage of vehicles) to public roads and the potential impacts on utility services lying within the public road boundary are identified.	2. All construction access routes have been assessed with the exception of the C50s, C31s, U137s, U133s, U107s, U103s and U62s which will solely be used to facilitate the removal of R route. It is assessed that the removal of the R route will generate less than ten vehicle movements per day on these specific road sections.
	3. Proposals for all accommodation works should be	Accordingly, the professional judgement of the assessment team is

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Response/Action Taken

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assumed able to safely accommodate

Consultee Scoping Response / Additional Consultation supported by swept path tracks. that effects arising from such low level of traffic will be **none** and therefore **not significant**. As such, no detailed assessment has been carried out for these public road sections. Appendix **13.2** provides a description of each construction access route and identify recommended mitigatory actions such as localised widening to ease access to the worksites. Further study, design and consultation with (D&GC) Roads Department will be undertaken during the pre-construction phase once the construction programmes and vehicle movements have been more accurately defined to identify and define extents of accommodation works. 3. Requirement acknowledged. Prior to commencement of works, SP Energy Networks (SPEN) will provide details of 4. Indicated that all accesses and accommodation works necessary to road infrastructure works on public roads must be designed and to allow all temporary or permanent constructed to the satisfaction of the Planning site access to the relevant Roads Authority in consultation with the Roads Authority Authority for approval, these will be and will require appropriate permits and consents to supported by swept path analysis. have been issued and a Legal Agreement covering ongoing maintenance and restoration entered into. 4. Requirement acknowledged. Prior to commencement of works, SPEN will submit details of infrastructure works necessary to provide temporary or permanent site access to the relevant Roads Authority for approval. The contractor will implement works required to the specification of the 5. Indicated that the developer will be held Roads Authority prior to responsible for the immediate execution of any commencement of construction works repairs and will be required to meet the cost of on site. Location, general arrangement above average maintenance to the public road and standard of construction of access network arising from the concentration of heavy points will be agreed with the relevant traffic associated with this development. This is to be Roads Authority. The Contractor will secured by Legal Agreement. liaise with the Roads Authority to obtain appropriate permits and 6. Indicated that where public road boundaries are consents. altered for accommodation works, these should be reinstated in their original position at the conclusion of construction works (unless prior agreements have been secured with the Planning and Road Authorities). 5. Requirement acknowledged. SPEN will enter into a legal agreement under 7. Indicated that where an access route crosses Section 96 of the Roads (Scotland) Act bridges and culverts, the applicant will require to get 1984 to formalise an inspection and approvals (in respect of those structures) from the maintenance regime with D&GC for Council's Design Bridges and Structures Unit. agreed sections of road. 8. Indicated that it would be appropriate for all 6. Noted. timber haulage traffic to follow agreed routes from the appropriate and approved forest plans. 9. Indicated that appropriate consultation with nearby forest managers and timber hauliers through the office of the South of Scotland Timber Transport Officer shall take place to co-ordinate timber haulage 7. Noted, consultation has been operations that may use the access routes during undertaken and D&GC confirmed that the construction period to minimise the cumulative none of the structures on the routes impact on communities and road users. identified have a legal weight restriction and can therefore be

10. Indicated that a Traffic Management Plan (TMP)

Consultee	Scoping Response / Additional Consultation	Response/Action Taken
	will be required and to be agreed in writing with the Police and the Roads Authorities prior to any works commencing on site. The TMP should include a programme of delivery types/numbers by month, details of all proposed mitigation measures, list of contacts, agreed access (and excluded) routes and	normal loads up to 40 tonnes.  8. None of the public roads proposed to be used for timber extraction for the KTR Project are designated as 'excluded route' <sup>1</sup> .
	details of measures that will be implemented to ensure that no stacking of delivery vehicles occur on any part of the public road network.	9. Further consultation with (D&GC) Roads Department and South of Scotland Timber Transport Officer (see below) will be undertaken during the pre-construction phase once the felling programmes have been more accurately defined to agree as necessary; limits of timing, allowable tonnage etc. before the routes are utilised by construction traffic.
		10. Requirement acknowledged. A framework Construction Traffic Management Plan (CTMP) is provided as <b>Appendix 13.1</b> . The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced and expanded as appropriate by SPEN's appointed contractor(s), prior to commencement of construction activities and updated as necessary during the construction phase.
D&GC Roads Department	Date: 3 <sup>rd</sup> August 2018  Consultation undertaken to assess the feasibility of using the A713 Old Polharrow Bridge for construction traffic to facilitate construction of Tower 20.	D&GC has advised that there is currently no weight restriction on the A713 Old Polharrow Bridge. However, as the bridge is closed to vehicles and is now in a deteriorating condition, the structure will require to be reassessed.  The structural integrity of the Old
		Polharrow Bridge and hence suitability as a route for construction traffic will be determined by further surveys and assessment undertaken by the appointed contractor during the preconstruction phase.
D&GC Roads Department	Date: 13th September 2018 and subsequently on the 20th November 2018 and 13th June 2019  Consultation undertaken to request condition status of road bridges on proposed construction access routes.	D&GC confirmed that none of the structures on the routes identified have a weight restriction and can therefore all accommodate normal loads up to 40 tonnes.
D&GC Roads Department	Date:10 <sup>th</sup> December 2018  Confirmed that appraisal of road traffic (personal injury) collision historical data sourced from the Crashmap website is acceptable.	Requirements acknowledged and road traffic (personal injury) collisions assessed in this Chapter.
D&GC Roads Department	Date: 11 <sup>th</sup> July 2019  Confirmed that the Non-motorised user (NMU) surveys method, duration and timings as carried out (i.e. surveys were carried out for full 24-hour periods over seven days during the summer 2018; largely to coincide where peak holiday period.	No further action required.

<sup>&</sup>lt;sup>1</sup> Agreed Route Map for Timber Transport currently undersized

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Consultee	Scoping Response / Additional Consultation	Response/Action Taken
	Counts were carried out via CCTV camera with subsequent manual classification) would provide a satisfactory basis for the assessment of impacts.	
Ayrshire Roads Alliance (ARA)	Date: 15 <sup>th</sup> March 2019  Consultation undertaken to confirm the suitability of using Gateside Road to bypass the central area of Dalmellington.	ARA subsequently confirmed that it would be acceptable to use Gateside Road to bypass the central area of Dalmellington.
South of Scotland Timber Transport Officer (SSTTO)	Date: 28 <sup>th</sup> March 2019  Consultation undertaken by RTS to introduce the project and more specifically proposed timber felling requirements and obtain advice regarding transport routes.	SSTTO subsequently advised that further consultation will be required once timescales and specific areas are identified.  Further liaison will be undertaken with SSTTO during the pre-construction phase once the felling programmes have been more accurately defined.

#### **Study Area**

13-3

- 13.14 The Study Area for traffic and transport is effectively the public road network in the vicinity of the KTR Project which will be used during construction of the new Connections and the decommissioning and removal of the existing N and R routes. The public road network considered in this assessment is shown on **Figures 13.1.1 and 13.1.2**. Whilst a Study Area has not been defined on a distance basis, the public roads in the vicinity of the KTR Project which are proposed to be used during construction and operation of the KTR Project, and therefore those which have been assessed as part of this study, include: A77(Trunk), A76 (Trunk), A75(Trunk), A713, A762, A712, A711, A702, B795, B741, C13s, C45s, C31s, C50s, U137s, U133s, U107s, U103s, U1s, U2s, U3s, U34s, U43s, U62s and Gateside Road as shown on **Figures 13.1.1 and 13.1.2**.
- 13.15 The primary route in the local area is the A75, a trunk road in south Scotland linking Stranraer with the A74 (M) at Gretna. Other roads include:
  - the A77 trunk road linking Kilmarnock to Stranraer;
  - the A76 trunk road linking Kilmarnock to Dumfries;
  - the A713 is a local road which runs broadly north-south between Ayr and Castle Douglas linking with the A77 trunk road to the north and the A75 trunk road to the south;
  - the A762 runs broadly north-south between St John's Town of Dalry and Ringford linking with the A713 to the north and the A75 to the south;
  - the A712 local road runs broadly east to west between Crocketford and Newton Stewart linking with the A75 to the east and west;
  - the A711 local road runs broadly north-south linking with the A75 to the north and the A762 to the south:
  - the A702 local roads runs broadly north east to south -west linking with the A76 to the north and the A713 to the south;
  - the B741 local roads runs broadly north east- south west between New Cumnock and Dalmellington linking with the A76 to the north and the A713 to the south; and
  - the B795 local roads runs broadly east-west linking with the A75 to the east and the A762 to the
     west
- 13.16 The C31s, U137s, U133s, U107s, U103s and U62s will solely be used to facilitate the removal of R(south). It is assessed that the removal of the R(south) will generate less than 10 vehicle movements per day on these specific road sections. Accordingly, the professional judgement of the assessment team is that effects arising from such low level of traffic will be **none** and therefore **not significant**. On this basis, no detailed assessment has been carried out for these public road sections.
- 13.17 As vehicles travel to/ from the KTR Project in the wider area they shall split across the wider road network. Beyond the Study Area professional judgement therefore suggests that effects relating to access, traffic and transport are unlikely to be significant.

#### **Desk Based Research and Data Sources**

- 13.18 Preliminary desktop study was undertaken to review site access routes. Constraints and sensitive road sections were identified (i.e. locations which are likely to be more vulnerable to change in traffic flow or profile, e.g. crash cluster sites ('accident blackspot'), high footfall areas, or areas in close proximity to a school).
- 13.19 Recorded Personal Injury Collision (PIC) data was obtained from publicly available PIC information from the Crashmap website (<a href="https://www.crashmap.co.uk/">https://www.crashmap.co.uk/</a>) which utilises information sourced from the Department for Transport (DfT) database.
- 13.20 SPEN provided information in relation to construction traffic generation, based on their knowledge and experience of the construction and operational traffic requirements of similar projects. Information in relation to traffic movements required for forestry felling was provided by RTS as Project forestry advisors. In addition, the following data sources have been used in this assessment:
  - Traffic flow information for roads within the defined Study Area were sourced from the DfT website (where available).
  - Automatic traffic counts undertaken by Streetwise on behalf of Mott MacDonald to supplement traffic flow information obtained from the DfT, dated October and November 2018.
  - Peak and off-peak sample traffic counts, undertaken by Mott MacDonald, on minor local routes to supplement traffic flow information obtained from the DfT, dated November 2018.
  - Non-motorised user (NMU) surveys undertaken by Streetwise on behalf of Mott MacDonald to quantify pedestrian, equestrian and pedal cycle activity, dated August 2018.

#### **Field Survey**

13.21 In addition to the traffic surveys undertaken as listed above, field surveys were undertaken on 31<sup>st</sup> July 2018, 11<sup>th</sup> November 2018, 22<sup>nd</sup> November 2018 and 5<sup>th</sup> and 6<sup>th</sup> June 2019 by experienced Mott MacDonald staff. This involved a drive through of the public road sections within the Study Area to identify potential constraints and upgrades necessary to accommodate the safe movements of development generated construction traffic and review sensitive route sections as defined above.

#### **Assessing Significance**

- 13.22 As noted above, and as agreed with TS and D&GC<sup>2</sup>, a TA has not been undertaken as a TA is not generally considered to be required for temporary construction works and the traffic movements associated with the operational phase of the KTR Project are not high enough to warrant a formal TA.
- 13.23 An assessment of traffic and transport effects has been undertaken as significant effects associated with felling and construction traffic were considered likely at the scoping stage. The following effect classifications are considered:
  - Driver Delay;
  - Road Safety; and
  - Community Effects (Pedestrian and Cyclist Amenity, Fear and Intimidation, and Severance).

#### Sensitivity

13.24 Under IEMA Guidelines road links may be categorised as 'specifically sensitive', meaning that these sections are considered to be more vulnerable to changes to the volume or profile of traffic flows. Such locations could include 'accident blackspots', hospitals (e.g. Ayr hospital), and links with high pedestrian flows etc.

#### Magnitude

13.25 The magnitude of change has been calculated as the proportional change in traffic volume anticipated on each public road section within the Study Area. This calculation compares the forecast development traffic generation against the anticipated traffic baseline during the assumed construction years.

#### Significance

- 13.26 The IEMA Guidelines suggest that two broad rules can be used as a screening process to delimit the scale and extent of the assessment of road traffic. These are:
  - Rule 1 Include highway links where traffic flows would increase by more 30% (or the number of HGVs would increase by more than 30%).
  - Rule 2 Include any other specifically sensitive areas where traffic flows would increase by 10% or more.
- 13.27 Where the predicted increase in traffic volume (general traffic or HGV only) is lower than these thresholds, the significance of the effects can be stated to be **not significant**. This means that that further detailed assessments are not warranted. Consequently, where the predicted increase in traffic volume exceeds thresholds, the effects are considered to be potentially significant and accordingly, are assessed in greater detail.
- 13.28 The assessment has clearly identified transport routes which are to be used in connection with the KTR Project. Quantitative assessments have been undertaken alongside the application of professional judgement to determine whether or not the effects are considered to be of significance. Based on the Rule 1 and 2 of the IEMA Guidelines (IEMA, 1993), the predicted significance of the effect was determined considering both the sensitivity of the receiving environment and the magnitude of change against the baseline. As a guide to inform the assessment, but not as a substitute for professional judgement, criteria for determining the significance of traffic related effects are set out in **Table 13.3**<sup>3</sup>. It should be noted that the assessment considers the effects of the % increase in general traffic (Heavy Goods Vehicles (HGV)+ Light Goods Vehicles (LGV) and also % increase in HGV traffic only based on related baseline traffic flows e.g. % increase in HGVs from existing HGV baseline flow.
- 13.29 Given the rural nature and proximity of the Study Area to the Galloway Forest all routes have been treated as sensitive areas, and therefore the 10% significance threshold will apply as per Rule 2 of the IEMA Guidelines (IEMA, 1993) and thus ensuring a robust assessment.

**Table 13.3: Significance Criteria** 

Significance of Effect	% Increase in general traffic (HGV + LGV) volume % Increase in HGV traffic volume
Major (Significant)	Greater than or equal to 60%
Moderate (Significant)	Greater than or equal to 10% and less than 60%
Minor (Not Significant)	Greater than or equal to 5% and less than 10%
None (Not Significant)	Less than 5%

- 13.30 These thresholds have been developed based upon the Rule 2 criteria above and the consideration that **'Major**' and **'Moderate**' effects are **significant** in the context of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the 2017 2017 EIA Regulation (as amended)).
- 13.31 As such, where traffic is expected to increase by less than 10% the potential effects have not been considered as 'significant' under this assessment. Therefore, any effect described as 'Minor' or 'None' has not been assessed in further detail.
- 13.32 The significance of all effects under consideration is linked to the volume of traffic generated by the KTR Project, and so it is considered appropriate to link significance criteria to the magnitude of forecast traffic increase. However, the IEMA Guidelines (IEMA, 1993) also state that:
  - "For many effects there are no simple rules or formulae which define the thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible."
- 13.33 As such, professional judgement (led by good practice guidance) has also been applied in the assessment of effects so as to provide more meaningful conclusions, particularly in relation to the assessment of community (pedestrian delay, pedestrian amenity / fear and intimidation) and road safety

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 $<sup>^2</sup>$  D&GC agreed with the proposed traffic and transport assessment methodology which proposed excluding a TA.

<sup>&</sup>lt;sup>3</sup> It should be noted that the term 'significance' is used here both to identify where the % change in traffic should be assessed in greater detail, and also to establish the level of effect on driver delay, community impacts and road safety.

- effects which require local area knowledge. Information gathered during site visits, advice provided in the IEMA Guidelines (IEMA, 1993) and the DMRB Volume 15 (Scottish Government, 2005) have been used.
- 13.34 Furthermore, where baseline traffic flows are very low, it is possible to derive unrealistic determinations of significance when considered against purely numerical assessment criteria. For example, when traffic flow is very low, it is possible to show relatively large traffic increases and for the road to operate well below capacity. Under the numerical criteria defined above, a 60% increase in traffic volume would represent a major effect, but in reality, the effect is likely to be less significant, given the residual capacity of the road.

#### **Assessment Limitations**

13.35 It has been necessary to make a number of assumptions to enable the traffic and transport assessment to be undertaken. These assumptions relate to all components of the KTR Project, with further specific assumptions highlighted in the individual assessments for each Connection.

#### Assessment Assumptions

- 13.36 As indicated in **Chapter 5**, a seven-day working week has been assumed for assessment purposes. Construction activities will be undertaken during daytime periods only, between approximately 07.00 to 19.00 for felling and access installation activities and in summer (April to September) and 08.00 to 17.00 (or as daylight allows) for all other activities and in winter (October to March).
- 13.37 Felling and construction related activities for the KTR Project comprise all activities relating to tree felling, removal and undergrounding of 11kV OHLs (associated with the P-G via K connection only), construction/upgrading of access tracks, construction of overhead line or cabling installation, commissioning and associated activities as well as the decommissioning and removal of the existing N and R routes as set out in **Chapter 5**.
- 13.38 It has been assumed that all concrete deliveries would be sourced from concrete batching plants, located predominantly to the north, south and east of the development. Delivery vehicles would be routed via the trunk road network (A75 and A77) and access the construction areas from the A713 north (33%), the A713 south (33%) and the A712 west (33%).
- 13.39 All electrical equipment deliveries are assumed to originate from the north; delivery vehicles would be routed via the trunk road network (A75 and A77) and access the construction areas:
  - from the A713 north (100%) for connections P-G via K, C-K and E-G.
  - from the A713 north (25%) and A713 south (75%) for Connections G-T and the BG Deviation.
- 13.40 In relation to the stone required for construction, whilst SPEN anticipates that most of all stone requirements for the KTR Project can be met from the seven onsite quarries, in advance of ground investigation data, for the purposes of the EIA, it has been assumed that
  - Stone will be sourced entirely from offsite locations for Connections P-G via K, C-K, E-G and for the removal of the N route towers between Polquhanity and Kendoon and the R(south) towers between Kendoon and Glenlee; this is primarily due to the presence of only one onsite quarry to the north. Stone will be sourced either from Sorn Quarry or Tongland Quarry. The traffic and transport assessment consider scenarios where stone will be sourced either 100% from Sorn Quarry or 100% from Tongland for these Connections.
  - For Connection G-T (including removal of the R (south) towers between Glenlee and Tongland), the BG Deviation and it has been assumed that 50% of stone will be sourced from the onsite quarries as a robust realistic scenario for assessment due to the presence of a number of proposed quarries in the vicinity of these Connections. In this scenario it is assumed that the remaining 50% will be sourced from both Sorn Quarry (north of the Study Area, in East Ayrshire) and Tongland Quarry (in the south of the Study Area, in Dumfries & Galloway).
- 13.41 Similar to the above, in relation to the reinstatement of temporary access tracks, for the purpose of the EIA, it has been assumed that:
  - Stone will be entirely be taken offsite for connections P-G via K, C-K, E-G and for the removal of the N route towers between Polquhanity and Kendoon and also R (north) towers between Kendoon and Glenlee. For assessment purposes it has been assumed that stone will be returned to either Sorn

- Quarry or Tongland Quarry. The traffic and transport assessment consider scenarios where stone will be returned either 100% to Sorn Quarry or 100% to Tongland for these Connections.
- 50% of stone will be reinstated within the onsite quarries as a 'robust' scenario for connection G-T, the BG Deviation and for the removal of the R route (south) towers between Glenlee and Tongland. In this scenario it is assumed that the remaining 50% will be returned to both Sorn Quarry and Tongland Quarry.
- 13.42 It is assumed that site personnel, during the felling/construction phase, will be transported to and from the site by car, mini-bus or van; all classed as LGVs. It is not intended that these vehicles will be restricted to specific site access routes; the only road section where no construction traffic will be allowed is the U3s road section between the U2s and Bucks Linn Bridge; this is to reduce the impact of construction traffic on the residential properties situated along the U3s. For the purpose of the assessment it has been assumed that site personnel will approach the construction areas from the A713 north (25%), A713 south (25%), A712 west (25%) and A712 east (25%).
- 13.43 Confirmation of the routes selected will be agreed with the appropriate roads authorities when a contractor has been appointed as an integral part of the Construction Traffic Management Plan (CTMP) to be approved by D&GC (in consultation with other relevant roads authorities) and adopted by the contractor.
- 13.44 Whilst a number of assumptions based on previous overhead line construction schemes have necessarily been required to have been made at this stage, 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 environmental effects on traffic and transport.

#### **Baseline Conditions**

#### **Existing Conditions**

Tourist and Leisure Use

- 13.45 There are several local communities present in the Study Area; including Patna, Dalmellington, New Cumnock, Carsphairn, Moniaive, St. John's Town of Dalry, New Galloway, Glenlee, Mossdale, Laurieston, Ringford, Crossmichael, Parton and Tongland. There are also smaller residential clusters, hamlets and farm buildings in the locality.
- 13.46 The locality is popular for leisure and tourist trips, focusing on outdoors activities, with road cycling being a common pursuit. Key recreational routes which can potentially be affected by the increase traffic volume include:
  - the National Byway Cycle Route is a national cycle route network which utilises predominantly rural lanes. The route approaches St. John's Town of Dalry from the north along the B7000, cuts west through the town via the A702, before joining the A713 heading north. After crossing west over the Water of Ken, the route then follows the A762 south and the U2s west, briefly, before continuing off to the south west to join the A712 to Blackcraig.
  - the National Cycle Route 7 links Sunderland and Inverness passing through the Galloway Forest Park. The route approaches Kirkcudbright from the east before heading west and north towards Gatehouse of Fleet. At Gatehouse Station, the route splits with one section heading north and crossing the A712 just south of Clatteringshaws Loch and another section heading west towards Newton Stewart and crossing the A712 at its junction with the A75.
  - the Southern Upland Way (Core Path 504) is a long-distance coast-to-coast footpath in southern Scotland. The route links Portpatrick in the west and Cockburnspath in the east via the hills of the Southern Uplands. The route approaches St. John's Town of Dalry from the north, cuts west through the town via the A702, before crossing the A713 heading north. It then crosses the A762 just south of the Earlstoun Power Station, before continuing west.
  - Raider's Road (Core Path 143) is a ten-mile-long forest road in Galloway Forest Park. The route links the A712 near Clatteringshaws to the A762 near Mossdale. Notable features on this forest drive include a variety of forest walks and cycle tracks, picnic sites at Stroan Loch and the Otter Pool.
  - the Mossdale to Gatehouse Station Railway Walk (Core Path 485) is an 8-mile route running along the old railway through the heart of the Dark Sky Park.

- a number of core paths intersect with or overlap with proposed construction routes for the KTR Project, including:
  - the Bardennoch Trail linking Carsphairn to Dundeugh (Core Path 164);
  - the Glenlee path (Core Path 30);
  - the Mulloch Hill path (Core Path 224);
  - the Dalry to New Galloway path (Core Path 21);
  - Raiders Road to Kenmuir Link (Core Path 142);
  - Cairn Edward Hill path (Core Path 177);
  - Arie path, near Mossdale (Core Path 153);
  - Glengap and Laurieston Forest (Core Path 28);
  - Kenick Burn Walk (Core Path 200);
  - The Gunney, Parton (Core Path 29);
  - Livingston Hill (Core Path 208);
  - Mossdale Walk, Red Kite Trail (Core Path 205);
  - Retreat Wood, Laurieston (Core Path 144);
  - The New Galloway West path (Core Path 516); and
  - Raiders Road East (Core Path 141).
- 13.47 The recreational routes as described above are shown on Figures 13.2.1 and 13.2.2.

#### Non-Motorised User Surveys

- 13.48 To determine the level of pedestrian, equestrian and pedal cycle activity, NMU surveys were carried out at five distinct sites for full 24-hour periods over seven days, from Wednesday 1<sup>st</sup> August 2018 to Tuesday 7<sup>th</sup> 2018 (Sites 1 and 2) and from Saturday 25<sup>th</sup> August 2018 to Friday 31<sup>st</sup> August 2018 (Sites 3, 4 and 5):
  - Site 1: Intersection of the Southern Upland Way and the A762;
  - Site 2: Intersection of the Glenlee Path (Core Path 30) and the A762;
  - Site 3: C13s (Laurieston Road) by the Kenick Burn car park;
  - Site 4: A762 by the Mossdale to Gatehouse Station Railway Walk in Mossdale; and
  - Site 5: B795 by its junction with Church Road, east of Laurieston.
- 13.49 Locations of Sites 1 to 5 are shown on **Figures 13.2.1** and **13.2.2.**
- 13.50 Counts were carried out via CCTV camera with subsequent manual classification and summarised in 15-minute intervals.
- 13.51 **Table 13.4** Summarises NMU movements at Sites 1 and 2 and
- 13.52 **Table** 13.5 summarises NMU movements at Sites 3, 4 and 5.

Table 13.4: NMU Movements Summary (Sites 1 and 2)

Date / Location		Site 1			Site	2	
Date / Location		Site 1			Site 2		
	Ped	PC	Equ	Ped	PC	Equ	
Wed 1 <sup>st</sup> August 2018	10	0	0	8	0	0	
Thu 2 <sup>nd</sup> August 2018	24	1	0	6	0	0	
Fri 3 <sup>rd</sup> August 2018	12	1	0	6	1	0	
Sat 4 <sup>th</sup> August 2018	17	1	0	7	0	0	
Sun 5 <sup>th</sup> August 2018	24	0	0	7	0	0	
Mon 6 <sup>th</sup> August 2018	13	1	0	10	0	0	
Tue 7 <sup>th</sup> August 2018	17	1	0	6	0	0	
TOTAL	117	5	0	50	1	0	

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Table 13.5: NMU Movements Summary (Sites 3, 4 and 5)

Date / Users		Site 3		Site 4		Site 5			
	Ped	PC	Equ	Ped	PC	Equ	Ped	PC	Equ
Sat 25 <sup>th</sup> August 2018	34	19	0	52	2	0	4	31	9
Sun 26 <sup>th</sup> August 2018	20	3	0	28	0	0	1	4	2
Mon 27 <sup>th</sup> August 2018	23	11	0	31	0	0	10	8	14
Tue 28 <sup>th</sup> August 2018	16	11	0	38	3	0	7	9	10
Wed 29 <sup>th</sup> August 2018	31	13	0	29	8	0	3	12	8
Thu 30 <sup>th</sup> August 2018	27	7	0	29	0	0	10	7	6
Fri 31 <sup>st</sup> August 2018	18	3	0	27	7	0	3	12	8
TOTAL	169	67	0	234	20	0	38	83	57

Chapter 13: Traffic and Transport

- 13.53 In addition, pedal cyclist counts were carried out at two sites situated on the National Byway Cycling Route, for full 24-hour periods over seven days, from Wednesday 1st August 2018 to Tuesday 7th 2018:
  - Site 6: A762 south of Earlstoun Power Station Bridge; and
  - Site 7: U2s at its intersection with the U3s.
- 13.54 **Table 13.6** summarises pedal cycle counts at Sites 6 and 7. The locations of Sites 6 and 7 are shown on **Figures 13.2.1** and **13.2.2**.

**Table 13.6: Pedal Cycle Counts Summary (Sites 6 and 7)** 

Date / Location	Site 6	Site 7	
Wed 1 <sup>st</sup> August 2018	10	2	
Thu 2 <sup>nd</sup> August 2018	6	2	
Fri 3 <sup>rd</sup> August 2018	6	3	
Sat 4 <sup>th</sup> August 2018	11	0	
Sun 5 <sup>th</sup> August 2018	2	0	
Mon 6 <sup>th</sup> August 2018	4	2	
Tue 7 <sup>th</sup> August 2018	10	2	
TOTAL	49	11	

#### Road Network and Route Profiles

- 13.55 The road network included in the Study Area was identified on the basis of likely felling and construction traffic routes provided by SPEN and consultation with the relevant transport authorities. Confirmation of the routes selected will be agreed with the appropriate road authorities when a contractor has been appointed as an integral part of the CTMP to be approved by D&GC (in consultation with other relevant roads authorities) and adopted by the contractor.
- 13.56 A concise profile setting out key characteristics of the local public road sections within the Study Area is provided as follows. These are shown graphically on **Figures 13.1.1 and 13.1.2.**
- 13.57 **A713 (between A77 and Dalmellington):** The A713 throughout this section is a single carriageway road. The route passes next to Ayr Hospital then through the hamlet of Hollybush and the village of Patna; where the speed limit reduces to 50mph and 30mph respectively. Elsewhere in this route section the national speed limit applies. Patna is a large village with residential and commercial properties fronting the A713. Patna Primary School is situated on Carnshalloch Avenue, situated approximately 500m from the A713. There are traffic management features implemented locally to encourage low speeds including 'slow' road markings, vehicle activated signs and speed humps. There is footway provision in Patna.

- 13.58 **A713 (between Dalmellington and Carsphairn):** The A713 throughout this section is a single carriageway road. The route passes through the town of Dalmellington and the hamlet of Waterside where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. Dalmellington is a small town with residential and commercial properties fronting the A713. Doon Academy Secondary School and Dalmellington Primary School are situated approximately 100m from the A713. There are traffic management features implemented locally to encourage low speeds including 'slow' road markings, illuminated 20mph signs (which operate at beginning and end of school day) and speed humps. There is footway provision in Dalmellington.
- 13.59 **A713 (between Carsphairn and A762):** The A713 throughout these sections is a single carriageway road. The route passes through the village of Carsphairn where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. In Carsphairn residential and commercial properties front the A713. Carsphairn Primary School is situated approximately 50m from the A713. There are a number of traffic management features implemented locally to encourage low speeds including 30mph speed roundels and 'slow' road markings and illuminated 20mph signs (which operate at beginning and end of school day). There is local footway provision in Carsphairn.
- 13.60 A713 (between A762 and A702) and A713 (between A702 and A712): The A713 throughout these sections is a single carriageway road. The route passes through the town of St John's Town of Dalry where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. St John's Town of Dalry is a small town with several residential and commercial properties including public amenities fronting the A713. Dalry Primary and Secondary Schools are situated approximately 100m from the A713. There are traffic management features implemented locally to encourage low speeds including 30mph speed roundels and 'slow' road markings. There is local footway provision in Dalry.
- 13.61 **A713 (between A712 and B795) and A713 (between B795 and A75):** The A713 throughout these sections is a single carriageway road. The route passes through the hamlet of Parton and the village of Crossmichael where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. In Crossmichael residential and commercial properties front the A713. Crossmichael Primary School is situated approximately 100m from the A713. There are traffic management features implemented locally to encourage low speeds including 30mph speed roundels and 'slow' road markings. There is local footway provision in Crossmichael.
- 13.62 **A712 (between A75 and A762) and A712 (between A762 and A713):** The A712 throughout these sections is a single carriageway road. The route features places of interest, such as the Wild Goat Park, the Red Deer Range and the Clatteringshaws Visitor Centre. The route passes through the town of New Galloway where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. New Galloway is a small town with residential properties fronting the A712. Kells Primary School is situated approximately 50m from the A712. There are traffic management features implemented locally to encourage low speeds including 30mph speed roundels and 'slow' road markings. There is local footway provision in the built-up areas.
- 13.63 **A712 (between A713 and Corsock) and A712 (between Corsock and A75):** The A712 throughout this section is a single carriageway road. The route passes through the villages of Corsock and Crocketford where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. With the exception of Corsock and Crocketford (where residential properties front the A712), there is minimal frontage development.
- 13.64 **A711 (between A75 and A762):** The A711 throughout this section is a single carriageway road. The route passes through the village of Tongland where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. In Tongland residential properties front the A711.
- 13.65 **A702** (between A713 and Moniaive) and A702 (between Moniaive and A76): The A702 throughout this section is a single carriageway road. The route passes through Moniaive and Thornhill where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. In Moniaive residential and commercial properties front the A702. Moniaive Primary School is situated approximately 100m from the A713. The route through Moniaive features width restrictions including an alternate one-way traffic system. There is local footway provision in Moniaive and Thornhill.
- 13.66 **A762 (between A713 and U2s):** The A762 throughout this section is a single carriageway road. The route provides access to residential properties and the Earlston Power Station. The national speed limit applies throughout.

- 13.67 **A762 (between A712 and B795):** The A762 throughout this section is a single carriageway road. The route passes through the town of New Galloway, the village of Laurieston and the hamlet of Mossdale. The speed limit reduces to 30mph through New Galloway and Laurieston, elsewhere in this route section the national speed limit applies. New Galloway is a small town with residential and commercial properties fronting the A762. There is local footway provision in the built-up areas. The route features places of interest, such as the Bennan viewpoint and access to Raider's Road.
- 13.68 **A762 (between B795 and A75):** The A762 throughout this section is a single carriageway road. The route passes through the villages of Laurieston and Ringford where the speed limit reduces to 30mph, elsewhere in this route section the national speed limit applies. There is local footway provision in the built-up areas.
- 13.69 **B741 (between A76 and Gateside Road):** The B741 throughout this section is a single carriageway road. The route passes through New Cumnock and the northern fringe of Dalmellington where the speed limit reduces to 30mph; elsewhere in this route section the national speed limit applies. In Dalmellington and New Cumnock residential properties front the B741. Doon Academy Secondary School and Dalmellington Primary School are situated approximately 200m from the B741. There is local footway provision in Dalmellington and New Cumnock.
- 13.70 **B795** (between the A713 and A762): The B795 throughout that section is a single carriageway road. The route passes through the hamlet of Glenlochar and the eastern part of Laurieston where the speed limit reduces to 30mph. Residential properties front the B795 and the Bellymack Hill Farm Kite Feeding Station is situated immediately off the B795.
- 13.71 **C13s (between A762 and Lochenbreck Cottage):** The C13s is a single carriageway road within Laurieston and a single-track road intercepted with passing places for the remainder of the section. The road passes through the western part of Laurieston where residential properties front the C13s.
- 13.72 **C45s (between the A75 and the B795):** The C45s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.73 **C50s (between the B795 and Livingstone):** The C50s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.74 **C31s (between the A713 and U107s):** The C31s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.75 **U137s (between the A713 and U112s):** The U137s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.76 **U133s (between the U103s and U107s):** The U133s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.77 **U107s:** The U107s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.78 **U103s:** The U103s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.79 **U62s:** The U62s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.80 **U43s:** The U43s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.81 **U34s:** The U34s is a single-track road. The road is used for access to a small number of residential and agricultural properties. The national speed limit applies on this section of road.
- 13.82 **U1s (to an extent of 200m west of the A713):** The U1s is a single-track road interspersed with passing places. The road is used for access to a small number of residential and agricultural properties as well as the Forest Estate Shooting Ground and Natural Power offices. The national speed limit applies on this section of road.

- 13.83 **U2s (between Glenlee Mains and the A762):** The U2s is a single-track road. The road is used for access to a small number of residential and agricultural properties and the Glenlee Power Station. The route passes through the Hamlet of Glenlee. The national speed limit applies on this section of road.
- 13.84 **Gateside Road (Dalmellington):** Gateside Road is a single carriageway road with a 30mph speed limit. The road is fronted by residential properties.

Bridges and Other Structures

- 13.85 To access tower 20 it will be necessary to cross the A713 Old Polharrow Bridge. Consultation was undertaken with D&GC Roads Department in August 2018 to obtain details on the bridge and associated access road.
- 13.86 The A713 Old Polharrow Bridge is Category B listed structure, located in Dumfries and Galloway (NGR 260323, 584358), which spans in a north-south direction accommodating the disused single-track Ayr Road over Polharrow Burn. The structure, which is owned and maintained by D&GC, is now decommissioned and closed to vehicles. The structural integrity of the Old Polharrow Bridge and hence suitability as a route for construction traffic will be determined by further surveys and assessment undertaken by the appointed contractor during the pre-construction phase. Should an alternative access be required, then the location will be confirmed by the appointed contractor as an integral part of their adopted CTMP.
- 13.87 There are several bridges and culverts on the existing road network, however no evidence of signed weight restrictions were observed during field study nor identified during consultation.

Existing Traffic Flows

- 13.88 Typical capacities for a variety of road types are provided within the Design Manual for Roads and Bridges (DMRB), Volume 15, Table 5/3/1. These capacities, which are quoted as two way flows in vehicles per hour (vph), have been extracted for the road sections considered likely to be utilised by project related traffic and are summarised in **Table 13.7**.
- 13.89 To supplement and verify the traffic count data sourced from the DfT website, Mott MacDonald at strategic locations:
  - Carried out peak and off-peak sample traffic counts, these were factored to provide Annual Average Daily Traffic (AADT) values, consistent with the process as set-out in The Design Manual for Roads and Bridges (DMRB), Volume 13, Chapter 9, Part 4.
  - Commissioned automatic traffic counts on the A713, C13s and B795; as shown on Figures 13.1.1 and 13.1.2.
- 13.90 Due to the rural status of the U1s, traffic flow data has not been sourced. Instead a reasonable assumption has been applied using professional judgement based on local observation and knowledge of traffic volumes on adjacent roads. For the purpose of assessment, 65 AADT has been assumed for the U1s, being 5% of the feeder road (the A713).
- 13.91 **Table 13.7** details the existing baseline traffic flows and capacities on the routes within the Study Area considered in the assessment.

**Table 13.7: Route Capacities and Existing Baseline Traffic Count Data** 

Route Section	Description [Speed limit (mph)]	Width	AADT {% HGV} [Source]	Capacity (vph) (two-way hourly flow)	Typical peak flow (vph) (two-way peak hour flow) from the determination of baselines conditions
<b>A77</b> (between A713 and A70)	Rural typical single carriageway [60 typical]	10m (typically)	20,094 {5.5%} [a]	3,000	<1,200
<b>A76</b> (between B743 and A70)	Rural typical single carriageway [60 typical]	7.3m (typically)	11,024 {8.5%} [a]	2,400	<1,000

Route	Description	Width	AADT	Capacity (vph)	Typical peak flow
Section	[Speed limit (mph)]		{% HGV}	(two-way hourly	(vph)
	/-		[Source]	flow)	(two-way peak hour
					flow) from the determination of
		10	6.056	2.000	baselines conditions
A76 (between A70 and New	Rural typical single	10m	6,056	3,000	<1,000
Cumnock)	carriageway	(typically)	{14.5%}		
	[60 typical]		[a]		
<b>A76</b> (between New Cumnock	Rural typical single	7.3m	3,634	2,400	<1,000
and Thornhill)	carriageway	(typically)	{16%}		
	[60 typical]		[a]		
A76 (between	Rural typical	7.3m	5,757	2,400	<1,000
Thornhill and A75)	single carriageway	(typically)	{9.5%}		
	[60 typical]		[a]		
A75 (between	Rural typical	7.3m	7,450	2,400	<1,000
A762(N) and A712)	single carriageway	(typically)	{13%}		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	[60 typical]		[a]		
A75 (between	Rural typical	10m	10,433	3,000	<1,000
A712 and	single	(typically)	{10.5%}	3,000	.2,000
A780)	carriageway	(1) p. 100,	[a]		
<b>A 7 F</b> (	[60 typical]	10		2.000	.1.000
<b>A75</b> (between A780 and A76)	Rural typical single	10m	13,888	3,000	<1,000
	carriageway	(typically)	{11%}		
	[60 typical]		[a]		
<b>A77</b> (between A713 and A70)	Rural typical single	10m	20.094	3,000	<1,200
70713 una 7070)	carriageway	(typically)	{5.5%}		
	[60 typical]		[a]		
A713	Rural typical	Varies; 6m	3,852	1,800	<200
(between A77 and	single carriageway	(typically)	{6%}		
Dalmellington)	[60 typical]		[a]		
A713	Rural typical	Varies; 6m	1,469	1,800	<200
(between Dalmellington	single carriageway	(typically)	{11.5%}		
and Carsphairn)	[60 typical]		[a]		
A713	Rural typical	Varies; 6m	1,243	1,800	<200
(between	single	(typically)	{11.3%}	1,000	\200
Carsphairn and A762)	carriageway		(11.5 %) [b]		
	[60 typical]				
A713 (between	Urban typical single	Varies; 6m (typically)	1,303	1,600	<200
A762 and A702)	carriageway		{8.5%}		
·	[30 typical]		[a]		
A713 (between	Urban typical single	Varies; 6m (typically)	2,152	1,600	<200
À702 and	carriageway	(6, 5, 5, 5, 1)	{8.5%}		
A712)	[30 typical]		[a]		
A713 (between A712 and	Rural typical single	Varies; 6m (typically)	1,781	1,800	<200
, ., 12 UIIU					

Route Section	Description [Speed limit	Width	AADT	Capacity (vph)	Typical peak flow
Section	(mph)]		{% HGV}	(two-way hourly	(vph)
			[Source]	flow)	(two-way peak hour flow) from the determination of baselines conditions
B795)	carriageway		{10%}		
	[60 typical]		[a]		
<b>A713</b> (between B795 and A75)	Rural typical single carriageway	Varies; 6m (typically)	3,647 {5%}	1,800	<200
	[60 typical]		[a]		
<b>A712</b> (between A75 and A762)	Rural typical single carriageway	Varies; 6m (typically)	646 {10.5%} [a]	1,800	<200
	[60 typical]				
A712 (between A762 and A713)	Urban typical single carriageway	Varies; 6m (typically)	1,456 {8%}	1,600	<200
A713)	[30 typical]		[a]		
A712 (between A713 and Corsock)	Rural typical single carriageway	Varies; 6m (typically)	932 {7.5%} [a]	1,800	<200
	[60 typical]				
A712 (between Corsock and A75)	Rural typical single carriageway	Varies; 6m (typically)	724 {10%}	1,800	<200
	[60 typical]		[a]		
<b>A711</b> (between A75 and A762)	Rural typical single carriageway	Varies; 6.5m (typically)	3,675 {9%}	1,800	<200
	[60 typical]		[a]		
A702 (between A713 and	Rural poor single carriageway	Varies; 5.5m (typically)	230 {8%}	1,600	<100
Moniaive)	[60 typical]		[a]		
A702 (between Moniaive and	Rural poor single carriageway	Varies; 5.5m (typically)	878 {9%}	1,600	<100
A76)	[60 typical]		[a]		
A762 (between A713 and U2s)	Rural poor single carriageway	Varies; 4.5m to 5m (typically)	336 {7%}	280	<50
	[60 typical]		[c]		
A762 (between A712 and	Rural poor single carriageway	Varies; 5.5m (typically)	375 {5.5%}	1,600	<100
B795)	[60 typical]		[a]		
A762 (between B795 and A75)	Rural poor single carriageway	Varies; 5.5m (typically)	349 {9%}	1,600	<100
2,35 ana 7,3)	[60 typical]		[a]		
<b>B741</b> (between New	Rural typical single	Varies; 6m	996	1,800	<200

Cumnock and Dalmellington   Cournock and Dalmellington   Cot typical	Route	Description	Width	AADT	Capacity (vph)	Typical peak flow
Cumnock and Dalmelington   Courned and Dalmeli	Section			{% HGV}		(vph)
Dalmellington   E60 typical   E795		(		[Source]	flow)	flow) from the determination of
Sample		carriageway	(typically)	{3.5%}		
(between A762 and A713)         single-track [60 typical]         (typically) [b]         (10%) [b]	Daimellington)	[60 typical]		[c]		
A762 and A713)   [60 typical]				482	1,600	<100
C13s Rural typical single-track [60 typical] Varies; 4m (typically) [c] N/a* <50  C45s Rural typical single-track [60 typical] Varies; 3m (typically) [c] N/a* <50  U43s Rural typical single-track [60 typical] Varies; 3m (typically) [c] N/a* <50  U34s Rural typical single-track [60 typical] Varies; 3m (typically) [c] N/a* <50  U15 Rural typical single-track [60 typical] Varies; 4m (typically) [c] N/a* <50  U25 Rural typical single-track [60 typical] Varies; 4m (typically) [d] N/a* <50  U36 Rural typical single-track [60 typical] Varies; 4m (typically) [d] N/a* <50  U37 Rural typical single-track [60 typical] Varies; 4m (typically) [c] N/a* <50  U38 Rural typical single-track [60 typical] Varies; 3m (typically) [c] N/a* <50  U39 Rural typical single-track [60 typical] Varies; 3m (typically) [c] N/a* <50  U30 Varies; 3m (typically) [c] N/a* <50  U31s Varies; 6m (typically) [c] N/a* <50  U24c Varies; 6m (typically) [c] N/a* <50  U35 Varies; 6m (typically) [c] N/a* <50  U36 Varies; 6m (typically) [c] N/a* <50  U37 Varies; 6m (typically) [c] N/a* <50  U38 Varies; 6m (typically) [c] N/a* <50  U38 Varies; 6m (typically) [c] N/a* <50  U39 Varies; 6m (typically) [c] N/a* <50  U39 Varies; 6m (typically) [c] N/a* <50  U30 Varies; 6m (typically) [c] N/a* (typically) [c] Varies; 6m (typically) [			(typically)	{10%}		
Single-track   (typically)   (5%)   [b]	A713)	[60 typical]		[b]		
[60 typical]	C13s			143	n/a*	<50
C45s			(typically)	{5%}		
Single-track   (typically)   (<1%)   (c)		[00 typical]		[b]		
[60 typical]	C45s	Rural typical			n/a*	<50
C     C     C   C   C   C   C   C   C			(typically)	{<1%}		
Single-track   (typically)   (<1%)   (c]     U34s		[oo typical]		[c]		
[60 typical]   [c]	U43s	Rural typical		204	n/a*	<50
C    C    C    C    C    C    C    C			(typically)	{<1%}		
Single-track   (typically)   (<1%)   (c]     U1s		[60 typical]		[c]		
[60 typical]   [c]	U34s			168	n/a*	<50
C   C   C   C   C   C   C   C   C   C			(typically)			
Single-track   (typically)   {9%}   [d]		[oo typical]		[c]		
[60 typical]   [d]   [d]	U1s			70	n/a*	<50
U2s			(typically)	{9%}		
Single-track   4.3m   {6%}   [c]		[oo typical]		[d]		
[60 typical]   [c]   [c]	U2s			192	n/a*	<50
Columbia			4.3111	{6%}		
single-track (typically) [60 typical]  Gateside Urban typical Varies; 6m (typically)  Road (typically)  1,187 1,600 <200		[60 typical]		[c]		
[60 typical] [c] [c] [c] [c] [c] [c] [c] [c] [c] [c	U3s			60	n/a*	<50
Gateside Urban typical Varies; 6m 1,187 1,600 <200			(typically)	{1.5%}		
Road single (typically)		[on rybical]		[c]		
NOGU SINGLE (LYPICALLY)				1,187	1,600	<200
(Dalmellington carriageway \\ \{3.8\%\}			(typically)	{3.8%}		
[c]	)			[c]		

- \* DMRB does not define theoretical capacities for single track roads.
- [a] Source: Department for Transport (DfT) database
- [b] Source: Automatic Traffic Counts (October and November 2018)
- [c] Source: Mott MacDonald Sample Traffic Counts (October 2017, November 2018 and June 2019)
  - factored flows derived from peak and inter-peak sample counts.
- [d] Source: Estimated traffic volume

- Personal Injury Collisions (PIC)
- 13.92 No concerns were raised during the consultations regarding road safety or crash 'blackspots' on the local or trunk road network.
- 13.93 Nevertheless, a road traffic collision analysis has been undertaken to appraise road safety in the Study Area. Personal Injury Collision (PIC) records have been obtained from Crashmap for a three-year period ending in June 2018.
- 13.94 The data has been examined with due reference to the ROSPA Road Safety Engineering Manual, 2007 (to identify any clusters and trends in the pattern and location of the collisions) and Road Casualties Great Britain, 2017 (RCGB) to evaluate against national statistics for roads of similar classification. Where collision rates exceed national average, these have been subject to more detailed consideration. Results of the road traffic collision analysis are summarised in **Table 13.8**.

Table 13.8: Summary of Collision Assessment for Public Roads within the Study Area

Route Section	No. of	RCGB Crash	Assessment
	collisions in three-year period	rate per billion vehicle miles	
	[Crash rate per billion vehicle miles]	(Comparison %)	
A713 (between A77 and Dalmellington [Road Length = 13 miles]	30 [569]	384 [148%]	<ul> <li>There were 30 recorded PICs during the three-year period ending in June 2018.</li> <li>HGVs were involved in 3% of the 30 collisions. Of the total 86 vehicles which were in some way involved in the 30 collisions, one involved a HGV; comprising 1% of the total vehicles involved in collisions.</li> <li>Of the 30 collisions recorded, eight resulted in serious injuries and none in fatal injuries.</li> <li>The collision where HGV was involved resulted in serious injuries.</li> <li>No collisions involved pedestrians, cyclists or</li> </ul>
A713 (between Dalmellington and Carsphairn)  [Road Length = 10 miles]	14 [870]	384 [227%]	<ul> <li>motorcyclists.</li> <li>There were 14 recorded PICs during the three-year period ending in June 2018.</li> <li>HGVs were involved in 14% of the 14 collisions. Of the total 17 vehicles which were in some way involved in the 14 collisions, two involved a HGV; comprising 12% of the total vehicles involved in collisions. HGVs comprise 11.5% of the overall traffic composition locally and thus they are not over-represented in the overall collision statistics.</li> <li>Of the 14 collisions recorded, three resulted in serious injuries and one in fatal injuries.</li> <li>Of the two collisions where HGVs were involved, one resulted in fatal injuries and the other one resulted in serious injuries.</li> <li>No collisions involved pedestrians, cyclists or motorcyclists.</li> </ul>
A713 (between Carsphairn and A762)  [Road Length = 8.6 miles]	4 [342]	384 [89%]	<ul> <li>There were four recorded PICs during the three-year period ending in June 2018.</li> <li>No HGV was involved in any collision.</li> <li>Of the four collisions recorded, none resulted in serious or fatal severity injury.</li> <li>No collisions involved pedestrians or cyclists and one collision involved motorcyclists.</li> </ul>
<b>A713</b> (between A762 and	0	384	No collisions were recorded during the three-year period ending in June 2018.

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No. of	RCGB Crash	Assessment

Route Section	No. of collisions in three-year period [Crash rate per billion vehicle miles]	RCGB Crash rate per billion vehicle miles (Comparison %)	Assessment
A702)	[0]	[0%]	
[Route Length = 0.8 miles]			
A713 (between A702 and	1	384	There was one recorded PIC during the three-year period ending in June 2018.
A712)	[170]	[44%]	No HGVs were involved in the recorded collision.
[Road Length = 2.5 miles]			The recorded collision resulted in fatal injuries.
2.5 miles			No pedestrians, cyclists or motorcyclists were involved in the collision.
A713 (between A712 and	3	384	There were three recorded PICs during the three-year period ending in June 2018.
B795) [Road Length = 11 miles]	[139]	[36%]	Of the total three vehicles which were in some way involved in the four collisions, there was one HGV involved.
_			No collisions involved pedestrians or cyclists.
			Two collisions involved motorcyclists.
<b>A713</b> (between B795 and A75)	4	384	There were four recorded PICs during the three-year period ending in June 2018.
[Road Length = 1.5 miles]	[626]	[163%]	Of the total six vehicles which were in some way involved in the four collisions, there was one HGV involved.
			No collisions involved pedestrians, cyclists or motorcyclists.
<b>A712</b> (between A75 and A762)	6	384	There were six recorded during the three-year period ending in June 2018.
[Road Length =	[278]	[72%]	No HGV was involved in any collision.
17.2 miles]			Of the six collisions recorded, three collisions resulted in serious injuries and one in fatal injuries.
			No collisions involved pedestrians or cyclists.
			Three collisions involved motorcyclists.
A712 (between A762 and	1	384	There was one recorded PIC within the route section during the three-year period ending in June 2018.
A713)	[896]	[233%]	No HGVs were involved in the recorded collision.
[Road Length = 0.7 miles]			No collisions involved pedestrians or cyclists.
_			One collision involved motorcyclist.
A712 (between A713 and Corsock)	3 [320]	384 [83%]	<ul> <li>There were three recorded PICs within the route section during the three-year period ending in June 2018.</li> </ul>
,	[320]	[6576]	No HGVs was involved in any collision.
[Road Length = 8.5 miles]			Of the three collisions recorded, one resulted in serious injuries.
			No collisions involved pedestrians or cyclists.
			One collision involved motorcyclist.
A712 (between Corsock and A75)	3 [1051]	384	There were three recorded PICs within the route section during the three-year period ending in June 2018.
[Road Length = 6 miles]	[1031]	[274%]	Of the total eight vehicles which were in some way involved in the three collisions, there was one HGV involved.
			No collisions involved pedestrians, cyclists or

Route Section	No. of collisions in three-year period	RCGB Crash rate per billion vehicle miles	Assessment
	[Crash rate per billion vehicle miles]	(Comparison %)	
			motorcyclists.
<b>A711</b> (between A75 and A762)	4	384	There were four recorded PICs within the route section during the three-year period ending in June 2018.
[Road Length = 3.9 miles]	[255]	[66%]	Of the total seven vehicles which were in some way involved in the four collisions, there was one HGV involved.
			No collisions involved pedestrians, cyclists or motorcyclists.
A702 (between A713 and	5	384	There were five recorded PICs within the route section during the three-year period ending in June 2018.
Moniaive) [Route Length	[1551]	[404%]	No HGVs were involved in the recorded collision.
= 14 miles]			No collisions involved pedestrians or cyclists.
			Three collisions involved motorcyclists.
<b>A702</b> (between Moniaive and	4	384	There were four recorded PICs within the route section during the three-year period ending in June 2018.
A76) [Route Length	[505]	[131%]	No HGVs were involved in the recorded collision.
= 8.5 miles]			No collisions involved pedestrians or cyclists.
			One collision involved motorcyclists.
<b>A762</b> (between A713 and U2s)	1	384	There was one recorded PIC during the three-year period ending in June 2018.
[Route Length = 1.2 miles]	[2455]	[639%]	No HGVs were involved in the recorded collision.
			No pedestrians, cyclists or motorcyclists were involved in the collision.
A762 (between	0	384	No collisions were recorded during the three-year period     and in a large 2010.
A712 and B795) {Road Length	[0]	[0%]	ending in June 2018.
= 9.2 miles] <b>A762</b> (between	0	384	No collisions were recorded during the three-year period
B795 and A75) Road Length = 5.1 miles]	[0]	[0%]	ending in June 2018.
B741 (between	5	599	There were five recorded PICs during the three-year
New Cumnock and Dalmellington	[246]	[41%]	<ul><li>period ending in June 2018.</li><li>Of the total five vehicles which were in some way</li></ul>
[Road Length = 10.3 miles]			<ul> <li>involved in the five collisions, no HGVs were involved.</li> <li>Of the five collisions recorded, one collision resulted in</li> </ul>
			<ul><li>serious injuries and one in fatal injuries.</li><li>No collisions involved pedestrians or cyclists and one</li></ul>
			collision involved motorcyclists.
<b>B795</b> (between A762 and A713)	1 [476]	599 [79%]	There was one recorded PIC during the three-year period ending in June 2018.
	[4/0]	[/ 370]	No HGVs were involved in the recorded collision.
[Road Length = 4 miles]			No pedestrians, cyclists or motorcyclists were involved in the collision.
C13s	0	599	No collisions were recorded during the three-year period anding in June 2018
[Road Length = 2.5 miles]	[0]	[0%]	ending in June 2018.
C45s	0	599	No collisions were recorded during the three-year period ending in June 2018.
[Road Length =	[0]	[0%]	chaing in Jane 2010.

