voltalia

Chapter 11: Traffic and Transport

Transport Statement

Department: ERM
Project: Springfield Solar Farm and BESS
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INDEX

11 TRAFFIC & TRANSPORT

11.1 Introduction

11.1.1 Background

11.1.1.1 This Transport Statement (TS) has been undertaken by Environmental Resources Management Ltd (ERM) on behalf of Voltalia UK Ltd ('the Applicant') in relation to an application to the Energy Consents Unit ('ECU') to construct and operate a ground-mounted solar photovoltaic ('PV') and Battery Electric Storage System (BESS) ('the Proposed Development'). The Proposed Development site will extend to a total area of 184 hectares. The solar will have a generating capacity of up to approximately 165MW (AC). The BESS will be comprised of up to 40 BESS units with a capacity of up to 80MW.

11.1.1.2 The Proposed Development is located on land approximately 50 m north of village of Oldhamstocks, East Lothian, at the closest point to the Proposed Development boundary and 7.8 km southeast of Dunbar, on National Grid Reference ('NGR') NT 74514 71531 ('the Site').

11.1.1.3 The purpose of the TS is to assess the traffic and transport impacts associated with the Proposed Development and in particular the impacts of an increase in Heavy Goods Vehicle (HGV) numbers associated with the construction of the Proposed Development. The anticipated impacts to be assessed will consist of detailed estimates of types and quantities of construction vehicles, assessment of the proposed Site Entrance, junctions onto the public road network, and an overview of the operational characteristics of the Proposed Development with regards to the operational phase. This report will also include an overall assessment of the transportation implications of the Site on the non-motorised user network. Measures to minimise or mitigate the impacts of these additional movements will be outlined where appropriate.

11.1.1.4 This TS has considered the feedback received as part of the Environmental Impact Assessment (EIA) Scoping Opinion received from the ECU in January 2025. A summary of the consultation relevant to traffic and transport is presented in **Table 11.1**.

TABLE 11.1 SCOPING FEEDBACK AND RESPONSE

CONSULTEE	TYPE AND DATE	SUMMARY OF CONSULTATION RESPONSE	RESPONSE TO CONSULTEE
Transport Scotland	Scoping Response – January 2025	Transport Scotland notes that the potential impact of the A1/Oldhamstocks junction should be assessed. This assessment should look at the standard of the junction in relation to existing flows and undertake a swept path analysis for the largest expected construction HGV to be undertaken and confirmation	This TS has considered the potential impacts of short-term increase in construction traffic. A routeing strategy to be enforced through the implementation of Construction Traffic Management Plan has been proposed whereby construction HGV traffic will only be allowed to exit the

CONSULTEE	TYPE AND DATE	SUMMARY OF CONSULTATION RESPONSE	RESPONSE TO CONSULTEE
		what turning movements will be undertaken at the junction.	A1(T) Oldhamstocks Junction and turn left northbound onto the A1(T)
		Transport Scotland acknowledge that is acceptable for base traffic data to be obtained from the Department for Transport (DfT) however "estimated" data should be used.	The closest DfT count location is listed as an "automatic counter" therefore traffic data for the most recently available year (2023) is from an automatic traffic count and not estimated.
East Lothian Council (ELC)	Scoping Response – January 2025	It is noted that the applicant intends to undertake a TS to assess the impacts of the scheme, and this is welcomed as an addition to the Traffic and Transport EIA chapter. ELC would request early dialogue with regards to the potential mitigation measures that could be employed during the construction phase.	
		The assessment methodology covered in the Scoping Report is to be based on first principles for the trip generation, which is acceptable.	No action required.
		The reference to NPF4 and East Lothian Local Development Plan (2018) is welcomed. The EIAR should also refer to NPF4 and *'Transport Infrastructure in New Developments' guidance.*	Reference has been made to NPF4 and *'Transport Infrastructure in New Developments'* guidance in **Section 11.2**.
		ELC acknowledges the constraints on the local road network whereby it is not possible to accommodate two-way movements of construction traffic for the full route to various access points. Mitigation measures will be required, including temporary traffic control, and these should be set out in a Construction Traffic Management Plan (CTMP). A draft of the CTMP should be submitted with the planning application and final version secured through a	Mitigation measures, including a routing strategy are detailed in **Section 11.6** of this TS. The structure of the draft CTMP is included in **Section 11.6** of this Report and will be finalised post consent. It is requested that the detailed CTMP to be undertaken post consent is secured through an appropriately worded condition of consent.

CONSULTEE	TYPE AND DATE	SUMMARY OF CONSULTATION RESPONSE	RESPONSE TO CONSULTEE
		relevant planning condition with required changes to the road network included in the description of the development.	
		ELC states there should be consideration to the effects on all road users, including pedestrians, cyclists and equestrian.	This TS has considered the traffic impacts on all road users, including non-motorised users. Mitigation measures are outlined in **Section 11.6**.
		ELC expects all approved developments within a 5km radius, or beyond this whereby significant traffic routes past the vicinity of the site, to be included in the cumulative assessment.	This TS has considered all approved developments within a 5km radius and has accounted for these in a cumulative assessment.
		Swept Path Analysis for typical construction vehicles expected are required for all construction routes and consideration, where appropriate, for passing places, junction visibility and forward visibility to facilitate swept path movements.	This is included in **Technical Appendix 11.1** of the EIA Report.
		Dilapidation surveys and a commitment to repairing road damage resulting from construction traffic will be required.	The Applicant is committed to undertaking a dilapidation survey Any deterioration in road condition, which is agreed as attributable to construction traffic associated with the Proposed Development will be restored to at least the same standard upon completion of construction. It is requested that this is undertaken post consent and is secured through an appropriately worded condition of consent.
		ELC requires Road Safety Audits where there are significant changes to the layout and operation of the road network proposed to mitigate impacts of the development.	The Applicant would seek to engage in dialogue with ELC to address this particular matter separately. It is requested that this work, if required, will be undertaken post consent, and is secured

CONSULTEE	TYPE AND DATE	SUMMARY OF CONSULTATION RESPONSE	RESPONSE TO CONSULTEE
			through an appropriately worded condition of consent.

11.1.1.5 The layout and technical details of the Proposed Development are provided in **Volume 1, Chapter 3: Development Description** and this report is supported by the following figures and appendices:

- Volume 2, Figure 11.1: Baseline Traffic & Transport Conditions;
- Volume 2, Figure 11.2: Transport Plan;
- Volume 2, Figure 11.3: Access Strategy Plan;
- Volume 2, Figure 11.4: General Construction Traffic Route to Site;
- Volume 2, Figure 11.5: Abnormal Load Route to Site;
- Volume 3, Appendix 11.1: Access Junctions Design and Swept Path Analysis; and
- Volume 3, Appendix 11.2: Construction Development Programme.

11.1.2 Report Structure

11.1.2.1 Following this introductory section, the TS is structured as follows:

- Section 11.1 – Introduction;
- Section 11.2 – Policy Review;
- Section 11.3 – Existing Conditions;
- Section 11.4 – The Proposed Development;
- Section 11.5 – Traffic Impact Assessment;
- Section 11.6 – Traffic Mitigation; and
- Section 11.7 – Conclusion.

11.2 Policy Context

11.2.1.1 This section summarises relevant transport policy and guidance which has been considered in preparation of this TS and is detailed in **Table 11.2**.

