

**Beauly to Blackhillock to New Deer to
Peterhead 400 kV Project
Environmental Impact Assessment Report
Volume 5 | Appendices**

**Appendix 13.2 – Moray Council - Transport
Assessment**





Scottish and Southern Electricity Networks
Transmission

BEAULY TO BLACKHILLOCK TO NEW DEER TO PETERHEAD 400 KV OHL PROJECT

Appendix 13.2: Moray Transport Assessment





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BEAULY TO BLACKHILLOCK TO NEW DEER TO PETERHEAD 400 KV OHL PROJECT

Appendix 13.2: Moray Transport Assessment

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EXECUTIVE SUMMARY

INTRODUCTION

WSP UK Limited has been appointed by Scottish and Southern Electricity Networks Transmission (the Applicant) to provide consultancy advice in support of the Proposed Development.

Moray Council (MC) identified a requirement to prepare a Transport Assessment (TA) to consider the impact of construction traffic on the operation of the local transport network, and this TA has been prepared in support of the S37 application.

ANTICIPATED TRIP GENERATION

The level of vehicle trips anticipated to be generated by construction activities has been derived from an estimate and an initial programme provided the Principal Contractor, with the trips assigned to the local road network on the basis of the anticipated locations of the indicative temporary construction compounds (or Yards) and quarries which will be used to support the Proposed Development's delivery.

Each site access section is anticipated to accommodate a maximum trip generation equating to 7 - 10 two-way cars / vans an hour and 14 two-way HGVs an hour.

The largest vehicles associated with the development are mobile cranes of 150 tonne (t) and 250 t as necessary. Mobile cranes have been assessed as AILs through an Abnormal Load Route Assessment (ALRA) found within **Appendix 13.5: Abnormal Load Route Assessment** of the EIAR. For the purposes of HGV assessments, the longest vehicle type making the most frequent trips to site will be a 16.5 m artic HGV and this has been used to inform this Transport Assessment.

LOCAL ROAD NETWORK

The area is predominantly rural in nature and the transport network reflects this. A proportion of the roads which it is intended to use to support access to the Proposed Overhead Line (OHL) tower installation sites, are agreed timber haulage routes and therefore considered to be appropriate to accommodate the temporary increase in traffic generated by construction activities. None of the roads, which form the proposed access routes, have any currently known weight restrictions identified on the unclassified road network which would support access to the tower installation sites.

STRUCTURES ALONG ROUTES

Transport Scotland / BEAR NW / Amey NE, Network Rail and MC have been consulted to advise on the current structural capacity of the routes proposed.

At the time of writing this report, the above consultees are yet to comment on the structural capacity of their assets. However, as mobile cranes route routinely across the UK for a variety of operators, e.g. construction sites, oil and gas, shipyards, and infrastructure projects, it is considered that the majority of structures should be suitable. It is acknowledged that some locations within the study area are more remote, and therefore there is potential for assets to require further inspection. It is

anticipated that as most of the structures are short span, that these would be suitable for alternative engineering solutions, should they fail further structural assessment, (if any are to require this).

PROPOSED MITIGATION

A detailed review of the proposed access routes has been undertaken, and it is considered that the unclassified road network can accommodate the temporary increase in traffic generated by construction activities, with the main impact anticipated for a period of no more than two months on any of the unclassified road network. Where possible, HGV arrivals and departures will be managed to reduce the potential for two larger vehicles to meet on the unclassified roads which are to be used to support access to the installation sites.

However, there may be a requirement to alter the alignment of short sections of the road network or kerblines at existing junctions to accommodate HGV movements associated with construction activities. While the requirement for these will require to be confirmed by a topographical survey of the potential constrained areas, the potential mitigation is summarised in **Table 1**.

Table 1: Proposed Mitigation Measure Summary

Section	Road	Potential Mitigation Measure
12	U88E East	Lengthen a proportion of the existing passing places
	U88E South	Liaise with property owner to minimise the impact of construction traffic on the operation of the road
	C11E	Manage arrivals and departures to minimise the impact of construction traffic on the operation of the road
13	C12E	None - Timber Transport Forum Agreed Route
	U109E	None - Timber Transport Forum Agreed Route
14	C12E	None - Timber Transport Forum Agreed Route
	C13E	None - Timber Transport Forum Agreed Route
15	A941	None - Timber Transport Forum Agreed Route
16	U129E	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U20E	None - sufficient number of existing passing places
17	U22E	Temporary closure of the road
	U19E	None - construction traffic will travel on the road for less than 300 m before leaving the adopted road network
18	U14E	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U13E	None - Timber Transport Forum Agreed Route
	U65H	Liaise with owner of the two farms to minimise the impact of construction traffic on the operation of the road
	C74H	None - sufficient number of existing passing places
	U41H	Temporary closure of the road
19	C74H / U41H	Liaise with local property owners to minimise the impact of construction traffic on the operation of the road

Section	Road	Potential Mitigation Measure
	U49H	Liaise with local property owners to minimise the impact of construction traffic on the operation of the road
	U51H	Temporary closure of the road
	U50H	None - short length of the road to be used
	U35H	None - consented development to provide additional passing places
	U44H	Lengthen a proportion of the existing passing places

There may also be the requirement to alter the alignment of the road network or kerblines at existing junctions to accommodate HGV movements associated with construction activities. While the requirement for these will require to be confirmed by a topographical survey of the potential constrained areas, the potential mitigation is summarised in **Table 2**.

Table 2: Potential Road Improvements

Section	Road	Location	Potential Mitigation Measure
12	C11E	Dorback Burn Bridge	Road widening
16	U1295	Site Access Point	Junction widening
18	U65H	A96 (T) / U65H junction	Junction widening
	C74H	B9016 / C74H junction	Junction widening
19	U51H	B9017 / U51H junction	Junction widening

CONCLUSIONS

It is considered that the Proposed Development will be constructed in a phased manner to support the availability of materials / components and the workforce, with this approach minimising the impact on the local road network.

Potential measures have been identified to manage construction traffic movements, and it is intended that this TA will present an initial set of measures and management strategy which can be used to support future discussion.

The Principal Contractor will subsequently have further detailed dialogue with MC as plans are refined, to ensure that a suitable set of measures are implemented in advance of the commencement of construction activities to mitigate the temporary increase in traffic on the operation of the local road network.

1 INTRODUCTION

1.1 OVERVIEW

- 1.1.1. WSP UK Limited has been appointed by the Applicant to provide consultancy advice in support of the Proposed Development which is described in **Chapter 1: Introduction and Background, Paragraph 1.1.2** of the EIAR.
- 1.1.2. Moray Council (MC) identified a requirement to prepare a Transport Assessment to consider the impact of construction traffic on the operation of the local transport network and this TA has been prepared in support of the application set out in **Chapter 1: Introduction and Background, Paragraph 1.1.2** of the EIAR.

1.2 PURPOSE OF THE TRANSPORT ASSESSMENT

- 1.2.1. This TA aims to address the key transport and access issues associated with the Proposed Development. This report identifies the anticipated key access routes and potential measures to accommodate the predicted temporary increase in traffic due to the construction of the Proposed Development.
- 1.2.2. This TA sets out the proposed scope of the future Transport Assessment and the objectives of this report are to:
- identify the relevant policy, legislation and guidance that will be reviewed in the formal submission of the TA;
 - determine the potential origin of construction traffic;
 - identify the level of trips generated by construction activities;
 - review the existing transport network;
 - identify the most suitable roads for vehicular traffic, including Heavy Goods Vehicles (HGVs);
 - review the potential impact of construction traffic on the operation of the local transport network; and
 - identify potential measures to mitigate the potential impact.

SCOPING DISCUSSIONS

- 1.2.3. In August 2024, MC provided transportation comments in relation to the Environmental Impact Assessment (EIA) Scoping Opinion Consultation Request for the project.
- 1.2.4. Consultation responses which are relevant to this Appendix, such as those provided by MC's Roads Officer (MCRO) in response to the EIA Scoping Request, are included in **Table 1.1**, with the full scoping response included within **Volume 5, Appendix 6.2: Scoping Opinion**. These requirements have been taken into consideration when preparing this report.

Table 1.1: Consultation Responses of Relevance to this Transport Assessment

Body / Organisation	Type of Consultation and Date	Response outlining a requirement to discuss	How response has been considered
Moray Council - Roads Officer (MCRO)	EIA Scoping Request - August 2024	Policy: <i>“Local / National Transport Policies / Guidance documents related to this development as indicated in the policies section of this document or as identified by the appointed Transport Consultant to this development project.”</i>	The relevant policy and legislation and guidance for this assessment is detailed in Chapter 2 of this Appendix .
		Proposed Development: <i>“proposed development including the Phasing Plan, Access Strategy and Construction Programme”</i>	The Proposed Development is discussed in Chapter 3 of this Appendix , which confirms access strategy and indicative construction programme.
		Trip Generation and Distribution: Requirement to discuss the following: - Access routes for each development phase, including the: <i>anticipated construction / operational traffic levels;</i> <i>of daily / weekly / monthly frequency broken down by;</i> <i>vehicle type/size; and</i> <i>each phase as proposed.</i> <i>“Expected construction traffic generation during the peak construction periods (as opposed to the average traffic generation over a period of time);</i> <i>The anticipated timber traffic associated with this development should be included into the assessment; and</i> <i>Transport Assessment report should make references to the proposed forestry clearance activities associated with this project.”</i>	Construction traffic estimates have been provided by the Principal Contractor and are detailed further in Chapter 6 of this Appendix . These construction traffic estimates have been used to inform the impact assessment for the purpose of this Transport Assessment.
		Access Routes and Mitigation: <i>“Details and assessment of the impacted access routes to the development sites would be required to understand the level of impact to the local road network during the construction period of the development and proposed mitigatory measures such as new passing places,</i>	The methodology for the assessment of the construction traffic origins and access routes identification is detailed in Chapter 5 of this Appendix . A summary of mitigation is provided in Chapter 7 of this Appendix .

Body / Organisation	Type of Consultation and Date	Response outlining a requirement to discuss	How response has been considered
		road widening and edge strengthening.” ■ A scope for the assessment of the impact of construction vehicles and deliveries of materials to the site, including identification of the origin of the components, proposed route for deliveries, possible points of constraint along the network (i.e. at junctions, bends in the road, points of restricted road width etc.); and, ■ Mitigation works proposed along the route at points of constraint. (Note some mitigation works will be temporary but others will be permanent)”	
		Road Safety and Development Impact: “Road safety and traffic delay implications need to be considered and possible mitigation measures provided where necessary.”	Road safety is assessed in Chapter 4 of this Appendix where it is found that there are no existing safety concerns. Traffic delay is considered in Chapter 7 of this Appendix where the hourly trip generation is summarised per Proposed OHL Alignment section. A summary of mitigation is provided in Chapter 7 of this Appendix.
		Access Junctions: ■ “Details of proposed access locations onto the public road for construction vehicles for each phase, including the required visibility splays and access specifications. Any permanent, access required onto the public road shall be constructed to an adoptable standard over the length of the largest vehicle which will require access and the first 20 metres shall be wide enough to allow two-way traffic. Technical Approval would be required for the access to demonstrate proposals will prevent water and loose materials from being discharged onto the public road.”; and ■ “Details of proposed access onto the public road - upgrading of the	The proposed location and form of the site accesses are detailed in Chapter 3 of this Appendix. The form of the proposed access junctions will be agreed with MC prior to construction.

Body / Organisation	Type of Consultation and Date	Response outlining a requirement to discuss	How response has been considered
		existing arrangement will be required along with the provision and maintenance of visibility splays."	
		Swept Path Analysis: "Swept path assessments for the proposed access arrangements will be required to demonstrate that the largest anticipated vehicle (construction and operation) can be accommodated without over-run of the road verges."	A desktop access route review has been undertaken (Chapter 5 of this Appendix) which identifies the more suitable routing to site for HGV deliveries. The study also provides an overview of mitigation requirements identified by a Swept Path Analysis (SPA). It is anticipated that there will AILs supporting the construction of the Proposed Development, and that thee largest of these will be Mobile Cranes, these movements are assessed separately within Appendix 13.5: Abnormal Load Route Assessment of the EIAR.
		Aggregate Movements: "Details for the volume and tonnages of materials being transported to each access point on the public road are required. Including number of loads, source of material and route to site. Assessment should be based on assumptions for development with and without borrow pits."	Construction traffic volume estimates are detailed in Chapter 6 of this Appendix. These construction traffic estimates have been based on the assumption that no material is won from borrow puts to provide a robust estimate of the impact of construction traffic.
		Outdoor Access: "Details of proposed diversion routes for local footpaths/cycle tracks during the construction period and associated signage (to be agreed with the Access Manager)."	It is considered that there is no requirement to divert any existing active travel facilities to accommodate construction activities.
		Parking Provision: "Parking provision for staff and construction vehicles during the construction period."; and "Adequate parking provision will be required for vehicles waiting to unload, staff working on-site etc. in order to ensure parking does not obstruct the public road. Requirements for any temporary waiting/holding areas will need to be assessed associated with the AIL and	The location and formation of the site parking provision for the construction and operation of the Proposed Development will ensure that no queueing occurs of the adopted road network. It is anticipated that there will AILs supporting the construction of the Proposed Development, and that thee largest of these will be Mobile Cranes, these movements are assessed separately within

Body / Organisation	Type of Consultation and Date	Response outlining a requirement to discuss	How response has been considered
		Construction traffic requirements".	Appendix 13.5: Abnormal Load Route Assessment of the EIAR.
		Baseline Conditions: "Baseline conditions such as accident data (and analysis) including the existing traffic volumes of the selected routes for the assessment. If the applicant intends to carry out traffic surveys for this study, location/starting date and duration of traffic surveys should be carried out after consultation with the Transport Development Team. MC Transportation Team could provide the recent traffic data for A941 and A940."	The baseline conditions of the proposed study area is outlined in Chapter 4 of this Appendix , and details the assessment of road safety, existing traffic flows and includes details of traffic surveys undertaken to inform the assessment.
		Cumulative Impacts: "Assessment of the cumulative impacts of the construction traffic considering the already consented major developments (such as Wind Farm / Battery Storage) and developments in the construction phase such as Moray West Onshore Transmission Infrastructure project should also be included in the report."	The assessment of construction traffic volume in combination with cumulative schemes in the study area will be assessed as part of the Environmental Impact Assessment (EIA) Chapter 13: Transport which will use data from this Transport Assessment.
		Guidance: "More information for this could be obtained referring to Transport Assessment Guidance published by Scottish Government."	This guidance is outlined in Chapter 2 of this Appendix as it is intended to follow this methodology.
		Operational Traffic: "As stated in the section 12.6.1 of the Scoping Report, Transportation has no objections to scope out the operational traffic from further assessment as there would be minimal traffic generation during the operational period of the proposed development. However, details should be submitted regarding any retained/permanent access point to be used during the operational period of the project for maintenance purposes."	The proposed location and form of the proposed site accesses are detailed in Chapter 3 of this Appendix .
		Sensitivity, Integrity and restrictions of Roads:	The assessment of road links suitable for construction traffic routing is detailed in Chapter 5 of this Appendix . This desktop

Body / Organisation	Type of Consultation and Date	Response outlining a requirement to discuss	How response has been considered
		■ “Section 12.3.3 of the report states that ‘Where the predicted growth in traffic flow is below the thresholds (i.e. predicted traffic increase less 30 %, or less than 10% in sensitive areas), the IEMA guidelines suggest the significance of the effects can be stated to be negligible and further detailed assessment is not warranted’. This statement would comply with the IEMA guidelines, however, when it comes to narrow rural roads without proper passing facilities/with narrow and weak structures / Road pavements with poor structural integrity for HGV traffic, this statistical test alone would not give a robust assessment for the suitability of the roads for the additional construction traffic. Therefore, Transportation would not recommend disregarding any road from further assessment solely based on the statistical checks as indicated in the section 12.3.2 of the Scoping report. Any road (other than the ‘A’ class roads) which is likely to be used by construction traffic should be assessed to identify the impacts from the construction traffic and to understand the suitability to used by the HGVs.”; ■ “An assessment of the structural integrity of the road pavement should be carried out to demonstrate that the selected roads are capable of sustaining the level of development traffic generated from this development. Bridge assessment for the weak bridges along the routes selected for the abnormal load deliveries would also be required.”; and, ■ Any existing road culverts and ditches which will be crossed will need to be maintained in full working order without capacity	access route study summarises the route selection process.

Body / Organisation	Type of Consultation and Date	Response outlining a requirement to discuss	How response has been considered
		restrictions at all stages of construction. Extensions to existing culverts will only be permitted where a watertight joint to existing pipe work can be provided. Any extension of existing stone culverts will not be permitted and full replacement with no capacity restrictions will be required.	
		Abnormal Load Route Assessment: ■ “Assessment of all abnormal load deliveries (scope to be submitted by applicant for agreement) including identification of the origin of the components, proposed route for deliveries, possible points of constraint along the network (i.e. at junctions, bends in the road, points of weight, width and height restriction etc.). This should include all roads under the control of MC, the applicant should also consult and check any requirements with Transport Scotland and neighbouring Local Authorities.”; ■ “Details of each abnormal load including vehicle and load dimensions, gross weight and axle weights.”; ■ “Swept Path Analysis for all abnormal load vehicles at all potential points of constraint along the network (proposed locations to be submitted by applicant for agreement with Roads Authority)”; ■ “Details of proposed roadway improvements to allow limited overtaking of the abnormal load convoys”	The largest vehicles associated with the development are mobile cranes of 150 tonne (t) and 250 t as necessary. Mobile cranes have been assessed as ALs through an Abnormal Load Route Assessment (ALRA) found within Appendix 13.5: Abnormal Load Route Assessment of the EIAR. For the purposes of HGV assessments, the longest vehicle type making the most frequent trips to site will be a 16.5 m artic HGV and this has been used to inform the TAs located within Appendix 13.1: Highland Council – Transport Assessment, 13.2: Moray Council - Transport Assessment and 13.3: Aberdeenshire Council - Transport Assessment of the EIAR.
		Preliminary Assessment: “Preliminary assessment of the existing route condition (This will need to be updated prior to commencement of deliveries with a condition survey and video of the route).”	Commitment will be provided to undertaking a route condition survey within the detailed CTMP, with the extent of the survey finalised prior to the commencement of construction activities.

Body / Organisation	Type of Consultation and Date	Response outlining a requirement to discuss	How response has been considered
		Construction Traffic Management Plan: <i>"Will be required, including;</i> ■ <i>Duration of works;</i> ■ <i>Estimated number of vehicle movements (i.e. materials, plant, staff, components);</i> ■ <i>Schedule for delivery of abnormal loads;</i> ■ <i>Source for stone and concrete deliveries and route to the site;</i> ■ <i>Measures to be put in place to prevent material being deposited on the public road;</i> ■ <i>Traffic Management during works including any specific instructions to drivers;</i> ■ <i>Parking provision, turning, loading and unloading areas; and</i> ■ <i>Improvements to the public road network to accommodate construction traffic."</i> It will also be required to include the following: ■ <i>Operational Traffic Management Plan as part of a planning condition;</i> ■ <i>Wear and Tear (S96 Agreement); and a</i> ■ <i>Road Construction Consent / Road Opening Permit.</i>	A detailed CTMP is currently being developed by the Principal Contractor.

2 TRANSPORT POLICY REVIEW

2.1.1. This Chapter of the Appendix will discuss the relevant transport policy in relation to the Proposed Development and **Table 2.1** outlines the policy that will be complied with within the Transport Assessment.

Table 2.1: Policy Identified for Review

Type of Document	National	Local
Policy	National Planning Framework 4 (2024) ¹	Keith Green Energy & Infrastructure Framework (2023) ²
		HITRANS Regional Transport Strategy (2018 & Draft 2024) ³
		Elgin Transport Strategy (2017) ⁴
		Second Moray Transport Strategy (2011) ⁵
		Moray Local Development Plan (2020) ⁶
Standards	National Roads Development Guide (2014) ⁷	
	Designing Streets: A Policy Statement for Scotland (2010) ⁸	
Guidance	Planning Advice Note (PAN) 75 (2005) ⁹	
	Transport Assessment Guidance (2012) ¹⁰	
	Environmental Impact Assessment Handbook (2018) ¹¹	

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

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3 PROPOSED DEVELOPMENT

3.1 INTRODUCTION

- 3.1.1. The Proposed Development is described in full in **Chapter 3: Project Description** of the EIAR.
- 3.1.2. Given the vast area the Proposed Development covers, and the number of roads anticipated to be used by construction traffic in order to reach access points to the Proposed Development. This TA departs from the formal description of the Proposed Development outlined in **Chapter 3: Project Description** of the EIAR, in order to make this Transport Assessment digestible. This Chapter outlines the Proposed Development in terms of Traffic and Transport.

3.2 SITE CONTEXT

- 3.2.1. As previously mentioned, there are a number of roads anticipate to be used to access the Proposed Development. In order to geographically assess, this assessment has split the Proposed OHL Alignment into hypothetical 'sections' between defined locations.
- 3.2.2. While these 'sections' are defined as geographical segments of the Proposed OHL Alignment between locations, they are also intended to serve as a catch-all term to refer to the road links used by construction traffic to reach these sections. Therefore, together the sections in each local authority boundary form the overall Study Area for construction traffic in that local planning authority.
- 3.2.3. The sections of the Proposed OHL Alignment that are relevant to this report are outlined within **Table 3.1**.

Table 3.1: Moray Proposed OHL Alignment Sections

Proposed OHL Alignment Moray Section Number	Location	Study Area
Section 12	Cairn Duhie to Johnstripe	Section 12 Study Area comprises the construction traffic routing on the roads used to reach the towers between Cairn Duhie and Johnstripe.
Section 13	Johnstripe to Moss of Bednawinny	Section 13 Study Area comprises the construction traffic routing on the roads used to reach the towers between Johnstripe and Moss of Bednawinny.
Section 14	Moss of Bednawinny to Glenlatterach Reservoir	Section 14 Study Area comprises the construction traffic routing on the roads used to reach the towers between Moss of Bednawinny and Glenlatterach Reservoir.
Section 15	Glenlatterach Reservoir to Glen of Rothes	Section 15 Study Area comprises the construction traffic routing on the roads used to reach the towers between Glenlatterach Reservoir and Glen of Rothes.

Proposed OHL Alignment Moray Section Number	Location	Study Area
Section 16	Glen of Rothes to Teindland	Section 16 Study Area comprises the construction traffic routing on the roads used to reach the towers between Glen of Rothes and Teindland.
Section 17	Teindland to River Spey	Section 17 Study Area comprises the construction traffic routing on the roads used to reach the towers between Teindland and River Spey.
Section 18	River Spey to west of Keith	Section 18 Study Area comprises the construction traffic routing on the roads used to reach the towers between River Spey and west of Keith.
Section 19	West of Keith to Coachford area	Section 19 Study Area comprises the construction traffic routing on the roads used to reach the towers between west of Keith and Coachford area.