Route Section	No. of collisions in three-year period [Crash rate per billion	RCGB Crash rate per billion vehicle miles (Comparison %)	Assessment
	vehicle miles]	70)	
3.9 miles]			
U43s	0	599	No collisions were recorded during the three-year period
[Road Length = 0.5 miles]	[0]	[0%]	ending in June 2018.
U34s	0	599	No collisions were recorded during the three-year period
[Road Length = 0.5 miles]	[0]	[0%]	ending in June 2018.
U1s	0	599	No collisions were recorded during the three-year period
[Road Length = 0.2 miles]	[0]	[0%]	ending in June 2018.
U2s	0	599	No collisions were recorded during the three-year period
[Road Length = 0.6 miles]	[0]	[0%]	ending in June 2018.
U3s	1	599	There was one recorded PIC during the three-year period     There was one recorded PIC during the three-year period
[Road Length = 2.8 miles]	[5018]	[838%]	<ul><li>ending in June 2018.</li><li>No HGVs were involved in the recorded collision.</li></ul>
			No pedestrians, cyclists or motorcyclists were involved in the collision.
Gateside Road	0	599	No collisions were recorded during the three-year period anding in June 2019
(Dalmellington) [Road Length = 0.6 miles]	[0]	[0%]	ending in June 2018.

- 13.95 From the descriptions provided it appears that for all four of the collisions resulting in a fatality that driver error played a notable part.
- 13.96 It can reasonably be concluded from review of the collision history that although some sections of some routes exceed national average collision rates for roads in their respective categories, there are no notable crash clusters (accident 'blackspots') and there is no apparent safety problem specifically relating to vulnerable road users.

### Future Baseline in the Absence of the Development

13.97 This section outlines traffic conditions anticipated within the Study Area, in the absence of the KTR Project.

Planned Changes to the Road Network

- 13.98 Routine periodic route maintenance is likely to occur at a variety of locations however nothing notable is proposed in the Study Area at the time of writing.
- 13.99 No planned changes to the road network were identified during consultation.

Future Baseline Traffic Flow

13-11

- 13.100 This assessment will consider the effects of traffic generated during the KTR Project construction phase (including the decommissioning of N and R routes). Construction is scheduled to commence in March 2022 and be completed by December 2026.
- 13.101 In the absence of the KTR Project, it has been assumed that traffic flows on the local road network would increase broadly in line with National Road Traffic Forecasts (NRTF). The level of increase within the local road network is assessed to be 'Low'. This relates to a 1.06% increase in background traffic between 2017 and 2022, 1.000 between 2018 and 2022 and 1.035 between 2019 and 2022. Low growth was selected on the basis that the KTR Project is situated in a sparsely populated area. High or medium levels

of traffic growth would only be likely if there is to be a significant increase in population and car ownership in the area, which is not foreseen. Beyond 2026 road traffic will continue to increase in line with NRTF low forecasts. **Table 13.9** details forecast 2022 future baseline traffic flows.

**Table 13.9: Future Baseline Traffic Count Data (2022)** 

Route Section	202	2 AADT
	Total Traffic Movements	HGV Traffic Movements
<b>A77</b> (between A713 and A70)	21,311	1188
<b>A76</b> (between B743 and A70)	11,691	978
A76 (between A70 and New Cumnock)	6,423	954
A76 (between New Cumnock and Thornhill)	3854	648
A76 (between Thornhill and A75)	6106	578
<b>A75</b> (between A762(N) and A712)	7,901	1052
<b>A75</b> (between A712 and A780)	11,065	1175
<b>A75</b> (between A780 and A76)	14,729	1624
<b>A77</b> (between A713 and A70)	21,311	1188
A713 (between A77 and Dalmellington)	4,085	239
A713 (between Dalmellington and Carsphairn)	1,557	182
A713 (between Carsphairn and A762)	1,398	160
<b>A713</b> (between A762 and A702)	1,382	116
<b>A713</b> (between A702 and A712)	2,282	196
<b>A713</b> (between A712 and B795)	1,889	187
<b>A713</b> (between B795 and A75)	3,868	201
<b>A712</b> (between A75 and A762)	685	72
<b>A712</b> (between A762 and A713)	1,544	120
A712 (between A713 and Corsock)	988	72
A712 (between Corsock and A75)	768	76
<b>A711</b> (between A75 and A762)	3,898	340
A702 (between A713 and Moniaive)	243	20
A702 (between Moniaive and A76)	931	81
A762 (between A713 and U2s)	356	25
<b>A762</b> (between A712 and B795)	398	23
<b>A762</b> (between B795 and A75)	370	33
<b>B741</b> (between New Cumnock and Dalmellington)	1031	37
<b>B795</b> (between A762 and A713)	499	49
C13s	148	7
C45s	249	1
U43s	211	1
U34s	174	1
U1s	72	7
U2s	199	12
U3s	62	1
Gateside Road (Dalmellington)	1,280	49

#### Planned Local Developments

- 13.102 Committed developments<sup>4</sup> were identified through consultation with D&GC and for the purpose of the cumulative assessment, the following developments were considered:
  - Knockman Hill Wind Farm;
  - Mochrum Fell Wind Farm;
  - Little Sypland Wind Turbine;
  - Shepherds Rig Wind Farm;
  - Troston Loch Wind Farm:
  - Cornharrow Wind Farm;
  - · Glenshimmeroch Wind Farm; and
  - Fell Wind Farm.
- 13.103 The EIA Report for the Glenlee Substation Extension notes that the construction programme for the works comprises August 2020 to June 2022, although the actual construction works will end in December 2021. Therefore, to ensure a robust EIA, the assessment has been undertaken on the basis of an overlap with the KTR construction enabling works between March 2022 and June 2022 in the cumulative assessment.

Implications of Climate Change

- 13.104 Qualitatively, the UKCP18<sup>5</sup> projects the following for Dumfries and Galloway:
  - an increase in summer and winter temperatures;
  - an increase in dry spells, particularly in summer months;
  - an increase in winter rainfall; and
  - an increase in wind speeds, including an increase in the frequency of winter storms.
- 13.105 These changes suggest that there may be an increase in travel disruptions due to increased flood risk and an increase in travel discomfort due to higher summer temperatures.
- 13.106 The assessment of the potential traffic and transport effects associated with the proposed development has focused on the key construction period starting in March 2022 and finishing in December 2026. The implications of climate change on the baseline conditions during that period and over the lifetime of the proposed development are unlikely to alter the predicted effects set out in this assessment.

## **Embedded Mitigation Measures**

#### **Construction Traffic Management Plan (CTMP)**

- 13.107 The temporary effects of felling and construction (whether assessed as significant or otherwise) will be mitigated through adoption of a regulated and approved CTMP. A framework CTMP is provided in **Appendix 13.1** and the assessment has been undertaken on the assumption that this, and the embedded measures set out within it, will be in place.
- 13.108 SPEN will agree temporary traffic management measures then adopt and monitor an appropriate way of working in consultation with D&GC Roads Department, Ayrshire Roads Alliance, Transport Scotland and/or their Agent and the Police as appropriate. Felling and construction activity generated vehicles (with the exception of site personnel in cars and vans) will travel on pre-defined routes to and from the relevant sites to reduce effects on existing local traffic.

<sup>&</sup>lt;sup>4</sup> Those developments which have permission/consent or are under construction or are the subject of an application for planning permission/consent.

<sup>&</sup>lt;sup>5</sup> UK Climate Projections (2019) [online], available at: http://www.metoffice.gov.uk/research/collaboration/ukcp

- 13.109 Timing and frequency of vehicle movements will be managed to ensure, where practical, that vehicle movements are spaced adequately to reduce disruption and coincide (if/where applicable) with existing/current local forestry operations.
- 13.110 The framework CTMP has been developed in consultation with relevant Roads Authorities and will be further developed as necessary in consultation with Roads Authorities and the Police prior to construction commencing. The CTMP will document outline measures to promote the efficient transportation of components and materials to site, whilst reducing congestion and disruption which might impact negatively on local communities or general traffic and in particular the emergency services. The CTMP should be considered a 'live' document that includes:
  - a programme of delivery types/numbers by month;
  - a statement of which public roads are to be used by felling and construction traffic;
  - a statement of which public roads are not to be used by felling and construction traffic;
  - a statement of which local towns and villages are to be avoided (completely or on stated days and times);
  - details of all proposed mitigation measures, list of contacts, and details of measures that will be implemented to limit the potential of vehicle stacking on any part of the public road network;
  - if appropriate, details of speed restrictions through sensitive areas and procedures to ensure pedestrian safety adjacent to worksites; and
  - details of temporary signage to be installed at defined locations.
- 13.111 As far as reasonably practicable, deliveries will be scheduled outwith school opening and closing times.
- 13.112 In partnership with SPEN, the appointed contractors will be required to maintain close liaison with local community representatives, landowners and statutory consultees throughout the construction period. This is likely to include circulation of information about ongoing activities; particularly those that could potentially cause disturbance, including due to traffic. A telephone number will be provided and persons with appropriate authority to respond to calls and resolve or escalate any problems arising will be available.
- 13.113 It will be mandated through the CTMP that HGV traffic:
  - must not travel through New Galloway via the A762; this is to reduce the impact of construction traffic on New Galloway;
  - must not travel through Moniaive via the A702; this is to reduce the impact of construction traffic on Moniaive;
  - must not travel through Gatehouse of Fleet via the C13s; this is to reduce the impact of construction traffic on Gathehouse of Fleet; and
  - must not travel through central Dalmellington; this is to reduce impact of construction traffic on the Dalmellington historic centre.
- 13.114 Furthermore, it will be mandated through the CTMP that construction generated traffic (i.e. HGVs and LGVs):
  - must not travel on the U3s road section between the U2s and Bucks Linn Bridge; this is to reduce the impact of construction traffic on the residential properties situated along the U3s.

### **Infrastructure Upgrades**

- 13.115 As part of the Glenlee Substation Extension development, it is proposed to locally widen strategic sections of the A762 (between the A713 and U2s) and the U2s to provide passing places achieving a minimum of width of 6.75m. It is assumed that the newly constructed passing places will remain for the duration of the KTR Project construction phase.
- 13.116 Works to culverts and bridges over watercourses will be agreed with the Scottish Environment Protection Agency (SEPA) and the contractor would be required to adhere to SEPA's Special Requirements. All relevant mitigation measures presented in **Chapter 9: Geology, Hydrology, Hydrogeology, Water Resources and Peat**, for the protection of watercourses during felling and construction activities (particularly those relating to access tracks) will apply.

### Polquhanity to Glenlee (via Kendoon)

- 13.117 The Polquhanity to Glenlee via Kendoon (P-G via K) Connection of the KTR Project is shown in **Figure 4.2.**
- 13.118 A new 132kV double circuit OHL is required between Polquhanity (situated approximately 3km north of the existing Kendoon substation) and the existing Glenlee substation, via the existing Kendoon substation. This proposed OHL, of approximately 10.1km in length, will connect to the recently constructed OHL which runs from Polquhanity to the existing New Cumnock substation; situated 3km north-east of Dalmellington.
- 13.119 Modifications will also be required within the Kendoon Substation to accommodate the new and repositioned terminal tower locations and 132kV trident wood pole entry from Carsfad. During the construction period it will be necessary to create a temporary crane pad to erect the proposed L7 Terminal tower. This will require a temporary diversion of the existing access road into Kendoon to ensure unrestricted access for residents during the works. It is proposed that the temporary road diversion will have a tarmac surface and be in place for up to nine months during the construction works. The existing pedestrian access leading to the footbridges and bus stop and A713 will remain open at all times. The proposed temporary construction works are shown in **Figure 4.8b.**
- 13.120 As outlined in **Chapter 4**, in addition to the new Connection above (and associated ancillary development), the assessment also considers the potential traffic and transport effects associated with:
  - the removal of the N route towers between Polquhanity and Kendoon, and the R (north) towers between Kendoon and Glenlee;

#### **Access Arrangements**

- 13.121 Transportation, including deliveries to and from the construction areas will be taken from the existing trunk and local road network. The local area road network is shown on **Figures 13.1.1 and 13.1.2.**
- 13.122 Given the nature of construction of the overhead line Connection (i.e. a linear development), SPEN has identified 31 construction access points for Connection P-G via K of the KTR Project, identified in **Table 13.10** and shown on **Figure 5.5.1**.
- 13.123 Further information relating to the proposed construction worksite access locations is included in **Appendix 13.2**.

Table 13.10: Access Points for the P-G via K Connection of the KTR Project

Worksite Access Reference	Public Road	Components
1	A713	Barlae Hill Quarry, towers 3, 4, 5 and 6
2	A713	Construction Compound
3	A713	Tower DE102R and removal of Towers 229 (N) and 230 (N)
4	A713	Tower 2
5	A713	Removal of Towers 231 (N) and 232 (N)
6	A713	Removal of Towers 233 (N) and 234 (N)
7	A713	Removal of Tower 235 (N)
8	A713	Towers 7, 8 and 9
9	A713	Removal of Tower 236 (N)
10	A713	Removal of Towers 237 (N) and 238 (N)
11	A713	Tower 36 and removal of Towers 239 (N) and 0 (R)
12	A713	Tower 10
13	A713	Tower 11 and 12 removal of Towers 001 (R) and 002 (R)
14	A713	Removal of Towers 003 (R)
15	A713	Tower 13
16	A713	Tower 14 and removal of Towers 004 (R) and 005 (R)

Worksite Access Reference	Public Road	Components
17	A713	Towers 15 and 16 and removal of Towers 001 (R) and 006 (R)
18	A713	Construction Compound
19	A713	Tower 17 and removal of Towers 007 A (R) and 007 (R)
20	A713	Towers 18 and 19 and removal of Towers 008 (R) and 009 (R)
21	A713	Removal of Tower 010 (R)
22	U1s	Tower 20
23	U1s	Tower 21
24	U1s	Towers 22 and 23 and removal of Towers 012 (R), 013 (R) and 014 (R)
25	A713	Removal of Tower 011 (R)
26	A713	Towers 24 to 29 and removal of Towers 015 (R) to 021 (R)
27	A713	Removal of Tower 023 (R)
28	A762	Towers 30 to 33 and removal Towers 022(R) to 026 (R)
29	A762	Tower 34 and removal of Tower 027 (R)
33	U2s	Tower 35
34	U2s	Removal of Tower 028 (R)

- 13.124 The proposed worksite accesses are preliminary based on SPEN's experience of constructing similar projects. The worksite access locations will be confirmed by the appointed contractor as an integral part of their adopted CTMP, the framework of which is provided as **Appendix 13.1**.
- 13.125 All construction vehicle drivers will be instructed to access a worksite via an approved route.

#### Assessment of Construction Effects (including tree felling)

- 13.126 As detailed in **Chapter 5**, the overall construction period duration for the P-G via K Connection is 51 months, allowing for the removal of the N route towers between Polguhanity and Kendoon, and the R (north) towers between Kendoon and Glenlee during that period.
- 13.127 Sections of the A77, A76, A75, A713, A712, A711, A702, A762, B741, U1s, U2s and Gateside Road public roads will be used by construction traffic. The assessed number of traffic movements (note: one trip = two movements; i.e. one delivery and one return journey) generated by construction activity are summarised in Table 13.11.
- 13.128 As outlined in Chapter 3: Approach to EIA, tree felling (or loss due to windthrow if not felled) of the areas outwith the 80m wayleave will result in indirect effects on the wider environment and therefore traffic generated by tree felling outside the wayleave has been included in the traffic assessment as part of the robust EIA6. This is based on the assumption that felling both within the wayleave and for windthrow will happen concurrently.

Table 13.11: Vehicle Movements Generated by Tree Felling and Construction Activity for the P-**G** via K Connection of the KTR Project

Activity/Item Being Transported	Type of Vehicle	Details/deliveries	Total Vehicle Movements
Timber Clearance (within wayleave)	Lorry (24 tonne capacity)	An estimated 29.81hectares (ha) of timber will be felled resulting in a total of 4,967.5 tonnes of timber being produced	416
Timber Clearance (windthrow areas)	Lorry (24 tonne capacity)	An estimated 20.9ha of timber will be felled resulting in a total of 6,237 tonnes of timber being produced	520
Site Access Tracks	Lorry (20 tonne capacity)	An estimated 154,421 tonnes of stone will be required	15,440

<sup>&</sup>lt;sup>6</sup> On this basis assessment of traffic effects associated with the wayleave felling has not been presented separately as a secondary effect.

Activity/Item Being Transported	Type of Vehicle	Details/deliveries	Total Vehicle Movements	
OHL Construction	Lorry (20 m³ capacity) concrete ready-mix trucks with a 6 m³ capacity	Concrete and steelwork	1,112	
11kV Removal and Undergrounding	Lorry (20 tonne capacity)	Wiring, ducting and sand	360	
Wiring and Commissioning	Lorry (20 m³ capacity) and light vans	Wiring and commissioning	396	
Decommissioning of N and R route towers	Lorry (20 m³ capacity) and light vans	Steelwork and wiring	1,740	
Reinstatement	Lorry (20 tonne capacity)	An estimated 143,100 tonnes of stone will require to be removed	14,310	
Other	Private cars, light vans and mini-bus	Construction personnel and other site visitors	25,256	
TOTAL HGV TRAFFIC MOVEMENTS for P-G via K				
TOTAL LGV TRAFFIC MOVEMENTS for P-G via K				
TOTAL ALL TRAFFIC MOVEMENTS for P-G via K				

#### Predicted Construction Effects

- 13.129 As indicated in **Table 13.11** the total of traffic generated by Connection P-G via K is estimated as 59,550 movements, of which 34,294 movements will be HGV movements over the 51 months construction period.
- 13.130 With reference to the indicative construction programme and the anticipated vehicle movements provided by SPEN for each activity, the number of vehicle movements that are anticipated for each month of the construction programme has been calculated. The vehicle movements calculated have then been distributed over each route section as per the assumptions indicated in the Assessment Assumptions section.
- 13.131 As indicated in the Assessment Assumptions section, two separate scenarios have been assessed:
  - Scenario 1: 100% stone is sourced/returned from/to Sorn Quarry and delivered to site via the A76, B741 and A713.
  - Scenario 2: 100% of stone is sourced/returned from/to Tongland Quarry and delivered to site via the A711, A75 and A713.
- 13.132 Estimated daily and monthly movements generated by Connection P-G via K against the programme along with predicted percentages increases on relevant trunk and local roads are shown in Table 13.12 and in **Table 13.13** for Scenario 1 and Scenario 2 respectively.
- 13.133 Construction traffic is estimated at an average of 62 vehicle movements a day over the entire construction (and N and R decommissioning) period, with a maximum of 108 vehicle movements occurring per day between August 2022 and January 2023. The 'peak period' for the purpose of this assessment is therefore considered to be August 2022 to January 2023 inclusive. Table 13.14 presents a summary of this information by route section for both Scenario 1 and Scenario 2.
- 13.134 The A77, A76, A75, A712 and A702 currently operate comfortably within their respective capacities (see Table 13.7). The increase in traffic volume on these roads throughout the construction phase of P-G via K Connection is assessed to be less than 5% in terms of both general traffic (HGV+LGV) and specifically HGV traffic for both Scenario 1 and Scenario 2. On this basis, the significance of the effect is assessed to be **none** and accordingly **not significant**. Since the 10% traffic increase threshold has not been exceeded on these routes, no detailed assessment has been undertaken for these public roads.
- 13.135 As noted above, for the purpose of the detailed assessment, it has been assumed that embedded mitigation measures and operational procedures as proposed in the framework CTMP (Appendix 13.1) will be in place during construction of the KTR Project and therefore have been used to inform the judgement of significance of effects.

Table 13.12: Outline Construction programme and Associated Traffic Assessment for P-G via K Connection Study Area – Scenario 1

	Sep-22 Oct-22 Nov-22 Dec-22 Jan-23 Feb-23 Mar-23 A	Apr-23 May-23 Jun-23 Jul-23 Aug-23 Sep-23 Oct-23 Nov-23 Dec-23	Jan-24   Feb-24   Mar-24   Apr-24   May-24   Jun-24   Jul-24   Jul-24   Aug-24   Sep-24   Oct-24   Nov-24   Dec-24   Jan-25   Feb-25   Mar-25   Apr-25	May-25 Jun-25 Jul-25 Aug-25 Sep-25 Oct-25 Nov-25 Dec-25 Jan-26 Feb-26 Mar-26 Apr-26 May-26 TOTAL
Activity           Timber Clearance (within wayleave)         28         26         26         26         26         26	26 26 26 26 22 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 284
Timber Clearance (windthrow areas) 62 62 62 62 62 62		0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 652
Site Access Tracks         1926         1896         1896         1896         1896         1896           OHL Construction         0         0         0         0         0         222		0 0 0 0 0 0 132 96 96 96 656 656 656 656 656 656 656 561 206	96 96 96 96 96 96 96 96 96 96 96 96 96 9	0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0
Wiring and Commissioning 0 0 0 0 0 0		86 372 372 372 372 372 372 372 372 372 372		0 0 0 0 0 0 0 0 0 0 0 0 0 4620
Decommissioning of 'N' and 'R' route towers 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 44 110 110 110	110   110   110   110   110   110   110   110   110   110   110   110   110   110   110   110   110	72 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2206
Reinstatement         0         0         0         0         0           11kV Undergrounding Works         46         44         44         44         44         44		0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0         0	0 0 0 0 764 1554 1554 1554 1554 1554 1554 1554 15	1169 82 82 82 82 82 82 82 82 82 82 82 82 82
(HGV + LGV) 2002 2028 2028 2028 2028 2230  Total no. Vehicle Movements / Day 92 92 92 92 92 109		742 1028 1028 1028 1028 1204 1234 1139 784 66 66 66 66 66 66 80 80 80 54	784         784         784         697         1040         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         1760         176	1241         82         82         82         82         82         82         82         82         82         82         82         82         82         82         82         82         82         82         82         83         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8
(NGV + LGV)		84 108 108 108 108 192 186 178 134		
Total no. Vehicle Movements / Day 66 66 66 66 80		34 34 34 34 44 44 44 30	30 30 30 30 74 62 62 62 62 62 62 62 62 56	60 4 4 4 4 4 4 4 4 4 4 4 6
Total no. Vehicle Movements   446   440   440   440   440   636   (LGV)   Total no. Vehicle Movements / Day   16   16   16   16   28   (GN)   (CR)		658 920 920 920 920 1012 1048 961 650 32 32 32 32 32 32 36 36 36 24	650 650 650 563 382 510 510 510 510 510 510 510 510 510 506 468 24 24 24 24 30 20 20 20 20 20 20 20 20 20 20 20 18	363 64 64 64 64 64 64 64 64 64 64 64 64 64
(LGV) 10 10 10 10 20	20 20 20 20 20 14 20	32 32 32 32 32 30 30 30 24	24 24 24 24 30 20 20 20 20 20 20 20 20 20 10	20 4 4 4 4 4 4 4 4 4 4 4
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A713 (between A77 and Daimellington)	<1% <1% <1% <1% <1% <1% <1% <1%	<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%	<1%	<1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%
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A713 (between Dalmellington and Carsphairn) 3% 3% 3% 3% 3% 4% 4% Increase in ALL TRAFFIC	4% 4% 4% 4% <1% <1%	<1% <1% <1% <1% 1% 1% 1% <1%	<1%	3% <1% <1% <1% <1% <1% <1% <1% <1% <1% <1
A713 (between Dalmellington and Carsphairn) 27% 27% 27% 27% 27% 27% 27%	27% 27% 27% 27% 27% 1% 1%	2% 2% 2% 2% 2% 3% 3% 3% 3%	3%         3%         3%         24%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%         23%	22% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1%
A713 (between Carsphairn and A762) % Increase in ALL TRAFFIC 5% 5% 5% 5% 6%	6% 6% 6% 6% 1% 2%	2% 2% 2% 2% 2% 3% 3% 3% 2%	2% 2% 2% 2% 5% 4% 4% 4% 4% 4% 4% 4% 4% 4% 4% 4%	4% <1% <1% <1% <1% <1% <1% <1% <1% <1% <1
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A713 North of Dalry (between A762 and A702) %Increase in ALL TRAFFIC 1% 1% 1% 1% 1% 2%	2% 2% 2% 2% <1% 1%	2% 2% 2% 2% 2% 2% 2% 2% 1%	1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%         1%<	1% <1% <1% <1% <1% <1% <1% <1% <1% <1% <
A713 North of Dalry (between A762 and A702) % Increase in HGV Traffic 2% 2% 2% 2% 2% 3%	3% 3% 3% 3% 2% 2%	2% 2% 2% 2% 2% 2% 2% <1%	<1%	<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%
A713 South of Dairy (between A702 and A712) % Increase in ALL TRAFFIC  41%  41%  41%  41%  41%  41%  41%  41	1% 1% 1% 1% 1% <1% <1%	1% 1% 1% 1% 1% 1% 1% 1% <1%	<1%	<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%
A713 South of Dalry (between A702 and A712) % Increase in HGV Traffic  1% 1% 1% 1% 1% 2%	2% 2% 2% 2% 1% 1%	1% 1% 1% 1% 1% 1% 1% 1% <1%	<1%	<1%
A713 (between A712 and B795)			<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%	<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%
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A713 (between B795 and A75)	<1% <1% <1% <1% <1% <1% <1% <1%	<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%	<1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1% <td>&lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1%</td>	<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%
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A712 (between Corsock and A75)				
A 744 (hotivon A 75 and A 763)		<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%		<1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%
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A 702 (hotiveen A 712 and Manielya)				
A702 (between Moniaive and A76)			<1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1%         <1% <td>&lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1% &lt;1%</td>	<1% <1% <1% <1% <1% <1% <1% <1% <1% <1%
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Programme	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	2 Sep-2	2 Oct-2	2 Nov-	-22 Dec	-22 Jan	ı-23 Fel	b-23 Ma	ir-23 A	pr-23 N	1ay-23	lun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	3 Jan-24	Feb-2	4 Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25 S	ep-25 O	ct-25	lov-25 Dec	25 Jan-	-26 Feb	b-26 Ma	ar-26 Ap	r-26 M	ay-26 TOTAL
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11s 6 Increase in ALL TRAFFIC	8%	8%	8%	8%	8%	8%	8%	8%	89	% 8'	% 8'	% 3	% :	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	<1%	<1%	<1%	<1% <	<1%	<1% <19	% <1′	% <1	1% <	:1% <	1%	<1%
I1s 6 Increase in HGV Traffic	86%	86%	86%	86%	86%	86%	86%	86%	6 86°	% 86	86	6% 2	9% 2	9% 2	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	<1%	<1%	<1%	<1% <	<1%	<1% <19	% <1°	% <1	1% <	:1% <	1%	<1%
2s 6 Increase in ALL TRAFFIC	1%	1%	1%	1%	1%	1%	1%	1%	19	% 1'	% 1'	% 1	% '	%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	<1%	<1%	<1% -	<1% <	:1%	<1% <19	% <1′	% <1	1% <	:1% <	1%	<1%
2s Increase in HGV Traffic	17%	17%	17%	17%	17%	17%	17%	17%	6 17°	% 17	'% 17	7% 1 <sup>-</sup>	7% 1	7% 1	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	<1%	<1%	<1%	<1% <	<1%	<1% <19	% <1′	% <1	1% <	:1% <	1%	<1%
J3s 6 Increase in ALL TRAFFIC	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	6 <1°	% <1	% <1	1% <	1% <	1% <	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% ·	<1% <	<1%	<1% <19	% <1°	% <1	1% <	:1% <	1% ·	<1%
3s Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	6 <1°	% <1	% <1	l% <	1% <	1% <	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% ·	<1% <	:1%	<1% <19	% <1°	% <1	1% <	:1% <	1% ·	<1%
Sateside Road 6 Increase in ALL TRAFFIC	4%	4%	4%	4%	4%	4%	4%	4%	49	% 4'	% 4'	% <	1% <	1% <	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	<1%	<1%	<1% ·	<1% <	:1%	<1% <19	% <1°	% <1	1% <	:1% <	1% ·	<1%
Sateside Road % Increase in HGV Traffic	98%	98%	98%	98%	98%	98%	98%	98%	6 98°	% 98	98	3% <	1% <	1% <	<1%	<1%	<1%	<1%	<1%	8%	8%	8%	8%	8%	8%	8%	8%	86%	86%	86%	86%	86%	86%	86%	86%	86%	86%	86%	82%	82%	4%	4%	4%	4%	4%	4% 4%	6 49	% 4 <sup>4</sup>	1% 4	4% 4	4%	4%

Table 13.13: Outline Construction programme and Associated Traffic Assessment for P-G via K Connection Study Area – Scenario 2

Programme	Mar-22	Apr-22 May-	22   Jun-22   Ju	ul-22 Aug	g-22 Sep-:	22 Oct-2	2 Nov-22	Poec-22 Ja	n-23 Fe	eb-23 M	ar-23 Apr-2	3   May-23   Jun	-23 Jul-23	Aug-23	Sep-23   Oct-2	3 Nov-2	3 Dec-23	Jan-24 Fe	eb-24 Mar-2	24 Apr-24	4 May-24 .	Jun-24 Jul	l-24 Aug-24	1 Sep-24	Oct-24 No	ov-24 Dec-24	Jan-25 Feb-	25   Mar-25	Apr-25 M	y-25 Jun-2	5 Jul-25	Aug-25 Sep	25 Oct-25	5 Nov-25	Dec-25 Jan-	26 Feb-26	Mar-26 Apr-	26 May-26	TOTAL
Activity																																							
Timber Clearance (within	28	26 26	26	26 2	26 26	3 26	26	26	22	0	0 0	0 (	0	0	0 0	0	0	0	0 0	0	0	0	0 0	0	0	0 0	0 0	0	0	0 0	0	0 0	0	0	0 0	0	0 0	0	284
wayleave) Timber Clearance (windthrow	62					_								0		0	-			_		-		0	-	0 0				0 0	0	0 0	-	0	1 1		0 0		652
areas) Site Access Tracks			6 1896 1							-			_				- 1		0 0 96 96	96				96	-	96 96	96 96			0 0	-		-				0 0		21943
OHL Construction	0	0 0		0 2		_			_		0 0 470 656		0 656		132 96 656 656	_			206 206					0		0 0	0 0		_	0 0			_	0	0 0	_	0 0		9488
Wiring and Commissioning	0	0 0	0	0 (	0 0	0	0	0	0	0	0 86	372 37	2 372	372	372 372	372	372	372	372 372	2 372	70	0	0 0	0	0	0 0	0 0	0	0	0 0		0 0	0	0	0 0	0	0 0	0	4620
Decommissioning of 'N' and 'R' route towers	0	0 0	0	0 (	0 0	0	0	0	0	0	0 0	0 (	0	0	44 110	110	110	110	110 110	110	110	110 1	10 110	110	110 1	110 110	110 11	0 110	110	72 0	0	0 0	0	0	0 0	0	0 0	0	2206
Reinstatement	0			0 (	_	_	_				0 0		0		0 0					_							1554 155								82 82				19997
11kV Undergrounding Works	46	44 44	44	44 4	14 44	50	0	0	0	0	0 0	0 (	0	0	0 0	0	0	0	0 0	0	0	0	0 0	0	0	0 0	0 0	0	0	0 0	0	0 0	0	0	0 0	0	0 0	0	360
Total no. Vehicle Movements	2062	2028 202	8 2028 2	028 22	250 247	8 2484	1 2434	2434 1	615	450 4	470 742	1028 10	28 1028	1028	1204 1234	1 1139	9 784	784	784 784	4 697	1040	1760 17	60 1760	1760	1760 17	760 1760	1760 176	60 1742	1664 1	241 82	82	82 83	2 82	82	82 82	2 82	82 82	68	59550
Total no. Vehicle Movements / Day (HGV + LGV)	82	82 82	82	82 10	08 108	8 108	108	108	108	30	42 66	66 6	6 66	66	80 80	80	54	54	54 54	54	104	82 8	32 82	82	82 8	82 82	82 82	2 82	74	80 8	8	8 8	8	8	8 8	8	8 8	8	-
Total no. Vehicle Movements (HGV) Total no. Vehicle Movements / Day	1616				614 164			_			54 84		8 108	_	192 186	_			134 134		_		250 1250	_			1250 125	_		378 18	_	18 1		18	18 18		18 18		34294
(HGV) Total no. Vehicle Movements	00	66 66 440 440		66 8 440 6		_			_	_	22 34 416 658		4 34 20 920		44 44 1012 1048	_	_		30 30 650 650	_		62 6 510 5	62	62 510		62 62 510 510	62 62 510 51	_		60 4 863 64		4 4 64 6	4 1 64	64	4 4 64 64		4 4 64 64		25256
(LGV) Total no. Vehicle Movements / Day		110		16 2										32					24 24		_			20		20 20			_	20 4			4 4	_	4 4				-
(LGV)					-											-					1 1										<u> </u>								
A76 (between B743 and A70) % Increase in ALL Traffic	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1% <	:1% <	<1% <	<1% <1%	<1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1%	6 <1%	<1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A76 (between B743 and A70) % Increase in HGV Traffic	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1% <	<1% <	<1% <	<1% <1%	<1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	<1% <1%	% <1%	<1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	% <1%	
A76 (between A70 and New Cumnock) % Increase in ALL Traffic	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1% <	<1% <	<1% <	<1% <1%	<1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	<1% <1%	6 <1%	<1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1%	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A76 (between A70 and New Cumnock)	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1% <	<1% <	<1% <	<1% <1%	s <1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1%	6 <1%	s <1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <1°	6 <1%	
% Increase in HGV Traffic A75 (between A762 and A712) % Increase in ALL Traffic	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1% <	:1% <	<1% <	<1% <1%	5 <1% <1	% <1%	<1%	<1% <1%	<1%	s <1%	<1% <	:1% <1%	6 <1%	s <1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A75 (between A762 and A712) % Increase in HGV Traffic	5%	5% 5%	5% !	5% 5	% 5%	6 5%	5%	5%	5% <	<1% <	<1% <1%	s <1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1%	6 <1%	4%	4% 4	% 4%	4%	4% 4	4% 4%	4% 4%	6 4%	4%	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A75 (between A712 and A780) % Increase in ALL Traffic A75 (between A712 and A780)			6 <1% <				_								<1% <1%	_				_				_				_			_					_			
% Increase in HGV Traffic A75 (between A780 and A76)				_	_	_			_	_			_		<1% <1% <1% <1%	_	_			_				_				_					_	_		_			
% Increase in ALL Traffic A75 (between A780 and A76) % Increase in HGV Traffic															<1% <1%	_																							
A77 (between A713 and A70) % Increase in ALL Traffic	_				_	_		_	_	_	_		_	_	<1% <1%	_			_		_		_					_		_	_		_						
A77 (between A713 and A70) % Increase in HGV Traffic A713 (between A77 and	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1% <	<1% <	<1% <	<1% <1%	<1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	<1% <1%	% <1%	<1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	% <1%	
Dalmellington) % Increase in ALL Traffic	<1%	<1% <1%	6 <1% <	<1% <1	1% <1%	% <1%	<1%	<1% <	<1% <	<1% <	<1% <1%	s <1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	<1% <1%	% <1%	<1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A713 (between A77 and Dalmellington) % Increase in HGV Traffic	<1%	<1% <1%	6 <1% <	:1% 2	% 2%	6 2%	<1%	<1% <	:1% <	<1% <	<1% <1%	s <1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1%	% <1%	<1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A713 (between Dalmellington and Carsphairn)	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1% <	<1% <	<1% <	<1% <1%	5 <1% <1	% <1%	<1%	<1% <1%	<1%	s <1%	<1% <	:1% <1%	6 <1%	s <1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
% Increase in ALL Traffic A713 (between Dalmellington and Carsphairn)	1%	1% 1%	1%	1% 2	% 2%	6 2%	1%	1%	1%	1%	1% 2%	2% 2	% 2%	2%	2% 2%	2%	2%	2%	2% 2%	2%	1%	1% 1	% 1%	1%	1% 1	1% 1%	1% 19	6 1%	1%	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
% Increase in HGV Traffic A713 (between Carsphairn and	5%	5% 5%			% 6%						2% 2%		% 2%		3% 3%	_			2% 2%	_			% 4%			4% 4%	4% 4%										<1% <1°		
% Increase in ALL Traffic A713 (between Carsphairn and																				_																			
A762) % Increase in HGV Traffic A713 North of Dalry (between A762	33%	33% 33%	6 33% 3	33% 34	1% 349	% 34%	34%	34% 3	34%	1%	3% 3%	3% 3	% 3%	3%	5% 5%	5%	4%	4%	4% 4%	4%	28%	26% 26	6% 26%	26%	26% 2	26%	26% 26	% 26%	25% 2	5% 1%	1%	1% 19	6 1%	1%	1% 1%	6 1%	1% 1%	1%	
and A702) % Increase in ALL Traffic	4%	4% 4%	4%	4% 5	% 5%	6 5%	5%	5%	5% <	<1%	1% 2%	2% 2	% 2%	2%	2% 2%	2%	1%	1%	1% 1%	1%	2%	1% 1	% 1%	1%	1% 1	1% 1%	1% 19	6 1%	1%	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	% <1%	
A713 North of Dalry (between A762 and A702) % Increase in HGV Traffic	43%	43% 43%	6 43% 4	13% 45	5% 45%	% 45%	45%	45% 4	15%	2%	2% 2%	2% 2	% 2%	2%	3% 3%	3%	3%	3%	3% 3%	3%	3%	3% 3	% 3%	3%	3% 3	3% 3%	3% 3%	6 3%	<1%	2% 2%	2%	2% 29	6 2%	2%	2% 2%	6 2%	2% 2%	2%	
A713 South of Dalry (between A702 and A712) % Increase in ALL Traffic	3%	3% 3%	3%	3% 3	% 3%	6 3%	3%	3%	3% <	<1% <	<1% 1%	1% 1	% 1%	1%	1% 1%	1%	<1%	<1% <	:1% <1%	% <1%	1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A713 South of Dalry (between A702 and A712)	26%	26% 26%	6 26% 2	26% 27	7% 27%	% 27%	27%	27% 2	27%	1%	1% 1%	1% 1	% 1%	1%	2% 2%	2%	2%	2%	2% 2%	2%	2%	2% 2	% 2%	2%	2% 2	2% 2%	2% 29	6 2%	<1%	1% 1%	1%	1% 19	6 1%	1%	1% 1%	6 1%	1% 1%	1%	
% Increase in HGV Traffic A713 (between A712 and B795) % Increase in ALL Traffic	3%	3% 3%		3% 3	% 3%	6 3%	3%	3%	3% <	<1% <	<1% <1%		% <1%	<1%	<1% <1%	_	_		:1% <1%				% 2%			2% 2%	2% 29		2%	2% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%		6 <1%	
A713 (between A712 and B795) % Increase in HGV Traffic	27%	27% 27%	6 27% 2	27% 27	7% 27%	% 27%	27%	27% 2	27%	1%	1% 1%	1% 1	% 1%	1%	2% 2%	2%	2%	2%	2% 2%	2%	22%	22% 22	2% 22%	22%	22% 2:	2% 22%	22% 22	% 22%	21% 2	1% 1%	1%	1% 19	6 1%	1%	1% 1%	6 1%	1% 1%	1%	
A713 (between B795 and A75) % Increase in ALL Traffic A713 (between B795 and A75)	1%	1% 1%		1% 1			_				<1% <1%					_			<1% <1%	_			% 1%	1%		1% 1%	1% 19	_		1% <1%	_	<1% <1				_			
% Increase in HGV Traffic A712 (between A75 and A762)	25% <1%	25% 25% <1% <1%			5% 25% % 1%		_				<1% <1% <1% 1%	5 <1% <1 1% 1		<1% 1%	2% 2% 1% 1%	2% 1%	_		2% 2% <1% <1%				1% 21% 1% <1%	21% <1%		21% 21% 21% <1%	21% 21° <1% <1°			0% <1% 1% <1%		<1% <1 <1% <1			<1% <1°	_			
% Increase in ALL Traffic A712 (between A75 and A762) % Increase in HGV Traffic	_	<1% <1%		:1% <1		_	_				<1% <1%				<1% <1%		_		:1% <1%				1% <1%	_		:1% <1%				1% <1%		<1% <1		_					
A712 (between A762 and A713) % Increase in ALL TRAFFIC	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1% <	:1% <	<1% <	<1% <1%	s <1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1%	6 <1%	s <1%		1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <1°	6 <1%	
A712 (between A762 and A713) % Increase in HGV Traffic A712 (between A713 and Corsock)	<1%				1% <19			_	_	_	<1% <1%				<1% <1%	_			:1% <1%	_			1% <1%			1% <1%				1% <1%	_	<1% <1	_		<1% <19				
% Increase in ALL Traffic A712 (between A713 and Corsock)	<1% 3%	<1% <1% 3% 3%			% 1% 3% 3%		_				<1% 1% 3% 3%		% 1% % 3%	1% 3%	1% 1% 3% 3%	1% 3%	_		<1% <1% <1% <1%				1% <1% 1% <1%	<1% <1%		:1% <1% :1% <1%	<1% <1'			1% <1% 1% <1%		<1% <1 <1% <1		_	<1% <1°			6 <1% 6 <1%	
% Increase in HGV Traffic A712 (between Corsock and A75) % Increase in ALL Traffic	_	<1% <1%			% 1%	_					<1% 1%		% 1%		1% 1%		_		<1% <1%				1% <1%			:1% <1%				1% <1%		<1% <1							
A712 (between Corsock and A75) % Increase in HGV Traffic	3%	3% 3%		3% 3	% 3%	6 3%			3%	3%	3% 3%	3% 3	% 3%	3%	3% 3%	3%	<1%	<1% <	:1% <1%	6 <1%	<1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A711 (between A75 and A762) % Increase in ALL Traffic A711 (between A75 and A762)	1%	1% 1%			% 1%		_				<1% <1%	<1% <1		_	<1% <1%	_	_		:1% <1%				% 1%	1%		1% 1%	1% 19			1% <1%		<1% <1		_	<1% <19			6 <1%	
% Increase in HGV Traffic A702 (between A713 and Moniaive)	14% 2%	14% 149 2% 2%			5% 15% 3% 3%	_					<1% <1% 2% 3%			<1% 3%	1% 1% 4% 4%	1% 4%	_		1% 1% 2% 2%				2% 12% % 2%	12% 2%		2% 12% 2% 2%	12% 12° 2% 2°			2% <1% 2% <1%		<1% <1 <1% <1		_	<1% <1°			6 <1% 6 <1%	
% Increase in ALL Traffic A702 (between A713 and Moniaive) % Increase in HGV Traffic					1% <19						<1% <1%				<1% <1%		_		2% 2% <1% <1%		_		1% <1%	_		1% <1%	2% 2% <1% <1'	_		1% <1%		<1% <1			<1% <1%	_			
A702 (between Moniaive and A76) % Increase in ALL Traffic	<1%				1% <19	_		_	_	_	<1% <1%		_	_	1% 1%	_			:1% <1%		_		1% <1%	<1%	<1% <	:1% <1%		_		1% <1%	_	<1% <1	_						
A702 (between Moniaive and A76) % Increase in HGV Traffic A762 (between A712 and B795)	<1%			<1% <1		_	_				<1% <1%			_	<1% <1%	_	_		<1% <1%				1% <1%	_		:1% <1%	<1% <1'			1% <1%		<1% <1		_	<1% <19			% <1%	
% Increase in ALL Traffic A762 (between A712 and B795)	<1% <1%				1% <19	_	_				<1% <1%			_	<1% <1%	_	_		:1% <1%				1% <1%	_		1% <1%	<1% <1'	_		1% <1%		<1% <1		_	<1% <19	_		6 <1%	
% Increase in HGV Traffic A762 (between B795 and A75)	- 11	- 11		<1% <1 <1% <1	1% <19 1% <19		_				<1% <1% <1% <1%			_	<1% <1% <1% <1%	_	_		<1% <1% <1% <1%	_			1% <1% 1% <1%	_		:1% <1% :1% <1%	<1% <1'			1% <1% 1% <1%		<1% <1 <1% <1				_			
% Increase in ALL Traffic A762 (between B795 and A75) % Increase in HGV Traffic	<1%	- 11			1% <19	_					<1% <1%			_	<1% <1%	_	_		:1% <1%				1% <1%			:1% <1%	<1% <1			1% <1%		<1% <1		_		_			
A762 (between A713 and U2s) % Increase in ALL Traffic	3%	3% 3%	3% 3	3% 3	% 3%	6 3%	3%	3%	3% <	<1% <	<1% <1%	s <1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1% <	<1% <1%	6 <1%	3%	2% 2	% 2%	2%	2% 2	2% 2%	2% 29		_	2% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	% <1%	<1% <19	6 <1%	
A762 (between A713 and U2s) % Increase in HGV Traffic B795 (between A762 and A713)				10% 40			_				8% 8%				8% 8%	_	_		8% 8%	_			2% 32%	_		32%		_		2% <1%	_	<1% <1				_			
% Increase in ALL Traffic	<1%	<1% <1%	6 <1% <	:1% <1	1% <19	% <1%	<1%	<1%   <	<1% <	<1% <	<1% <1%	s <1% <1	% <1%	<1%	<1% <1%	<1%	<1%	<1%   <	<1% <1%	% <1%	5 <1%	<1% <	1% <1%	<1%	<1% <	:1% <1%	<1% <1'	% <1%	<1%   <	1% <1%	<1%	<1% <1	% <1%	<1%	<1% <19	%   <1%	<1% <19	6   <1%	

ogramme	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22 S	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24 Ju	ın-24 Ju	ıl-24 A	ug-24 Se	p-24 Oc	ct-24 No	ov-24 Dec-2	24 Jan-25	5 Feb-25	5 Mar-25	Apr-25	May-25	Jun-25 J	Jul-25 <i>f</i>	ug-25 Sep	-25 Oct-2	25 Nov-	25 Dec-25	Jan-26	Feb-26	Mar-26 /	Apr-26 I	May-26 TOT
95 (between A762 and A713) Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
41 increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
41 Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	% <1%	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
3s ncrease in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
s ncrease in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
s icrease in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
s crease in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
s crease in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1% ·	<1%	<1% <	l% <1%	% <1º	% <1%	<1%	<1%	<1%	<1%	<1%
s crease in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
4s ncrease in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1% ·	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
s crease in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1% ·	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
ncrease in ALL Traffic	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	6%	6% 6	6%	6% (	6% E	6% 6	6% 6%	6%	6%	6%	6%	6%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
ncrease in HGV Traffic	86%	86%	86%	86%	86%	86%	86%	86%	86%	86%	86%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	57%	7% 5	7% 5	57% 5	7% 5	7% 5	7% 57%	6 57%	57%	57%	57%	57%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
ncrease in ALL Traffic	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1% 1	1%	1%	1% 1	1% 1	1% 1%	1%	1%	1%	1%	1%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
ncrease in HGV Traffic	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	7% 1	7% 1	17% 1	7% 1	7% 1	7% 179	6 17%	17%	17%	17%	17%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
ncrease in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	l% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
ncrease in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
eside Road crease in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	% <19	% <1°	% <1%	<1%	<1%	<1%	<1%	<1%
eside Road ncrease in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <	:1% <	<1% <	:1% <	:1% <	:1% <1%	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	% <19	% <19	% <1%	<1%	<1%	<1%	<1%	<1%

Table 13.14: Summary of Construction Traffic Generated on Public Roads within P-G via K Connection Study Area

Route Section			Construction traff	ic generated over the 51 mor	nths construction programn	ne, by route section		
		Scen	ario 1			Scen	ario 2	
		nents per day over entire cion period	, ,	s per day during the period of uction activity		nents per day over entire tion period	, ,	s per day during the period of uction activity
	[% In	crease]	[% In	crease]	[% Ir	ncrease]	[% Ir	ncrease]
	{Signit	ficance}	{Signit	ficance}	{Signi	ificance}	{Signi	ficance}
	HGV + LGV	HGV	HGV + LGV	HGV	HGV + LGV	HGV	HGV + LGV	HGV
A76 (between B743 and	24	24	48	48	0	0	0	0
A70)	[<1%]	[2%]	[<1%]	[5%]	[0%]	[0%]	[0%]	[0%]
[AADT = 11,691]	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A76 (between A70 and	24	24	48	48	0	0	0	0
New Cumnock)	[<1%]	[2%]	[<1%]	[5%]	[0%]	[0%]	[0%]	[0%]
[AADT = 6,423]	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A75</b> (between A762(N)	2	2	2	2	24	24	50	50
and A712)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[2%]	[<1%]	[5%]
[AADT= 7,901]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}
<b>A75</b> (between A712 and A780)	8	2	10	2	8	2	10	2
·	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 11,065]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A75</b> (between A780 and A76)	8	2	10	2	8	2	10	2
	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 14,729]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A77</b> (between A713 and A70)	28	22	58	50	8	2	10	2
,	[<1%]	[2%]	[<1%]	[4%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 21,311]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A713</b> (between A77 and Dalmellington)	8	2	10	4	8	2	10	2
	[<1%]	[<1%]	[<1%]	[1%]	[<1%]	[<1%]	[<1%]	[1%]
[AADT= 4,085]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A713</b> (between Dalmellington and	28	24	58	50	8	4	10	2
Carsphairn)	[2%]	[13%]	[4%]	[27%]	[<1%]	[1%]	[<1%]	[2%]
[AADT= 1,557]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between Carsphairn and A762)	42	26	82	54	42	28	82	54
	[3%]	[15%]	[6%]	[34%]	[3%]	[15%]	[6%]	[34%]
[AADT=1,398]	{none, not significant}	{moderate, significant}	{minor, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}	{minor, not significant}	{moderate, significant}
<b>A713</b> (between A762 and A702)	16	2	24	4	28	14	72	52
[AADT=1,382]	[1%]	[<1%]	[2%]	[3%]	[2%]	[11%]	[5%]	[45%]
	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}	{minor, not significant}	{moderate, significant}
<b>A713</b> (between A702 and A712)	16	2	24	4	28	14	72	52
· ·	[<1%]	[<1%]	[1%]	[2%]	[1%]	[7%]	[3%]	[27%]
[AADT=2,282]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}	{moderate, significant}
<b>A713</b> (between A712 and B795)	8	2	10	2	28	24	58	50
· ·	[<1%]	[<1%]	[<1%]	[1%]	[1%]	[12%]	[3%]	[27%]
[AADT=1,889]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
<b>A713</b> (between B795 and A75)	8	2	10	2	28	24	58	50
,	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[11%]	[1%]	[25%]

Route Section			Construction traf	fic generated over the 51 moi	nths construction programn	ne, by route section		
[AADT=3,868]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
A712 (between A75 and	6	0	8	0	6	0	8	0
A762)	[<1%]	[0%]	[1%]	[0%]	[<1%]	[0%]	[1%]	[0%]
[AADT=685]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A712</b> (between A762	6	0	8	0	6	0	8	0
and A713)	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]
[AADT=1,544]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A712</b> (between A713	8	2	10	2	8	2	10	2
and Corsock)	[<1%]	[1%]	[1%]	[3%]	[<1%]	[1%]	[1%]	[3%]
[AADT=988]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between Corsock	8	2	10	2	8	2	10	2
and A75)	[<1%]	[1%]	[1%]	[3%]	[<1%]	[1%]	[1%]	[3%]
[AADT=768]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A711 (between A75 and	2	2	2	2	24	24	50	50
A762)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[7%]	[1%]	[15%]
[AADT=3,898]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}	{moderate, significant}
<b>A702</b> (between A713	6	0	8	0	6	0	8	0
and Moniaive)	[2%]	[0%]	[3%]	[0%]	[2%]	[0%]	[3%]	[0%]
[AADT=243]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A702 (between Moniaive	6	0	8	0	6	0	8	0
and A76)	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]	[1%]	[0%]
[AADT=931]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A762</b> (between A713	6	6	12	10	6	6	12	10
and U2s)	[1%]	[19%]	[3%]	[40%]	[<1%]	[19%]	[<1%]	[40%]
[AADT = 356]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
B741 (between New	24	24	48	48	0	0	0	0
Cumnock and Dalmellington)	[2%]	[60%]	[5%]	[130%]	[0%]	[0%]	[0%]	[0%]
[AADT = 1,031]	{none, not significant}	{major, significant}	{minor, not significant}	{major, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
U1s	4	4	6	6	4	4	6	6
[AADT = 72]	[4%]	[41%]	[8%]	[86%]	[4%]	[41%]	[8%]	[86%]
	{none, not significant}	{moderate, significant}	{minor, not significant}	{major, significant}	{none, not significant}	{moderate, significant}	{minor, not significant}	major, significant}
U2s	2	2	2	2	2	2	2	2
[AADT = 199]	[<1%]	[13%]	[1%]	[17%]	[<1%]	[13%]	[1%]	[17%]
	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
Gateside Road	24	24	48	48	0	0	0	0
(Dalmellington)	[2%]	[45%]	[4%]	[98%]	[0%]	[0%]	[0%]	[0%]
[AADT = 1,280]	{none, not significant}	{moderate, significant}	{none, not significant}	{major, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}

#### Driver Delay

- 13.136 All public road route sections where the 10% significance threshold has been met or exceeded operate notably below their theoretical capacity. **Table 13.15** provides a comparison of forecast traffic flows on roads during the 'Peak Period' and associated theoretical road capacities.
- 13.137 Furthermore, the CTMP, a framework of which is provided in **Appendix 13.1**, will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. CTMP measures include but are not limited to:
  - the timing and frequency of vehicle movements being managed to minimise local disruption;
  - details of designated access routes forming part of the site induction and training being held for all site operatives and delivery drivers through 'toolbox talks'; and
  - where reasonable and practicable, project-related vehicles will avoid travelling in convoys on public roads.

