11. Access Traffic & Transport

11.1 Introduction

11.1.1 This chapter provides an assessment of the potential effects of the Proposed Development on receptors along the transport routes resulting from vehicle movements associated with the construction phase.

11.1.2 The specific objectives of the chapter are to:

- review the relevant policy and legislative framework;
- describe the baseline transport conditions;
- describe the assessment methodology and significance criteria used in undertaking the assessment;
- describe the potential effects, including direct, indirect and cumulative effects;
- describe the mitigation measures proposed to avoid, reduce and offset likely potential significant adverse effects; and
- assess the significance of residual effects remaining following the implementation of mitigation.

11.1.3 The assessment has been carried out in accordance with the Institute of Environmental Assessment (now Institute of Environmental Management and Assessment (IEMA)) Guidelines for the Environmental Assessment of Traffic and Movement (2023). The document is referred to as the IEMA Guidelines in this chapter.

11.1.4 This chapter should be read in conjunction with **Technical Appendix 11.1: Transport Assessment**.

11.1.5 This chapter is supported by the following Figures (**EIA Report Volume 2b**):

- **Figure 11.1**: Study Area;
- **Figure 11.2**: Traffic Count Locations;
- **Figure 11.3**: Personal Injury Accident Locations; and
- **Figure 11.4**: Abnormal Indivisible Load Delivery Route.

11.2 Legislation, Policy & Guidance

11.2.1 Relevant legislation and guidance documents have been reviewed and taken into account as part of this assessment. Of particular relevance are:

- National Planning Framework 4 (NPF4) (2023);
- Planning Advice Note (PAN) 75 (2005);
- Transport Assessment Guidance (2012);
- Onshore Wind Turbines; Online Renewables Planning Advice (2014);
- Institute of Environmental Assessment, Environmental Assessment of Traffic and Movement (2023);

- The Guidelines for the Environmental Assessment of Road Traffic (Institute of Environmental Assessment (IEA) (1993);
- Institution of Environmental Management and Assessment (IEMA) 'Guidelines for Environmental Impact Assessment' (2005);
- East Ayrshire Local Development Plan (LDP), East Ayrshire Council (2017);
- East Ayrshire LDP Supplementary Guidance; Planning for Wind Energy, East Ayrshire Council (2017);
- LA104, Environmental assessment and monitoring, Design Manual for Roads and Bridges (DMRB) (Standards for Highways, 2020); and
- Table 2.2 of Volume 11, Section 2, Part 5 of the Design Manual for Roads and Bridges (DMRB) (2008).

11.3 Consultation

11.3.1 In undertaking the assessment, a request for a Scoping Opinion was issued to transport agencies that have an interest in the surrounding road network, which includes EAC and Ayrshire Roads Alliance (ARA) as local roads agency and Transport Scotland (TS) as the trunk road agency.

11.3.2 **Table 11.1** provides a summary of the consultation responses received to date in relation to the Proposed Development.

Table 11.1: Consultation Responses

Consultee	Consultation Response	Applicant Action
Transport Scotland	It is noted that baseline traffic data will be obtained from the UK Government Department for Transport (DfT) and Transport Scotland (TS) traffic count databases. In addition, National Road Traffic Forecast (NRTF) Low Traffic Growth assumptions will be used to provide a common future year baseline to coincide with the expected construction traffic peak. This is considered appropriate but we would ask that "estimated" data from the DfT site is not used.	Comment noted, no estimated data from the Department for Transport (DfT) has been used. New Automatic Traffic Counts (ATCs) have been undertaken for the assessment, complimented where necessary by Transport Scotland count data.
	For your awareness, Transport Scotland is currently undertaking essential investigatory works on the Woodside Viaduct on the M8 northern flank. Temporary traffic management measures and weight restrictions are in force. The route is therefore not appropriate for abnormal loads, with all HGV traffic encouraged to use the M74 and M73 as an alternative. At this time, there is no timeframe for completion of the works.	Comment noted.
East Ayrshire Council	With regards to any access route (indicated as coming in from the A713) this should form part of the application red line site boundary once finalised to ensure	Since the main access to the Site will be via the North Kyle Wind Farm, no upgrades to the access track leading from the

Consultee	Consultation Response	Applicant Action
	any works or upgrades to the access can be formed as part of the proposed development, including visibility splays as necessary.	A713 to the Proposed Development will be required. The access track through North Kyle Wind Farm is therefore not included in the red line Site boundary. All other tracks, including both proposed and existing, are within the red line Site boundary.
	The traffic assessment shall be based on a worst-case scenario which, for the avoidance of doubt, the Planning Authority would expect assumes 100% of construction materials such as stone requiring to be imported to site. Vehicle movement figures should also be based on all vehicle movements, including HGV, LGV and abnormal loads. Any expected reduction in stone importation due to the use of borrow pits can be reported within the EIA Report, along with the consequent effect this would have on traffic volumes. A worst-case scenario should, nevertheless, be presented in case any proposed borrow pits fail to provide the anticipated volume of stone to ensure a robust assessment of impacts.	Comment noted. The assessment within the Chapter has been undertaken on a worst-case scenario whereby all aggregate materials are imported to the Site. Details of the most likely scenario whereby the on-site borrow pits provide the necessary aggregate materials has also been provided within **Technical Appendix 11.1**.
	The EIA Report should identify potential sources of materials (e.g. stone quarries) if these are off-site and consider the impacts of those routes to site, including communities along those routes. Such assessment should also include cumulative impacts with other developments. Should any borrow pits be proposed, appropriate environmental and/or supporting information should be submitted to justify the need for borrow pits.	Comment noted. The assessment has given cognisance to the likely sources of materials and effects on routing to the Site, including potential cumulative impacts. The assessment has been undertaken in line with the Institute of Environmental Management and Assessment (IEMA) 'Environmental Assessment of Traffic and Movement'. Specifically in relation to the proposed borrow pits on-site, a borrow pit assessment is included in the **EIAR Volume 3: Technical Appendices**.
	The Planning Authority welcomes the proposed cumulative assessment which should consider any consented / under construction developments likely to generate large volumes of traffic. This should not necessarily be limited to other wind farms as any traffic generating development using the same local road network as the proposed wind farm has the potential to contribute to cumulative traffic	Comment noted. A full review of cumulative assessment has been undertaken and is included in **Technical Appendix 11.1**.

Consultee	Consultation Response	Applicant Action
	impacts regardless of the nature of the development. The Applicant is advised to keep tabs on the cumulative situation and development applications in and around the area / using the same road network to inform the cumulative traffic assessment nearer the time, prior to submission of the application to ensure the cumulative assessment is up to date as this is a constantly evolving situation, particularly in the southern part of the district.	
	The EIA Report should detail the port of entry and the delivery route for turbines and components to site. Transport Scotland may provide advice in respect of the trunk road network, whilst the Applicant is also encouraged to discuss traffic matters with the Council's Ayrshire Roads Alliance (ARA). Early contact with ARA is advised.	Comment noted. An AIL Route Survey Report from the Port of Entry (PoE) through to the proposed Site access junction is included as **Annex A** of **Technical Appendix 11.1**. Within this, preliminary consultation has been undertaken via the Electronic Service Delivery for Abnormal Loads (ESDAL).
	The Planning Authority would agree that the decommissioning phase of the development can be scoped out of the traffic assessment as such impacts are likely to be similar to those during construction, as can the operational period be scoped out.	Comment noted.

11.4 Scope of Assessment

11.4.1 This assessment focusses on the effects of construction of the Proposed Development, upon those receptors identified during the review of desk-based information and field surveys (the extents of the study areas set out in the 'Study Area' section below).

11.4.2 The following potential effects were identified at the Scoping Stage for consideration in this assessment:

- Direct effects on road / path users during construction due to changes in traffic flows and transport of AILs in the surrounding study area; and
- Direct effects on local residents as a result of increased traffic during construction.

11.4.3 The assessment scenarios used for this topic are as follows:

- Future Baseline Flows (2027) – which are estimated by applying National Road Traffic Forecast (NRTF) Low growth factors to existing traffic flow information;
- Future Baseline + Development Flows (2027) – which are estimated by applying the distributed development trips to the future baseline traffic flow information; and

- Future Baseline + Committed Development Flows + Development Flows (2027) – which are estimated by applying the distributed development trips, plus committed development trips to the future baseline traffic flow information.

11.5 Assessment Methods & Significance Criteria

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

- determine the baseline for traffic and transport;
- review and identify potential impacts related to the construction of the Proposed Development;
- evaluate significance of effects on receptors;
- identify mitigation; and
- assess residual effects.

Study Area

11.5.2 The study area includes local roads that are likely to experience increased traffic flows resulting from the Proposed Development. The geographic scope was determined through a review of Ordnance Survey (OS) plans and an assessment of the potential origin locations of construction staff and supply locations for construction materials. Locally sourced material will be used where feasible and traffic will avoid impacting on local communities as far as is possible.