- 3.2.4. The Proposed OHL Alignment through Moray is shown in **Figure 13.2.3.1**, along with the potential locations of Yards which will support construction activities.
- 3.2.5. All figures are included in succession at a larger scale in **Annex A**.

Figure 13.2.3.1: Site Context



VEHICLE CLASSIFICATION

- 3.2.6. This report has been prepared using information supplied by the Applicant's Principal Contractor who have estimated the level of trips generated by construction activities.
- 3.2.7. The Principal Contractor confirms that construction activities will be supported by the following key vehicle types:
- Heavy Goods Vehicles (HGVs) transporting construction materials, plant and equipment to / from site;
 - Tipper Trucks (e.g. for transporting aggregates to site);
 - Light Goods Vehicles (LGVs) delivering materials to site; and
 - Cars transporting staff to and from the site.
- 3.2.8. The largest vehicles associated with the development are mobile cranes of 150 t and 250 t as necessary. The largest vehicles associated with the development are mobile cranes of 150 t and 250 t as necessary. We have assessed the mobile cranes as AILs through an ALRA found within **Appendix 13.5: Abnormal Load Route Assessment** of the EIAR. For the purposes of HGV assessments, the longest vehicle type making the most frequent trips to site will be a 16.5 m artic HGV and this has been used to inform this TA.

PROPOSED DEVELOPMENT TIMESCALES

- 3.2.9. It is anticipated that the construction of the Proposed Development would commence in 2026, with estimated energisation in Quarter 4 of 2030. The length of the main construction work is expected to

take four years to 2030, with construction traffic likely to peak in 2026. Dismantling of existing OHLs would follow and is anticipated to be completed by Quarter 2 of 2032. The main tasks that are included in the key project stages are as follows:

- site mobilisation;
- forestry felling;
- access track construction;
- tower installation works;
- OHL installation works;
- OHL outage connection works;
- tower demolition / dismantling; and
- site reinstatements.

- 3.2.10. It is anticipated that throughout the Proposed OHL Alignment will be constructed in a phased manner working from west to east along the installation corridor.

CONSTRUCTION WORKING HOURS

- 3.2.11. Construction activities would in general be undertaken during daytime periods. Working hours are currently anticipated between 07.00 to 19.00 Monday to Sunday during British Summer Time (BST) and 07:00 to 18:00 during Greenwich Mean Time (GMT).
- 3.2.12. To ensure a robust assessment, the construction impact analysis has been based on the peak daily traffic flows of site deliveries over a 11 hour period, within the assumed GMT working hours. In doing so, simulating the most intensive movements required to construct the Proposed Development in the shorter time period within the construction window. Therefore, the condensing of movements provides a worst-case assessment scenario.
- 3.2.13. Any other out of hours working would be agreed in advance with MC. With regard to weekend working, this would be planned to minimise construction traffic, and areas of work would be restricted to those locations which would have the least impact on the local communities and general public.

3.3 PROPOSED YARD LOCATIONS

- 3.3.1. As shown in **Figure 13.2.3.1**, there are two potential Yards to be provided in the Moray area, with these are located at Elgin and Keith. These gated sites will provide storage for materials and welfare facilities for workers. It has been determined by the Principal Contractor that construction materials would be delivered to the Yards prior to transport to site.
- 3.3.2. It is acknowledged that construction activities would also be supported by aggregate deliveries which are generated throughout the construction programme, and these movements will not originate from the Yards. It is not currently known what quarries and suppliers would be used, and it has therefore been assumed that aggregates would be transported from the nearest quarry via the trunk road network (TRN) to the site (the A9, the A95 and the A96), via the most direct route.

3.4 POTENTIAL ACCESS ROUTES

- 3.4.1. This Chapter of the Appendix aims to identify the potential access routes that could be used to support the delivery of materials from each of the Yards, with this forming the Study Area for the

purpose of this assessment, with this appraisal looking to make use of the classified road network as far as possible.

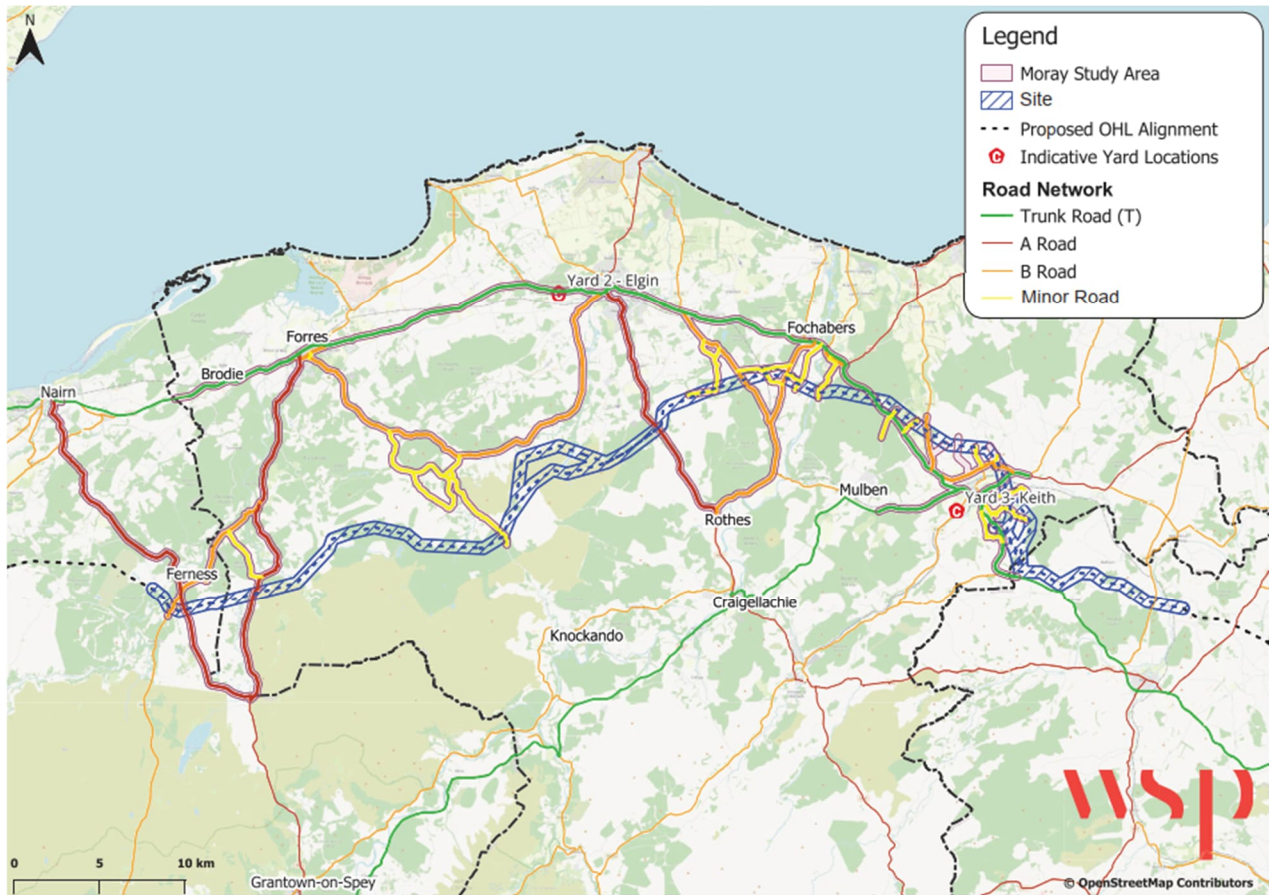
- 3.4.2. Access to the tower installation sites is to be achieved through the upgrading of existing access tracks or installing new permanent stone access tracks.
- 3.4.3. For the purpose of this TA, (as explained in **Chapter 3.1 of this Appendix**) the Moray Proposed OHL Alignment has been divided into eight geographically defined sections, (Sections 12-19), as stated in **Table 3.1**, with these defined taking cognisance of the intention to provide Yards at Elgin and Keith. **Table 3.2** summarises the assumed routes which construction traffic will use when accessing the installation sites from the Yards.

Table 3.2: Study Area Sections 12-19 Access Point Determination

Proposed OHL Alignment Section (Location)	Access Points for this Section	Yard Serving these Access Points	Roads Utilised from the TRN
12 (Cairn Duhie to Johnstripe)	Access Points (AP 52-62)	Elgin Yard	A940, C11E, U88E
13 (Johnstripe to Moss of Bednawinny)	Access Points (AP 63)	Elgin Yard	B9011, B9010, C12E, U109E
14 (Moss of Bednawinny to Glenlatterach Reservoir)	Access Points (AP 64-67)	Elgin Yard	B9010, C12E, C13E
15 (Glenlatterach Reservoir to Glen of Rothes)	Access Points (AP 68-70)	Elgin Yard	A941 (Urban), A941 (Rural)
16 (Glen of Rothes to Teindland)	Access Points (AP 71-78)	Elgin Yard	B9103, U20E, U21E, U129E
17 (Teindland to River Spey)	Access Points (AP 79-82)	Elgin Yard	B9015, U19E, U22E
18 (River Spey to west of Keith)	Access Points (AP 83-85)	Keith Yard	B9104, B9016, C74H, U41H, U13E (SW), U13E (NE), U14E, U65H,
19 (west of Keith to Coachford area)	Access Points (AP 86-117)	Keith Yard	A95, B9017, C74H, U35H, U41H, U44H, U49H, U50H, U51H

3.4.4. The identified access routes are shown in **Figure 13.2.3.2**.

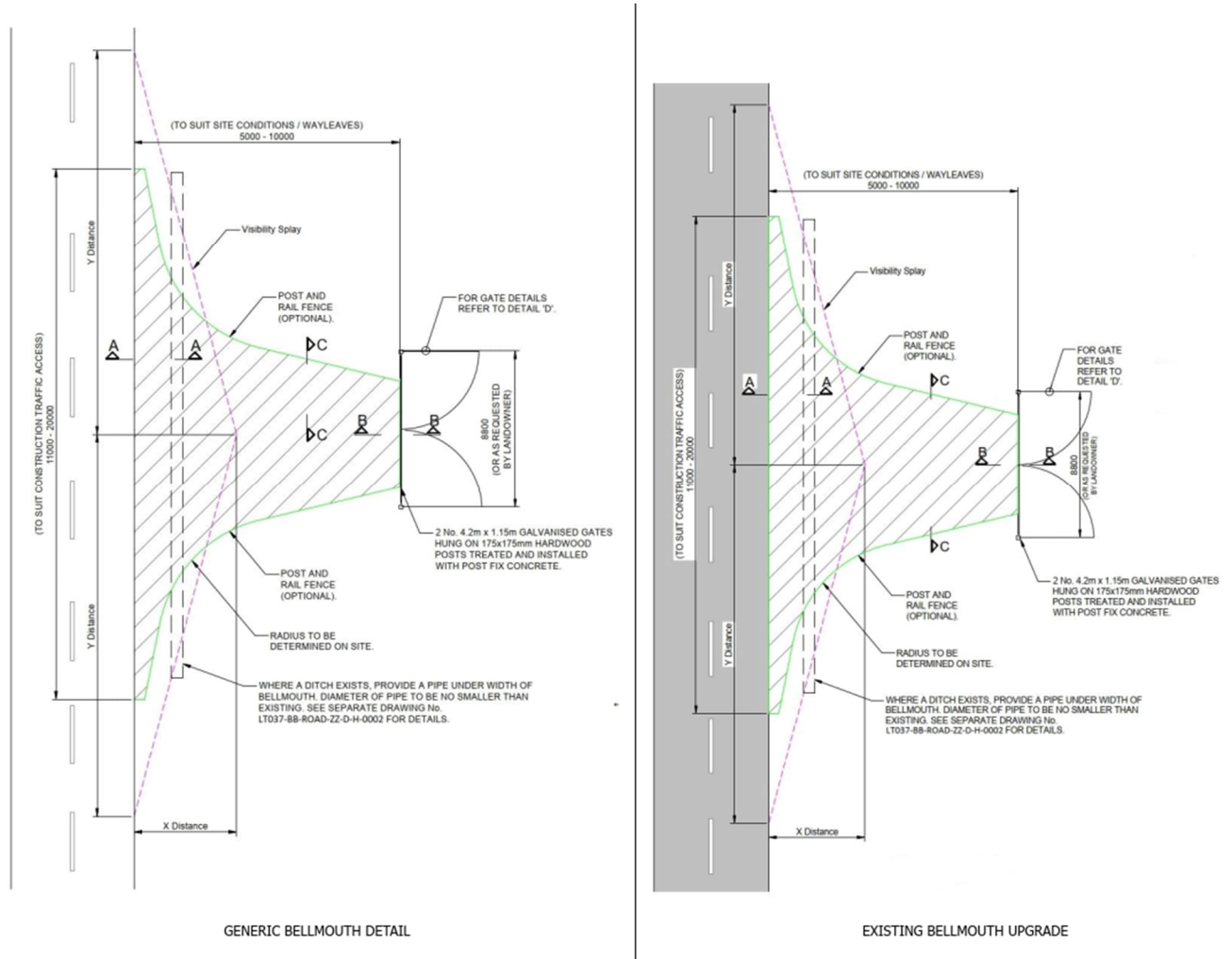
Figure 13.2.3.2: Proposed OHL Alignment Sections 12-19 Study Area



3.5 ACCESS JUNCTIONS

- 3.5.1. All the tower installation sites will be accessed via existing or new junction to be formed on the adopted road network and the indicative form of these proposed junctions are shown in **Figure 13.2.3.3** with full detail presented in **Figure 3.7: Typical Bellmouth Layout** of the EIAR Report.

Figure 13.2.3.3: Indicative Form of the Proposed Bellmouth Access Junctions

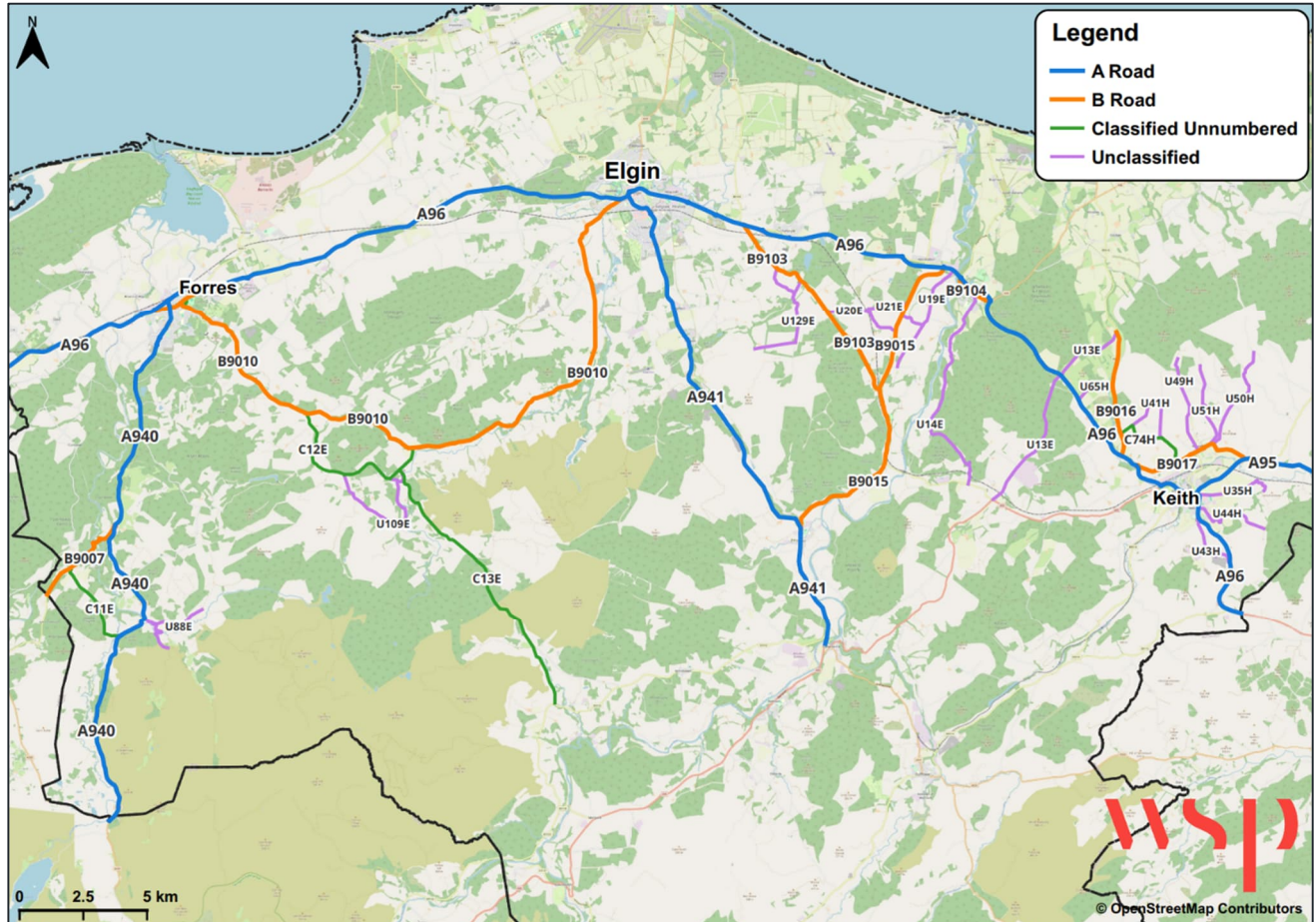


- 3.5.2. A total of 74 access points have been identified where construction traffic will access the site from the adopted local road network. A further 3 access points have been identified on the trunk road network. The formation of these junctions may be supported by the installation of temporary speed limits to support the provision of an appropriate level of visibility at each access location, using site-relevant instruments for the duration of the construction works, including Traffic Regulation Orders and Temporary Traffic Regulation Orders.

4 BASELINE CONDITIONS

- 4.1.1. This Chapter of the Appendix discusses the local road network to be used throughout the duration of the construction of the Proposed Development. **Figure 13.2.4.1** shows the Proposed OHL Alignment along with the access routes it is assumed that construction traffic will utilise. The majority of the road network is rural in nature and its standard reflects this.

Figure 13.2.4.1: Moray Road Network



TRUNK ROAD NETWORK

A96 (T)

- 4.1.2. The A96 (T) is a two-way single carriageway which forms part of the trunk road network and provides the main road connection between Aberdeen and Inverness. The A96 (T) is generally subject to the national speed limit, which reduces to 30 miles per hour (mph) when passing through towns and villages.

A95 (T)

- 4.1.3. The A95 (T) within the study area is a two-way single carriageway which provides a connection between Keith and the A98. The A95 (T) is generally subject to the national speed limit, which reduces when passing through towns and villages.

Local Road Network

A940

- 4.1.4. The A940 is a two-way single carriageway road which provides a connection between Forres and Ballater. The A940 is generally subject to the national speed limit, which reduces when passing through villages.

A941

- 4.1.5. The A941 is a two-way single carriageway road which and provides a connection between Lossiemouth and Rhynie, via Elgin. The A941 is generally subject to the national speed limit, which reduces when passing through villages.

B9007

- 4.1.6. The B9007 is a single carriageway road which provides a connection between the A940 (near Logie) and A938. Within the study area, the B9007 is of a reasonable standard and is subject to the national speed limit within the study area.

B9010

- 4.1.7. The B9010 is a single carriageway road which provides a connection between the A96 (T) in Elgin and the B9011 in Forres, and is generally subject to the national speed limit, which reduces when passing through villages.

B9011

- 4.1.8. The B9011 provides a connection between the A96 (T) and Findhorn. Within the study area, the B9011 is a single two-way carriageway road which forms the main street through Forres. The B9011 is subject to a 30 mph speed limit within Forres.

B9015

- 4.1.9. The B9015 is a two-way single carriageway road providing a connection from the A96 (T) to the A941 in Rothes. Within the study area, the B9015 is subject to the national speed limit outwith settlements.

B9016

- 4.1.10. The B9016 is a single two-way carriageway road that provides a connection between the A96 (T) and the A98 (near Enzie). The B9016 is mainly subject to the national speed limit, however, this reduces to 40 mph when passing through Aultmore within the study area.

B9017

- 4.1.11. The B9017 is a single carriageway road that provides a connection between the A96 (T) and the A95 via Newmill. The B9017 is mainly subject to the national speed limit, however, this reduces to 30 mph when passing through Newmill.

B9103

- 4.1.12. The B9103 is a two-way single carriageway which provides a connection between Lossiemouth and Mulben. Within the study area, the B9103 is primarily subject to the national speed limit. There are signed height restrictions found adjacent to the carriageway where the main Inverness - Aberdeen

rail line crosses the road, and also approximately 300 m south of the A96 (T) / B9103 and the B9013 / B9015 junctions and B9104.

- 4.1.13. The B9104 provides a connection between the A96 (T) and Spey Bay. Within the study area, the B9104 is a single two-way carriageway road which forms the main street through Fochabers where it is subject to a 30 mph speed limit.

C11E

- 4.1.14. The C11E is a rural single-track road which is approximately 3 m in width, providing a connection between the B9007 and the A940, within the study area. The C11E is supported by passing places and subject to the national speed limit.

C12E

- 4.1.15. The C12E is a rural single-track road which is approximately 4 m in width, which connects to the B9010 at both its western and eastern end. The C12E is mainly subject to the national speed limit, however this reduces to 30 mph when passing through Dallas. The C12E is supported by passing places.

C13E

- 4.1.16. The C13E is a rural single-track road which is approximately 4 m in width, which provides a connection between Dallas and the B9102. Within the study area, the C13E is subject to the national speed limit and is supported by passing places.

C37E

- 4.1.17. The C37E is a two-way single carriageway road within Forres, which provides a connection between the B9011 and B9010. The C37E is subject to a 30 mph speed limit, with a part-time 20 mph speed limit in place within the vicinity of the Andersons Primary School.

C74H

- 4.1.18. The C74H is a rural single-track road of approximately 3 m in width, providing a connection from the B9016 and the B9017. The C74H is subject to the national speed and is supported by passing places.

U109E

- 4.1.19. The U109E is a rural single-track road which is approximately 3 m in width, which connects the C12E with the C13E near Dallas. The U109E is subject to the national speed and is supported by passing places.

U129E (Teindland Road)

- 4.1.20. The U129E is a rural single-track road of approximately 3 m in width, providing a connection from the B9103 to Teindland Farm. The U129E is subject to the national speed and is supported by passing places.

U13E (Forgiehill Road)

- 4.1.21. The U13E is a rural single-track road of approximately 3 m in width, providing a connection between C49H and the B9016 near Raefin, crossing the A96 (T). Within the study area, the U13E is subject to the national speed and is supported by passing places.