Table 13.15: Baseline Traffic + Traffic Generated by Construction of the P-G via K Connection of the KTR Project

Route Section	Two-way peak hour movements (2022 Baseline Traffic + Traffic Generated by Construction of the P-G via K Connection)	Capacity (vph) (two-way hourly flow)
A713 (between Dalmellington and Carsphairn)	206	1800
A713 (between Carsphairn and A762)	208	1800
<b>A713</b> (between A762 and A702)	206	1600
<b>A713</b> (between A702 and A712)	206	1600
<b>A713</b> (between A712 and B795)	206	1800
<b>A713</b> (between B795 and A75)	202	1800
<b>A711</b> (between A75 and A762)	202	1800
A762 (between A713 and U2s)	52	280
<b>B741</b> (between New Cumnock and Dalmellington)	202	1600
U1s	52	Not Specified
U2s	52	Not Specified
Gateside Road (Dalmellington)	202	1600

- 13.138 From a review of **Table 13.14**, it is evident that threshold significance criteria have been exceeded on the A713 (between Dalmellington and the A75), A711, A762, B741, U2s, U1s and Gateside Road either, or both, throughout the duration of the entire construction period or during the 'peak period' of construction activity for either Scenario 1 or Scenario 2.
- 13.139 The A713 has the residual capacity (see **Table 13.15**) to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between Carsphairn and the A762) is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).
- 13.140 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the A762 (between the A713 and the U2s) and the U2s to provide passing places will be implemented; achieving a minimum of width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (see Embedded Mitigation Measures Section). On this basis, the significance of effect of driver delay for users of the A762 and U2s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.141 The U1s currently has very low traffic flow and as such shows a relatively large traffic increase which would represent a major effect. However, only a small section of the U1s will be used (approx. 500m in length). Furthermore, the CTMP will promote interventions that will ensure the safe and efficient

- transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the U1s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.142 Considering Scenario 1, **Table 13.14** indicates that threshold significance criteria have been exceeded on the A713 (between Dalmellington and Carsphairn) the B741 and Gateside Road both throughout the duration of the entire construction period and during the 'peak period' of construction activity.
- 13.143 The A713 has the residual capacity (see **Table 13.15**) to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between Dalmellington and Carsphairn) is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).
- 13.144 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such show a relatively large traffic increase which would represent a major effect, however it is important to note that these route sections have the residual capacity (see **Table 13.15**) to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).
- 13.145 Considering Scenario 2, **Table 13.14** indicates that threshold significance criteria have been exceeded on the A713 (between Carsphairn and the A75) either, or both, throughout the duration of the entire construction period or during the 'peak period' of construction activity and during the 'peak period' of construction activity for the A711.
- 13.146 Both the A713 and A711 have the residual capacity (see **Table 13.15**) to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delays for users of the A713 and A711 is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).

#### Road Safety

13.147 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic, the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.16**.

Table 13.16: Projected Collisions for the P-G via K Connection of the KTR Project

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the P- G via K Connection of the KTR Project)
A713 (between Dalmellington and Carsphairn)	4.7	4.8
A713 (between Carsphairn and A762)	1.3	1.4
<b>A713</b> (between A762 and A702)	0	0
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A713</b> (between A712 and B795)	1	1.1
<b>A713</b> (between B795 and A75)	1.3	1.4
<b>A711</b> (between A75 and A762)	1.3	1.4
A762 (between A713 and U2s)	0.3	0.4
<b>B741</b> (between New Cumnock and Dalmellington)	1.7	1.8

Route Section	Average No. of collisions (2022 Average Baseline)	Average No. of collisions (2022 Average Baseline + Traffic Generated by Construction of the P- G via K Connection of the KTR Project)
U1s	0	0
U2s	0	0
Gateside Road	0	0

13.148 Using this basis of assessment, there would be a negligible increase in PICs in the Study Area as a consequence of the increased traffic generated by the P-G via K Connection and the significance of the effect would be **none** and therefore **not significant**.

Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)

- 13.149 The IEMA Guidelines define severance as 'the perceived division that can occur within a community when it becomes separated by a major traffic artery'. Severance may result from a road carrying large traffic flows or a physical barrier created by the road itself, and the IEMA guidelines suggest that consideration is given to the severity of existing severance and how this might be exacerbated by proposed construction traffic generated by a development. As shown in **Table 13.15**, the roads within the P-G via K Connection Study Area will continue to operate below capacity, even with the addition of traffic generated by construction of the P-G via K Connection. Severance should not occur when there is such a notable level of residual road capacity and traffic generated by the P-G via K Connection will be relatively low.
- 13.150 For similar reasoning, pedestrian delay is not considered to be an existing problem on any of the route sections within the P-G via K Study Area, nor one that shall be created by the addition of proposed construction traffic to these routes.
- 13.151 Pedestrian amenity is broadly defined by the IEMA as the 'relative pleasantness of a journey', and this definition also takes into account 'fear and intimidation'. The IEMA Guidelines suggest that 'a tentative threshold for judging the significance of changes in pedestrian amenity would be where traffic flows (or its lorry component) is halved or doubled. The construction of the P-G via K Connection is predicted to generate less than double HGV flows on all route sections within the P-G via K Study Area and therefore the effect on pedestrian amenity is not considered to be significant.
- 13.152 Several construction access routes overlap and/or intersect with existing recreational routes, these include the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route; and
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way).
  - The section of private road leading to Polmaddy overlaps with Core Path 164.
- 13.153 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of the potential of construction traffic. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of the Southern Upland Way, Core Paths 21, 30, 164 and 224 and the National Byway cycling route is considered to be **minor** and accordingly considered to be **not significant**.
- 13.154 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate any potential pedestrian effects as a result of construction traffic engaged in the P-G via K Connection.
- 13.155 Overall, based on professional judgement, the construction traffic generated by P-G via K Connection Study Area will have a **minor** effect upon community receptors and is therefore **not significant** in the context of the 2017 EIA Regulations (as amended).

Proposed Additional Mitigation

- 13.156 No further mitigation is proposed in addition to the embedded mitigation measures and operational procedures as proposed in the framework CTMP.
- 13.157 The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced and expanded upon as appropriate by SPEN's appointed contractor(s) in consultation with Roads Authorities and the Police prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.

Residual Construction Effects

13.158 Overall, due to the implementation of both the infrastructure improvements to the A762 (between the A713 and the U2s) and the U2s (therefore, embedded mitigation for the P-G via K Connection),, in conjunction with the embedded mitigation measures and operational procedures as proposed in the framework CTMP, the significance of the residual effects associated with the levels of traffic anticipated during the construction of the P-G via K Connection is considered to be **minor** and accordingly **not significant** in the context of the 2017 EIA Regulations (as amended).

#### **Assessment of Cumulative Effects**

- 13.159 An assessment of the likely construction effects of the P-G via K Connection and other committed developments as well as other Connections and developments forming part of the KTR Project has been undertaken to take account of the likely interrelation of overlapping construction programmes and the resultant cumulative effect upon the local road network.
- 13.160 The overall approach for the cumulative assessments, including a list of developments considered, is outlined in **Chapter 3**.
- 13.161 The following developments have been included with P-G via K Connection for the cumulative traffic and transport assessment:
  - Knockman Hill Wind Farm (Proposed Wind Turbine Project at Knockman Hill, Milnmark Farm Dumfries and Galloway Environmental Statement (ES) 2009);
  - Mochrum Fell Wind Farm (Mochrum Fell Wind Farm ES, 2009);
  - Shepherds Rig Wind Farm (Shepherds Rig Wind Farm ES, 2020);
  - Troston Loch Wind Farm (Troston Loch Wind Farm EIA Report, 2019);
  - Cornharrow Wind Farm (Cornharrow Wind Farm EIA Report, 2020);
  - Glenshimmeroch Wind Farm (Glenshimmeroch Wind Farm EIA Report, 2018); and
  - Fell Wind Farm (Fell Wind Farm EIA Report, 2019).
- 13.162 In addition to the above wind farms, traffic associated with the construction of the proposed Glenlee Substation Extension has been included in order to ensure a robust EIA; the assessment has been undertaken on the basis of an overlap with the KTR construction enabling works between March 2022 and June 2022.
- 13.163 Construction of the other KTR Project Connections (i.e. C-K, EG, BG Deviation and G-T (including decommissioning and removal of R route (south))) will overlap with the construction phase of the P-G via K of the KTR Project between March 2022 and May 2026 inclusive.

Glenlee Substation Extension Access Arrangements

- 13.164 For the purpose of the assessment, it has been assumed that:
  - Construction traffic associated with the Glenlee Substation Extension will access from the south via the A713 (45%), the north via the A713 (45%) and a proportion will come from the east via the A712 (10%).

Wind Farm Access Arrangements

13.165 The following assumptions have been made to inform the assessment, as derived from review of relevant supporting ESs/EIA reports for the wind farm projects:

- Construction traffic accessing the proposed Knockman Hill Wind Farm will do so from the north via the A713.
- Construction traffic accessing the proposed Mochrum Fell Wind Farm site will predominantly do so from the south via the A712 (60%) although a proportion will come from the north via the A713 (25%).
- All construction traffic accessing the proposed Shepherds Rig Wind Farm site will do so from the north via the A713.
- All construction traffic accessing the proposed Troston Loch Wind Farm site will do so from the north via the A713.
- Construction traffic accessing the Cornharrow Wind Farm site will route from both the north (50%) and south (50%) via the A713.
- Construction traffic accessing the Glenshimmeroch Wind Farm site will route from both the north (50%) and south (50%) via the A713.
- Construction traffic accessing the Fell Wind Farm site will route from both the north (70%) and south (30%) via the A712.

#### Total Cumulative Construction Effects

- 13.166 This section assesses the maximum development case, assuming that all the developments being considered as part of the cumulative assessment will proceed to construction and that the cumulative effects are the total likely effects created by the construction of the P-G via K Connection of the KTR Project in combination with:
  - Wind farm developments (Knockman Hill, Mochrum Fell, Shepherds Rig, Troston Loch, Cornharrow, Glenshimmeroch, Fell);
  - Glenlee Substation Extension; and
  - other KTR Project Connections, i.e. C-K, E-G, BG Deviation and G-T.
- 13.167 It is uncertain if and when the construction phases of the wind farms and the P-G via K Connection of the KTR Project might overlap. To robustly assess cumulative traffic generation, the cumulative assessment has been undertaken for route sections within the KTR Project Study Area that are utilised by other committed developments as well as other Connections forming part of the KTR Project. This is based on the sum of the average traffic generation of the developments listed above and the P-G via K Connection of the KTR Project peak traffic generation. This is considered to represent a maximum case scenario as, in reality, it is considered highly improbable that peak traffic generation for all developments will align.
- 13.168 For the purpose of the assessment it has been assumed that:
  - 50% of stone will be sourced entirely from the onsite quarries with the remaining 50% being sourced from both Sorn Quarry and Tongland Quarry.
- 13.169 Similarly, to the above, in relation to the reinstatement of temporary access tracks, it has been assumed that:
  - 50% of stone will be reinstated within the onsite quarries and the remaining 50% being returned to both Sorn Quarry and Tongland Quarry.
- 13.170 **Table 13.17** presents a summary of predicted traffic volume increases over the entire construction period of the P-G via K Connection and during the 'peak period' of construction activity (August 2022 to January 2023 inclusive). The table below shows the proportional increase in traffic generated for route sections within the KTR Project Study Area that are utilised by other committed developments as well as the other Connections forming part of the KTR Project.

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Table 13.17: Summary of Predicted Traffic Volume Increase – Total Likely Cumulative Impact for P-G via K Connection of the KTR Project

Chapter 13: Traffic and Transport

Route Section		ovements per day onstruction period		lovements per da eriod of peak on activity
	[% In	crease]	[% Inc	crease]
	{Signif	icance}	{Signif	icance}
	Total Traffic Movements	HGV Traffic Movements	Total Traffic Movements	HGV Traffic Movements
A713 (between A77 and	116	37	319	93
Dalmellington)	3%	15%	8%	39%
[AADT = 4,085]	None	Moderate	Minor	Moderate
A713 (between	158	75	387	159
Dalmellington and Carsphairn)	10%	41%	25%	87%
[AADT = 1,557]	Moderate	Moderate	Moderate	Major
<b>A713</b> (between Carsphairn	144	73	304	141
and A762)	10%	46%	22%	88%
[AADT = 1,398]	Moderate	Moderate	Moderate	Major
A713 (between A762 and	66	30	62	30
A702)	5%	26%	4%	26%
[AADT = 1,382]	Minor	Moderate	None	Moderate
A713 (between A702 and	66	30	62	30
A712) `	3%	15%	3%	15%
[AADT = 2,282]	None	Moderate	None	Moderate
<b>A713</b> (between A712 and	50	24	98	36
B795) `	3%	13%	5%	19%
[AADT = 1,889]	None	Moderate	Minor	Moderate
A713 (between B795 and	56	24	100	36
A75)	1%	12%	3%	18%
[AADT = 3,868]	None	Moderate	None	Moderate
<b>A712</b> (between A713 and	44	15	125	46
Corsock)	4%	21%	13%	64%
[AADT = 988]	None	Moderate	Moderate	Major
A712 (between Corsock	36	13	83	31
and A75)	5%	17%	11%	41%
[AADT = 768]	Minor	Moderate	Moderate	Moderate
<b>A711</b> (between A75 and	34	30	32	30
4762)	<1%	9%	<1%	9%
[AADT=3,893]	None	Minor	None	Minor
A762 (between A713 and	16	14	18	14
J2s)	4%	56%	5%	56%
[AADT = 356]	None	Moderate	Minor	Moderate
<b>B741</b> (between New Cumnock and	42	42	70	70
Dalmellington)	4%	114%	7%	189%
[AADT = 1,031]	None	Major	Minor	Major
U2s	14	8	8	8

Route Section	over the entire co	lovements per day onstruction period crease]	Average Vehicle M during the pe construction [% Inc	eriod of peak on activity rease]
[AADT = 199]	7%	67%	4%	67%
	Minor	Major	None	Major
Gateside Road	40	40	66	66
(Dalmellington)	3%	82%	5%	135%
[AADT = 1,280]	None	Major	Minor	Major

Predicted Cumulative Effects during Construction

Driver Delay

#### 13.171 From a review of

- 13.172 **Table** 13.17, it is evident that threshold significance criteria have been exceeded on the A713 (between the A77 and the A75), A711, A762, B741, U2s and Gateside Road throughout the duration of the entire construction period.
- 13.173 The A713 has the residual capacity to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between the A77 and the A75) is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.174 As an integral part of the Glenlee Substation Extension Project, localised widening of strategic sections of the A762 (between the A713 and the U2s) and the U2s to provide passing places will be implemented achieving a minimum of width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (see Embedded Mitigation Measures Section). On this basis, the significance of effect of driver delay for users of the A762 and U2s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.175 Both the B741 and Gateside Road have very low HGV traffic flow and as such, the assessment shows a relatively large traffic increase which would represent a major effect; however it is important to note that these route sections have the residual capacity to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.176 The A711 and A712 have the residual capacity to readily accommodate the expected additional traffic flow. Again, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delays for users of the A711 and A712 is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.177 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Therefore, if the number of collisions were to increase proportionally with the increase in traffic volume, then the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.18**.

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Table 13.18: Projected Collisions – Total Likely Cumulative Impacts

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the P-G via K Connection + Committed WF Developments + Glenlee Substation Extension + other KTR Project Connections)
A713 (between A77 and Dalmellington)	10	10.3
A713 (between Dalmellington and Carsphairn)	4.7	5.2
A713 (between Carsphairn and A762)	1.3	1.5
<b>A713</b> (between A762 and A702)	0	0
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A713</b> (between A712 and B795)	1	1.1
<b>A713</b> (between B795 and A75)	1.3	1.4
A712 (between A713 and Corsock)	1	1.1
A712 (between Corsock and A75)	1	1.1
<b>A711</b> (between A75 and A762)	1.3	1.4
<b>A762</b> (between A713 and U2s)	0.3	0.4
<b>B741</b> (between New Cumnock and Dalmellington)	1.7	1.8
U2s	0	0
Gateside Road	0	0

- 13.178 Using the basis of assessment set out above, there would be a small increase (less than 1 collision) in PICs for the A713 (between the A77 and the A762) as a consequence of the increased traffic generated cumulatively. Professional judgment suggests that the peak cumulative traffic, which would be temporary (seven months duration), would result in a **minor** effect (**not significant**) upon road safety if unmitigated.
- 13.179 On the other route sections within the Study Area, there would be a negligible (and therefore **not significant**) increase in PICs as a consequence of the increased traffic generated cumulatively by the developments and the significance of the effect would be **none** and therefore **not significant**.

Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)

- 13.180 The roads within the P-G via K Connection Study Area will continue to operate below capacity, even with the addition of traffic generated cumulatively. Severance and pedestrian delay should not occur when there is such a notable level of residual road capacity
- 13.181 Cumulatively, the only road sections where HGV flows are expected to double, or more are the B741 and Gateside Road.
- 13.182 The CTMP an outline of which is provided as **Appendix 13.1** will promote interventions that will minimise the effect of construction traffic on local communities, measures include but are not limited to:
  - temporary construction site signage will be erected on the local road network in advance of local communities to warn people of construction activities and associated construction vehicles;
  - SPEN shall nominate a Community Liaison Officer (CLO); the CLO will be responsible for keeping the local community informed of progress on the site and warning them of upcoming activities which may give rise to increased construction vehicle movements; and

- all site staff will be informed about traffic management arrangements and procedures via the site induction.
- 13.183 There is local footway provision in Dalmellington (B741 and Gateside Road) and New Cumnock (B741).

  Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of construction traffic generated cumulatively. On this basis, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the B741 and Gateside Road.
- 13.184 Several construction access routes overlap and/or intersect with existing recreational routes, these include the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route; and
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route, and intersects both Core Path 224 and 504 (the Southern Upland Way).
- 13.185 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of construction traffic. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of the Southern Upland Way, Core Paths 21, 30 and 224 and the National Byway cycling route is considered to be **minor** and accordingly considered to be **not significant**.
- 13.186 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of construction traffic engaged in the P-G via K Connection.
- 13.187 Overall based on professional judgement the construction traffic generated cumulatively will have a **minor** effect upon community receptors which is therefore **not significant** in the context of the 2017 EIA Regulations (as amended).

Proposed Additional Mitigation

13.188 As recorded in the CTMP, if another development, such as the wind farms considered in the cumulative assessment appears likely to undergo construction at the same time as the P-G via K Connection, SPEN will liaise with the other developer regarding the scheduling of deliveries and potential means of reducing the impact of combined construction.

Residual Cumulative Effects during Construction

13.189 Overall, due to the implementation of infrastructure improvements to the A762 (between the A713 and the U2s) and the U2s as part of the Glenlee Substation Extension works (therefore, embedded mitigation for the P-G via K Connection), in conjunction with the embedded mitigation measures and operational procedures as proposed in the framework CTMP and the proposed additional requirement for SPEN to liaise with other developers regarding the scheduling of deliveries and potential means of reducing the effect of combined construction, the residual effects associated with the levels of traffic generated cumulatively are considered to be **minor** and accordingly **not significant** in the context of the 2017 EIA Regulations (as amended).

#### Monitoring

- 13.190 The requirement for construction monitoring will be agreed with SPEN, Roads Authority representatives and other relevant stakeholders prior to commencement of works.
- 13.191 If deemed necessary, SPEN will enter into a legal agreement under Section 96 of the Roads (Scotland)

  Act 1984 to formalise an inspection and maintenance regime with the Roads Authority to contribute to
  maintenance of those roads impacted by HGV movements associated with the P-G via K Connection.

#### **Summary of Effects**

13.192 A summary of effects before and after proposed mitigation measures for the P-G via K Connection is provided in **Table 13.19**.

Table 13.19: Summary of Effects for Public Roads Within the P-G via K Connection Study Area

Predicted Effect	Significance	Mitigation	Significance of Residual Effect
Construction Effects			
Driver Delay	Minor	No additional mitigation is proposed beyond	Minor
Road Safety	Minor	the embedded measures and operational procedures as proposed as good practice in the	Minor
Community Impacts	Minor	framework CTMP.  The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced and expanded as appropriate by SPEN's appointed contractor(s) in consultation with Roads Authorities and the Police prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.	Minor
Cumulative Effects			
Driver Delay	Minor	If the construction of any notably sized development(s), e.g. wind farm development(s) (as considered in the	Minor
Road Safety	Minor	cumulative assessment) appears likely to overlap with the KTR Project, SPEN will liaise with the appropriate developer organisation	Minor
Community Impacts	Minor	regarding the scheduling of deliveries and potential means of reducing the impact of combined construction.	Minor

13.193 Based on the assessment summary in **Table 13.19**, the additional traffic predicted to be generated on public roads throughout the P-G via K Connection Study Area during the construction phase is anticipated to result in **minor** effects which are therefore considered to be **not significant**.

#### Carsfad to Kendoon

- 13.194 The Carsfad to Kendoon (C-K) Connection of the KTR Project is shown in Figure 4.3.
- 13.195 A new 132kV single circuit OHL, of approximately 2.6km in length, is required between the hydroelectric power station at Carsfad and the existing substation at Kendoon. The OHL will be supported on a 'trident' design wood pole.
- 13.196 In relation to the stone required for construction of the C-K Connection of the KTR Project, it has been assumed that:
  - Stone will be sourced entirely from offsite locations.
  - Stone will be sourced either from Sorn Quarry or Tongland Quarry. The traffic and transport assessment consider scenarios where stone will be sourced either 100% from Sorn Quarry or 100% from Tongland.
- 13.197 Similarly, to the above, in relation to the reinstatement of temporary access tracks (where required), it has been assumed that:
  - stone will be entirely be taken offsite and returned to either Sorn Quarry or Tongland Quarry. The traffic and transport assessment consider scenarios where stone is returned either 100% to Sorn Quarry or 100% to Tongland.

#### **Access Arrangements**

13.198 Transportation, including deliveries to and from the construction areas will be taken from the existing trunk and local road network. The local area road network is shown on **Figures 13.1.1 and 13.1.2**.

- 13.199 Given the nature of construction of the overhead line Connection (i.e. a linear development), SPEN has identified 6 construction access points for the Connection C-K of the KTR Project, identified in **Table**13.20 and shown on **Figure 5.5.1**.
- 13.200 Further information relating to the proposed construction worksite access locations is included in **Appendix 13.2**.

Table 13.20: Access Points for Connection C-K of the KTR Project

Worksite Access Reference	Public Road	Components
11	A713	Wood Pole R002R and R003R
13	A713	Wood Pole R004R, R005R, R006R, R007R, R008R and R009R
15	A713	Wood Pole R010R, R011R and R012R
16	A713	Wood Pole R013R, R014R, R015R and R016R
17	A713	Wood Pole R017R, R018R, R019R and R020R
18	A713	Construction Compound
19	A713	Wood Pole R021R, R022R and R023R

- 13.201 The proposed worksite accesses are preliminary based on SPEN's experience of constructing similar projects. The worksite access locations will be confirmed by the appointed contractor as an integral part of their adopted CTMP, a framework of which is provided in **Appendix 13.1**.
- 13.202 All construction vehicles drivers will be instructed to access a worksite via an approved route.

#### Assessment of Construction Effects (including tree felling)

- 13.203 As detailed in **Chapter 5**, the overall construction period duration for the Connection C-K is 24 months.
- 13.204 Sections of the A77, A76, A75, A713, A712, A711, A702, B741 and Gateside Road public roads will be used by construction traffic (see **Figure 13.1.1 and 13.1.2**). The assessed number of traffic movements (note: one trip = two movements; i.e. one delivery and one return journey) generated by construction activity are summarised in **Table 13.21.**

Table 13.21: Vehicle Movements Generated by Tree Felling and Construction Activity for Connection C-K of the KTR Project

Activity/Item Being Transported	Type of Vehicle	Details/deliveries	Total Vehicle Movements
Timber Clearance (within wayleave)	Lorry (24 tonne capacity)	An estimated 0.98ha of timber will be felled resulting in a total of 204 tonnes of timber to be produced.	22
Site Access Tracks	Lorry (20 tonne capacity)	An estimated 15,610 tonnes of stone will be required.	1,561
OHL Construction	Lorry (20 m³ capacity)	Wooden poles	150
Wiring and Commissioning	Lorry (20 m³ capacity) and light vans	Wiring and commissioning	156
Reinstatement	Lorry (20 tonne capacity)	An estimated 15,610 tonnes of stone will be required to be removed.	1,561
Other	Private cars, light vans and mini-bus	Construction personnel, other site visitors.	3,764
TOTAL HGV TRAFF	IC MOVEMENTS FOR C	CONNECTION C-K	3,450
TOTAL LGV TRAFF	IC MOVEMENTS FOR C	ONNECTION C-K	3,764
TOTAL ALL TRAFFI	C MOVEMENTS FOR C	ONNECTION C-K	7,214

Predicted Construction Effects

13.205 As indicated in **Table 13.21** the total of traffic generated by Connection C-K is estimated as 7,214 movements, of which 3,450 movements will be HGV movements over the 25 months construction period.

- 13.206 With reference to the indicative construction programme and the anticipated vehicle movements provided by SPEN for each activity, the number of vehicle movements that are anticipated for each month of the construction programme has been calculated. The vehicle movements calculated have then been distributed over each route section as per the assumptions indicated in the Assessment Assumptions section.
- 13.207 As indicated in the Assessment Assumption section, two separate scenarios have been assessed:
  - Scenario 1: 100% stone is sourced/returned from/to Sorn Quarry and delivered to site via the A76, B741 and A713.
  - Scenario 2: 100% of stone is sourced/returned from/to Tongland Quarry and delivered to site via the A711, A75 and A713.
- 13.208 Estimated daily and monthly movements generated by Connection C-K against the programme along with predicted percentages increases on relevant trunk and local roads are shown in **Table 13.22** and in **Table 13.23** for Scenario 1 and Scenario 2 respectively.
- 13.209 Construction traffic is estimated at an average of 14 vehicle movements a day over the entire construction period.
- 13.210 The highest levels of construction traffic are anticipated to occur over a period of 3 months from August 2023 to October 2023 with an average of 64 vehicle movements a day, with a maximum of 70 vehicle movements occurring per day in October 2023. The 'peak period' for the purpose of this assessment is therefore considered to be August 2023 to October 2023 inclusive. **Table 13.24** presents a summary of this information by route section for both Scenario 1 and Scenario 2.
- 13.211 The A77, A76, A75, A711, A712 and A702 currently operate comfortably within their respective capacities (see **Table 13.7**). The increase in traffic volume on these roads throughout the construction phase of Connection C-K is assessed to be less than 5% or 10% for the A711 in terms of both general traffic (HGV+LGV) and specifically HGV traffic. On this basis, the significance of the effect is assessed to be **minor** at worst and accordingly **not significant**. Since the 10% traffic increase threshold has not been exceeded on these routes, no detailed assessment has been undertaken for these public roads.
- 13.212 For the purpose of the detailed assessment, it has been assumed that embedded mitigation measures and operational procedures as proposed in the framework CTMP (**Appendix 13.1**) will be in place during construction of the KTR Project and therefore used to inform the judgement of significance of effects.

Table 13.22: Outline Construction Programme and Associated Traffic Assessment for Connection C-K of the KTR Project – Scenario 1

Programme	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	TOTAL
Activity			,		,										,							,				
Timber Clearance (within wayleave)	4	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Site Access Tracks	466	1780	643	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2889
OHL Construction	0	0	180	274	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	525
Wiring and Commissioning	0	0	0	0	80	118	118	118	118	118	118	101	0	0	0	0	0	0	0	0	0	0	0	0	0	889
Reinstatement	0	0	0	0	0	0	0	0	0	0	0	0	228	240	240	240	240	240	240	240	240	240	240	240	21	2889
Total no. vehicle movements, all traffic	470	1794	927	274	151	110	110	110	110	110	110	101	220	240	240	240	240	240	240	240	240	240	240	240	21	7214
(HGV + LGV) Total no. vehicle movements, all traffic			827		151	118	118	118	118	118	118	101	228	240	240	240	240	240	240	240	240	240		240	21	7214
(HGV + LGV) / day	60	60	70	12	14	6	6	6	6	6	6	6	10	10	10	10	10	10	10	10	10	10	10	10	10	-
Total no. HGV vehicle movements  Total no. HGV vehicle movements / day	256 32	976 32	403 36	78 4	34 4	20	20 2	20 2	20 2	20 2	20 2	22 2	124 6	130 6	130 6	130 6	130 6	130 6	130 6	130 6	130 6	130 6	130 6	130 6	7 6	3450
Total no. LGV vehicle movements	214	818	424	196	117	98	98	98	98	98	98	79	104	110	110	110	110	110	110	110	110	110	110	110	14	3764
Total no. LGV vehicle movements / day	28	28	34	8	10	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	-
A76 (between B743 and A70) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A76 (between B743 and A70)	3%	3%	3%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic A76 (between A70 and New Cumnock)																										
% Increase in ALL Traffic A76 (between A70 and New Cumnock)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic	3%	3%	3%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A75 (between A762 and A712) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A75 (between A762 and A712) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A75 (between A712 and A780) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A75 (between A712 and A780)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic A75 (between A780 and A76)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	_
% Increase in ALL Traffic A75 (between A780 and A76)																										
% Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A77 (between A713 and A70) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A77 (between A713 and A70) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between A77 and Dalmellington) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	
A713 (between A77 and Dalmellington)	<1%	<1%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	
% Increase in HGV Traffic A713 (between Dalmellington and Carsphairn)	2%	2%	3%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	
% Increase in ALL Traffic A713 (between Dalmellington and Carsphairn)																										$\vdash$
% Increase in HGV Traffic A713 (between Carsphairn and A762)	17%	17%	19%	1%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	-
% Increase in ALL Traffic	4%	4%	5%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between Carsphairn and A762) % Increase in HGV Traffic	20%	20%	22%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	-
A713 North of Dalry (between A762 and A702) % Increase in ALL Traffic	1%	1%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 North of Dalry (between A762 and A702) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 South of Dalry (between A702 and A712)	<1%	<1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in ALL Traffic A713 South of Dalry (between A702 and A712)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	_
% Increase in HGV Traffic A713 (between A712 and B795)																										$\vdash$
% Increase in ALL Traffic A713 (between A712 and B795)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between B795 and A75) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between B795 and A75) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A75 and A762) % Increase in ALL Traffic	<1%	<1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A75 and A762)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic A712 (between A762 and A713)																										
% Increase in ALL Traffic A712 (between A762 and A713)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A713 and Corsock) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A713 and Corsock) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between Corsock and A75) % Increase in ALL Traffic	<1%	<1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between Corsock and A75)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic A711 (between A75 and A762)																										
% Increase in ALL Traffic A711 (between A75 and A762)	<1%	<1% <1%	<1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	1% <1%	1% <1%	1% <1%	-															
M/II (DELWEEH A/O dHU A/OZ)	<b>\1</b> %0	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<b>\1</b> %	<1%	<1%	<1%	<1%	<1%	<b>\1%</b>	<1%	

Programme	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	TOTAL
% Increase in HGV Traffic																										
A702 (between A713 and Moniaive) % Increase in ALL Traffic	3%	3%	3%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between A713 and Moniaive) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between Moniaive and A76) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between Moniaive and A76) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
B741 % Increase in ALL Traffic	3%	3%	3%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
B741 % Increase in HGV Traffic	85%	85%	85%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	-
Gateside Road % Increase in ALL Traffic	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
Gateside Road % Increase in HGV Traffic	64%	64%	64%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	-

Table 13.23: Outline Construction Programme and Associated Traffic Assessment for Connection C-K of the KTR Project – Scenario 2

Programme	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	TOTAL
Activity													<u> </u>													
Timber Clearance (within wayleave)	4	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Site Access Tracks	466	1780	643	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2889
OHL Construction	0	0	180	274	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	525
Wiring and Commissioning	0	0	0	0	80	118	118	118	118	118	118	101	0	0	0	0	0	0	0	0	0	0	0	0	0	889
Reinstatement	0	0	0	0	0	0	0	0	0	0	0	0	228	240	240	240	240	240	240	240	240	240	240	240	21	2889
Total no. vehicle movements, all traffic (HGV	470	1704	027	274	151	110	110	110	110	110	110	101	220	240	240	240	240	240	240	240	240	240	240	240	21	7244
+ LGV) Total no. vehicle movements, all traffic (HGV	470	1794	827	274	151	118	118	118	118	118	118	101	228	240	240	240	240	240	240	240	240	240	240	240	21	7214
+ LGV) / day	60	60	70	12	14	6	6	6	6	6	6	6	10	10	10	10	10	10	10	10	10	10	10	10	10	-
Total no. HGV vehicle movements  Total no. HGV vehicle movements / day	256 32	976 32	403 36	78	34	20 2	20	20	20	20 2	20 2	22 2	124 6	130	130	130	130 6	130	130	130	130 6	130 6	130 6	130 6	7 6	3450
Total no. LGV vehicle movements	214	818	424	196	117	98	98	98	98	98	98	79	104	110	110	110	110	110	110	110	110	110	110	110	14	3764
Total no. LGV vehicle movements / day	28	28	34	8	10	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	-
A76 (between B743 and A70)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	_
% Increase in ALL Traffic A76 (between B743 and A70)																				-						_
% Increase in HGV Traffic A76 (between A70 and New Cumnock)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A76 (between A70 and New Cumnock) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A75 (between A762 and A712) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A75 (between A762 and A712)	3%	3%	3%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic A75 (between A712 and A780)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	_
% Increase in ALL Traffic A75 (between A712 and A780)																										
% Increase in HGV Traffic A75 (between A780 and A76)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A75 (between A780 and A76) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A77 (between A713 and A70) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A77 (between A713 and A70)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in HGV Traffic A713 (between A77 and Dalmellington)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	
% Increase in ALL Traffic A713 (between A77 and Dalmellington)																				-						
% Increase in HGV Traffic A713 (between Dalmellington and Carsphairn)	<1%	<1%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	
% Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between Dalmellington and Carsphairn) % Increase in HGV Traffic	<1%	<1%	1%	1%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between Carsphairn and A762) % Increase in ALL Traffic	4%	4%	5%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between Carsphairn and A762) % Increase in HGV Traffic	20%	20%	22%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	-
A713 North of Dalry (between A762 and A702)	4%	4%	4%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	_
% Increase in ALL Traffic A713 North of Dalry (between A762 and A702)	27%	27%	27%										4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	_
% Increase in HGV Traffic A713 South of Dalry (between A702 and A712)				<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%								-						
% Increase in ALL Traffic	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 South of Dalry (between A702 and A712) % Increase in HGV Traffic	16%	16%	16%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	-
A713 (between A712 and B795) % Increase in ALL Traffic	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between A712 and B795) % Increase in HGV Traffic	17%	17%	17%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	-
A713 (between B795 and A75)	<1%	<1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in ALL Traffic A713 (between B795 and A75)	16%																									_
% Increase in HGV Traffic A712 (between A75 and A762)		16%	16%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
% Increase in ALL Traffic	<1%	<1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A75 and A762) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A762 and A713) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A762 and A713) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A713 and Corsock)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
% Increase in ALL Traffic A712 (between A713 and Corsock)	<1%					<1%					<1%	<1%	<1%			<1%				-					<1%	
% Increase in HGV Traffic A712 (between Corsock and A75)		<1%	<1%	<1%	<1%		<1%	<1%	<1%	<1%				<1%	<1%		<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		+
% Increase in ALL Traffic	<1%	<1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between Corsock and A75) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A711 (between A75 and A762) % Increase in ALL Traffic	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	1%	1%	1%	1%	1%	1%	1%	
A711 (between A75 and A762) % Increase in HGV Traffic	9%	9%	9%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	-
70 Indicase in riov frame	1		l .	1	I		I.		1	I	I	I	l .	1	1	1		1	1	1		I				

Programme	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	TOTAL
A702 (between A713 and Moniaive) % Increase in ALL Traffic	3%	3%	3%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between A713 and Moniaive) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between Moniaive and A76) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between Moniaive and A76) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
B741 % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
B741 % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
Gateside Road % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-
Gateside Road % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	-

Table 13.24: Summary of Construction Traffic Generated on Public Roads within Connection C-K Study Area

Route Section			Construction traffic	generated over the 24 mor	nths construction program	me, by route section		
		Scen	ario 1			Scen	ario 2	
		ents per day over entire ion period		ts per day during the period ruction activity		ents per day over entire ion period		ts per day during the period ruction activity
	[% Inc	crease]	[% In	crease]	[% In	crease]	[% In	crease]
	{Signif	icance}	{Signif	icance}	{Signif	icance}	{Signit	ficance}
	HGV + LGV	HGV	HGV + LGV	HGV	HGV + LGV	HGV	HGV + LGV	HGV
A76 (between A77 and	8	6	32	32	0	0	0	0
B743)	[<1%]	[1%]	[<1%]	[3%]	[0%]	[0%]	[0%]	[0%]
[AADT = 11,691]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A76 (between A70 and	6	6	32	32	0	0	0	0
New Cumnock)	[<1%]	[1%]	[<1%]	[3%]	[0%]	[0%]	[0%]	[0%]
[AADT = 6,423]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A75</b> (between A762(N)	2	2	2	2	8	8	32	32
and A712)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[1%]	[<1%]	[3%]
[AADT= 7,901]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A75 (between A712 and	2	2	8	2	2	2	8	2
A780)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 11,065]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A75 (between A780 and	2	2	8	2	2	2	8	2
A76)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 14,729]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A77 (between A713 and	4	2	10	2	4	2	10	2
A70)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 21,311]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between A77 and	4	2	10	2	4	2	10	2
Dalmellington)	[<1%]	[<1%]	[<1%]	[1%]	[<1%]	[<1%]	[<1%]	[1%]
[AADT= 4,085]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between	10	8	40	34	4	2	10	2
Dalmellington and Carsphairn)	[1%]	[4%]	[3%]	[18%]	[<1%]	[<1%]	[1%]	[1%]
[AADT= 1,557]	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between	14	8	62	34	14	8	62	34
Carsphairn and A762)	[1%]	[4%]	[4%]	[21%]	[<1%]	[4%]	[1%]	[21%]
[AADT=1,398]	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}
A713 (between A762 and	6	2	24	2	12	8	54	32
A702)	[<1%]	[<1%]	[2%]	[<1%]	[1%]	[5%]	[4%]	[27%]
[AADT=1,382]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}	{moderate, significant}
A713 (between A702 and	6	2	24	2	12	8	54	32
A712)	[<1%]	[<1%]	[1%]	[<1%]	[1%]	[3%]	[4%]	[16%]
[AADT=2,282]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}

Route Section			Construction traffic	generated over the 24 mo	nths construction program	me, by route section		
A713 (between A712 and	2	2	8	2	8	8	40	32
B795)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[3%]	[2%]	[17%]
[AADT=1,889]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}
A713 (between B795 and	2	2	8	2	8	6	40	30
A75)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[3%]	[2%]	[16%]
[AADT=3,868]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}
A712 (between A75 and	2	0	8	0	2	0	8	0
A762)	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]	[1%]	[0%]
[AADT=685]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between A762 and	2	0	8	0	2	0	8	0
A713)	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]	[1%]	[0%]
[AADT=1,544]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between A713 and	2	2	8	2	2	2	8	2
Corsock)	[<1%]	[1%]	[1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT=988]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between Corsock	2	2	8	2	2	2	8	2
and A75)	[<1%]	[1%]	[1%]	[<1%]	[<1%]	[<1%]	[1%]	[<1%]
[AADT=768]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A711 (between A75 and	30	0	18	0	36	6	50	32
A762)	[1%]	[0%]	[<1%]	[0%]	[1%]	[2%]	[1%]	[9%]
[AADT=3,898]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}
A702 (between A713 and	2	0	8	0	2	0	8	0
Moniaive)	[1%]	[0%]	[3%]	[0%]	[1%]	[0%]	[3%]	[0%]
[AADT=243]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A702 (between Moniaive	2	0	8	0	2	0	8	0
and A76)	[<1%]	[0%]	[1%]	[0%]	[<1%]	[0%]	[1%]	[0%]
[AADT=931]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>B741</b> (between New	6	6	32	32	0	0	0	0
Cumnock and Dalmellington)	[1%]	[16%]	[3%]	[85%]	[0%]	[0%]	[0%]	[0%]
[AADT = 1,031]	{none, not significant}	{moderate, significant}	{none, not significant}	{major, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
Gateside Road	6	6	32	32	0	0	0	0
(Dalmellington)	[<1%]	[12%]	[2%]	[64%]	[0%]	[0%]	[0%]	[0%]
[AADT = 1,280]	{none, not significant}	{moderate, significant}	{none, not significant}	{major, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}

#### Driver Delay

- 13.213 All public road route sections where the 10% threshold significance criteria has been exceeded operate notably below their theoretical capacity. **Table 13.25** provides a comparison of forecast traffic flows on roads during the 'Peak Period' and associated theoretical road capacities.
- 13.214 Furthermore, the CTMP a framework of which is provided as **Appendix 13.1** will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay, CTMP measures include but are not limited to:
  - The timing and frequency of vehicle movements being managed to minimise local disruption;
  - details of designated access routes will form part of the site induction and training being held for all site operatives and delivery drivers through 'toolbox talks'; and
  - where reasonable and practicable, project-related vehicles will avoid travelling in convoys on public roads.

Table 13.25: Baseline Traffic + Traffic Generated by Construction of the C-K Connection of the KTR Project

Route Section	Two-way peak hour movements (2022 Baseline Traffic + Traffic Generated by Construction of the C- K Connection of the KTR Project)	Capacity (vph) (two-way hourly flow)
<b>A713</b> (between Dalmellington and Carsphairn)	204	1800
<b>A713</b> (between Carsphairn and A762)	206	1800
<b>A713</b> (between A762 and A702)	206	1600
<b>A713</b> (between A702 and A712)	206	1600
<b>A713</b> (between A712 and B795)	204	1800
<b>A713</b> (between B795 and A75)	204	1800
<b>A711</b> (between A75 and A762)	204	1800
<b>B741</b> (between New Cumnock and Dalmellington)	204	1600
Gateside Road (Dalmellington)	206	1600

- 13.215 From a review of **Table 13.24** it is evident that threshold significance criteria have been exceeded on the A713 (between Carsphairn and the A762) during the 'peak period' of construction activity for both Scenario 1 or Scenario 2.
- 13.216 The A713 has the residual capacity to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between Carsphairn and the A762) is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).
- 13.217 Considering Scenario 1, **Table 13.24** indicates that threshold significance criteria have been exceeded on the A713 (between Dalmellington and Carsphairn) during the 'peak period' of construction activity. Furthermore, threshold significance criteria have been exceeded on the B741 and Gateside Road both throughout the whole of the entire construction period and during the 'peak period' of construction activity.
- 13.218 As indicated above, the A713 has the residual capacity (see **Table 13.25**) to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between Dalmellington and Carsphairn) is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).
- 13.219 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such show a relatively large traffic increase would represent a **major** effect, however it is important to note that these route sections have the residual capacity (see **Table 13.25**) to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and

- efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.220 Considering Scenario 2, **Table 13.24** indicates that threshold significance criteria have been exceeded on the A713 (between the A762 and the A75) during the 'peak period' of construction activity. The A713 has the residual capacity (see **Table 13.25**) to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 is considered to be **minor** and accordingly considered **not significant** in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.221 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic, the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.26**.

**Table 13.26: Projected Collisions** 

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the P- G via K Connection of the KTR Project)
A713 (between Dalmellington and Carsphairn)	4.7	4.8
A713 (between Carsphairn and A762)	1.3	1.4
<b>A713</b> (between A762 and A702)	0.0	0.0
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A713</b> (between A712 and B795)	1.0	1.1
<b>A713</b> (between B795 and A75)	1.3	1.4
<b>B741</b> (between New Cumnock and Dalmellington)	1.7	1.8
Gateside Road (Dalmellington)	0	0

13.222 Using this basis of assessment set out above, there would be a negligible increase in PICs in the Study Area as a consequence of the increased traffic generated by Connection C-K of the KTR Project and the significance of the effect would be **none** and accordingly considered **not significant** in the context of the 2017 EIA Regulations (as amended).

Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)

- 13.223 The IEMA Guidelines define severance as 'the perceived division that can occur within a community when it becomes separated by a major traffic artery'. Severance may result from a road carrying large traffic flows or a physical barrier created by the road itself, and the IEMA guidelines suggest that consideration is given to the severity of existing severance and how this might be exacerbated by proposed construction traffic generated by a development. As shown in **Table 13.25**, the roads within the C-K Connection Study Area will continue to operate below capacity, even with the addition of traffic generated by construction of the C-K Connection. Severance should not occur when there is such a notable level of residual road capacity and traffic generated by the C-K Connections will be relatively low.
- 13.224 For similar reasoning, pedestrian delay is not considered to be an existing problem on any of the route sections within the C-K Study Area, nor one that shall be created by the addition of proposed construction traffic to these routes.
- 13.225 Pedestrian amenity is broadly defined by the IEMA as the 'relative pleasantness of a journey', and this definition also takes into account fear and intimidation. The IEMA Guidelines suggest that 'a tentative threshold for judging the significance of changes in pedestrian amenity would be where traffic flows (or its lorry component) is halved or doubled. The construction of the Connection C-K is predicted to

- generate less than double the current HGV flows on all route sections within the C-K Study Area and therefore the effect on pedestrian amenity is not considered to be significant.
- 13.226 The section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route, and intersects both Core Path 224 and Core Path 504 (the Southern Upland Way). As such, the CTMP will include a commitment to provide signage 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. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of the Southern Upland Way, Core Paths 21 and 224 and the National Byway cycling route is considered to be **minor** and accordingly considered to be **not significant**.
- 13.227 Construction routes traverse St John's Town of Dalry where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of project generated construction traffic engaged in the C-K Connection.
- 13.228 Overall based on professional judgement, the construction traffic generated by Connection C-K will have a **minor** (and therefore **not significant** in the context of the 2017 EIA Regulations (as amended)) effect upon community receptors.

Proposed Additional Mitigation

- 13.229 No further mitigation is proposed in addition to the embedded mitigation measures and operational procedures as proposed in the framework CTMP.
- 13.230 The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced and expanded upon as appropriate by SPEN's appointed contractor(s) in consultation with Roads Authorities and the Police prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.

Residual Construction Effects

13.231 Overall, due to the implementation of the embedded mitigation measures and operational procedures as proposed in the framework CTMP, the significance of the residual effects associated with the levels of traffic anticipated during the construction of the C-K Connection is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).

### **Assessment of Cumulative Effects**

- 13.232 An assessment of the likely construction effects of the C-K Connection and other committed developments as well as other Connections forming part of the KTR Project has been undertaken to robustly take account of the likely interrelation of overlapping construction programmes and the resultant cumulative effect upon the local road network.
- 13.233 The overall approach for the cumulative assessments, including a list of developments considered, is outlined in **Chapter 3**
- 13.234 The following developments have been included with the C-K Connection of the KTR Project for the cumulative traffic and transport assessment:
  - Knockman Hill Wind Farm (Proposed Wind Turbine Project at Knockman Hill, Milnmark Farm Dumfries and Galloway Environmental Statement (ES) 2009);
  - Mochrum Fell Wind Farm (Mochrum Fell Wind Farm ES, 2009);
  - Shepherds Rig Wind Farm (Shepherds Rig Wind Farm ES, 2020);
  - Troston Loch Wind Farm (Troston Loch Wind Farm EIA Report, 2019);
  - Cornharrow Wind Farm (Cornharrow Wind Farm EIA Report, 2020);
  - Glenshimmeroch Wind Farm (Glenshimmeroch Wind Farm EIA Report, 2018); and
  - Fell Wind Farm (Fell Wind Farm EIA Report, 2019).

13.235 In addition to the above developments, construction of the other KTR Project Connections (i.e. P-G via K (including decommissioning of N and R route (north), EG, BG Deviation and G-T (including decommissioning of R route (south)) will overlap with the construction phase of Connection C-K of the KTR Project between August 2023 and August 2025 inclusive.

### Wind Farm Access Arrangements

- The following assumptions have been made to inform the assessment, as derived from review of relevant supporting ESs/EIA reports for the wind farm projects:
- Construction traffic accessing the proposed Knockman Hill Wind Farm will do so from the north via the A713.
- Construction traffic accessing the proposed Mochrum Fell Wind Farm site will predominantly do so from the south via the A713 (75%) although a proportion would come from the north via the A713 construction activity (25%).
- All construction traffic accessing the proposed Shepherds Rig Wind Farm site will do so from the north via the A713.
- All construction traffic accessing the proposed Troston Loch Wind Farm site will do so from the north via the A713.
- Construction traffic accessing the Cornharrow Wind Farm site will route from both the north (50%) and south (50%) via the A713.
- Construction traffic accessing the Glenshimmeroch Wind Farm site will route from both the north (50%) and south (50%) via the A713.
- Construction traffic accessing the Fell Wind Farm site will route from both the north (70%) and south (30%) via the A712.

### Total Cumulative Construction Effects

- 13.236 This section assesses the maximum development case assuming that all the developments being considered as part of the cumulative assessment will proceed to construction and that the cumulative effects are the total likely effects created by the construction of the C-K Connection in combination with:
  - Wind farm developments (Knockman Hill, Mochrum Fell, Shepherds Rig, Troston Loch, Cornharrow, Glenshimmeroch, Fell); and
  - other KTR Project Connections; P-G via K, E-G, BG Deviation and G-T.
- 13.237 It is uncertain if and when the construction phases of the wind farms and C-K Connection might overlap. To robustly assess cumulative traffic generation, the cumulative assessment has been undertaken for route sections within the KTR Study Area that are utilised by other committed developments as well as other Connections and developments forming part of the KTR Project. This is based on the sum of the average traffic generation of the developments listed above combined with peak traffic generation associated with C-K Connection. This is considered to represent a maximum case scenario as, in reality, it is considered highly improbable that peak traffic generation for all developments will align.
- 13.238 For the purpose of the assessment it has been assumed that:
  - 50% of stone will be sourced entirely from the onsite quarries with the remaining 50% being sourced from both Sorn Quarry and Tongland Quarry.
- 13.239 Similarly, to the above, in relation to the reinstatement of temporary access tracks, it has been assumed that:
  - 50% of stone will be reinstated within the onsite quarries and the remaining 50% being returned to both Sorn Quarry and Tongland Quarry.
- 13.240 **Table 13.27** presents a summary of predicted traffic volume increases over the entire construction period of C-K Connection and during the 'peak period' of construction activity (August 2023 to October 2023 inclusive). The table below shows the proportional increase in traffic generated for route sections within the KTR Project Study Area that are utilised by other committed developments as well as other Connections and developments forming part of the KTR Project.