11.5.3 Construction traffic associated with the Proposed Development will generally originate from the north, joining the study area on the A77 and then A713 or from the B741 to the south accessed from the A76.

11.5.4 Based on the above, the study area for this assessment is as follows:

- A713 between its junction with the A77 and Dalmellington;
- A713 between its junction with Dalmellington and A75;
- B741 between its junctions with the A713 and A76;
- A70 between its junctions with the A77 and A76;
- A76 between Auchinleck and Sanquhar; and
- A77 between St Quivox and Nether Auchindrane.

11.5.5 Effects associated with construction traffic generated by the Proposed Development would be most pronounced in close proximity to the Site access junction and on the final approaches to the Site. As vehicles travel away from the Proposed Development, they would disperse across the wider road network, thus diluting any potential effects. It is therefore expected that the effects relating to construction traffic are unlikely to be significant beyond the study area identified above.

11.5.6 The study area is shown in **Figure 11.1**.

Desk Study

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

- review of relevant transport planning policy;
- consideration of potential origin locations of construction staff and potential supply locations for construction materials to inform extent of local area roads network to be considered in the assessment;
- collection of existing traffic flow information from both new ATCs and Transport Scotland data;
- review of the relevant roads hierarchy;
- review of personal injury accident (PIA) data;
- identification of sensitive locations within study area (as defined by IEMA such as settlements, schools, tourist attractions etc.) using freely available online mapping;
- identification of any other traffic sensitive receptors in the area (Core Paths, routes, communities, etc.) using freely available online mapping and relevant agency websites;
- review of OS plans;
- review of cumulative development information – EAC planning portal and the Scottish Government's Energy Consents Unit (ECU) portal; and
- identification of constraints to the movement of AILs through a Route Survey including swept path assessments – OS plans, video footage and Google Streetview.

Site Visit

11.5.8 Detailed Site visits were undertaken to review the proposed access route and potential constraints for both general construction traffic and AILs.

Assessment of Significance

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

significance of major new developments. The guidelines intend to complement professional judgement and the experience of trained assessors.

Criteria for Assessing Sensity of Receptors

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

11.5.11 The IEMA Guidelines include guidance on how the sensitivity of receptors should be assessed. Using that as a base, professional judgement was used to develop a classification of sensitivity for users based on the characteristics of roads and locations. This is summarised in **Table 11.2**.

Table 11.2: Classification of Receptor Sensitivity

Receptor	Sensitivity			
	High	Medium	Low	Negligible
Users of Roads	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.	Where the road is a local A or B class road, capable of regular use by HGV traffic. Includes roads where there is some traffic calming or traffic management measures.	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.	Where roads have no adjacent settlements. Includes new strategic trunk roads that would be little affected by additional traffic and suitable for AILs and new strategic trunk road junctions capable of accommodating AILs.
Users / Residents of Locations	Where a location is a large rural settlement containing a high number of community and public services and facilities.	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.	Where a location is a small rural settlement, few community or public facilities or services.	Where a location includes individual dwellings or scattered settlements with no facilities.

11.5.12 It is acknowledged that there will be locations both in terms of users of roads or users / residents of locations that may not fit within one of the sensitivity classifications highlighted in **Table 11.2**. In these situations, professional judgement has been applied and justification for any changes provided.

11.5.13 Where a road passes through a location, users are considered subject to the highest level of sensitivity defined by either the road or the location characteristics.

Criteria for Assessing Magnitude of Change

11.5.14 Magnitude of change has been assessed in accordance with the following rules which are outlined in the IEMA Guidelines, and are used to inform a screening

exercise to determine which links within the study area are to be considered for detailed analysis in the assessment:

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

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

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

- Severance – the IEMA Guidance advises that, *"The Department for Transport has historically set out a range of indicators for determining the significance of severance. Changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law. However, caution needs to be observed when applying these thresholds as very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic." (Para 3.16). The Guidelines acknowledge that changes in traffic flows should be used cautiously, stating that "the assessment of severance should pay full regard to specific local conditions, e.g. sensitivity of adjacent land uses, prevalence of vulnerable people, whether or not crossing facilities are provided, traffic signal settings, etc."* (Para 3.17).
- Driver delay – the IEMA Guidelines note that these delays are only likely to be *"significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system"* (Para 3.20).
- Pedestrian delay (incorporating delay to all non-motorised users) – the IEMA Guidance advises that *"pedestrian delay and severance are closely related effects and can be grouped together. Changes in the volume, composition or speed of traffic may affect the ability of people to crossroads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the development Site."* (Para 3.24). Furthermore, the guidance advises that *"…it is not considered wise to set down definitive thresholds. Instead it is recommended that the competent traffic and movement expert use their judgement to determine whether pedestrian delay constitutes a significant effect."* (Para 3.26).
- Non-motorised user amenity - the IEMA Guidance advises that*, "The 1993 Guidelines suggest that a tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or HGV component) is halved or doubled. Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law."* (Para 3.30).

- Fear and intimidation – there are no commonly agreed thresholds for estimating levels of fear and intimidation, from known traffic and physical conditions. However, as the impact is considered to be sensitive to traffic flow, changes in traffic flow of 30%, 60% and 90% are regarded as producing minor, moderate and substantial changes respectively in the guidelines. (Para 2.19). As such, this has been used to assess the potential impacts associated with construction activities around fear and intimidation on people in close proximity to the Proposed Development.
- Road safety – professional judgement would be used to assess the implications of local circumstances, or factors which may elevate or lessen risks of accidents. In line with the IEMA Guidance, those areas of collision clusters would be subject to detailed review.
- Road safety audits – It would be proposed to undertake any necessary Road Safety Audits (RSA) post consent and it is considered that this can be secured via a planning condition.
- Large loads – The movement of the AILs associated with the construction of the Proposed Development have been considered in full, within a separate route survey assessment (see **Annex A** of **Technical Appendix 11.1**), which identifies physical mitigation measures required to accommodate the predicted loads. Additional mitigation in terms of addressing potential impacts on sensitive receptors are included as standard within Mitigation section.

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

Criteria for Assessing Significance

11.5.18 Table 3.7 of LA104 Environmental Assessment Methodology of the Design Manual for Roads and Bridges (DMRB) sets out four levels against which the magnitude of these impacts should be assessed – major, moderate, minor and negligible. The impacts and levels of magnitude are discussed below in **Table 11.3**.

Table 11.3: Magnitude of Effect

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

11.5.19 The predicted significance of the effect was determined through a standard method of assessment based on professional judgement, considering both sensitivity and magnitude of change as detailed in **Table 11.4** below.

Table 11.4: Classification of Receptor Sensitivity

Receptor Sensitivity	Magnitude of Change			
	Major	Moderate	Minor	Negligible
High	Major	Major / Moderate	Moderate / Minor	Minor
Medium	Major / Moderate	Moderate	Minor	Minor / Negligible
Low	Moderate / Major	Minor	Minor	Minor / Negligible
Negligible	Minor	Minor	Minor / Negligible	Negligible

11.5.20 Significance is categorised as **major**, **moderate**, **minor** or **negligible**. Effects judged to be of **major** or **moderate** significance are considered to be *Significant* in with the context of the EIA Regulations and require mitigation.

11.5.21 Where an effect could be one of **major** / **moderate** or **moderate** / **minor** significance, professional judgement is used to determine which option should be applicable. Effects judged to be of **minor** or **negligible** significance are considered *Not Significant* in the context of EIA Regulations.

Mitigation and Enhancement

11.5.22 If significant likely potential effects are identified, appropriate mitigation will be implemented to remove and reduce the significance of the effects where possible.

Assessment of Residual Effect Significance

11.5.23 Residual effects will be assessed following the methodology described above, taking into consideration the identified mitigation.

Assessment of Cumulative Effects

Onshore Wind Farm and Energy Related Planning Applications

11.5.24 A review of EAC's online planning portal and Scottish Governments ECU portal was undertaken to identify any consented developments within the vicinity of the Proposed Development which would generate significant traffic within the same study area and should be included within the assessment.

11.5.25 Transport Assessment Guidance advises that only those projects with extant planning permission or local development plan allocations within an adopted or approved plan require to be included in any assessment. Those projects in scoping or at the application stage should not be included in cumulative assessments as they have yet to be determined. When considering traffic impacts specifically in relation to the construction phase of a project, the potential traffic impact is highly speculative and as such, cannot be included in the assessment.

11.5.26 **Technical Appendix 11.1** includes a full review of consented schemes in the area which required consideration, including justification on whether these should be included within the cumulative assessment. Those included within **Table 11.5** are those schemes deemed applicable for inclusion within the assessment.