TABLE 11.2 POLICY AND GUIDANCE

AUTHOR	POLICY/GUIDANCE TITLE	POLICY DESCRIPTION	NOTES
The Scottish Government	National Planning Framework 4 (NPF4) (2024)[1]	This provides a statement of the Scottish Government's policy on nationally important land use planning matters. In relation Energy, Policy 11 notes that "*Development proposals for all forms of renewable, low carbon and zero emission technologies will be supported*". In addition, the NPF highlights that project design and mitigation will demonstrate how impacts on road traffic and trunk roads during construction will be addressed as well as cumulative impacts. In terms of new developments, the NPF highlights the importance of considering the impact on the surrounding transport network, such as within Policy 13: *"Where a development proposal will generate a significant increase in the number of person trips, a transport assessment/statement will be required to be undertaken in accordance with the relevant guidance".*	This report has considered the impact of construction traffic (including cumulative impacts) on the surrounding road network associated with the Proposed Development and appropriate mitigation measures have been proposed to minimise any adverse impact where necessary.
East Lothian Council	East Lothian Council Local Development Plan (LDP) 2018[2]	The East Lothian Council LDP sets out a planning strategy and policies to guide future development of the local authority area. For transport and new developments, Policy T2 states: *"new development must have no significant adverse impact on road safety; walking and cycling convenience and safety in the*	This report has considered the impact of construction traffic (including cumulative impacts) on the surrounding road network associated with the Proposed Development and appropriate

[1] The Scottish Government, National Planning Framework 4. Available at: https://www.gov.scot/publications/national-planning-framework-4/ [Accessed: 22/04/2025]
[2] East Lothian Council, Local Development Plan 2018. Available at: https://www.eastlothian.gov.uk/downloads/file/27791/local_development_plan_2018_adopted_270918 [Accessed: 22/04/2025]

AUTHOR	POLICY/GUIDANCE TITLE	POLICY DESCRIPTION	NOTES
		surrounding area; capacity of the road network to deal with traffic unrelated to proposed development; and residential amenity".	mitigation measures have been proposed to minimise any adverse impact where necessary.
East Lothian Council	Transport Infrastructure in new developments guidance[3]	Guidance notes for use by developers of housing and employment sites in East Lothian, providing guidance on transport infrastructure against which applications for consent will be assessed and evaluated. **Section 4.3** of the guidance, *'Construction Method Statements'*, outlines measures to be implemented for construction traffic management, including the inclusion of wheel wash areas, parking and a site compound.	This guidance has been considered in the preparation of this report.
East Lammermuir Community Council	East Lammermuir Local Place Plan 2024 - 2034[4]	This policy document is designed for everyone in the community, including Energy Developers, and others who are looking to work in East Lammermuir. It contains an overview of the priorities of the community, and a detailed plan outlining how those priorities can be met with contribution from Energy Developers and other stakeholder.	A number of Action Plans have been formulated in this policy document, some of which requires contributions from Energy Developers to facilitate its implementation, e.g. Lorries in lanes. The Applicant is committed and where appropriate will implement mitigation measures which will help to reduce the impacts of HGV movement and align

[3]East Lothian Council, Transport Infrastructure in New Developments. Available at: https://www.eastlothian.gov.uk/info/210646/transport_infrastructure_in_new_developments [Accessed: 22/04/2025]
[4] East Lothian Council, East Lammermuir Local Place Plan 2024-34. Available at: https://www.eastlothian.gov.uk/downloads/file/34419/east_lammermuir_local_place_plan_2024-34 [Accessed 23/04/2025]

AUTHOR	POLICY/GUIDANCE TITLE	POLICY DESCRIPTION	NOTES
			with the aims of the Lorries in our Lanes Action Plan.
Department for Transport (DfT)	Design Manual for Roads and Bridges (DMRB) – CD 123[5]	Details the geometric design standard for at-grade priority and signal-controlled junctions.	Has been used within this report to appraise the standard of existing infrastructure, particularly the Site entrance junction.
Department for Transport (DfT)	Design Manual for Roads and Bridges (DMRB) – CD 109[6]	Details the design requirements and advice to derive design speed and the appropriate values of geometric parameters for use in the design of the road alignment	Has been used within this report to determine the required stopping sight distance (metres) as part of junction visibility splay assessment.
Transport Scotland	Transport Assessment Guidance (2012)[7]	Sets out the methodology for preparation of a Transport Assessment.	Transport Assessments are normally associated with developments which are expected to cause a long-term, or permanent, change in traffic flow or composition. It is therefore of limited relevance for the Proposed Development, where the principal traffic

[5] Department for Transport, DMRB CD 123 - Geometric design of at-grade priority and signal-controlled junctions. Available at: https://www.standardsforhighways.co.uk/search/962a81c1-abda-4424-96c9-fe4c2287308c [Available at: 22/04/2025]
[6] Department for Transport, DMRB CD 109 – Highway Link Design. Available at: https://www.standardsforhighways.co.uk/search/c27c55b7-2dfc-4597-923a-4d1b4bd6c9fa [Available at: 22/04/2025]
[7] Transport Scotland, Transport Assessment Guidance. Available at: https://www.transport.gov.scot/media/4591/planning_reform_-_dpmtag_-_development_management__dpmtag_ref__17__-_transport_assessment_guidance_final_-_june_2012_1.pdf [Accessed: 22/04/2025]

AUTHOR	POLICY/GUIDANCE TITLE	POLICY DESCRIPTION	NOTES
			effects will be short-term and associated with construction.
Institute of Environmental Management and Assessment (IEMA, 2023)	Guidelines for the Environmental Assessment of Road Traffic & Movement[8]	Sets out guidelines for determining the appropriateness and significance of traffic effects as a result of a proposed development. The following criteria should be applied for determining where further assessment is required: • Routes where traffic is predicted to increase by 30% or more; and • On highly sensitive routes where traffic is predicted to increase by 10% or more.	This guidance is primarily intended to apply to Environmental Impact Assessments; however, the quoted thresholds are useful for determining where temporary traffic increase may be significant.

[8] Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement. Available at: iema-report-environmental-assessment-of-traffic-and-movement-rev07-july-2023.pdf [Accessed: 12/05/2025]

11.3 Existing Conditions

11.3.1 Overview

11.3.1.1 This section of the TS describes the existing conditions on and around the Site focusing on the Site location, access arrangements and the surrounding road network, including its accident record. **Volume 2, Figure 11.1: Baseline Conditions** shows the existing transport conditions in the vicinity of the Site, including road network, core paths and cycle paths.

11.3.2 Highway Infrastructure

A1(T)

11.3.2.1 The A1(T) is part of the trunk road network in Scotland and provides a connection from Edinburgh to the border with England at Berwick upon Tweed passing through both East Lothian and the Scottish Borders Council areas. The A1(T) runs southeast to northwest in the vicinity of the Study Area and provides a key link to other major roads within East Lothian where the Site is located. The A1(T) is a good standard single carriageway (in the vicinity of the Study Area) with stretches of dual carriageway along the route and is subject to the national speed limit, which is enforced by the presence of speed cameras.

11.3.2.2 Transport Scotland manages the A1(T) and the road is operated by Amey (as maintenance contractor for Scotland Southeast Area). A route of this type and size has a capacity of circa 57,600 vehicles movements per day [9].

U220 Dunglass Road

11.3.2.3 The U220 leading from the A1(T) to Bilsdean is a two-way single carriageway which is subject to the national speed limit. The road has centre line markings which indicates that the road is wide enough for HGVs to pass each other safely. The U220 is unlit and has no footway provision although, it connects Core Path 309 (located along the A1(T)) with Bilsdean and is designated as 'suggested links on quiet roads', so it may likely be used by non-motorised users. Therefore, measures will be required to warn construction drivers about the presence of non-motorised users. The U220 connects to the U24-6 at a crossroads junction, circa 600 m west of the A1/Cockburnspath roundabout. Roads of this type and size have a capacity of circa 38,400 vehicles movements per day[9].

U24-6

11.3.2.4 The U24-6 leading from the crossroads with the U220 to the Cockburnspath roundabout is a two-way single carriageway with centre line markings and is subject to a 40 mph speed limit. The road is circa. 5.5m wide and is considered wide enough for HGVs to pass each other safely. The U24-6 is unlit and has no footway provision although, it connects Core Path 12 to the south with Bilsdean and onwards to Core Path 309 via the U220. The road is

[9] Standards for Highways (2013) Volume 15, Economic Assessment of Road Schemes in Scotland, DMRB.

designated as 'suggested links on quiet roads', so it may likely be used by non-motorised users. Therefore, measures will be required to warn construction drivers about the presence of non-motorised users. Roads of this type and size have a capacity of circa 38,400 vehicles movements per day[9] .