Table 13.27: Summary of Predicted Traffic Volume Increase – Total Likely Cumulative Impact for C-K Connection

Route Section		vements per day over struction period	Average Vehicle M during the period o acti			
	[% In	crease]	[% Inc	rease]		
	{Signit	ficance}	{Signifi	icance}		
	Total Traffic Movements	HGV Traffic Movements	Total Traffic Movements	HGV Traffic Movements		
A713 (between	217	61	337	93		
A77 and Dalmellington)	5%	26%	8%	39%		
[AADT = 4,085]	Minor	Moderate	Minor	Moderate		
A713 (between	255	97	375	129		
Dalmellington and Carsphairn)	16%	53%	24%	71%		
[AADT = 1,557]	Moderate	Moderate	Moderate	Major		
A713 (between	201	87	338	127		
Carsphairn and A762)	14%	54%	24%	79%		
[AADT = 1,398]	Moderate	Moderate	Moderate	Major		
A713 (between	74	28	118	48		
A762 and A702)	5%	24%	9%	41%		
[AADT = 1,382]	Minor	Moderate	Minor	Moderate		
A713 (between	74	28	118	48		
A702 and A712)	3%	14%	5%	24%		
[AADT = 2,282]	None	Moderate	Minor	Moderate		
A713 (between	74	32	128	54		
A712 and B795)	4%	17%	7%	29%		
[AADT = 1,889]	None	Moderate	Minor	Moderate		
A713 (between	82	30	134	52		
B795 and A75)	2%	15%	3%	29%		
[AADT = 3,868]	None	Moderate	None	Moderate		
A712 (between	77	28	139	46		
A713 and Corsock) [AADT = 988]	8%	39%	14%	64%		
	Minor	Moderate	Moderate	Major		
A712 (between	55	19	97	31		
Corsock and A75) [AADT = 768]	7%	25%	13%	41%		
	Minor	Moderate	Moderate	Moderate		
<b>A711</b> (between	30	24	54	50		
A75 and A762)	<1%	7%	1%	15%		
[AADT=3,898]	None	Minor	None	Moderate		
<b>B741</b> (between New Cumnock and	40	40	40	40		
Dalmellington)	4%	108%	4%	108%		
[AADT = 1,031]	None	Major	None	Major		
Gateside Road	36	36	36	36		
(Dalmellington)	3%	73%	3%	73%		
[AADT = 1,280]	None	Major	None	73% Major		

# Predicted Cumulative Effects during Construction

### Driver Delay

- 13.241 From a review of **Table 13.27**, it is evident that threshold significance criteria have been exceeded on the A713 (between the A77 and the A75), A711, B741 and Gateside Road throughout the duration of the entire construction period.
- 13.242 The A713 has the residual capacity to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between the A77 and the A75) is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.243 Both the B741 and Gateside Road generally experience low HGV traffic levels and this assessment has therefore shown a relatively large traffic increase which would represent a major effect. However, it is important to note that these route sections have the residual capacity to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.244 The A711 and A712 have the residual capacity to readily accommodate the expected additional traffic flow. Again, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delays for users of the A711 and A712 is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).

# Road Safety

The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic volume, then the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.28**.

Table 13.28: Projected Collisions - Total Likely Cumulative Impacts

Route Section	Average No. of collisions (2022 Average Baseline)	Average No. of collisions  (2022 Average Baseline + Traffic Generated by Construction of the C-K Connection + Committed Developments + other KTR Project Connections)					
<b>A713</b> (between A77 and Dalmellington)	10	10.5					
<b>A713</b> (between Dalmellington and Carsphairn)	4.7	5.5					
<b>A713</b> (between Carsphairn and A762)	1.3	1.5					
<b>A713</b> (between A762 and A702)	0	0					
<b>A713</b> (between A702 and A712)	0.3	0.4					
<b>A713</b> (between A712 and B795)	1	1.1					
<b>A713</b> (between B795 and A75)	1.3	1.4					
<b>A712</b> (between A713 and Corsock)	1	1.1					
<b>A712</b> (between Corsock and A75)	1	1.1					
<b>A711</b> (between A75 and A762)	1.3	1.4					
<b>B741</b> (between New Cumnock and Dalmellington)	1.7	1.8					
Gateside Road	0	0					

- 13.245 Using this basis of assessment, there would be a small increase (less than 1 collision) in PICs for the A713 (between the A77 and the A762) as a consequence of the increased traffic generated cumulatively. Professional judgment suggests that the peak cumulative traffic, which would be temporary (seven months duration), would result in a **minor** effect (**not significant**) upon road safety if unmitigated.
- 13.246 On the other route sections within the Study Area, there would be a negligible increase in PICs as a consequence of the increased traffic generated cumulatively by the developments and the significance of the effect would be **none** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
  - Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)
- 13.247 The roads within the C-K Connection Study Area will continue to operate below capacity, even with the addition of traffic generated cumulatively. Severance and pedestrian delay should not occur when there is such a notable level of residual road capacity.
- 13.248 Cumulatively, the only road section where HGV flows are expected to double, or more is the B741.
- 13.249 The CTMP an outline of which is provided as **Appendix 13.1** will promote interventions that will minimise the effect of construction traffic on local communities, measures include but are not limited to:
  - temporary construction site signage will be erected on the local road network in advance of local communities to warn people of construction activities and associated construction vehicles;
  - SPEN shall nominate a Community Liaison Officer (CLO); the CLO will be responsible for keeping the local community informed of progress on the site and warning them of upcoming activities which may give rise to increased construction vehicle movements; and
  - all site staff will be informed about traffic management arrangements and procedures via the site induction.
- 13.250 There is local footway provision in Dalmellington and New Cumnock (B741). Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of construction traffic generated cumulatively. On this basis, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the B741.
- 13.251 The section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersects both Core Path 224 and Core Path 504 (the Southern Upland Way). As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and 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. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of the Southern Upland Way, Core Paths 21 and 224 and the National Byway cycling route is considered to be **minor** and accordingly considered to be **not significant**.
- 13.252 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of project generated construction traffic.
- 13.253 Overall based on professional judgement the construction traffic generated cumulatively will have a **minor** effect upon community receptors and is therefore **not significant** in the context of the 2017 EIA Regulations (as amended).
  - Proposed Additional Mitigation
- 13.254 As recorded in the CTMP, if another development, such as the wind farms considered in the cumulative assessment appears likely to undergo construction at the same time as the C-K Connection, SPEN will liaise with the other developer regarding the scheduling of deliveries and potential means of reducing the impact of combined construction.
  - Residual Cumulative Effects during Construction
- 13.255 Overall, due to the implementation of the embedded mitigation measures and operational procedures as proposed in the framework CTMP and the proposed requirement for SPEN to liaise with other developers regarding the scheduling of deliveries and potential means of reducing the effect of combined

construction, the residual effects associated with the levels of traffic generated cumulatively are considered to be **minor** and accordingly **not significant** in the context of the 2017 EIA Regulations (as amended).

### **Monitoring**

- 13.256 The requirement for construction monitoring will be agreed with SPEN, Roads Authority representatives and other relevant stakeholders prior to commencement of works.
- 13.257 If deemed necessary, SPEN will enter into a legal agreement under Section 96 of the Roads (Scotland) Act 1984 to formalise an inspection and maintenance regime with the Roads Authority to contribute to maintenance of those roads impacted by HGV movements associated with the C-K Connection.

### **Summary of Effects**

13.258 A summary of effects before and after proposed additional mitigation measures for the C-K Connection is provided in **Table 13.29.** 

Table 13.29: Summary of Effects for Public Roads Within the C-K Connection Study Area

Predicted Effect	Significance	Mitigation	Significance of Residual Effect
Construction Effec	ts		
Driver Delay	Minor	No additional mitigation is proposed beyond the embedded measures and operational	Minor
Road Safety	Minor	procedures as proposed as good practice in the	Minor
Community Impacts	Minor	framework CTMP.	Minor
Impacts		The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced and expanded as appropriate by SPEN's appointed contractor(s) in consultation with Roads Authorities and the Police prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.	
Cumulative Effects			
Driver Delay	Minor	If the construction of any notably sized development(s), e.g. wind farm development(s) (as considered in the cumulative assessment)	Minor
Road Safety	Minor	appears likely to overlap with the KTR Project, SPEN will liaise with the appropriate developer organisation regarding the scheduling of	Minor
Community Impacts	Minor	deliveries and potential means of reducing the impact of combined construction.	Minor

13.259 Based on the assessment summary in **Table 13.29**, the additional traffic predicted to be generated on public roads throughout the C-K Connection Study Area during the construction phase is anticipated to result in **minor** effects and therefore considered to be **not significant**.

# Earlstoun to Glenlee

- 13.260 The Earlstoun to Glenlee (E-G) Connection of the KTR Project is shown in Figure 4.4.
- 13.261 A new 132kV single circuit OHL, of approximately 1.6km in length, is required between the hydroelectric power station at Earlstoun and the existing substation at Glenlee. The OHL will be supported on a 'trident' design wood pole. A short section of approximately 250m of underground cable will be required to connect into the Glenlee substation.

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- 13.262 In relation to the stone required for construction of the E-G Connection of the KTR Project, it has been assumed that:
  - Stone will be sourced entirely from offsite locations.
  - Stone will be sourced either from Sorn Quarry or Tongland Quarry. The traffic and transport
    assessment consider scenarios where stone will be sourced either 100% from Sorn Quarry or 100%
    from Tongland.
- 13.263 Similarly, to the above, in relation to the reinstatement of temporary access tracks (where required), it has been assumed that:
  - stone will be entirely be taken offsite and returned to either Sorn Quarry or Tongland Quarry. The traffic and transport assessment consider scenarios where stone is returned either 100% to Sorn Quarry or 100% to Tongland.

### **Access Arrangements**

- . . . . . . . .

- 13.264 Transportation, including deliveries to and from the construction areas will be taken from the existing trunk and local road network. The local area road network is shown on **Figures 13.1.1 and 13.1.2**.
- 13.265 Given the nature of construction of the overhead line Connection (including cable section) (i.e. a linear development), SPEN has identified 4 construction access points for the Connection E-G of the KTR Project, identified in **Table 13.30** and shown on **Figure 5.5.1**.
- 13.266 Further information relating to the proposed construction worksite access locations is included in **Appendix 13.2**.

lable	13.30:	Access	Points	tor	Connection	E-G	of ti	ne K	IKI	roject	

Worksite Access Reference	Public Road	Components
27	A713	Wood Pole EG0016
28	A762	Wood Poles EG0015, EG0014, EG0013, EG0012, EG0011, EG0010, EG009, EG008 and EG007
29	A762	Wood Poles EG006, EG005, EG004, EG003 and EG002
33	U2s	Wood Pole EG001

- 13.267 The proposed worksite accesses are preliminary based on SPEN's experience of constructing similar projects. The worksite access locations will be confirmed by the appointed contractor as an integral of their adopted CTMP, a framework of which is provided in **Appendix 13.1**.
- 13.268 All construction vehicles drivers will be instructed to access a worksite via an approved route.

### **Assessment Construction Effects (including tree felling)**

- 13.269 As detailed in **Chapter 5**, the overall construction period duration for E-G Connection is 41 months.
- 13.270 Sections of the A77, A76, A75, A713, A712, A711, A702, A762, B741, U2s and Gateside Road public roads will be used by construction vehicles (see **Figure 13.1.1** and **13.1.2**). The assessed number of traffic movements (note: one trip = two movements; i.e. one delivery and one return journey) generated by construction activity are summarised **Table 13.31.**
- 13.271 As outlined in **Chapter 3**, tree felling (or loss due to windthrow if not felled) of the areas outwith the 70m wayleave will result in indirect effects on the wider environment and therefore traffic generated by tree felling outside the wayleave have been included in the traffic assessment as part of a robust EIA<sup>7</sup>. This is based on the assumption that felling both within the wayleave and for windthrow will happen concurrently.

Table 13.31: Vehicle Movements Generated by Tree Felling and Construction Activity for Connection E-G of the KTR Project

Activity/Item Being Transported	Type of Vehicle	Details/deliveries	Total Vehicle Movements
Timber Clearance (within wayleave)	Lorry (24 tonne capacity)	An estimated 1.9ha of timber will be felled resulting in a total of 349 tonnes of timber to be produced.	30

<sup>&</sup>lt;sup>7</sup> On this basis assessment of traffic effects associated with the wayleave felling has not been presented separately as a secondary effects.

cts. Glenlee substa

Activity/Item Being Transported	Type of Vehicle	Details/deliveries	Total Vehicle Movements
Timber Clearance (windthrow areas)	Lorry (24 tonne capacity)	An estimated 0.68ha of timber will be felled resulting in a total of 227 tonnes of timber to be produced.	26
Site Access Tracks	Lorry (20 tonne capacity)	An estimated 24,027 tonnes of stone will be required.	2,402
OHL Construction	Lorry (20 m³ capacity)	Wooden poles	96
Wiring and Commissioning <sup>8</sup>	Lorry (20 m <sup>3</sup> capacity) and light vans	Wiring and commissioning	92
Reinstatement	Lorry (20 tonne capacity)	An estimated 24,027 tonnes of stone will be required to be removed.	2,402
Other	Private cars, light vans and mini-bus	Construction personnel, other site visitors	3,163
TOTAL HGV TRAFFI	C MOVEMENTS FOR C	ONNECTION E-G	5,048
TOTAL LGV TRAFFI	C MOVEMENTS FOR CO	DNNECTION E-G	3,163
TOTAL ALL TRAFFI	C MOVEMENTS FOR CO	DNNECTION E-G	8,211

Predicted Construction Effects

- 13.272 As indicated in **Table 13.31** the total of traffic generated by E-G Connection is estimated as 8,211 movements, of which 5,048 movements will be HGV movements over the 41 months construction period.
- 13.273 With reference to the indicative construction programme and the anticipated vehicle movements provided by SPEN for each construction related activity, the number of vehicle movements that are anticipated for each month of the construction programme has been calculated. The vehicle movements calculated have then been distributed over each route section as per the assumptions indicated in the Assessment Assumptions section.
- 13.274 As indicated in the Assessment Assumption section, two separate scenarios have been assessed:
  - Scenario 1: 100% stone is sourced/returned from/to Sorn Quarry and delivered to site via the A76, B741 and A713.
  - Scenario 2: 100% of stone is sourced/returned from/to Tongland Quarry and delivered to site via the A711, A75 and A713.
- 13.275 Estimated daily and monthly movements generated by E-G Connection against the programme along with predicted percentages increases on relevant trunk and local roads are shown in **Table 13.32** and in **Table 13.33** for Scenario 1 and Scenario 2 respectively.
- 13.276 Construction traffic is estimated at an average of 8 vehicle movements a day over the entire construction period, with a maximum of 32 vehicle movements occurring per day between March 2022 and June 2022. The 'peak period' for the purpose of this assessment is therefore considered to be March 2022 to June 2022 inclusive. **Table 13.34** presents a summary of this information by route section for both Scenario 1 and Scenario 2.
- 13.277 The A77, A76, A75, A711, A712, A702 currently operate comfortably within their respective capacities (see **Table 13.7**). The increase in traffic volume on these roads throughout the construction phase of E-G Connection is assessed to be less than 5% or 10% for the A711 in terms of both general traffic (HGV+LGV) and specifically HGV traffic. On this basis, the significance of the effect is assessed to be **minor** and accordingly insignificant. Since the 10% traffic increase threshold has not been exceeded on these routes, no detailed assessment has been undertaken for these public roads.
- 13.278 For the purpose of the detailed assessment, it has been assumed that embedded mitigation measures and operational procedures as proposed in the framework CTMP (**Appendix 13.1**) will be in place during construction of the KTR Project and therefore have been used to inform the judgement of significance of effects.

The Kendoon to Tongland 132kV Reinforcement Project 13-37

<sup>&</sup>lt;sup>8</sup> This includes an allowance for HGV movements associated with the construction of the 250m section of underground cable to connect into the Glenlee substation

Table 13.32: Outline Construction Programme and Associated Traffic Assessment for Connection E-G of the KTR Project – Scenario 1

Programme	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23 Apr-23	May-23 Jun-2	23 Jul-	23 Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24 Mai	r-24 <i>A</i>	Apr-24 May-24	Jun-24	Jul-24	Aug-24	Sep-24 Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25 Jul-	-25 Aug-25	5 TOTAL
Activity																																						
Timber Clearance (within wayleave)  Timber Clearance (windthrow areas)	8	8 6	6	6 8	0	0	0	0	0	0	0	0	0 0	0 0	_	_	0	0	0	0	0		0	0 0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0 0	30 26
Site Access Tracks	904	888	888	818	0	0	0	0	0	0	0	0	0 0	0 0	_		0	0	0	0	0		0	0 0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0 0	
OHL Construction	0	0	0	0	40	240	56	0	0	0	0	0	0 0	0 0	_		0	0	0	0	0			0 0	0	0	0	0 0	0	0	0	0	0	0	0		0 0	
Wiring and Commissioning Reinstatement	0	0	0	0	0	16 0	36 0	36 0	36 0	36 0	36 0	36 0	36 36 0 0	36 36 0 0			36 0	36 0	36 0	36 0	36			36 36 0 0	36	15	0 276	0 0	290	290	0 290	0 290	0 290	290	290		0 0	
Total no. vehicle movements, all traffic (HGV + LGV)	918	902	902	832	40	256	92	36	36	36	36	36	36 36	36 36	36	36	36	36	36	36	36	36 3	36	36 36	36	15	276	290 290	290	290	290	290	290	290	290	290 29	90 32	8211
Total no. vehicle movements, all traffic (HGV	32	32	32	32	10	12	12	4	4	4	4	4	4 4	4 4	4	4	4	4	4	4	4	4 .	4	4 4	4	4	12	12 12	12	12	12	12	12	12	12	12 12	2 12	-
+ LGV) / day Total no. HGV vehicle movements	634	624	624	576	12	70	20	4	4	4	4	4	4 4	4 4	4	4	4	4	4	4	4	4	4	4 4	4	2	190	200 200	200	200	200	200	200	200	200	200 20	00 12	5048
Total no. HGV vehicle movements / day	22	22	22	22	4	4	4	2	2	2	2	2	2 2	2 2	2	2	2	2	2	2	2	2 :	2	2 2	2	2	8	8 8	8	8	8	8	8	8	8	8 8	8 8	-
Total no. LGV vehicle movements	284	278	278	256	28	186	72	32	32	32	32	32	32 32	32 32	32	2 32	32	32	32	32	32	32 3	32	32 32	32	13	86	90 90	90	90	90	90	90	90	90	90 90	0 20	3163
Total no. LGV vehicle movements / day	10	10	10	10	6	8	8	2	2	2	2	2	2 2	2 2	2	2	2	2	2	2	2	2 :	2	2 2	2	2	4	4 4	4	4	4	4	4	4	4	4 4	4 4	-
A76 (between B743 and A70)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	s <19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	:1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
% Increase in ALL Traffic A76 (between B743 and A70) % Increase in HGV Traffic	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%		_	<1%	<1%	<1%	<1%	<1%		1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
A76 (between A70 and New Cumnock)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	s <19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	:1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	
% Increase in ALL Traffic A76 (between A70 and New	20/	201	00/	00/	40/	40/	407	40/	40/	40/	40/	40/	40/ 40/	40/ 40/		V 40/	40/	40/	40/	40/	40/	40/	40/	40/ 40/	40/	40/	40/	40′ 40′	40/	40/	40/	40/	40/	40/	40/	40/	100	
Cumnock) % Increase in HGV Traffic A75 (between A762 and A712)	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%			<1%	<1%	<1%	<1%	<1%			<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'		
% Increase in ALL Traffic A75 (between A762 and A712)	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1% <1%	<1%	<1% <1% <1% <1%	<1% <1%			<1%	<1% <1%	<1%	<1% <1%	<1%			<1% <1%	<1%	<1%	<1% <1%	<1% <1%	<1%	<1% <1%	<1% <1%	<1%	<1%	<1%	<1%		% <1%  % <1%	_
% Increase in HGV Traffic A75 (between A712 and A780) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%		_	<1%	<1%	<1%	<1%	<1%		1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
A75 (between A712 and A780) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
A75 (between A780 and A76) % Increase in ALL Traffic A75 (between A780 and A76)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	_	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
% Increase in HGV Traffic A77 (between A713 and A70)	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1% <1% <1%	<1% <1%	_		<1%	<1%	<1%	<1%	<1%		1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
% Increase in ALL Traffic A77 (between A713 and A70) % Increase in HGV Traffic	<1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1%	<1% <1% <1% <1%	<1% <1% <1%			<1%	<1% <1%	<1%	<1% <1%	<1%			<1% <1%	<1%	<1%	<1% <1%	<1% <1%	<1%	<1% <1%	<1% <1%	<1%	<1%	<1%	<1%		1% <1% 1% <1%	_
A713 (between A77 and Dalmellington)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	s <19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	
% Increase in ALL Traffic A713 (between A77 and Dalmellington)	40/	40/	40/	40/	40/	40/	40/	<1%	40/	40/	40/	40/	40′ 40′	40/ 40/		Y 40'	40/	40/	40/	40/	40/	40/	40/	40/ 40/	40/	40/	40/	40′ 40′	40/	40/	40/	40/	40/	40/	40/	40/	1% <1%	
% Increase in HGV Traffic A713 (between Dalmellington and	<1%	<1%	<1%	<1%	<1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
Carsphairn) % Increase in ALL Traffic	1%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
A713 (between Dalmellington and Carsphairn) % Increase in HGV Traffic	11%	11%	11%	11%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	:1%	<1% <1%	<1%	<1%	4%	4% 4%	4%	4%	4%	4%	4%	4%	4%	4% 49	% 4%	-
A713 (between Carsphairn and A762) % Increase in ALL Traffic	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
A713 (between Carsphairn and A762)	13%	13%	13%	13%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	s <19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	4%	4% 4%	4%	4%	4%	4%	4%	4%	4%	4% 49	% 4%	
% Increase in HGV Traffic A713 North of Dalry (between A762 and A702)	<1%	<1%	<1%	<1%	<1%	<1%	-19/	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	5 <19	% <1%	<1%	<1%	-19/	<1%	<1%	<1% <1	:1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	
% Increase in ALL Traffic A713 North of Dalry (between A762							<1%												<1%										-									
and A702) % Increase in HGV Traffic A713 South of Dalry (between A702)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	:1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
and A712) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	:1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
A713 South of Dalry (between A702 and A712) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	:1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
A713 (between A712 and B795) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
A713 (between A712 and B795) % Increase in HGV Traffic A713 (between B795 and A75)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%			<1%	<1%	<1%	<1%	<1%		1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	_	_
% Increase in ALL Traffic A713 (between B795 and A75)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	_	_	<1%	<1%	<1%	<1%	<1%			<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
% Increase in HGV Traffic A712 (between A75 and A762)	<1% <1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1%	<1% <1% <1% <1%	<1% <1% <1%			<1%	<1% <1%	<1%	<1% <1%	<1%		1%	<1% <1%	<1% <1%	<1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1%	<1%	<1%		1% <1% 1% <1%	_
% Increase in ALL Traffic A712 (between A75 and A762) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	_	_	<1%	<1%	<1%	<1%	<1%			<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
A712 (between A762 and A713) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
A712 (between A762 and A713) % Increase in HGV Traffic A712 (between A713 and Corsock)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	_		<1%	<1%	<1%	<1%	<1%		1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'		_
% Increase in ALL Traffic A712 (between A713 and Corsock)	<1% <1%	<1% <1%	<1%	<1% <1%	<1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1%	<1% <1% <1% <1%	<1% <1% <1% <1%			<1%	<1% <1%	<1%	<1% <1%	<1%			<1% <1%	<1%	<1%	<1% <1%	<1% <1%	<1%	<1% <1%	<1% <1%	<1% <1%	<1%	<1%	<1%		1% <1% 1% <1%	_
% Increase in HGV Traffic A712 (between Corsock and A75) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%			<1%	<1%	<1%	<1%	<1%			<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
A712 (between Corsock and A75) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	:1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	1% <1%	-
A711 (between A75 and A762) % Increase in ALL Traffic A711 (between A75 and A762)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	1% 19	% 1%	-
% Increase in HGV Traffic A702 (between A713 and Moniaive)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%		_	<1%	<1%	<1%	<1%	<1%		1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
% Increase in ALL Traffic A702 (between A713 and Moniaive)	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<1% <1%	<1%	<1% <1%	<1%	<1% <1% <1% <1%	<1% <1% <1% <1%			<1%	<1% <1%	<1%	<1% <1%	<1%			<1% <1%	<1% <1%	<1%	<1% <1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%		1% <1% 1% <1%	_
% Increase in HGV Traffic A702 (between Moniaive and A76) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	_		<1%	<1%	<1%	<1%	<1%			<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1'	_	_
A702 (between Moniaive and A76) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1% <1%	-
A762 (between A713 and U2s) % Increase in ALL Traffic A762 (between A713 and U2s)	8%	8%	8%	8%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%			<1%	<1%	<1%	<1%	<1%			<1% <1%	<1%	<1%	3%	3% 3%	3%	3%	3%	3%	3%	3%	3%	3% 3%		_
% Increase in HGV Traffic B741	84% 2%	84% 2%	84% 2%	84% 2%	9% <1%	9% <1%	9% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% 1%	<1% <1% 1% 1%	<1% <1% 1% 1%		_	<1% 2%	<1% 2%	<1% 2%	<1% 2%	<1% 2%			<1% <1% 2% 3%	<1% 3%	<1% 3%	27% 3%	27% 27% 4% 4%	27% 4%	27% 4%	27% 4%	27% 4%	27% 4%	27% 4%	27%	27% 27° 4% 59°	% 27% % 5%	+ -
% Increase in ALL Traffic B741 % Increase in HGV Traffic	54%	2% 54%	54%	54%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%			<1%	<1%	<1%	<1%	<1%			2% 3% <1% <1%	<1%	<1%	18%	18% 18%	18%	18%	18%	18%	18%	18%	18%		% 5% 3% 18%	
W Increase in HGV Traffic U2s W Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	_	_	<1%	<1%	<1%	<1%	<1%			<1% <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1% <1%	_
U2s % Increase in HGV Traffic	4%	4%	4%	4%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	1%	1% 1%	1%	1%	1%	1%	1%	1%	1%	1% 19	% 1%	-
Gateside Road % Increase in ALL Traffic Gateside Road	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% 1%	1% 1%			1%	1%	2%	2%	2%			2% 2%	2%	2%	3%	3% 3%	3%	3%	3%	3%	3%	3%	3%		% 4%	-
% Increase in HGV Traffic	41%	41%	41%	41%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1% <1%	<19	% <1%	<1%	<1%	<1%	<1%	<1%	<1% <1	1%	<1% <1%	<1%	<1%	13%	13% 13%	13%	13%	13%	13%	13%	13%	13%	13% 13	13%	-

Table 13.33: Outline Construction Programme and Associated Traffic Assessment for Connection E-G of the KTR Project – Scenario 2

Programme	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23 No	ov-23 Dec	-23 Ja	ın-24 F	Feb-24 Mar-2	Apr-24	May-24	Jun-24	Jul-24 A	ug-24	Sep-24 0	ct-24 No	v-24 Dec	-24 Ja	in-25 Feb	-25 Ma	ar-25 A	pr-25	May-25	Jun-25	Jul-25	Aug-25	TOTAL
Activity																																										
Timber Clearance (within wayleave)	8	8	8	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (	)	0	0 0	0	0	0	0	0	0	0	0 (		0 0	0	0	0	0	0	0	0	30
Timber Clearance (windthrow areas)	6	6	6	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (	)	0	0 0	0	0	0	0	0	0	0	0 (		0 0	)	0	0	0	0	0	0	26
Site Access Tracks	904	888	888	818	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (	)	0	0 0	0	0	0	0	0	0	0	0 (		0 0	)	0	0	0	0	0	0	3498
OHL Construction	0	0	0	0	40	240	56	0	0	0	0	0	0	0	0	0	0	0	0				0	0 0	0	0	0		0			0 (	_	0 0			0	0	0	0	0	336
Wiring and Commissioning Reinstatement	0	0	0	0	0	16 0	36 0	36 0	36 0	36 0	36 0	36	36 0			_	36 0	36 36 0 0	36 0	36 0	36		0			0 (	_	0 0			0 290	0	0	0	0 32	823 3498						
romotatorion	0	0	0	U	0	U	U	U	0	U	U	0	0	U	0	U	U	0	U	U	0   0	,	U	0 0	0	0	0	0	276	290	290 2	90 29	U	290 29	90 2	290	290	290	290	290	32	3498
Total no. vehicle movements,	918	902	902	832	40	256	92	36	36	36	36	36	36	36	36	36	36	36	36	36	36 3	6	36	36 36	36	36	36	15	276	290	290 2	90 29	0	290 29	90 2	290	290	290	290	290	32	8211
all traffic (HGV + LGV) Total no. vehicle movements,	32	32	32	32	10	12	12	4	4	4	4	4	4	4	4	4	4	4	4		4 4		4	4 4	4	4	4		12			12 1	_	12 12	_		12	12	12	12	12	-
all traffic (HGV + LGV) / day Total no. HGV vehicle	634	624	624	576	12	70	20	4	4	4	4	4	4	4	4	4	4	4	4		4 4		4	4 4	4	4	4		190			00 20	_				200	200	200	200	12	5048
movements Total no. HGV vehicle	22	22	22	22	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2		2 2	_	2	2 2	2	2	2		8			8 8	_	8 8			8	8	8	8	8	-
movements / day Total no. LGV vehicle	284	278	278	256	28	186	72	32	32	32	32	32	32	32	32	32	32	32	32		32 3		32	32 32	32	32	32		86			90 9	_	90 90			90	90	90	90		3163
movements Total no. LGV vehicle											- 1				-	-			-	-		_						-			-											
movements / day	10	10	10	10	6	8	8	2	2	2	2	2	2	2	2	2	2	2	2	2	2 2	2	2	2 2	2	2	2	2	4	4	4	4 4		4 4	-	4	4	4	4	4	4	-
A76 (babusas D742 and A70)																																										
A76 (between B743 and A70) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A76 (between B743 and A70) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A76 (between A70 and New Cumnock) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A76 (between A70 and New	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	
Cumnock) % Increase in HGV Traffic																																										
A75 (between A762 and A712) % Increase in ALL Traffic A75 (between A762 and A712)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	- "	<1% <1			<1% <1%	<1%	<1%	<1%		<1%					<1% <1°				<1%	<1%		<1%	-
% Increase in HGV Traffic A75 (between A712 and A780)	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		<1% <1			<1% <1%	<1%	<1%	<1%		<1%					<1% <1°				<1%	<1%		<1%	-
% Increase in ALL Traffic A75 (between A712 and A780)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		<1% <1		<1%	<1% <1%	<1%	<1%	<1%		<1%				_				<1%	<1%	<1%		<1%	-
% Increase in HGV Traffic A75 (between A780 and A76)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		<1% <1	_	_	<1% <1%	<1%	<1%	<1%		<1%				_	<1% <19	_			<1%	<1%		<1%	
% Increase in ALL Traffic A75 (between A780 and A76)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		<1% <1		<1%	<1% <1%	<1%	<1%	<1%		<1%	_			_		_		<1%	<1%	<1%		<1%	
% Increase in HGV Traffic A77 (between A713 and A70)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		<1% <1		<1%	<1% <1%	<1%	<1%	<1%		<1%				_		_		<1%	<1%	<1%		<1%	-
% Increase in ALL Traffic A77 (between A713 and A70)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%			_	_	<1% <1%	<1%	<1%	<1%		<1%				_	<1% <1°	_		<1%	<1%	<1%		<1%	-
% Increase in HGV Traffic A713 (between A77 and Dalmellington	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		<1% <1		<1%	<1% <1%	<1%	<1%	<1%		<1%			1% <1						<1%	<1%		<1%	-
% Increase in ALL Traffic A713 (between A77 and Dalmellington	(1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	- ''	<1% <1			<1% <1%	<1%	<1%	<1%		<1%				-	<1% <1°			<1%	<1%	<1%		<1%	-
% Increase in HGV Traffic A713 (between Dalmellington and	<sup>1)</sup> <1%	<1%	<1%	<1%	<1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	
Carsphairn) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between Dalmellington and Carsphairn)	<1%	<1%	<1%	<1%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	
% Increase in HGV Traffic A713 (between Carsphairn and A762)	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1%	<1%	<1%	<1%	<1%	<1%	<1%	
% Increase in ALL Traffic A713 (between Carsphairn and A762)		13%	13%	13%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		<1% <1	_	<1%	<1% <1%	<1%	<1%	<1%		4%			% 4	_		_		4%	4%	4%	4%	4%	-
% Increase in HGV Traffic A713 North of Dalry (between A762																																										_
and A702) % Increase in ALL Traffic	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 North of Dalry (between A762 and A702) % Increase in HGV Traffic	18%	18%	18%	18%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	6%	6%	6%	% 6	6	6% 69	%	6%	6%	6%	6%	6%	6%	-
A713 South of Dalry (between A702 and A712)	1%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	9/.	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	%	<1% <1°	19/	<1%	<1%	<1%	<1%	<1%	<1%	
% Increase in ALL Traffic A713 South of Dalry (between A702	176	170	176	170	<176	<170	<170	<170	<176	<176	<176	<170	<176	<170	<176	<176	<176	<170	<170	<170	<176 <1	70	<170	<176 <176	<176	<170	<176	<176	<170	<170	<176	176 <1	70	.176	70	<170	<170	<176	<176	<176	<176	
and A712) % Increase in HGV Traffic	10%	10%	10%	10%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	3%	3%	3% :	% 3'	6	3% 39	%	3%	3%	3%	3%	3%	3%	-
A713 (between A712 and B795) % Increase in ALL Traffic	1%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between A712 and B795) % Increase in HGV Traffic	11%	11%	11%	11%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	3%	3%	3% :	% 3'	6	3% 3%	%	3%	3%	3%	3%	3%	3%	-
A713 (between B795 and A75) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	ı% ·	<1%	<1%	<1%	<1%	<1%	<1%	-
A713 (between B795 and A75) % Increase in HGV Traffic	10%	10%	10%	10%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	3%	3%	3% :	% 3'	6	3% 3%	s% :	3%	3%	3%	3%	3%	3%	-
A712 (between A75 and A762) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A75 and A762) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A762 and A713) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A762 and A713) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A713 and Corsock) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	%	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between A713 and Corsock) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between Corsock and A75) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	%	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A712 (between Corsock and A75) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	% -	<1%	<1%	<1%	<1%	<1%	<1%	-
A711 (between A75 and A762) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% 1	6	1% 19	%	1%	1%	1%	1%	1%	1%	-
A711 (between A75 and A762) % Increase in HGV Traffic	6%	6%	6%	6%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	2%	2%	2% :	% 2	6	2% 29	!% :	2%	2%	2%	2%	2%	2%	-
A702 (between A713 and Moniaive) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	%	<1% <1°	% -	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between A713 and Moniaive) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between Moniaive and A76) % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	% -	<1%	<1%	<1%	<1%	<1%	<1%	-
A702 (between Moniaive and A76) % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-
A762 (between A713 and U2s) % Increase in ALL Traffic	8%	8%	8%	8%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	3%	3%	3% :	% 3'	6	3% 3%	%	3%	3%	3%	3%	3%	3%	-
A762 (between A713 and U2s) % Increase in HGV Traffic	84%	84%	84%	84%	9%	9%	9%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	27%	27%	27% 2	7% 27	% :	27% 279	% 2	27%	27%	27%	27%	27%	27%	-
B741 % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2% 2	%	2%	2% 2%	2%	3%	3%	3%	3%	3%	3% :	% 3'	6	3% 3%	%	3%	4%	4%	4%	4%	4%	
B741 % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	
U2s % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	% .	<1%	<1%	<1%	<1%	<1%	<1%	-
W Increase in HGV Traffic	4%	4%	4%	4%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	1%	1%	1%	% 1	6	1% 19	%	1%	1%	1%	1%	1%	1%	-
Gateside Road % Increase in ALL Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	1%	1%	1%	1%	1%	1%	1%	2% 2	%	2%	2% 2%	2%	2%	2%	2%	2%	2%	2% :	% 3'	6	3% 39	s% :	3%	3%	3%	3%	3%	3%	-
Gateside Road % Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	% .	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1% <1	% .	<1% <1°	1% <	<1%	<1%	<1%	<1%	<1%	<1%	-

Table 13.34: Summary of Construction Traffic Generated on Public Roads within Connection E-G Study Area

Route Section			Construction traffic	generated over the 41 mor	ths construction program	me, by route section		
		Scen	ario 1			Scen	ario 2	
	Average vehicle movem construct			s per day during the period ruction activity		ents per day over entire ion period		ts per day during the period ruction activity
	[% Inc	crease]	[% Inc	crease]	[% Inc	crease]	[% In	crease]
	{Signif	icance}	{Signif	ïcance}	{Signif	icance}	{Signi	ficance}
	HGV + LGV	HGV	HGV + LGV	HGV	HGV + LGV	HGV	HGV + LGV	HGV
A76 (between B743 and	4	4	22	22	0	0	0	0
A70)	[<1%]	[<1%]	[<1%]	[2%]	[0%]	[0%]	[0%]	[0%]
[AADT = 11,691]	{none, not significant}	{none, not significant}	{none, not significant}	{none, insignificant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A76 (between A70 and	4	4	22	22	0	0	0	0
New Cumnock)	[<1%]	[<1%]	[<1%]	[2%]	[0%]	[0%]	[0%]	[0%]
[AADT = 6423]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A75</b> (between A762(N)	2	2	2	2	4	4	22	22
and A712)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[2%]
[AADT= 7,901]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A75 (between A712 and	2	2	4	2	2	2	4	2
A780)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 11,065]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A75 (between A780 and	2	2	4	2	2	2	4	2
A76)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 14,729]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A77 (between A713 and	2	2	4	2	2	2	4	2
A70)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 21,311]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between A77 and	2	2	4	2	2	2	4	2
Dalmellington)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 4,085]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between	6	6	24	22	2	2	4	2
Dalmellington and Carsphairn)	[<1%]	[2%]	[1%]	[11%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT= 1,557]	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between	8	6	30	22	8	6	30	22
Carsphairn and A762)	[1%]	[3%]	[2%]	[13%]	[1%]	[3%]	[2%]	[13%]
[AADT=1,398]	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}
<b>A713</b> (between A762	4	2	8	2	8	4	28	22
and A702)	[<1%]	[<1%]	[1%]	[<1%]	[<1%]	[3%]	[2%]	[18%]
[AADT=1,382]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}
<b>A713</b> (between A702	4	2	8	2	8	4	28	22
and A712)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[2%]	[1%]	[10%]
[AADT=2,282]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}
<b>A713</b> (between A712	2	2	4	2	6	4	24	22
and B795)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[2%]	[1%]	[11%]
[AADT=1,889]	{none, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}
<b>A713</b> (between B795 and A75)	2	2	4	2	6	4	24	22

Route Section			Construction traffic	generated over the 41 mor	nths construction program	nme, by route section		
[AADT=3,868]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[2%]	[1%]	[10%]
	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{moderate, significant}
A712 (between A75 and	2	0	4	0	2	0	4	0
A762)	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]
[AADT=685]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A712</b> (between A762	2	0	4	0	2	0	4	0
and A713)	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]
[AADT=1,544]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A712</b> (between A713	2	2	4	2	2	2	4	2
and Corsock)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT=988]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between Corsock	2	2	4	2	2	2	4	2
and A75)	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]	[<1%]
[AADT=768]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A711</b> (between A75 and	22	0	2	0	26	4	22	22
A762)	[1%]	[0%]	[<1%]	[0%]	[1%]	[1%]	[1%]	[6%]
[AADT=3,898]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}
A702 (between A713	2	0	4	0	2	0	4	0
and Moniaive)	[<1%]	[0%]	[1%]	[0%]	[<1%]	[0%]	[1%]	[0%]
[AADT=243]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A702 (between Moniaive	2	0	4	0	2	0	4	0
and A76)	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]	[<1%]	[0%]
[AADT=931]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A762</b> (between A713	8	6	30	22	8	6	30	22
and U2s)	[2%]	[17%]	[8%]	[84%]	[2%]	[17%]	[8%]	[84%]
[AADT = 356]	{none, not significant}	{moderate, significant}	{minor, not significant}	{major, significant}	{none, not significant}	{moderate, significant}	{minor, not significant}	{major, significant}
B741 (between New	26	4	26	26	0	0	0	0
Cumnock and Dalmellington)	[2%]	[11%]	[2%]	[54%]	[0%]	[0%]	[0%]	[0%]
[AADT = 1,031]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
U2s	2	2	2	2	2	2	2	2
[AADT = 199]	[<1%]	[5%]	[1%]	[4%]	[<1%]	[5%]	[1%]	[4%]
	{none, not significant}	{minor, not significant}	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}	{none, not significant}
Gateside Road	26	4	26	26	0	0	0	0
(Dalmellington)	[2%]	[8%]	[2%]	[41%]	[0%]	[0%]	[0%]	[0%]
[AADT = 1,280]	{none, not significant}	{minor, not significant}	{none, not significant}	{moderate, significant}	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}

# Driver Delay

- 13.279 All public road route sections where the 10% threshold significance criteria has been exceeded operate notably below their theoretical capacity. **Table 13.35** provides a comparison of forecast traffic flows on roads during the Peak Period and associated theoretical road capacities.
- 13.280 Furthermore, the CTMP a framework of which is provided as **Appendix 13.1** will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay, CTMP measures include but are not limited to:
  - The timing and frequency of vehicle movements being managed to minimise local disruption;
  - details of designated access routes forming part of the site induction and training being held for all site operatives and delivery drivers through 'toolbox talks'; and
  - where reasonable and practicable, project-related vehicles will avoid travelling in convoys on public roads.

Table 13.35: Baseline Traffic + Traffic Generated by Construction of the E-G Connection of the KTR Project

Route Section	Two-way peak hour movements (2022 Baseline Traffic + Traffic Generated by Construction of the E-G Connection of the KTR Project)	Capacity (vph) (two-way hourly flow)
A713 (between Dalmellington and Carsphairn)	202	1800
A713 (between Carsphairn and A762)	204	1800
<b>A713</b> (between A762 and A702)	204	1600
<b>A713</b> (between A702 and A712)	204	1600
<b>A713</b> (between A712 and B795)	202	1800
<b>A713</b> (between B795 and A75)	202	1800
A762 (between A713 and U2s)	54	280
<b>B741</b> (between New Cumnock and Dalmellington)	204	1600
Gateside Road (Dalmellington)	204	1600

- 13.281 From review of **Table 13.34** it is evident that threshold significance criteria have been exceeded on the A713 (between Carsphairn and the A762) during the 'peak period' of construction activity and on the A762 throughout the duration of the entire construction period for both Scenario 1 and Scenario 2.
- 13.282 The A713 (between Carsphairn and the A762) has the residual capacity (see **Table 13.35**) to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between Carsphairn and the A762) is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.283 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the A762 (between the A713 and the U2s) to provide passing places will be implemented; achieving a minimum of width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (see Embedded Mitigation Measures Section). On this basis, the significance of effect on driver delay for users of the A762 is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).
- 13.284 Considering Scenario 1, **Table 13.32** indicates that threshold significance criteria have been exceeded on the A713 (between Dalmellington and Carsphairn) and Gateside Road during the 'peak period' of construction activity and on the B741 both during the 'peak period' of construction activity and throughout the duration of the entire construction period.
- 13.285 The A713 (between Dalmellington and Carsphairn) has the residual capacity (see **Table 13.35**) to readily accommodate the expected additional traffic flow. On this basis, the significance of effect on driver delay for users of the A713 (between Dalmellington and Carsphairn) is considered to be **minor**

- and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.286 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such show a relatively large traffic increase would represent a **major** effect, however it is important to note that these route sections have the residual capacity (see **Table 13.35**) to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.287 Considering Scenario 2, **Table 13.33** indicates that threshold significance criteria have been exceeded on the A713 (between the A762 and the A702) and the A713 (between the A712 and B795) during the 'peak period' of construction activity. The A713 has the residual capacity (see **Table 13.35**) to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.288 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic, the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis is summarised in **Table 13.36**Error! Reference source not found.

**Table 13.36: Projected Collisions** 

Route Section	Average No. of collisions (2022 Average Baseline)	Average No. of collisions (2022 Average Baseline + Traffic Generated by Construction of the E-G Connection of the KTR Project)
A713 (between Dalmellington and Carsphairn)	4.7	4.8
A713 (between Carsphairn and A762)	1.3	1.4
<b>A713</b> (between A762 and A702)	0.0	0.0
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A713</b> (between A712 and B795)	1.0	1.1
<b>A713</b> (between B795 and A75)	0.0	0.0
A762 (between A713 and U2s)	0.3	0.4
<b>B741</b> (between New Cumnock and Dalmellington)	1.7	1.8
Gateside Road (Dalmellington)	0.0	0.0

13.289 Using this basis of assessment, there would be a negligible increase in PICs in the Study Area as a consequence of the increased traffic generated by Connection E-G of the KTR project and the significance of the effect would be **none** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)

13.290 The IEMA Guidelines define severance as 'the perceived division that can occur within a community when it becomes separated by a major traffic artery'. Severance may result from a road carrying large traffic flows or a physical barrier created by the road itself, and the IEMA guidelines suggest that consideration is given to the severity of existing severance and how this might be exacerbated by proposed construction traffic generated by a development. As shown in **Table 13.35**, the roads within the Connection E-G Study Area will continue to operate below capacity, even with the addition of traffic

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- generated by construction of the E-G Connection. Severance should not occur when there is such a notable level of residual road capacity and traffic generated by the E-G Connection will be relatively low.
- 13.291 For similar reasoning, pedestrian delay is not considered to be an existing problem on any of the route sections within the E-G Study Area, nor one that shall be created by the addition of proposed construction traffic to these routes.
- 13.292 Pedestrian amenity is broadly defined by the IEMA as the 'relative pleasantness of a journey', and this definition also takes into account fear and intimidation. The IEMA Guidelines suggest that 'a tentative threshold for judging the significance of changes in pedestrian amenity would be where traffic flows (or its lorry component) is halved or doubled. The construction of Connection E-G is predicted to generate less than double the current HGV flows on all route sections within the E-G Study Area and therefore the effect on pedestrian amenity is not considered to be significant.
- 13.293 Several construction access routes overlap and/or intersect with existing recreational routes, including the following route sections (see **Figure 13.2.1**):
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route; and
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way).
- 13.294 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of the potential of construction traffic. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of the Southern Upland Way, Core Paths 21, 30 and 224 and the National Byway cycling route is considered to be **minor** and accordingly considered to be **not significant**.
- 13.295 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of construction traffic engaged in the E-G Connection.
- 13.296 Overall based on professional judgement the construction traffic generated by E-G Connection will have a **minor** effect upon community receptors and is therefore **not significant** in the context of the 2017 EIA Regulations (as amended).

Proposed Additional Mitigation

- 13.297 No further mitigation is proposed in addition to the embedded mitigation measures and operational procedures as proposed in the framework CTMP.
- 13.298 The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced and expanded upon as appropriate by SPEN's appointed contractor(s) in consultation with Roads Authorities and the Police prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.

Residual Construction Effects

13.299 Overall, due to the implementation of both the infrastructure improvements to the A762 (between the A713 and the U2s) as part of the Glenlee substation extension works (therefore, embedded mitigation for the EG Connection), in conjunction with the embedded mitigation measures and operational procedures as proposed in the framework CTMP the significance of the residual effects associated with the levels of traffic anticipated during the construction of the E-G Connection is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

### **Assessments of Cumulative Effects**

13.300 An assessment of the likely construction effects of the E-G Connection and other committed developments as well as other Connections forming part of the KTR Project has been undertaken to

- robustly take account of the likely interrelation of overlapping construction programmes and the resultant cumulative effect upon the local road network.
- 13.301 The overall approach for the cumulative assessments, including a list of developments considered, is outlined in **Chapter 3**
- 13.302 The following developments have been included with Connection E-G of the KTR Project for the cumulative traffic and transport assessment:
  - Knockman Hill Wind Farm (Proposed Wind Turbine Project at Knockman Hill, Milnmark Farm Dumfries and Galloway Environmental Statement (ES) 2009);
  - Mochrum Fell Wind Farm (Mochrum Fell Wind Farm ES, 2009);
  - Shepherds Rig Wind Farm (Shepherds Rig Wind Farm ES, 2020);
  - Troston Loch Wind Farm (Troston Loch Wind Farm EIA Report, 2019);
  - Cornharrow Wind Farm (Cornharrow Wind Farm EIA Report, 2020);
  - Glenshimmeroch Wind Farm (Glenshimmeroch Wind Farm EIA Report, 2018); and
  - Fell Wind Farm (Fell Wind Farm EIA Report, 2019).
- 13.303 In addition to the above wind farms, traffic associated with the construction of the proposed Glenlee Substation Extension has been included in order to ensure a robust EIA; the assessment has been undertaken on the basis of an overlap with the KTR construction enabling works between March 2022 and June 2022.
- 13.304 In addition to the above developments, construction of the other KTR Project Connections (i.e. Connections P-G via K (including decommissioning of N and R route (north)), C-K, BG Deviation and G-T( including the decommissioning of R route (south) will overlap with the construction phase of the Connection E-G of the KTR Project between March 2022 and August 2025 inclusive.

Glenlee Substation Extension Access Arrangements

- 13.305 For the purpose of the assessment, it has been assumed that:
  - Construction traffic associated with the Glenlee Substation Extension will access from the south via the A713 (45%), the north via the A713 (45%) and a proportion would come from the east via the A712 (10%).

Wind Farm Access Arrangements

- 13.306 The following assumptions have been made to inform the assessment, as derived from review of relevant supporting ESs/EIA reports for the wind farm projects:
  - Construction traffic accessing the proposed Knockman Hill Wind Farm will do so from the north via the A713.
  - Construction traffic accessing the proposed Mochrum Fell Wind Farm site will predominantly do so from the south via the A713 (75%) although a proportion would come from the north via the A713 (25%).
  - All construction traffic accessing the proposed Shepherds Rig Wind Farm site will do so from the north via the A713.
  - All construction traffic accessing the proposed Troston Loch Wind Farm site will do so from the north via the A713.
  - Construction traffic accessing the Cornharrow Wind Farm site will route from both the north (50%) and south (50%) via the A713.
  - Construction traffic accessing the Glenshimmeroch Wind Farm site will route from both the north (50%) and south (50%) via the A713.
  - Construction traffic accessing the Fell Wind Farm site will route from both the north (70%) and south (30%) via the A712.

Average Vehicle Movements per day

during the period of peak construction

activity

[% Increase]

{Significance}

23%

Major

#### Total Cumulative Construction Effects

- 13.307 This section assesses the maximum development case assuming that all the developments being considered as part of the cumulative assessment will proceed to construction and that the cumulative effects are the total likely effects created by the construction of the E-G Connection in combination with:
  - Wind farm developments (Knockman Hill, Mochrum Fell, Shepherds Rig, Troston Loch, Cornharrow, Glenshimmeroch, Fell);
  - Glenlee Substation Extension; and
  - other KTR Project Connections; P-G via K, C-K, BG Deviation and G-T.
- 13.308 It is uncertain if and when the construction phases of the wind farms and E-G Connection might overlap. To robustly assess cumulative traffic generation, the cumulative assessment has been undertaken for route sections within the KTR Project Study Area that are utilised by other committed developments as well as other Connections and developments forming part of the KTR Project. This is based on the of sum of the average traffic generation of the developments listed above and E-G Connection peak traffic generation. This is considered to represent a maximum case scenario, as in reality, it is considered highly improbable that peak traffic generation for all developments will align.
- 13.309 **Table 13.37** presents a summary of predicted traffic volume increases over the entire construction period of E-G Connection and during the 'peak period' of construction activity (March 2022 to June 2022 inclusive). The table below shows the proportional increase in traffic generated for route sections within the KTR Project Study Area that are utilised by other committed developments as well as other Connections and developments forming part of the KTR Project.