Table 11.5: Consented Schemes

Planning Reference	Scheme Name	Status	Included as Committed Development
EC00005256	Enoch Hill 2 Wind Farm (12 month construction phase)	Consented 8 December 2021 – Commencement of development no later than six years from date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.
PPA-170-2179	Manquhill Wind Farm (12 month construction phase)	Consented at Appeal 8 July 2024 – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.
23/1686/S42	Glenshimmeroch Hill Wind Farm (12 month construction phase)	Consented 12 December 2023 – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.
PPA-170-2153 PPA-170-2178 (Combined due to falling within same site boundary)	Margree Area Wind Farm (12 month construction phase) Divot Hill Wind Farm (12 month construction phase)	Consented at Appeal on 21 March 2022 – Commencement of development no later than three years from the date of consent. Consented at Appeal on 10 July 2024 respectively – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.
23/2600/S36	Windy Standard III Wind Farm (15 month construction phase)	Consented 30 May 2024 – Commencement of development no later than six years from date of consent.	Yes – Potential for construction phases to overlap if construction of the Proposed Development is consented and begins construction in 2027 or soon thereafter.
ECU00001801	Sanquhar II Wind Farm (24 month construction phase)	Consented 31 August 2023 – Commencement of development no later than five years from date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.

Planning Reference	Scheme Name	Status	Included as Committed Development
ECU00000735	Shepherds' Rig Wind Farm (21 month construction phase)	Consented 21 August 2023 – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction of the Proposed Development is consented and begins construction in 2027. It is also noted that a revised application will be made in relation to varying the consented scheme.
ECU00002221 / ECU00001856	Lethan Wind Farm / Lethan Wind Farm Extension	Consented 18 June 2020 – Commencement of development no later than six years from the date of consent and consented 8 August 2024 – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction of the Proposed Development is consented and begins construction in 2027.

Other Planning Applications

11.5.27 A review of local online planning applications on the EAC planning applications website was undertaken to determine committed developments which should be considered within this assessment. The review examined consented developments whose trips are considered significant in scale (i.e., has associated traffic impact of over 30%).

11.5.28 The review did not identify any other significant traffic generating developments in the study area that may occur during the construction phase associated with the Proposed Development.

11.5.29 It should be noted that the use of NRTF growth assumptions has provided a basis for general local development growth within the study area.

Limitations, Difficulties and Uncertainties

11.5.30 Limitations to the assessment are as follows:

- The assessment is based upon average traffic flows in one month periods. During the month, activities at the Site may fluctuate between one day and another. It is not possible to fully develop a day by day traffic flow estimate as no Balance of Plant (BoP) contractor has been appointed and external factors can impact upon activities on a day by day basis (weather conditions, availability of materials, time of year, etc).
- Assumptions on the original points for materials have been made to provide a worst-case assessment scenario. Should these origin points change, the effects on the study area may alter to those presented in the assessment.
- Construction material estimates set out in **Technical Appendix 11.1** are based on past experience of what is likely to be required for a project of this

size and are considered to be appropriate for enabling a robust assessment of effects to be made.

- There will be a requirement for timber felling and extraction associated with the construction of the Proposed Development. It is currently estimated that there will be in the order of 12,000 tonnes (t) of timber to be felled. It has been assumed that the felling will commence in month one of the construction programme and will occur over a period of four months. Note this is subject to change following the preparation of a detailed felling plan.

11.5.31 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.

11.6 Baseline

Current Baseline

Active Travel Network

11.6.1 There are no dedicated pedestrian facilities in the immediate vicinity of the Site or in the vicinity of the proposed Site access locations. The closest settlement to the Proposed Development is Dalmellington, which is located approximately 3.8 km to the south (from the centre of the Site) and there are pedestrian facilities at this location. There are pedestrian footways on one or both sides of the carriageway, on the majority of the roads within Dalmellington, including on the A713, which is the main road passing through the town. There are no dedicated crossing facilities within the town, however a number of roads are traffic calmed, making them conducive to walking and cycling.

11.6.2 Further away from the Proposed Development in the wider study area, there are pedestrian facilities within the larger settlements like Cumnock and Ayr, and some of the smaller settlements, including Patna and New Cumnock.

11.6.3 The level of pedestrian infrastructure in the immediate vicinity of the Site is commensurate with the scale of the local settlements and their rural setting.

11.6.4 A review of EAC Core Path Map indicates there are no Core Paths located within the Site boundary, however there are a small number of Core Paths in the vicinity of the Site and on sections of the study area which could be impacted by construction vehicles routing to the Site. Those Core Paths sufficiently set back from the road network are excluded. The relevant Core Paths are provided below:

- Core Path D4: Patna to Rankinston;
- Core Path D10: Patna and Waterside Circular;
- Core Path D12: Dalmellington to Bogton Plantation;
- Core Path C10: Coalfield Cycle Route;
- Core Path C11: Knockshinnoch Lagoons;
- Core Path C12: New Cumnock Circular;
- Core Path C13: Castle Path;

- Core Path C14: Glen Afton; and
- Core Path D18: Carmlarg.

11.6.5 The Core Path Network within the vicinity of the Site can be seen in **Figure 6** in **Technical Appendix 11.1**.

11.6.6 A review of the Sustrans National Cycle Network (NCN) map indicates that the closest cycle route to the Site is NCN Route 7, located approximately 15 km west of the Proposed Development and does not overlap with the Proposed Development study area. NCN Route 7 spans over 965 km and links Inverness with Sunderland, passing through Ayr to the west of the Site. There are no NCN routes within the vicinity of the Proposed Development.

Road Access

A713

11.6.7 The A713 is a major road of approximately 64 km in length and 6.5 m in width. It is a two-way single carriageway road connecting Ayr and Castle Douglas. The road is generally subject to a 60 miles per hour (mph) speed limit, reducing through settlements, with speeds ranging from 30mph, 40mph and 50mph. The A713 in the vicinity of the Site is maintained by the Ayrshire Roads Alliance (ARA) on behalf of EAC, while the southern section is maintained by ARA on behalf of the Dumfries and Galloway Council (DGC).

B741

11.6.8 The B741 is a two-way single carriageway B-road through East Ayrshire approximately 50km in length. It starts at a junction on the A76 in New Cumnock and ends at a T-junction on the A77 north of Girvan. The B741 within the study area is maintained by the ARA and appears to be in a reasonable condition. The road is subject to a 60 mph speed limit in rural areas, reducing to 30mph in settlements.

A70

11.6.9 The A70 is a major road which runs for a total of 120 km from Edinburgh, where it begins as Dalry Road, to Ayr, where it ends as Miller Road. The A70 is approximately 7.3 m in width and links the A77 to the A76. The A70 is maintained by the ARA within the study area and appears to be in good condition. The road is mainly subject to a 60 mph speed limit which reduces to 30 mph through settlements, for example Ochiltree and Coylton. In the vicinity of schools, the speed limit reduces to a part-time 20 mph limit.

A76

11.6.10 The A76 is a major trunk road within East Ayrshire, to the east / north-east of the Site. The road runs for a total of 90 km from Kilmarnock, where it starts at the Belfield Interchange running to Cuckoo Bridge Roundabout in Dumfries. The A76 is maintained by Amey on behalf of TS and sits within the South West Unit of the Trunk Road network. The road for the most part is subject to a 60 mph speed limit

outwith towns and settlements, where it reduces to speeds ranging from 30 mph, 40 mph and 50 mph.

A77

11.6.11 The A77 is a major trunk road approximately 148 km in length. It runs from Glasgow to Portpatrick and passes through Kilmarnock, Ayr, and Stranraer. The A77 is maintained by Amey on behalf of TS and sits within the South West Unit of the Trunk Road network. The road for the most part is subject to a 60 mph speed limit outwith towns and settlements, where it reduces to speeds ranging from 30 mph, 40 mph and 50 mph.

General Road Suitability

11.6.12 The Agreed Timber Route Map has been developed by The Timber Transport Forum who are a partnership of the forestry and timber industries, local government, national government agencies, timber hauliers and road and freight associations. One of the key aims of the forum is to minimise the impact of timber transport on the public road network, on local communities and the environment and a way of achieving this is to categorise the roads leading to forest areas in terms of their capacity to sustain the likely level of timber haulage vehicles i.e. Heavy Goods Vehicles (HGVs). The routes are categorised into four groups, namely; 'Agreed Routes', 'Consultation Routes', 'Severely Restricted Routes' and 'Excluded Routes'.

11.6.13 'Agreed Routes' are categorised as routes used for timber haulage without restriction as regulated by the Road Traffic Act 1988. A-roads are classified as 'Agreed Routes' by default unless covered by one of the other road classifications. Those links classed as 'Consultation Routes' are categorised as a route which is key to timber extraction, but which are not up to 'Agreed Route' standard. Consultation with the local authority is required, and it may be necessary to agree limits of timing, allowable tonnage etc. before the route can be used. B-roads are classified as 'Consultation Routes' by default unless covered by one of the other classifications. 'Severely Restricted Routes' are not normally to be used for timber transport in their present condition. These routes are close to being Excluded Routes. Consultation with the local authority is required prior to use. Finally, 'Excluded Routes' should not be used for timber transport in their present condition. These routes are either formally restricted, or are close to being formally restricted, to protect the network from damaging loads.