U14E (Ordiequish Road)

- 4.1.22. The U14E is a single carriageway road a provides a connection between the B9104 in Fochabers and the B9103. Within Fochabers, the U14E is subject to a 30 mph speed limit, with a part-time 20 mph speed limit in place within the vicinity of Milnes Primary and High Schools. To the south of Fochabers the U14E reduces to a width of approximately 3 m and is subject to the national speed limit. The U14E is supported by passing places.

U19E (Dipple Road)

- 4.1.23. The U19E is a rural single-track road of approximately 3 m in width that connects into the A96 (T) and the B9015 near Orton. The U19E is subject to the national speed limit and is not currently supported by passing places.

U22E (Hatton Road)

- 4.1.24. The U22E is a rural single-track road approximately 3 m in width which connects the B9015 and the U19E. The U22E is subject to the national speed limit and is not currently supported by passing places.

U20E (Bandentilan Road)

- 4.1.25. The U20E is a rural single-track road of approximately 3 m in width, providing a connection between the B9103 and the B9015. The U20E is subject to the national speed limit and is supported by passing places to the west of the rail line.

U21E (Millhill Road)

- 4.1.26. The U21E is a rural single-track road of approximately 3 m in width, connecting from the B9015 and the U20E. The U21E is subject to the national speed and is supported by passing places.

U35H (Drum Road)

- 4.1.27. The U35H is a single carriageway road which provides a connection from the A96 (T) to Meikle Ardrone. Within Keith the U35H is subject to a 30 mph speed limit. To the east of Keith, the U35H reduces to a width of approximately 3 m and is subject to the national speed limit. The U35H is not currently supported by passing places.

U43H (Blackhillock Road)

- 4.1.28. The U43H is a single-track road of approximately 3.5 m in width, providing a connection between the A96 (T) and the U33H near Keith. The U43H is subject to the national speed and is supported by passing places.

U44H (Auchoynanie Road)

- 4.1.29. The U44H is a single-track road of approximately 3 m in width, providing a connection between the A96 (T) and Wester Herricks. The U44H is subject to the national speed and is supported by passing places.

U49H (Sand Lane)

- 4.1.30. The U49H is a rural single-track road of approximately 3 m in width, connecting from the B9017 and Wellside. The U49H is not currently supported by passing places but is subject to a 30 mph speed limit within Newmill, changing to the national speed limit as the road leaves the village.

U50H

- 4.1.31. The U50H is a rural single-track road of approximately 3 m in width, connecting from the B9017 and Wellside. The U50H is subject to the national speed and is supported by passing places.

U51H

- 4.1.32. The U51H is a rural single-track road of approximately 3 m in width, connecting from the B9017 and Wellside. The U51H is subject to the national speed limit but is not currently supported by passing places.

U65H (Drakemyres Road)

- 4.1.33. The U65H is a rural single-track road of approximately 3 m in width, providing a connection from the A96 (T) to Blackfold. The U65H is subject to the national speed limit but is not currently supported by passing places.

U88E (Diveside Road)

- 4.1.34. The U88E is a rural single-track road of approximately 3 m in width, providing a connection from the A940 to Tomcork. The U88E is subject to the national speed and is supported by passing places.

PEDESTRIAN, CORE PATH AND CYCLIST FACILITIES

Pedestrian Facilities

- 4.1.35. The Proposed OHL Alignment of the Proposed Development results in it passing through an area which is predominantly rural in nature, with limited pedestrian facilities provided outwith towns and villages.
- 4.1.36. There are pedestrian facilities provided by way of footways adjacent to carriageways on several sections of the access routes, predominantly along the A96 (T) within the vicinity of the towns of Elgin, Forres and Keith. These towns are served by comprehensive pedestrian networks supported by controlled pedestrian crossings.
- 4.1.37. Pedestrian facilities are also present in the village of Fochabers, Newmill, Dallas, Alves and Brodie, which support local pedestrian access.

Core Paths

- 4.1.38. A review of the Core Paths within Moray indicates that the following Core Paths detailed in **Figure 13.2.4.2** to **Figure 13.2.4.6** are located within the vicinity of the access routes.

Figure 13.2.4.2: Core Path and Cyclist Network Overview

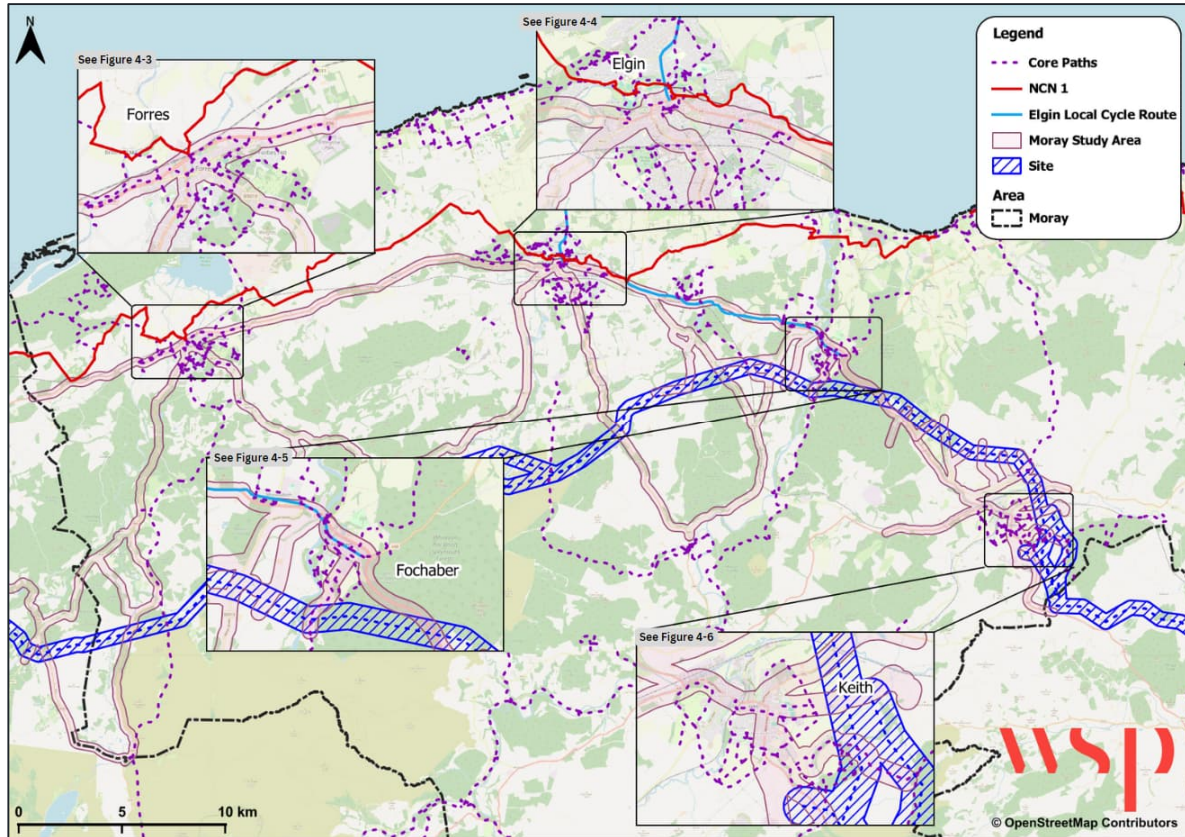


Figure 13.2.4.3: Forres Core Path and Cyclist Network

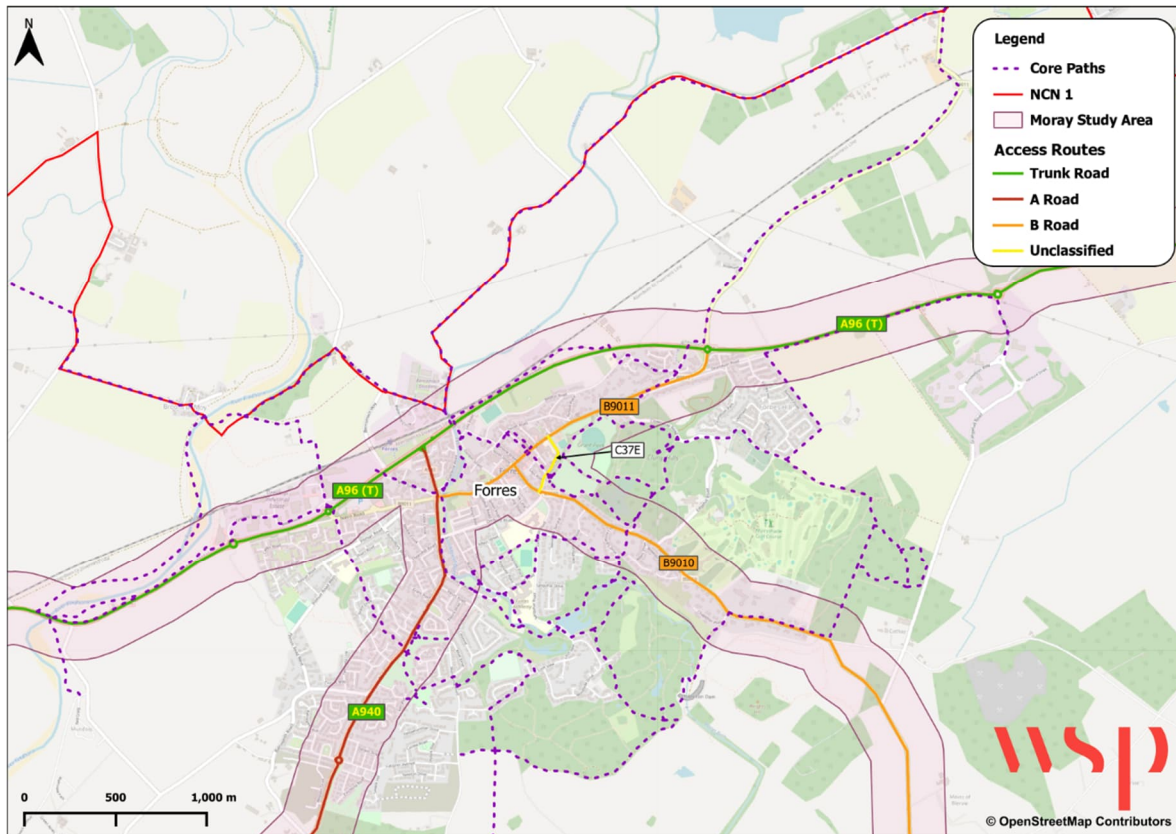


Figure 13.2.4.4: Elgin Core Path and Cyclist Network

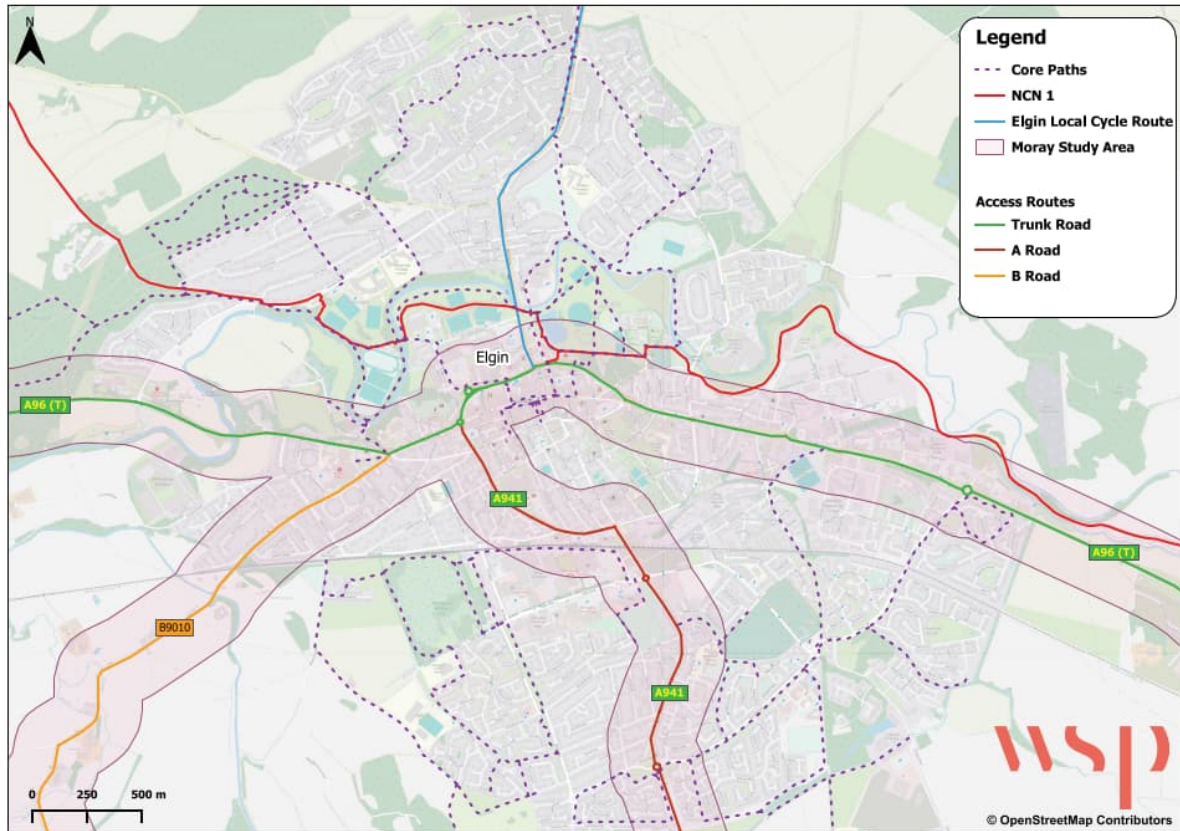


Figure 13.2.4.5: Fochabers Core Path and Cyclist Network

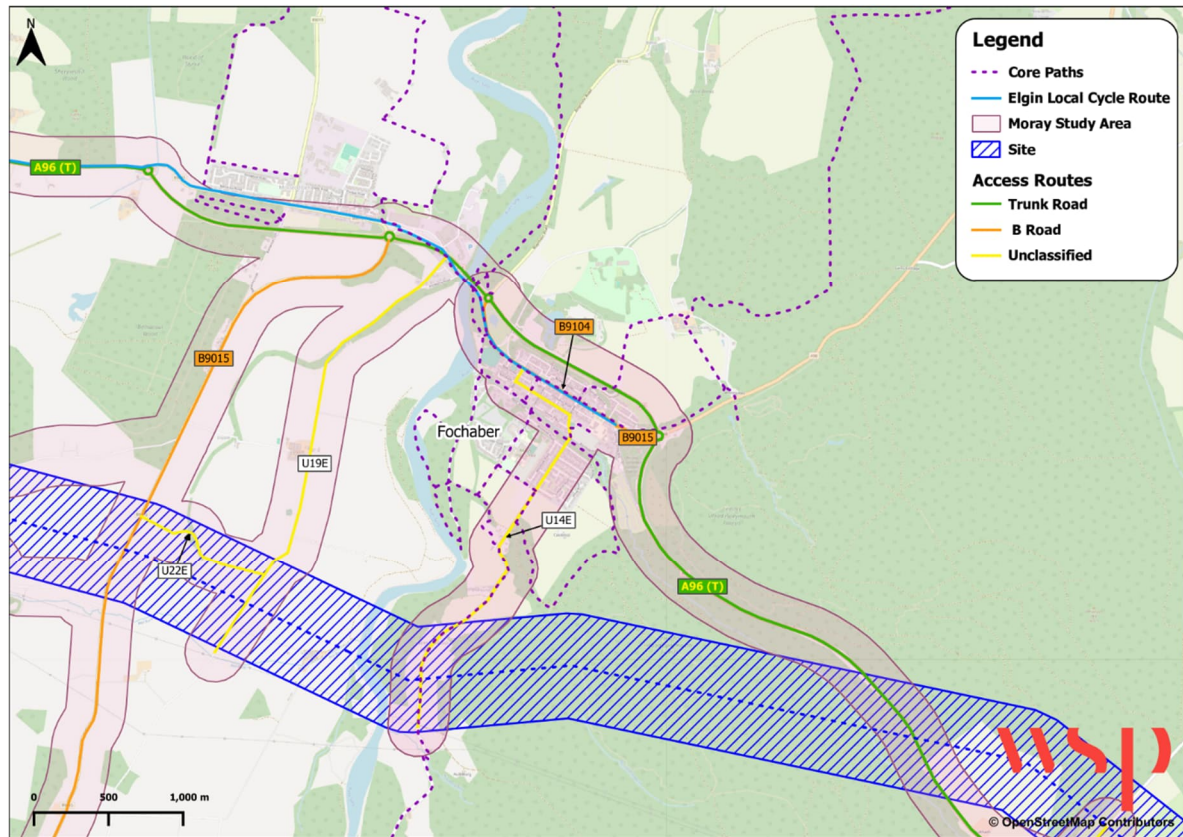
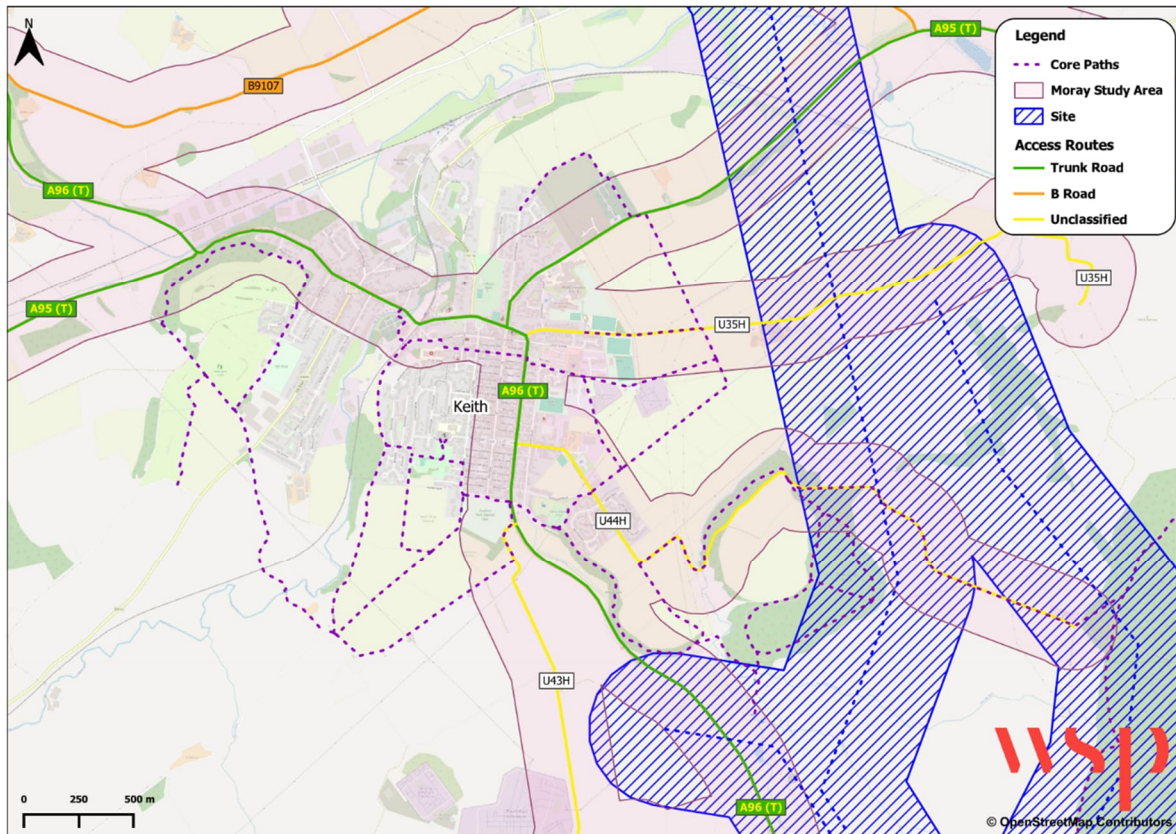


Figure 13.2.4.6: Keith Core Path and Cyclist Network



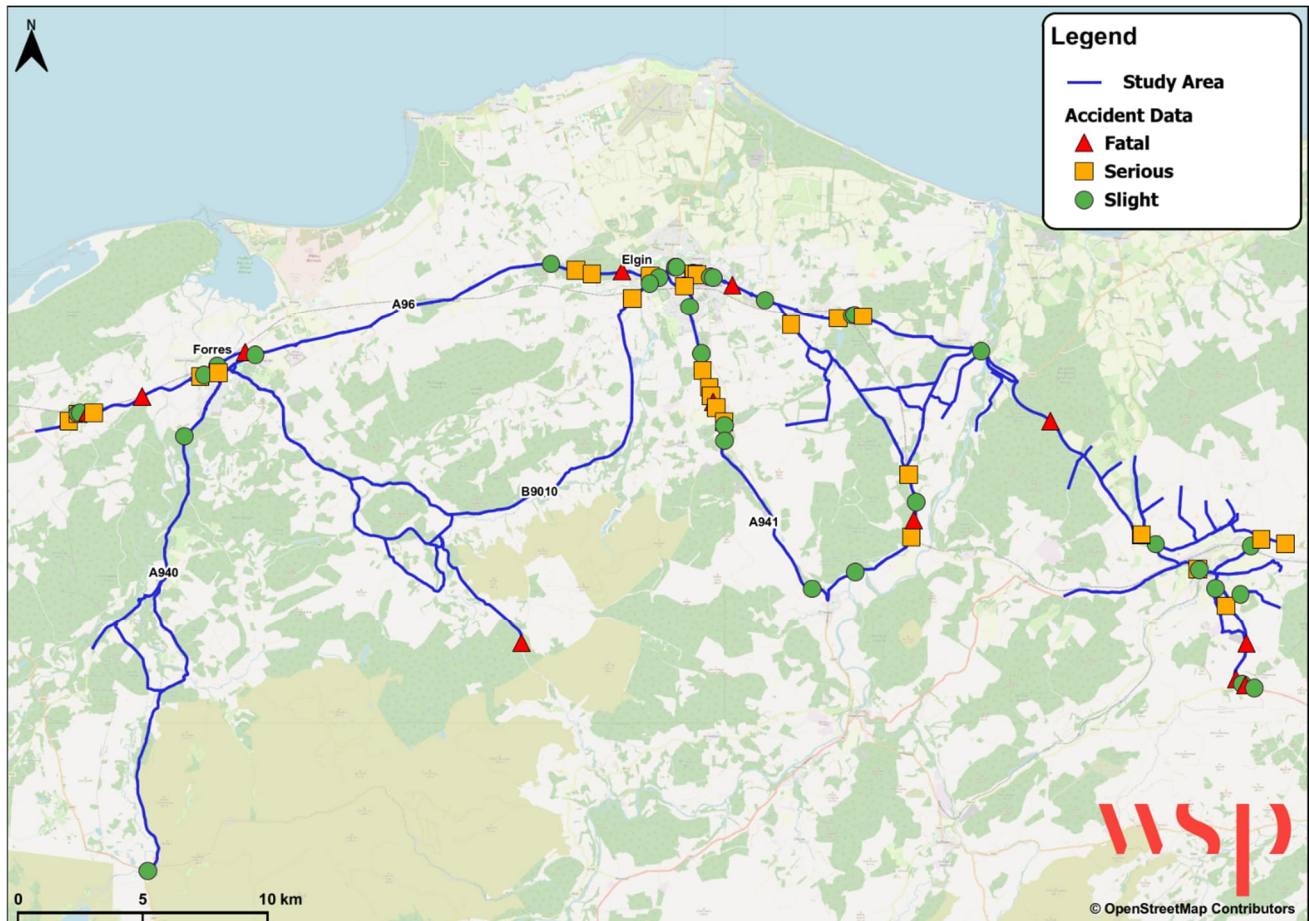
Cycle Facilities

- 4.1.39. Local cycle facilities are provided within Elgin, Forres and Fochabers but these are predominantly located remote from the primary road network. A local cycle route consisting of a shared-use and on road facility is provided adjacent to the A96 (T) between Elgin and Fochabers.
- 4.1.40. The Speyside Way, a long-distance trail that comprises a combination of on-road and traffic-free sections running from Buckie to Aviemore, passes through Fochabers.
- 4.1.41. A review of Sustrans' National Cycle Network (NCN) map indicates that NCN Route 1 passes through Elgin and Forres, with the route supported by both on-road and traffic-free cycle facilities.