C120 Birnieknowes Road

11.3.2.5 The C120 Birnieknowes Road from which the temporary construction access will be taken into the Site is a single carriageway with a rural aspect and is subject to the national speed limit. The road connects to the U220 in the north and the U218 to the south. The C120 has no centreline markings (or passing places) and is not wide enough for HGVs to pass safely, therefore it would require mitigation measures to minimise the impact of construction traffic. The road is unlit, has no footway provision and is bound by mainly grass verges, hedgerows, or trees. Roads of this type and size have a capacity of circa. 6,720 vehicle movements per day[9].

Other Minor Roads (U218, U219 and C122)

11.3.2.6 The U218, U219, and C122 are all single carriageway roads with a rural aspect, have no centre line markings (or passing places) and are subject to the national speed limit. The geometric standard of these roads varies between roads, and along the roads themselves. The roads provide access to residential properties and small settlements including Oldhamstocks and are not wide enough for HGVs to pass each other safely, therefore it would require mitigation measures to minimise the impact of construction traffic. The roads are unlit, have no footway provision and are bound by mainly grass verges, hedgerows, or trees.

11.3.3 Non-Motorised User Network

11.3.3.1 As noted above, there is generally no footway provision along the key road links surrounding the Site, and the impacted sections of road are generally unlit. A review of East Lothian's Core Paths Plan Maps has identified that a section of Core Path 12 runs along the southeastern edge of the Site and provides a connection between Oldhamstocks and Dunglass to the northeast of the Site. It is noted that there are a number of coastal paths including the John Muir Link and the John Muir Way located north of the Site although these core paths are unlikely to be impacted by construction traffic. A review of Sustrans' National Cycle Network (NCN) map indicates that a section of the NCN Route 76 is located to the northwest of the Site along the A1(T) through Bilsdean and towards Cockburnspath although part of this route has now been declassified as a 'local' route.

11.3.4 Baseline Traffic Flows

11.3.4.1 Baseline traffic flow data for the A1(T) in the vicinity of the Site was obtained from the Department for Transport (DfT)[9] traffic count data site. The latest manual count was

[9] UK Government, Department for Transport, Road Traffic Statistics. Available at: https://roadtraffic.dft.gov.uk/manualcountpoints/50710 . [Accessed: 22/04/2025]

undertaken in 2023. The Annual Average Daily Flow (AADF) for 2023 is summarised in **Table 11.3** below and the count location is shown in **Volume 2, Figure 11.2: Transport Plan**.

TABLE 11.3 EXISTING ANNUAL AVERAGE DAILY FLOW (2023)

ROAD/LOCATION	TOTAL AADF	HGV AADF	HGV % OF TOTAL AADF
A1(T) near Bilsdean, DfT Point ID 50710	11,486	1,586	13.8 %

11.3.4.2 It is acknowledged that there are no publicly available traffic count data for the minor roads in the locality, however, information available from the transport reports for the potential cumulative developments suggest the minor roads are lightly trafficked with average daily flows of circa 100 vehicle (2 HGVs) recorded on some of the minor roads in the vicinity of the Site.

11.3.5 Road Traffic Collision (RTC) Assessment

11.3.5.1 An analysis of the RTC data has been undertaken to establish a road safety baseline and identify any inherent road safety issues on the surrounding road network, including on the Site access route. This RTC analysis has been undertaken using collision data from the online resource Crashmap[10] covering the five-year period between 2019 – 2023.

11.3.5.2 Collisions are categorised according to the severity of injuries sustained by those involved:

- 'Slight' is defined as a collision in which nobody is fatally or seriously injured, but at least one person is slightly injured;
- 'Serious' injuries are those which result in hospitalisation or death more than 30 days after the incident; and
- 'Fatal' results in the death of one or more persons at the scene of the collision or within 30 days of the incident.

11.3.5.3 A total of 11 RTCs (10 on the A1(T) and one on the U220 just south of the A1(T) / U220) were recorded between the dates stated above, and a breakdown of the severity of these collision per year is shown in **Table 11.4** below, while the locations of the identified RTCs are noted on **Volume 2, Figure 11.2: Transport Plan**.

[10] Crashmap.co.uk, CrashMap Data: Great Britain 1999-2023. Available at: https://www.crashmap.co.uk/Search [Accessed: 22/04/2025]

TABLE 11.4 COLLISION SUMMARY BY YEAR

YEAR/SEVERITY	SLIGHT	SERIOUS	FATAL	TOTAL
2019	1	1	0	2
2020	1	2	0	3
2021	1	1	0	2
2022	1	1	0	2
2023	2	0	0	2
TOTAL	6	5	0	11

11.3.5.4 Of the 11 RTCs recorded, 6 RTCs were classified as 'slight' and 5 RTCs are classified as 'serious' while no fatal collisions occurred.

11.3.5.5 The two slight RTCs at the Torness Power Station junction occurred in 2019 and 2022 and involved 2 or more vehicles with the causes of collisions attributed to driver decision error as a vehicle proceeded to turn at the T-Junction. Three out of the remaining four slight collisions involved two vehicles and are attributed to driver decision error, such as the 2021 RTC which involved an HGV overtaking a Light Goods Vehicle (LGV) on the carriageway.

11.3.5.6 A review of the 'serious' RTCs indicate that four out of the five recorded involved 2 or more vehicles, including in 2020 where a collision occurred between two HGVs, a car and a vehicle classed as 'other'. One HGV and car were parked in the carriageway while the 'other' vehicle was changing lane, leading a multi-vehicle collision and three casualties (two serious). One serious RTC was recorded in 2020 at the A1(T) Cockburnspath Roundabout which involved a car slowing down and colliding with a lamppost. All serious RTCs can be attributed to driver decision error. There were no recorded collisions involving a motorcycle, bicycle or pedestrian on the A1(T).

11.3.5.7 The RTC on the U220 occurred in 2023 and was recorded as 'slight' involving a car colliding with a pedal cycle on approach to the U220 / A1(T) junction. Overall, no trends or hotspots have been noted which would otherwise indicate the route to be unsafe. As such it is determined that the road network along the route is working as intended and does not pose any significant safety concerns.

11.4 The Proposed Development

11.4.1 Proposed Development Elements

11.4.1.1 The Proposed Development will consist of the following elements among others:

- Array of solar panels mounted on metal frames;
- Inverters and transformers;

- Battery Energy Storage Containers;
- Temporary Construction Compound (TCC) which will be surfaced with aggregate;
- Fencing and secure entrance gates;
- Access tracks; and
- Access junctions onto public road.

11.4.1.2 Full details of the Proposed Development are set out in Volume 1, Chapter 3: Development Description of the Environmental Impact Assessment Report (EIAR).

11.4.2 Proposed Development Access

11.4.2.1 The Site is broadly divided into 8 development parcels for the purposes of the access strategy. To support this, and a total of 8 access junctions will be constructed onto the public road to serve the various land areas. During the construction phase, the main (and only) construction access for the Site will be from the C120 on the northern boundary of the Site. Construction vehicles will then access the remaining land areas via temporary crossing points off the C218, C122 and the C121. It is proposed that the section of the C120 being used by HGVs will be temporarily closed off to general traffic except for local access. Local traffic has the opportunity to continue to access the A1(T) via the U219, U215 and C121 roads or U211 via Cockburnspath as shown in **Volume 2, Figure 11.3: Access Strategy Plan**.

11.4.2.2 Following construction, the main construction access will be formalised as an operational access junction in addition to the 7 access junctions to serve the various land areas. It should be noted that apart from the main construction access junction which will be used by HGV traffic during the construction phase of the Site, during the operation phase, access to the Site will be very limited and occasional and will be limited to visits by technicians for inspection and routine maintenance. This will be undertaken by vans or similar sized vehicles and would typically occur approximately once per week, although there may be an occasional need for an HGV delivery to the BESS area during the operational phase to replace any of the BESS components if required.