11.6.14 Roads within the study area form part of the route network used for the extraction of timber and are therefore regularly used by HGV traffic. This includes sections of the A713, A70, A76, and A77 which are 'Agreed Routes' and the B741 which is a 'Consultation Route'.

Existing Traffic Conditions

11.6.15 In order to assess the impact of development traffic on the study area, ATCs were deployed along the A713 and the B741, in the vicinity of the proposed Site access junctions over a 7-day period in June 2024, in order to collect vehicle volumes, composition and speed per direction per hour.

11.6.16 To compliment the ATC survey, existing traffic count data was obtained from the Transport Scotland (TS) database, with 2024 data utilised for all locations with the exception of location eight, where there was insufficient data for 2024. As such 2023 data for this location has been used.

11.6.17 The traffic count sites used are as follows:

1. A713, north-west of Dalmellington (Commissioned ATC Survey);
2. A713, south-east of Dalmellington (Commissioned ATC Survey);
3. B741, east of Dalmellington (Commissioned ATC Survey);
4. A70, west of Coylton (TS Counter: ATC00322);
5. A76, south of Cumnock (TS Counter: ATCSW004);
6. A76, north of Cumnock (TS Counter: ATCSW005);
7. A76, New Cumnock (TS Counter: JTC00537);
8. A77, north of A713 junction (TS Counter: JTC00109); and
9. A77, south of A713 junction (TS Counter: JTC00110).

11.6.18 The traffic counters allowed the traffic flows to be split into vehicle classes and the data has been summarised into cars / light good vehicles (LGVs) and HGVs (all goods vehicles >3.5 tonnes gross maximum weight).

11.6.19 A National Road Traffic Forecast (NRTF) Low growth factor has been applied to the survey data to bring it up to the base year of 2025. The NRTF Low growth factors applied were 1.011 and 1.005 for 2023 and 2024, respectively.

11.6.20 These sites were identified as being areas where sensitive receptors on the access routes would be located. **Figure 11.2** shows the location of the survey points, while **Table 11.6** summarises the 2025 Annual Average Daily Traffic (AADT) traffic data collected and used in this assessment.

Table 11.6: 24-Hour Two Way Average Traffic Data (2025)

Site ID	Survey Location	Cars & Lights	HGV	Total
1	A713, north-west of Dalmellington	3,822	103	3,925
2	A713, south-east of Dalmellington	1,716	77	1,793
3	B741, east of Dalmellington	881	33	915
4	A70, west of Coylton	10,156	1,151	11,306
5	A76, south of Cumnock	5,198	1,108	6,305
6	A76, north of Cumnock	7,321	1,337	8,658
7	A76, New Cumnock	3,026	755	3,781
8	A77, north of A713 junction	22,337	1,849	24,186
9	A77, south of A713 junction	16,832	1,984	18,816

Please note minor variances due to rounding may occur.

11.6.21 The ATC and TS survey locations which provided traffic volume data were also used to obtain speed statistics. The two-way seven-day average and 85th percentile speeds observed at the count sites are summarised in **Table 11.7**.

Table 11.7: Speed Summary

Site ID	Survey Location	Mean Speed (mph)	85%ile Speed (mph)	Speed Limit (mph)
1	A713, north-west of Dalmellington	55.5	63.4	60
2	A713, south-east of Dalmellington	42.4	49.3	60
3	B741, east of Dalmellington	37.8	45.3	60
4	A70, west of Coylton	49.1	56.4	60
5	A76, south of Cumnock	51.7	58.1	60
6	A76, north of Cumnock	58.5	65.9	60
7	A76, New Cumnock	25.7	30.4	30
8	A77, north of A713 junction	47.0	54.4	60
9	A77, south of A713 junction	40.8	48.8	60

Speed data for TS Count Sites obtained April 2025 and for the ATC Count Sites in June 2024

11.6.22 The speed information indicates that for the most part, speed limits are being adhered to within the study area, with the exception of the 85th percentile on the A713 north-west of Dalmellington, and the A76. The 85th percentile speeds on the A713 north-west of Dalmellington are approximately 6% above the posted speed limit of 60mph, while on the A76, they are 1% above the posted speed limit of 30mph at New Cumnock and 10% above the posted speed limit of 60mph north of Cumnock.

Personal Injury Accident Review

11.6.23 PIA data for the three-year period commencing 01 January 2021 through to the 31 December 2023 was obtained from the online resource CrashMap which uses data collected by the police about road traffic crashes occurring on British roads, where someone is injured.

11.6.24 TA Guidance requires an analysis of the accident data on the road network in the vicinity of any development to be undertaken for at least the most recent three-year period. For the purposes of the assessment, PIA data was analysed for the following road links within the immediate vicinity of the Proposed Development:

- A713, between Patna and Dalmellington;
- A713, between Dalmellington and Eriff; and
- B741, between Dalmellington and New Cumnock.

11.6.25 The statistics are categorised into three categories, namely “Slight” for damage only incidents, “Serious” for injury accidents and “Fatal” for accidents that result in a fatality.

11.6.26 The locations and severity of the recorded accidents within the study area are summarised in **Table 11.8** while **Figure 11.3** shows their locations.

Table 11.8: Personal Injury Accident Summary

Road Link	Slight	Serious	Fatal	HGV
A713 between Patna and Dalmellington	3	1	1	0
A713 between Dalmellington and Eriff	1	1	0	0
B741 between Dalmellington and New Cumnock	2	0	0	0
Total	**6**	**2**	**1**	**0**
Percentage of total accidents	**67%**	**22%**	**11%**	**-**

11.6.27 A general summary of the accidents is as follows:

A713 from Patna to Dalmellington

- There were a total of five PIAs on the A713 at this location, three slight, one serious and one fatal.
- The single fatality occurred at a bend on the carriageway to the east of Waterside and involved four vehicles, all of which were cars. The accident resulted in a total of six casualties, two of which were fatalities.
- Two of the recorded accidents involved a young driver (under 25), both of which were classified as slight.
- Three of the five accidents occurred at junctions (two slight and one serious) and two occurred at bends on the carriageway (one slight and one fatality).
- None of the recorded accidents involved a child, pedestrian or cyclist casualty.
- None of the recorded accidents involved an HGV or motorcycle.
- There were no accidents recorded in the immediate vicinity of the Site access.

A713 from Dalmellington to Eriff

- There were a total of two PIAs on the A713 at this location, one slight and one serious.
- The serious accident was a single vehicle accident and involved a motorcycle on a bend on the carriageway.
- The slight accident was a single vehicle accident and involved a car on approach to a junction.
- None of the accidents involved a young driver (under 25).
- None of the recorded accidents involved a child, pedestrian or cyclist casualty.
- None of the recorded accidents involved an HGV.

B741

- There were a total of two PIAs on the B741 at this location, both of which were slight.
- Both accidents were single vehicle accidents and occurred on bends on the carriageway.

- None of the accidents involved a young driver (under 25).
- None of the recorded accidents involved a child, pedestrian or cyclist casualty.
- None of the recorded accidents involved an HGV or motorcycle.
- There were no accidents recorded in the immediate vicinity of the Site access.

PIA Summary

11.6.28 The analysis indicates that there were a total of nine PIA incidents within the most recent three-year period. Most recorded accidents are categorised as being "slight" (67%) with "serious" accidents representing approximately 22% of all accidents. One accident resulted in a fatality.

11.6.29 None of the recorded incidents within the study area involved an HGV. There were no clusters of PIAs to raise a safety concern and there were no pedestrian, child, or cyclist incidents within the most recent three-year period. There were no accidents within the immediate vicinity of either of the Site access locations.

11.6.30 Based on the information available, it has been established that there are no specific road safety issues within the immediate vicinity of the Proposed Development that currently require to be addressed or will be exacerbated by construction activities associated with the Proposed Development.

Future Baseline

11.6.31 As detailed in **Technical Appendix 11.1** construction of the Proposed Development is expected to commence in 2026 if planning permission is granted and it is expected to take between 18 to 24 months to construct, with the grid connection currently estimated for October 2028. For the purposes of the assessment, an 18-month construction programme has however been assumed, to allow for a suitably robust assessment to take place, whereby all construction activity occurred over a shorter timeframe.

11.6.32 Taking account of the construction trip generation provided in **Section 6** of **Technical Appendix 11.1**, it can be seen that the peak month occurs in month eight of the 18-month construction programme and working back from the estimated grid connection date in October 2028, this would put the peak month of construction activity in 2027, and as such this has been used as the future year baseline for the assessment.

11.6.33 To assess the likely effects during the construction phase, base year traffic flows were determined by applying a NRTF Low growth factor to the surveyed traffic flows. The NRTF low growth factor for 2025 to 2027 is 1.010. This factor was applied to the 2025 traffic data presented in **Table 11.6** to estimate the 2027 future baseline traffic flows presented in **Table 11.9**.