4.2 PERSONAL INJURY ACCIDENT REVIEW

- 4.2.1. Injury accident data for the most recently available five-year period, covering 2018 to 2022, was obtained for the Study Area links. The locations and severity of the accidents reported in the Study Area are shown in **Figure 13.2.4.7** and are summarised below.

Figure 13.2.4.7: Personal Injury Accident Data 2018-2022



- 4.2.2. A total of 75 accidents were recorded on roads within Moray in the vicinity of the proposed access routes, of which 34 were recorded as being slight in severity, 29 resulted in serious injuries, with 12 fatalities recorded.
- 4.2.3. Of the fatal accidents, the majority (nine) were recorded on the A96 (T). Each of these collisions were a result of driver error (including distracted driving, impairment due to drugs or alcohol, fatigue etc.), or pedestrian error (including failure to look properly, impairment by drugs or alcohol, wearing dark clothes at night, etc.). The three remaining fatal accidents also resulted from driver error. Two of these involved motorcyclists, with one reported on the C13E near Dallas and the second on the A941 between Longmorn and Fogwatt. The third was a result of driver error and involved two cars colliding on the B9015 at Orton.
- 4.2.4. Four accidents involving motorcyclists were recorded in the study area, with two recorded as fatal, one serious, and one slight.

- 4.2.5. Three incidents involving pedestrian casualties were recorded. All of these incidents were recorded on the A96 (T), with two reported in Forres and one in Keith. Two of these incidents involved a collision with a car and one with a goods vehicle.
- 4.2.6. A total of seven incidents involved HGVs, of which two incidents were recorded as slight, two were recorded as serious and three were recorded as fatal. The three fatalities involving HGVs occurred in Elgin, Fochabers, and Keith along the A96 (T) and were reported to have occurred as a result of driver error.
- 4.2.7. The accident data review confirms that that no accidents were recorded over the five-year assessment period on the majority of the unclassified road network and no accident cluster sites were observed within 200 m of the proposed construction access points.
- 4.2.8. It is observed that the A941 recorded the greatest number of accidents with ten collisions reported over the five-year period, which averages two accidents per annum. It is also noted that the B9015 (between the A96 (T) and the A941) has a higher concentration of accidents including one slight, two serious, and one fatal.
- 4.2.9. **Table 4.1** identifies the accident rates associated with each of the local roads with the highest number of accidents, comparing these rates with the national averages as identified by the DfT for the road type.

Table 4.1: Personal Injury Accident Summary (2018-2022)

PIA Study Area	Road Type	Slight	Serious	Fatal	Total	PIA Rate (per Million Veh Km)	National Average (per Million Veh Km)*	Above or Below National Average
A941 (south of Elgin to Access Point)	Rural A road	4	5	1	10	0.07	0.12	Below
B9015 (south of B9013 to the A941)	Rural other road	2	2	1	5	0.15	0.2	Below

*The DfT reported road casualties for Great Britain 2021 as presented in RAS03021: national accident rate per million vehicle kms by road classification.

- 4.2.10. As shown in **Table 4.1**, the A941 and the B9015 links have annual accident rates that are below the respective national average for each of the road's characteristics, suggesting that there are no existing safety concerns on the A941 or B9015 which were reported to experience the highest number of accidents on the local road network.
- 4.2.11. All reported accidents have been attributed to driver error, and further analysis of the accident data confirms that there are no specific safety concerns on the local road network which will support access to the tower installation sites from the trunk road network.

4.3 EXISTING TRAFFIC FLOWS

- 4.3.1. To establish baseline traffic flows, Automatic Traffic Counters (ATCs) were installed in April and August 2024 at the following locations:

- ATC 1: A940 (southeast of Forres) at Dunphail;
- ATC 2: B9010 (southwest of Elgin) at Kellas;
- ATC 3: A941 (between Longmorn and Fogwatt);
- ATC 4: B9103 (southeast of Elgin) at Redbog;
- ATC 5: B9015 (southwest of Fochabers) at Westerton;
- ATC 6: B9016 northwest of Keith) at Aultmore;
- ATC 7: Unclassified U43H - Blackhillock Road between the A96 (T) and U43aH Rosehall Road;
- ATC 8: A96 (T) - just south of the U111s; and
- ATC 9: Unclassified U111s road between the A96 and the U111S.

4.3.2. To supplement the ATC surveys, traffic survey data has been obtained from the following Transport Scotland (TS) and Department for Transport (DfT) traffic count sites for the remaining road network contained within the Study Area:

- TS Traffic Count ID ATC00335 - Live Count 2024: B9011, Victoria Road, Forres, between the A96 (T) and the B9010;
- DfT Traffic Count ID 78576 - Manual Count 2018: A941, New Elgin Road, Elgin, between the A96 (T) and Thornhill Rd; and
- DfT Traffic Count ID 805372 - Manual Count 2018 - U19E, Dipple, between the B9015 and U19E Dipple Road.

4.3.3. The most recent ‘manual and automatic count’ data available on the DfT website has been used and extrapolated to 2024 where necessary to align with the ATC data. A summary of the 2024 two-way flows on the road links contained in the Study Area is provided in **Table 4.2**, with the locations of the traffic count sites shown in **Figure 13.2.4.8**.

Figure 13.2.4.8: Traffic Count Site Locations

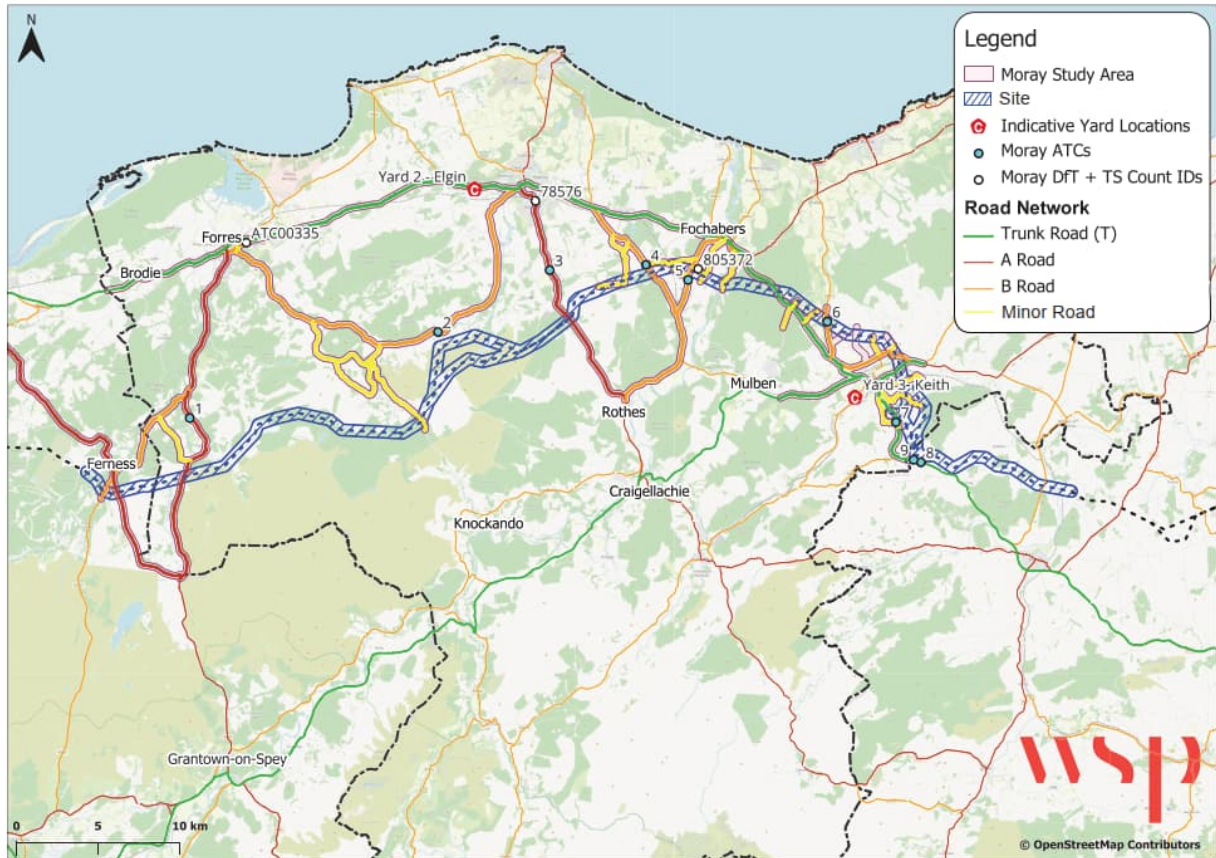


Table 4.2: 2024 Annual Average Daily Two-Way Traffic Flows (24-hour)

Section	Road Link (of Route) from the TRN	Manual / Automatic Survey Year	Survey Location	Survey Year Two-Way Flows		HGV Proportion (%)
				HGV	Total	
12	A940	2024	ATC 1	46	1189	4%
13	B9011	2024	ATC0033	418	5297	8%
14	B9010	2024	ATC 2	5	303	2%
15	A941 (Urban)	2018	78576	310	20849	1%
	A941 (Rural)	2024	ATC 3	235	6401	4%
16	B9103	2024	ATC 4	10	1245	1%
17	B9015	2024	ATC 5	164	1389	12%
	U19E	2018	805372	7	39	19%
18	-	-	No Data*	-	-	-
19	B9016	2024	ATC 6	85	2604	3%
	U43H	2024	ATC 7	0	312	0%
	A96 (T)	2024	ATC 8	69	5545	1%
	U111s	2024	ATC 9	1	102	1%

4.3.4. To provide a robust assessment, and to align with the current information provided by the Principal Contractor, it is assumed that site deliveries will take place over an 11-hour day (between 07:00 and 18:00). Conversion factors have been derived from DfT Road Traffic Statistics – Table TRA0308: ‘Traffic distribution on all roads by time of day and day of the week, for selected vehicle types in Great Britain’ for the latest data available, 2023¹², to convert the DfT and ATC 5 AADT flows to 11-hour flows.

4.3.5. The following factors have been derived for cars, light vehicles and HGVs For the ATC survey data, 11-hour flows have been derived from survey outputs:

- Cars - 0.745;
- Light Vehicles - 0.773;
- HGVs - 0.712; and
- All Vehicles - 0.743.

4.3.6. **Table 4.3** shows the resulting 11-hour flows following application of the derived factors.

¹² Department for Transport, (2024). Road Traffic Estimates (TRA). (Online). Available at: <https://www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra>

Table 4.3: 2024 Annual Average Daily Two-Way Traffic Flows (11-hour)

Section	Road Link (of Route) from the TRN	Manual / Automatic Survey Year	Survey Location	Survey Year Two-Way Flows		HGV Proportion (%)
				HGV	Total	
12	A940	2024	ATC 1	44	966	5%
13	B9011	2024	ATC0033	298	3938	8%
14	B9010	2024	ATC 2	4	261	2%
15	A941 (Urban)	2018	78576	221	15501	1%
	A941 (Rural)	2024	ATC 3	203	5431	4%
16	B9103	2024	ATC 4	8	954	1%
17	B9015	2024	ATC 5	117	1116	10%
	U19E	2018	805372	5	29	18%
18	-	-	No Data*	-	-	-
19	B9016	2024	ATC 6	48	1789	3%
	U43H	2024	ATC 7	0	282	0%
	A96 (T)	2024	ATC 8	50	4063	1%
	U111s	2024	ATC 9	1	73	1%

4.4 FUTURE TRAFFIC FLOWS

- 4.4.1. Construction of the Proposed Development within Moray could commence during 2026 if consent is granted. In order to provide a robust assessment, the future baseline year has been adjusted to cover the peak period of construction movements. The Principle Contractor currently anticipates that the busiest construction period will take place during 2026, and the assessment has therefore been undertaken for a 2026 future baseline to coincide with the peak period.
- 4.4.2. To assess the likely effects during the construction phase, 2026 base year traffic flows were determined by applying a National Road Traffic Forecast 1997 (NRTF97) low growth factor (1.0106) to the 2024 traffic flows. The resulting 2026 Base traffic flows are presented in **Table 4.4**.

Table 4.4: 2026 Annual Average Daily Two-Way Traffic Flows (11-hour)

Section	Road Link (of Route) from the TRN	Manual / Automatic Survey Year	Survey Location	Survey Year Two-Way Flows		HGV Proportion (%)
				HGV	Total	
12	A940	2024	ATC 1	45	976	5%
13	B9011	2024	ATC0033	301	3980	8%
14	B9010	2024	ATC 2	4	264	2%
15	A941 (Urban)	2018	78576	223	15666	1%
	A941 (Rural)	2024	ATC 3	205	5489	4%
16	B9103	2024	ATC 4	8	964	1%
17	B9015	2024	ATC 5	118	1128	10%
	U19E	2018	805372	5	29	18%
18	-	-	No Data*	-	-	-
19	B9016	2024	ATC 6	48	1808	3%
	U43H	2024	ATC 7	0	285	0%
	A96 (T)	2024	ATC 8	51	4106	1%
	U111s	2024	ATC 9	1	74	1%

5 ACCESS ROUTE REVIEW

5.1 ACCESS ROUTE REVIEW

- 5.1.1. This Chapter of the Appendix summarises the results of a review of the potential routes from the trunk road network which can be used to access the Proposed OHL tower installation sites prior to identifying what is considered to be the most appropriate construction traffic access route.

Construction Traffic Origins

- 5.1.2. As previously highlighted, Yards will be established at Elgin and Keith to support construction activities, with these being used to support the delivery of plant and materials to the installation sites.
- 5.1.3. It is acknowledged that construction activities would also be supported by aggregate deliveries which are generated throughout the construction programme, and these movements will not originate from the Yards. It is not currently known what quarries and suppliers would be used, and it has therefore been assumed for the purpose of this assessment, that aggregates would be transported from the nearest quarry via the trunk road network prior to accessing the installations sites via the most direct route.

Agreed Route Map for Timber Transport Forum Classification

- 5.1.4. The Agreed Route Map for Timber Transport Forum¹³ has been developed by timber transport groups at local authority level, and it categorises roads supporting access to forest areas in terms of their capacity to sustain the likely level of timber haulage vehicles. The routes are categorised into four groups, namely; 'Agreed Routes', 'Consultation Routes', 'Severely Restricted Routes' and 'Excluded Routes'.
- 5.1.5. 'Agreed Routes' are categorised as routes used for timber haulage without restriction as regulated by the Road Traffic Act 1988. A classification roads are classified as 'Agreed Routes' by default unless covered by one of the other road classifications. Those routes classed as 'Consultation Routes' are categorised as a route which is key to timber extraction, but which are not up to 'Agreed Route' standard. The Timber Transport Forum confirms that consultation with the local authority is required, and it may be necessary to agree limits of timing, allowable tonnage, etc., before 'Consultation Routes' can be used.

¹³ Timber Transport Forum, (2024). Agreed Route Map for Timber Transport Forum (Online). Available at: <https://timbertf.maps.arcgis.com/apps/webappviewer/index.html?id=4a23d4910e604b71872956441113c83c>

- 5.1.6. An extract from the Agreed Route Map for the Moray area is shown in **Figure 13.2.5.1**.

Figure 13.2.5.1: Timber Transport Forum - Agreed Routes



- 5.1.7. Due consideration has been given to the agreed routes when identifying a preferred routing arrangement to support access to the tower installation sites and our detailed appraisal of the form of the local road network has therefore focussed on roads which are not 'Agreed Routes'.

PLANNED ASSESSMENT OF STRUCTURES

- 5.1.8. Transport Scotland / Amey NE, Network Rail and MC have been consulted to advise on the current structural capacity of the routes proposed.
- 5.1.9. At the time of writing this report, the above consultees are yet to comment on the structural capacity of their asset. However, as mobile cranes route routinely across the UK for a variety of operators, e.g. construction sites, oil and gas, shipyards, and infrastructure projects, it is considered that the majority of structures should be suitable. It is acknowledged that some locations within the study area are more remote, and therefore there is potential for assets to require further inspection. It is anticipated that as most of the structures are short span, that these would be suitable for alternative engineering solutions, should they fail further structural assessment (if any are to require this).

5.2 IDENTIFICATION AND APPRAISAL OF POTENTIAL ACCESS ROUTE OPTIONS

- 5.2.1. The proposed access routes from the Yards to their associated access points have been informed by a desktop review. While all route options to site present constraints, the selected access routes are considered to be the most suitable of the available access options for construction vehicles. Any constraints on the proposed construction access routes have been highlighted, with a swept-path

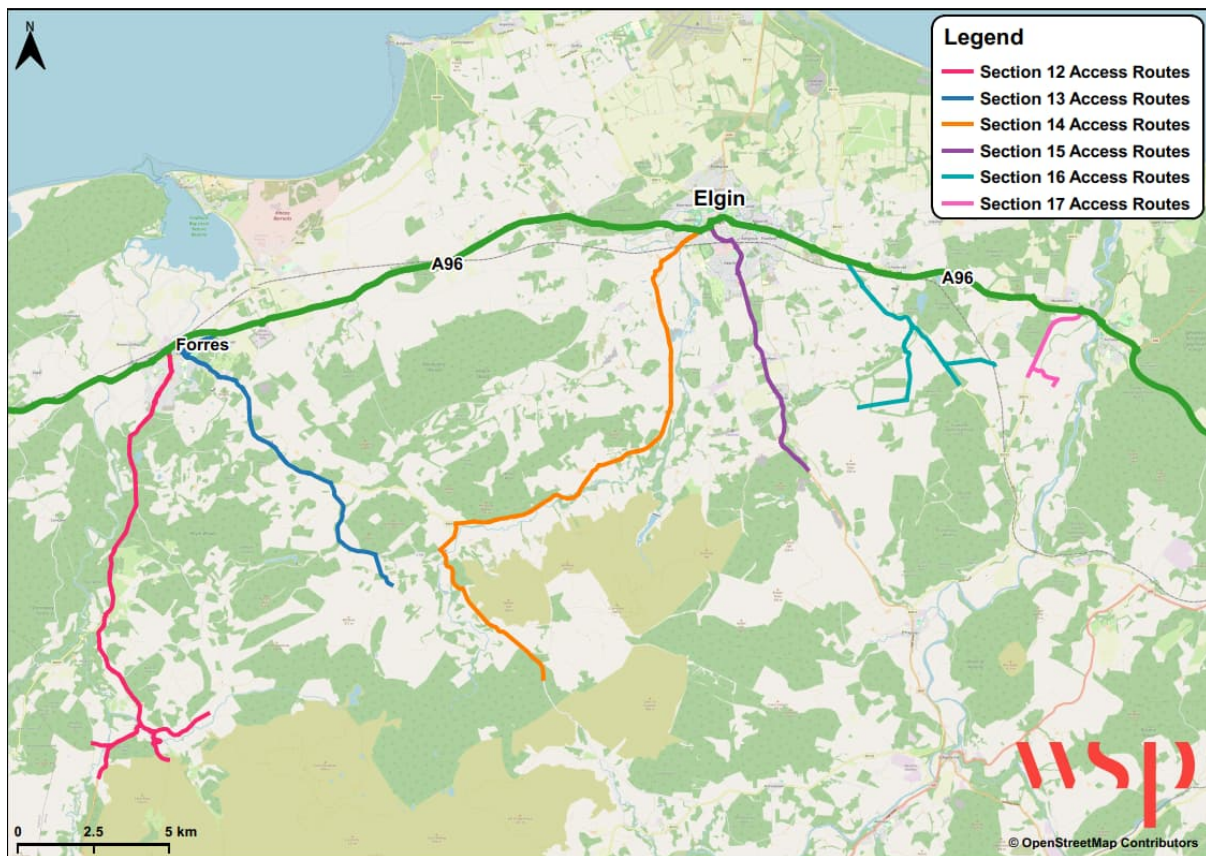
analysis undertaken (SPA) using AutoTrack, to ensure the route is able to accommodate HGVs and to assess the level of mitigation that is required. The summary of the analysis and any proposed mitigation for each of the routes is contained in **Chapter 7 of this Appendix**.

- 5.2.2. The Elgin and Keith Yards will support delivery of eight sections of the Proposed OHL Alignment within Moray. Below is a summary of the proposed construction access routes from each of the Yards to each of the sections and the access points found at each of the sections.

ELGIN YARD

- 5.2.3. Five sections of the Proposed OHL Alignment installation sites are to be served by the Yard located within Elgin. **Figure 13.2.5.2** shows an overview of the routes that construction vehicles will be using to access each of the sections.