11.4.2.3 A swept path analysis has been undertaken for the proposed access junctions and has determined that the largest anticipated vehicle to access the Site for both phases of the Proposed Development can do successfully in forward gear. The analysis further demonstrates that subject to a minor improvement at one location, a 16.5 m articulated lorry can navigate the proposed route to Site in forward gear.

11.4.2.4 A visibility splay assessment has been undertaken at the proposed access junction locations using the minimum setback distance of 2.4 m for a simple priority junction. The minor roads in the vicinity of the access locations are subject to the national speed limit. Therefore, the visibility splay of 215 m for a 60-mph design speed should be demonstrated. It is acknowledged that the achievable visibility splays fall short of the Design Manual for Roads and Bridges (DMRB) standard of 215 m for a 60-mph design speed at the Site. In response to the short fall, the following points should be noted:

- DMRB sets out standards for trunk roads, but these are also applicable in certain cases to non-trunk roads/high speed roads under free-flowing traffic conditions. However, the minor roads from which these access junctions will be formed are single track roads

and due to the geometry of the roads, vehicle speeds are likely to be significantly below the 60-mph speed limit;

- During the construction phase when the short-term increase in traffic is greatest, the C120 will be closed off to general traffic except for local access with appropriate traffic management in place (Section 11.6 of this report);

- During the operational phase where vehicle movements to the Site will comprise activities associated with inspection, maintenance and general Site up-keep, which will be infrequent, typically less than once a week and does not involve HGVs and does not constitute intensification of use; and

- No RTCs are noted at, or in the vicinity of, the junctions.

11.4.2.5 The above points mitigate the limited visibility at the access locations and therefore it is considered that the proposed access junction can operate safely for the duration of construction, operation and decommissioning.

11.4.2.6 Detailed drawings of the proposed new Site entrances are provided in **Volume 3, Technical Appendix 11.1: Access Junctions Design and Swept Path Analysis**.

11.4.3 Construction Vehicle Routing

HGVs

11.4.3.1 The likely constraints relating to the routeing of HGVs associated with the construction of the Site have been considered, with the proposed routeing for all HGVs access/egressing the Site during the construction phase outlined below and shown in **Volume 2, Figure 11.4: General Construction Traffic Route to Site**.

- Inbound HGVs will exit the A1(T) from the Cockburnspath Roundabout east of Bilsdean and turn right on the U246;

- Continue northwest on the U246 and then onto the U220 via Bilsdean before turning left on to the C120;

- Travel southwest on the C120 for approx. 500 m to the Site entrance at the north-eastern corner of the Site; and

- Outbound HGVs will turn right onto the C120 and travel north to the C120/U220 junction, join the U220, before making a left turn and joining the A1(T) northbound.

11.4.3.2 All construction vehicles approaching the Site will be directed to use the proposed approach route to Site. All relevant parties involved in making deliveries of construction materials, once the construction of the Site commences, will be instructed on the above routeing arrangements before arriving/departing the Site. This arrangement is to be strictly enforced, and all sub-contractors and suppliers are to be monitored to ensure that they use the defined routes. A Construction Traffic Management Plan (CTMP) to be finalised post consent will be used to ensure construction vehicles are adhering the approved routing.

LGVs/Cars

11.4.3.3 Construction staff trips made by car and/or LGVs would also generally be expected to utilise the routes outlined above to access/egress the Site, although there is some scope to utilising other roads in the Study Area to access the Site.

Abnormal Load Vehicles

11.4.3.4 Abnormal Load Vehicles (ALV) will follow the proposed route for the delivery of abnormal loads for the consented Branxton BESS Development as shown on **Volume 2, Figure 11.5: Abnormal Load Route to Site**. Vehicles will exit the A1(T) at an existing, unused exit which is currently blocked off to traffic before turning right on to the U220 northwest bound towards the Site entrance off the C120. Following the delivery of the abnormal loads, it is expected that the ALV will retract to the size of an HGV for the return journey.

11.4.3.5 All Abnormal Indivisible Loads will be delivered to the Site under escort in accordance with permits issued by the Local Roads Authority and Transport Scotland. Prior to the commencement of construction works on Site, an Abnormal Load route Assessment will be prepared and submitted to the Council and Transport Scotland for approval. It is assumed the requirement for this assessment would be secured by an appropriately worded planning condition.

11.4.4 Construction Programme and Timescales

11.4.4.1 Details on the construction programme and timescales are set out in **Volume 1, Chapter 3: Development Description** of the EIAR. Subject to the necessary consents being granted, construction of the Site is anticipated to commence in the third quarter of 2028, and it is anticipated to take approximately 18 months to complete.

11.4.5 Construction Traffic Composition

11.4.5.1 Construction traffic generated by the Proposed Development will primarily be associated with the importation of construction materials including solar panels, support structures, electrical equipment, and other construction materials. It is expected that many of these materials will be transported to the Site by HGVs or HGV low-loader while an abnormal load vehicle is expected to be used for the delivery of the transformer.

11.4.5.2 Aggregates would be transported to the Site using rigid tipper HGVs. As no on-site batching is anticipated, all concrete will be ready-mix and will be imported by HGV concrete mixer. Fuel will be delivered by an HGV fuel tanker; it is anticipated that this would be a small rigid type of tanker due to the small amount of plant required on Site. A crane, if required, will travel to and from the Site under its own power.

11.4.5.3 Other vehicles associated with construction of the Proposed Development can be expected from construction workers and other Site personnel accessing the Site. Construction personnel are expected to primarily use car or van to access the Site.

11.4.6 Construction Traffic Volume

11.4.6.1 An indicative programme of anticipated construction traffic associated with the Site is provided in **Volume 3**, **Technical Appendix 11.2: Construction Development Program** and is expected to run for approximately 18 months. The following sub-sections provide detail for each element of work. Detailed assumptions have been made in estimating material quantities.

Site Mobilisation and Demobilisation

11.4.6.2 At the commencement of the project, plant, equipment, and welfare facilities will be brought to the Site and the Temporary Construction Compound (TCC) will be formed. This is expected to require up to 15 HGV deliveries or 30 two-way HGV movements at the commencement and end of the construction period (60 overall).

11.4.6.3 During Site demobilisation, most of this equipment will be removed from Site. Vehicle movements for demobilisation will result from empty HGVs and low loaders travelling to Site and then departing loaded.

Access Tracks & Hardstandings

11.4.6.4 It has been estimated that approximately 5,500m of new access tracks will be required on Site. These tracks will be formed to a width of 4m and to a depth of 0.8m with an additional 0.2m surface layer dressing. Therefore, the volume of material (aggregate) required for the construction of the access tracks is approximately of 22,003m^3.

11.4.6.5 The proposed TCC will make up an area of approximately 16,553 m^2. Aggregate will be laid at a depth of 0.5 m, therefore approximately 8,277 m^3 of aggregate will be required to be delivered to Site.

11.4.6.6 The customer substation will make up an area of 7.5 m^2. Aggregate will be laid at a depth of 0.3 m, therefore approximately 2 m^3 of aggregate will be required to be delivered to Site.

11.4.6.7 Hardstanding in relation to the power transformer bund area will make up an area of 57.4 m^2. Aggregate will be laid at a depth of 1.15 m, therefore approximately 66 m^3 of aggregate will be required to be delivered to Site.

11.4.6.8 The customer switchroom and control house will make up an area of 28.8 m^2. Aggregate will be laid at a depth of 0.5 m, therefore approximately 14 m^3 of aggregate will be required to be delivered to Site.

11.4.6.9 Hardstanding in relation to the Power Conversion System (PCS) foundations will make up an area of 460.8 m^2. Aggregate will be laid at a depth of 0.2 m, therefore approximately 92 m^3 of aggregate will be required to be delivered to Site.

11.4.6.10 Overall, the aggregate required to construct the access tracks and hardstanding areas throughout the Site will make up a combined 30,454 m^3. Presuming that all aggregate will be delivered to Site via tipper lorries with a volumetric capacity of 9 m^3, this will require approximately 3,384 vehicle loads, or 6,768 two-way HGV movements.