Table 11.9: 24-Hour Two Way Average Traffic Data (2027)

Site ID	Survey Location	Cars & Lights	HGV	Total
1	A713, north-west of Dalmellington	3,860	104	3,964
2	A713, south-east of Dalmellington	1,733	78	1,811

Site ID	Survey Location	Cars & Lights	HGV	Total
3	B741, east of Dalmellington	890	33	924
4	A70, west of Coylton	10,257	1,162	11,419
5	A76, south of Cumnock	5,250	1,119	6,368
6	A76, north of Cumnock	7,395	1,350	8,745
7	A76, New Cumnock	3,056	762	3,819
8	A77, north of A713 junction	22,561	1,868	24,428
9	A77, south of A713 junction	17,000	2,004	19,004

Please note minor variances due to rounding may occur.

11.7 Summary of Sensitive Receptors

11.7.1 A review of sensitive receptors has been undertaken within the study area. **Table 11.10** details the receptors and their sensitivities for use within the following assessment. A justification for the sensitivity has been provided, based upon the details contained in **Table 11.2**.

Table 11.10: Receptor Sensitivity Summary

Receptor	Sensitivity	Justification
A713 Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
B741 Users	Medium	Where the road is a local A or B class road, capable of regular use by HGV traffic.
A70 Users	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
A76 Users	Negligible	Where roads have no adjacent settlements.
A77 Users	Negligible	Where roads have no adjacent settlements.
Residents in Dalmellington	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents in Waterside	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents in Patna	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents in Polnessan	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents in Hollybush	Low	Where a location is a small rural settlement, few community or public facilities or services.
Ailsa Hospital / University Hospital Ayr	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents in New Cumnock (including Pathhead)	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.

Receptor	Sensitivity	Justification
Residents in Kirkconnel	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents in Cumnock	High	Where a location is a large rural settlement containing a high number of community and public services and facilities.
Residents in Ochilltree	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents in Coalhall	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents in Joppa / Coylton Hillhead	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents of Carsphairn	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents in St John's Town of Dalry	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents along A713 (outwith towns and villages)	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents along B741 (outwith towns and villages)	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents along A70 (outwith towns and villages)	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents along A76 (outwith towns and villages)	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents along A77 (outwith towns and villages)	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Core Path / Path Users	Medium	At locations where users are required to cross roads within the study area to use the paths.

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

- Dalmellington (church, schools, tourist attractions and health centre);
- Waterside (tourist attractions);
- Patna (church, schools, tourist attractions and health centre);
- Alisa Hospital / University Hospital Ayr (hospital);
- New Cumnock (church, schools, tourist attractions and health centre);

- Cumnock (church, schools, education facilities, tourist attractions, health centre, community hospital);
- Ochiltree (school and church);
- Joppa / Coylton / Hillhead (church, schools, tourist attractions and medical centre);
- Kirkconnel (church, schools, tourist attractions and medical centre);
- Carsphairn (church and tourist attraction); and
- St John's Town of Dalry (church, schools, tourist attractions and health centre).

11.7.3 These location is therefore subject to 'Rule 2' of the IEMA Guidelines which requires a full assessment of effects if the locations are subject to a total traffic increase of 10% or more.

11.7.4 All other locations within the study area are subject to 'Rule 1' and are assessed if total traffic flows (or HGV flows) on highway links increase by more than 30%.

11.8 Implications of Climate Change for Existing Conditions

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

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

11.9 Future Baseline in the Absence of the Proposed Development

11.9.1 As noted above, the assessment has been undertaken on the basis of a future baseline of conditions in 2027, with growth factors applied. In the absence of the Proposed Development, it is anticipated that traffic growth will occur throughout the study area as a result of other development pressures, tourism and population flows.

11.10 Impacts Scoped Out of Assessment

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

- Operation Phase: The traffic effects during the operation phase of the Proposed Development will be low, with two vehicles per week for maintenance purposes, far below the recognised thresholds for triggering a formal transport assessment. As such, the effects during the operation phase are scoped out of the assessment.

- Decommissioning Phase: The traffic effects during the decommissioning phase can only be fully assessed closer to that period, 40 years on from the completion of the Proposed Development. As elements of the Proposed Development are likely to remain *in situ* (such as cable trenches, some access tracks, etc.), the traffic flows associated with the decommissioning works will be lower than those associated with the construction phase. The construction phase therefore represents a worst-case assessment, and as such Decommissioning effects are considered to be less than or equal to, the predicted construction phase effects.

11.11 Standard Mitigation Measures

11.11.1 The Site layout includes the use of three on-site borrow pits to provide material for the creation of the access tracks, hardstandings and compound bases etc. The borrow pit assessment undertaken has confirmed that the volume of material suitable to be used on site is in excess of the volume of material required, with a surplus of material estimated to be in excess of 6,000 m3. The use of aggregate materials won from the on-site borrow pits would result in fewer delivery vehicles travelling to and from the Site.

11.11.2 Nevertheless, as per the requirements set out within the Scoping Opinion by EAC a worst-case assessment has been undertaken whereby all aggregate materials are imported to the Site from local quarries, with potential suppliers located to the northeast of the Proposed Development.

11.11.3 Batching of concrete for use on-site is considered feasible and economic and facilities to enable this are being provided at the Proposed Development which would result in fewer delivery vehicles travelling to and from the site compared to if ready-mix material were to be delivered. The assessment, has, however, taken into consideration the importation of concrete batching materials, including cement, water and aggregates.

11.12 Potential Effects

Construction

11.12.1 The assessment is based upon the construction effects that may occur within the study area during the 18-month construction phase. To assess the effects, it is necessary to determine the likely traffic generation associated with the Proposed Development during the peak construction month.

11.12.2 During the 18-month construction phase, the following traffic will require access to the Site:

- Staff transport, in either cars or staff minibuses;
- Construction equipment and materials, deliveries of machinery and supplies such as concrete materials, sand and crushed rock;
- Components relating to the BESS element, substation components and associated infrastructure; and
- AILs consisting of the wind turbine sections and heavy lift cranes.

11.12.3 Average monthly traffic flow data was used to establish the construction trips associated with the Proposed Development and these are detailed in the Transport Assessment provided as **Technical Appendix 11.1**. The trip estimates have been based upon first principle estimates of traffic movements to and from the Site, having established the likely volumes of construction materials, resources and components.

11.12.4 Except for the turbine components, most traffic will be HGVs and normal construction plant, including grading tractors, excavators, high-capacity cranes, forklifts and dumper trucks. Most will arrive at the Site access junction on low loaders.

11.12.5 The turbines are delivered in component sections for transport and will be assembled within the turbine array. The nacelle, hub, drive train, blade, tower sections are classified as AILs due to their weight and/or length, width and height when loaded. The components can be delivered on a variety of transport platforms with typical examples illustrated in **Technical Appendix 11.1**.

11.12.6 In addition to the turbine deliveries, up to two high-capacity erection cranes will be needed to offload components and erect the turbines. The cranes are likely to be mobile cranes with a capacity up to 1,000 tonnes that will be escorted by boom and ballast trucks to allow full mobilisation on-site. A smaller erector / assist crane will also be present to allow the assembly of the main cranes and to ease overall erection of the turbines.

11.12.7 The resulting traffic generation profile is presented in **Technical Appendix 11.1**. The peak of construction activity is expected to occur in month eight when there will be a total of 7,128 vehicle movements, which equates to 324 vehicle movements per day, comprising 252 two-way HGV movements and 72 two-way car / LGV movements.

11.12.8 This would equate to approximately 27 total vehicles movements per hour or 21 HGV movements per hour, across a typical 12-hour day, assuming a flat traffic profile i.e. vehicles distributed evenly across the day.

11.12.9 At the request of EAC, this has been based on the assumption that 100% of aggregate materials are brought to the Site from nearby quarries, when in fact this would not be the case, with the on-site borrow pits being sufficient to provide the necessary aggregate materials.

11.12.10 In the actual scenario whereby the on-site borrow pits are used to provide the on-site aggregate materials, with the exception of sand aggregates to be used within the concrete batching, the peak of construction activity in the scenario where on-site borrow pits are used, will still occur in month eight, when there will be a total of

2,264 vehicle movements, which equates to 104 vehicle movements per day, comprising 28 HGV movements per hour and 72 car / LGV movements per hour.

11.12.11 This would equate to approximately eight total vehicles movements or approximately two HGV movements per hour, across a typical 12-hour day, assuming a flat traffic profile i.e. vehicles distributed evenly across the day.

11.12.12 This would equate to a reduction in 4,864 total vehicle movements in the peak month, or 220 per day.

11.12.13 A full comparison between both scenarios and details on traffic generation for the Proposed Development with 100% of aggregate materials being imported to the Site and the use of on-site borrow pits is included in **Section 7** of **Technical Appendix 11.1**. For the purposes of the assessment of the potential impacts of the Proposed Development on the local road network within this Chapter, this has been done in line with the Scoping requirements set out by EAC.

11.12.14 The distribution of development traffic on the network will vary depending on the types of loads being transported, however it will generally originate from the north on the A713 or from the east on the B741. The assumptions for the distribution of construction traffic during the peak month are presented in **Technical Appendix 11.1**.