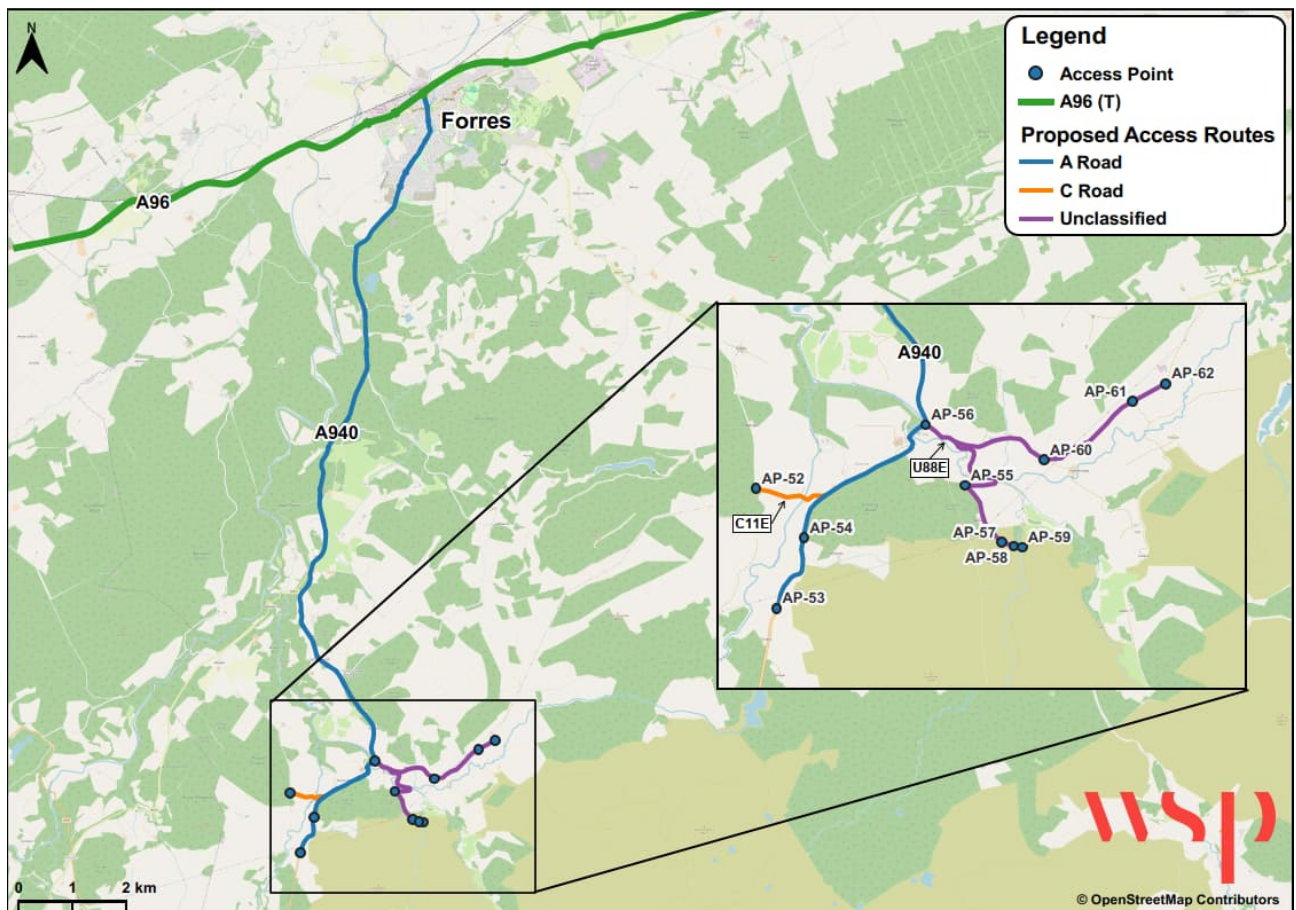
Figure 13.2.5.2: Elgin Yard Access Routes



Section 12 - Proposed Access Route

- 5.2.4. Section 12 of the Proposed OHL Alignment is located to the southwest of Forres and includes the towers that are located between Cairn Duhie and Johnstripe. There are 11 access points within this section. The proposed routes from the trunk road network to each of the access points is shown in **Figure 13.2.5.3**.

Figure 13.2.5.3: Section 12 Access Point Route Options



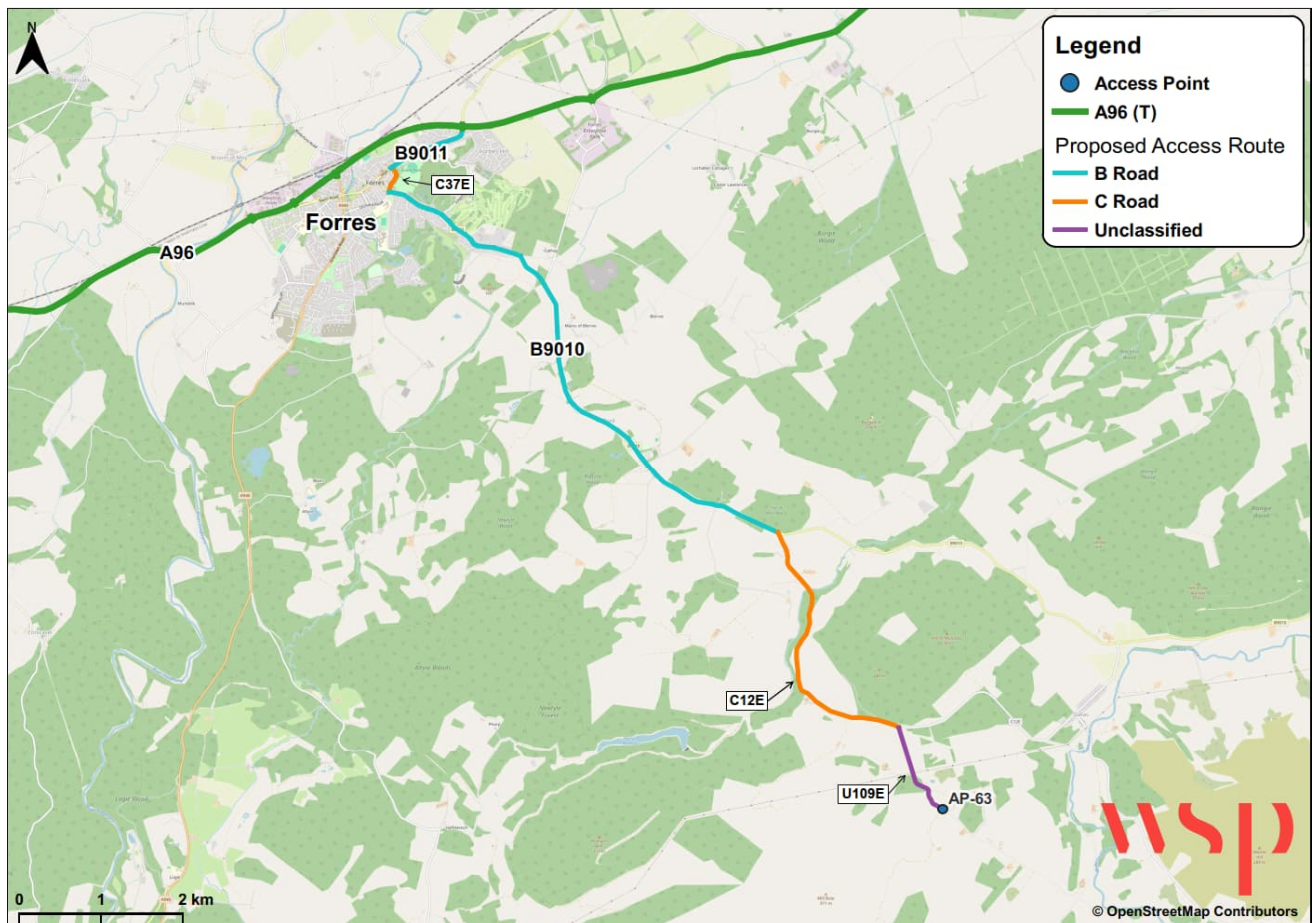
- 5.2.5. As shown by **Figure 13.2.5.3**, it is proposed that all construction vehicles accessing Section 12 of the Proposed OHL Alignment will leave the trunk road network at the A96 (T) / A940 junction in Forres to head south on the A940. The A940 is a single carriageway road which is subject to the national speed limit, which reduces when passing through settlements. The road is generally rural in nature with grass verges either side of the road and an approximate width of 7 m. The A940 is also designated as an 'Agreed Route' by the Timber Transport Forum and is therefore considered to be suitable for use by HGVs. Vehicles will then take the following routes to access their associated access points:
- **AP52:** Construction vehicles will leave the A940 at its junction with the C11E, before traveling west on the unclassified C11E to reach the access point. The C11E is a single-track road of approximately 3 m in width that is not currently supported by passing places. The desktop review also highlighted a potential constraint on the C11E where the road narrows and crosses Ess Bridge, with the SPA confirming that mitigation may be required to accommodate HGVs.

- **AP53 and AP54:** These access points will be accessed directly from the A940, with construction vehicles leaving the adopted road network via a new or upgraded bellmouth junction.
- **AP55 - AP62:** Construction vehicles serving the access points to the east of the A940 will turn left onto the U88E, with AP56 located at the A940 / U88E junction. Vehicles serving AP60, AP61 and AP62 will continue northeast on the main section of the U88E to reach their access points. The main section of the U88E is a single-track road of approximately 3 m which is supported by passing places. Construction vehicles serving AP55, AP57, AP58 and AP59 will take the southern fork of the U88E, with this section of the U88E not currently supported by passing places.

Section 13 - Proposed Access Route

- 5.2.6. Section 13 of the Proposed OHL Alignment is located to the southeast of Forres and includes the towers that are located between Johnstripe and Moss of Bednawinny. There is one access point within this section and the proposed access route from the trunk road network to the access point is shown in **Figure 13.2.5.4**.

Figure 13.2.5.4: Section 13 Access Point Route Options



- 5.2.7. As shown by **Figure 13.2.5.4**, it is proposed that construction vehicles accessing Section 13 of the Proposed OHL Alignment will leave the trunk road network at Forres, before heading west on the B9011. The B9011 is a two-way single carriageway road that forms the main street through Forres. Construction vehicles would then turn left onto the C37E before turning left onto the B9010. The

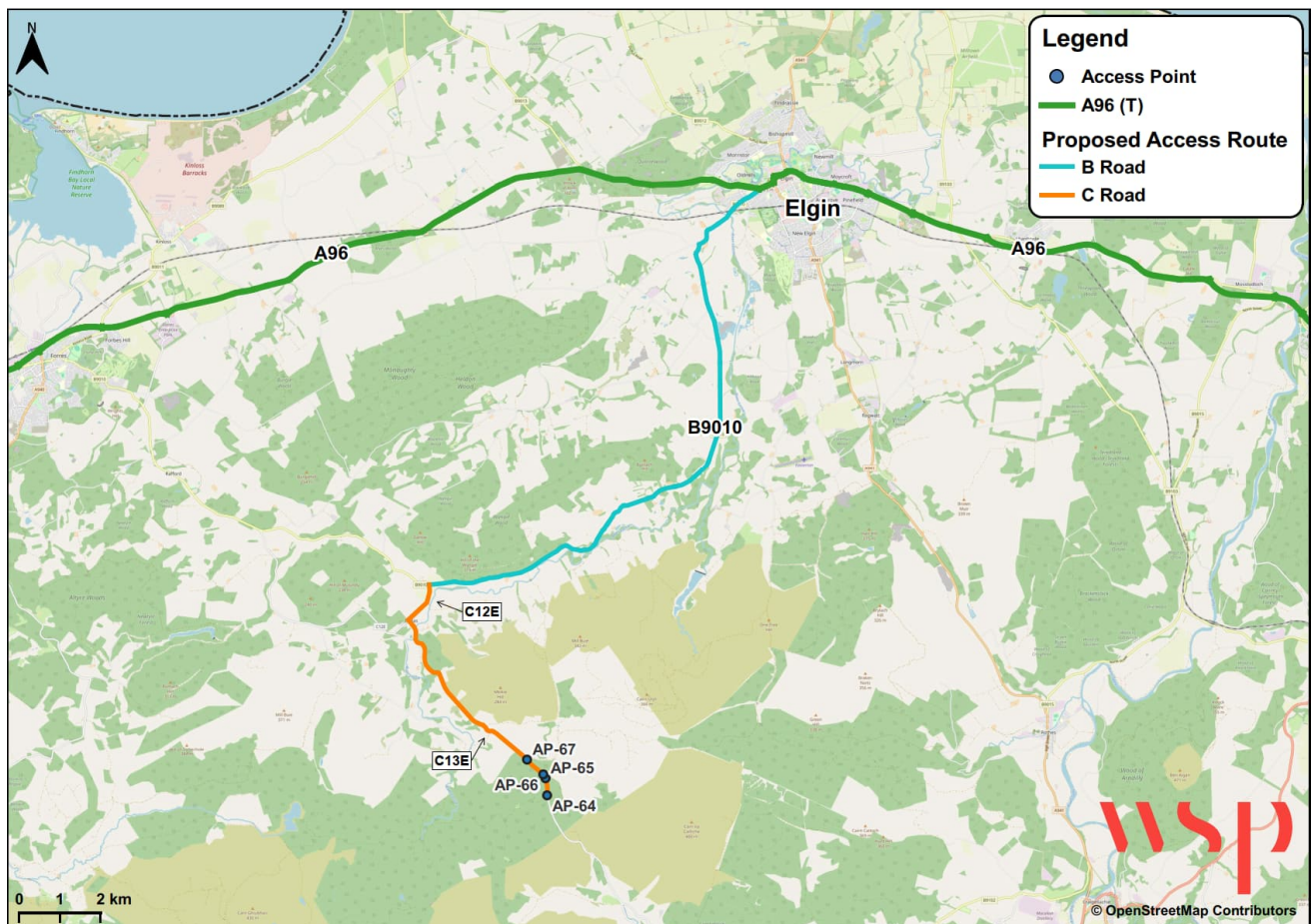
B9010 is generally a single carriageway of approximately 5 m in wide and is subject to the national speed limit, which reduces when passing through settlements. The road is generally rural in nature with grass verges either side.

- 5.2.8. Construction vehicles would then right off the B9010 onto the C12E, a single-track road approximately 4 m in width that is supported by passing places. Vehicles will then turn right onto the single track unclassified U109E where AP63 is located. The U129E is approximately 3 m in width and is supported by passing places. constraints have been identified on this route.
- 5.2.9. All of the roads used in the proposed access route are classified as an 'Agreed Route' by the Timber Transport Forum and are therefore considered to be suitable for use by HGVs.
- 5.2.10. No potential constraints have been identified on this route.

Section 14 - Proposed Access Route

- 5.2.11. Section 14 of the Proposed OHL Alignment is located to the southwest of Elgin and includes the towers that are located between Moss of Bednawinny and Glenlatterach Reservoir. There is a total of four access points within this section. The proposed access routes from the trunk road network to each of the access points is shown in **Figure 13.2.5.5**.

Figure 13.2.5.5: Section 14 Access Point Route Options



- 5.2.12. As shown by **Figure 13.2.5.5**, the proposed route for construction vehicles accessing Section 14 of the Proposed OHL Alignment will see vehicles leaving the trunk road network in Elgin, before

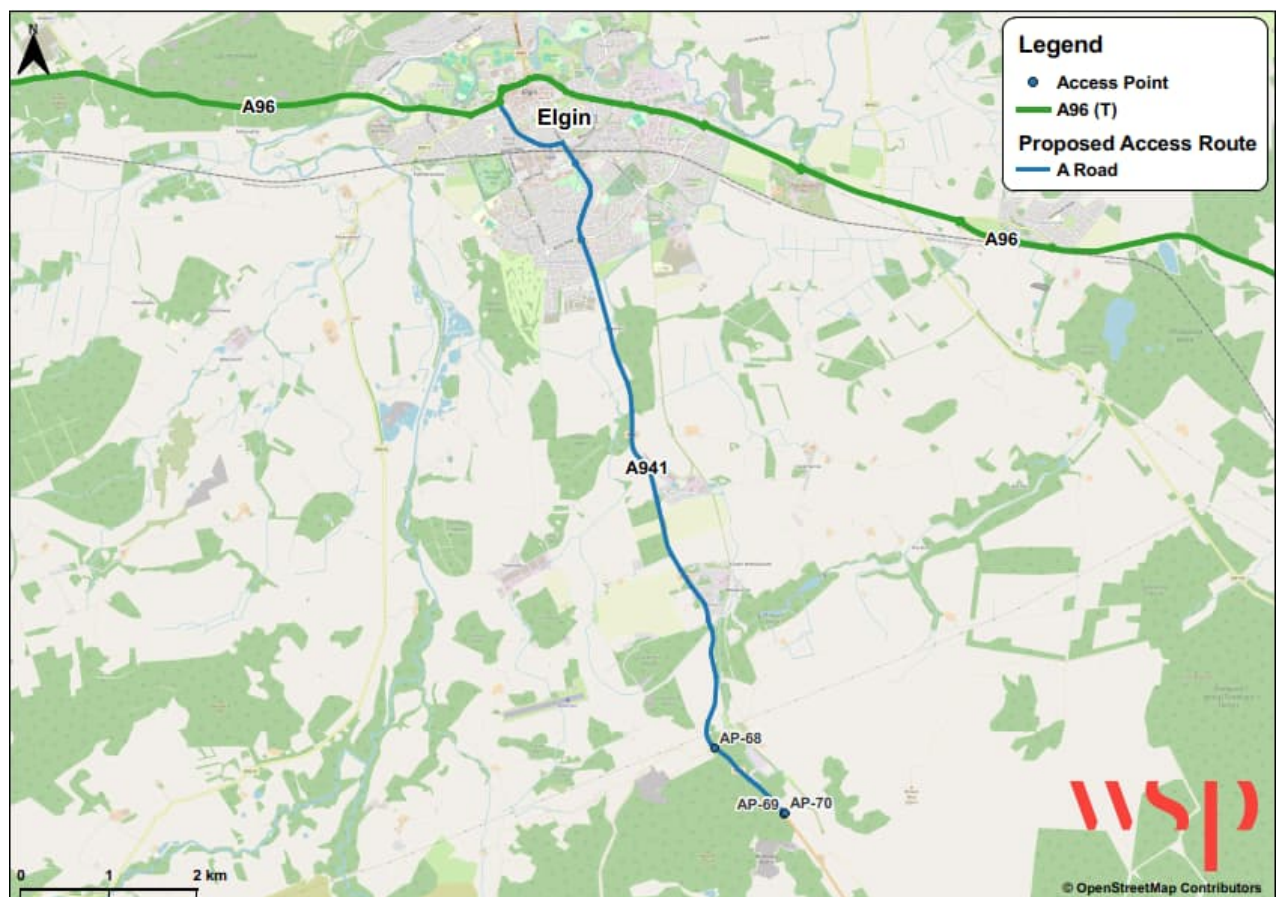
heading southwest on the B9010. The B9010 is generally a single carriageway of approximately 5 m in width and is subject to the national speed limit, which reduces when passing through settlements. The road is generally rural in nature with grass verges either side.

- 5.2.13. Construction vehicles will then turn left onto the C12E, with this section of the C12E a single-track road of approximately 4.5 m in width. Vehicles would then turn left within Dallas onto the C13E to reach AP67, AP66, AP65 and AP64. The C13E is a single-track road of approximately 4.5 m in width.
- 5.2.14. All of the roads used in the proposed access route are classified as an 'Agreed Route' by the Timber Transport Forum and are therefore considered to be suitable for use by HGVs.
- 5.2.15. No potential constraints have been identified on this route.

Section 15 - Proposed Access Route

- 5.2.16. Section 15 of the Proposed OHL Alignment is located to the south of Elgin and includes the towers that are located between Glenlatterach Reservoir and the Glen of Rothes. There is a total of three access points within this section. The proposed access routes from the trunk road network to each of the access points is shown in **Figure 13.2.5.6**.

Figure 13.2.5.6: Section 15 Access Point Route Options



- 5.2.17. As shown by **Figure 13.2.5.6**, the proposed route for construction vehicles accessing Section 15 of the Proposed OHL Alignment will see vehicles leaving the trunk road network at the A96 / A941 junction in Elgin to head south on the A941. The A941 is a single carriageway which is subject to the

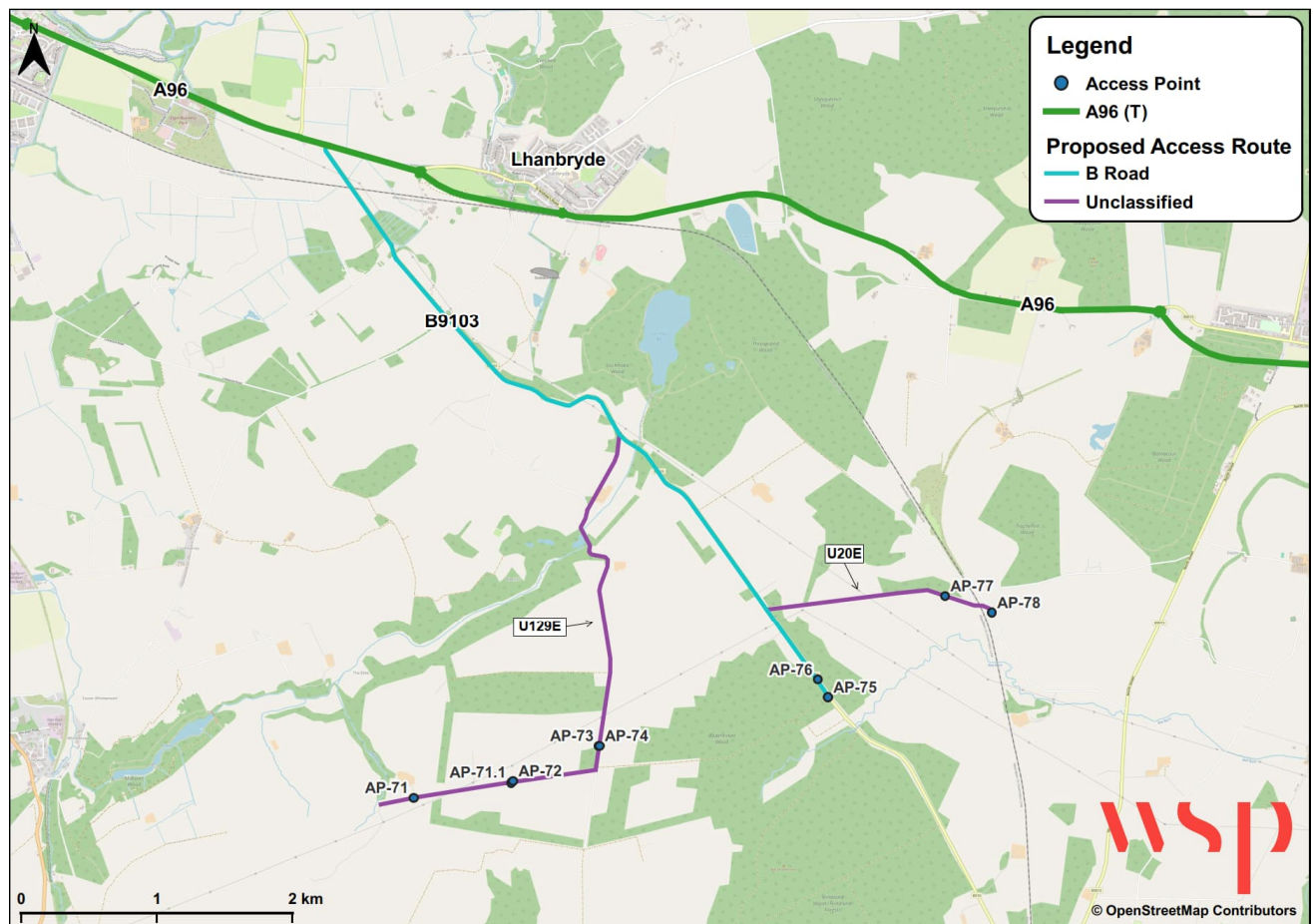
national speed limit, which reduces when passing through settlements. The road is generally rural in nature with grass verges either side of the road and an approximate width of 7 m. The A941 is also designated as an 'Agreed Route' by the Timber Transport Forum and is therefore considered to be suitable for use by HGVs.