Solar Panels

11.4.6.11 Solar Panels will be transported to Site via the use of a maximum length 16.5 m HGV. Once delivered, the panels will be stored on Site before being installed later. While the exact number of panels will be subject to the technology available at during procurement, enough panels will be installed to provide up to 165 MW of generating capacity. Based on this capacity, it is estimated that up to 182,136 solar panels will be required for the Proposed Development.

11.4.6.12 A typical container can carry approximately 600 panels, therefore the total number of loads which will be required for panel delivery is estimated to be 304, or a total of approximately 608 two-way HGV vehicle movements required for this element of works.

11.4.6.13 Up to 115 m^3 of steel will be required for piles and frames of the solar panels, which will require an additional 13 HGV deliveries, or 26 two-way HGV movements.

BESS Containers, PCS & Transformers

11.4.6.14 The Proposed Development is expected up to 40 BESS containers. Based on the expected HGV capacity of 6 containers per HGV, there are estimated to be 7 deliveries or 13 two-way movements which will take place over a three-month period to deliver the containers. The construction of the BESS containers will require a total of 11 m^3 of concrete and 3 tonnes of Rebar for the foundations laid to a depth of approximately 1.4 m.

11.4.6.15 For PCS, 20 units are expected to be required which will generate 3 deliveries or 7 two-way HGV movements, based on an assumed capacity of 6 units per HGV. The PCS foundations will require approximately 192m^3 of concrete and 48 tonnes of rebar to enable the component's construction.

11.4.6.16 In addition, 10 transformer units are expected resulting in an estimated 3 deliveries and 7 two-way movements, based on a capacity of 3 units per HGV load. The BESS transformer foundations will require approximately 320 m^3 of concrete and 80 tonnes of rebar for construction.

11.4.6.17 Overall, the delivery of individual components will require 13 HGV deliveries, separate to the material required for construction, or 27 two-way movements.

11.4.6.18 An approximate total of 523m^3 of concrete will be required to be delivered to Site in relation to these components. All concrete will be delivered to Site via HGV concrete wagons with a volumetric capacity of 9 m^3, this will require approximately 58 vehicle loads, or 116 two-way HGV movements.

11.4.6.19 An approximate total weight of 131 tonnes of rebar will be required to be delivered to Site in relation to these components. Presuming that rebar will be delivered to Site via tipper lorries with a weight capacity of 20 tonnes, this will require approximately 6 vehicle loads, or 12 two-way HGV movements.

Combiner Boxes, Cabling, Centralised Inverter & Transformers

11.4.6.20 The Proposed Development is expected to house 422 combiner boxes, and it is assumed that 50 boxes can be delivered per HGV. Based on this ratio, it is estimated that approximately 8 HGV deliveries or 17 two-way movements will be required.

11.4.6.21 ReAlongside the boxes, a total of 1,013 cable drums will be required for the Proposed Development which will contain the cabling for the Site. Based on an assumed capacity of 30 drums per HGV it is estimated that there will be approximately 34 deliveries or 68 two-way movements for the delivery of cabling.

11.4.6.22 There are expected to be 16 Centralised Inverter and Transformer Units required for the Site. Based on an assumed capacity of 6 units per HGV load, an approximate total of 3 deliveries and 5 two-way movements are expected. In relation to the transformer units, an approximate total of 46m^3 of concrete and 11 tonnes of rebar will also be required for construction. This will require an approximate total of 10 and 2 two-way HGV movements in relation to the delivery of concrete and rebar respectively.

11.4.6.23 Overall, the delivery of individual components (including concrete and rebar) will require approximately 51 HGV deliveries, or 102 two-way movements.

Substation Compound

11.4.6.24 Construction of the substation compound will commence once the access tracks are complete. The substation control room containing grid transformers will be installed within the substation compound. The transformers will be transported as Abnormal Indivisible Loads (AILs) due to their weight and overall dimensions.

11.4.6.25 A total of 8 AILs are expected to be required to deliver these components. Typical AIL vehicles are able to retract to the size of a standard HGV on their return trip, resulting in 8 HGV movements leaving the Site and an overall total of 16 two-way movements.

11.4.6.26 All of the components related to the substation compound will require an approximate total of 306 m^3 of concrete to form the foundations, which will require approximately 34 HGV deliveries, or 68 two-way movements. These components will also require a total of 77 tonnes of rebar for construction, which will require approximately 4 HGV deliveries, or 8 two-way movements.

11.4.6.27 Overall, 38 vehicle loads, or 76 two-way HGV movements will be required to construct the concrete and rebar elements of the substation compound.

Auxiliary Delivery Items

11.4.6.28 As per the Site layout, additional items will be required to be delivered to Site. These items are highlighted in **Table 11.5** below.

TABLE 11.5 AUXILIARY DELIVERY ITEMS

ITEM	NO. UNITS	NO. OF UNITS PER HGV	NO. OF HGV LOADS	2-WAY HGV MOVEMENTS
BESS Switch room and O&M	10	3	3	6
Underground Water Tank	1	1	1	2
Total HGV Loads	-	-	4	8

11.4.6.29 A total of 4 HGV loads have been assumed to deliver these items to Site, resulting in 8 two-way movements.

11.4.6.30 The approximate total volume of concrete required to construct the above components is 10 m^3, and will require approximately 1 HGV delivery, or 2 two-way movements. An approximate total of 2.5 tonnes of rebar will also be required for construction of the above components, which will require approximately 1 HGV delivery, or 2 two-way movements.

11.4.6.31 Overall, approximately 6 vehicle loads, or 12 two-way HGV movements will be required to construct the components listed in **Table 11.5** above.

Miscellaneous Deliveries

11.4.6.32 It is estimated that there will be approximately 100 two-way vehicle movements associated with miscellaneous deliveries (including fencing, gates, security cameras, cranes, skips etc.) in order to maintain the compound areas and running of the Site's during construction. This equates to approximately 6 two-way movements per month.

11.4.6.33 Construction of fencing, gates and erection of security cameras will require an approximate total of 87 m^3 of concrete to form the foundations, which will require approximately 10 HGV deliveries, or 20 two-way movements. An approximate total of 22 tonnes of rebar will also be required for construction, which will require approximately 1 HGV delivery, or 2 two-way movements.

Fuel

11.4.6.34 Fuel for plant will be required on the Site regularly through construction, this is estimated to result in two HGV fuel tanker deliveries per month during the construction programme and a total of 36 during the construction programme.

Staff

11.4.6.35 Staff levels will vary through construction depending on the operations being undertaken. It is anticipated that during the peak period of construction, 150 staff will be required onsite per day, whilst during the quietest phases of work this is anticipated to be 20 staff. For the purposes of this assessment, it has been assumed that 10% of the onsite staff will travel by private car with the remaining staff traveling by minibuses (10 per bus). For private vehicle