11.12.15 All AIL traffic will access from the PoE at King George V Docks in Glasgow, utilising sections of proven AIL routes used during the construction of other wind farms in the area. For the purposes of preparing this Chapter and **Technical Appendix 11.1**, it has been assumed that all AIL traffic will access the Site via the following route:

- Loads would depart the KGV Docks and proceed to exit the roundabout onto Kings Inch Drive;
- At the roundabout loads would take the second exit and stay on Kings Inch Drive;
- Loads would merge onto the M8 via the ramp to Glasgow;
- Blade loads will continue east on the M8 / M74 before departing at Junction 4 and continue northbound on the M73, continuing to Junction 8 between the M73 and M8;
- At Junction 8, the loads will circumnavigate the roundabout, before rejoining the M73 southbound;
- Loads will then rejoin the M74 at Junction 4 continuing westbound. They will travel west before joining the southbound carriageway of the M77 at Junction 22 of the M8;
- Non-blade loads will use the Seaward Street Interchange to U turn and access the M77 from the M8;
- Loads will continue south on the M77 / A77 to Bankfield Roundabout to the east of Ayr, taking the first exit and joining the A713; and
- Loads would continue on the A713 to the north of Dalmellington where they would access the Proposed Development via an existing Site access junction, used for North Kyle Wind Farm.

11.12.16 The above route is shown in **Figure 11.4**.

11.12.17 Following the distribution and assignment of traffic flows to the study area network, the resultant daily traffic during the peak of construction in month eight, is summarised in **Table 11.11**. Note for locations where no construction traffic has been assigned, this is due to those construction activities that are taking place within the peak month not utilising those routes.

Table 11.11: Peak Construction Traffic (month eight) – 100% Import of Aggregate Materials

Site ID	Survey Location	Cars & Lights	HGV	Total
1	A713, north-west of Dalmellington	44	10	54
2	A713, south-east of Dalmellington	22	-	22
3	B741, east of Dalmellington	8	244	252
4	A70, west of Coylton	-	-	-
5	A76, south of Cumnock	8	244	252
6	A76, north of Cumnock	8	244	252
7	A76, New Cumnock	8	244	252
8	A77, north of A713 junction	44	10	54
9	A77, south of A713 junction	-	-	-

Please note minor variances due to rounding may occur.

11.12.18 The peak month (month eight) traffic data was combined with the future year (2027) traffic data to allow a comparison between the baseline results to be made. The increase in traffic volumes is illustrated in percentage increases for each class of vehicle. This is illustrated in **Table 11.12**.

Table 11.12: 2027 Baseline + Construction Development (100% Import of Aggregate Materials) – Flows and Impact

Site ID	Survey Location	Cars & Lights	HGV	Total Traffic	Cars & LGV % Increase	HGV	Cars & LGV % Increase
1	A713, north-west of Dalmellington	3,904	114	4,018	1.14%	9.66%	1.36%
2	A713, south-east of Dalmellington	1,755	78	1,833	1.27%	0.00%	1.21%
3	B741, east of Dalmellington	898	277	1,176	0.90%	728.43%	27.28%
4	A70, west of Coylton	10,257	1,162	11,419	0.00%	0.00%	0.00%
5	A76, south of Cumnock	5,258	1,363	6,620	0.15%	21.81%	3.96%
6	A76, north of Cumnock	7,403	1,594	8,997	0.11%	18.07%	2.88%
7	A76, New Cumnock	3,064	1,006	4,071	0.26%	32.01%	6.60%
8	A77, north of A713 junction	22,605	1,878	24,482	0.20%	0.54%	0.22%

Site ID	Survey Location	Cars & Lights	HGV	Total Traffic	Cars & LGV % Increase	HGV	Cars & LGV % Increase
9	A77, south of A713 junction	17,000	2,004	19,004	0.00%	0.00%	0.00%

Please note minor variances due to rounding may occur.

11.12.19 The total traffic movements are predicted to increase by a maximum of 27.28% on the B741, east of Dalmellington, where the majority of construction vehicles associated with the movement of bulk aggregate materials would route to the Site. On the rest of the study area, the highest total traffic increase is 6.60%, which occurs on the A76 at New Cumnock.

11.12.20 **Table 11.12** shows that highest HGV traffic movements increase will occur on the B741, east of Dalmellington, where the majority of construction vehicles associated with the movement of bulk aggregate materials would route to the Site. At this location, it is estimated to increase by 728.43%. Whilst this increase could be considered statistically significant high, this is due to the low level of HGVs currently using this road. To put the increase into perspective, the B741 will see an additional 244 HGV movements per day or approximately 20 HGV movements per hour over the course of a typical 12-hour shift. This is not considered significant in terms of overall traffic flows.

11.12.21 The next highest HGV traffic movement increase would occur on the A76 at New Cumnock, where it is estimated to increase by 32.01%. To put the increase into perspective, the A76 will see an additional 244 HGV movements per day or approximately 20 HGV movements per hour over the course of a typical 12-hour shift. This is not considered significant in terms of overall traffic flows.

11.12.22 A review of existing theoretical road capacity has been undertaken using The NESA Manual, formerly part of the Design Manual for Roads and Bridges, Volume 15, Part 5. The theoretical road capacity has been estimated for each of the road links for a 12-hour period that makes up the study area. The results are summarised in **Table 11.13**.

Table 11.13: 2027 Peak Traffic Flow Capacity Review – 100% Import of Aggregate Materials

Site ID	Survey Location	2027 Baseline Flow	2027 Base + Development Flows	Theoretical Road Capacity (12hr)	Spare Road
1	A713, north-west of Dalmellington	3,964	4,018	21,600	81.4%
2	A713, south-east of Dalmellington	1,811	1,833	21,600	91.5%
3	B741, east of Dalmellington	924	1,176	19,200	93.9%
4	A70, west of Coylton	11,419	11,419	21,600	47.1%
5	A76, south of Cumnock	6,368	6,620	21,600	69.3%
6	A76, north of Cumnock	8,745	8,997	21,600	58.3%

Site ID	Survey Location	2027 Baseline Flow	2027 Base + Development Flows	Theoretical Road Capacity (12hr)	Spare Road
7	A76, New Cumnock	3,819	4,071	21,600	81.2%
8	A77, north of A713 junction	24,428	24,482	28,800	15.0%
9	A77, south of A713 junction	19,004	19,004	28,800	34.0%

Please note minor variances due to rounding may occur.

11.12.23 The results indicate there are no road capacity issues with the addition of construction traffic associated with the Proposed Development and significant spare capacity exists within the trunk and local road network to accommodate all construction phase traffic.

11.12.24 In accordance with the IEMA Guidelines Rules 1 and 2, detailed assessments have been undertaken on the following receptors within the study area.

- B741 Users (Medium Sensitivity);
- A76 Users (Negligible Sensitivity);
- Residents along B741 (Negligible Sensitivity);
- Residents along A76 (Negligible Sensitivity);
- Residents in New Cumnock (Medium Sensitivity); and
- Core Path / Path Users (Medium Sensitivity).

11.12.25 The significance of the potential effects on the above receptors has been determined using the rules and thresholds previously outlined in the Criteria for Assessing Significance. **Table 11.14** summarises the significance of the effect on the receptors for the construction phase.

11.12.26 Note, for the purposes of undertaking the assessment, where both the users of a road and residents in the vicinity of the road require to be assessed, these have been done together to avoid repetition.

Table 11.14: Overall Construction Phase Effects Assessment

Receptor	Severance	Driver Delay	Pedestrian Delay	Non-motorised user Amenity	Fear & Intimidation	Road Safety	Large Loads
B741 Users / Residents	Moderate	Minor	Minor	Moderate	Moderate	Minor	N/A
A76 Users / Residents	Negligible	Negligible	Minor / Negligible	Minor / Negligible	Minor / Negligible	Minor / Negligible	N/A
Residents in New Cumnock	Moderate	Minor	Minor	Moderate	Moderate	Minor	N/A
Core Path / Path Users	Moderate	N/A	Minor	Moderate	Moderate	Minor	N/A

11.12.27 The assessment of significance suggests that the following receptors are considered likely to experience significant effects in accordance with the EIA Regulations, prior to the application of mitigation measures:

- B741 Users;
- Residents along B741;
- Residents in New Cumnock; and
- Core Path / Path Users.

11.12.28 It should be noted that the impacts relate solely to the peak of construction activities and that the construction period is short lived (18 months) and the effects transitory in nature.

11.13 Mitigation

Construction Traffic Management Plan (CTMP)

11.13.1 During the construction phase, a project website, blog or X (Twitter) feed will be regularly updated to provide the latest information relating to traffic movements associated with vehicles accessing the Site. This would be agreed with EAC.