Table 13.37: Summary of Predicted Traffic Volume Increase – Total Likely Cumulative Impact for Connection E-G of the KTR Project

Route Section	the entire cons	vements per day over struction period	Average Vehicle Movements per day during the period of peak construction activity  [% Increase]  {Significance}						
	[% In	crease]							
	{Signit	ficance}							
	Total Traffic Movements	HGV Traffic Movements	Total Traffic Movements	HGV Traffic Movements					
A713 (between	139	45	341	91					
A77 and Dalmellington)	3%	19%	8%	38%					
[AADT = 4,085]	None	Moderate	Minor	Moderate					
A713 (between	185	87	419	167					
Dalmellington and Carsphairn)	12%	48%	27%	92%					
[AADT = 1,557]	Moderate	Moderate	Moderate	Major					
A713 (between	165	83	334	159					
Carsphairn and A762)	12%	52%	24%	99%					
[AADT = 1,398]	Moderate	Moderate	Moderate	Major					
A713 (between	70	30	90	42					
A762 and A702)	5%	26%	7%	21%					
[AADT = 1,382]	Minor	Moderate	Minor	Moderate					
A713 (between	70	28	128	44					
A702 and A712)	3%	15%	7%	24%					
[AADT = 2,282]	None	Moderate	Minor	Moderate					
A713 (between	56	28	128	44					
A712 and B795)	3%	15%	7%	24%					
[AADT = 1,889]	None	Moderate	Minor	Moderate					
A713 (between	62	26	132	46					

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[AADT = 3,868]None Moderate None Moderate 54 20 123 50 A712 (between 5% 28% 12% 69% A713 and Corsock) [AADT = 988]Minor Moderate Moderate Major 41 15 81 35 A712 (between 5% 20% 11% 46% Corsock and A75) [AADT = 768]Minor Moderate Moderate Moderate 28 32 38 36 A711 (between A75 and A762) <1% <1% 11% 8% [AADT=3,898] None Minor None Moderate 24 102 44 14 A762 (between A713 and U2s) 7% 56% 29% 176% [AADT = 356]Minor Moderate Moderate Major B741 (between 46 46 76 76 New Cumnock and Dalmellington) 4% 124% 7% 205% Major Minor None Major [AADT = 1,031]18 14 68 U2s 7% 67% 34% 155% [AADT = 199]Minor Major Moderate Maior **Gateside Road** 42 76 76 42 (Dalmellington) 3% 86% 6% 155% [AADT = 1,280]

13%

Average Vehicle Movements per day over

the entire construction period

[% Increase]

{Significance}

2%

Predicted Cumulative Effects during Construction

None

Driver Delay

Route Section

B795 and A75)

13.310 From a review of **Table 13.37**, it is evident that threshold significance criteria have been exceeded on the A713 (between the A77 and the A75), A762, B741, U2s and Gateside Road throughout the duration of the entire construction period and the A711 during the 'peak period' of construction activity

Major

Minor

- 13.311 The A713 has the residual capacity to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between the A77 and the A75) is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).
- 13.312 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the A762 (between the A713 and the U2s) and the U2s to provide passing places will be implemented; achieving a minimum of width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (see Embedded Mitigation Measures Section). On this basis, the significance of effect of driver delay for users of the A762 and U2s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.313 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such shows a relatively large traffic increase which would represent a major effect, however it is important to note that these route sections have the residual capacity to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient

- transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.314 The A711 and A712 have the residual capacity to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delays for users of the A711 and A712 is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.315 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic volume, then the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.38**.

**Table 13.38: Projected Collisions – Total Likely Cumulative Impacts** 

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the E- G Connection of the KTR Project + Committed Developments + Glenlee Substation Extension + other KTR Project Connections)
A713 (between A77 and Dalmellington)	10	10.3
A713 (between Dalmellington and Carsphairn)	4.7	5.3
A713 (between Carsphairn and A762)	1.3	1.5
<b>A713</b> (between A762 and A702)	0	0
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A713</b> (between A712 and B795)	1	1.1
<b>A713</b> (between B795 and A75)	1.3	1.4
A712 (between A713 and Corsock)	1	1.1
A712 (between Corsock and A75)	1	1.1
<b>A711</b> (between A75 and A762)	1.3	1.4
A762 (between A713 and U2s)	0.3	0.4
B741 (between New Cumnock and Dalmellington)	1.7	1.8
U2s	0	0
Gateside Road	0	0

- 13.316 Using this basis of assessment, there would be a small increase (less than 1 collision) in PICs for the A713 (between the A77 and the A762) as a consequence of the increased traffic generated cumulatively. Professional judgment suggests that the peak cumulative traffic, which would be temporary (five months duration), would result in a **minor** effect (**not significant**) upon road safety if unmitigated.
- 13.317 On the other route sections within the Study Area, there would be a negligible increase in PICs as a consequence of the increased traffic generated cumulatively by the developments and the significance of the effect would be **none** and **not significant**.

- Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)
- 13.318 The roads within the E-G Connection Study Area will continue to operate below capacity, even with the addition of traffic generated cumulatively. Severance and pedestrian delay should not occur when there is such a notable level of residual road capacity.
- 13.319 Cumulatively, the only road sections where HGV flows are expected to double, or more are the A762 (between the A713 and U2s), the B741, the U2s and Gateside Road.
- 13.320 The CTMP an outline of which is provided as **Appendix 13.1** will promote interventions that will minimise the effect of construction traffic on local communities, measures include but are not limited to:
  - temporary construction site signage will be erected on the local road network in advance of local communities to warn people of construction activities and associated construction vehicles;
  - SPEN shall nominate a Community Liaison Officer (CLO); the CLO will be responsible for keeping the local community informed of progress on the site and warning them of upcoming activities which may give rise to increased construction vehicle movements; and
  - all site staff will be informed about traffic management arrangements and procedures via the site induction.
- 13.321 There is local footway provision in Dalmellington (B741 and Gateside Road) and New Cumnock (B741).

  Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of construction traffic generated cumulatively. On this basis, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the B741 and Gateside Road.
- 13.322 Site observations indicate that pedestrian activity on the A762 (between the A713 and U2s) and the U2s road sections is low. Furthermore, the CTMP will promote interventions that will minimise the effect of construction traffic on pedestrian amenity. On this basis, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the A762 (between the A713 and U2s) and the U2s
- 13.323 Several construction access routes overlap and/or intersect with existing recreational routes, including the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route; and
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way).
- 13.324 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of construction traffic. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of the Southern Upland Way, Core Paths 21, 30 and 224 and the National Byway cycling route is considered to be **minor** and accordingly considered to be **not significant**.
- 13.325 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of project generated construction traffic.
- 13.326 Overall based on professional judgement the construction traffic generated cumulatively will have a **minor** effect upon community receptors and therefore **not significant** in the context of the 2017 EIA Regulations (as amended).

Proposed Additional Mitigation

13.327 As recorded in the CTMP, if another development, such as the wind farms considered in the cumulative assessment appears likely to undergo construction at the same time as the E-G Connection, SPEN will liaise with the other developer regarding the scheduling of deliveries and potential means of reducing the impact of combined construction.

### Residual Cumulative Effects during Construction

13.328 Overall, due to the implementation of the infrastructure improvements to the A762 (between the A713 and the U2s) and the U2s as part of the Glenlee Substation Extension works (therefore, embedded mitigation for the EG Connection), in conjunction with the embedded mitigation measures and operational procedures as proposed in the framework CTMP and the proposed additional requirement for SPEN to liaise with other developers regarding the scheduling of deliveries and potential means of reducing the effect of combined construction, the residual effects associated with the levels of traffic generated cumulatively are considered to be **minor** and accordingly **not significant** in the context of the 2017 EIA Regulations (as amended).

### **Monitoring**

- 13.329 The requirement for construction monitoring will be agreed with SPEN, Roads Authority representatives and other relevant stakeholders prior to commencement of works.
- 13.330 If deemed necessary, SPEN will enter into a legal agreement under Section 96 of the Roads (Scotland) Act 1984 to formalise an inspection and maintenance regime with the Roads Authority to contribute to maintenance of those roads impacted by HGV movements associated with the E-G Connection.

### **Summary of Effects**

13.331 A summary of effects before and after proposed additional mitigation measures for E-G Connection is provided in **Table 13.39.** 

Table 13.39: Summary of Effects for Public Roads Within the Connection E-G Study Area

Predicted Effect	Significance	Mitigation	Significance of Residual Effect
Construction Effec	ts		
Driver Delay	Minor	No additional mitigation is proposed beyond	Minor
Road Safety	Minor	the embedded measures and operational procedures as proposed as good practice in	Minor
Community	Minor	the framework CTMP.	Minor
Impacts		The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced and expanded as appropriate by SPEN's appointed contractor(s) in consultation with Roads Authorities and the Police prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.	
Cumulative Effects	•		
Driver Delay	Minor	If the construction phase of any notably sized development(s), e.g. wind farm development(s) (as considered in the	Minor
Road Safety	Minor	cumulative assessment) appears likely to overlap with the KTR Project, SPEN will liaise with the appropriate developer organisation regarding the scheduling of deliveries and	Minor
Community Impacts	Minor	potential means of reducing the impact of combined construction.	Minor

13.332 Based on the assessment summary in **Table 13.39**, the additional traffic predicted to be generated on public roads throughout the E-G Connection Study Area during the construction phase is anticipated to result in **minor** effects and therefore considered to be **not significant**.

# **BG** Route Deviation

- 13.333 The BG route comprises an existing 132kV OHL between the existing Glenlee substation and the existing substation at Newton Stewart. The OHL is currently supported on lattice steel towers. The 'BG' Connection of the KTR Project is shown in **Figure 4.5.**
- 13.334 To facilitate construction and operation of the proposed OHL for the Glenlee to Tongland connection (G-T), existing towers BG098-BG102 are proposed to be removed and replaced with five new L4m towers located approximately 40m north of those towers to be removed. Existing tower BG097 will remain in its existing location and strengthened to accommodate an increased angle onto new tower BG098. The relocation of these towers will result in an approximate 1.2km deviation of the existing BG OHL which will connect into the proposed extension to the Glenlee Substation. The existing BG route terminal tower will remain in situ within the existing substation compound and will form part of the proposed new Glenlee to Tongland circuit. The proposed configuration for both the B-G route deviation and proposed new Glenlee to Tongland route to the Glenlee substation are shown in **Figures 4.7.4 and 4.7.5**.
- 13.335 In relation to the stone required for construction of BG Deviation of the KTR Project, it has been assumed that:
  - 50% of stone will be sourced entirely from the onsite quarries with the remaining 50% being sourced from both Sorn Quarry and Tongland Quarry.
- 13.336 Similarly, to the above, in relation to the reinstatement of temporary access tracks, it has been assumed that:
  - 50% of stone will be reinstated within the onsite quarries and the remaining 50% being returned to both Sorn Quarry and Tongland Quarry.

### **Access Arrangements**

- 13.337 Transportation, including deliveries to and from the construction areas will be taken from the existing trunk and local road network. The local area road network is shown on **Figures 13.1.1** and **13.1.2**.
- 13.338 Given the nature of construction of the overhead line Connection (i.e. a linear development), SPEN has identified 2 construction access points for the 'BG' route deviation, identified in **Table 13.40** and shown on **Figure 5.5.1.**
- 13.339 Further information relating to the proposed construction worksite access locations is included in **Appendix 13.2.**

Table 13.40: Access Points for BG Route Deviation

Worksite Access Reference	Public Road	Components
35	U2s	Towers R-BG-101 and R-BG-102
37	U3s	Towers R-BG-097 to 100

- 13.340 The proposed worksite accesses are preliminary based on SPEN's experience of constructing similar projects. The worksite access locations will be confirmed by the appointed contractor as an integral of their adopted CTMP, a framework of which is provided as **Appendix 13.1.**
- 13.341 All construction vehicles drivers will be instructed to access a worksite via an approved route.

### Assessment of Construction Effects (including tree felling)

- 13.342 As detailed in **Chapter 5**, the overall construction period duration for the 'BG' route deviation is 43 months.
- 13.343 Sections of the A77, A75, A713, A712, A711, A702, A762, U2s and U3s will be used by construction vehicles. The assessed number of traffic movements (note: one trip = two movements; i.e. one delivery and one return journey) generated by construction activity are summarised in **Table 13.41**.

Table 13.41: Vehicle Movements Generated by Tree Felling and Construction Activity for the BG Route Deviation

Activity/Item Being Transported	Type of Vehicle	Details/deliveries	Total Vehicle Movements
Timber Clearance (within wayleave)	Lorry (24 tonne capacity)	An estimated 2.12ha of timber will be felled resulting in a total of 209 tonnes of timber to be produced.	18
Site Access Tracks	Lorry (20 tonne capacity)	An estimated 13,630 tonnes of stone will be required.	1,364
OHL Construction	Lorry (20 m³ capacity) concrete ready mix trucks with a 6 m³ capacity	Concrete and steelwork	192
Wiring and Commissioning	Lorry (20 m³ capacity) and light vans	Wiring and commissioning	92
Reinstatement	Lorry (20 tonne capacity)	An estimated 13,630 tonnes of stone will be required to be removed.	1,364
Other	Private cars, light vans and mini-bus	Construction personnel, other site visitors	3,212
TOTAL HGV TRAFF	IC MOVEMENTS FOR 'BG' ROL	JTE DEVIATION	3,030
TOTAL LGV TRAFF	IC MOVEMENTS FOR 'BG' ROU	TE DEVIATION	3,212
TOTAL ALL TRAFFI	C MOVEMENTS FOR 'BG' ROU	TE DEVIATION	6,242

- 13.344 It should be noted that these accesses represent the likely access arrangements during construction, based on SPEN's experience of constructing similar projects. However, the final access points will be confirmed by the appointed contractor.
- 13.345 All construction vehicles will be instructed to access the site via the approved access routes.

Predicted Construction Effects

- 13.346 As indicated in **Table 13.41** the total of traffic generated by the BG Deviation is estimated as 6,242 movements, of which 3,030 movements will HGV movements over the 42 months construction period.
- 13.347 With reference to the indicative construction programme and the anticipated vehicle movements provided by SPEN for each construction related activity, the number of vehicle movements that are anticipated for each month of the construction programme has been calculated. The vehicle movements calculated have then been distributed over each route section as per the assumptions indicated in the Assessment Assumptions section.
- 13.348 Estimated daily and monthly movements generated by the BG Deviation against the programme along with predicted percentages increases on relevant trunk and local roads are shown in **Table 13.42.**
- 13.349 As indicated in **Table 13.42** felling and construction traffic is estimated at an average of 8 vehicle movements a day over the entire construction period, with a maximum of 36 vehicle movements occurring per day from September 2023 to November 2023 (the 'peak period'). The 'peak period' for the purpose of this assessment is therefore defined as September 2023 to November 2023 inclusive.
- 13.350 **Table 13.43** presents a summary of this information by route section.
- 13.351 The A77, A76, A75, A713, A712, A711 and A702 currently operate comfortably within their respective capacities (see **Table 13.7**). The increase in traffic volume on these roads throughout the construction phase of the BG Deviation is assessed to be less than 5% in terms of both general traffic (HGV+LGV) and specifically HGV traffic. On this basis, the significance of the effect is assessed to be **none** and accordingly **not significant**. Since the 10% traffic increase threshold has not been exceeded on these routes, no detailed assessment has been undertaken.
- 13.352 As indicated in the Embedded Mitigation Measures Section, embedded mitigation measures and operational procedures as indicated in the framework CTMP (**Appendix 13.1**) have been assumed to be in place as part of the KTR Project and therefore used to inform the judgement of significance of effects.

Table 13.42: Outline Construction Programme and Associated Traffic Assessment for the BG Route Deviation

Programme	Mar-22	Apr-22 May	-22 Jun-2	22 Jul-2	22 Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23 Feb-23	Mar-23 A	pr-23	May-23	Jun-23	Jul-23	Aug-23 S	Sep-23 Oct	t-23   f	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24 M	lay-24 .	Jun-24 Jul-2	4 Aug-24	Sep-24	Oct-24	Nov-24	Dec-24 :	Jan-25	Feb-25 Mar	-25 A <sub>l</sub>	pr-25 N	1ay-25 :	Jun-25	Jul-25 Au	g-25 Sep	25 TOTAL
Activity					1																																			
Timber Clearance (within wayleave)	2	2 2	2	2	2	2	2	2	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0 (	)	0	0	0	0	0 0	18
Timber Clearance (windthrow areas)	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0 (	)	0	0	0	0	0 0	0
Site Access Tracks	100	100 10	0 100	100	100	100	100	100	100	100 100	100	100	100	100	100	92	0	0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0 (	)	0	0	0	0	0 0	1792
OHL Construction	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	464 5	68	465	339	106	136	136	136	136	136 18	0	0	0	0	0	0	0 (	)	0	0	0	0	0 0	2640
Wiring and Commissioning	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0 (	)	0	0	0	0	0 0	0
Reinstatement	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	142	150	150	150	150	150 1	50	150	150	150	150 1	48 2	1792
Total no. vehicle movements, all traffic					-	1																						1 1												
(HGV + LGV) Total no. vehicle movements, all traffic	102	102 10	_	_	_	102	102	102 8	100	100 100		100	100	100	100			68	465 36	339	106	136	136	136	136	136 18		142	150	150	150	150			150	150	150 6		48 2	
(HGV + LGV) / day Total no. HGV vehicle movements	8 78	8 8 78 78	_			78	8 78	78	76	6 6 76 76	6 76	6 76	6 76	6 76	6 76	6 76		34	46	30	6 12	6 16	16	6 16	16	6 6	0	108	114	6 114	6 114	114	6 (		114	114	114		6 6	
Total no. HGV vehicle movements / day	6	6 6		6		6	6	6	4	4 4	4	4	4	4	4	4		4	4	2	2	2	2	2	2	2 2	0	4	4	4	4	4	4		4	4	4		4 4	_
Total no. LGV vehicle movements	24	24 24	4 24	24	24	24	24	24	24	24 24	24	24	24	24	24	20	412 5	04	419	309	94	120	120	120	120	120 18	0	34	36	36	36	36	36 3	6	36	36	36	36	34 0	3212
Total no. LGV vehicle movements / day	2	2 2	2	2	2	2	2	2	2	2 2	2	2	2	2	2	2	18 1	18	32	16	4	4	4	4	4	4 4	0	2	2	2	2	2	2 :	2	2	2	2	2	2 2	-
A76 (between B743 and A70)	40/	<1% <1'	0/ 40/	40	. 40/	40/	40/	40/	40/	<1% <1%	<1%	<1%	40/	<1%	407	407	40/	40/	40/	40/	40/	40/	40/	40/	40/	40/ 40/	<1%	40/	<1%	<1%	<1%	40/	<1% <1	0/	40/	40/	40/	40/	1% <1'	_
% Increase in ALL Traffic A76 (between B743 and A70)	<1%	<1% <1°	_	_		<1%	<1%	<1% <1%	<1%	<1% <1%		<1%	<1%	<1%	<1% <1%			_	<1%	<1%	<1%	<1%	<1%		<1%	<1% <1%	_	<1% <1%	<1%	<1%		<1%	<1% <1	_		<1%	<1%		1% <1	
% Increase in HGV Traffic A76 (between A70 and New Cumnock) % Increase in ALL Traffic	<1%	<1% <1				<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%				<1%	<1%	<1%	<1%	<1%		<1%	<1% <1%		<1%	<1%	<1%		<1%	<1% <1			<1%	<1%		1% <1	_
A76 (between A70 and New Cumnock) % Increase in HGV Traffic	<1%	<1% <1'	% <1%	s <1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1	6 -
A75 (between A762 and A712) % Increase in ALL Traffic	<1%	<1% <1°	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1'	6 -
A75 (between A762 and A712) % Increase in HGV Traffic A75 (between A712 and A780)	<1%	<1% <1°			_	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			-	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1		<1%	<1%	<1%		1% <1	
% Increase in ALL Traffic A75 (between A712 and A780)	<1%	<1% <1°		_		<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			_	<1%	<1%	<1%	<1%	<1%		<1%	<1% <1%	_	_	<1%	<1%		<1%	<1% <1		<1%	<1%	<1%		1% <1	_
% Increase in HGV Traffic A75 (between A780 and A76)	<1%	<1% <1°	_	_		<1%	<1% <1%	<1% <1%	<1%	<1% <1%		<1%	<1%	<1%	<1% <1%			_	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1% <1%	<1%	<1% <1%	<1%	<1%	<1% <1	_	<1%	<1%	<1%		1% <1 <sup>1</sup>	_
% Increase in ALL Traffic A75 (between A780 and A76) % Increase in HGV Traffic	<1%	<1% <1'		_	_	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			_	<1%	<1%	<1%	<1%	<1%		<1%	<1% <1%		<1%	<1%	<1%		<1%	<1% <1			<1%	<1%		1% <1	
A77 (between A713 and A70) % Increase in ALL Traffic	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1	6 -
A77 (between A713 and A70) % Increase in HGV Traffic	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1'	6 -
A713 (between A77 and Dalmellington) % Increase in ALL Traffic A713 (between A77 and Dalmellington)	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1	á -
% Increase in HGV Traffic A713 (between Dalmellington and Carsphairn)	<1%	<1% <1'				<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			_	<1%	<1%	<1%	<1%	<1%		<1%	<1% <1%	_		<1%	<1%	<1%	<1%	<1% <1	_			<1%		1% <1'	
% Increase in ALL Traffic A713 (between Dalmellington and Carsphairn)	<1% 1%	<1% <1°	_	_	_	<1% 1%	<1% 1%	<1% 1%	<1%	<1% <1%		<1%	<1%	<1%	<1% <1%	<1%		1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1% 1%	1%	<1% 1%	1%	<1% 1%	<1% <1 1% 1		<1% 1%	<1% 1%	<1% 1%		1% <1' % 19	
% Increase in HGV Traffic A713 (between Carsphairn and A762) % Increase in ALL Traffic	<1%	<1% <1'	_	_	_	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			1%	1%	<1%	<1%	<1%	<1%		<1%	<1% <1%			<1%	<1%		<1%	<1% <1	_	_	_	<1%		1% <1	
A713 (between Carsphairn and A762) % Increase in HGV Traffic	2%	2% 29				2%	2%	2%	1%	1% 1%	1%	1%	1%	1%	1%			1%	1%	<1%	<1%	<1%	<1%		<1%	<1% <1%	_	2%	2%	2%	2%	2%	2% 2		2%	2%	2%		!% 29	
A713 North of Dalry (between A762 and A702) % Increase in ALL Traffic	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1'	6 -
A713 North of Dalry (between A762 and A702) % Increase in HGV Traffic A713 South of Dalry (between A702 and A712)	2%	2% 29	_	_	_	2%	2%	2%	1%	1% 1%		1%	1%	1%	1%			1%	1%	<1%	<1%	<1%	<1%		<1%	<1% <1%		_	2%	2%		2%	2% 2		2%	2%	2%		!% 29	_
% Increase in ALL Traffic A713 South of Dairy (between A702 and A712)	<1%	<1% <1'		_		<1% 1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1% <1%			_	<1%	<1%	<1%	<1%	<1%		<1%	<1% <1%	_	<1% <1%	<1%	<1% <1%	<1%	<1%	<1% <1	-	<1%	<1%	<1%		1% <1'	_
% Increase in HGV Traffic A713 (between A712 and B795)	1% <1%	1% 19 <1% <1'	_	_	_	<1%	1% <1%	1% <1%	<1%	<1% <1%		<1%	<1%	<1%	<1%	<1%		_	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	_		<1%	<1%		<1%	<1% <1		<1%		<1%		1% <1	
% Increase in ALL Traffic A713 (between A712 and B795) % Increase in HGV Traffic	1%	1% 19	_		_	1%	1%	1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			_	<1%	<1%	<1%	<1%	<1%		<1%	<1% <1%	_	<1%	<1%	<1%	<1%	<1%	<1% <1	_	<1%	<1%	<1%		1% <1	
A713 (between B795 and A75) % Increase in ALL Traffic	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1	6 -
A713 (between B795 and A75) % Increase in HGV Traffic	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1	6 -
A712 (between A75 and A762) % Increase in ALL Traffic A712 (between A75 and A762)	<1%	<1% <1'	_	_	_	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			!%	3%	1%	<1%	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%	<1%	<1% <1				<1%		1% <1	_
% Increase in HGV Traffic A712 (between A762 and A713)	2% <1%	2% 29 <1% <1°		_		2% <1%	2% <1%	2% <1%	2% <1%	2% 2%		2% <1%	2% <1%	2% <1%	2% <1%			%	2% 1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1% <1% <1%	_	3% <1%	3% <1%	3% <1%	3% <1%	3% <1%	3% 3 <1% <1	_	3% <1%	3% <1%	3% <1%		1% 39 1% <1'	
% Increase in ALL Traffic A712 (between A762 and A713)	1%	1% 19	_	_	_	1%	1%	1%	1%	1% 1%	1%	1%	1%	1%	1%			1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	_	2%	2%	2%	2%	2%		_	2%	2%	2%		1% 29	
% Increase in HGV Traffic A712 (between A713 and Corsock) % Increase in ALL Traffic	<1%	<1% <1'	_	_	_	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%				<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%	<1%	<1% <1		<1%	<1%	<1%		1% <1	_
A712 (between A713 and Corsock) % Increase in HGV Traffic	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1	6 -
A712 (between Corsock and A75) % Increase in ALL Traffic A712 (between Corsock and A75)	<1%	<1% <1'		_		<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			1%	1%	<1%	<1%	<1%	<1%		<1%	<1% <1%	_	<1%	<1%	<1%		<1%	<1% <1				<1%		1% <1'	_
A712 (between Corsock and A75) % Increase in HGV Traffic A711 (between A75 and A762)	<1%	<1% <1°	_	_	_	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			1%	2%	<1%	<1%	<1%	<1%		<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1		<1%	<1%	<1%		1% <1	
% Increase in ALL Traffic A711 (between A75 and A762)	<1% <1%	<1% <1° <1% <1°		_		<1%	<1% <1%	<1% <1%	<1% <1%	<1% <1% <1% <1%		<1%	<1%	<1%	<1% <1%			_	<1%	<1%	<1%	<1% <1%	<1%		<1%	<1% <1% <1% <1%	_	<1% <1%	<1%	<1% <1%	<1%	<1%	<1% <1 <1 <1		<1%	1%	1%		% 19 1% <1'	_
% Increase in HGV Traffic A702 (between A713 and Moniaive)	<1%	<1% <1		_	_	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			1%	3%	1%	<1%	<1%	<1%		<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1		<1%	<1%	<1%		1% <1	
% Increase in ALL Traffic A702 (between A713 and Moniaive) % Increase in HGV Traffic	<1%	<1% <1'	_		_	<1%	<1%	<1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			_	<1%	<1%	<1%	<1%	<1%		<1%	<1% <1%		<1%	<1%	<1%	<1%	<1%	<1% <1	_	<1%	<1%	<1%		1% <1	
A702 (between Moniaive and A76) % Increase in ALL Traffic	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	%	<1%	<1%	<1%	<1% <	1% <1	6 -
A702 (between Moniaive and A76) % Increase in HGV Traffic	<1%	<1% <1'	% <1%	<1%	6 <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%			1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1	_	<1%	<1%	<1%		1% <1'	_
A762 (between A713 and U2s) % Increase in ALL Traffic A762 (between A713 and U2s)	1%	1% 19	_	_	_	1%	1%	1%	<1%	<1% <1%		<1%	<1%	<1%	<1%			1%	5%	2%	<1%	<1%	<1%	<1%	<1%	<1% <1%	_	<1%	<1%	<1%	<1%	<1%	<1% <1		<1%	<1%	<1%		1% <1'	_
% Increase in HGV Traffic B741	13%	13% 13°				13%	13% <1%	13% <1%	5% <1%	5% 5% 1% 1%	5% 1%	5% 1%	5% 1%	5% 2%	5% 2%			1%	6% 2%	2%	<1%	<1%	<1% 2%	<1% 2%	<1% 3%	<1% <1% 3% 3%	<1% 3%	8% 3%	3%	8% 3%	8% 3%	8% 3%	8% 8 4% 4	_	4%	8% 4%	8% 4%		1% 89 1% 49	
% Increase in ALL Traffic B741	<1% 3%	3% 39	_	_	_	3%	<1% 3%	<1% 3%	<1% 3%	1% 1%	3%	3%	3%	3%	3%			1%	<1%	<1%	2% <1%	2% <1%	<1%	<1%	<1%	3% 3% <1% <1%		5%	5%	3% 5%	5%	5%	4% 4 5% 5	_	5%	5%	5%		i% 49	
% Increase in HGV Traffic U2s % Increase in ALL Traffic	2%	2% 29		_		2%	2%	2%	<1%	<1% <1%		<1%	<1%	<1%	<1%			i%	8%	4%	1%	1%	1%	1%	1%	1% 1%	_	1%	1%	1%	1%	1%			1%	1%	1%		% 19	_
U2s % Increase in HGV Traffic	27%	27% 27				27%	27%	27%	10%	10% 10%		10%	10%	10%	10%			1%	13%	4%	1%	1%	1%	1%	1%	1% 1%	_	15%	15%	15%	15%	15%	15% 15	_	15%	15%	15%		5% 15'	
U3s % Increase in ALL Traffic	3%	3% 3%	6 3%	3%	3%	3%	3%	3%	3%	3% 3%	3%	3%	3%	3%	3%	3%	18% 1	5%	27%	12%	3%	3%	3%	3%	3%	3% 3%	<1%	4%	4%	4%	4%	4%	4% 4	%	4%	4%	4%	4%	1% 49	-
U3s % Increase in HGV Traffic Gateside Road	123%	123% 123	_		_	123%	123%	123%	123%	123% 123%		123%	123%	123%	123%			_	150%	45%	17%	17%	17%		17%	17% 17%	_	186%	186%	186%		186%		_			186%		186	_
% Increase in ALL Traffic Gateside Road	<1%	<1% <1°	_		_	<1%	<1%	<1%	<1%	<1% <1%	1%	1%	1%	1%	1%			%	2%	2%	2%	2%	2%	2%	2%	2% 2%	_	2%	3%	3%	3%	3%			3%	3%	3%		1% 39	_
% Increase in HGV Traffic	3%	3% 3%	6 3%	3%	3%	3%	3%	3%	3%	3% 3%	3%	3%	3%	3%	3%	3%	3% <	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	4%	4%	4%	4%	4%	4% 4	%	4%	4%	4%	4%	1% 49	

Table 13.43: Summary of Construction Traffic Generated on Public Roads within the BG Route Deviation Study Area

Route Section	Construction traffic generated over the 43 months construction programme, by route section										
	LGV-	+HGV		Only							
	Average vehicle movements per day over entire construction period	Average vehicle movements per day during the period of peak construction activity	Average vehicle movements per day over entire construction period	Average vehicle movements per day during the period of peak construction activity							
	[% Increase] {Significance}	[% Increase]	[% Increase] {Significance}	[% Increase]							
		{Significance}		{Significance}							
<b>A76</b> (between B743 and A70)	2	2	2	2							
[AADT = 11,691]	[<1%] {none, not significant}	[<1%] {none, not significant}	[<1%] {none, not significant}	[<1%] {none, not significant}							
<b>A76</b> (between A70 and New	2 [<1%]	2	2	2							
Cumnock) [AADT = 6423]	{none, not significant}	[<1%] {none, not significant}	[<1%] {none, not significant}	[<1%] {none, not significant}							
A75 (between	2	2	2	2							
A762(N) and A712)	[<1%]	[<1%]	[<1%]	[<1%]							
[AADT= 7,901]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}							
<b>A75</b> (between A712 and A780)	2	8	2	2							
[AADT= 11,065]	[<1%] {none, not significant}	[<1%] {none, not significant}	[<1%] {none, not significant}	[<1%] {none, not significant}							
A75 (between	2	8	2	2							
A780 and A76)	[<1%]	[<1%]	[<1%]	[<1%]							
[AADT= 14,729]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}							
A77 (between	2	8	2	2							
A713 and A70)	[<1%]	[<1%]	[<1%]	[<1%]							
[AADT= 21,311]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}							
A713 (between	2	8	2	2							
A77 and Dalmellington)	[<1%]	[<1%]	[<1%]	[<1%]							
[AADT= 4,085]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}							
<b>A713</b> (between Dalmellington and	4	8	2	2							
Carsphairn)	[<1%]	[<1%]	[1%]	[1%]							
[AADT= 1,557]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}							
A713 (between	6	16	4	4							
Carsphairn and A762)	[<1%]	[1%]	[3%]	[3%]							
[AADT=1,398]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}							
<b>A713</b> (between	4	14	2	2							
A762 and A702)	[<1%]	[1%]	[2%]	[2%]							

Route Section	Construction traffic	generated over the 43	months construction pection	programme, by route
	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A713</b> (between	4	14	2	2
A702 and A712)	[<1%]	[<1%]	[1%]	[1%]
[AADT=2,282]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A713</b> (between	4	8	2	2
A712 and B795)	[<1%]	[<1%]	[1%]	[1%]
[AADT=1,889]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between	4	8	2	2
B795 and A75)	[<1%]	[<1%]	[<1%]	[<1%]
[AADT=3,868]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A712</b> (between	4	16	2	2
A75 and A762)	[<1%]	[2%]	[3%]	[3%]
[AADT=685]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between	4	16	2	2
A762 and A713)	[<1%]	[1%]	[2%]	[2%]
[AADT=1,544]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between	2	8	2	2
A713 and Corsock)	[<1%]	[<1%]	[3%]	[3%]
[AADT=988]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between	2	8	2	2
Corsock and A75)	[<1%]	[1%]	[3%]	[3%]
[AADT=768]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A711 (between	2	2	2	2
A75 and A762)	[<1%]	[<1%]	[<1%]	[<1%]
[AADT=3,898]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A702 (between	2	6	0	0
A713 and Moniaive)	[<1%]	[2%]	[0%]	[0%]
[AADT=243]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A702 (between	2	6	0	0
Moniaive and A76)	[<1%]	[<1%]	[0%]	[0%]
[AADT=931]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A762 (between	4	14	2	2
A713 and U2s)	[1%]	[4%]	[8%]	[8%]
[AADT = 356]	{none, not significant}	{none, not significant}	{minor, not significant}	{minor, not significant}
B741 (between	2	2	2	2
New Cumnock and	[<1%]	[<1%]	[5%]	[5%]
Dalmellington)	{none, not	{none, not	{minor, not	{minor, not
				<u> </u>

Route Section	Construction traffic o		months construction p ection	rogramme, by route
[AADT = 1,031]	significant}	significant}	significant}	significant}
U2s	4	14	2	2
[AADT = 199]	[2%]	[7%]	[17%]	[17%]
	{none, not significant}	{minor, not significant}	{moderate, significant}	{moderate, significant}
U3s	4	14	2	2
[AADT = 62]	[6%]	[23%]	[200%]	[200%]
	{none, not significant}	{moderate, significant}	{major, significant}	{major, significant}
Gateside Road	2	2	2	2
(Dalmellington)	[2%]	[<1%]	[4%]	[4%]
[AADT = 1,280]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}

#### Driver Delay

- 13.353 The CTMP a framework which is provided as **Appendix 13.1** will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay, CTMP measures include but are not limited to:
  - The timing and frequency of vehicle movements being managed to minimise local disruption;
  - details of access route forming part of the site induction and training being held for all site operatives and delivery drivers through 'toolbox talks'; and
  - where reasonable and practicable, project-related vehicles will avoid travelling in convoys on public roads.
- 13.354 From a review of **Table 13.43** it is evident that threshold significance criteria have been exceeded on the U2s and U3s both throughout the duration of the entire construction period and during the 'peak period' of construction activity.
- 13.355 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the U2s to provide passing places will be implemented; achieving a minimum width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (see Embedded Mitigation Measures Section). On this basis, the significance of effect of driver delay for users of the U2s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.356 The U3s has very low traffic flow and as such shows a relatively large traffic increase which would represent a **major** effect. However, professional judgement suggests that effects on the U3s are likely to be less significant based on the low level of construction traffic anticipated. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the U3s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

### Road Safety

13.357 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic, the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.44**.

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**Table 13.44: Projected Collisions** 

Route Section	Average No. of collisions (2022 Average Baseline)	Average No. of collisions (2022 Average Baseline + Traffic Generated by Construction of the B- G Route Deviation)
U2s	0.0	0.0
U3s	0.3	0.4

13.358 Using this basis of assessment, there would be a negligible (**not significant**) increase in PICs in the Study Area as a consequence of the increased traffic generated by B-G Route deviation and the significance of the effect would be **none** and **not significant**.

Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)

- 13.359 The IEMA Guidelines define severance as 'the perceived division that can occur within a community when it becomes separated by a major traffic artery'. Severance may result from a road carrying large traffic flows or a physical barrier created by the road itself, and the IEMA guidelines suggest that consideration is given to the severity of existing severance and how this might be exacerbated by proposed construction traffic generated by a development. The roads within the BG Deviation Study Area will continue to operate below capacity, even with the addition of traffic generated by construction of the B-G route deviation. Severance should not occur when there is such a notable level of residual road capacity and traffic generated by the BG Deviation will be low.
- 13.360 For similar reasoning, pedestrian delay is not considered to be an existing problem on any of the route sections within the BG Deviation Study Area, nor one that shall be created by the addition of proposed construction traffic to these routes.
- 13.361 The only road section where HGV flows are expected to double, or more is the U3s. The U3s has currently very low level of HGV traffic, and as such shows a large traffic increase which would represent a major effect. However, professional judgement suggests that effects on the U3s are likely to be less significant based on the low level of construction traffic anticipated. On this basis, it is considered that construction traffic generated by the BGdeviation will have a **minor** and therefore **not significant** effect to the amenity of users of the U3s.
- 13.362 Several construction access routes overlap and/or intersect with existing recreational routes, including the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route; and
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way).
- 13.363 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of the potential of construction traffic. On this basis, the effect on pedestrian amenity, specifically on the amenity of users of the Southern Upland Way, Core Paths 21, 30 and 224 and the National Byway cycling route is considered to be **minor** and accordingly considered to be **not significant**.
- 13.364 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of construction traffic engaged in the B-G route deviation.
- 13.365 Overall based on professional judgement the, construction traffic generated by BGdeviation will have a **minor** effect upon community receptors.

Proposed Additional Mitigation

13.366 Localised widening of strategic sections of the U3s (between the junction of the A712 and worksite access reference 37) will be implemented to ease access to the worksites for HGV construction traffic and general traffic sharing this route section notably including upgraded passing places.

### Residual Construction Effects

13.367 Overall, due to the implementation of the infrastructure improvements to the A762 (between the A713 and the U2s) and the U2s as part of the Glenlee Substation Extension works (therefore, embedded mitigation for the BG Deviation) and the U3s (between the junction of the A712 and worksite access reference 37) and the embedded mitigation measures and operational procedures as proposed in the framework CTMP the significance of the residual effects associated with the levels of traffic anticipated during the construction of the BG Deviation are considered to be **minor** and accordingly considered to be **not significant**.

#### **Assessments of Cumulative Effects**

- 13.368 An assessment of the likely construction effects of the BG Deviation and other committed developments as well as other Connections forming part of the KTR Project has been undertaken to robustly take account of the likely interrelation of overlapping construction programmes and the resultant cumulative effect upon the local road network.
- 13.369 The overall approach for the cumulative assessments, including a list of developments considered, is outlined in **Chapter 3**
- 13.370 The following developments have been included with the BG Deviation for the cumulative traffic and transport assessment:
  - Knockman Hill Wind Farm (Proposed Wind Turbine Project at Knockman Hill, Milnmark Farm Dumfries and Galloway Environmental Statement (ES) 2009);
  - Mochrum Fell Wind Farm (Mochrum Fell Wind Farm ES, 2009);
  - Shepherds Rig Wind Farm (Shepherds Rig Wind Farm ES, 2020);
  - Troston Loch Wind Farm (Troston Loch Wind Farm EIA Report, 2019);
  - Cornharrow Wind Farm (Cornharrow Wind Farm EIA Report, 2020);
  - · Glenshimmeroch Wind Farm (Glenshimmeroch Wind Farm EIA Report, 2018); and
  - Fell Wind Farm (Fell Wind Farm EIA Report, 2019).
- 13.371 In addition to the above wind farms, traffic associated with the construction of the proposed Glenlee Substation Extension has been included in order to ensure a robust EIA; the assessment has been undertaken on the basis of an overlap with the KTR construction enabling works between March 2022 and June 2022.
- 13.372 In addition to the above developments, construction of the other KTR Project Connections (i.e. Connection P-G via K, C-K, E-G and G-T) will overlap with the construction phase of the Connection E-G of the KTR Project between March 2022 and September 2025 inclusive.

Glenlee Substation Extension Access Arrangements

- 13.373 For the purpose of the assessment, it has been assumed that:
  - Construction traffic associated with the Glenlee Substation Extension will access from the south via the A713 (45%), the north via the A713 (45%) and a proportion would come from the east via the A712 (10%).

Wind Farm Access Arrangements

- 13.374 The following assumptions have been made to inform the assessment, derived from review of relevant supporting ESs/EIA reports for the schemes:
  - Construction traffic accessing the proposed Knockman Hill Wind Farm will do so from the north via the A713.
  - Construction traffic accessing the proposed Mochrum Fell Wind Farm site will predominantly do so from the south via the A713 (75%) although a proportion would come from the north via the A713 (25%).
  - All construction traffic accessing the proposed Shepherds Rig Wind Farm site will do so from the north via the A713.

- All construction traffic accessing the proposed Troston Loch Wind Farm site will do so from the north via the A713.
- Construction traffic accessing the Cornharrow Wind Farm site will route from both the north (50%) and south (50%) via the A713.
- Construction traffic accessing the Glenshimmeroch Wind Farm site will route from both the north (50%) and south (50%) via the A713.
- Construction traffic accessing the Fell Wind Farm site will route from both the north (70%) and south (30%) via the A712.

Total Cumulative Construction Effects

- 13.375 This section assesses the maximum development case assuming that all the developments being considered as part of the cumulative assessment will proceed to construction and that the cumulative effects are the total likely effects created by the construction of the BG Deviation in combination with:
  - Wind farm developments (Knockman Hill, Mochrum Fell, Shepherds Rig, Troston Loch, Cornharrow, Glenshimmeroch, Fell);
  - Glenlee Substation Extension; and
  - other KTR Project Connections; P-G via K, C-K, E-G and G-T.
- 13.376 It is uncertain if and when the construction phases of the wind farms and the BG Deviation might overlap. To robustly assess cumulative traffic generation, cumulative assessment has been undertaken for route sections within the KTR Project Study Area that are utilised by other committed developments as well as other Connections and developments forming part of the KTR Project. This is based on the sum of the average traffic generation of the developments listed above and the BG Deviation peak traffic generation. This is considered to represent a maximum case scenario as, in reality, it is considered highly improbable that peak traffic generation for all developments will align.
- 13.377 **Table 13.45** presents a summary of predicted traffic volume increases over the entire construction period of the BG Deviation and during the 'peak period' of construction activity (September 2023 to November 2023 inclusive). The table shows the proportional increase in traffic generated for route sections within the KTR Project Study Area that are utilised by other committed developments as well as other Connections and developments forming part of the KTR Project

Table 13.45: Summary of Predicted Traffic Volume Increase – Total Likely Cumulative Impact for the BG Route deviation

Route Section	the entire cons	crease]	Average Vehicle Movements per day during the period of peak construction activity [% Increase] {Significance}						
	Total Traffic Movements	HGV Traffic Movements	Total Traffic Movements	HGV Traffic Movements					
A713 (between	136	42	339	95					
A77 and Dalmellington)	3%	18%	8%	40%					
AADT = [4,085]	None	Moderate	Minor	Moderate					
A713 (between	180	84	371	125					
Dalmellington and Carsphairn)	12%	46%	24%	69%					
[AADT = 1,557]	Moderate	Moderate	Moderate	Major					
A713 (between	162	80	330	119					
Carsphairn and A762)	12%	50%	24%	74%					
[AADT = 1,398]	Moderate	Moderate	Moderate	Major					
<b>A713</b> (between A762 and A702)	68	30	114	42					
[AADT = 1,382]	5%	26%	8%	21%					

Route Section		vements per day over struction period	during the period o	Novements per day of peak construction ivity
		crease]	[% In	crease]
	{Signit	icance}	{Signif	ficance}
	None	Moderate	Minor	Moderate
A713 (between	68	30	114	42
A702 and A712)	3%	15%	5%	27%
[AADT = 2,282]	None	Moderate	None	Moderate
A713 (between	53	27	124	50
A712 and B795)	3%	14%	7%	27%
[AADT = 1,889]	None	Moderate	Minor	Moderate
A713 (between	59	25	130	48
B795 and A75)	2%	12%	3%	24%
[AADT = 3,868]	None	Moderate	None	Moderate
A712 (haturaan	38	16	66	22
<b>A712</b> (between A713 and Corsock)	6%	22%	10%	31%
[AADT = 988]	Minor	Moderate	Minor	Moderate
A712 /hatauaan	50	20	80	28
<b>A712</b> (between Corsock and A75)	3%	17%	5%	23%
[AADT = 768]	None	Moderate	Minor	Moderate
A711 (between	32	28	50	44
A75 and A762)	<1%	8%	1%	13%
[AADT=3,898]	None	Minor	None	Moderate
A762 (between	24	14	16	4
A713 and U2s)	7%	56%	4%	16%
[AADT = 356]	Minor	Moderate	None	Moderate
B741 (between	44	44	34	34
New Cumnock and Dalmellington)	4%	119%	3%	92%
[AADT = 1,031]	None	Major	None	Major
	14	8	16	4
U2s	7%	67%	8%	33%
[AADT = 199]	Minor	Major	Minor	Moderate
U26	10	4	20	6
U3s	16%	400%	32%	600%
[AADT = 62]	Moderate	Major	Moderate	Major
Gateside Road	42	42	30	30
(Dalmellington)	3%	86%	2%	61%
[AADT = 1,280]	None	Major	None	Major

Predicted Cumulative Effects during Construction

Driver Delay

- 13.378 From a review of **Table 13.45**, it is evident that threshold significance criteria have been exceeded on the A713 (between the A77 and the A75), A762, B741, U2s, U3s and Gateside Road throughout the duration of the entire construction period and the A711 during the 'peak period' of construction activity
- 13.379 The A713 has the residual capacity to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713 (between the A77 and the A75) is

considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).

- 13.380 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the A762 (between the A713 and the U2s) and the U2s to provide passing places will be implemented; achieving. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (and therefore form embedded mitigation). On this basis, the significance of effect of driver delay for users of the A762 and U2s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.381 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the A762 (between the A713 and the U2s) to provide passing places will be implemented; achieving a minimum of width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (see Embedded Mitigation Measures Section). On this basis, the significance of effect on driver delay for users of the A762 is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.382 The U3s has very low traffic flow and as such shows a relatively large traffic increase which would represent a major effect. However, professional judgement suggests that effects on the U3s are likely to be less significant based on the low level of construction traffic anticipated. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the U3s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.383 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such show that a relatively large traffic increase would represent a major effect, however it is important to note that these route sections have the residual capacity to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.384 The A711 and A712 have the residual capacity to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delays for users of the A711 and A712 is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.385 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic volume, then the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.46**.

**Table 13.46: Projected Collisions – Total Likely Cumulative Impacts** 

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the BG Route deviation + Committed Developments + Glenlee Substation Extension + other KTR Connections)
A713 (between A77 and Dalmellington)	10	10.3
A713 (between Dalmellington and Carsphairn)	4.7	5.3
A713 (between Carsphairn and A762)	1.3	1.5
<b>A713</b> (between A762 and A702)	0	0

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the BG Route deviation + Committed Developments + Glenlee Substation Extension + other KTR Connections)
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A713</b> (between A712 and B795)	1	1.1
<b>A713</b> (between B795 and A75)	1.3	1.4
A712 (between A713 and Corsock)	1	1.1
A712 (between Corsock and A75)	1	1.1
<b>A711</b> (between A75 and A762)	1.3	1.4
A762 (between A713 and U2s)	0.3	0.4
<b>B741</b> (between New Cumnock and Dalmellington)	1.7	1.8
U2s	0	0
U3s	0.3	0.4
Gateside Road	0	0

- 13.386 Using this basis of assessment, there would be a small increase (less than 1 collision) in PICs for the A713 (between the A77 and the A762) as a consequence of the increased traffic generated cumulatively. Professional judgment suggests that the peak cumulative traffic, which would be temporary (five months duration), would result in a **minor** effect (**not significant**) upon road safety if unmitigated.
- 13.387 On the other route sections within the Study Area, there would be a negligible increase in PICs as a consequence of the increased traffic generated cumulatively by the developments and the significance of the effect would be **none** and **not significant**.
  - Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)
- 13.388 The roads within the BG Deviation Study Area will continue to operate below capacity, even with the addition of traffic generated cumulatively. Severance and pedestrian delay should not occur when there is such a notable level of residual road capacity.
- 13.389 Cumulatively, the only road section where HGV flows are expected to double, or more is the U3s. The U3s has currently very low level of HGV traffic, and as such shows a large traffic increase which would represent a major effect. However, professional judgement suggests that effects on the U3s are likely to be less significant based on the low level of construction traffic anticipated. On this basis, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the U3s.
- 13.390 Several construction access routes overlap and/or intersect with existing recreational routes, including the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route; and
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way).
- 13.391 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of the potential of construction traffic. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of the Southern Upland Way, Core Paths 21, 30 and 224 and the National Byway cycling route is considered to be **minor** and accordingly considered to be **not significant**.

- 13.392 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of project generated construction traffic.
- 13.393 Overall based on professional judgement the construction traffic generated cumulatively will have a **minor** effect upon community receptors and will **not be significant** in the context of the 2017 EIA Regulations (as amended).

Proposed Additional Mitigation

13.394 As recorded in the CTMP, if another development, such as the wind farms considered in the cumulative assessment appears likely to undergo construction at the same time as the BG Deviation, SPEN will liaise with the other developer regarding the scheduling of deliveries and potential means of reducing the impact of combined construction.

Residual Cumulative Effects during Construction

13.395 Overall, due to the implementation of the infrastructure improvements to the A762 (between the A713 and the U2s) and the U2s as part of the Glenlee Substation Extension works (therefore, embedded mitigation for the BG Deviation) and the U3s (between the junction of the A712 and worksite access reference 37), in conjunction with the embedded mitigation measures and operational procedures as proposed in the framework CTMP and the additional proposed requirement for SPEN to liaise with other developers regarding the scheduling of deliveries and potential means of reducing the effect of combined construction, the residual effects associated with the levels of traffic generated cumulatively are considered to be **minor** and accordingly **not significant** in the context of the 2017 EIA Regulations (as amended).

### **Monitoring**

- 13.396 The requirement for construction monitoring will be agreed with SPEN, Roads Authority representatives and other relevant stakeholders prior to commencement of works.
- 13.397 If deemed necessary, SPEN will enter into a legal agreement under Section 96 of the Roads (Scotland) Act 1984 to formalise an inspection and maintenance regime with the Roads Authority to contribute to maintenance of those roads impacted by HGV movements associated with the BG Deviation.

### **Summary of Effects**

13.398 A summary of effects before and after proposed mitigation measures for the BG Deviation is provided in **Table 13.47**.

Table 13.47: Summary of Effects for Public Roads within the BG Route Deviation Study Area

Predicted Effect	Significance	Mitigation	Significance of Residual Effect
<b>Construction Effects</b>			
Driver Delay	Minor	Localised widening of strategic sections of the U3s (between the junction of the A712 and worksite access reference 37) will be implemented to ease access to the worksites	Minor
Road Safety	Minor	for HGV construction traffic and general traffic sharing this route section notably including upgraded passing places.	Minor
Community Impacts	Minor	Beyond the measures listed above, no additional mitigation is proposed beyond the embedded measures and operational procedures as proposed as good practice in the framework CTMP.	Minor
		The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced	

Predicted Effect	Significance	Mitigation	Significance of Residual Effect
		and expanded as appropriate by SPEN's appointed contractor(s) in consultation with Roads Authorities and the Police prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.	
<b>Cumulative Effects</b>			
Driver Delay	Minor	If the construction phase of any notably sized development(s), e.g. wind farm development(s) (as considered in the	Minor
Road Safety	Minor	cumulative assessment) appears likely to overlap with the KTR Project, SPEN will liaise with the appropriate developer regarding the	Minor
Community Impacts	Minor	scheduling of deliveries and potential means of reducing the impact of combined construction.	Minor

13.399 Based on the assessment summary in **Table 13.47**, the additional traffic predicted to be generated on public roads throughout the BG Deviation Study Area during the construction phase is anticipated to result in **minor** effects which are therefore considered to be **not significant**.

# Glenlee to Tongland

- 13.400 The Glenlee to Tongland (G-T) Connection of the KTR Project is shown in Figure 4.6
- 13.401 A new 132kV double circuit OHL, of approximately 32.3km in length, is required between the existing/extended Glenlee substation and the existing Tongland substation. The OHL will be supported on L4 lattice steel towers, which have six cross-arms (three on each side).
- 13.402 As outlined in **Chapter 1: Introduction**, in addition to the new Connection above, the assessment also considers the potential traffic and transport effects associated with the removal of the R route (south) towers between Glenlee and Tongland.
- 13.403 In relation to the stone required for construction of the Glenlee to Tongland Connection of the KTR Project, it has been assumed that:
  - 50% of stone will be sourced entirely from the onsite quarries with the remaining 50% being sourced from both Sorn Quarry and Tongland Quarry.
- 13.404 Similarly, to the above, in relation to the reinstatement of temporary access tracks, it has been assumed that:
  - 50% of stone will be reinstated within the onsite quarries and the remaining 50% being returned to both Sorn Quarry and Tongland Quarry.

# **Access Arrangements**

- 13.405 Transportation, including deliveries to and from the construction areas will be taken from the existing trunk and local road network. The local area road network is shown on **Figures 13.1.1 and 13.1.2**.
- 13.406 Given the nature of construction of the overhead line Connection (i.e. a linear development), SPEN has identified 88 construction access points for the Connection G-T of the KTR Project, identified below in
- 13.407 **Table** 13.48 and shown on **Figures 5.5.1** and **5.5.2**.
- 13.408 Further information relating to the proposed construction worksite access locations is included in **Appendix 13.2**.