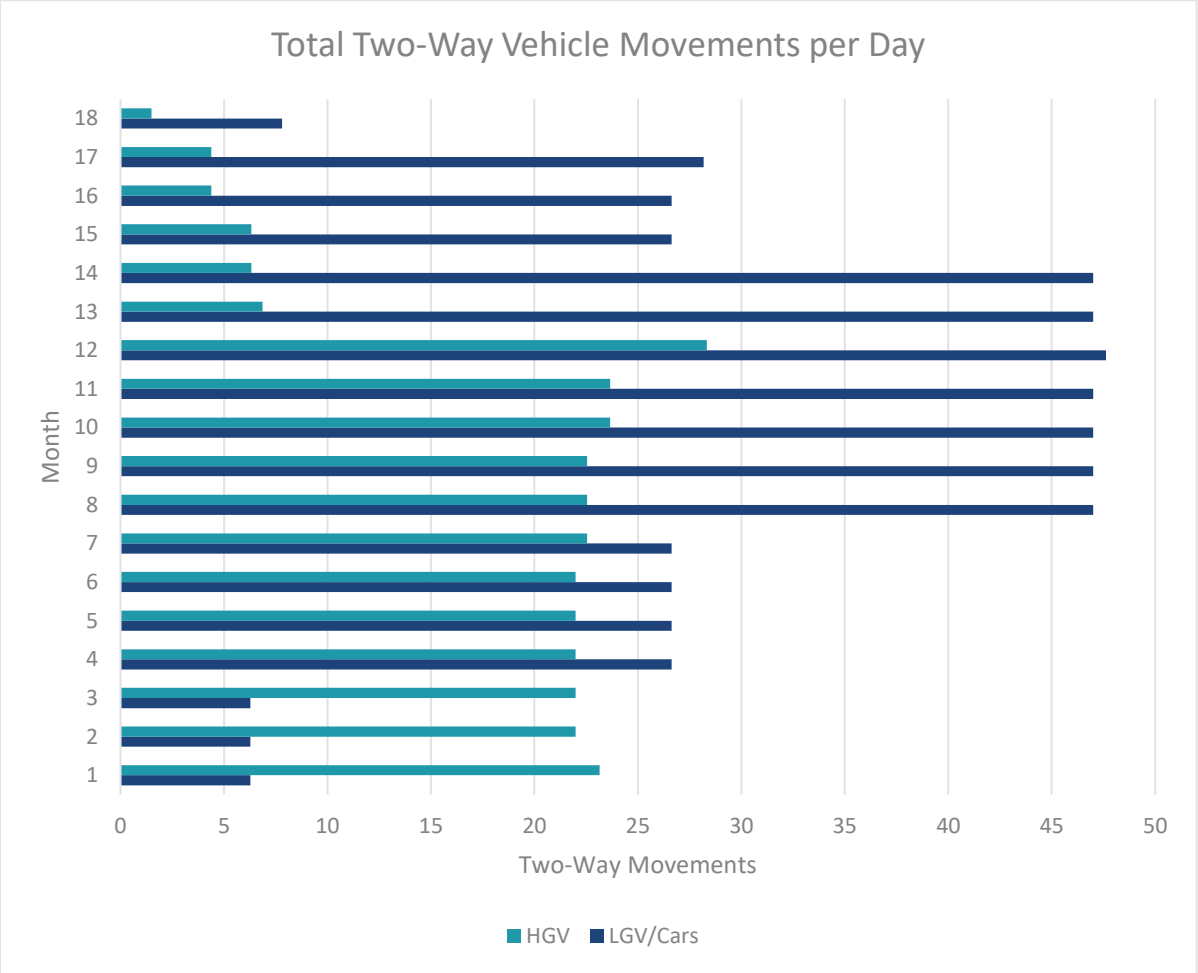
trips, the most recent National Travel Survey[10] private vehicle occupancy rate of 1.5 people per vehicle was used as the basis for determining car trips.

11.4.6.36 Following this methodology, on the busiest typical day for staff onsite, staff will generate 10 private vehicles (20 two-way movements) and approximately 14 minibus movements (28 two-way trips). Assuming a 26-day working month, this would equate to a total of 1,238 two-way vehicle movements generated by staff, during the typical busiest month of the construction programme.

Overall Delivery Programme

11.4.6.37 An indicative program of anticipated construction traffic during the construction phase is provided in **Volume 3**, **Technical Appendix 11.2: Construction Development Program** and a summary of estimated number of vehicle movements during the construction phase, including both light and heavy vehicles is shown in **Chart 11.1** below.

CHART 11.1 TOTAL DAILY TWO-WAY VEHICLE MOVEMENTS



[10] National Travel Survey, Average car or van occupancy. 2023. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1017064/nts0905.ods

11.4.6.38 The peak of construction is expected to occur in Month 12 of the 18-month construction programme. During the peak month, there are approximately 1,975 two-way movements, made up of 1,238 car/van movements and 737 HGV movements including AILs. Assuming a 26-day working month, this would equate to a maximum of 76 two-way vehicle movements per day which would consist of 48 car/van movements and 28 two-way HGV movements (that is approximately 14 vehicles arriving and then the same 14 vehicles departing) per day as shown in **Chart 11.1**. In the months preceding the peak month, the average daily HGV movements is 23 two-way movements.

11.4.6.39 Following the peak month, all HGV impacts would reduce from a maximum of 28 two-way HGV movements per day to a daily average of 5 two-way HGV movements and then to a maximum of 2 movements per day during the latter stages of the construction phase.

11.5 Traffic Impact Assessment

11.5.1 Peak Traffic Increase

11.5.1.1 Baseline traffic flow data was only available for the A1(T). Due to the rural nature of minor roads that are expected to experience increased traffic flows associated with the construction of the Proposed Development, it is assumed that baseline traffic flows are very low on these roads.

11.5.1.2 **Table 11.6** indicates the predicted increase in traffic on the A1(T) during the peak phase of construction.

TABLE 11.6 PREDICTED PEAK MONTH AVERAGE DAILY FLOW (ADF) - A1(T)

REF	ALL VEHICLES			HGV ONLY		
	BASELINE	BASELINE + DEVELOPMENT	% INCREASE	BASELINE	BASELINE + DEVELOPMENT	% INCREASE
1	11,486	11,562	0.7%	1,586	1,615	1.8%

11.5.1.3 As indicated in **Table 11.6** above, the peak increase in traffic is 0.7% for all vehicles and 1.8% for HGVs on the A1(T). This increase is negligible and is likely to be within the existing daily variation in traffic flow on this route and therefore not significant as per the IEMA guidelines.

11.5.1.4 It should also be noted that the above is only during the peak month, month 12 of construction. During the remaining construction period, traffic would be lower and would be less than half of the peak for HGV deliveries during the final 5 out of 18 months.

Capacity Assessment

11.5.1.5 A comparison of the anticipated peak month traffic against the theoretical capacity on the U246, U220, C120 roads was undertaken. **Table 11.7** below indicates the percentage of the theoretical capacity which would be used by the predicted construction traffic. For the below

table it has been assumed that construction traffic will be distributed over an 8-hour period based on the maximum daily peak of 77 vehicle movements.

TABLE 11.7 CAPACITY ASSESSMENT

ROAD	CAPACITY (VEH / HOUR / DIRECTION)	TWO-WAY HOURLY CAPACITY	ONE-WAY 8-HOUR CAPACITY	TWO-WAY 8-HOUR CAPACITY	PEAK 8-HOUR FLOW FOR CONSTRUCTION VEHICLES	% OF 8 HOUR CAPACITY
U220	800	N/A	6,400	N/A	39	0.6%
U246	800	N/A	6,400	N/A	39	0.6%
C120	140	280	1,120	2,240	77	3.4%

11.5.1.6 As shown above, the predicted peak construction traffic is a negligible component of the overall road capacity. The predicted percentages are so low that the impact of construction traffic on these roads will be insignificant. Assuming an eight-hour delivery window, the total number of additional HGV movements per hour is estimated at no more than 4, which equates to 2 additional hourly movements per direction. These trips would be planned and typically be scheduled throughout the day to avoid peak movements. Therefore, it is concluded such temporary increases are negligible and would not be noticeable to other drivers on the surrounding network. Special consideration has been given to the potential impact of opposing HGV traffic on the C120 in **Section 11.6** on this TS.

11.5.2 Operational Traffic

11.5.2.1 Vehicle movements generated during the operational phase of the development will comprise activities associated with inspection, monitoring, and general Site up-keep. It is anticipated that such visits will occur once per week on average and be via van or other similarly sized vehicles.

11.5.2.2 Due to the low numbers of vehicle movements anticipated, it is unlikely that the operation of the Proposed Development will have any significant impact on the road network. The Proposed Development is not intended to attract visitors, and therefore it is not anticipated to generate other types of trips other than for regular maintenance.

11.5.2.3 The effect of operational traffic is therefore expected to be negligible and has been scoped out of this assessment. This is acknowledged by the Council and considered acceptable by Transport Scotland.

11.5.3 Decommissioning Phase

11.5.3.1 Traffic and transport effects associated with decommissioning of the Proposed Development are expected to comprise removal of all solar PV array infrastructure including modules, mounting structures, cabling, and switching stations. These would be removed from the Site and recycled or disposed of in accordance with good practice and market conditions at that time.