11.13.2 The following measures will be implemented during the construction phase through the CTMP:

- Agree AIL route modifications and improvements with EAC / ARA and TS. Works which will be required to facilitate turbine deliveries are outlined in the RSR, which is presented in **Annex A** of **Technical Appendix 11.1**;
- Where possible, the detailed design process will minimise the volume of material to be imported to Site to help reduce HGV numbers;
- A Staff Travel Plan, including transport modes to and from the worksite (including pick up and drop off times);
- A Transport Management Plan for AIL deliveries;
- All materials delivery lorries (dry materials) should be sheeted to reduce dust and stop spillage on public roads;
- Specific training and disciplinary measures should be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway;
- Wheel cleaning facilities may be established at the Site entrance, depending on the views of EAC / ARA;
- Normal Site working hours will be limited to between 0700 and 1900 Monday to Friday and 0700 and 1300 on Saturdays though component delivery and turbine erection may take place outside these hours i.e. depending on when police escort is available;
- Appropriate traffic management measures will be put in place on the A713, B741 leading through to the Site, to avoid conflict with general traffic, subject to the agreement of EAC / ARA. Typical measures will include HGV turning and crossing signs and / or banksmen at the Site access and warning signs;

- Provide construction updates on the project website, social media feeds and a newsletter to be distributed to residents within an agreed distance of the Site;
- Adoption of a voluntary reduced speed limits, for example on the A713 and B741 and at other locations to be agreed with EAC / ARA;
- All drivers will be required to attend an induction to include:
  - A toolbox talk safety briefing;
  - The need for appropriate care and speed control;
  - A briefing on driver speed reduction agreements (to slow Site traffic at sensitive locations through the villages); and
  - Identification of the required access routes and the controls to ensure no departure from these routes.

Off-site Mitigation

11.13.3 EAC / ARA is likely to request that an agreement to cover the cost of abnormal wear on its network is made. Video footage of the pre-construction phase condition of the abnormal loads access route and the construction vehicles route will be recorded to provide a baseline of the condition of the road prior to any construction work commencing. This baseline will inform any change in the road condition during the construction phase. Any necessary repairs will be coordinated with EAC / ARA's roads team. Any damage caused by traffic associated with the Proposed Development during the construction phase that would be hazardous to public traffic will be repaired immediately.

11.13.4 Damage to road infrastructure caused directly by construction traffic will be repaired and street furniture that is removed on a temporary basis will be fully reinstated.

11.13.5 There will be a regular road review and any debris and mud will be removed from the carriageway using an on-site road sweeper to ensure road safety for all road users.

Specific Abnormal Load Mitigation

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

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

11.13.8 The majority of potential conflicts between construction traffic and other road users will occur with abnormal load traffic. General construction traffic is not likely to come

into conflict with other road users as the vehicles are smaller and road users are generally more accustomed to them.

11.13.9 Potential conflicts between the abnormal loads and other road users can occur at a variety of locations and circumstances.

- On sections of single carriageway road or narrow road sections, for example on the A713;
- At locations where there are significant changes in the horizontal alignment of the carriageway, requiring the loads to use the full carriageway width;
- Where traffic turns at a road junctions, requiring other traffic to be restrained on other approach arms; and
- In locations where high speeds of general traffic are predicted.

11.13.10 Advance warning signs will be installed on the approaches to the affected road network. Information signage could be installed to help improve driver information and allow other road users to consider alternative routes or times for their journey (where such options exist).

11.13.11 The location and numbers of signs will be agreed post consent and would form part of the wider traffic management proposals for the Proposed Development.

11.13.12 Information on the wind turbine convoys will be provided to local media outlets such as local papers and local radio to help assist the public. Information will relate to expected vehicle movements from the PoE through to the Site access junction. This will assist residents becoming aware of the convoy movements and may help reduce any potential conflicts.

11.13.13 The Applicant will also ensure information is distributed through its communication team via the project website, local newsletters, and social media.

AIL Transport Management Plan

11.13.14 An Abnormal Load Transport Management Plan will be prepared to cater for all movements to and from the Proposed Development Site. This will include:

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

Public Information

11.13.15 Information on the wind turbine convoys will be provided to local media outlets such as local papers and local radio to help assist the public.

11.13.16 Information will relate to expected vehicle movements from the PoE through to the Site access junction. This will assist residents in understanding the timing of the convoy movements and may help reduce any potential conflicts.

11.13.17 The Applicant will also ensure information is distributed through its communication team via the project website, local newsletters, and social media.

Convoy System

11.13.18 A police escort will be required to facilitate the delivery of the predicted AILs. The police escort will be further supplemented by a civilian pilot car to assist with the escort duty. It is proposed that an advance escort will warn oncoming vehicles ahead of the convoy, with one escort staying with the convoy at all times. The escorts and convoy will remain in radio contact at all times where possible.

11.13.19 The AIL convoys will be no more than three AILs vehicles long, or as advised by the police, to permit safe transit along the delivery route, and to allow limited overtaking opportunities for following traffic where it is safe to do so.

11.13.20 The times in which the convoys will travel will need to be agreed with Police Scotland who have sole discretion on when loads can be transported.

Staff Travel Plan

11.13.21 A Staff Travel Plan will be deployed where necessary, to manage the arrival and departure profile of staff and to encourage sustainable modes of transport, especially car-sharing. A package of measures could include:

- Appointment of a Travel Plan Coordinator (TPC);
- Provision of public transport information;
- Mini-bus service for transport of Site staff;
- Promotion of a car sharing scheme;
- Car parking management; and
- Restrictions on parking, for example on the public road network and verges in the vicinity of the Site entrance.

Outdoor Access Management Plan (OAMP)

11.13.22 Within the Site, consideration has been given to pedestrians and cyclists alike due to potential interactions between construction traffic and users of, paths, cycle routes and public roads. An Outdoor Access Management Plan (OAMP) will be developed and secured via a planning condition.

11.13.23 Users of paths and Core Paths etc. will be separated from construction traffic wherever possible. Crossing points will be provided where required, with path users

having right of way and temporary diversions will be provided where necessary. Appropriate Traffic Signs Manual Chapter 8 compliant temporary road signage will be provided to assist at these crossings for the benefit of all users.

11.13.24 The principal contractor will ensure that speed limits are always adhered to by their drivers and associated subcontractors. This is particularly important within close proximity to any paths or crossing points. Advisory speed limit signage will also be installed on approaches to areas where path users may interact with construction traffic.

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

11.13.26 A scoping response has not been received from The British Horse Society; however consideration will be given to measures implemented on similar schemes as part of the Proposed Development. These measures are predominantly focused around the interactions between HGV traffic and horses. Horses are normally nervous of large vehicles, particularly when they do not often meet them. Horses are flight animals and will run away in panic if really frightened. Riders will do all they can to prevent this but, should it happen, it could cause a serious accident for other road users, as well as for the horse and rider.

11.13.27 The main factors causing fear in horses in this situation are:

- something approaching them, which is unfamiliar and intimidating;
- a large moving object, especially if it is noisy;
- lack of space between the horse and the vehicle;
- the sound of air brakes; and
- anxiety on the part of the rider.

11.13.28 The British Horse Society has previously recommended the following actions that will be included in the Site training for all HGV staff:

- on seeing riders approaching, drivers must slow down and stop, minimising the sound of air brakes, if possible;
- if the horse still shows signs of nervousness while approaching the vehicle, the engine should be shut down (if it is safe to do so);
- the vehicle should not move off until the riders are well clear of the back of the HGV;
- if drivers are wishing to overtake riders, please approach slowly or even stop in order to give riders time to find a gateway or lay by where they can take refuge and create sufficient space between the horse and the vehicle. Because of the position of their eyes, horses are very aware of things coming up behind them; and
- all drivers delivering to the Site must be patient. Riders will be doing their best to reassure their horses while often feeling a high degree of anxiety themselves.

11.14 Assessment of Residual Effects

11.14.1 This section considers the assessment of traffic impacts following the incorporation of the identified mitigation measures. An evaluation of the potential effects of the increase in traffic on the study area roads used for construction traffic was undertaken. The summary of this assessment is provided in **Table 11.17**.

11.14.2 The assessment confirms the effects will be **minor** in nature and they would be not significant, following the implementation of a comprehensive CTMP, together with on-site route signage and an OAMP. The traffic effects are transitory in nature and appropriate mitigation measures are proposed to reduce the potential impacts. No long-term detrimental transport or access issues are associated with the construction phase of the Proposed Development.

11.15 Assessment of Cumulative Effects

11.15.1 As detailed in **Technical Appendix 11.1** and the **Section 11.6** of this Chapter, there are eight consented onshore wind farms, which could potentially impact the roads within the study area, namely:

- Enoch Hill 2 Wind Farm;
- Manquhill Wind Farm;
- Glenshimmeroch Hill Wind Farm;
- Margree Area Wind Farm & Divot Hill Wind Farm;
- Windy Standard III Wind Farm;
- Sanquhar II Wind Farm;
- Shepherds' Rig Wind Farm; and
- Lethan Wind Farm and Lethan Wind Farm Extension.

11.15.2 The peak traffic flows for the above schemes were obtained from their respective planning application documents (see **Table 11.15**: 2027 Daily Traffic (12hr) Construction Traffic Summary) and then compared to the future baseline year (2027) on **Table 11.16**.