- 5.2.18. AP68, AP69 and AP70 will be accessed directly from the A941, with construction vehicles leaving the adopted road network via a new / upgraded bellmouth junctions.
- 5.2.19. No potential constraints have been identified on this proposed access route.

Section 16 - Proposed Access Route

- 5.2.20. Section 16 of the Proposed OHL Alignment is located to the southeast of Elgin and includes the towers that are located between the Glen of Rothes and Teindland. There is a total of nine access points within this section. The proposed access routes from the trunk road network to each of the access points is shown in **Figure 13.2.5.7**.

Figure 13.2.5.7: Section 16 Access Point Route Options



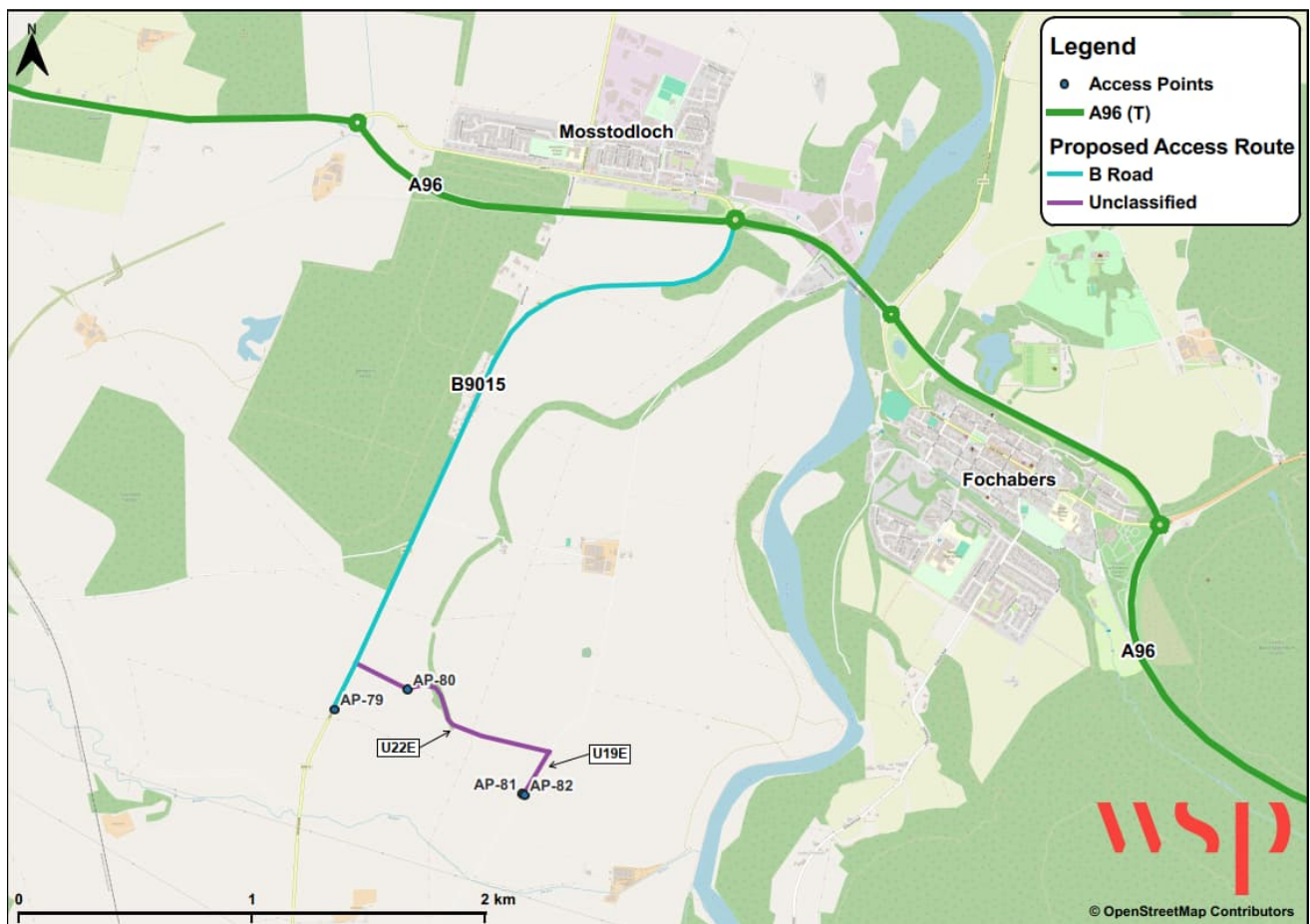
- 5.2.21. As shown by **Figure 13.2.5.7**, the proposed route for construction vehicles accessing Section 16 of the Proposed OHL Alignment involves vehicles leaving the trunk road network at the A96 / B9103 junction to head southeast on the B9103. The B9103 is a two-way single carriageway road and is designated as an 'Agreed Route' by the Timber Transport Forum, and it is therefore considered suitable for HGVs. HGVs would then travel to the nine access points via the following routes:

- **AP71- AP74:** Construction vehicles will leave the B9103 at its junction with the U129E, and head south on the unclassified road. The U129E is a single-track road that is supported by passing places. AP73 and AP74 will be accessed from this section of the U129E. Vehicles serving AP71, AP71.1 and AP72 will then turn right onto the western fork of the U129E to reach their access points. The right turn onto the western fork has been identified as a potential constraint, with the SPA confirming widening will be required to accommodate HGVs.
- **AP75 and AP76:** These will be accessed directly from the B9103, with construction vehicles leaving the adopted road network via a new or upgraded bellmouth junction.
- **AP77 and AP78:** Construction vehicles will leave the B9103 at its junction with the U20E, traveling westwards on the unclassified road to reach their access points. The U20E is a single-track road supported by passing places.

Section 17 - Proposed Access Route

- 5.2.22. Section 17 of the Proposed OHL Alignment is located to the southeast of Elgin and includes the towers that are located between Teindland and the River Spey. There is a total of four access points within this section. The proposed access routes from the trunk road network to each of the access points is shown in **Figure 13.2.5.8**.

Figure 13.2.5.8: Section 17 Access Point Route Options



- 5.2.23. As illustrated by **Figure 13.2.5.8**, it is proposed that construction vehicles accessing Section 17 of the Proposed OHL Alignment leave the trunk road network at the A96 (T) / B9015 roundabout in

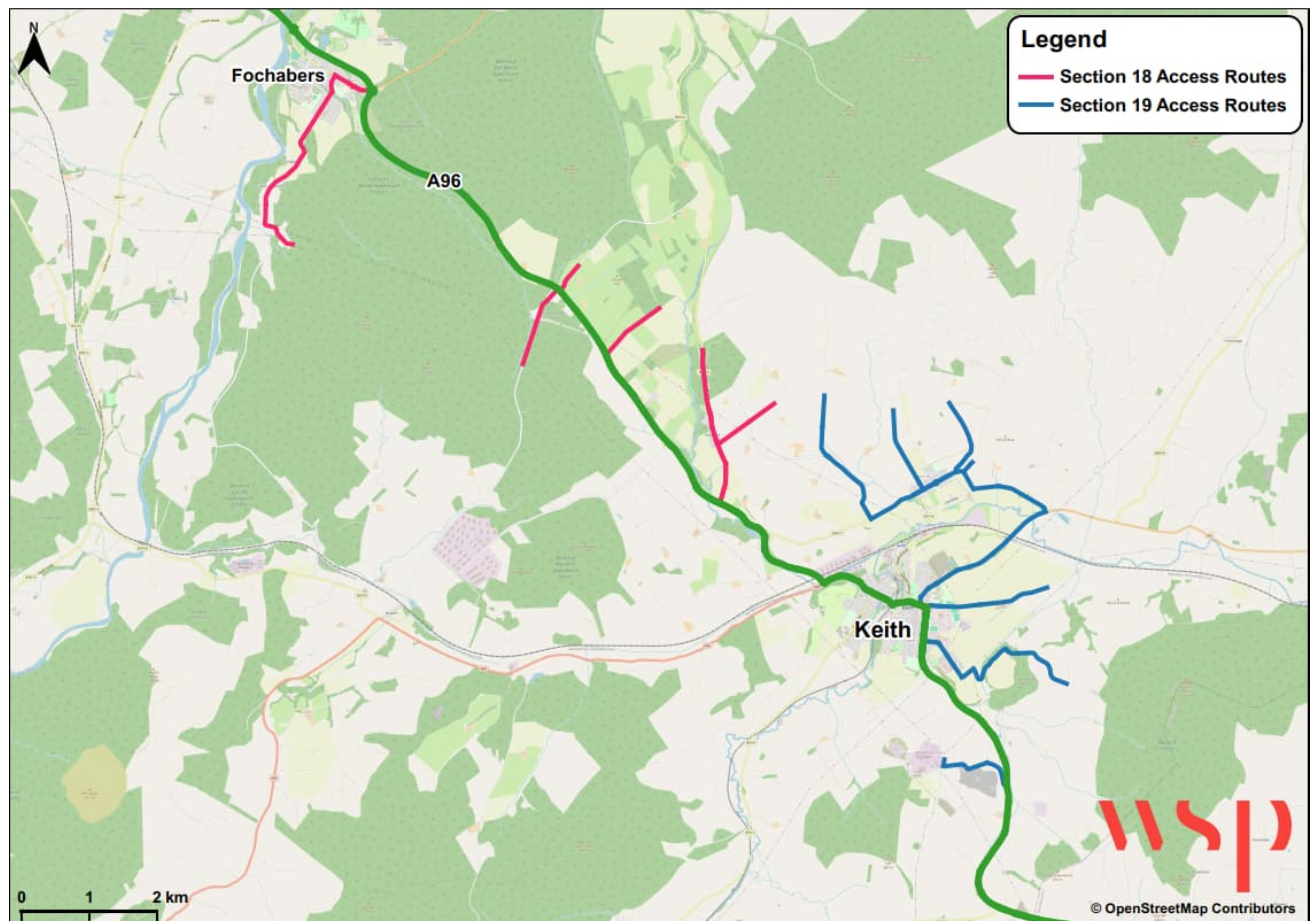
Mosstodloch to head south on the B9015. The B9015 is a two-way single carriageway road and is designated as an 'Agreed Route' by the Timber Transport Forum, and therefore considered to be suitable for HGVs. Vehicles will then take the following routes to access their associated access points:

- **AP79:** This will be accessed directly from the B9015 via a new temporary bellmouth.
- **AP80- AP82:** Construction vehicles will leave the B9015 at its junction with the U22E and head east. The U22E is a single-track road that is not currently supported by passing places. AP80 is located on the U22E. Vehicles serving AP81 and AP82 will continue east on the U22E, before turning right onto the U19E to reach their access points. The right turn onto the U19E has been identified as a potential constraint, with the SPA confirming widening is required to accommodate HGVs.

KEITH YARD

- 5.2.24. The final two sections of the Proposed OHL Alignment are to be served by the Yard located within Keith. **Figure 13.2.5.9** shows an overview of the routes that construction vehicles will be using to serve each of the sections.

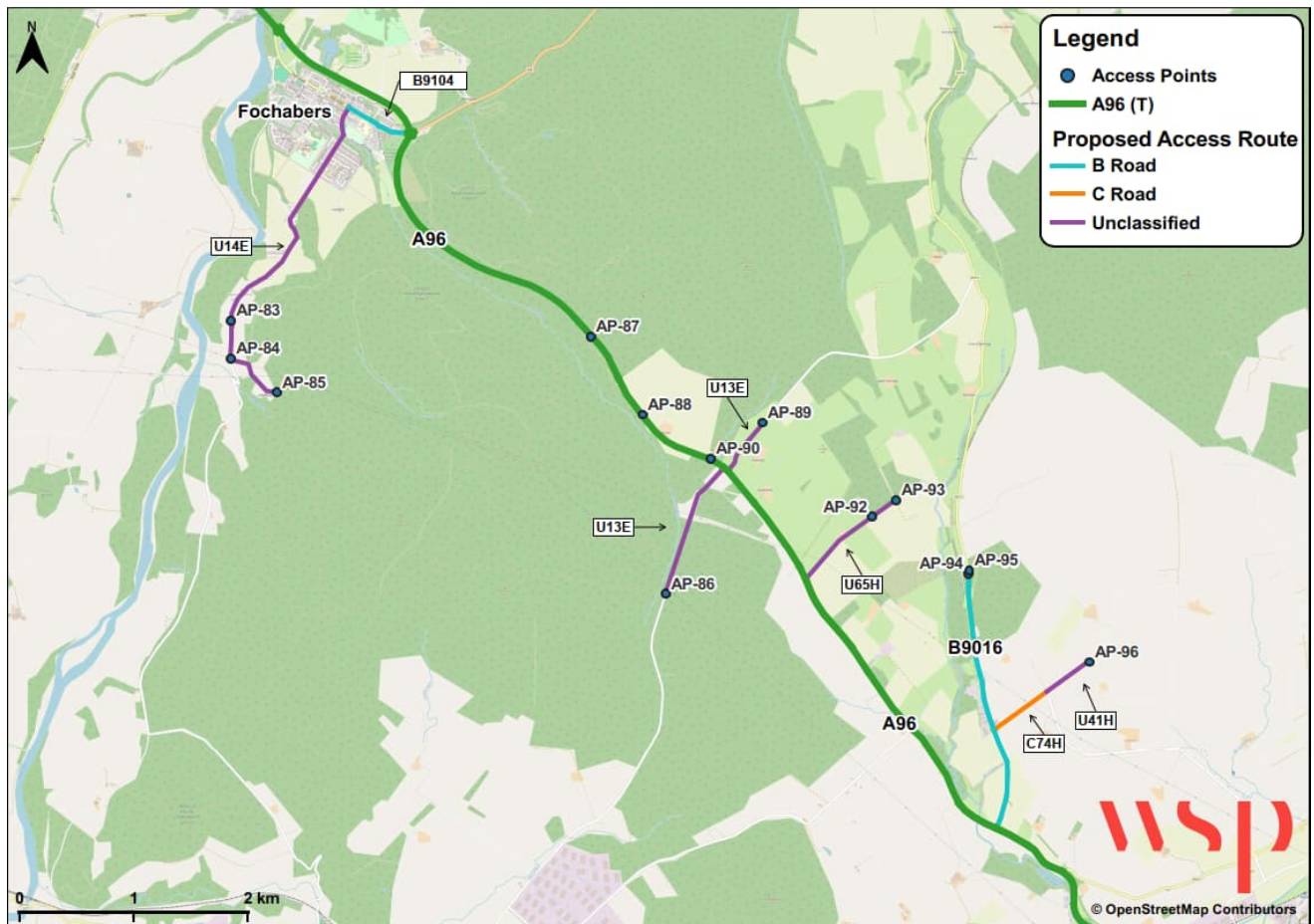
Figure 13.2.5.9: Keith Yard Access Routes



Section 18 - Proposed Access Routes

- 5.2.25. Section 18 of the Proposed OHL Alignment is located to the northwest of Keith and includes the towers that are located from the River Spey to the west of Keith. There is a total of 14 access points within this section. The proposed access routes from the trunk road network to each of the access points is shown in **Figure 13.2.5.10**.

Figure 13.2.5.10: Section 18 Access Point Route Options



- 5.2.26. As shown by **Figure 13.2.5.10**, the proposed route for construction vehicles accessing Section 18 of the Proposed OHL Alignment will see vehicles leave the trunk road network at various points along the A96 (T). Vehicles will then take the following routes to access their associated access points:

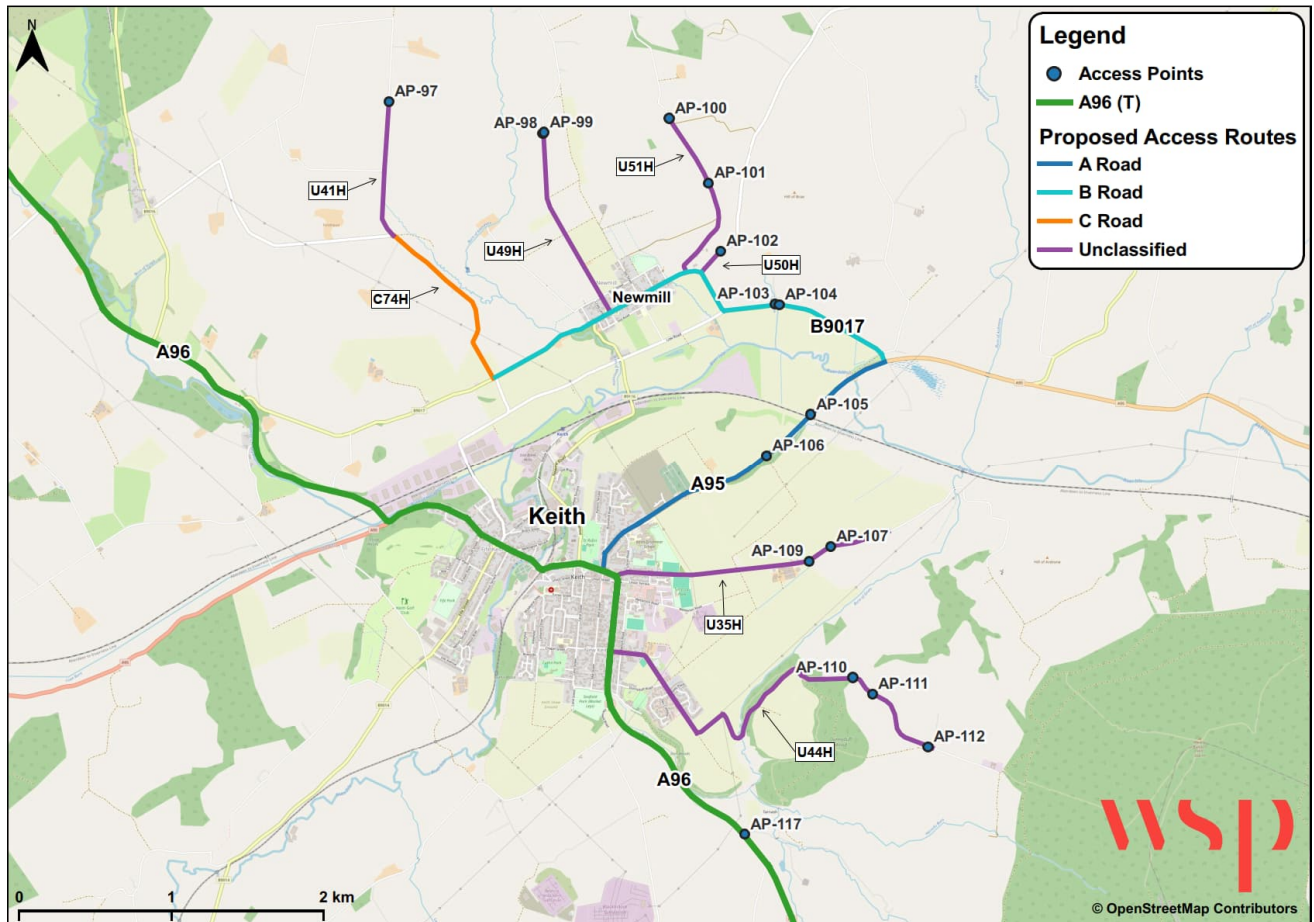
- **AP83- AP85:** Construction vehicles will exit the A96 / A98 / B9104 roundabout and head northwest on the B9104 to Fochabers. The B9104 is designated as an 'Agreed Route' by the Timber Transport Forum, is considered to be suitable for HGVs. Vehicles will then turn left to head south on the U14E towards the access points. This junction was identified as a potential constraint, however the SPA confirmed that HGVs could make the turn within the carriageway extents. Within Fochabers the U14E is a two-way single carriageway road, reducing to a single-track road of approximately 3 m in width to the south of Fochabers, which is not currently supported by passing places.
- **AP87, AP88, and AP90:** These will be accessed directly from the A96 (T), with vehicles exiting the adopted road network via new or upgraded bellmouth junctions.

- **AP86 and AP89:** Construction vehicles will leave the A96 (T) at its junction with the U13E. Vehicles serving AP86 will use the southwest section of the U13E, while those serving AP89 will use the northeast section. Both sections of the U13E are designated as 'Agreed Routes' by the Timber Transport Forum and are considered to be suitable for HGVs.
- **AP92 and AP93:** Vehicles will exit the A96 (T) at its junction with the U65H and travel northeast on the unclassified road to reach the access points. This junction has been identified as a potential constraint, with the SPA confirming widening is required to accommodate HGVs. The U65H is not currently supported by passing places.
- **AP94- AP96:** Construction vehicles will leave the A96 (T) at the A96 / B9016 junction, heading north on the B9016. AP94 and AP95 will be accessed directly from the B9016 via new or upgraded bellmouth junctions. The B9016 is designated as an 'Agreed Route' by the Timber Transport Forum, and it is considered to be suitable for HGVs. Vehicles serving AP96 will turn right off the B9016 to the south Aultmore to head northeast on the C74H. This junction has been identified as a potential constraint, with the SPA confirming widening is required to accommodate HGVs. Vehicles will continue northeast onto the U41H to reach the access point. Both the C74H and U41H are single track roads that are not currently supported by passing places.

Section 19 - Proposed Access Routes

5.2.27. Section 19 of the Proposed OHL Alignment is located in the vicinity of Keith and includes the towers that are located west of Keith. There are a total of 16 access points within this section. The proposed access routes from the trunk road network to each of the access points is shown in **Figure 13.2.5.11**.

Figure 13.2.5.11: Section 19 Access Point Route Options



5.2.28. As shown by **Figure 13.2.5.11**, the proposed route for construction vehicles accessing Section 18 of the Proposed OHL Alignment will see vehicles leave the trunk road network at various points along the A96 (T). Vehicles will take the following routes to access their associated access points:

- **AP97-AP102:** Construction vehicles will exit the A96 (T) in Keith at its junction with the A95 (T), and travel northeast on the A95 (T), before turning left onto the B9017. Both the A95 (T) and B9017 are classified as an 'Agreed Route' by the Timber Transport Forum and are therefore considered to be suitable for use by HGVs.
 - Vehicles serving AP97 will travel through Newmill before turning right and heading north on the C74H, continuing onto the U41H to reach the access point. Both the C74H and U41H are single track roads that are not currently supported by passing places. The right turn from the B9017 was identified as a potential constraint, but the SPA confirmed the turn could be made within the carriageway extents from an eastern direction.