**Table 13.48: Access Points for Connection G-T of the KTR Project** 

Worksite Access Reference	Public Road	Components
30	A762	Removal of Tower 032 I
31	U2s	Removal of Tower 031 (R)
36	U3s	Towers 5 to 12
37	U3s	Towers 2, 3 and 4
38	U3s	Gallows Knowe Quarry
39	U3s	Will's Hill Quarry
40	A712	Towers 13 to 20 and Hind Craig Quarry
41	A712	Towers 9, 10, 11 and 12 and Gallows Knowe Quarry
42	A712	Tower 9 and installation of road crossing
43	A762	Towers 21 to 42 (including 41A) and Hind Craig Quarry
44	A762	Construction Compound
45	A762	Construction Compound
46	A762	Towers 43 to 49
47	C13s	Towers 63 and 64
48	C13s	Towers 71 to 73, Craigelwhan Quarry and Craigelwhan West Quarry
49	C13s	Towers 69 to 73, Craigelwhan Quarry and Craigelwhan West Quarry
50	C13s	Craigelwhan Quarry and Craigelwhan West Quarry
51	C13s	Towers 50 to 68 Lochenbreck Quarry
52	A762	Towers 74 to 79
53	A762	Towers 74 to 79
54	A762	Tower 80
55	A762	Towers 81 to 89
56	U34s	Towers 90 and 91
57	C45s	Towers 92 to 95 and removal of Towers 127 (R) and 128 (R)
58	C45s	Removal of Tower 129 (R)
59	C45s	Towers 97 and 98
60	C45s	Removal of Tower 130 (R)
61	C45s	Tower 100
62	C45s	Removal of Towers 133 (R)
63	A75	Towers 103 and 104
64	A75	Towers 101 and 102 and removal of Towers 134 (R) to Tower 137 (R)
65	U43s	Towers 105 and 106 and removal of Towers 138 (R) to Towers 140 (R)
66	U43s	Towers 107 and 108 and removal of Towers 141 (R) and 142 (R)
67	U43s	Towers 109, 110 and 111 and removal of Towers 143 (R) to Tower 145 (R)
68	A711	Towers 112, 113 and 114 and removal of Towers 146 (R) to Tower 149 (R)
69	A711	Towers 115, 116, 117 and 118 and removal of Towers 150 (R) to Tower 153 (R)
70	A713	Removal of Tower 033 (R)
71	A713	Removal of Tower 034 (R) and 35(R)
72	A713	Removal of Tower 036 (R)
73	A713	Removal of Tower 037 (R)
74	A713	Removal of Tower 038 (R)
75	A713	Removal of Tower 039 (R) to Tower 042 (R)

Worksite Access Reference	Public Road	Components
76	A713	Removal of Tower 043 (R)
77	A713	Removal of Tower 044 (R) and Tower 045 (R)
78	A712	Removal of Tower 046 (R) and Tower 047 (R)
79	A713	Removal of Tower 048 (R) to Tower 051 (R)
80	A713	Removal of Tower 052 (R) to Tower 054 (R)
81	A713	Removal of Tower 055 (R) and Tower 056 (R)
82	A713	Removal of Tower 057 (R)
83	U137S	Removal of Tower 059 (R) and Tower 60 (R)
84	U137S	Removal of Tower 061 (R)
85	U137S	Removal of Tower 058 (R)
86	A713	Removal of Tower 062 (R)
87	A713	Removal of Tower 063 (R) and Tower 064
88	A713	Removal of Tower 065 (R) to Tower 067 (R)
89	A713	Removal of Tower 068 (R) to Tower 071 (R)
90	A713	Removal of Tower 072 (R) to Tower 076 (R)
91	U103s	Removal of Tower 077 (R) to Tower 079 (R)
92	U103S	Removal of Tower 077 (R) to Tower 079 (R)
93	U103S	Removal of Tower 080 (R) and Tower 081 (R)
94	U133S	Removal of Tower 082 (R)
95	U133S	Removal of Tower 083 (R)
96	U107S	Removal of Tower 084 (R) to Tower 87 (R)
97	U107S	Removal of Tower 090 (R) and Tower 091 (R)
98	C31S	Removal of Tower 092 (R) and Tower 093 (R)
99	C31S	Removal of Tower 094 (R)
100	A713	Removal of Tower 095 (R)
101	A713	Removal of Tower 096 (R) and Tower 097 (R)
102	A713	Removal of Tower 098 (R) and Tower 099 (R)
103	A713	Removal of Tower 100 (R) and Tower 100I(R)
104	C50S	Removal of Tower 101 (R)
105	C50S	Removal of Tower 102 (R)
106	C50S	Removal of Tower 103 (R)
107	C50S	Removal of Tower 104 I and Tower 105 (R)
108	U62S	Removal of Tower 106 (R)
109	U62s	Removal of Tower 107 (R) to Tower 109 (R)
110	B795	Removal of Tower 110 (R) to Tower 112 (R)
111	B795	Removal of Tower 113 (R)
112	B795	Removal of Tower 113 (R)
113	C45s	Removal of Tower 114 (R)
114	C45s	Removal of Tower 115 (R)
115	C45s	Removal of Tower 116 (R)
116	C45s	Removal of Tower 117 (R)
117	C45s	Removal of Tower 118 (R) and Tower 119I)

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Worksite Access Reference	Public Road	Components
119	C45s	Removal of Tower 122 (R) to Tower 126 (R)
120	C45s	Tower 96
121	C45s	Tower 99 and removal of Towers 131 (R) and 132 (R)

- 13.409 The proposed worksite accesses are preliminary based on SPEN's experience of constructing similar projects. The worksite access locations will be confirmed by the appointed contractor as an integral of their adopted CTMP, an outline of which is provided in **Appendix 13.1**.
- 13.410 All construction vehicles drivers will be instructed to access a worksite via an approved route.

### Assessment of Construction Effects (including tree felling)

- 13.411 As detailed in **Chapter 5**, the overall construction period duration for the G-T Connection is 58 months, allowing for the removal of the R route (south) towers between Glenlee and Tongland.
- 13.412 Sections of the A77, A76, A75, A713, A712, A711, A702, A762, B795, C50s, C31s, C13s, C45s, U137s, U133s, U107s, U103s, U62s, U43s, U34s, U3s and U2s will be used by construction vehicles. The number of movements (note: one trip = two movements; i.e. one delivery and one return journey) for each construction task are outlined below in **Table 13.49**.
- 13.413 As outlined in **Chapter 3**, tree felling (or loss due to windthrow if not felled) of the areas outwith the 80m wayleave will result in indirect effects on the wider environment and therefore traffic generated by tree felling outside the wayleave has been included in the traffic assessment as part of a robust EIA. This is based on the assumption that felling both within the wayleave and for windthrow will happen concurrently.

Table 13.49: Vehicle Movements Generated by Tree Felling and Construction Activity for Connection G-T of the KTR Project

Activity/Item Being Transported	Type of Vehicle	Details/deliveries	Total Vehicle Movements
Timber Clearance (within wayleave)	Lorry (24 tonne capacity)	An estimated 208Ha of timber will be felled resulting in a total of 18,293 tonnes of timber to be produced.	1,522
Timber Clearance (windthrow areas)	Lorry (24 tonne capacity)	An estimated 91.9Ha of timber will be felled resulting in a total of 22,920 tonnes of timber to be produced.	1,908
Site Access Tracks	Lorry (20 tonne capacity)	An estimated 341,500 tonnes of stone will be required.	34,150
OHL Construction	Lorry (20 m <sup>3</sup> capacity) concrete ready mix trucks with a 6 m <sup>3</sup> capacity	Concrete and steelwork	3,704
Wiring and Commissioning	Lorry (20 m³ capacity) and light vans	Wiring and commissioning	1,196
Decommissioning	Lorry (20 m³ capacity) and light vans	Steelwork and wiring	6,600
Reinstatement	Lorry (20 tonne capacity)	An estimated 293,540 tonnes of stone will be required to be removed.	29,354
Other	Private cars, light vans and mini-bus	Construction personnel and other site visitors	92,863
TOTAL HGV TRAF	FIC MOVEMENTS FOR	CONNECTION G-T	78,434
TOTAL LGV TRAFF	IC MOVEMENTS FOR	CONNECTION G-T	92,863
TOTAL ALL TRAFF	IC MOVEMENTS FOR (	CONNECTION G-T	171,297

### Predicted Construction Effects

- 13.414 As indicated in **Table 13.49** the total of traffic generated by Connection G-T is estimated as 171,297 movements, of which 78,434 movements will be HGV movements over the 58 months construction period.
- 13.415 With reference to the indicative construction programme and the anticipated vehicle movements provided by SPEN for each construction related activity, the number of vehicle movements that are anticipated for each month of the construction programme has been calculated. The vehicle movements calculated have then been distributed over each route section as per the assumptions indicated in the Assessment Assumptions section.
- 13.416 Estimated daily and monthly movements generated by G-T Connection against the programme along with predicted percentages increases on relevant trunk and local roads are shown in **Table 13.50.**
- 13.417 Construction traffic is estimated at an average of 164 vehicle movements a day over the entire construction period.
- 13.418 The highest levels of construction traffic are anticipated to occur over a period of 13 months from December 2025 to December 2026 with an average of 234 vehicle movements a day, with a maximum of 250 vehicle movements occurring per day in April 2026. The 'peak period' for the purpose of this assessment is therefore considered to be December 2025 to December 2026 inclusive. **Table 13.51** presents a summary of this information by routes sections.
- 13.419 The A77, A76, A75, A702 and B795 currently operate comfortably within their respective capacities (see **Table 13.7**). The increase in traffic volume on these roads throughout the construction phase of G-T Connection of the KTR Project is assessed to be less than 5% in terms of both general traffic (HGV+LGV) and specifically HGV traffic. On this basis, the significance of the effect is assessed to be **none** and accordingly **not significant**. Since the 10% traffic increase threshold has not been exceeded on these routes, no detailed assessment has been undertaken for these public roads.
- 13.420 The C50s, C31s, U137s, U133s, U107s, U103s and U62s will solely be used to facilitate the removal of R route (south). It is assessed that the removal of the R route (south) will generate less than 10 vehicle movements per day on these specific road sections. Accordingly, the professional judgement of the assessment team is that effects arising from such low level of traffic will be **none** and therefore **not significant**. On this basis, no detailed assessment has been carried out for these public road sections.
- 13.421 For the purpose of the detailed assessment, it has been assumed that embedded mitigation measures and operational procedures as proposed in the framework CTMP (**Appendix 13.1**) will be in place during the construction of the KTR Project and therefore have been used to inform the judgement of significance of effects.

Table 13.50: Outline Construction Programme and Associated Traffic Assessment for Connection G-T of the KTR Project

Programme	Mar-22	Apr-22 May	-22 Jun-22	Jul-22 Aug	-22 Sep-22	Oct-22 Nov-2	22 Dec-22	Jan-23 Feb	-23 Mar-23	Apr-23 M	lay-23 Ju	n-23 Jul-23	Aug-23	Sep-23 O	t-23 Nov-	23 Dec-23	Jan-24	Feb-24 Ma	r-24 Apr-2	4 May-24	Jun-24 J	Jul-24 Aug-	24 Sep-24	1 Oct-24 N	lov-24 Dec	c-24 Jan	n-25 Feb-2	25 Mar-25	Apr-25 May-	-25 Jun-25	Jul-25 Au	g-25 Sep-25	Oct-25 N	ov-25 Dec-2	5 Jan-26	Feb-26 M	r-26 Ap	r-26 May-	26 Jun-26	Jul-26 A	ug-26 Sep-2	26 Oct-26	Nov-26 De	ec-26 TOTAL
Activity																																												
Timber Clearance (within wayleave)	38	38 3	38	38 38	3 38	38 38	38	38 38	18 38	38	38	38 38	38	38	38 38	38	38	38 :	38 38	38	6	0 0	0	0	0	0	0 0	0	0 0	0	0	0 0	0	0 0	0	0	0	0 0	0	0	0 0	0	0	0 1032
Timber Clearance (windthrow	88	88 8	8 88	88 88	8 88	88 88	88	88 88	8 88	88	88	88 88	88	88	88 88	88	88	88	88 88	88	22	0 0	0	0	0	0	0 0	0	0 0	0	0	0 0	0	0 0	0	0	0	0 0	0	0	0 0	0	0	0 2398
areas)																										1					- 1					- 1							- 1	
Site Access Tracks OHL Construction	2070	2034 20	34 2034	0 0		2196 2196 0 0		0 0	_	2196 602		2196 2196 874 874	_		196 2196 374 874		2196 874		196 2196 174 1234	2196 1450	_	162 162 1450 1450				_	162 162 450 1450		162 162 1450 121	_		0 0		162 162 0 0	_			0 0	_	_	0 0	-	-	0 62873
Wiring and Commissioning		0 0	0	0 0						_		0 0	_	_	0 0				0 0		_	650 650				_	550 650		650 650	_		650 650	-	426 0				0 0	_	_	0 0	-		0 11498
Decommissioning of 'R' route	0	0 0	0	0 0	0	0 168	196	196 19	96 196	196	196	196 196	196	196	196 196	196	196	196 1	96 196	196	196	196 196	3 196	196	196 1	96 1	96 196	196	196 196	6 196	196	196 196	196	196 196	196	196	196 2	234 0	0	0	0 0	0	0	0 8242
Reinstatement	0		0	0 0		0 0																																	0 4670					
Total no. vehicle movements, all traffic	2196	2160 21	60 2160	2160 216	30 2376	2322 2490	0 2518	2518 25	18 2518	3120	3392 3	3392 3392	3392	3392	392 3392	3392	3392	3392 3	392 3752	3990	3455	2458 2458	8 2458	2458	2458 24	458 24	458 2458	8 2458	2458 221	8 1361	1008 1	008 1008	1008	784 3974	4602	4694	440 4	594 467	0 4670	4670	4670 4670	4670	4670	1443 <b>171297</b>
(HGV + LGV) Total no. vehicle	-						+																																					
movements, all traffic (HGV + LGV) / day	98	98 9	3 98	98 98	3 110	110 126	126	126 12	26 126	178	178	178 178	178	178	178 178	178	178	178 1	78 214	256	256	158 158	3 158	158	158 1	58 1	158 158	3 158	158 158	B 104	68	68 68	68	68 226	226	226	218 2	250 23	236	236	236 236	236	236	236 -
Total no. HGV vehicle movements	1390	1368 13	68 1368	1368 136	8 1494	1462 1498	8 1504	1504 150	1504	1576	1608 1	1608 1608	1608	1608	608 1608	1608	1608	1608 1	608 1654	1684	1004	382 382	2 382	382	382 3	182 3	382 382	2 382	382 360	0 250	204	204 204	204	174 2212	2572	2616	478 2	530 252	6 2526	2526	2526 2526	2526	2526	618 <b>78434</b>
Total no. HGV vehicle movements / day	72		2 72	72 72					88 88		116		_			116		116 1				86 86	_				86 86		86 86	_		38 38		38 156	_			168 16	_					
Total no. LGV vehicle movements Total no. LGV vehicle	806	1.0-		792 79								1784 1784			784 1784		1784		_			2076 2076				_	076 2076		2076 185	_		804 804		610 1762			_	064 214						825 <b>92863</b>
movements / day	26	26 2	6 26	26 26	30	30 38	38	38 38	18 38	62	62	62 62	62	62	62 62	62	62	62 (	62 78	98	98	72 72	72	72	72 7	72 7	72 72	72	72 72	! 46	30	30 30	30	30 70	70	70	68	82 76	76	76	76 76	76	76	76 -
A76 (between B743 and A70)		404								101			401				401				401			101	40/						101		101		401								401	
% Increase in ALL TRAFFIC A76 (between B743 and A70)		<1% <1 2% 2°	% <1%	<1% <1°		<1% <1% 2% 2%		_			<1% ·	<1% <1%			:1% <1% 2% 2%	_			1% <1%			<1% <1%		- "		_	1% <1%		<1% <19	_		1% <1%		<1% <1%	_			1% <15 4% 4%	_	<1% 4%	<1% <1% 4% 4%			<1% - 4% -
% Increase in HGV Traffic A76 (between A70 and New																_												_																
Cumnock) % Increase in ALL TRAFFIC	<1%	<1% <1	% <1%	<1% <1'	% <1%	<1% <1%	s <1%	<1% <1	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	:1% <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	6 <1%	<1%	<1% <1	1% <	1% <1%	6 <1%	<1% <1%	% <1%	<1%	1% <1%	<1%	<1% <1%	<1%	<1%	:1% <	:1% <19	6 <1%	<1%	<1% <1%	<1%	<1%	<1% -
A76 (between A70 and New Cumnock) % Increase in HGV Traffic	2%	2% 29	% 2%	2% 29	6 2%	2% 2%	2%	2% 29	% 2%	2%	2%	2% 2%	2%	2%	2% 2%	2%	2%	2% 2	2% 2%	2%	2%	<1% <1%	6 <1%	<1%	<1% <1	1% <	:1% <1%	6 <1%	<1% <19	% <1%	<1%	1% <1%	<1%	<1% 4%	4%	4%	4%	4% 4%	4%	4%	4% 4%	4%	4%	4% -
% Increase in HGV Traffic A76 (between New Cumnock and Thornhill)	<1%	<1% <1	% <1%	<1% <1'	% <1%	<1% <1%	6 <1%	<1% <1	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	:1% <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	6 <1%	<1%	<1% <1	1% <	:1% <1%	6 <1%	<1% <1%	% <1%	<1%	1% <1%	<1%	<1% <1%	<1%	<1%	:1% <	:1% <15	6 <1%	<1%	<1% <1%	<1%	<1%	<1% -
% Increase in ALL TRAFFIC A76 (between New Cumnock and	-170						+					176					3.70		\170																11/0				_			~170		
Thornhill) % Increase in HGV Traffic	3%	3% 3	% 3%	3% 3%	6 3%	3% 3%	3%	3% 3%	% 3%	3%	3%	3% 3%	3%	3%	3% 3%	3%	3%	3% 3	3%	3%	3%	<1% <1%	6 <1%	<1%	<1% <1	1% <	:1% <1%	6 <1%	<1% <1%	% <1%	<1%	1% <1%	<1%	<1% 5%	5%	5%	5%	5% 5%	5%	5%	5% 5%	5%	5%	5% -
A76 (between Thornhill and A75) % Increase in ALL TRAFFIC	<1%	<1% <1	% <1%	<1% <1'	% <1%	<1% <1%	6 <1%	<1% <1	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	:1% <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	6 <1%	<1%	<1% <1	1% <	1% <1%	6 <1%	<1% <19	% <1%	<1%	1% <1%	<1%	<1% <1%	<1%	<1%	:1% <	:1% <19	6 <1%	<1%	<1% <1%	<1%	<1%	<1% -
A76 (between Thornhill and A75) % Increase in HGV Traffic	3%	3% 3	% 3%	3% 3%	6 3%	3% 3%	3%	3% 3%	% 3%	3%	3%	3% 3%	3%	3%	3% 3%	3%	3%	3% 3	3%	3%	3%	<1% <1%	6 <1%	<1%	<1% <1	1% <	1% <1%	6 <1%	<1% <1%	% <1%	<1%	1% <1%	<1%	<1% 6%	6%	6%	6%	6% 6%	6%	6%	6% 6%	6%	6%	6% -
A75 (between A762 and A712) % Increase in ALL TRAFFIC	<1%	<1% <1	% <1%	<1% <1'	% <1%	<1% <1%	6 <1%	<1% <1	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	:1% <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	6 <1%	<1%	<1% <1	1% <	1% <1%	6 <1%	<1% <19	% <1%	<1%	1% <1%	<1%	<1% <1%	<1%	<1%	:1% <	:1% <19	6 <1%	<1%	<1% <1%	<1%	<1%	<1% -
A75 (between A762 and A712) % Increase in HGV Traffic A75 (between A712 and A780)	2%		% 2%	2% 29					% 3%			3% 3%			3% 3%		3%	3% 3				<1% <1%	_	_		_	1% <1%		<1% <19	_		1% <1%		<1% 4%	4%		_	4% 4%	_		4% 4%			4% -
% Increase in ALL TRAFFIC A75 (between A712 and A780)	_		% <1%	<1% <1'		<1% <1%					- ''	<1% <1%			:1% <1%	_			1% <1%		- "	<1% <1%	_				1% <1%		<1% <1%	_		1% <1%		<1% <1%	-			1% <19			<1% <1%			<1% -
% Increase in HGV Traffic A75 (between A780 and A76)			% <1%	<1% <1'		<1% <1%			_		_	<1% <1%			:1% <1%	_			1% <1%			<1% <1%		_		_	1% <1%			% <1%		1% <1%		<1% <1%	-	- "		:1% <19	_		<1% <1%		<1%	
% Increase in ALL TRAFFIC A75 (between A780 and A76)		<1% <1	% <1% % <1%	<1% <1'		<1% <1% <1% <1%	_		_	_		<1% <1%			:1% <1%				1% <1% 1% 1%			<1% <1%				_	1% <1%		<1% <1%	_		1% <1%		<1% <1% <1% 2%	<1% 2%		_	:1% <19 2% 1%			<1% <1% 1% 1%			<1% -
% Increase in HGV Traffic A77 (between A713 and A70)	_		% <1%			<1% <1%				<1%					:1% <1%		_	<1% <	_	<1%			6 <1%	_	<1% <1	_	_	_	<1% <1%	_		1% <1%		<1% 2%	_	<1%			6 <1%		<1% <1%			
% Increase in ALL TRAFFIC A77 (between A713 and A70)	_	<1% <1		<1% <1'								<1% <1%			:1% <1%		<1%		1% <1%			<1% <1%					1% <1%		<1% <19	_		1% <1%		<1% <1%	_		_	1% <19			<1% <1%			<1% -
% Increase in HGV Traffic A713 (between A77 and Dalmellington)	<1%	<1% <1	% <1%	<1% <1'	% <1%	<1% <1%	6 <1%	<1% <1	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	:1% <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	6 <1%	<1%	<1% <1	1% <	:1% <1%	6 <1%	<1% <1%	% <1%	<1%	1% <1%	<1%	<1% <1%	<1%	<1%	:1% <	:1% <19	6 <1%	<1%	<1% <1%	<1%	<1%	<1% -
% Increase in ALL TRAFFIC A713 (between A77 and	C170	\$170	76 (176	C170 C1	70 (170	C176 C176	0 (170	2170 21	170 (170	V170	X170 .	170	C170	C170	.170	170	C170	X170	170 (170	<170	C170	C170 C170	0 (1/0	C176	<170	170	.170	0 (170	X170 X17	70 (170	(170	170 (170	V170	C170 C170	V170	C170	.170	.170 (1.	0 (170	C170	C176 C176	V170	<170	.176
Dalmellington) % Increase in HGV Traffic	<1%	<1% <1	% <1%	<1% <1'	% 3%	3% 3%	3%	3% 3%	% 3%	3%	3%	3% 3%	3%	3%	3% 3%	3%	3%	3% 3	3%	3%	3%	3% 3%	3%	3%	3% 3	3% 3	3% 3%	3%	3% 3%	3%	2%	2% 2%	2%	2% 2%	2%	2%	:1% <	:1% <19	6 <1%	<1%	<1% <1%	<1%	<1%	<1% -
A713 (between Dalmellington and Carsphairn)	2%	2% 29	% 2%	2% 2%	6 2%	2% 2%	2%	2% 29	% 2%	2%	2%	2% 2%	2%	2%	2% 2%	2%	2%	2% 2	2% 3%	3%	3%	1% 1%	1%	1%	1% 1	1% 1	1% 1%	1%	1% 1%	5 1%	<1%	1% <1%	<1%	<1% 3%	3%	3%	3% :	3% 3%	3%	3%	3% 3%	3%	3%	3% -
% Increase in ALL TRAFFIC A713 (between Dalmellington and	11%	11% 11	% 11%	11% 119	% 12%	12% 13%	6 13%	13% 13	3% 13%	13%	13%	13% 13%	13%	13%	3% 13%	13%	13%	13% 1:	3% 13%	14%	14%	4% 4%	4%	4%	4% 4	1% 4	1% 4%	4%	4% 4%	5 3%	3%	3% 3%	3%	3% 20%	20%	20%	9% 2	0% 209	6 20%	20%	20% 20%	20%	20%	20% -
Carsphairn) % Increase in HGV Traffic A713 (between Carsphairn and	11%	11% 11	% 11%	11% 11	76 12%	12% 13%	0 13%	13% 13	13%	13%	13%	13% 13%	13%	13%	3% 13%	13%	13%	13% 1	3% 13%	14%	14%	4% 4%	4%	4%	4% 4	1% 4	1% 4%	4%	4% 4%	3%	3%	3% 3%	3%	3% 20%	20%	20%	9% 2	.0% 20%	6 20%	20%	20% 20%	20%	20%	.0% -
A762) % Increase in ALL TRAFFIC	2%	2% 29	% 2%	2% 29	6 2%	2% 3%	3%	3% 39	% 3%	3%	3%	3% 3%	3%	3%	3% 3%	3%	3%	3% 3	3% 4%	4%	4%	2% 2%	2%	2%	2% 2	2% 2	2% 2%	2%	2% 2%	5 2%	1%	1% 1%	1%	1% 4%	4%	4%	4%	5% 4%	4%	4%	4% 4%	4%	4%	4% -
A713 (between Carsphairn and A762)	13%	13% 13	% 13%	13% 139	% 15%	15% 16%	6 16%	16% 16	5% 16%	18%	18%	18% 18%	18%	18%	8% 18%	18%	18%	18% 1	8% 18%	19%	19%	8% 8%	8%	8%	8% 8	3% 8	3% 8%	8%	8% 8%	6%	6%	6%	6%	6% 25%	25%	25%	23% 2	5% 249	6 24%	24%	24% 24%	24%	24%	24% -
% Increase in HGV Traffic A713 North of Dalry (between A76)	2						+																																					
and A702) % Increase in ALL TRAFFIC	2%	2% 2	% 2%	2% 29	6 2%	2% 3%	3%	3% 39	% 3%	3%	3%	3% 3%	3%	3%	3% 3%	3%	3%	3% 3	3% 3%	4%	4%	2% 2%	2%	2%	2% 2	2% 2	2% 2%	2%	2% 2%	5 2%	1%	1% 1%	1%	1% 4%	4%	4%	4%	5% 4%	4%	4%	4% 4%	4%	4%	4% -
A713 North of Dalry (between A762 and A702) % Increase in HGV Traffic	17%	17% 17	% 17%	17% 17	% 21%	21% 22%	6 22%	22% 22	2% 22%	24%	24%	24% 24%	24%	24%	24% 24%	24%	24%	24% 2	4% 24%	26%	26%	10% 10%	6 10%	10%	10% 10	0% 10	0% 10%	6 10%	10% 10%	% 9%	9%	9% 9%	9%	9% 34%	34%	34%	31% 3	4% 339	6 33%	33%	33% 33%	33%	33%	33% -
A713 South of Dairy (between A702 and A712)	1%	1% 19	% 1%	1% 19	6 1%	1% 2%	2%	2% 29	% 2%	2%	2%	2% 2%	2%	2%	2% 2%	2%	2%	2% 2	2% 2%	2%	2%	1% 1%	1%	1%	1% 1	1% 1	1% 1%	1%	1% 1%	5 1%	<1%	1% <1%	<1%	<1% 3%	3%	3%	2% :	3% 3%	3%	3%	3% 3%	3%	3%	3% -
% Increase in ALL TRAFFIC A713 South of Dalry (between A70)		.~ 1	//0	17	70	270	_,0	Z)	2/0			2.70			- 2/0	-/0		4	2/0	270	-~	170	170	~	'	- '	. 1/0	. ,0	170					3,0		-70		37	3,0	370	570	0.70	-/-	
and A712) % Increase in HGV Traffic	10%	10% 10	% 10%	10% 109	% 12%	12% 13%	13%	13% 13	3% 13%	14%	14%	14% 14%	14%	14%	4% 14%	14%	14%	14% 1	4% 14%	15%	15%	6% 6%	6%	6%	6% 6	6% 6	6%	6%	6% 6%	5%	5%	5% 5%	5%	5% 20%	20%	20%	8% 2	0% 199	6 19%	19%	19% 19%	19%	19%	19% -
A713 (between A712 and B795) % Increase in ALL TRAFFIC	<1%	<1% <1	% <1%	<1% <1'	% <1%	<1% <1%	6 <1%	<1% <1	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	:1% <1%	<1%	<1%	<1% <	1% <1%	1%	1%	<1% <1%	6 <1%	<1%	<1% <1	1% <	:1% <1%	6 <1%	<1% <1%	% <1%	<1%	1% <1%	<1%	<1% 1%	1%	1%	:1%	1% 1%	1%	1%	1% 1%	1%	1%	1% -
A713 (between A712 and B795) % Increase in HGV Traffic	3%	3% 39	% 3%	3% 3%	6 5%	5% 6%	6%	6% 69	% 6%	6%	6%	6% 6%	6%	6%	6% 6%	6%	6%	6% 6	6%	6%	6%	4% 4%	4%	4%	4% 4	1% 4	1% 4%	4%	4% 4%	4%	4%	4% 4%	4%	4% 9%	9%	9%	5%	9% 6%	6%	6%	6% 6%	6%	6%	6% -
A713 (between B795 and A75) % Increase in ALL TRAFFIC A713 (between B795 and A75)	_	<1% <1		<1% <1'		<1% <1%		<1% <1				<1% <1%	<1%		:1% <1%	_	<1%		1% <1%		- "	<1% <1%				-	:1% <1%		<1% <1%	-	- "	1% <1%		<1% <1%	<1%			:1% <19			<1% <1%			<1% -
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% Increase in ALL TRAFFIC A712 (between A75 and A762)	4%			4% 49		4% 4%	_	4% 49	_	_		5% 5%	5%		5% 5%		5%	5% 5	_	7%		3% 3%		+ +	3% 3	_	3% 3%	_	3% 3%	_		1% 1%	1%	1% 7%	7%		_	8% 7%	_		7% 7%			7% -
% Increase in HGV Traffic A712 (between A762 and A713)	25%			25% 259		25% 25%	_	25% 25				25% 25%	25%		25% 25%	_	25%	25% 2			28%	6% 6%	_	_	6% 6		5% 6%		6% 6%			3% 3%		3% 44%	44%			4% 449			44% 44%			5% -
% Increase in ALL TRAFFIC A712 (between A762 and A713)	2%			2% 29 20% 20°		2% 2% 20% 20%			% 2% )% 20%			3% 3% 22% 22%	3% 22%		3% 3% 2% 22%	_	3% 22%	3% 3	3% 4% 2% 22%			2% 2% 3% 3%	_	_	2% 2 3% 3	_	2% 2% 3% 3%	_	2% 2% 3% 3%			1% <1% 2% 2%		<1% 4% 2% 33%	33%		_	5% 5% 3% 33°	_		5% 5% 33% 33%			5% -
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% Increase in ALL TRAFFIC A712 (between A713 and Corsock)	3%			3% 3%		3% 3%		3% 39	_	- "		3% 3%	3%		3% 3%		3%		3% 3%			3% 3%		_	3% 3	_	3% 3%		3% 3%			3% 3%		3% 3%	3%		_	3% <19			<1% <1%			<1% -
% Increase in HGV Traffic A712 (between Corsock and A75)	_	<1% <1		<1% <1'			_	1% 19	_	_		2% 2%			2% 2%		2%	_	2% 2%			2% 2%		+ +		_	2% 2%	_	2% 2%	_		1% <1%		<1% 2%	2%		_	2% 2%	_		2% 2%			2% -
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% Increase in HGV Traffic A711 (between A75 and A762) % Increase in ALL TRAFFIC	<1%			<1% <1'					1% <1%			<1% <1%	<1%		:1% <1%	_	<1%	_	1% <1%			<1% <1%		_			1% <1%		<1% <1%	_		1% <1%		<1% 1%	1%		_	1% 1%	_		1% 1%			1% N/A
A711 (between A75 and A762) % Increase in HGV Traffic	8%	8% 89	% 8%	8% 89	6 8%	8% 8%	8%	8% 89	% 8%	9%	9%	9% 9%	9%	9%	9% 9%	9%	9%	9% 9	9% 9%	9%	9%	2% 2%	2%	2%	2% 2	2% 2	2% 2%	2%	2% 2%	5 1%	1%	1% 1%	1%	1% 15%	15%	15%	5% 1	5% 159	6 15%	15%	15% 15%	15%	15%	15% -
A702 (between A713 and Moniaive % Increase in ALL TRAFFIC	<1%	<1% <1	% <1%	<1% <1'	% 2%	2% 2%	2%	2% 29	% 2%	2%	2%	2% 2%	2%	2%	2% 2%	2%	2%	2% 2	2% 2%	3%	3%	2% 2%	2%	2%	2% 2	2% 2	2% 2%	2%	2% 2%	5 2%	2%	2% 2%	2%	2% 2%	2%	2%	2%	4% 3%	3%	3%	3% 3%	3%	3%	3% -
A702 (between A713 and Moniaive % Increase in HGV Traffic	<1%	<1% <1	% <1%	<1% <1°	% <1%	<1% <1%	6 <1%	<1% <1	I% <1%	<1%	<1%	<1% <1%	<1%	<1%	:1% <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	6 <1%	<1%	<1% <1	1% <	1% <1%	6 <1%	<1% <19	% <1%	<1%	1% <1%	<1%	<1% <1%	<1%	<1%	:1% <	:1% <19	6 <1%	<1%	<1% <1%	<1%	<1%	<1% -
A702 (between Moniaive and A76) % Increase in ALL TRAFFIC	<1%	<1% <1	% <1%	<1% <1'	% <1%	<1% <1%	6 <1%	<1% <1	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	:1% <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	6 <1%	<1%	<1% <1	1% <	:1% <1%	6 <1%	<1% <1%	% <1%	<1%	1% <1%	<1%	<1% <1%	<1%	<1%	:1%	1% <19	6 <1%	<1%	<1% <1%	<1%	<1%	<1% -

Programme !	Mar-22 A	Apr-22 M	1ay-22	lun-22 .	Jul-22	Aug-22	Sep-22	2 Oct-2	22 Nov-	-22 De	c-22 J	Jan-23	Feb-2	3 Mar-2	3 Apr-	23 May	/-23 Ju	n-23 J	ıl-23 A	ug-23 S	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-2	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25 ]	Jun-25	Jul-25	Aug-25	Sep-25 (	ct-25 No	ov-25 De	c-25 Jai	n-26 Feb	-26 Mar	-26 Apr	-26 May	/-26 Jun-2	26 Jul-	26 Aug	-26 Sep-	26 Oct-2	26 Nov-2	26 Dec-2	6 TOTAI
(702 (between Moniaive and A76)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<19	% <	:1%	<1%	<1%	<1%	<19	% <1	1% -	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <1	% <1	% <1	% <19	1% <1%	% <1%	% <1%	1% <1%	% <1%	6 <1%	6 <1%	-
1762 (between A712 and B795) 6 Increase in ALL TRAFFIC	9%	9%	9%	9%	9%	9%	9%	9%	9%	% 9	9%	9%	9%	9%	129	% 12	2%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	14%	16%	16%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	5%	3%	3%	3%	3%	3%	17% 1	7% 17	% 17	% 17	% 179	7% 17%	% 17%	% 17%	°% 17%	% 17%	6 17%	17%	-
1762 (between A712 and B795) 6 Increase in HGV Traffic	96%	96%	96%	96%	96%	96%	96%	96%	969	% 9	96%	96%	96%	96%	104	% 10	4% 1	04%	04%	104%	104%	104%	104%	104%	104%	104%	104%	113%	113%	113%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	9%	9%	9%	9%	9% 1	74% 17	74% 17	174	1% 174	4% 174	4% 1749	174%	1749	4% 1749	174%	% 174%	6 174%	
1762 (between B795 and A75) 6 Increase in ALL TRAFFIC	9%	9%	9%	9%	9%	9%	9%	9%	9%	% 9	9%	9%	9%	9%	119	% 11	%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	14%	16%	16%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	4%	3%	3%	3%	3%	3%	17% 1	7% 17	% 17	% 17	'% 17°	7% 17%	% 17%	% 179	°% 17%	% 17%	6 17%	17%	-
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1762 (between A713 and U2s) 6 Increase in ALL TRAFFIC	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<19	% <	<1%	<1%	<1%	<1%	<19	K <1	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1% <	:1% <1	% <1	% <1	1% <19	1% <1%	% <1%	% <1%	1% <1%	% <1%	6 <1%	<1%	-
1762 (between A713 and U2s) 6 Increase in HGV Traffic	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	8%	16	8%	8%	8%	8%	89	6 8	%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8% 8	6 89	6 89	% <1	1% <1%	% <1%	% <1%	1% <1%	% <1%	s <1%	<1%	-
8795 (between A762 and A713)	1%	1%	1%	1%	1%	1%	1%	1%	1%	16	1%	1%	1%	1%	29	6 2	%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	2%	2% 2	6 29	6 29	% 2%	% 2%	2%	6 2%	% 2%	6 2%	2%	2%	-
795 (between A762 and A713) 6 Increase in HGV Traffic	4%	4%	4%	4%	4%	4%	4%	4%	4%	16	4%	4%	4%	4%	49	6 4	%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	8%	8%	8%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	<1% <	:1% <1	% <1	% <1	1% <19	1% <1%	% <1%	% <1%	1% <1%	% <1%	s <1%	<1%	-
6741 6 Increase in ALL TRAFFIC	2%	2%	2%	2%	2%	2%	2%	2%	2%	16	2%	2%	2%	2%	29	6 2	%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	3%	3% 3	6 39	6 39	% 3%	% 3%	6 3%	6 3%	% 3%	6 3%	3%	3%	-
8741 6 Increase in HGV Traffic	49%	49%	49%	49%	49%	49%	54%	54%	599	% 5	59%	59%	59%	59%	59	% 59	9%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	97% 9	97% 97	% 92	% 97	7% 979	7% 97%	% 97%	% 97%	7% 97%	% 97%	6 97%	97%	-
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45s 6 Increase in ALL TRAFFIC	2%	2%	2%	2%	2%	2%	2%	2%	3%	16	3%	3%	3%	3%	39	6 3	%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5% 5	6 59	6 69	% 5%	% 5%	6 5%	6 5%	% 5%	6 5%	5%	5%	-
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J43s 6 Increase in HGV Traffic	200%	200%	200%	200%	200%	200%	200%	200%	200	0% 20	00%	200%	200%	200%	200	% 20	0% 2	100%	200%	200%	200%	200%	200%	200%	200%	200%	200%	400%	400%	400%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200% 2	200% 4	100% 4	00% 40	0% 400	0% 400	0% 400	10% 4009	1% 400%	0% 4009	0% 400%	0% 400%	% 400%	6 400%	-
J34s 6 Increase in ALL TRAFFIC	1%	1%	1%	1%	1%	1%	1%	1%	1%	16	1%	1%	1%	1%	19	6 1	%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2% 2	6 25	6 29	% 2%	% 2%	6 2%	6 2%	% 2%	6 2%	2%	2%	-
J34s 6 Increase in HGV Traffic	200%	200%	200%	200%	200%	200%	200%	200%	200	0% 20	00%	200%	200%	200%	200	% 20	0% 2	100%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200% 2	200% 4	100% 4	00% 40	0% 400	9% 400	0% 400	10% 4009	1% 400%	0% 4009	0% 400%	0% 400%	% 400%	6 400%	-
J2s 6 Increase in ALL TRAFFIC	1%	1%	1%	1%	1%	1%	1%	1%	1%	16	1%	1%	1%	1%	29	6 2	%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2% 2	6 29	6 29	% 2%	% 2%	2%	6 2%	% 2%	6 2%	2%	2%	-
J2s 6 Increase in HGV Traffic	17%	17%	17%	17%	17%	17%	17%	17%	179	% 1	17%	17%	17%	17%	17	% 17	7%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	33% 3	33% 33	% 33	% 33	3% 339	3% 33%	% 33%	% 33%	3% 33%	% 33%	6 33%	33%	-
J3s 6 Increase in ALL TRAFFIC	6%	6%	6%	6%	6%	6%	6%	6%	6%	16	6%	6%	6%	6%	10	% 10	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	13%	16%	16%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	6%	3%	3%	3%	3%	3%	16% 1	16% 16	% 16	% 16	5% 169	6% 16%	% 16%	% 16%	5% 16%	% 16%	6 16%	16%	-
J3s 6 Increase in HGV Traffic	400%	400%	400%	400%	400%	400%	400%	400%	400	0% 4	00%	400%	400%	400%	400	% 40	0% 4	100%	100%	400%	400%	400%	400%	400%	400%	400%	400%	400%	400%	400%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200%	200% 2	200% 6	600% 6	00% 60	0% 600	0% 600	0% 600	10% 6009	1% 600%	0% 6009	0% 600%	0% 600%	% 600%	6 600%	-
Gateside Road 6 Increase in ALL TRAFFIC	1%	1%	1%	1%	1%	1%	1%	1%	1%	16	1%	1%	1%	1%	19	6 1	%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	3%	3% 3	6 39	6 39	% 3°	% 39	3%	á 3%	% 3%	هٔ 3%	3%	3%	1
Sateside Road 6 Increase in HGV Traffic	37%	37%	37%	37%	37%	37%	37%	37%	379	% 3	37%	37%	37%	37%	37	% 37	7%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	69% 6	59% 69	% 69	% 69	9% 699	9% 69%	% 69%	% 69%	9% 69%	% 69%	6 69%	69%	1

Table 13.51: Summary of Construction Traffic Generated on Public Roads within the Connection G-T Study Area

Road	Construction traff	ic generated over th	e 58 months constru ite section	ction programme,
	I GV-	+HGV		Only
	Average vehicle movements per day over entire construction period	Average vehicle movements per day during the period of peak construction activity	Average vehicle movements per day over entire construction period	Average vehicle movements per day during the period of peak construction activity
	[% Increase] {Significance}	[% Increase] {Significance}	[% Increase] {Significance}	[% Increase] {Significance}
<b>A76</b> (between B743 and A70)	20	36	20	36
[AADT = 11,691]	[<1%] {none, not significant}	[<1%] {none, not significant}	[2%] {none, not significant}	[4%] {none, not significant}
A76 (between A70 and New Cumnock)	20	36	20	36
[AADT = 6,423]	[<1%] {none, not significant}	[<1%] {none, not significant}	[2%] {none, not significant}	[4%] {none, not significant}
A76 (between New Cumnock and Thornhill)	18 [<1%]	34 [<1%]	18 [3%]	34 [5%]
[AADT = 3,854]	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}
<b>A76</b> (between Thornhill and A75)	18	34	18	34
[AADT = 6,106]	[<1%] {none, not significant}	[<1%] {none, not significant}	[3%] {none, not significant}	[6%] {minor, not significant}
<b>A75</b> (between A762(N) and A712)	48	70	28	46
[AADT= 7,901]	[<1%] {none, not significant}	[<1%] {none, not significant}	[3%] {none, not significant}	[4%] {none, not significant}
<b>A75</b> (between A712 and A780)	16 [<1%]	18 [<1%]	4 [<1%]	2 [<1%]
[AADT= 11,065]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A75</b> (between A780 and A76)	28 [<1%]	40 [<1%]	16 [1%]	26 [2%]
[AADT= 14,729]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A77</b> (between A713 and A70)	16 [<1%]	14 [<1%]	6 [<1%]	2 [<1%]
[AADT= 21,311]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
<b>A713</b> (between A77 and Dalmellington)	14 [<1%]	12 [<1%]	6 [2%]	4 [1%]
[AADT= 4,085]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between Dalmellington and Carsphairn)	32 [2%]	48 [3%]	22 [12%]	36 [20%]
[AADT= 1,557]	{none, not significant}	{none, not significant}	{moderate, significant}	{moderate, significant}

Road	Construction traf	fic generated over the by rou	e 58 months constru Ite section	ction programme,
A713 (between	42	62	26	40
Carsphairn and A762)	[3%]	[4%]	[15%]	[24%]
[AADT=1,398]	{none, not significant}	{none, not significant}	{moderate, significant}	{moderate, significant}
A713 (between A762 and	40	58	26	40
A702)	[3%]	[4%]	[21%]	[33%]
[AADT=1,382]	{none, not significant}	{none, not significant}	{moderate, significant}	{moderate, significant}
A713 (between A702 and	40	58	26	40
A712)	[2%]	[3%]	[12%]	[20%]
[AADT=2,282]	{none, not significant}	{none, not significant}	{moderate, significant}	{moderate, significant}
A713 (between A712 and	16	22	12	14
B795)	[<1%]	[1%]	[6%]	[7%]
[AADT=1,889]	{none, not significant}	{none, not significant}	{minor, not significant}	{minor, not significant}
A713 (between B795 and	22	28	10	12
A75)	[<1%]	[<1%]	[5%]	[5%]
[AADT=3,868]	{none, not significant}	{none, not significant}	{minor, not significant}	{minor, not significant}
A712 (between A75 and	32	52	18	32
A762)	[5%]	[7%]	[24%]	[44%]
[AADT=685]	{minor, not significant}	{minor, not significant}	{moderate, significant}	{moderate, significant}
A712 (between A762 and	46	70	24	40
A713)	[3%]	[5%]	[18%]	[33%]
[AADT=1,544]	{none, not significant}	{minor, not significant}	{moderate, significant}	{moderate, significant}
A712 (between A713 and	12	14	2	2
Corsock)	[1%]	[1%]	[2%]	[1%]
[AADT=988]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between Corsock	12	14	2	2
and A75)	[1%]	[2%]	[2%]	[1%]
[AADT=768]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A711 (between A75 and	34	58	28	52
A762)	[<1%]	[1%]	[8%]	[15%]
[AADT=3,898]	{none, not significant}	{none, not significant}	{minor, not significant}	{moderate, significant}
A702 (between A713 and	6	8	0	0
Moniaive)	[2%]	[3%]	[0%]	[0%]
[AADT=243]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A702 (between Moniaive	6	8	0	0
and A76)	[<1%]	[<1%]	[0%]	[0%]
[AADT=931]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}

Road	Construction traff	ic generated over the by rou	e 58 months constru Ite section	iction programme,
A762 (between A712 and	44	66	22	40
B795)	[11%]	[17%]	[92%]	[174%]
[AADT=398]	{moderate, significant}	{moderate, significant}	{major, significant}	{major, significant}
A762 (between B795 and	40	64	22	40
A75)	[11%]	[17%]	[64%]	[121%]
[AADT=370]	{moderate, significant}	{moderate, significant}	{major, significant}	{major, significant}
A762 (between A713 and	2	2	2	2
U2s)	[<1%]	[<1%]	[6%]	[3%]
[AADT=356]	{none, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}
<b>B795</b> (between A762 and	10	10	2	0
A713)	[2%]	[2%]	[3%]	[0%]
[AADT= 499]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
B741 (between New	20	36	20	36
Cumnock and Dalmellington)	[2%]	[4%]	[52%]	[97%]
[AADT= 1,031]	{none, not significant}	{none, not significant}	{moderate, significant}	{major, significant}
C13s	18	26	12	20
[AADT= 148]	[12%]	[18%]	[170%]	[286%]
[	{moderate, significant}	(moderate, significant}	{major, significant}	{major, significant}
C45s	8	14	6	8
[AADT= 249]	[3%]	[5%]	[483%]	[800%]
	{none, not significant}	{minor, not significant}	{major, significant}	{major, significant}
U43s	6	8	4	4
[AADT= 211]	[3%]	[4%]	[255%]	[400%]
	{none, not significant}	{none, not significant}	{major, significant}	{major, significant}
U34s	4	4	4	4
[AADT= 174]	[2%]	[2%]	[245%]	[400%]
	{none, not significant}	{none, insignificant}	{major, significant}	{major, significant}
U2s	4	4	4	4
[AADT= 199]	[2%]	[2%]	[20%]	[33%]
	{none, not significant}	{none, not significant}	{moderate, significant}	{moderate, significant}
U3s	8	10	4	6
[AADT= 62]	[10%]	[16%]	[386%]	[600%]
	{moderate, significant}	{moderate, significant}	{major, significant}	{major, significant}
Gateside Road	18	34	18	34
(Dalmellington)	[1%]	[3%]	[33%]	[69%]
[AADT= 1,280]	{none, not significant}	{none, not significant}	{moderate, significant}	{major, significant}

the A713 (between Dalmellington and the A712), A712 (between A75 and A713), A711, A762 (between A712 and A75), B741, C45s, C13s, U43s, U34s, U2s, and U3s and Gateside Road either, or both, throughout the whole project duration or during the 'peak period' of construction activity.

13.425 The A713, A712, A711 and A762 have the residual capacity (see **Table 13.52**) to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the A713, A712, A711 and A762 is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

13.424 From a review of **Table 13.51** it is evident that threshold significance criteria have been exceeded on

13.426 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such shows a relatively large traffic increase which would represent a major effect, however it is important to note that these route sections have the residual capacity (see **Table 13.52**) to readily accommodate the expected

Driver Delay

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- 13.422 All public road route sections where the 10% threshold significance criteria has been exceeded operate notably below their theoretical capacity. **Table 13.52** provides a comparison of forecast traffic flows on roads during the Peak Period and associated theoretical road capacities.
- 13.423 Furthermore, the CTMP (a framework of which is provided as **Appendix 13.1**) will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. CTMP measures include but are not limited to:
  - The timing and frequency of vehicle movements will be managed to minimise local disruption;
  - details of access route will form part of the site induction and training will be held for all site operatives and delivery drivers through 'toolbox talks'; and
  - where reasonable and practicable, project-related vehicles will avoid travelling in convoys on public roads

Table 13.52: Baseline Traffic + Traffic Generated by Construction of the G-T Connection of the KTR Project

Route Section	Two-way peak hour movements (2022 Baseline Traffic + Traffic Generated by Construction of the G-T Connection of the KTR Project)	Capacity (vph) (two-way hourly flow)
A713 (between Dalmellington and Carsphairn)	206	1800
A713 (between Carsphairn and A762)	206	1800
<b>A713</b> (between A762 and A702)	206	1600
<b>A713</b> (between A702 and A712)	206	1600
<b>A712</b> (between A75 and A762)	206	1800
<b>A712</b> (between A762 and A713)	206	1800
<b>A711</b> (between A75 and A762)	206	1800
<b>A762</b> (between A712 and B795)	206	1600
<b>A762</b> (between B795 and A75)	206	1600
<b>B741</b> (between New Cumnock and Dalmellington)	204	1800
C13s	54	Not Specified
C45s	52	Not Specified
U43s	52	Not Specified
U34s	52	Not Specified
U2s	52	Not Specified
U3s	52	Not Specified
Gateside Road (Dalmellington)	204	1600

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- additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.427 The C45s, C13s, U43s, U34s and U3s have very low traffic flow and as such show a relatively large traffic increase which would represent a major effect. However, professional judgement suggests that effects on these roads are likely to be less significant based on the low level of construction traffic anticipated. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the C45s, U43s, U34s and U3s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.428 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the U2s to provide passing places will be implemented; achieving a minimum of width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (See Embedded Mitigation Measures Section). On this basis, the significance of effect of driver delay for users of the U2s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.429 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic, the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.53**.