Table 11.15: 2027 Daily Traffic (12hr) Construction Traffic Summary) – Part One

Site ID	Survey Location	Proposed Development		Enoch Hill 2 Wind Farm		Manquhill Wind Farm	
		Cars & Lights	HGV	Cars & Lights	HGV	Cars & Lights	HGV
1	A713, north-west of Dalmellington	44	10	0	0	50	25
2	A713, south-east of Dalmellington	22	-	0	0	50	25
3	B741, east of Dalmellington	8	244	0	0	0	0
4	A70, west of Coylton	-	-	0	0	0	0

Site ID	Survey Location	Proposed Development		Enoch Hill 2 Wind Farm		Manquhill Wind Farm	
		Cars & Lights	HGV	Cars & Lights	HGV	Cars & Lights	HGV
5	A76, south of Cumnock	8	244	0	0	0	0
6	A76, north of Cumnock	8	244	0	204	0	0
7	A76, New Cumnock	8	244	0	204	0	0
8	A77, north of A713 junction	44	10	0	0	50	25
9	A77, south of A713 junction	-	-	0	0	0	0

Table 11.15: 2027 Daily Traffic (12hr) Construction Traffic Summary) – Part Two

Site ID	Survey Location	Glenshimmeroch Hill Wind Farm		Margree Area Wind Farm & Divot Hill Wind Farm		Windy Standard III Wind Farm	
		Cars & Lights	HGV	Cars & Lights	HGV	Cars & Lights	HGV
1	A713, north-west of Dalmellington	0	0	50	31	21	40
2	A713, south-east of Dalmellington	0	0	50	31	21	40
3	B741, east of Dalmellington	0	0	0	0	0	0
4	A70, west of Coylton	0	0	0	0	0	0
5	A76, south of Cumnock	50	39	0	0	0	0
6	A76, north of Cumnock	50	39	0	0	0	0
7	A76, New Cumnock	50	39	0	0	0	0
8	A77, north of A713 junction	0	0	50	31	21	40
9	A77, south of A713 junction	0	0	0	0	0	0

Table 11.15: 2027 Daily Traffic (12hr) Construction Traffic Summary) – Part Three

Site ID	Survey Location	Sanquhar II Wind Farm		Shepherds' Rig Wind Farm		Lethan Wind Farm and Lethan Wind Farm Extension	
		Cars & Lights	HGV	Cars & Lights	HGV	Cars & Lights	HGV
1	A713, north-west of Dalmellington	0	0	52	16	0	0
2	A713, south-east of Dalmellington	0	0	52	16	0	0
3	B741, east of Dalmellington	0	0	0	0	0	0

Site ID	Survey Location	Sanquhar II Wind Farm		Shepherds' Rig Wind Farm		Lethan Wind Farm and Lethan Wind Farm Extension	
		Cars & Lights	HGV	Cars & Lights	HGV	Cars & Lights	HGV
4	A70, west of Coylton	0	0	0	0	0	0
5	A76, south of Cumnock	19	9	0	0	50	128
6	A76, north of Cumnock	19	9	0	0	50	144
7	A76, New Cumnock	19	9	0	0	100	206
8	A77, north of A713 junction	0	0	52	16	0	0
9	A77, south of A713 junction	0	0	0	0	0	0

Table 11.16: 2027 Combined Scheme Sensitivity Traffic Impact Summary

Site ID	Survey Location	Cars & Lights	HGV	Total Traffic	Cars & LGV % Increase	HGV	Cars & LGV % Increase
1	A713, north-west of Dalmellington	4,077	226	4,303	5.62%	117.83%	8.55%
2	A713, south-east of Dalmellington	1,928	190	2,118	11.25%	143.30%	16.95%
3	B741, east of Dalmellington	898	277	1,176	0.90%	728.43%	27.28%
4	A70, west of Coylton	10,257	1,162	11,419	0.00%	0.00%	0.00%
5	A76, south of Cumnock	5,377	1,539	6,915	2.42%	37.55%	8.59%
6	A76, north of Cumnock	7,522	1,990	9,512	1.72%	47.41%	8.77%
7	A76, New Cumnock	3,233	1,464	4,698	5.79%	92.09%	23.02%
8	A77, north of A713 junction	22,778	1,990	24,767	0.96%	6.53%	1.39%
9	A77, south of A713 junction	17,000	2,004	19,004	0.00%	0.00%	0.00%

Please note minor variances due to rounding may occur.

11.15.3 **Table 11.16** shows that the total traffic movements in a scenario where all schemes were constructed at the same time are predicted to increase by a maximum of 27.28% on the B741, east of Dalmellington. On the rest of the study area, the highest total traffic increase is 23.02%, which occurs on the A76 at New Cumnock.

11.15.4 **Table 11.16** shows that highest HGV traffic movements increase will occur on the B741, east of Dalmellington, where it is estimated to increase by 728.43%. Whilst this increase could be considered statistically significant high, this is due to the low level of HGVs currently using this road. The next highest HGV traffic movement

increase would occur on the A713, south-east of Dalmellington, where it is estimated to increase by 143.30%.

11.15.5 Based on the road capacity results shown previously in **Table 11.13**, there would still be no road capacity issues should the Proposed Development and other schemes be constructed at the same time, with ample spare capacity within the study area road network to accommodate construction phase traffic.

11.15.6 The Applicant would welcome the opportunity to engage with other developers in consultation with EAC / ARA to ensure appropriate traffic management measures would be implemented to minimise any cumulative impacts. In the event of all the sites being constructed at the same time it is suggested this would be mitigated through the use of an overarching Traffic Management and Monitoring Plan (TMMP) for all of the sites and by introducing a phased delivery plan which would be agreed with EAC and Police Scotland.

11.15.7 Furthermore, it is not predicted that the potential traffic flow increases would ever occur on the study area, as it is extremely unlikely that the peak traffic conditions will occur at the same time due to differences in construction programmes, material supplies and developer resources. In addition, those schemes already consented will likely begin construction prior to the Proposed Development gaining planning consent. All abnormal load deliveries cannot occur at multiple separate sites on the same day due to restrictions on the numbers of loads moving on the network at the same time set by Police Scotland.

11.16 Summary

11.16.1 The Proposed Development will lead to increased traffic volumes on a number of roads in the vicinity of the Site during the construction phase. These will be of a temporary timescale and transitory in nature.

11.16.2 The peak of construction activity is expected to occur in month eight when there will be a total of 7,128 vehicle movements, which equates to 324 vehicle movements per day, comprising 252 two-way HGV movements and 72 two-way car / LGV movements.

11.16.3 It should however be noted that the Proposed Development's trip generation assumes that 100% of all aggregate materials would be imported to the Site from nearby quarries and should therefore be considered a significant over estimate of the number of HGV movements that will travel to and from the Site during the peak month of activity. As previously advised, the borrow pit assessment undertaken has confirmed that the volume of material suitable to be used on-site is in excess of the volume of material required, with a surplus of material estimated to be in excess of 6,000 m3. Should that be the case there would be a total of 104 vehicle movements

per day, comprising 32 two-way HGV movements and 72 two-way car / LGV movements.

11.16.4 A review of the theoretical road capacity was undertaken for the study area which showed that with the addition of construction traffic associated with the Proposed Development, there was significant spare capacity within the road network.

11.16.5 A sensitivity review was undertaken to inform the planning authorities of possible issues with other relevant schemes in the area, whose construction traffic would impact the study area, should they be constructed concurrently. The review found that there would be more than sufficient spare road capacity to accommodate all schemes being constructed at the same time. It is proposed that any effects of all the sites being constructed at the same time would be mitigated through the use of an overarching Traffic Management and Monitoring Plan, which can be co-ordinated with EAC.

11.16.6 With the implementation of appropriate mitigation, no significant residual effects are anticipated in respect of traffic and transport issues. The residual effects are all assessed to be **minor** and will occur during the construction phase only, they are temporary and reversible.

11.16.7 Traffic levels during the operation phase of Proposed Development will be up to two vehicles per week for maintenance purposes. Traffic levels during the decommissioning of the Proposed Development are expected to be lower than during the construction phase as some elements are likely be left *in situ* and others broken up on-site.

11.16.8 The movement of AIL traffic will require small scale and temporary remedial works at a number of locations along identified delivery route.

Table 11.17: Summary of Effects

Description of Effect	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
During Construction					
B741 Users / Residents	*Moderate*	*Adverse*	*Implementation of Construction Traffic Management Plan, provision of construction traffic road signage.*	*Minor*	*Neutral*
Residents in New Cumnock	*Moderate*	*Adverse*	*Implementation of Construction Traffic Management Plan, provision of construction traffic road signage.*	*Minor*	*Neutral*
Core Path / Path Users	*Moderate*	*Adverse*	*Implementation of Construction Traffic Management Plan, provision of construction traffic road signage.*	*Minor*	*Neutral*

11.17 References

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