- Vehicles serving AP98 and AP99 will turn right within Newmill onto the U49H and head north to reach the access points. The U49H is a single-track road that is not currently supported by passing places. The right turn from the B9017 was identified as a potential constraint, but the SPA confirmed the turn could be made within the carriageway extents from an eastern direction.
- Vehicles serving AP100 and AP101 will leave the B9017 to the east of Newmill and take the U51H to the access points. The U51H is a single-track road that is not currently supported by passing places. The right turn from the B9017 was identified as potential constraint, with the SPA confirming widening will be required to accommodate HGVs.
- Vehicles serving AP102 will leave the B9017 and take the U50H to the access point. The U50H is a single-track road that is not currently supported by passing places. The right turn from the B9017 was identified as a potential constraint, but the SPA confirmed the turn could be made within the carriageway extents from an eastern direction.
- **AP103- AP106:** Construction vehicles will exit the A96 (T) in Keith at its junction with the A95 (T) and travel northeast on the A95 (T). Vehicles serving AP105 and AP106 will leave the adopted road network via a new or upgraded bellmouth junction from the A95 (T). Vehicles serving AP103 and AP104 will continue on the A95 (T) before turning left onto the B9017 where they will leave the adopted network via a new or upgraded bellmouth junction.
- **AP107- AP109:** Vehicles will exit the A96 (T) in Keith at its junction with the U35H and travel east on the to reach the access points. The U35H is predominantly a single-track road of approximately 3 m in width and is not currently supported by passing places.
- **AP110- AP112:** Vehicles will exit the A96 (T) in Keith at its junction with the U44H and travel east on the unclassified road to reach the access points. The U44H is predominantly a single-track road of approximately 3 m in width and is not currently supported by passing places.
- **AP117:** Will be accessed directly from the A96 (T), with vehicles exiting the adopted road network via a new or upgraded bellmouth junction.

5.3 DESKTOP ACCESS ROUTE REVIEW SUMMARY

- 5.3.1. The above review has informed an initial route options appraisal to identify the most suitable routes from the Yards to each of the access points. None of the roads which it is proposed to use to support construction traffic access, are signed as having weight restrictions or being unsuitable for HGV use and **Table 5.1** provides a summary of the Proposed OHL Alignment sections and associated access points served by each route section.

Table 5.1: Route Identification

Proposed OHL Alignment Section (Location)	Access Points for this Section	Yard Serving these Access Points	Roads Utilised from the TRN
12 (Cairn Duhie to Johnstripe)	Access Points (AP 52-62)	Elgin Yard	A940, C11E, U88E
13 (Johnstripe to Moss of Bednawinny)	Access Points (AP 63)	Elgin Yard	B9011, B9010, C12E, C37E, U109E
14 (Moss of Bednawinny to Glenlatterach Reservoir)	Access Points (AP 64 - 67)	Elgin Yard	B9010, C12E, C13E
15 (Glenlatterach Reservoir to Glen of Rothes)	Access Points (AP 68 - 70)	Elgin Yard	A941 (Urban), A941 (Rural)
16 (Glen of Rothes to Teindland)	Access Points (AP 71 - 78)	Elgin Yard	B9103, U20E, U129E
17 (Teindland to River Spey)	Access Points (AP 79 - 82)	Elgin Yard	B9015, U19E, U22E
18 (River Spey to west of Keith)	Access Points (AP 83 - 85)	Keith Yard	B9104, B9016, C74H, U41H, U13E (SW), U13E (NE), U14E, U65H,
19 (west of Keith to Coachford area)	Access Points (AP 86 - 117)	Keith Yard	A95, B9017, C74H, U35H, U41H, U44H, U49H, U50H, U51H

6 TRIP GENERATION AND DISTRIBUTION

6.1 INTRODUCTION

- 6.1.1. This Chapter of the Appendix identifies the potential level of trips generated by construction activities prior to assigning the trips to the anticipated routes that traffic will use to access the tower installation sites.

6.2 CONSTRUCTION PHASE

- 6.2.1. As stated in **Chapter 3 of this Appendix**, it is anticipated that the construction of the Proposed Development would commence in 2026, with estimated energisation in Quarter 4 of 2030. The length of the main construction work is expected to take four years to 2030, with construction traffic likely to peak in 2026. Dismantling of existing OHLs would follow and is anticipated to be completed by Quarter 2 of 2032. The key project stages anticipated to include the following:
- site mobilisation;
 - forestry felling;
 - access track construction;
 - tower installation works
 - OHL installation works;
 - OHL outage connection works;
 - tower demolition / dismantling; and
 - site reinstatements.
- 6.2.2. As stated in **Chapter 3 of this Appendix**, to ensure robustness, the construction impact analysis has been based on the peak daily traffic flows of site deliveries over a 11 hour period, to reflect the GMT working hours (07:00-18:00). In doing so, simulating the most intensive movements required to construct the Proposed Development in the shorter time period within the construction window.

6.3 TRIP GENERATION

- 6.3.1. The level of trips generated by each section of the Proposed OHL Alignment's installation have been derived from an estimate provided by the Principal Contractor, with it anticipated that the greatest number of traffic movements will be generated in 2026. This assessment has therefore focussed on this period to provide a robust estimate of the impact of construction activities.
- 6.3.2. **Table 6.1** provides an indication of the average level of trips generated by each tower's installation.

Table 6.1: Predicted Total Traffic Generation Associated with each Tower

Per tower	LCV Pick-Ups and Welfare Vans	Sprinter pickup - tipper	Beavertail wagon	4x4 MAN	Low Loader	Concrete Wagon	Crane	Tractors	Telehandler
1	320	84	54	32	6	24	2	8	2

- 6.3.3. The Principal Contractor has identified an indicative programme to support the installation of the Proposed OHL towers, this can be found in **Table 3.5 of Chapter 3: Project Description**, of the EIAR. This has been used in conjunction with the trip generation estimate identified in **Table 6.1**, to

determine the average level of trips generated on a daily basis by each section of the Proposed OHL Alignment and by association, each access point.

- 6.3.4. As each access point supports access to a different number of towers, the level of trips which each accommodates, varies. To simplify the assessment, the highest number of trips anticipated to be generated on each section have been used to provide a robust estimate of the impact of construction traffic on the operation of the local road network. **Table 6.2** summarises the number of daily trips which each access will accommodate, with **Table 6.3** identifying the anticipated maximum level of daily trips which it is estimated that each section will accommodate.

Table 6.2: Predicted Total Daily Traffic Generation Associated with each Access Point

Section	Access Point	Car / LGV Two-Way Trip Generation	HGV Two-Way Trip Generation
12	AP52	75	18
	AP53	76	18
	AP54	76	18
	AP55	76	18
	AP56	76	18
	AP57	76	18
	AP58	76	18
	AP59	76	18
	AP60	76	18
	AP61	75	18
	AP62	75	18
13	AP63	75	17
14	AP64	75	18
	AP65	76	18
	AP66	76	18
	AP67	60	14
15	AP68	45	10
	AP69	75	18
	AP70	75	18
16	AP71.1	76	18

Section	Access Point	Car / LGV Two-Way Trip Generation	HGV Two-Way Trip Generation
	AP71	75	18
	AP73	76	18
	AP74	75	18
	AP75	75	18
	AP76	76	18
	AP77	75	18
	AP78	75	18
17	AP79	76	18
	AP80	76	18
	AP81	76	18
	AP82	75	18
18	AP83	76	18
	AP84	76	18
	AP85	75	18
	AP86	88	21
	AP87	106	26
	AP88	106	26
	AP90	83	20
	AP89	106	26
	AP91	106	26
	AP92	83	20
	AP93	88	21
	AP94	106	26
	AP95	83	20
	AP96	88	21
19	AP97	76	18

Section	Access Point	Car / LGV Two-Way Trip Generation	HGV Two-Way Trip Generation
	AP98	76	18
	AP99	76	18
	AP100	76	18
	AP101	76	18
	AP102	76	18
	AP103	76	18
	AP104	76	18
	AP105	76	18
	AP106	76	18
	AP107	76	18
	AP109	76	18
	AP110	76	18
	AP111	76	18
	AP112	76	18
	AP117	75	18

Table 6.3: Predicted Total Daily Traffic Generation Associated with each Section

Section	Daily Cars / Vans	Daily HGVs	Hourly Cars / Vans	Hourly HGVs
12	76	18	7	2
13	75	17	7	2
14	76	18	7	2
15	75	18	7	2
16	76	18	7	2
17	76	18	7	2
18	106	26	10	2
19	76	18	7	2

AGGREGATE TRIP GENERATION

- 6.3.5. The level of trips identified in **Table 6.3** makes no allowance for the formation of access tracks or the indicative temporary construction compounds (Yards) to support construction activities.
- 6.3.6. The Principal Contractor has advised that they are likely to use six HGVs to transport aggregate material to and from the installation sites, with the vehicles travelling between the nearest quarry and the installation sites throughout the working day. It has therefore been assumed that these trips will equate to 12 two-way trips an hour and this assumption has been used to support the impact assessment.
- 6.3.7. **Table 6.4** summarises the assumed quarry which will be used to support the delivery of each section of the Proposed Development.

Table 6.4: Quarries Assumed for each of the Sections

Section	Assumed Quarry
12	Assumed to route from Leiths Quarry.
13	Assumed to route the most direct route from Leiths Quarry.
14	Assumed to route from Leiths Quarry.
15	Assumed to route from site from Rothes Glen Quarry.
16	Assumed to route from the south from Kirkhill Quarry.
17	Assumed to route from the west from Kirkhill Quarry.
18	Assumed to route from the south from Tarmac Cairhills Quarry.
19	Assumed to route from the south from Tarmac Cairhills Quarry.

Timber Extraction

- 6.3.8. It is expected that the greatest number of trips will be associated with the formation of access tracks and compounds and that a significantly reduced number of trips will be associated with timber extraction activities which will be undertaken using existing forestry tracks in advance of the formation of access tracks to support tower installation activities. This TA has therefore focussed on assessing the impact of construction traffic generated by the formation of access tracks and tower installation activities.

6.4 DAILY TRIP GENERATION PER ACCESS POINT

- 6.4.1. **Table 6.5** summarises the maximum level of daily trips anticipated to be generated by the construction of each section of the Proposed OHL Alignment taking cognisance of the trips generated by tower installation and track formation activities, but assuming that no materials can be won or disposed of via borrow pits to provide a robust estimate of the level of traffic generated by construction activities. The table also summarises the average number of vehicles generated on an hourly basis on the assumption that construction traffic will be accessing the site for an 11 hour period.

Table 6.5: Trip Generation per Section

Sections	Daily Cars / Vans	Daily HGVs	Hourly Cars / Vans	Hourly HGVs	Days	Movements per Period
12	76	150	7	14	83	18782
13	75	149	7	14	111	24939
14	76	150	7	14	140	31680
15	75	150	7	14	175	39375
16	76	150	7	14	49	11088
17	76	150	7	14	20	4526
18	106	158	10	14	35	9240
19	76	150	7	14	70	15840

- 6.4.2. The above generation has been used to review the impact of construction traffic on the local road network, with the results of the assessment presented in **Chapter 7 of this Appendix**.

7 DEVELOPMENT IMPACT ASSESSMENT

7.1 INTRODUCTION

7.1.1. This Chapter of the Appendix summarises the impact of construction traffic on the local road network which will be used to support the delivery of each Proposed OHL Alignment section. It identifies the increase of traffic along each road link on the access route and reviews this in relation to the potential constraints on the route, prior to identifying potential measures to mitigate the impact.

7.2 CONSTRUCTION TRAFFIC IMPACT ASSESSMENT

7.2.1. **Table 7.1** quantifies the impact which construction traffic is forecast to have on the operation of each of the links on each of the eight sections of the local road network supporting access to the installation sites.

Table 7.1: Construction Traffic Impact Assessment Summary

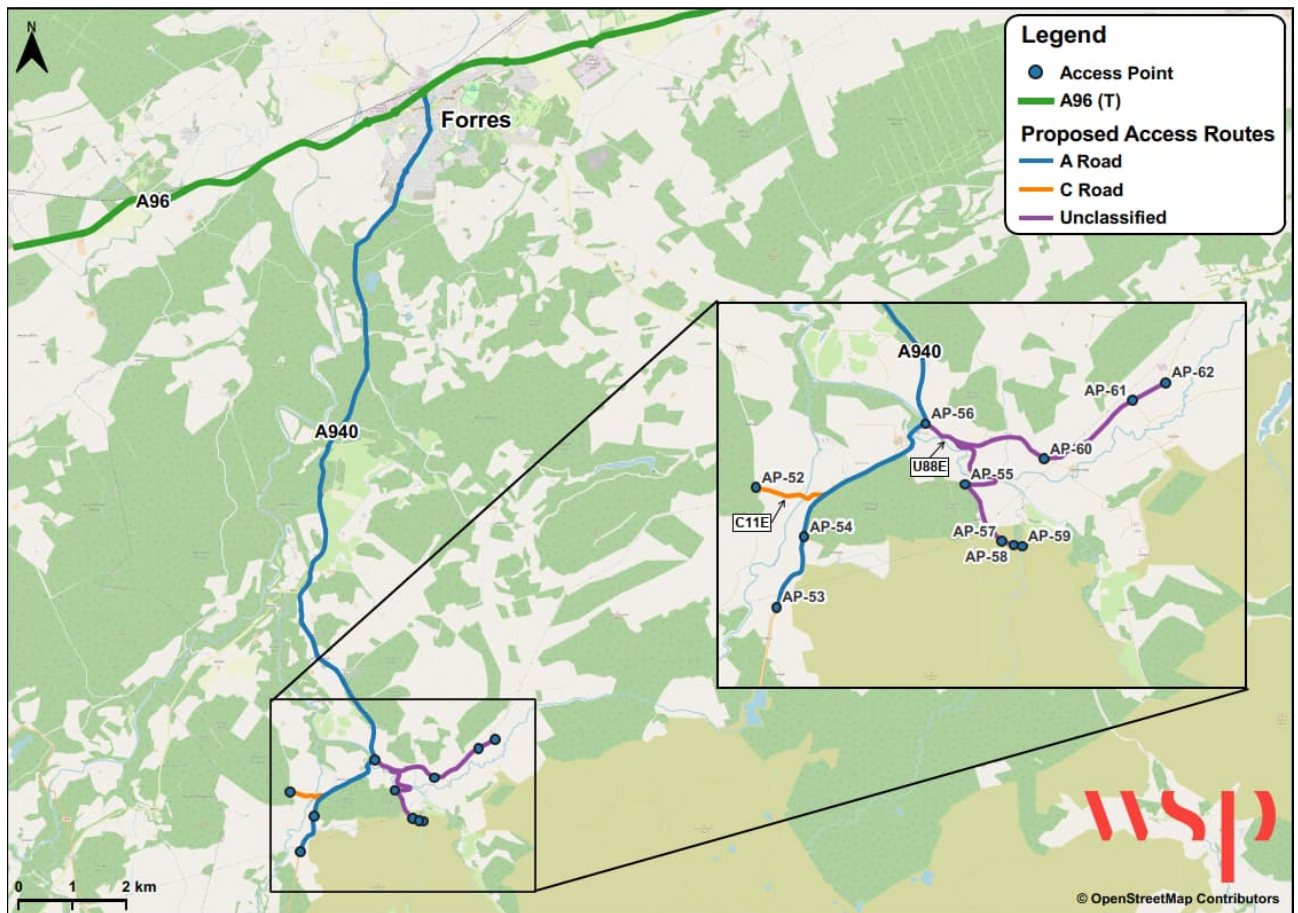
Section	Location	Daily Two-Way Movements				Hourly Two-Way Movements	
		Existing Traffic		Proposed Development		Proposed Development	
		Cars / Vans	HGVs	Cars / Vans	HGVs	Cars / Vans	HGVs
12	A940	932	45	76	150	7	14
13	B9011	3679	301	75	149	7	14
14	B9010	260	4	76	150	7	14
15	A941 (Urban)	15442	223	75	150	7	14
	A941 (Rural)	5284	205	75	150	7	14
16	B9103	956	8	76	150	7	14
17	B9015	1010	118	76	150	7	14
	U19E	24	5	76	150	7	14
18	Various	-	-	106	158	10	14
19	B9016	1760	48	76	150	7	14
	U43H	285	0	76	150	7	14
	A96 (T)	4055	51	76	150	7	14
	U111s	74	1	76	150	7	14

- 7.2.2. As can be seen from the above summary, construction activities are generally forecast to generate a maximum of 21 two-way traffic flows per hour, with the majority of these movements (12) generated by HGVs transporting aggregates to the construction sites. Where possible these movements will be managed to spread arrivals and departures to / from the quarry throughout each hour, and it is therefore expected that construction activities will generate an increase of one two-way HGV movement every four minutes.

SECTION 12

- 7.2.3. **Figure 13.2.7.1** shows the routes that construction traffic would use to access the tower installation sites associated with Section 12 of the Proposed Development.

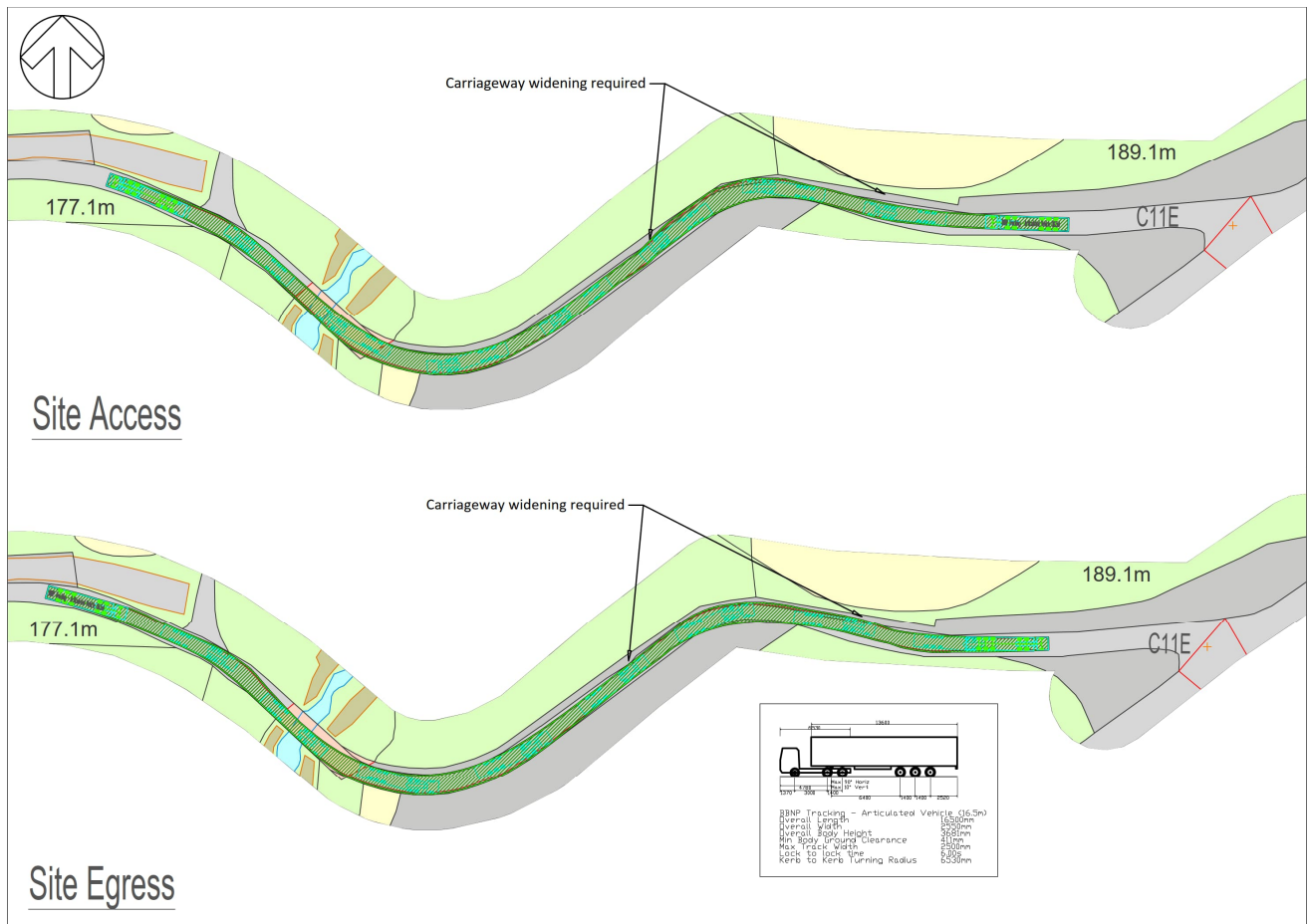
Figure 13.2.7.1: Section 12 Access Route



Pinch Point Analysis

- 7.2.4. As highlighted in **Chapter 5 of this Appendix**, a potential constraint was highlighted on the C11E. Swept Path Analysis using OS mapping was undertaken at this location to assess whether the construction vehicles can be accommodated using the existing road and junction layouts. The SPA was undertaken using AutoTrack and the result of the assessment is shown in **Figure 13.2.7.2**.

Figure 13.2.7.2: Potential Constraint on C11E

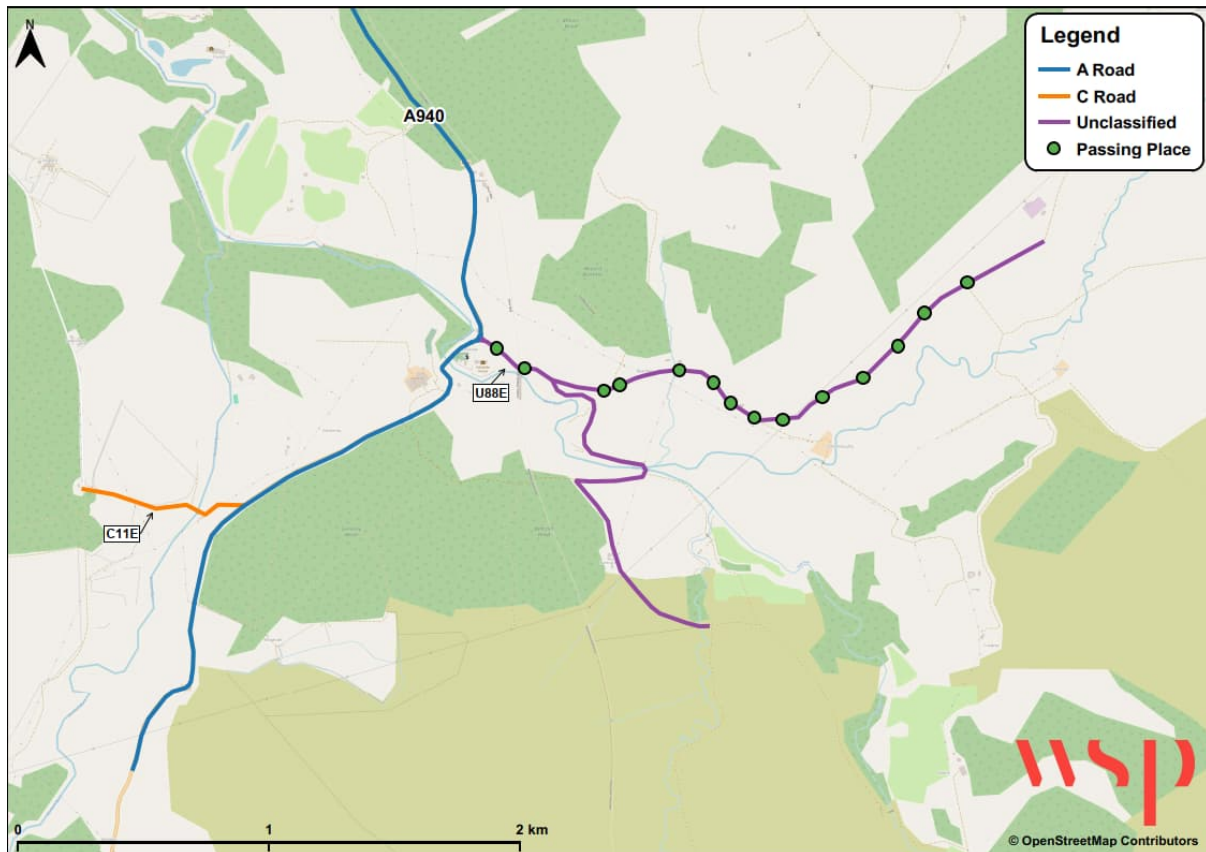


- 7.2.5. As shown by **Figure 13.2.7.2**, while the road is signed as having been improved to accommodate timber extraction activities, there may be a requirement to slightly widen a short section of the C11E in the vicinity of the Dorback Burn Bridge, to accommodate its use by HGVs, although the need for this will require to be confirmed by a topographical survey. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land.