11.5.3.2 Traffic associated with decommissioning of the Proposed Development will be the same or less than that experienced during construction as the activities associated with

decommissioning are expected to be similar to the construction phase, albeit in reverse. It is not possible to accurately forecast baseline environment including traffic flow levels 40 years into the future.. For these reasons, further work would be undertaken, and appropriate traffic management procedures agreed with the East Lothian Council and Transport Scotland at the time of decommissioning, As the construction phase represents a worst-case assessment, the decommissioning phase has been scoped of this assessment. This is considered acceptable by Transport Scotland.

11.5.4 Impact on Road Safety

11.5.4.1 The existing width of the surrounding minor roads presents a constraint on the movement of Site vehicles and other traffic. Due to the minor intensification of traffic and in particular HGV traffic on the access routes during the construction phase, a number of traffic management procedures are proposed for the access routes in Section 5 of this TS.

11.5.4.2 On other routes considered within this study, the predicted temporary increase in traffic during construction of the Proposed Development is minor. In relation to road traffic collisions, no fatal collision was recorded and, in the absence of any identifiable RTC trends or hotspots, a minor increase in traffic is not sufficient to have a detrimental effect on the safe operation of the highway network. The overall impact of the Proposed Development on road safety after the implementation of the proposed traffic management measures in Section 6 of this TS is negligible.

11.5.5 Impact on the Non-motorised User Network

11.5.5.1 As outlined in section 11.3, there is generally no footway provision along the key road links within the Study Area and the impacted sections of road are generally unlit. However, the U220 Dunglass Road through Bilsdean is designated as 'suggested links on quiet roads', so it may likely be used by non-motorised users. Therefore, the minor intensification of traffic and in particular HGV traffic on the access routes during the construction phase will likely result in a decrease in non-motorised user amenity (as well as an increase in fear and intimidation) on this corridor. In addition to this construction activity near the section of the Core Path 12 located on southeastern corner of the Site may reduce amenity value of this path. Hence consideration has been given to the potential impacts of HGV traffic on the non-motorised user network in Section 6 of this TS.

11.5.6 Cumulative Traffic

11.5.6.1 As part of this TS, a review of other committed developments in the area has been undertaken with a view to assessing any traffic and transport impacts which may arise. Cumulative traffic impacts can only occur where the construction phase of a nearby development, which shares a common route to Site for construction traffic, overlap with that of the Proposed Development. As such, only plans or projects with potential to overlap spatially or temporarily will be included. Proposed Developments which have the potential to result in cumulative traffic and transport impacts are provided in **Table 11.8**.

TABLE 11.8 CUMULATIVE DEVELOPMENT REVIEW

DEVELOPMENT/PLANNING REF	STATUS	COMMENT
Erection of 400KV substation and associated developments (Branxton Substation, Planning Ref: 23/00616/PM	Under construction	There is an overlap in the general construction traffic route via the U220 and U246 through Bilsdean for both developments. However, it is unlikely that there would be an overlap in the peak months of construction as both developments are at different stages of the planning process with the proposed Branxton substation likely to be completed prior to the start of construction of the Proposed Development.
Berwick Bank Wind Farm Onshore inc. onshore cable installation, Planning Ref: 23/00162/PPM	Approved. Awaiting Construction	General construction traffic will use the A1(T) approach route, common with the Proposed Development. The development will share a similar route for abnormal load vehicles; however, the delivery of abnormal loads requires police approval and escort, and such deliveries would not be permitted to occur at the same time. Therefore, there is no scope for a cumulative effect of abnormal load movements. Any potential overlap in routes for general construction traffic is limited to the A1(T) north of the Site which is outside the core Study Area for the Proposed Development. The A1(T) is a good standard trunk road which is well used by HGVs and has sufficient capacity to accommodate temporary increases in traffic levels meaning any cumulative effects from traffic of other developments using the road are likely to be negligible. Therefore, the development has not been considered further in this assessment.
Construction and operation of BESS and associated infrastructure, Braxbess BESS; Ref: ECU00004993	Proposed – In Planning	It is proposed that all construction vehicles for the proposed Braxbess BESS will exit the A1(T) at the A1(T)/C122 Innerwick junction and approach the site via the U209 and the C121. As such, any potential overlap in routes for general construction traffic is limited to the A1(T) north of the Site which is outside the core Study Area for the Proposed Development. The A1(T) is a good standard trunk road which is well used by HGVs and has sufficient capacity to accommodate temporary increases in traffic levels meaning any cumulative effects from traffic of other developments using the road are likely to be negligible. Therefore, the development has not been considered further in this assessment.

DEVELOPMENT/PLANNING REF	STATUS	COMMENT
Crystal Rig 4 Wind Farm; Ref: ECU00000607	Approved, Awaiting Construction.	It is proposed that all construction vehicles for the proposed Crystal Rig 4 Wind Farm will exit the A1(T) at the A1(T)/C122 Innerwick junction and approach the site via the C123. As such, any potential overlap in routes for general construction traffic is limited to the A1(T) north of the Site which is outside the core Study Area for the Proposed Development. The A1(T) is a good standard trunk road which is well used by HGVs and has sufficient capacity to accommodate temporary increases in traffic levels meaning any cumulative effects from traffic of other developments using the road are likely to be negligible. Therefore, the development has not been considered further in this assessment.
Crystal Rig Solar. Ref: ECU00004759	Proposed – In Planning	It is proposed that all construction vehicles for the proposed Crystal Rig Solar Farm will exit the A1(T) at the A1(T)/ C122 Innerwick junction and approach the site via the C123. As such, any potential overlap in routes for general construction traffic is limited to the A1(T) north of the Site which is outside the core Study Area for the Proposed Development. The A1(T) is a good standard trunk road which is well used by HGVs and has sufficient capacity to accommodate temporary increases in traffic levels meaning any cumulative effects from traffic of other developments using the road are likely to be negligible. Therefore, the development has not been considered further in this assessment.
Bowshiel Solar and BESS	Proposed – In Planning	It is proposed that all construction vehicles for the proposed Bowshiel Solar and BESS will exit the A1(T) at the A1(T)/Bowshiel Farm Road and approach the site via Bowshiel Farm Road. As such, any potential overlap in routes for general construction traffic is limited to the A1(T) north of the Site which is outside the core Study Area for the Proposed Development. The A1(T) is a good standard trunk road which is well used by HGVs and has sufficient capacity to accommodate temporary increases in traffic levels meaning any cumulative effects from traffic of other developments using the road are likely to be negligible. Therefore, the development has not been considered further in this assessment.

11.5.6.2 In summary, it is unlikely that the peak construction period associated with nearby development in the area would overlap with the peak construction period of the Proposed Development as the applications are at different stages in the planning process and each development has varying lengths of construction period. Therefore, in the unlikely event that the identified developments are scheduled to be constructed simultaneously, it is anticipated that in line with good practice and the application of standard development consent conditions, the implementation of a CTMP for each development would ensure that there are open lines of communication with East Lothian Council, Transport Scotland, and developers of nearby developments. This would monitor the progress of the construction activities and ensure that adequate steps are taken to minimise any potential disruption on the surrounding road network. In this regard, the Applicant is committed to joining the Lorries in our Lanes initiative being promoted by East Lammermuir Community Council where they will seek to adopt best practices and promote communication between stakeholders and construction representatives of the cumulative projects.

11.6 Traffic Mitigation

11.6.1.1 This section of the report covers the mitigation measures required to be complied with to minimise the impact of construction traffic during the construction of the Proposed Development and to alleviate against risks. It is proposed that these measures will be included as part of a CTMP for the Site.

11.6.1.2 Prior to the commencement of construction works on Site, a CTMP will be prepared and submitted to the Council for approval. The requirement for the CTMP would be secured by an appropriately worded condition of consent. This CTMP will provide specific timings of construction phases and will consider the specific details of how construction will be managed.