**Table 13.53: Projected Collision** 

Route Section	Average No. of collisions (2022 Average Baseline)	Average No. of collisions  (2022 Average Baseline + Traffic Generated by Construction of the G-T Connection of the KTR Project)
A713 (between Dalmellington and Carsphairn)	4.7	4.8
A713 (between Carsphairn and A762)	1.3	1.4
<b>A713</b> (between A762 and A702)	0	0
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A712</b> (between A75 and A762)	2	2.1
<b>A712</b> (between A762 and A713)	0.3	0.4
<b>A711</b> (between A75 and A762)	1.3	1.4
<b>A762</b> (between A712 and B795)	0	0
<b>A762</b> (between B795 and A75)	0	0
B741 (between New Cumnock and Dalmellington)	1.7	1.8
C13s	0	0
C45s	0	0
U43s	0	0
U34s	0	0
U2s	0	0
U3s	0.3	0.4
Gateside Road (Dalmellington)	0	0

- 13.430 Using this basis of assessment, there would be a negligible increase in PICs in the Study Area as a consequence of the increased traffic generated by G-T Connection and the significance of the effect would be **none** and **not significant**.
  - Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)
- 13.431 The IEMA Guidelines define severance as 'the perceived division that can occur within a community when it becomes separated by a major traffic artery'. Severance may result from a road carrying large traffic flows or a physical barrier created by the road itself, and the IEMA guidelines suggest that consideration is given to the severity of existing severance and how this might be exacerbated by proposed construction traffic generated by a development. The roads within the G-T Connection Study Area will continue to operate below capacity, even with the addition of traffic generated by construction of the G-T Connection. Severance should not occur when there is such a notable level of residual road capacity and traffic generated by the G-T Connection will be relatively low.
- 13.432 For similar reasoning, pedestrian delay is not considered to be an existing problem on any of the route sections within the G-T Study Area, nor one that shall be created by the addition of proposed construction traffic to these routes.
- 13.433 Pedestrian amenity is broadly defined in the IEMA Guidelines as the 'relative pleasantness of a journey', and this definition also takes into account fear and intimidation. The IEMA Guidelines suggest that 'a tentative threshold for judging the significance of changes in pedestrian amenity would be where traffic flows (or its lorry component) is halved or doubled'. The only road sections where HGV flows are expected to double, or more are the A762 (between the A712 and the A75), the A C45s, C13s, U43s, U34s and U3s.
- 13.434 The CTMP an outline of which is provided as **Appendix 13.1** will promote interventions that will minimise the effect of construction traffic on local communities, measures include but are not limited to:
  - temporary construction site signage will be erected on the local road network in advance of local communities to warn people of construction activities and associated construction vehicles;
  - SPEN shall nominate a Community Liaison Officer (CLO); the CLO will be responsible for keeping the local community informed of progress on the site and warning them of upcoming activities which may give rise to increased construction vehicle movements; and
  - all site staff will be informed about traffic management arrangements and procedures via the site induction.
- 13.435 Site observations indicate that pedestrian activity on the C45s, U43s, U34s and U3s road sections is low. Furthermore, the CTMP will promote interventions that will minimise the effect of construction traffic on pedestrian amenity. On this basis, it is considered that construction traffic generated by Connection G-T will have a **minor** and therefore **not significant** effect to the amenity of users of the C45s, U43, U34 and U3s.
- 13.436 HGV traffic is predicted to increase considerably on the C13s and A762 through Laurieston. However, with the interventions promoted through the CTMP, and most specifically through local community consultation, it is considered that construction traffic generated by Connection G-T will have a **minor** and therefore **not significant** effect to the amenity of users of the C13s and A762.
- 13.437 Several core paths overlap with proposed construction access tracks, this include the following Core Paths (see **Figure 13.2**):
  - The New Galloway West path (Core Path 516) overlaps with a proposed access track to towers 5 to 12;
  - Raiders Road to Kenmuir Link (Core Path 142) overlaps with a proposed access track to Hind Craig Quarry;
  - Raiders Road East (Core Path 141) and Cairn Edward Hill path (Core Path 177) overlaps with a proposed access track to towers 43 to 49;
  - Arie path, near Mossdale (Core Path 153) overlaps with a proposed access track to towers 50 and 51;
  - Glengap and Laurieston Forest (Core Path 28) and Retreat Wood, Laurieston (Core Path 144) overlap with a proposed access track to Craigelwhan Quarry;

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- The Gunney, Parton (Core Path 29) overlaps with a proposed access track to existing R route (south) towers 84(R) to 87(R);
- Livingston Hill (Core Path 208) overlaps with a proposed access track to towers 104(R) and 105(R);
- 13.438 Furthermore, several construction access routes overlap and/or intersect with existing recreational routes, this include the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route;
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way);
  - the section of the C13s intersects the Kenick Burn Walk (Core Path 200); and
  - the section of the A712 between the A75 and the A762 intersects the National Cycle Route 7.
- 13.439 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of construction traffic. On this basis, it is considered that construction traffic generated by Connection G-T will have a **minor** and therefore **not significant** effect to the amenity of users of the recreational routes identified above.
- 13.440 New construction access tracks will intersect with Raiders Road (Core Path 143), the Mossdale to Gatehouse Station Railway walk (Core Path 485) and Core Path 205. Based on site observations and results of NMU surveys it is considered that construction traffic generated by Connection G-T will have a **minor** effect on pedestrian amenity, specifically to the amenity of users of these three recreational routes.
- 13.441 NMU surveys indicated a relatively high level of equestrian activity on the B795. There is existing signage in place warning road users of the presence of equestrians and delivery drivers will be informed about the potential presence of equestrians at that location through 'toolbox talks'. On this basis, it is considered that construction traffic generated by Connection G-T will have a **minor** effect on equestrian activity along the B795.
- 13.442 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of construction traffic engaged in the G-T Connection.
- 13.443 Overall based on professional judgment, the construction traffic generated by Connection G-T will have a **minor** effect upon community receptors and is therefore **not significant** in the context of the 2017 EIA Regulations (as amended).

Proposed Additional Mitigation

13.444 Localised widening of strategic sections of C45s, C13s, U3s (between the junction of the A712 and worksite access reference 37) and U43s will be implemented to ease access to the worksites for HGV construction traffic and general traffic sharing these route sections notably including upgraded passing places.

Residual Construction Effects

13.445 Overall, due to the implementation of the infrastructure improvements to the U2s as part of the Glenlee Substation Extension works (therefore, embedded mitigation for the G-T Connection), the C45s, C13s, U3s (between the junction of the A712 and worksite access reference 37) and U43s and the embedded mitigation measures and operational procedures as proposed in the framework CTMP the significance of the residual effects associated with the levels of traffic anticipated during the construction of the G-T Connection is considered to be **minor** and accordingly considered to be **not significant**.

### **Assessments of Cumulative Effects**

13.446 An assessment of the likely construction effects of the G-T Connection and other committed developments as well as other Connections and developments forming part of the KTR Project has been undertaken to robustly take account of the likely interrelation of overlapping construction programmes and the resultant cumulative effect upon the local road network.

- 13.447 The overall approach for the cumulative assessments, including a list of developments considered, is outlined in **Chapter 3**
- 13.448 The following developments have been included together with G-T Connection for the cumulative traffic and transport assessment:
  - Knockman Hill Wind Farm (Proposed Wind Turbine Project at Knockman Hill, Milnmark Farm Dumfries and Galloway Environmental Statement (ES) 2009);
  - Mochrum Fell Wind Farm (Mochrum Fell Wind Farm ES, 2009);
  - Shepherds Rig Wind Farm (Shepherds Rig Wind Farm ES, 2020);
  - Troston Loch Wind Farm (Troston Loch Wind Farm EIA Report, 2019);
  - Cornharrow Wind Farm (Cornharrow Wind Farm EIA Report, 2020);
  - Glenshimmeroch Wind Farm (Glenshimmeroch Wind Farm EIA Report, 2018); and
  - Fell Wind Farm (Fell Wind Farm EIA Report, 2019).
- 13.449 In addition to the above wind farms, traffic associated with the construction of the proposed Glenlee Substation Extension has been included in order to ensure a robust EIA; the assessment has been undertaken on the basis of an overlap with the KTR construction enabling works between March 2022 and June 2022.
- 13.450 In addition to the above developments, construction of the other KTR Project Connections (i.e. Connections P-G via K, C-K, E-G and BG Deviation) will overlap with the construction phase of the Connection G-T of the KTR Project between March 2022 and December 2026 inclusive.

Glenlee Substation Extension Access Arrangements

- 13.451 For the purpose of the assessment, it has been assumed that:
  - Construction traffic associated with the Glenlee Substation Extension will access from the south via the A713 (45%), the north via the A713 (45%) and a proportion would come from the east via the A712 (10%).

Wind Farm Access Arrangements

- 13.452 The following assumptions have been made to inform the assessment, as derived from review of relevant supporting ESs/EIA Reports for the wind farms projects:
  - Construction traffic accessing the proposed Knockman Hill Wind Farm will do so from the north via the A713.
  - Construction traffic accessing the proposed Mochrum Fell Wind Farm site will predominantly do so from the south via the A713 (75%) although a proportion would come from the north via the A713 (25%).
  - All construction traffic accessing the proposed Shepherds Rig Wind Farm site will do so from the north via the A713.
  - All construction traffic accessing the proposed Troston Loch Wind Farm site will do so from the north via the A713.
  - Construction traffic accessing the Cornharrow Wind Farm site will route from both the north (50%) and south (50%) via the A713.
  - Construction traffic accessing the Glenshimmeroch Wind Farm site will route from both the north (50%) and south (50%) via the A713.
  - Construction traffic accessing the Fell Wind Farm site will route from both the north (70%) and south (30%) via the A712.

Total Cumulative Construction Effects

- 13.453 This section assesses the maximum development case assuming that all the developments being considered as part of the cumulative assessment will proceed to construction and that the cumulative effects are the total likely effects created by the construction of the G-T Connection in combination with:
  - Wind farm developments (Knockman Hill, Mochrum Fell, Shepherds Rig, Troston Loch, Cornharrow, Glenshimmeroch, Fell);

40

33%

**Moderate** 

44

61%

69%

Major

Average Vehicle Movements per day during

the period of peak construction activity

[% Increase]

{Significance}

70

5%

Minor

121

10%

3%

None

- Glenlee Substation Extension; and
- other KTR Project Connections; P-G via K, C-K, E-G and BG Deviation.
- 13.454 It is uncertain if and when the construction phases of the wind farms and the Connection G-T of the KTR Project might overlap. To robustly assess cumulative traffic generation, cumulative assessment has been undertaken for route sections within the KTR Project Study Area that are utilised by other committed developments as well as other Connections and developments forming part of the KTR Project. This is based on the of sum of the average traffic generation of the developments listed above and the Connection G-T of the KTR Project peak traffic generation. This is considered to represent a maximum case scenario as, in reality, it is considered highly improbable that peak traffic generation for all developments will align.
- 13.455 **Table 13.54** presents a summary of predicted traffic volume increases over the entire construction period of Connection G-T of the KTR Project and during the 'peak period' of construction activity for G-T (December 2025 to December 2026 inclusive). The table shows the proportional increase in traffic generated for route sections within the G-T Connection Study Area that are also utilised by other committed developments as well as other Connections and developments forming part of the KTR Project.

Table 13.54: Summary of Predicted Traffic Volume Increase – Total Likely Cumulative Impact for Connection G-T of the KTR Project

Route Section	Average Vehicle M over the entire co	lovements per day enstruction period		Movements per day during eak construction activity
	[% Inc	crease]	[%	Increase]
	{Signif	icance}	{Si	gnificance}
	Total Traffic Movements	HGV Traffic Movements	Total Traffic Movements	HGV Traffic Movements
A713 (between	107	36	309	87
A77 and Dalmellington)	3%	15%	8%	36%
[AADT = 4,085]	None	Moderate	Minor	Moderate
A713 (between	147	74	345	121
Dalmellington and Carsphairn)	9%	41%	22%	66%
[AADT = 1,557]	Minor	Moderate	Moderate	Major
A713 (between	135	70	244	99
Carsphairn and A762)	10%	44%	17%	62%
[AADT = 1,398]	Moderate	Moderate	Moderate	Major
A713 (between	66	32	60	40
A762 and A702)	5%	28%	3%	34%
[AADT = 1,382]	Minor	Moderate	None	Moderate
A713 (between	66	32	60	40
A702 and A712)	3%	16%	5%	20%
[AADT = 2,282]	None	Moderate	Minor	Moderate
A713 (between	44	24	94	36
A712 and B795)	2%	13%	5%	29%
[AADT = 1,889]	None	Moderate	Minor	Moderate
A713 (between	50	22	102	34
B795 and A75)	1%	11%	3%	17%
[AADT = 3,868]	None	Moderate	None	Moderate
A712 (between	40	20	52	32
A75 and A762)	6%	28%	8%	44%
[AADT=685]	Minor	Moderate	Minor	Moderate

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[AADT = 988]	None	Moderate	Moderate	Major
A712 (between	33	12	79	29
Corsock and A75)	4%	16%	10%	38%
[AADT = 768]	None	Moderate	Moderate	Moderate
A711 (between	38	32	58	52
A75 and A762)	<1%	9%	1%	15%
[AADT=3,898]	None	Minor	None	Moderate
A762 (between	44	22	66	40
A712 and B795)	11%	96%	17%	174%
[AADT=398]	Moderate	Major	Moderate	Major
A762 (between	40	22	64	40
B795 and A75)	11%	67%	17%	121%
[AADT=370]	Moderate	Major	Moderate	Major
A762 (between	20	12	2	2
A713 and U2s)	6%	48%	<1%	8%
[AADT = 356]	Minor	Moderate	None	Minor
<b>B741</b> (between New Cumnock	42	42	38	38
and	4%	114%	4%	103%
Dalmellington) [AADT = 1,031]	None	Major	None	Major
U2s	14	8	4	4
[AADT = 199]	7%	67%	2%	33%
[AAD] = 199]	Minor	Major	None	Moderate
U3s	10	6	10	6
	16%	600%	16%	600%
[AADT = 62]	Moderate	Major	Moderate	Major
Gateside Road	38	38	34	34

Average Vehicle Movements per day

over the entire construction period

[% Increase]

{Significance}

24

20%

Moderate

16

22%

52

3%

None

44

4%

Route Section

A712 (between

A762 and A713)

[AADT=1,544]

A712 (between

A713 and

Corsock)

Predicted Cumulative Effects during Construction

3%

None

Driver Delay

(Dalmellington)

[AADT = 1,280]

13.456 From a review of **Table 13.54**, it is evident that threshold significance criteria have been exceeded on the A713 (between the A77 and the A75), A762, A711, A712, B741, U2s, U3s and Gateside Road throughout the duration of the entire construction period.

78%

Major

- 13.457 The A713, A712, A711 and A762 (between the A712 and the A75) have the residual capacity to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713, A712, A711 and A762 (between the A712 and the A75) is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.458 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the A762 (between the A713 and the U2s) and the U2s to provide passing places will be implemented; achieving a minimum width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase (see Embedded Mitigation Measures Section). On this basis, the significance of effect of driver delay for users of the A762 and U2s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.459 The U3s has very low traffic flow and as such shows a relatively large traffic increase which would represent a major effect. However, professional judgement suggests that effects on the U3s are likely to be less significant based on the low level of construction traffic anticipated. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the U3s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.460 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such show a relatively large traffic increase which would represent a major effect; however, it is important to note that these route sections have the residual capacity to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.461 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic volume, then the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.55**.

**Table 13.55: Projected Collisions – Total Likely Cumulative Impacts** 

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the G-T Connection of the KTR Project + Committed Developments + Glenlee Substation Extension + other KTR Connections)
A713 (between A77 and Dalmellington)	10	10.3
<b>A713</b> (between Dalmellington and Carsphairn)	4.7	5.2
<b>A713</b> (between Carsphairn and A762)	1.3	1.5
<b>A713</b> (between A762 and A702)	0	0
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A713</b> (between A712 and B795)	1	1.1
<b>A713</b> (between B795 and A75)	1.3	1.4
<b>A712</b> (between A75 and A762)	2	2.2
<b>A712</b> (between A762 and A713)	0.3	0.4
A712 (between A713 and Corsock)	1	1.1

Route Section Average No. of collisions Average No. of collisions (2022 Average Baseline) (2022 Average Baseline + Traffic Generated by Construction of the **G-T Connection of the KTR** Project + Committed **Developments + Glenlee Substation Extension + other KTR Connections**) A712 (between Corsock and 1 1.1 A75) 1.3 1.4 **A711** (between A75 and A762) 0 **A762** (between A712 and B795) 0 A762 (between B795 and A75) **A762** (between A713 and U2s) 0.3 0.4 **B741** (between New Cumnock 1.7 1.8 and Dalmellington) 0 0 U2s 0.3 0.4 U3s **Gateside Road** 

- 13.462 Using this basis of assessment, there would be a small increase in PICs (less than 1 collision) for the A713 (between the A77 and the A762) as a consequence of the increased traffic generated cumulatively. Professional judgement suggests that the peak cumulative traffic, which would be temporary (13 months duration), would result in a **minor** effect (**not significant**) upon road safety if unmitigated.
- 13.463 On the other route sections within the Study Area, there would be a negligible increase in PICs as a consequence of the increased traffic generated cumulatively by the developments and the significance of the effect would be **none** and therefore **not significant**.

Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)

- 13.464 The roads within the Connection G-T of the KTR Project Study Area will continue to operate below capacity, even with the addition of traffic generated cumulatively. Severance and pedestrian delay should not occur when there is such a notable level of residual road capacity.
- 13.465 The only road sections where HGV flows are expected to double or more are the A762 (between the A712 and the A75), the B741 and the U3s.
- 13.466 The CTMP an outline of which is provided as **Appendix 13.1** will promote interventions that will minimise the effect of construction traffic on local communities, measures include but are not limited to:
  - temporary construction site signage will be erected on the local road network in advance of local communities to warn people of construction activities and associated construction vehicles;
  - SPEN shall nominate a Community Liaison Officer (CLO); the CLO will be responsible for keeping the local community informed of progress on the site and warning them of upcoming activities which may give rise to increased construction vehicle movements; and
  - all site staff will be informed about traffic management arrangements and procedures via the site induction.
- 13.467 There is local footway provision in Dalmellington and New Cumnock (B741). Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of construction traffic generated cumulatively. On this basis, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the B741.

The U3s has currently very low level of HGV traffic, and as such shows a large traffic increase which would represent a major effect. However, professional judgement suggests that effects on the U3s are likely to be less significant based on the low level of construction traffic anticipated. On this basis, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the U3s.

- 13.468 HGV traffic is predicted to increase considerably on the A762 through Laurieston. However, with the interventions promoted through the CTMP, and most specifically through local community consultation, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the C13s and A762.
- 13.469 Furthermore, several construction access routes overlap and/or intersect with existing recreational routes, this include the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route;
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way); and
- 13.470 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of construction traffic. On this basis, it is considered that construction traffic generated by Connection G-T will have a **minor** effect to the amenity of users of the recreational routes identified above.
- 13.471 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of project generated construction traffic.
- 13.472 Overall based on professional judgement the construction traffic generated cumulatively will have a **minor** effect upon community receptors and is **not significant** in the context of the 2017 EIA Regulations (as amended).

Proposed Additional Mitigation

13.473 As recorded in the CTMP, if another development, such as the wind farms considered in the cumulative assessment appears likely to undergo construction at the same time as the G-T Connection, SPEN will liaise with the other developer regarding the scheduling of deliveries and potential means of reducing the impact of combined construction.

Residual Cumulative Effects during Construction

13.474 Overall, due to the implementation of the infrastructure improvements to the U2s as part of the Glenlee substation extension works (therefore, embedded mitigation for the G-T Connection), the C45s, C13s, U3s (between the junction of the A712 and worksite access reference 37) and U43s in conjunction with the embedded mitigation measures and operational procedures as proposed in the framework CTMP and the additional proposed requirement for SPEN to liaise with other developers regarding the scheduling of deliveries and potential means of reducing the effect of combined construction, the residual effects associated with the levels of traffic generated cumulatively are considered to be **minor** and accordingly **not significant** in the context of the 2017 EIA Regulations (as amended).

### **Monitoring**

- 13.475 The requirement for construction monitoring will be agreed with SPEN, local roads authority representatives and other stakeholders prior to commencement of works.
- 13.476 If deemed necessary, SPEN will enter into a legal agreement under Section 96 of the Roads (Scotland) Act 1984 to formalise an inspection and maintenance regime with the Roads Authority to contribute to maintenance of those roads impacted by HGV movements associated with the G-T Connection.

# **Summary of Effects**

- 13.477 A summary of effects before and after proposed mitigation measures for Connection G-T of the KTR Project is provided in
- 13.478 **Table** 13.56.

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### Table 13.56: Summary of Effects for Connection G-T of the KTR Project

Predicted Effect	Significance	Mitigation	Significance of Residual Effect
Construction Effec	ts		
Driver Delay	Minor	Localised widening of strategic sections of C45s, C13s, U3s (between the A712 and worksite access reference 37) and U43s will be implemented to ease access to the worksites for HGV construction	Minor
Road Safety	Minor	traffic and general traffic sharing these route sections notably including upgraded passing places.	Minor
Community Impacts	Minor	Beyond the measures listed above, no additional mitigation is proposed beyond the embedded measures and operational procedures as proposed as good practice in the framework CTMP.	Minor
		The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the KTR Project to minimise disruption and improve safety. The CTMP will be enhanced and expanded as appropriate by SPEN's appointed contractor(s) in consultation with Roads Authorities and the Police prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.	
<b>Cumulative Effects</b>			
Driver Delay	Minor	If the construction phase of any notably sized development(s), e.g. wind farm development(s) (as considered in the cumulative assessment)	Minor
Road Safety	Minor	àppears likely to overlap with the KTR Project, SPEN will liaise with the appropriate developer	Minor
Community Impacts	Minor	regarding the scheduling of deliveries and potential means of reducing the impact of combined construction effects.	Minor

- 13.479 Based on the assessment summary in
- 13.480 **Table** 13.56, the additional traffic predicted to be generated on public roads throughout the Connection G-T Study Area during the construction phase is anticipated to result in a **minor** effect and therefore **not significant.**

# KTR Project as a Whole: Assessment of Effects

- 13.481 This section identifies the likely significant traffic and transport effects of the KTR Project as a Whole as if it was the subject of a single application for consent. These comprise the following:
  - any likely significant effects identified as a consequence of the combined construction of the KTR Project as a whole; and
  - any likely significant effects identified as a consequence of the combined construction of the KTR Project as a whole cumulatively with other committed developments.

# **Access Arrangements**

- 13.482 Transportation, including deliveries to and from the site will be taken from the existing trunk and local road network. The local area road network is shown on **Figures 13.1.1** and **13.1.2**.
- 13.483 Given the nature of construction of the Connections forming the KTR Project (i.e. a number of linear developments), SPEN has identified 121 construction access points as shown on **Figures 5.5.1 and 5.5.2**.

### **Assessment of Construction Effects (including tree felling)**

- 13.484 As detailed in **Chapter 5**, the overall construction period duration for the KTR Project as a Whole, including decommissioning of N and R routes and reinstatement, is 58 months.
- 13.485 Sections of the A77, A76, A75 trunk roads in addition to the A713, A762, A712, A711, A702, B795, B741, C50s, C45s, C31s, C13s, U137s, U133s, U107s, U103s, U62s, U43s, U34s, U3s, U2s, U1s and Gateside Road will be used by construction vehicles. The number of movements assumed for the purpose of this assessment are shown by individual Connection; see **Table 13.11** for Connection P-G via K, **Table 13.21** for Connection C-K, **Table 13.31** for Connection E-G, **Table 13.41** for BG Deviation, and **Table 13.49** for Connection G-T.
- 13.486 The assessed number of traffic movements (note: one trip = two movements; i.e. delivery and return journeys) generated by construction activity for KTR Project as Whole are summarised in **Table 13.57**.

Table 13.57: Vehicle Movements Generated by Tree Felling and Construction Activity for the KTR Project as a Whole

Activity/Item Being Transported	Type of Vehicle	Details/deliveries	Total Vehicle Movements
Timber Clearance (within wayleave)	Lorry (24 tonne capacity)	An estimated 242.97Ha of timber will be felled resulting in a total of 24,022.8 tonnes of timber to be produced.	2,008
Timber Clearance (outside wayleave)	Lorry (24 tonne capacity)	An estimated 113.5ha of timber will be felled resulting in a total of 29,384.2 tonnes of timber to be produced.	2,454
Site Access Tracks	Lorry (20 tonne capacity)	An estimated 549,188 tonnes of stone will be required.	54,917
OHL Construction	Lorry (20 m <sup>3</sup> capacity) concrete ready- mix trucks with a 6 m <sup>3</sup> capacity	Concrete and steelwork	5,254
11kV Removal and Undergrounding	Lorry (20 tonne capacity)	Cabling, ducting and sand	360
Wiring and Commissioning <sup>9</sup>	Lorry (20 m <sup>3</sup> capacity) and light vans	Wiring and commissioning	1,932
Decommissioning	Lorry (20 m <sup>3</sup> capacity) and light vans	Steelwork and wiring	8,340
Reinstatement	Lorry (20 tonne capacity)	An estimated 489,907 tonnes of stone will be required to be removed.	48,991
Other	Private cars, light vans and minibus	Construction personnel and other site visitors	128,258
TOTAL HGV TRAF	FIC MOVEMENTS F	OR KTR PROJECT AS A WHOLE	124,256
TOTAL LGV TRAFF	IC MOVEMENTS FO	DR KTR PROJECT AS A WHOLE	128,258
TOTAL ALL TRAFF	IC MOVEMENTS FO	OR KTR PROJECT AS A WHOLE	252,514

### Predicted Construction Effects

- 13.487 No significant residual effects that have been identified for the individual Connections.
- 13.488 As indicated in **Table 13.57** the total of traffic generated by the KTR Project as a Whole is estimated as 252,514 movements, of which 124,256 movements will be HGV movements over the 58 month construction period.
- 13.489 For the purpose of the assessment of the potential traffic and transport effects associated with the construction of the KTR Project as a Whole, it has been assumed that:
  - Stone will be sourced entirely from offsite locations for Connections P-G via K, C-K, E-G and for the removal of the N route towers between Polquhanity and Kendoon and also the R route (north) towers between Kendoon and Glenlee. In this scenario it is assumed that 50% will be sourced from Sorn

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- Quarry (north of the Study Area, in East Ayrshire) and 50% sourced from Tongland Quarry (in the south of the Study Area, in Dumfries & Galloway).
- For Connection G-T, the BG Deviation and removal of the R (south) towers between Glenlee and Tongland it has been assumed that 50% of stone will be sourced from the onsite quarries as a robust realistic scenario for assessment due to the presence of a number of proposed quarries in the vicinity of these Connections. In this scenario it is assumed that the remaining 50% will be sourced from both Sorn Quarry and Tongland Quarry.
- 13.490 Similar to the above, in relation to the reinstatement of temporary access tracks, for the purpose of the EIA, it has been assumed that:
  - Stone will be entirely be taken offsite for Connection P-G via K, C-K, E-G and for the removal of the N route towers between Polquhanity and Kendoon and also the R route (north) towers between Kendoon and Glenlee. In this scenario it is assumed that stone will be returned to both Sorn Quarry or Tongland Quarry.
  - 50% of stone will be reinstated within the onsite quarries as a robust scenario for Connection G-T, the BG Deviation and for the removal of the R route (south) towers between Glenlee and Tongland. In this scenario it is assumed that the remaining 50% will be returned to both Sorn Quarry and Tongland Quarry.
- 13.491 Estimated daily and monthly movements generated by the KTR Project as a Whole against the programme along with predicted percentages increases on relevant trunk and local roads are shown in **Table 13.58**.
- 13.492 Construction traffic is estimated at an average of 168 vehicle movements a day over the entire construction period.
- 13.493 The highest levels of construction traffic are anticipated to occur over a period of 11 months from August 2023 to June 2024 with an average of 212 vehicle movements a day, with a maximum of 264 vehicle movements occurring per day in October 2023. The 'peak period' for the purpose of this assessment is therefore considered to be August 2023 to June 2024 inclusive. **Table 13.59** presents a summary of this information by route section.
- 13.494 The A77, A76, A75, A702 and the B795 currently operate comfortably within their respective capacities. The increase in traffic volume on these roads throughout the construction phase of the KTR Project as a Whole is assessed to be less than 10% in terms of both general traffic (HGV+LGV) and specifically HGV traffic. On this basis, the significance of the effect is considered to be **minor** and accordingly **not significant**. Since the 10% traffic increase threshold has not been exceeded on these routes, no detailed assessment has been undertaken for these public roads.
- 13.495 The C50s, C31s, U137s, U133s, U107s, U103s and U62s will solely be used to facilitate the removal of R route (south). It is assessed that the removal of the R route (south) will generate less than 10 vehicle movements per day on these specific road sections. Accordingly, the professional judgement of the assessment team is that effects arising from such low level of traffic will be **none** and therefore **not significant**. On this basis, no detailed assessment has been carried out for these public road sections.
- 13.496 For the purpose of the detailed assessment, it has been assumed that mitigation measures and operational procedures as proposed in the framework CTMP (**Appendix 13.1**) will be in place during construction of the KTR Project and therefore used to inform the judgement of significance of effects.

 $<sup>^{9}</sup>$  This includes an allowance for HGV movements associated with the construction of the 250m section of underground cable to connect into the Glenlee substation

Table 13.58: Outline Construction programme and Associated Traffic Assessment for the KTR Project as a Whole

Programme Activity	Mar-22 Ap	r-22 May-2	2 Jun-22	Jul-22 Aug	-22 Sep-22	Oct-22	Nov-22 [	Dec-22 Ja	an-23 Fel	eb-23 Mar	r-23 Apr-	-23 May-2	23 Jun-2	3 Jul-23	Aug-23 Se	ер-23 О	ct-23 Nov-2	3 Dec-23	Jan-24	Feb-24 Ma	ır-24 Apr	-24 May-	24 Jun-24	Jul-24	Aug-24 S	Sep-24 Oc	:-24 Nov-2	4 Dec-24	Jan-25	Feb-25 Mar-2	25 Apr-25	May-25 Ju	n-25 Jul-2	5 Aug-25 S	ep-25 Oct-	25 Nov-2	5 Dec-25	Jan-26 F	eb-26 Ma	ar-26 Apr	-26 May-	-26 Jun-26	Jul-26 A	ug-26 Sep	-26 Oct-26	Nov-26	Dec-26 TOTAL	
Polquhanity - Kendoon,	2062 2	028 2028	2028	2028 22	50 2478	2484	2434	2434	1615 4	450 47	70 74:	2 1028	3 1028	1028	1028	1204	234 1139	784	784	784	784 69	97 1040	0 1760	1760	1760	1760 1	60 1760	1760	1760	1760 1742	2 1664	1241	82 82	82	82 82	82	82	82	82	82 8	2 68	. 0	0	0	0 0		0 59550	_
Kendoon - Glenlee Carsfad - Kendoon	0			0 (		1	1				0 0					1794				- 1	118 11						40 240			240 240			240 240	1	0 0		0	0	0	0 0	0 0	0	0	0	0 0	0	0 7214	_
Earlston - Glenlee		02 902		40 25		_	-	-			36 36	_	_				36 36	36	_		36 3	_	_	15		_	90 290	290	290	290 290			290 290		0 0		0	0	0		0		-	0	0 0		0 8211	_
BG Route Realignment	102 1	02 102	102	102 10	102	102	102	100	100 1	100 10	00 10	0 100	100	100	92	464	568 465	339	106	136	136 13	36 136	136	18	0	142	50 150	150	150	150 150	150	150	150 150	148	2 0	0	0	0	0	0 0	0	0	0	0	0 0	0	0 6242	_
Glenlee - Tongland	2196 2	160 2160	2160	2160 21	60 2376	2322	2490	2518	2518 2	2518 25	312	20 3392	3392	3392	3392	3392	3392 3392	3392	3392	3392 3	392 37	52 3990	0 3455	2458	2458	2458 2	158 2458	2458	2458	2458 2458	2458	2218 1	1361 1008	1008	1008 100	08 784	3974	4602	4694 4	4440 45	94 467	0 4670	4670	4670 46	670 4670	4670	1443 171297	_
Total no. Vehicle Movements	F279 F	102 5102	F122	4220 47	68 5048	4944	5062	5000	4260 2	3104 31:	200	00 4550	4550	4556	E010	6900	5057 5306	4702	4426	4466 4	466 47	39 5320	0 5505	4352	4722	4900 4	198 4898	4909	4898	4909 4990	4902	4139 2	1122 1770	1291	1092 109	90 866	4056	4694	4776 4	4522 46	76 472	8 4670	4670	4670 44	670 4670	4670	1443 <b>252514</b>	_
(HGV + LGV) Total no. Vehicle Movements	1																														_						_									_		_
Day (HGV + LGV) Total no. Vehicle Movements		82 182		160 17		176					26 16						264 220	188	168			36 252		172	178		84 184	184	184	184 184		1	96 78		56 50		166	166			78 168		162		62 162		162 -	_
(HGV) Total no. Vehicle Movements	1		3610		30 3232					1636 163					2048						782 18			1656		2070 2					2022		712 666		224 22						48 253		2526		526 2526	_	618 <b>124256</b>	_
Day (HGV)	128 1	28 128	128	110 11	116	114	116	114	114	62 6	68	68	68	68	100	106	108 76	72	70			2 112			76	80	80	80	80	80 80		- 1	34 32		18 14	1 14	90	90	90	84 9	0 88	86	86		36 86	86	86 -	_
Total no. Vehicle Movements (LGV) Total no. Vehicle Movements	1500 1	534 1534	1512	1284 16	38 1816	1754	1886	1908	1723 1	1468 14	186 225	58 2760	2760	2760	2970	4058	3792 3392	2892	2658	2684 2	684 29	11 293	8 3211	2696	2776	2820 2	322 2822	2822	2822	2822 2818	3 2780	2457 1	1411 1104	936	868 86	8 674	1826	2094	2142 2	2026 21	28 220	14 2144	2144	2144 2	144 2144	2144	825 <b>128258</b>	_
Day (LGV)	54	54 54	54	50 6	4 68	62	70	70	70	56 6	32 10	0 100	100	100	128	150	156 144	116	98	98	98 11	14 140	130	104	102	104	04 104	104	104	104 104	102	106	62 46	46	38 36	36	76	76	76	72 8	8 80	76	76	76	76 76	76	76 -	
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A76 (between A70 and New Cumnock)	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1	% <1%	6 <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	-
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A75 (between A780 and A76) S Increase in HGV Traffic	<sup>6</sup> 3% 3	3% 3%	3%	2% 2	% 3%	2%	3%	3%	3% 1	1% 19	% 1%	6 1%	1%	1%	3%	3%	3% 2%	2%	1%	1%	1% 1	% 3%	2%	2%	2%	3% :	% 3%	3%	3%	3% 3%	2%	3%	1% 1%	1%	<1% <19	% <1%	1%	1%	1% <	<1% 19	% 1%	5 1%	1%	1% 1	1% 1%	1%	1% -	_
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A713 (between Carsphairn and A762)	3% 3	3% 3%	3%	3% 5'	% 5%	4%	5%	5%	5% 3	3% 49	% 6%	6 6%	6%	6%	8%	11%	12% 10%	7%	6%	6%	6% 6	% 7%	6%	5%	5%	5%	% 5%	5%	5%	5% 5%	5%	5%	3% 2%	2%	2% 2%	6 2%	3%	3%	3%	2% 49	% 3%	3%	3%	3% 3	3% 3%	3%	3% -	
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% Increase in HGV Traffic A713 North of Dalry (between	\$170		+	\$170	76 176	170	170	170	170	170 17	70 27			270		370			270		270 2			170	170	170			170	170 170	170		C176		C170 C1			<170		170					70 (170	+ +	170	_
A762 and A702) % Increase in ALL Traffic	9% 9	9%	9%	9% 9'	% 9%	9%	9%	9%	9% 9	9% 99	% 129	% 12%	12%	12%	12%	12%	12% 12%	12%	12%	12% 1	2% 14	% 16%	16%	8%	8%	8%	% 8%	8%	8%	8% 8%	8%	8%	5% 3%	3%	3% 3%	6 3%	17%	17%	17% 1	17% 17	'% 17%	6 17%	17%	17% 1	7% 17%	17%	17% -	_
A713 North of Dalry (between A762 and A702) % Increase in HGV Traffic	9% 9	9%	9%	9% 9'	% 9%	9%	9%	9%	9% 9	9% 99	% 119	% 11%	11%	11%	11%	11%	11% 11%	11%	11%	11% 1	1% 14	% 16%	16%	8%	8%	8%	% 8%	8%	8%	8% 8%	8%	8%	4% 3%	3%	3% 3%	6 3%	17%	17%	17% 1	17% 17	'% 1 <b>7</b> 9	% 17%	17%	17% 1	7% 17%	17%	17% -	
A713 South of Dalry (between A702 and A712)	12% 1	2% 12%	12%	6% 7'	% 7%	4%	4%	4%	4% 1	1% 29	% 2%	6 2%	2%	2%	2%	4%	4% 6%	3%	2%	2%	2% 2'	% 3%	3%	3%	5%	6%	% 6%	6%	6%	6% 6%	6%	6%	3% 3%	3%	1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	_
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A712 (between A713 and Corsock) % Increase in ALL Traffic	4%	1% 4%	4%	3% 3'	% 3%	3%	3%	3%	3% 1	1% 19	% 1%	6 1%	1%	1%	3%	3%	3% 1%	1%	1%	1%	1% 1'	% 3%	3%	2%	2%	2%	% 2%	2%	2%	2% 2%	2%	2%	<1% <1%	<1%	<1% <19	% <1%	3%	3%	3%	3% 39	% 3%	3%	3%	3% 3	3%	3%	3% -	
A712 (between A713 and Corsock)	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	s <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1	% <1%	6 <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	_
% Increase in HGV Traffic A712 (between Corsock and A7	<sup>75)</sup> <1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	5 <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1	% <1%	6 <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	_
% Increase in ALL Traffic A712 (between Corsock and A7 % Increase in HGV Traffic	(5)	1% <1%			% <1%	<1%	_	_	_	<1% <1	_		_			_	<1% <1%	_	_		:1% <1	_	_			<1% <	_	_	<1%	<1% <1%	_		<1% <1%		<1% <19		_	<1%			% <19	_		_	1% <1%	_	<1% -	-
A711 (between A75 and A762) % Increase in ALL Traffic	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1	% <1%	6 <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	_
A711 (between A75 and A762) % Increase in HGV Traffic	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1	% 1%	1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	_
A702 (between A713 and Moniaive)	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1	% <1%	6 <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	
% Increase in ALL Traffic A702 (between A713 and Moniaive)	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	5 <1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1	% <1%	6 <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	_
% Increase in HGV Traffic A702 (between Moniaive and			+																												_																	_
A76) % Increase in ALL Traffic	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	<1%	<1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <	:1% <1	% <1%	6 <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <1%	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	_
A702 (between Moniaive and A76) % Increase in HGV Traffic	<1% <	1% <1%	<1%	<1% <1	% <1%	<1%	<1%	<1%	<1% <	<1% <1	1% <19	% <1%	<1%	<1%	<1%	<1%	1% <1%	<1%	<1%	<1% <	:1% <1	% <1%	6 <1%	<1%	<1%	<1% <	1% <1%	<1%	<1%	<1% <1%	<1%	<1%	<1% <1%	<1%	<1% <19	% <1%	<1%	<1%	<1% <	<1% <1	% <19	% <1%	<1%	<1% <	1% <1%	<1%	<1% -	
A762 (between A712 and B795	) 4% 4	1% 4%	4%	4% 4	% 4%	4%	4%	4%	4% 2	2% 29	% 3%	6 3%	3%	3%	4%	5%	5% 4%	4%	3%	3%	3% 3'	% 5%	5%	3%	3%	4%	% 4%	4%	4%	4% 4%	3%	4%	2% 1%	1%	1% <19	% <1%	3%	3%	3% :	3% 39	% 3%	5 3%	3%	3% 3	3% 3%	3%	3% -	
																																																_

ogramme	Mar-22 A	pr-22 M	ay-22 Jur	ı-22 Jul-	-22 Aug	-22 Sep-	-22 Oct	t-22 N	ov-22 [	Dec-22	Jan-23	Feb-2	3 Mar-2	23 Apr-	23 May	23 Jun-	23 Jul-2	23 Aug	23 Sep-2	3 Oct-2	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24 M	lay-24 J	un-24 Ju	ıl-24 Aug	g-24 Sep-	-24 Oct-	-24 Nov-	-24 Dec-2	4 Jan-2	Feb-25	Mar-25 A	pr-25 Ma	y-25 Jun	1-25 Jul-	·25 Aug·	25 Sep-2	5 Oct-2	5 Nov-25	Dec-25	Jan-26 F	eb-26 M	ar-26 Ap	r-26 Ma	/-26 Jun-	26 Jul-2	26 Aug-	-26 Sep-2	26 Oct-2	Nov-26	Dec-26	6 TOTAL
Increase in ALL Traffic																																																						_		
62 (between A712 and B795) Increase in HGV Traffic	9%	9%	9% 9	% 79	% 99	6 9%	6 8	3%	9%	9%	9%	4%	5%	6%	69	6%	6%	109	6 12%	12%	8%	7%	6%	6%	6%	6%	10%	9%	7% 8	% 89	6 89	% 8%	6 8%	8%	8%	8%	8%	8% 4	% 39	6 3%	2%	2%	2%	5%	5%	5%	4%	5% 5	% 4%	4%	4%	% 4%	4%	4%	4%	-
62 (between A712 and B795) Increase in ALL Traffic	6%	6%	6% 6	% 59	% 69	6 6%	6 6	5%	7%	6%	6%	4%	4%	5%	59	5 5%	5%	8%	9%	9%	7%	6%	5%	5%	5%	5%	6%	5%	4% 4	% 49	% 49	% 4%	6 4%	4%	4%	4%	4%	4% 3	% 29	% 2%	2%	2%	2%	4%	4%	4%	4%	5% 4	% 4%	4%	4%	% 4%	4%	4%	4%	-
62 (between A712 and B795) Increase in HGV Traffic	4%	4%	4% 4	% 39	% 49	6 4%	6 4	4%	4%	4%	4%	2%	2%	3%	39	3%	3%	5%	5%	5%	4%	3%	3%	3%	3%	3%	4%	3%	2% 2	% 29	% 29	% 2%	6 2%	2%	2%	2%	2%	2% 2	% 19	% 1%	1%	<1%	<1%	3%	3%	3%	2%	3% 3	% 3%	3%	3%	% 3%	3%	3%	3%	-
62 (between A713 and U2s) Increase in ALL Traffic	3%	3%	3% 3	% 29	% 29	6 3%	6 2	2%	3%	3%	3%	1%	1%	1%	19	19	1%	3%	3%	3%	2%	2%	1%	1%	1%	1%	3%	2%	2% 2	% 39	% 39	% 3%	6 3%	3%	3%	3%	2%	3% 1	% 19	6 1%	<1%	<1%	<1%	1%	1%	1%	<1%	1% 1	% 1%	1%	1%	% 1%	1%	1%	1%	-
62 (between A713 and U2s) Increase in HGV Traffic	1%	1%	1% 1	% 19	% 19	6 1%	6 1	1%	1%	1%	1%	<1%	<1%	<1%	6 <1'	% <19	6 <1%	6 1%	2%	2%	1%	<1%	<1%	<1%	<1%	<1%	2%	2%	1% 1	% 19	6 19	% 1%	6 1%	1%	1%	1%	1%	1% <1	1% <1	% <19	6 <1%	<1%	<1%	<1%	<1%	<1%	<1% -	:1% <	1% <19	6 <1%	6 <19	% <1%	<1%	<1%	<1%	-
95 (between A762 and A713) Increase in ALL Traffic	5%	5%	5% 5	% 59	% 59	6 5%	6 5	5%	5%	5%	5%	5%	5%	6%	69	6%	6%	8%	9%	9%	10%	8%	6%	6%	6%	7%	8%	8%	4% 4	% 59	% 59	% 5%	6 5%	5%	5%	5%	4%	5% 3	% 29	% 2%	2%	1%	1%	7%	7%	7%	7%	8% 8	% 7%	7%	7%	% 7%	7%	7%	7%	-
95 (between A762 and A713) Increase in HGV Traffic	3%	3%	3% 3	% 39	% 39	6 3%	6 3	3%	3%	3%	3%	3%	3%	4%	49	4%	4%	4%	5%	5%	5%	4%	4%	4%	4%	4%	5%	5%	3% 2	% 39	% 39	% 3%	6 3%	3%	3%	3%	3%	3% 2	% 19	6 1%	1%	<1%	<1%	5%	5%	5%	4%	5% 5	% 5%	5%	5%	% 5%	5%	5%	5%	-
41 Increase in ALL Traffic	1%	1%	1% 1	% 19	% 29	6 2%	6 2	2%	2%	2%	2%	1%	1%	2%	29	29	2%	3%	3%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2% 2	% 29	% 2º	% 2%	6 2%	2%	2%	2%	2%	2% 1	% 19	% 1%	<1%	<1%	<1%	1%	1%	1%	1%	1%	% 1%	1%	1%	% 1%	1%	1%	1%	-
41 Increase in HGV Traffic	2%	2%	2% 2	% 29	% 29	6 2%	6 2	2%	2%	2%	2%	2%	2%	3%	39	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3% 2	% 39	% 39	% 3%	6 3%	3%	3%	3%	2%	3% 2	% 19	6 1%	1%	1%	1%	2%	2%	2%	2%	2% 2	% 2%	2%	2%	% 2%	2%	2%	2%	-
3s Increase in ALL Traffic	2%	2%	2% 2	% 19	% 19	6 1%	6 1	1%	1%	1%	1%	<1%	<1%	<1%	6 <1	% <1°	6 <1%	6 1%	1%	1%	<1%	<1%	<1%	<1%	<1%	<1%	2%	2% <	:1% 1	% 19	6 19	6 1%	6 1%	1%	1%	1%	1%	1% <1	1% <1	% <19	6 <1%	<1%	<1%	1%	1%	1%	1%	1%	% 1%	1%	1%	% 1%	1%	1%	1%	-
3s Increase in HGV Traffic	3%	3%	3% 3	% 39	% 59	6 5%	6 4	1%	5%	5%	5%	3%	4%	6%	69	6%	6%	8%	11%	12%	10%	7%	6%	6%	6%	6%	7%	6%	5% 5	% 59	% 5º	% 5%	6 5%	5%	5%	5%	5%	5% 3	% 29	% 2%	2%	2%	2%	3%	3%	3%	2%	4% 3	% 3%	3%	3%	% 3%	3%	3%	3%	-
5s Increase in ALL Traffic	<1%	<1%	<1% <	1% <1	% 19	6 1%	6 1	1%	1%	1%	1%	<1%	1%	2%	29	29	2%	2%	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	1% 1	% 19	% 19	% 1%	6 1%	1%	1%	1%	1%	1% <1	1% <1	% <19	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	1% <	1% <19	6 <1%	6 <19	% <1%	<1%	<1%	<1%	-
5s Increase in HGV Traffic	9%	9%	9% 9	% 99	% 9%	6 9%	6 9	9%	9%	9%	9%	9%	9%	12%	6 12	6 129	6 12%	6 125	6 12%	12%	12%	12%	12%	12%	12%	14%	16%	16%	8% 8	% 89	% 89	% 8%	6 8%	8%	8%	8%	8%	8% 5	% 39	% 3%	3%	3%	3%	17%	17%	17%	17% 1	7% 1	7% 179	6 17%	6 17%	% 17%	17%	17%	17%	
3s Increase in ALL Traffic	9%	9%	9% 9	% 99	% 99	6 9%	6 9	9%	9%	9%	9%	9%	9%	11%	6 11	6 119	6 11%	6 119	6 11%	11%	11%	11%	11%	11%	11%	14%	16%	16%	8% 8	% 89	% 8°	% 8%	6 8%	8%	8%	8%	8%	8% 4	% 39	% 3%	3%	3%	3%	17%	17%	17%	17% 1	7% 1	7% 179	6 17%	6 17%	% 17%	17%	17%	17%	-
3s Increase in HGV Traffic	12%	12%	12% 1	2% 69	% 79	6 7%	6 4	4%	4%	4%	4%	1%	2%	2%	29	2%	2%	2%	4%	4%	6%	3%	2%	2%	2%	2%	3%	3%	3% 5	% 69	% 6º	6%	6%	6%	6%	6%	6%	6% 3	% 39	% 3%	1%	<1%	<1%	<1%	<1%	<1%	<1% -	:1% <	1% <19	6 <1%	6 <19	% <1%	<1%	<1%	<1%	-
4s Increase in ALL Traffic	1%	1%	1% 1	% 19	% 19	6 1%	6 1	1%	1%	1%	1%	1%	1%	2%	29	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	2% 2	% 29	6 29	% 2%	6 2%	2%	2%	2%	2%	2% 2	% <1	% <19	6 <1%	<1%	<1%	2%	2%	2%	2%	2% 2	% 2%	2%	2%	% 2%	2%	2%	2%	-
4s Increase in HGV Traffic	5%	5%	5% 5	% 49	% 49	6 4%	6 4	4%	4%	4%	4%	2%	2%	2%	29	29	2%	4%	4%	4%	2%	2%	2%	2%	2%	2%	4%	4%	3% 3	% 39	% 39	% 3%	6 3%	3%	3%	3%	3%	3% 1	% 19	6 1%	<1%	<1%	<1%	4%	4%	4%	3%	3% 3	% 3%	3%	3%	% 3%	3%	3%	3%	-
s Increase in ALL Traffic	12%	12%	12% 1	2% 12	% 129	% 129	% 12	2%	12%	12%	12%	12%	12%	14%	6 14	6 149	6 14%	6 149	6 14%	14%	14%	14%	14%	14%	14%	15%	16%	16%	5% 5	% 5%	% 59	% 5%	6 5%	5%	5%	5%	5%	5% 4	% 39	% 3%	3%	3%	3%	18%	18%	18%	18% 1	8% 1	3% 189	6 18%	6 18%	% 18%	18%	18%	18%	-
s Increase in HGV Traffic	2%	2%	2% 2	% 29	% 29	6 2%	6 2	2%	3%	3%	3%	3%	3%	3%	39	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	2% 2	% 29	6 29	% 2%	6 2%	2%	2%	2%	2%	2% 2	% 29	% 2%	2%	2%	2%	5%	5%	5%	5%	6% 5	% 5%	5%	5%	% 5%	5%	5%	5%	-
s Increase in ALL Traffic	2%	2%	2% 2	% 29	% 29	6 2%	6 2	2%	2%	2%	2%	2%	2%	3%	39	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	2% 2	% 29	% 29	% 2%	6 2%	2%	2%	2%	2%	2% 2	% <1	% <19	6 <1%	<1%	<1%	4%	4%	4%	4%	4%	% 4%	4%	4%	% 4%	4%	4%	4%	-
s Increase in HGV Traffic	1%	1%	1% 1	% 19	% 19	6 1%	6 1	1%	1%	1%	1%	1%	1%	1%	19	19	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	1% 1	% 19	% 1º	% 1%	6 1%	1%	1%	1%	1%	1% 1	% 19	6 1%	1%	1%	1%	2%	2%	2%	2%	2% 2	% 2%	2%	2%	% 2%	2%	2%	2%	-
s Increase in ALL Traffic	8%	8%	8% 8	% 89	% 89	6 8%	6 8	3%	8%	8%	8%	3%	3%	3%	39	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	6%	6%	6% 6	% 69	% 6º	% 6%	6%	6%	6%	6%	6%	6% <1	1% <1	% <19	6 <1%	<1%	<1%	<1%	<1%	<1%	<1%	:1% <	1% <19	6 <1%	6 <19	% <1%	<1%	<1%	<1%	-
s Increase in HGV Traffic	4%	4%	4% 4	% 49	% 49	6 4%	6 4	4%	4%	3%	3%	2%	2%	3%	39	3%	3%	3%	7%	6%	10%	5%	3%	3%	3%	3%	4%	4%	3% 2	% 39	% 39	% 3%	6 3%	3%	3%	3%	3%	3% 2	% 29	% 2%	2%	1%	1%	2%	2%	2%	2%	2% 2	% 2%	2%	2%	% 2%	2%	2%	2%	-
teside Road Increase in ALL Traffic	10%	10%	10% 10	)% 10	% 10	% 109	% 10	0%	10%	10%	10%	10%	10%	13%	6 13'	6 139	6 13%	6 139	6 29%	26%	39%	23%	13%	13%	13%	16%	19%	19% 1	13% 10	0% 13'	% 13	% 139	% 13%	13%	13%	13%	13%	13% 10	0% 10	% 109	6 10%	3%	3%	16%	16%	16%	16% 1	6% 1	5% 16%	6 16%	6 16%	% 16%	16%	16%	16%	-
teside Road Increase in HGV Traffic	4%	4%	4% 4	% 39	% 39	6 3%	6 3	3%	3%	3%	3%	1%	1%	1%	19	19	1%	3%	3%	3%	1%	1%	1%	1%	1%	1%	3%	3%	2% 2	% 29	% 2º	% 2%	6 2%	2%	2%	2%	2%	2% <1	1% <1	% <19	6 <1%	<1%	<1%	3%	3%	3%	3%	3% 3	% 3%	3%	3%	% 3%	3%	3%	3%	

Table 13.59: Summary of Construction Traffic Generated on Public Roads within the KTR Project As a Whole Study Area

Route Section	Construction traffic	generated over the 58 sec	months construction p tion	rogramme, by route
		ents per day over entire ion period		nents per day during the nstruction activity
	[% Inc	crease]	[% Ind	crease]
	{Signif	icance}	{Signif	icance}
	HGV + LGV	HGV	HGV + LGV	HGV
A76 (between	32	32	30	30
B743 and A70)	[<1%]	[3%]	[<1%]	[3%]
[AADT = 11,691]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A76 (between	32	32	30	30
A70 and New Cumnock)	[<1%]	[3%]	[<1%]	[3%]
[AADT = 6,423]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A76 (between	18	18	20	20
New Cumnock and Thornhill)	[<1%]	[3%]	[<1%]	[3%]
[AADT = 3,854]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A76 (between	18	18	20	20
Thornhill and A75)	[<1%]	[3%]	[<1%]	[3%]
[AADT = 6,106]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A75 (between	60	40	66	42
A762(N) and A712)	[1%]	[4%]	[1%]	[4%]
[AADT = 7,901]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A75 (between A712 and	22	4	32	6
A780)	[<1%]	[<1%]	[<1%]	[<1%]
[AADT = 11,065]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A75 (between A780 and A76)	34	16	46	18
[AADT =	[<1%]	[<1%]	[<1%]	[1%]
14,729]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A77 (between A713 and A70)	32	16	40	14
[AADT =	[<1%]	[<1%]	[<1%]	[1%]
21,311]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between A77 and	22	8	34	10
Dalmellington)	[1%]	[3%]	[1%]	[4%]
[AADT = 4,085]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A713 (between Dalmellington	54	36	64	38
and Carsphairn)	[3%]	[20%]	[4%]	[21%]
[AADT = 1,557]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
A713 (between	92	52	116	52
Carsphairn and A762)	[7%]	[33%]	[8%]	[32%]
[AADT =1,398]	{minor, not significant}	{moderate, significant}	{minor, not significant}	{moderate, significant}

Route Section	Construction traffic generated over the 58 months construction programme, by route section			
A713 (between	66	34	88	34
A762 and A702)	[5%]	[29%]	[6%]	[29%]
[AADT =1,382]	{minor, not significant}	{moderate, significant}	{minor, not significant}	{moderate, significant}
A713 (between	66	34	88	34
A702 and A712)	[3%]	[17%]	[4%]	[17%]
[AADT=2,282]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
A713 (between	36	24	40	24
A712 and B795)	[2%]	[13%]	[2%]	[12%]
[AADT = 1,889]	{none, not significant}	{moderate, not significant}	{none, not significant}	{moderate, significant}
A713 (between	42	24	50	22
B795 and A75)	[1%]	[11%]	[1%]	[10%]
[AADT = 3,868]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
A712 (between	40	20	54	22
A75 and A762)	[6%]	[25%]	[8%]	[29%]
[AADT = 685]	{minor, not significant}	{moderate, significant}	{minor, not significant}	{moderate, significant}
A712 (between	52	24	70	28
A762 and A713)	[3%]	[19%]	[4%]	[22%]
[AADT = 1,544]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
A712 (between	18	4	26	4
A713 and Corsock)	[2%]	[3%]	[3%]	[4%]
[AADT = 988]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A712 (between	18	4	26	4
Corsock and	[2%]	[3%]	[3%]	[3%]
A75) [AADT = 768]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A711 (between		40	(none, not eighnicant)	40
A711 (Between A762)	46	[12%]	46	[12%]
[AADT = 3,898]	[1%]	{moderate,	[1%]	{moderate,
	{none, not significant}	significant}	{none, not significant}	significant}
A702 (between	12	0	20	0
A713 and Moniaive)	[5%]	[0]	[8%]	[0%]
[AADT = 243]	{minor, not significant}	{none, not significant}	{minor, not significant}	{none, not significant}
A702 (between	12	0	20	0
Moniaive and A76)	[1%]	[0%]	[2%]	[0%]
[AADT = 931]	{none, not significant}	{none, not significant}	{none, not significant}	{none, not significant}
A762 (between	44	22	52	36
A712 and B795)	[11%]	22	[13%]	26
[AADT = 398]	{moderate, significant}	[92%] {major, significant}	{moderate, significant}	[107%] {major, significant}

Route Section	Construction traffic generated over the 58 months construction programme, by route section			
A762 (between	40	22	46	24
B795 and A75)	[11%]	[64%]	[12%]	[73%]
[AADT = 370]	{moderate, significant}	{major, significant}	{moderate, significant}	{major, significant}
A762 (between	14	10	12	4
A713 and U2s) [AADT = 356]	[3%]	[35%]	[3%]	[15%]
[AAD1 - 330]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
B795 (between A762 and	10	2	12	4
A713)	[2%]	[3%]	[2%]	[5%]
[AADT = 499]	{none, not significant}	{none, not significant}	{none, not significant}	{minor, not significant}
B741 (between New Cumnock	32	32	32	32
and	[3%]	[86%]	[3%]	[82%]
Dalmellington) [AADT= 1,031]	{none, not significant}	{major, significant}	{none, not significant}	{major, significant}
C13s	18	12	22	16
[AADT = 148]	[12%]	[170%]	[14%]	[205%]
	{moderate, significant}	{major, significant}	{moderate, significant}	{major, significant}
C45s	8	6	10	6
[AADT = 249]	[3%]	[483%]	[3%]	[600%]
	{none, not significant}	{major, significant}	{none, not significant}	{major, significant}
U43s	6	4	8	4
[AADT = 211]	[3%]	[255%]	[3%]	[255%]
	{none, not significant}	{major, significant}	{none, not significant}	{major, significant}
U34s	4	4	4	2
[AADT = 174]	[1%]	[245%]	[1%]	[200%]
	{none, not significant}	{major, significant}	{none, not significant}	{major, significant}
U1s	4	4	4	4
[AADT = 72]	[4%]	[36%]	[3%]	[34%]
	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}
U2s	8	6	10	4
[AADT = 199]	[3%]	[36%]	[5%]	[26%]
	{none, not significant}	{moderate, significant}	{minor, not significant}	{moderate, significant}
U3s	10	6	14	6
[AADT = 62]	[14%]	[438%]	[20%]	[436%]
	{moderate, significant}	{major, significant}	{moderate, significant}	{major, significant}
Gateside Road	30	30	28	28
(Dalmellington)	[2%]	[59%]	[2%]	[53%]
[AADT = 1,280]	{none, not significant}	{moderate, significant}	{none, not significant}	{moderate, significant}

Driver Delay

- 13.497 All public road route sections where the 10% threshold significance criteria has been exceeded operate notably below their theoretical capacity. **Table 13.60** below provides a comparison of forecast traffic flows on roads during the 'Peak Period' and associated theoretical road capacities.
- 13.498 Furthermore, the CTMP an outline of which is provided as **Appendix 13.1** will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay, CTMP measures include but are not limited to:
  - The timing and frequency of vehicle movements will be managed to minimise local disruption;
  - details of access route will form part of the site induction and training will be held for all site operatives and delivery drivers through 'toolbox talks'; and
  - where reasonable and practicable, project-related vehicles will avoid travelling in convoys on public roads.