11.6.2 Management of Approach Route to Site

11.6.2.1 All vehicles will be directed along the approved route to access the Site and that access from non-approved routes is prohibited. There are a number of residential properties located along the U220 which would require unrestricted access. The appointed contractor is required to maintain safe operation of these routes throughout construction of the Proposed Development and to ensure that local residents, businesses, cyclists, and pedestrians have unrestricted access to use the route.

11.6.2.2 Due to the restricted width of the C120, it is not possible for opposing HGVs (or for a farm truck / car to pass an HGV) to pass each other safely without causing damage to the verges and potential blockage of the route. Therefore, in order to prevent the risk of obstruction of these routes due to construction traffic, it is proposed to close off a section of the C120 to general traffic (except for local access) in conjunction with the implementation of a vehicle booking system and a vehicle delivery hold-off area for the duration of construction.

11.6.2.3 A hold off area will be identified where approaching delivery vehicles can safely pull off the road and contact the Site Manager or Banksman via mobile phone. Only once permission to make the final approach to site has been received should drivers proceed beyond the hold off area. The Site Manager or Banksman will control the flow of delivery vehicles to ensure that opposing vehicles do not meet on the C120.

11.6.2.4 The temporary closure of the C120 will ensure that construction traffic will not route directly along C128 thereby minimising any potential severance effects on the settlement of Oldhamstocks and other nearby settlements. Local traffic (in particular residents of Oldhamstocks) may continue to access the A1(T) via the U219, U215 and C121.

11.6.2.5 It is considered that implementation of the above measures would allow the road network in the vicinity of the Site to operate safely during short term construction phase, and any potential congestion will be minimal.

11.6.3 C120 / U220 Dunglass Road Junction

11.6.3.1 To warn approaching drivers of the increased number of HGVs during the construction phase, it is proposed that the appointed contractor would install and maintain warning signage at the C120 Road/ U220 Dunglass Road junction for the duration of construction.

11.6.3.2 The precise location and specification of this signage would be agreed in consultation with East Lothian Council's Roads Officers; however, it is likely to take the form of red coloured construction warning signs located on the C120 Road approaching the junction warning of turning HGVs ahead. A swept path assessment, outlined in **Volume 3, Appendix 11.1: Access Junctions Design and Swept Path Analysis** has also demonstrated that a 16.5 m articulated lorry can negotiate the junction in forward gear.

11.6.3.3 Given the very low predicted increase in traffic the above mitigation is considered sufficient to address the issue of road safety at this junction.

11.6.4 Temporary Signage

11.6.4.1 Prior to the commencement of construction, the appointed contractor will submit a signage strategy for approval by East Lothian Council and other stakeholders. The required signage will fall into two broad categories: directional signage on the approved route to the Site and warning signage.

11.6.4.2 Directional signage should be located at key points on the approved route to the Site for the duration of construction with the purpose of reinforcing the route and preventing delivery vehicles from using the wrong route.

11.6.4.3 Temporary warning signage should be provided by the appointed contractor at key points throughout the vicinity of the Site to caution other road users of the increased number of HGVs that will be using the road network as a result of construction traffic. Warning signage should also be provided to caution all construction vehicles on the presence of non-motorised or vulnerable road users within the vicinity of the Site. Any additional signage e.g., for speed restriction and Temporary Traffic Regulation Order (TTRO), will be subject to a separate application to East Lothian Council and their consenting process.

11.6.5 Banksman

11.6.5.1 During the construction phase of the Proposed Development, it is proposed that the appointed contractor consider the services of a banksman at the Site access junctions (in particular, the temporary crossing points off the C128 and other minor roads) to manage

the entrance and egress of vehicles. The banksman will be responsible for administering the delivery vehicle booking system, communicating with the hold off area, and for ensuring that vehicles arriving and departing the Site do so safely.

11.6.5.2 A banksman would ensure that HGVs only leave the Site when the road is clear. Vehicles associated with the Proposed Development must not park on the public road and banksmen should ensure that vehicles do not have to wait on the main road before turning onto the Site.

11.6.6 Wheel Washing

11.6.6.1 In the interests of road safety, mud and other materials must be prevented from being deposited onto the public road. If there is a risk of such material being transported by construction vehicles as they exit the Site, then the appointed contractor will install and operate wheel washing facilities to prevent this. These will be located at the Site entrance junctions (in particular, the temporary crossing points off the C128 and other minor roads).

11.6.6.2 In the event that mud, or debris is deposited onto the public road then the appointed contractor will employ the services of a road sweeper to have this removed.

11.6.7 Road Conditioning Survey

11.6.7.1 If required, a pre/post road condition survey will be carried out for the carriageway on the routes to the Site in conjunction with East Lothian Council Road Maintenance Department to identify any deterioration in infrastructure condition that has occurred during the construction period and how they will be rectified.

11.6.7.2 The Applicant will fund the completion of pre-construction and post-construction surveys as defined above. Any damage which has occurred that is agreed as reasonably attributable to the activities associated with the construction of the Proposed Development will then be repaired with repairs implemented and/or funded by the Applicant or agents thereof.

11.6.8 Non-motorised Users

11.6.8.1 There are Core Paths adjacent (and in the vicinity) to the Site and users may face a temporary reduction in amenity value due to the presence of construction plant and equipment. It is proposed that the footpath will be managed by a banksman on Site, who will communicate with both users and on-site vehicles to ensure the continuous safe usage of the network throughout construction. Other measures that may be employed to maintain safe access for non-motorised users during the construction phase may include:

- Provision of signage and other information alerting the users (including horse riders) of the likelihood of meeting construction traffic;
- Solid fencing / barriers adjacent to the core path area to maintain separation between pedestrians, cyclists, horse-riders and construction operations;
- Temporary re-routing of core path during construction of the Site if required;

- Consideration of an advisory temporary lower speed limit through the sensitive areas along the route to Site (i.e. 'suggested links on quiet road'); and

- Active management plan for crossing points and shared use access routes, taking into account delivery timescales and movements of plant and machinery etc.

11.7 Conclusion

11.7.1.1 This TS has considered the likely impact of traffic generated by the Proposed Development on the local transport network. A detailed review of the type and quantity of vehicles associated with each element of the construction project has been provided along with an approximate construction programme. The routes to Site for all construction traffic have also been provided.

11.7.1.2 Construction of the Proposed Development will run for an 18-month period and will generate approximately 22,109 vehicle movements. It is expected that during the peak month of construction, approximately 76 two-way vehicle movements will occur per day consisting of 48 car/van movements and 28 HGV movements on average. This assessment has concluded that this increase is negligible in terms of the existing traffic flow and the capacity of the routes in question. The predicted increase is temporary and would cease following completion of the short-term construction of the Proposed Development.

11.7.1.3 Each proposed Site entrance junction has been designed to accommodate the largest type of vehicle anticipated at the Site. Each entrance has also been assessed for visibility against the DMRB standard, and the achievable splays are deemed acceptable.

11.7.1.4 A number of traffic management procedures have been proposed within this report to mitigate the constraints identified and to ensure the safe operation of the approach route to the Site during construction. Determination of the final details of these traffic management measures will occur once a contractor has been appointed and can be secured via an appropriately worded condition of consent. Overall, it is considered that following the implementation of the proposed mitigation and traffic management procedures, the overall impact of construction traffic on the surrounding road network is expected to be minimal.

11.7.1.5 As the Site will not be manned, operational traffic is expected to be minimal and would be conducted by smaller vehicles. The impact of this on the wider highway network is therefore expected to be negligible.

11.7.1.6 This TS has demonstrated that the level of traffic associated with the Proposed Development will not lead to a severe impact on the surrounding road network. Therefore, the Proposed Development is considered to be in accordance with national and local policy, including East Lothian Council's LDP Policy T2 which highlights that a new development must not have a negative impact on road safety and amenity.

11.7.1.7 This TS has demonstrated that the level of traffic associated with the Proposed Development will not lead to a severe impact on the surrounding road network. Therefore, the Proposed Development is considered to be in accordance with national and local policy, including East Lothian Council's LDP Policy T2 which highlights that a new development must not have a negative impact on road safety and amenity.