Table 13.60: Baseline Traffic + Traffic Generated by Construction of KTR As a Whole

Route Section	Two-way peak hour movements (2022 Baseline Traffic + Traffic Generated by Construction of KTR As a Whole)	Capacity (vph) (two-way movements per hour)
<b>A713</b> (between Dalmellington and Carsphairn)	206	1800
A713 (between Carsphairn and A762)	210	1800
<b>A713</b> (between A762 and A702)	208	1600
<b>A713</b> (between A702 and A712)	208	1600
<b>A713</b> (between A712 and B795)	204	1800
<b>A713</b> (between B795 and A75)	206	1800
<b>A712</b> (between A75 and A762)	206	1800
<b>A712</b> (between A762 and A713)	206	1600
A712 (between A713 and Corsock)	204	1800
A712 (between Corsock and A75)	204	1800
<b>A711</b> (between A75 and A762)	204	1800
<b>A762</b> (between A712 and B795)	206	1600
<b>A762</b> (between B795 and A75)	204	1600
A762 (between A713 and U2s)	52	280
<b>B741</b> (between New Cumnock and Dalmellington)	204	1800
C13s	52	Not Specified
C45s	52	Not Specified
U43s	52	Not Specified
U34s	52	Not Specified
U1s	52	Not Specified
U2s	52	Not Specified
U3s	52	Not Specified
Gateside Road (Dalmellington)	204	1600

13.499 From a review of **Table 13.59** it is evident that threshold significance criteria have been exceeded on the A713 (between Dalmellington and the A75), A712 (between A75 and A713), A711, A762 (between A712 and A75), A762 (between A713 and U2s), B741, C45s, C13s, U43s, U34s, U1s, U2s, and U3s and Gateside Road either, throughout the duration of the entire construction period or during the 'peak period' of construction activity, or both.

- 13.500 The A713, A712, A711 and A762 (between A712 and A75), have the residual capacity (see **Table 13.60**) to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the A713, A712, A711 and A762 (between A712 and A75) is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.501 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such show a relatively large traffic increase which would represent a major effect, however it is important to note that these route sections have the residual capacity (see **Table 13.60**) to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.502 The C45s, C13s, U43s, U34s and U3s have very low traffic flow and as such shows a relatively large traffic increase which would represent a major effect. However, professional judgement suggests that effects on these roads are likely to be less significant based on the low level of construction traffic anticipated. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the C45s, C13s, U43s, U34s and U3s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.503 The U1s currently has very low traffic flow and as such shows a relatively large traffic increase which would represent a major effect. However, only a small section of the U1s will be used (approx. 500m in length). On this basis, the significance of effect of driver delay for users of the U1s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.504 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the A762 (between the A713 and the U2s) and U2s to provide passing places will be implemented; achieving a minimum of width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase, therefore comprising embedded mitigation for the KTR Project. On this basis, the significance of effect of driver delay for users of the A762 (between the A713 and the U2s) and U2s is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.505 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic, the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis is summarised in **Table 13.61**.

**Table 13.61: Projected Collisions** 

Route Section	Average No. of collisions	Average No. of collisions	
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the KTR As a Whole)	
<b>A713</b> (between Dalmellington and Carsphairn)	4.7	4.9	
<b>A713</b> (between Carsphairn and A762)	1.3	1.4	
<b>A713</b> (between A762 and A702)	0	0	
<b>A713</b> (between A702 and A712)	0.3	0.4	
<b>A713</b> (between A712 and B795)	1	1.1	
<b>A713</b> (between B795 and A75)	1.3	1.4	
<b>A712</b> (between A75 and A762)	2	2.2	
<b>A712</b> (between A762 and A713)	0.3	0.4	

A712 (between A75 and A762)

A712 (between A762 and A713)

O.3

Furthermore, the CTMP will promote interventions that will minimise the effect of construction traffic on pedestrian amenity. On this basis, it is considered that construction traffic generated by KTR As a Whole will have a minor effect to the amenity of users of the C45s, U43s and U34s.

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the KTR As a Whole)
A712 (between A713 and Corsock)	1	1.1
A712 (between Corsock and A75)	1	1.1
<b>A711</b> (between A75 and A762)	1.3	1.4
<b>A762</b> (between A712 and B795)	0	0
<b>A762</b> (between B795 and A75)	0	0
A762 (between A713 and U2s)	0.3	0.4
<b>B741</b> (between New Cumnock and Dalmellington)	1.7	1.8
C13s	0	0
C45s	0	0
U43s	0	0
U34s	0	0
U1s	0	0
U2s	0	0
U3s	0.3	0.4
Gateside Road (Dalmellington)	0	0

13.506 Using this basis of assessment, there would be a negligible (**not significant**) increase in PICs in the KTR Project Study Area as a consequence of the increased traffic generated by KTR As a Whole and the significance of the effect would be **none**.

Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)

- 13.507 The IEMA Guidelines define severance as 'the perceived division that can occur within a community when it becomes separated by a major traffic artery'. Severance may result from a road carrying large traffic flows or a physical barrier created by the road itself, and the IEMA guidelines suggest that consideration is given to the severity of existing severance and how this might be exacerbated by proposed construction traffic generated by a development. The roads within the KTR as a Whole Project Study Area will continue to operate below capacity, even with the addition of traffic generated by construction of the KTR Project as a Whole. Severance and pedestrian delay should not occur when there is such a notable level of residual road capacity.
- 13.508 Pedestrian amenity is broadly defined by the IEMA as the 'relative pleasantness of a journey', and this definition also takes into account fear and intimidation. The IEMA Guidelines suggest that 'a tentative threshold for judging the significance of changes in pedestrian amenity would be where traffic flows (or its lorry component) is halved or doubled. The only road sections where HGV flows are expected to double, or more are the A762 (between A712 and B795), C45s, C13s, U43s, U34s and U3s.
- 13.509 The CTMP an outline of which is provided as **Appendix 13.1** will promote interventions that will minimise the effect of construction traffic on local communities, measures include but are not limited to:
  - Temporary construction site signage will be erected on the local road network in advance of local communities to warn people of construction activities and associated construction vehicle;
  - SPEN shall nominate a Community Liaison Officer (CLO); the CLO will be responsible for keeping the local community informed of progress on the site and warning them of upcoming activities which may give rise to increased construction vehicle movements; and
  - All site staff will be informed about traffic management arrangements and procedures via the site induction.

13.510 Site observations indicate that pedestrian activity on the C45s, U43s and U34s road sections is low.

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- 13.511 HGV traffic is predicted to increase considerably on the C13s and A762 through Laurieston. However, with the interventions promoted through the CTMP and most specifically through local community consultation, it is considered that construction traffic generated by KTR As a Whole will have a **minor** effect to the amenity of users of the C13s and A762.
- 13.512 Several core paths overlap with proposed construction access tracks, this includes the following Core Paths:
  - The New Galloway West path (Core Path 516) overlaps with a proposed access track to towers 5 to 12;
  - Raiders Road to Kenmuir Link (Core Path 142) overlaps with a proposed access track to Hind Craig Quarry;
  - Raiders Road East (Core Path 141) and Cairn Edward Hill path (Core Path 177) overlap with a proposed access track to towers 43 to 49;
  - Arie path, near Mossdale (Core Path 153) overlaps with a proposed access track to towers 50 and 51;
  - Glengap and Laurieston Forest (Core Path 28) and Retreat Wood, Laurieston (Core Path 144) overlap with a proposed access track to Craigelwhan Quarry;
  - The Gunney, Parton (Core Path 29) overlaps with a proposed access track to towers 84(R) to 87(R);
  - Livingston Hill (Core Path 208) overlaps with a proposed access track to towers 104(R) and 105(R);
- 13.513 Furthermore, several construction access routes overlap and/or intersect with existing recreational routes, this include the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route;
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way); and
  - the section of the A712 between the A75 and the A762 intersects the National Cycle Route 7.
- 13.514 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of construction activity will be installed on the 'core path network' in advance of road crossing points to warn users of construction traffic. On this basis, it is considered that construction traffic generated by KTR As a Whole will have a **minor** effect to the amenity of users of the recreational routes identified above.
- 13.515 HGV traffic will significantly increase on the private road leading to Polmaddy which overlaps with Core Path 164. As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of construction traffic. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of Core Path 164 is considered to be **minor** and accordingly considered to be **not significant**.
- 13.516 NMU survey findings indicated a relatively high level of equestrian activity on the B795. There is existing signage in place warning road users of the presence of equestrians and delivery drivers will be informed about the potential presence of equestrians at that location through 'toolbox talks'. On this basis, it is considered that construction traffic generated by KTR As a Whole will have a **minor** effect on equestrian activity along the B795.
- 13.517 New construction access tracks will intersect with Raiders Road (Core Path 143), the Mossdale to Gatehouse Station Railway walk (Core Path 485) and Core Path 205. Based on site observations and results of NMU surveys it is considered that construction traffic generated by KTR As a Whole will have a **minor** effect on pedestrian amenity, specifically to the amenity of users of these three recreational routes.
- 13.518 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of project generated construction traffic.

13.519 Overall based on professional judgment, the construction traffic generated by KTR Project as a whole will have a **minor** effect upon community receptors which is **not significant** in the context of the 2017 EIA Regulations (as amended).

Proposed Additional Mitigation

13.520 No further mitigation is proposed in addition to the embedded mitigation measures and operational procedures as proposed in the framework CTMP and the KTR Connection specific mitigation measures.

Residual Effects

13.521 Overall, due to the implementation of the infrastructure improvements to the A762 (between the A713 and the U2s) and the U2s as part of the Glenlee Substation Extension works (therefore, embedded mitigation for the KTR Project) theC45s, C13s, U3s (between the junction of the A712 and worksite access reference 37) and U43s and the embedded mitigation measures and operational procedures as proposed in the framework CTMP the significance of the residual effect associated with the levels of traffic anticipated during the construction of the KTR Project As a Whole is considered to be minor and accordingly not considered to be significant.

#### **Assessment of Cumulative Effects**

- 13.522 An assessment of the likely construction effects of the KTR Project As a Whole and other committed developments has been undertaken to robustly take account of the likely interrelation of overlapping construction programmes and the resultant cumulative effect upon the local road network.
- 13.523 The overall approach for the cumulative assessments, including a list of developments considered, is outlined in **Chapter 3**
- 13.524 The following developments have been included with the KTR Project As a Whole for the cumulative traffic and transport assessment:
  - Knockman Hill Wind Farm (Proposed Wind Turbine Project at Knockman Hill, Milnmark Farm Dumfries and Galloway Environmental Statement (ES) 2009);
  - Mochrum Fell Wind Farm (Mochrum Fell Wind Farm ES, 2009);
  - Shepherds Rig Wind Farm (Shepherds Rig Wind Farm ES, 2020);
  - Troston Loch Wind Farm (Troston Loch Wind Farm EIA Report, 2019);
  - Cornharrow Wind Farm (Cornharrow Wind Farm EIA Report, 2020);
  - Glenshimmeroch Wind Farm (Glenshimmeroch Wind Farm EIA Report, 2018); and
  - Fell Wind Farm (Fell Wind Farm EIA Report, 2019).
- 13.525 In addition to the above wind farms, traffic associated with the construction of the proposed Glenlee Substation Extension has been included in order to ensure a robust EIA; the assessment has been undertaken on the basis of an overlap with the KTR construction enabling works between March 2022 and June 2022.

Wind Farm Access Arrangements

- 13.526 The following assumptions have been made to inform the assessment, as derived from review of relevant supporting ESs/EIA reports for the schemes:
  - Construction traffic accessing the proposed Knockman Hill Wind Farm will do so from the north via the A713.
  - Construction traffic accessing the proposed Mochrum Fell Wind Farm site will predominantly do so from the south via the A713 (75%) although a proportion would come from the north via the A713 (25%).
  - All construction traffic accessing the proposed Shepherds Rig Wind Farm site will do so from the north via the A713.
  - All construction traffic accessing the proposed Troston Loch Wind Farm site will do so from the north via the A713.
  - Construction traffic accessing the Cornharrow Wind Farm site will route from both the north (50%) and south (50%) via the A713.

- Construction traffic accessing the Glenshimmeroch Wind Farm site will route from both the north (50%) and south (50%) via the A713.
- Construction traffic accessing the Fell Wind Farm site will route from both the north (70%) and south (30%) via the A712.

Glenlee Substation Extension Access Arrangements

- 13.527 For the purpose of the assessment, it has been assumed that:
  - Construction traffic associated with the Glenlee Substation Extension will access from the south via the A713 (45%), the north via the A713 (45%) and a proportion would come from the east via the A712 (10%).

Total Cumulative Construction Effects

- 13.528 This section assesses the maximum development case assuming that all the developments being considered as part of the cumulative assessment will proceed to construction and that the cumulative effects are the total likely effects created by the construction of the KTR Project As a Whole in combination with:
  - Wind farm developments (Knockman Hill, Mochrum Fell, Shepherds Rig, Troston Loch, Cornharrow, Glenshimmeroch, Fell); and
  - Glenlee Substation Extension.
- 13.529 It is uncertain if and when the construction phases of the wind farms and the KTR Project As a Whole might overlap. To robustly assess cumulative traffic generation, cumulative assessment has been undertaken on the basis of summing the average traffic generation of the respective wind farms and the KTR Project As a Whole peak traffic generation, assuming that it is improbable that peak traffic generation at all developments will align.
- 13.530 **Table 13.62** presents a summary of predicted traffic volume increases over the entire construction period of KTR Project As a Whole and during the 'peak period' of construction activity (August 2023 to June 2024 inclusive) and the proportional increase in traffic generated.

Table 13.62: Summary of Predicted Traffic Volume Increase – Total Likely Cumulative Impact for the KTR Project As a Whole

Route Section	Average Vehicle Movements per day over the entire construction period [% Increase] {Significance}		Average Vehicle Movements per day during the period of peak construction activity [% Increase] {Significance}	
	Total Traffic Movements	HGV Traffic Movements	Total Traffic Movements	HGV Traffic Movements
A713 (between	107	36	331	93
A77 and Dalmellington)	[3%]	[15%]	[8%]	[39%]
[AADT = 4,085]	{None}	{Moderate}	{Minor}	{Moderate}
A713 (between	147	74	365	125
Dalmellington and Carsphairn)	[9%]	[41%]	[23%]	[69%]
[AADT = 1,557]	{Minor}	{Moderate}	{Moderate}	{Major}
A713 (between	135	70	296	111
Carsphairn and A762)	[10%]	[44%]	[21%]	[69%]
[AADT = 1,382]	{Moderate}	{Moderate}	{Moderate}	{Major}
A713 (between	66	32	88	34
A762 and A702)	[5%]	[28%]	[6%]	[29%]
[AADT = 1,350]	{Minor}	{Moderate}	{Minor}	{Moderate}
A713 (between	66	32	88	34
A702 and A712)	[3%]	[16%]	[4%]	[17%]

Route Section	Average Vehicle Movements per day over the entire construction period		Average Vehicle Movements per day during the period of peak construction activity	
	[% Increase]		[% Increase]	
	{Significance}		- {Significance}	
[AADT = 2,282]	{None}	{Moderate}	{None}	{Moderate}
A713 (between	44	24	110	42
A712 and B795)	[2%]	[13%]	[6%]	[22%]
[AADT = 1,889]	{None}	{Moderate}	{Minor}	{Moderate}
A713 (between	50	22	118	40
B795 and A75)	[1%]	[11%]	[3%]	[20%]
[AADT = 3,868]	{None}	{Moderate}	{None}	{Moderate}
<b>A712</b> (between	52	24	70	28
A75 and A762)	[8%]	[33%]	[10%]	[39%]
[AADT = 685]	{Minor}	{Moderate}	{Moderate}	{Moderate}
<b>A712</b> (between A762 and A713)	52	24	70	28
ŕ	[3%]	[20%]	[5%]	[23%]
[AADT=1,544]	{None}	{Moderate}	{Minor}	{Moderate}
A712 (between A713 and Corsock)	44	16	133	46
·	[4%]	[22%]	[13%]	[64%]
[AADT=988]	{None}	{Moderate}	{Moderate}	{Major}
A712 (between	33	12	91	31
Corsock and A75)	[4%]	[16%]	[12%]	[41%]
[AADT = 768]	{None}	{Moderate}	{Moderate}	{Moderate}
<b>A711</b> (between A75 and A762)	38	32	44	38
,	[<1%]	[9%]	[1%]	[11%]
[AADT = 3,898]	{None}	{Minor}	{None}	{Moderate}
<b>A762</b> (between A712 and B795)	44	22	52	26
•	11%	96%	13%	113%
[AADT=398]	{Moderate}	{Major}	{Moderate}	{Major}
<b>A762</b> (between B795 and A75)	40	22	46	24
-	[11%]	[67%]	[12%]	[73%]
[AADT=370]	{Moderate}	{Major}	{Moderate}	{Major}
A762 (between	20	12	12	4
A713 and U2s)	[6%]	[48%]	[3%]	[16%]
[AADT = 356]	{Minor}	{Moderate}	{None}	{Moderate}
<b>B741</b> (between New Cumnock and	42	42	34	34
Dalmellington)	[4%]	[114%]	[3%]	[92%]
[AADT = 1,031]	{None}	{Major}	{None}	{Major}
U2s	14	8	10	4
[AADT = 199]	[7%]	[67%]	[5%]	[33%]
[	{Minor}	{Major}	{Minor}	{Moderate}
U3s	10	6	14	6

Route Section	Average Vehicle Movements per day over the entire construction period  [% Increase]  {Significance}		Average Vehicle M during the period of activ [% Inc {Signifi	f peak construction vity rease]
[AADT = 62]	[16%]	[600%]	[23%]	[600%]
	{Moderate}	{Major}	{Moderate}	{Major}
Gateside Road	38	38	30	30
(Dalmellington)	[3%]	[78%]	[2%]	[61%]
[AADT = 1,280]	{None}	{Major}	{None}	{Major}

Predicted Cumulative Effects during Construction

Driver Delay

- 13.531 From a review of **Table 13.54**, it is evident that threshold significance criteria have been exceeded on the A713 (between A77 and the A75), A762, A711, A712, A702 (between A713 and Moniaive) B741, U2s, U3s and Gateside Road throughout the duration of the entire construction period.
- 13.532 The A713, A712, A711 and A762 (between the A712 and the A75) have the residual capacity to readily accommodate the expected additional traffic flow. On this basis, the significance of effect of driver delay for users of the A713, A712, A711and A762 (between the A712 and the A75) is considered to be **minor** and accordingly not considered to be significant in the context of the 2017 EIA Regulations (as amended).
- 13.533 As an integral part of the Glenlee Substation Extension, localised widening of strategic sections of the A762 (between the junction of the A713 and the U2s) and the U2s to provide passing places will be implemented; achieving a minimum of width of 6.75m. It is assumed that these newly constructed passing places will remain for the duration of the KTR Project construction phase and therefore comprise embedded mitigation. On this basis, the significance of effect of driver delay for users of the A762 and U2s is considered to be **minor** and accordingly considered **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.534 The U3s has very low traffic flow and as such shows a relatively large traffic increase which would represent a major effect. However, professional judgement suggests that effects on the U3s are likely to be less significant based on the low level of traffic anticipated. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the U3s is considered to be **minor** and accordingly considered **not significant** in the context of the 2017 EIA Regulations (as amended).
- 13.535 Both the B741 and Gateside Road generally experience low HGV traffic levels and as such show a relatively large traffic increase which would represent a major effect; however, it is important to note that these route sections have the residual capacity to readily accommodate the expected additional traffic flow. Furthermore, the CTMP will promote interventions that will ensure the safe and efficient transportation of materials to site to reduce the likelihood of driver delay. On this basis, the significance of effect of driver delay for users of the B741 and Gateside Road is considered to be **minor** and accordingly considered to be **not significant** in the context of the 2017 EIA Regulations (as amended).

Road Safety

13.536 The NESA Manual suggests that where traffic flow doubles, it can be expected that road traffic collisions will double (i.e. the increase in collisions is likely to be approximately proportional to the increase in traffic). Accordingly, if the number of collisions were to increase proportionally with the increase in traffic volume, then the impact of the construction traffic on road safety per route section can be forecast. The results of this analysis are summarised in **Table 13.63**.

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Table 13.63: Projected Collisions - Total Likely Cumulative Impacts

Route Section	Average No. of collisions	Average No. of collisions
	(2022 Average Baseline)	(2022 Average Baseline + Traffic Generated by Construction of the KTR Project As A Whole+ Committed Developments + Glenlee Substation Extension
<b>A713</b> (between A77 and Dalmellington)	10	10.3
<b>A713</b> (between Dalmellington and Carsphairn)	4.7	5.2
<b>A713</b> (between Carsphairn and A762)	1.3	1.5
<b>A713</b> (between A762 and A702)	0	0
<b>A713</b> (between A702 and A712)	0.3	0.4
<b>A713</b> (between A712 and B795)	1	1.1
<b>A713</b> (between B795 and A75)	1.3	1.4
<b>A712</b> (between A75 and A762)	2	2.2
<b>A712</b> (between A762 and A713)	0.3	0.4
A712 (between A713 and Corsock)	1	1.1
A712 (between Corsock and A75)	1	1.1
<b>A711</b> (between A75 and A762)	1.3	1.4
<b>A762</b> (between A712 and B795)	0	0
<b>A762</b> (between B795 and A75)	0	0
<b>A762</b> (between A713 and U2s)	0.3	0.4
<b>B741</b> (between New Cumnock and Dalmellington)	1.7	1.8
U2s	0	0
U3s	0.3	0.4
Gateside Road (Dalmellington)	0	0

- 13.537 Using this basis of assessment, there would be a small increase (less than 1 collision) in PICs for the A713 (between the A77 and the A762) as a consequence of the increased traffic generated cumulatively. Professional judgment suggests that the peak cumulative traffic, which would be temporary (11 months duration), would result in a **minor** effect (**not significant**) upon road safety if unmitigated.
- 13.538 On the other route sections within the Study Area, there would be a negligible increase in PICs as a consequence of the increased traffic generated cumulatively by the developments and the significance of the effect would be **none** and therefore **not significant**.

Community Impacts (severance, pedestrian amenity / fear and intimidation, and pedestrian delay)

- 13.539 The roads within the KTR Project Study Area will continue to operate below capacity, even with the addition of traffic the increased traffic generated cumulatively. Severance and pedestrian delay should not occur when there is such a notable level of residual road capacity.
- 13.540 The only road sections where HGV flows are expected to double, or more are the A762 (between A712 and B795) and the U3s.
- 13.541 The CTMP an outline of which is provided as **Appendix 13.1** will promote interventions that will minimise the effect of construction traffic on local communities, measures include but are not limited to:
  - temporary construction site signage will be erected on the local road network in advance of local communities to warn people of construction activities and associated construction vehicles;
  - SPEN shall nominate a Community Liaison Officer (CLO); the CLO will be responsible for keeping the local community informed of progress on the site and warning them of upcoming activities which may give rise to increased construction vehicle movements; and

- all site staff will be informed about traffic management arrangements and procedures via the site induction.
- 13.542 The U3s has currently very low level of HGV traffic, and as such shows a large traffic increase which would represent a major effect. However, professional judgement suggests that effects on the U3s are likely to be less significant based on the low level of construction traffic anticipated. On this basis, it is considered that construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect to the amenity of users of the U3s.
- 13.543 HGV traffic is predicted to increase considerably on the A762 through Laurieston. However, with the interventions promoted through the CTMP and most specifically through local community consultation, it is considered that construction traffic generated by KTR As a Whole will have a **minor** effect to the amenity of users of the A762.
- 13.544 Several core paths overlap with proposed construction access tracks, this include the following Core Paths:
  - The New Galloway West path (Core Path 516) overlaps with a proposed access track to towers 5 to 12:
  - Raiders Road to Kenmuir Link (Core Path 142) overlaps with a proposed access track to Hind Craig Quarry;
  - Raiders Road East (Core Path 141) and Cairn Edward Hill path (Core Path 177) overlap with a proposed access track to towers 43 to 49;
  - Arie path, near Mossdale (Core Path 153) overlaps with a proposed access track to towers 50 and 51;
  - Glengap and Laurieston Forest (Core Path 28) and Retreat Wood, Laurieston (Core Path 144) overlap with a proposed access track to Craigelwhan Quarry;
  - The Gunney, Parton (Core Path 29) overlaps with a proposed access track to towers 84(R) to 87(R);
  - Livingston Hill (Core Path 208) overlaps with a proposed access track to towers 104(R) and 105(R);
- 13.545 Furthermore, several construction access routes overlap and/or intersect with existing recreational routes, this include the following route sections:
  - the section of the A762 between the A713 and U2s overlaps with Core Path 504 (the Southern Upland Way), Core Path 30 and the National Byway cycling route;
  - the section of the A713 between the A762 and A712 overlaps with Core Path 21, the National Byway cycling route and intersect both Core Path 224 and 504 (the Southern Upland Way); and
  - the section of the A712 between the A75 and the A762 intersects the National Cycle Route 7.
- 13.546 As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and cycling routes and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of construction traffic. On this basis, it is considered that construction traffic generated by KTR As a Whole will have a **minor** effect to the amenity of users of the recreational routes identified above.
- 13.547 HGV traffic will significantly increase on the private road leading to Polmaddy which overlaps with Core Path 164. As such, the CTMP will include a commitment to provide signage to warn drivers to the presence of public paths and appropriate signage advising of dates and hours of working will be installed on the 'core path network' in advance of road crossing points to warn users of construction traffic. On this basis, the significance of the effect on pedestrian amenity, specifically on the amenity of users of Core Path 164 is considered to be **minor** and accordingly considered to be **not significant**.
- 13.548 NMU survey findings indicated a relatively high level of equestrian activity on the B795. There is existing signage in place warning road users of the presence of equestrians and delivery drivers will be informed about the potential presence of equestrians at that location through 'toolbox talks'. On this basis, it is considered that construction traffic generated by KTR As a Whole will have a **minor** effect on equestrian activity along the B795.
- 13.549 New construction access tracks will intersect with Raiders Road (Core Path 143), the Mossdale to Gatehouse Station Railway walk (Core Path 485) and Core Path 205. Based on site observations and results of NMU surveys it is considered that construction traffic generated by KTR As a Whole will have a

- **minor** effect on pedestrian amenity, specifically to the amenity of users of these three recreational routes.
- 13.550 Construction routes traverse St John's Town of Dalry, where pedestrian activity can be notable, especially at the beginning and end of the school day. There is existing pedestrian infrastructure provision in place, including footways and traffic management features. Based on professional judgement the existing provision is considered adequate to accommodate potential pedestrian effects as a result of project generated construction traffic.
- 13.551 Overall based on professional judgement the construction traffic generated cumulatively will have a **minor** and therefore **not significant** effect upon community receptors.

Proposed Mitigation

13.552 As recorded in the CTMP, if another development, such as the wind farms considered in the cumulative assessment, appears likely to undergo construction at the same time as the KTR Project, SPEN will liaise with the other developer regarding the scheduling of deliveries and potential means of reducing the impact of combined construction.

Residual Cumulative Effects during Construction

13.553 Overall, due to the implementation of the infrastructure improvements to the A762 (between the A713 and the U2s) and the U2s as part of the Glenlee Substation Extension works (therefore, embedded mitigation for the G-T Connection), the C45s, C13s, U3s (between the junction of the A712 and worksite access reference 37) and U43s in conjunction with the embedded mitigation measures and operational procedures as proposed in the framework CTMP and the additional proposed requirement for SPEN to liaise with other developers regarding the scheduling of deliveries and potential means of reducing the effect of combined construction, the residual effects associated with the levels of traffic generated cumulatively are considered to be **minor** and accordingly **not significant** in the context of the 2017 EIA Regulations (as amended).

### Monitoring

- 13.554 The requirement for construction monitoring will be agreed with SPEN, local roads authority representatives and other stakeholders prior to commencement of works.
- 13.555 If deemed necessary, SPEN will enter into a legal agreement under Section 96 of the Roads (Scotland) Act 1984 to formalise an inspection and maintenance regime with the Roads Authority to contribute to maintenance of those roads impacted by HGV movements associated with KTR as a Whole.

# Interrelationship between Effects

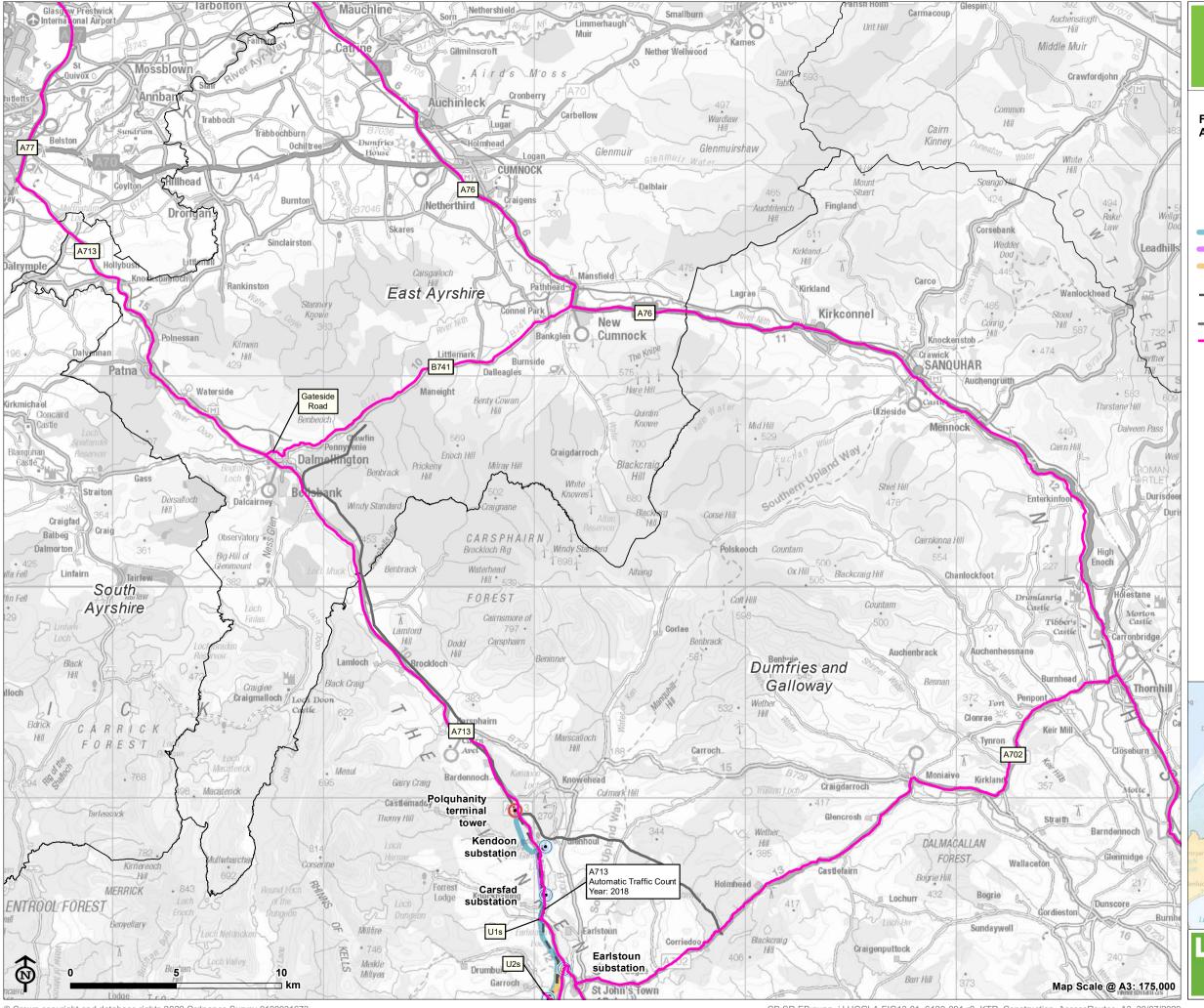
- 13.556 The additional traffic assessed to be generated on public roads throughout the KTR Project as whole Study Area during the construction phase may trigger environmental effects associated with related study disciplines.
- 13.557 These include, but are not limited to, the following:
  - effects associated with socio-economic, tourism and recreation; and
  - effects associated with noise and dust.
- 13.558 Where relevant, environmental effects related to traffic and transport associated with the KTR Project are referred to in **Chapter 17: Assessment of Intra-Connection and Intra-KTR Effects.**

# Summary of Significant Effects

13.559 Assuming, the implementation of the embedded mitigation measures and operational procedures as proposed in the framework CTMP during the construction of the KTR Project alongside the identified Connection specific additional mitigation measures (i.e. public road infrastructure improvements), the residual effects associated with the levels of traffic anticipated during the construction of the KTR Project are considered to be **minor** and of temporary duration, hence the mitigated effects are **not considered to be significant**.

# References

- Institution of Highways and Transportation (IHT) (1994), Guidelines for Traffic Impact Assessment.
- Institute of Environmental Assessment (now the Institute of Environmental Management and Assessment (IEMA) (1993), Guidelines for the Environmental Assessment of Road Traffic, Guidance Notes No. 1 (referred to as 'the IEMA Guidelines')).
- 3 Transport Scotland (2012), Transport Assessment Guidance.
- 4 Scottish Government (2005), NESA Manual, DMRB, Volume 15, Economic Assessment of Road Schemes in Scotland.
- 5 ROSPA Road Safety Engineering Manual, 2007.
- 6 Knockman Hill Wind Farm (Proposed Wind Turbine Project at Knockman Hill, Milnmark Farm Dumfries and Galloway Environmental Statement (ES) 2009);
- 7 Mochrum Fell Wind Farm (Mochrum Fell Wind Farm ES, 2009);
- 8 Shepherds Rig Wind Farm (Shepherds Rig Wind Farm ES, 2020);
- 9 Troston Loch Wind Farm (Troston Loch Wind Farm EIA Report, 2019);
- 10 Cornharrow Wind Farm (Cornharrow Wind Farm EIA Report, 2020);
- Glenshimmeroch Wind Farm (Glenshimmeroch Wind Farm EIA Report, 2018); and
- 12 Fell Wind Farm (Fell Wind Farm EIA Report, 2019).



# KTR Project EIA Report

Figure 13.1.1: Proposed Construction Access Routes

Polquhanity sealing end and terminal tower

Substation and hydro electricity generating station

Polquhanity to Glenlee via Kendoon

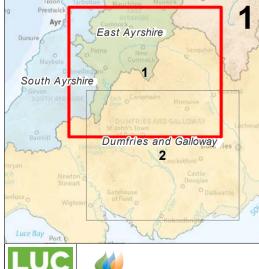
Carsfad to Kendoon

Earlstoun to Glenlee

Existing 132kV overhead line to be
 removed (following construction of the KTR Project)

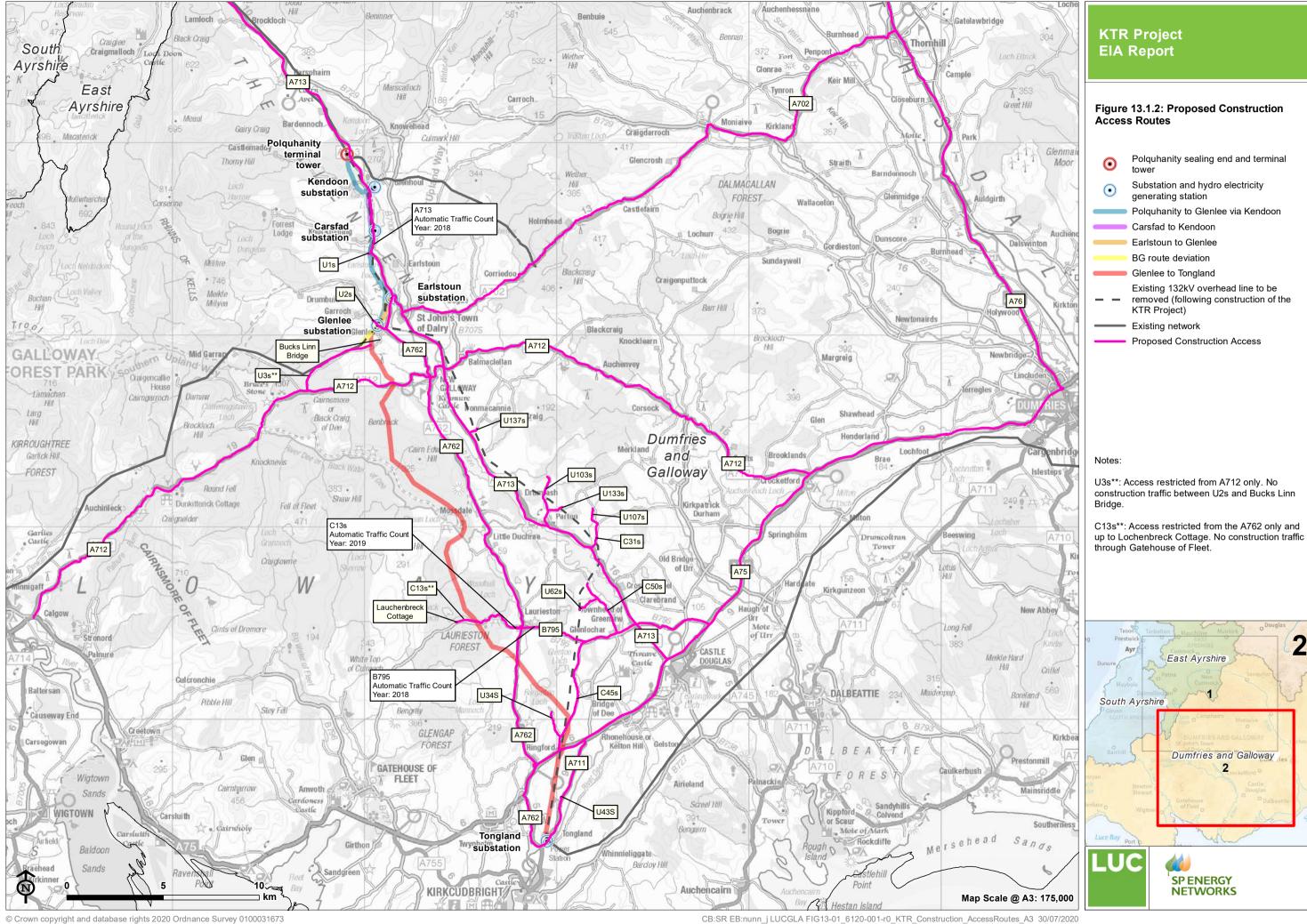
Existing network

Proposed Construction Access



SP ENERGY

**NETWORKS** 



Polquhanity sealing end and terminal

Polguhanity to Glenlee via Kendoon

Existing 132kV overhead line to be

**Proposed Construction Access** 

East Ayrshire

Dumfries and Galloway

SP ENERGY

**NETWORKS** 

removed (following construction of the

Substation and hydro electricity

generating station

Carsfad to Kendoon

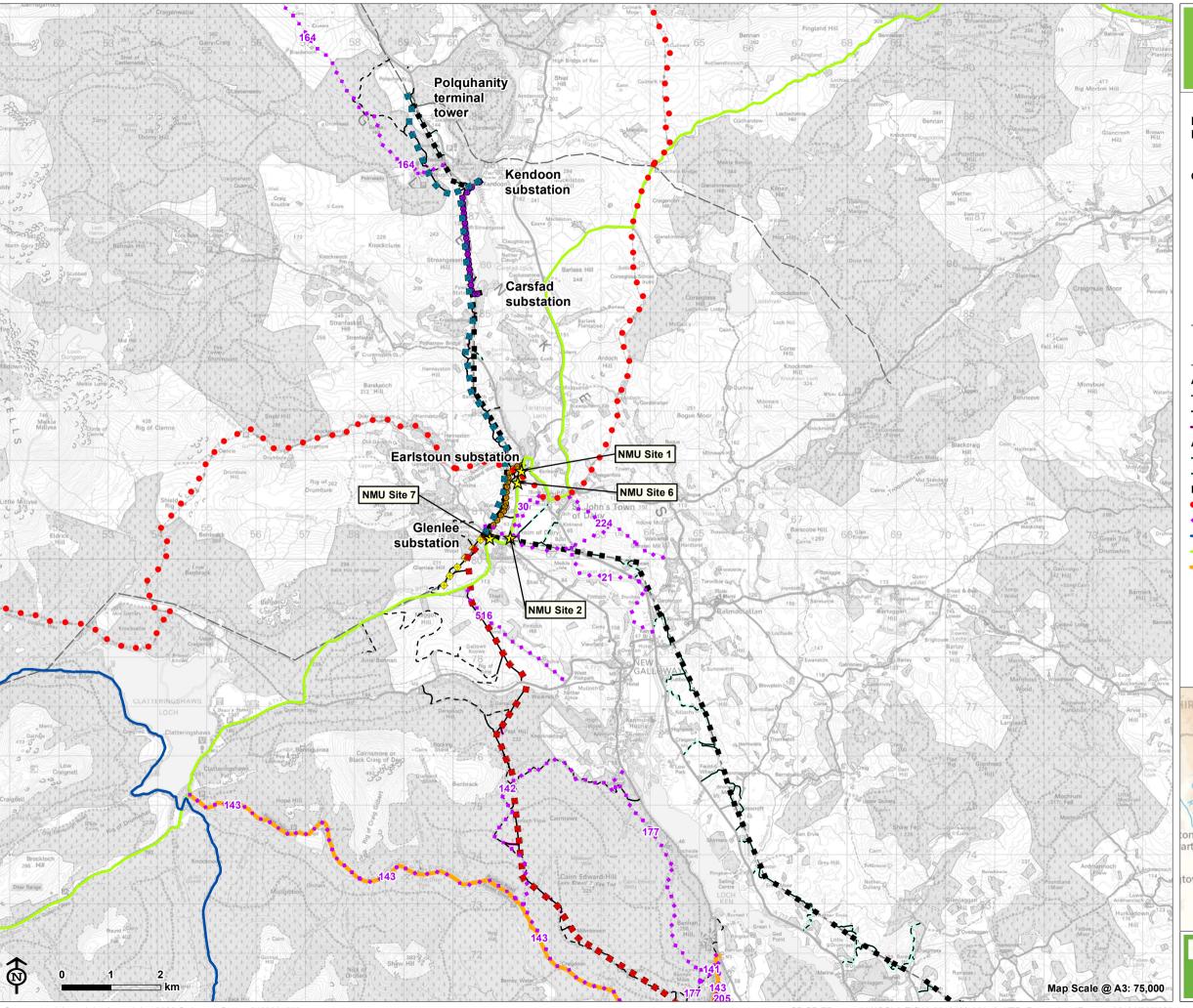
Earlstoun to Glenlee BG route deviation

Glenlee to Tongland

KTR Project)

Existing network

tower



# Figure 13.2.1: Existing Recreational

#### Overhead line infrastructure

- Polquhanity to Glenlee via Kendoon (steel lattice tower)
- Carsfad to Kendoon (wood pole)
- Earlstoun to Glenlee (wood pole)
- Earlstoun to Glenlee (temporary wood
- Glenlee to Tongland (steel lattice tower)
- BG route deviation (steel lattice tower)
- Existing tower for removal
- Existing 132kV overhead line to be removed (following construction of the KTR Project)
- — · Existing network

### Access to proposed towers

- --- Existing access
- New access
- Timber extraction spur

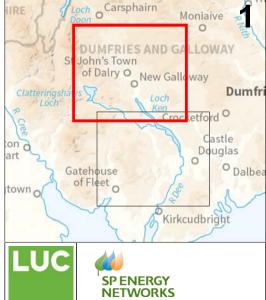
# Access to towers for removal

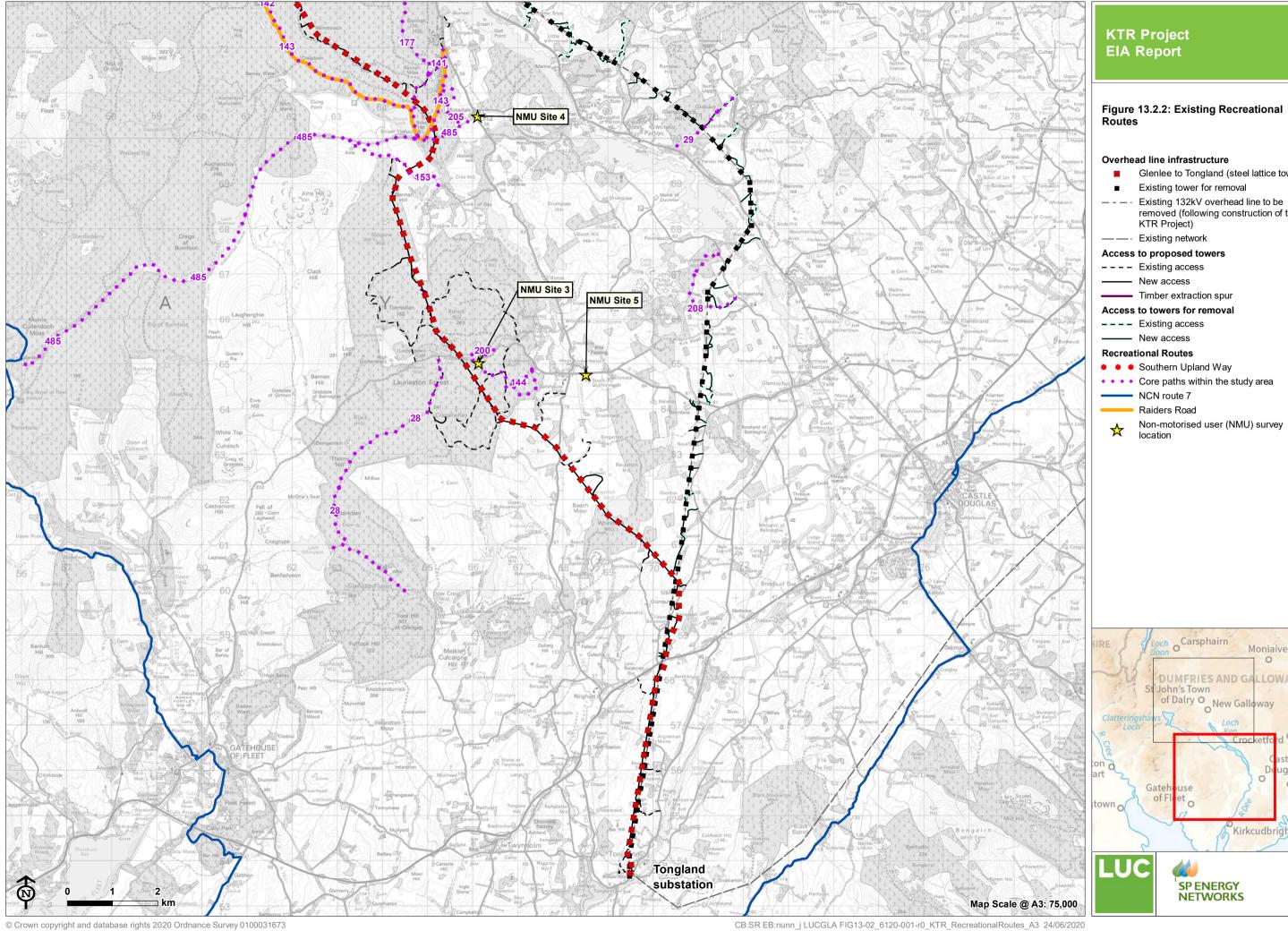
- --- Existing access
  - New access

# **Recreational Routes**

- Southern Upland Way
- • Core paths within the study area
  - NCN route 7
- The National Byway
- Raiders Road

Non-motorised user (NMU) survey location





■ Glenlee to Tongland (steel lattice tower)

Non-motorised user (NMU) survey

och o Carsphairn

DUMFRIES AND GALLOWAY John's Town of Dalry O New Galloway

SP ENERGY NETWORKS

Moniaive

Kirkcudbright

Dumfri

removed (following construction of the KTR Project)

■ Existing tower for removal

Timber extraction spur

New access

New access

Raiders Road