Passing Place Provision

- 7.2.6. **Figure 13.2.7.3** shows the unclassified roads which it is proposed to use to support construction activities. The Timber Transport Forum confirms that all three roads are recognised as being key routes for timber extraction activities. **Figure 13.2.7.3** also shows the indicative locations the current passing place provision on the U885 which forms the access routes for Section 12 of the Proposed OHL Alignment.

Figure 13.2.7.3: Section 12 - Passing Places



- 7.2.7. The main section of the U88E is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 2200 m of this section of the U88E for access. As shown in **Figure 13.2.7.3**, there are 13 formal passing places on the U88E between the A940 and site access points.
- 7.2.8. The southern fork of the U88E is also approximately 3 m in width but is not currently supported by passing places. Construction vehicles will use approximately 1600 m of this section of the U88E for access.
- 7.2.9. The C11E is a single-track road of approximately 3 m in width, which is not currently supported by passing places. Construction vehicles will use approximately 650 m of the C11E when accessing the tower installation sites from the A940.

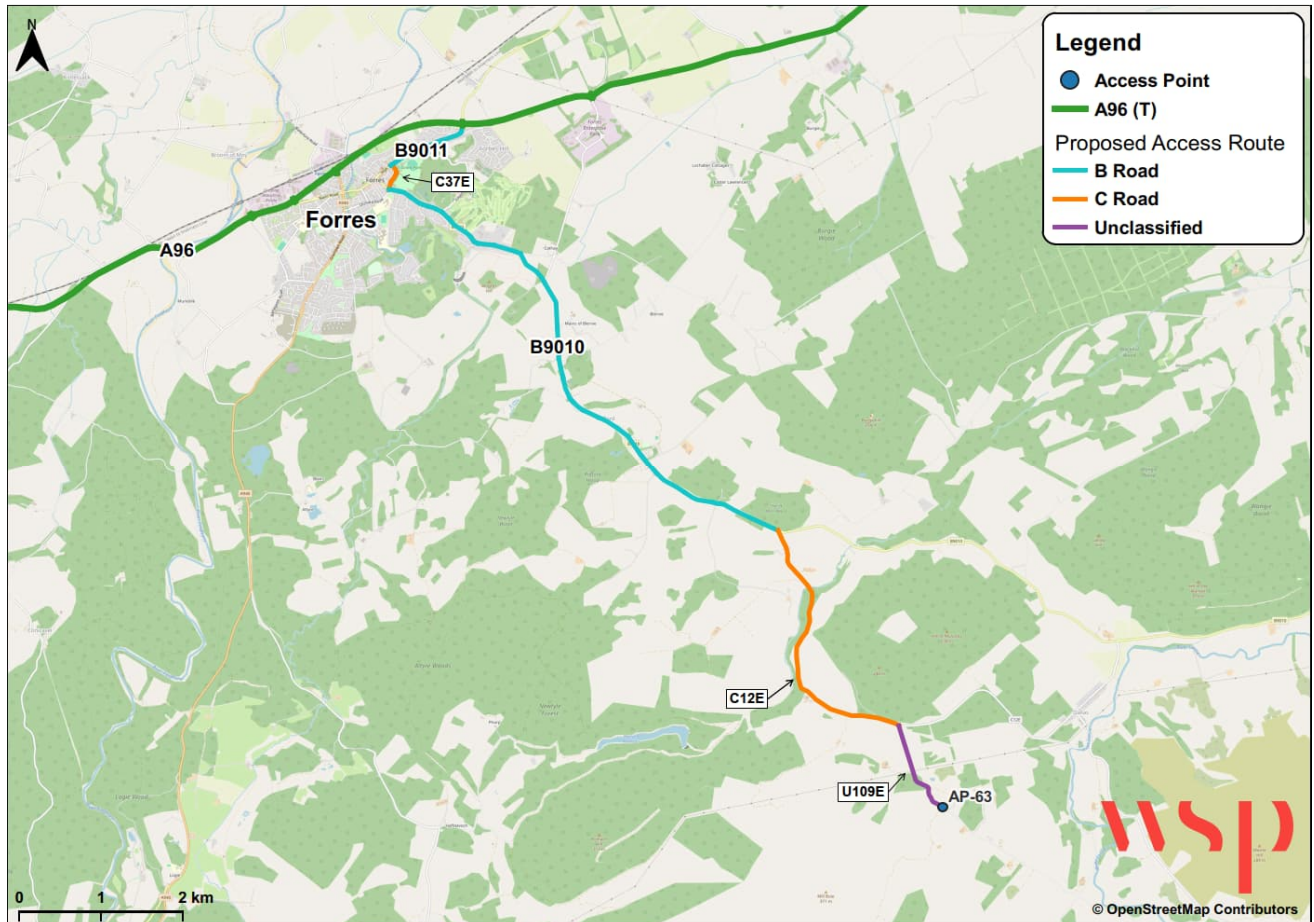
Proposed Mitigation

- 7.2.10. As previously noted, there may be a requirement to widen a short section of the C11E in the vicinity of the Dorback Burn Bridge within Section 12 of the Proposed OHL Alignment.
- 7.2.11. As highlighted in **Table 7.1**, it is estimated that construction activities could generate up to 21 two-way movements an hour. It is considered that while the U885E's existing passing place provision may accommodate the seven hourly two-way car / van movements, a proportion of the passing places may need to be lengthened to support their use by HGVs given that the increase in construction traffic is likely to be generated over a 1-2 month period.
- 7.2.12. The southern fork of the U88E provides access to a single residential property and is therefore considered to accommodate a minimal number of vehicle movements on a daily basis. While there are no formal passing places, there are locations where two vehicles could pass each other. With this in mind, it is suggested that the Principal Contractor will liaise with the residential property owner to minimise the impact of construction traffic on their use of the road. Arrivals and departures could also be managed by a banksman to be stationed at the northern end of the road, to avoid the need to introduce new passing places on this section of the road to accommodate the temporary increase in traffic movements over a 1-2 month period.
- 7.2.13. The C11E connects the A940 and the B9007, in addition to supporting access to a minimal number of residential properties and is therefore expected to be lightly trafficked. It is signed as having been improved to support timber extraction activities and it is not proposed to implement any measures to support its use by construction traffic. In addition, vehicles will only require to travel on the road for less than a minute to access the site from the A940 and the likelihood of two vehicles meeting is considered to be minimal, particularly as vehicles will be accessing and leaving the site in a managed manner.

SECTION 13

- 7.2.14. **Figure 13.2.7.4** shows the route that construction traffic would use to access the tower installation sites associated with Section 13 of the Proposed Development.

Figure 13.2.7.4: Section 13 Access Route



Pinch Point Analysis

- 7.2.15. As highlighted in **Chapter 5 of this Appendix**, the B9010 is single carriageway road of approximately 5 m in width. While the access route will also utilise the unclassified C12E and U109E which are both single track roads which are supported by passing places, all roads are classified 'Agreed Route' by the Timber Transport Forum and are therefore considered to be suitable for use by HGVs. No potential constraints have been identified on the access route which will serve construction activities associated with Section 13 of the Proposed OHL Alignment.

Passing Place Provision

- 7.2.16. **Figure 13.2.7.5** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 13 of the Proposed OHL Alignment.

Figure 13.2.7.5: Section 13 - Passing Places



- 7.2.17. The C12E is a single-track road approximately 4 m in width at its narrowest point, although it is approximately 5 m in width for a proportion of its length. Construction vehicles will use approximately 3400 m of the C12E for access. As shown by **Figure 13.2.7.5**, there are currently ten passing places on the section of the C12E between the B9010 and U109E.
- 7.2.18. The U109E is a single-track road approximately 3 m in width. Construction vehicles will use approximately 1200 m of the U109E for access. As shown by **Figure 13.2.7.5**, there are currently seven passing places on the U109E between the C12E and the access point.

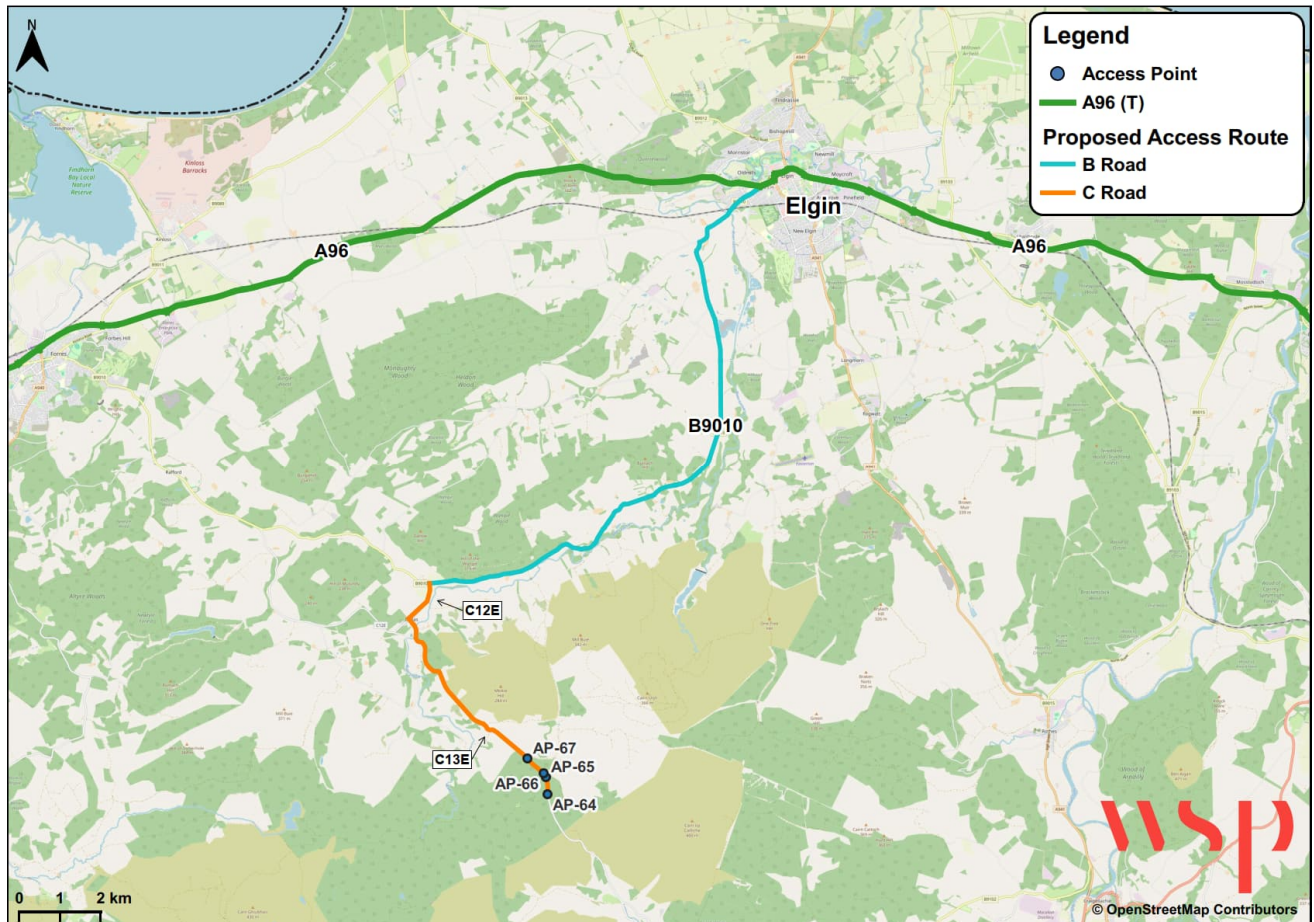
Proposed Mitigation

- 7.2.19. The C12E is signed as a key timber haulage route and has been improved in recent years to accommodate an increased level of HGV usage. Improvements have included the provision of suitably sized passing places and localised carriageway widening. The U1095 is also supported by passing places, the majority of which appear to be of a length which would support use by HGVs. As the full route from the A96 (T) to the site is shown to be an agreed timber haulage route, it is considered that there is no requirement to introduce any form of measures to mitigate the temporary increase in traffic generated by construction activities associated with this section of the scheme.

SECTION 14

- 7.2.20. **Figure 13.2.7.6** shows the route that construction traffic would use to access the tower installation sites associated with Section 14 of the Proposed Development.

Figure 13.2.7.6: Section 14 Access Route



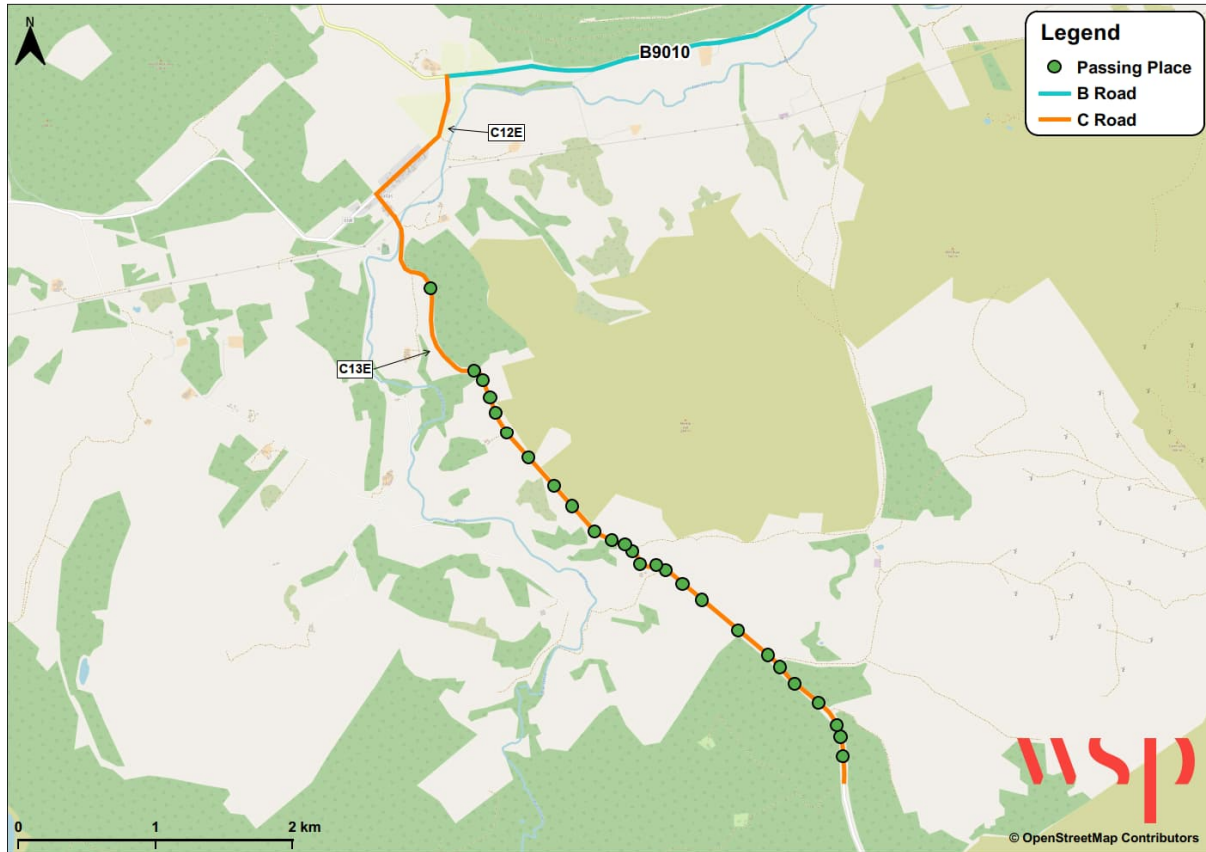
Pinch Point Analysis

- 7.2.21. As highlighted in **Chapter 5 of this Appendix**, the C12E is single carriageway road of approximately 5 m in width between its junction with the B9010 and the C13E. The C13E is also approximately 5 m in width between Dallas and Burnside where the road reduces in width, being supported by passing places. Both roads are classified as 'Agreed Routes' by the Timber Transport Forum and are therefore considered to be suitable for use by HGVs. No potential constraints have been identified on the access route which will serve construction activities associated with Section 14 of the Proposed OHL Alignment.

Passing Place Provision

- 7.2.22. **Figure 13.2.7.7** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 14 of the Proposed OHL Alignment.

Figure 13.2.7.7: Section 14 - Passing Places



- 7.2.23. The 1000 m section of the C12E that forms part of access route 14 is approximately 5 m in width and therefore sufficiently wide to enable two vehicles to pass. There are therefore no passing places provided on the road between the B9010 and the C13E.
- 7.2.24. The majority of the C13E that forms part of access route 14 is approximately 4 m in width and construction vehicles will use approximately 5800 m of the C13E for access. As shown in **Figure 13.2.7.7**, there are currently 26 passing places on the C13E between the C12E and the location where construction vehicles will leave the adopted road network to access the site.

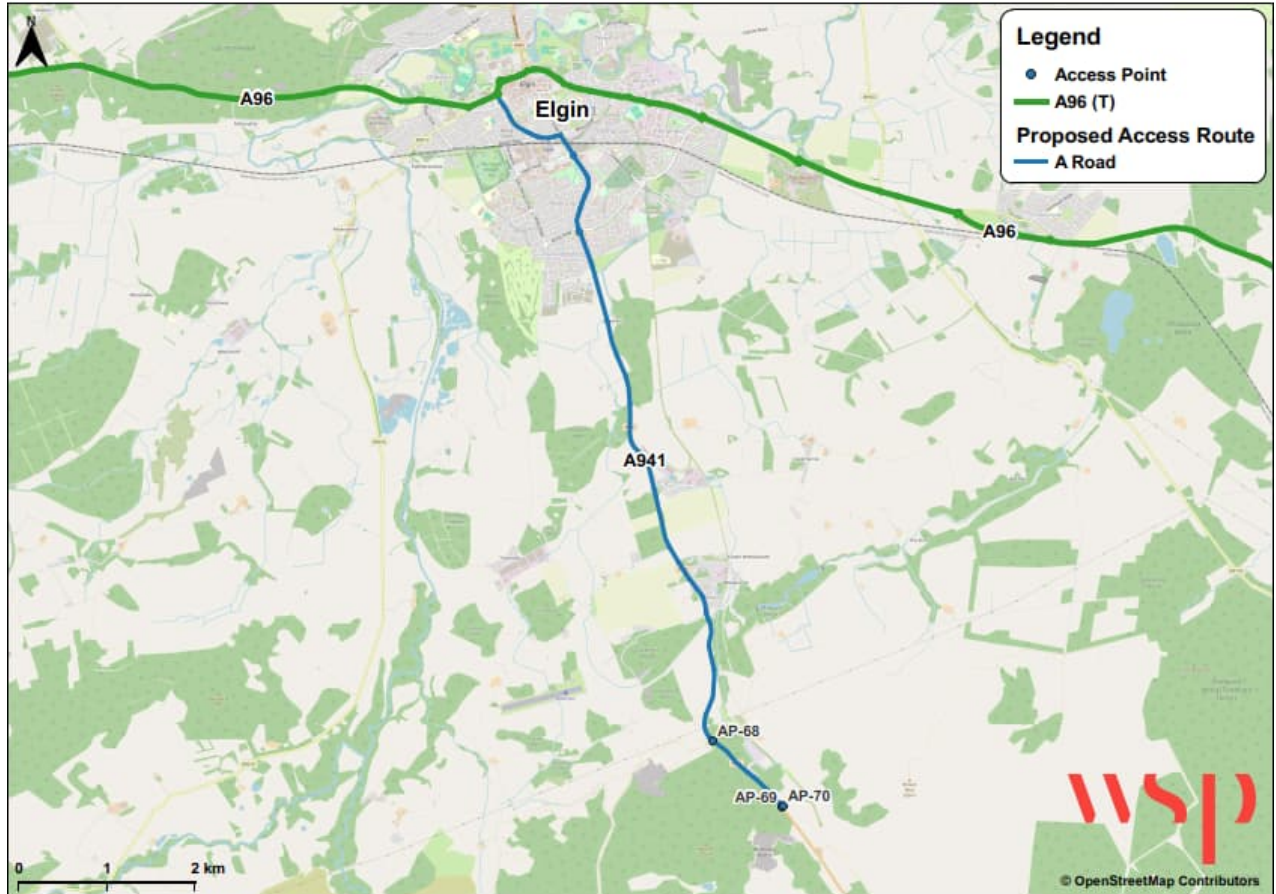
Proposed Mitigation

- 7.2.25. The C12E and C13E are classified as 'Agreed Routes' by the Timber Transport Forum, with a proportion of the roads of a width which supports two-way working. The narrower section of the C13E is supported by passing places at regular intervals, with the majority of these provided at a length suitable to accommodate HGVs. As the full route from the A96 (T) to the site is shown to be an agreed timber haulage route, it is considered that there is no requirement to introduce any form of measures to mitigate the temporary increase in traffic generated by construction activities associated with this section of the scheme.

SECTION 15

- 7.2.26. **Figure 13.2.7.8** shows the route that construction traffic would use to access the tower installation sites associated with Section 15 of the Proposed Development.

Figure 13.2.7.8: Section 15 Access Route

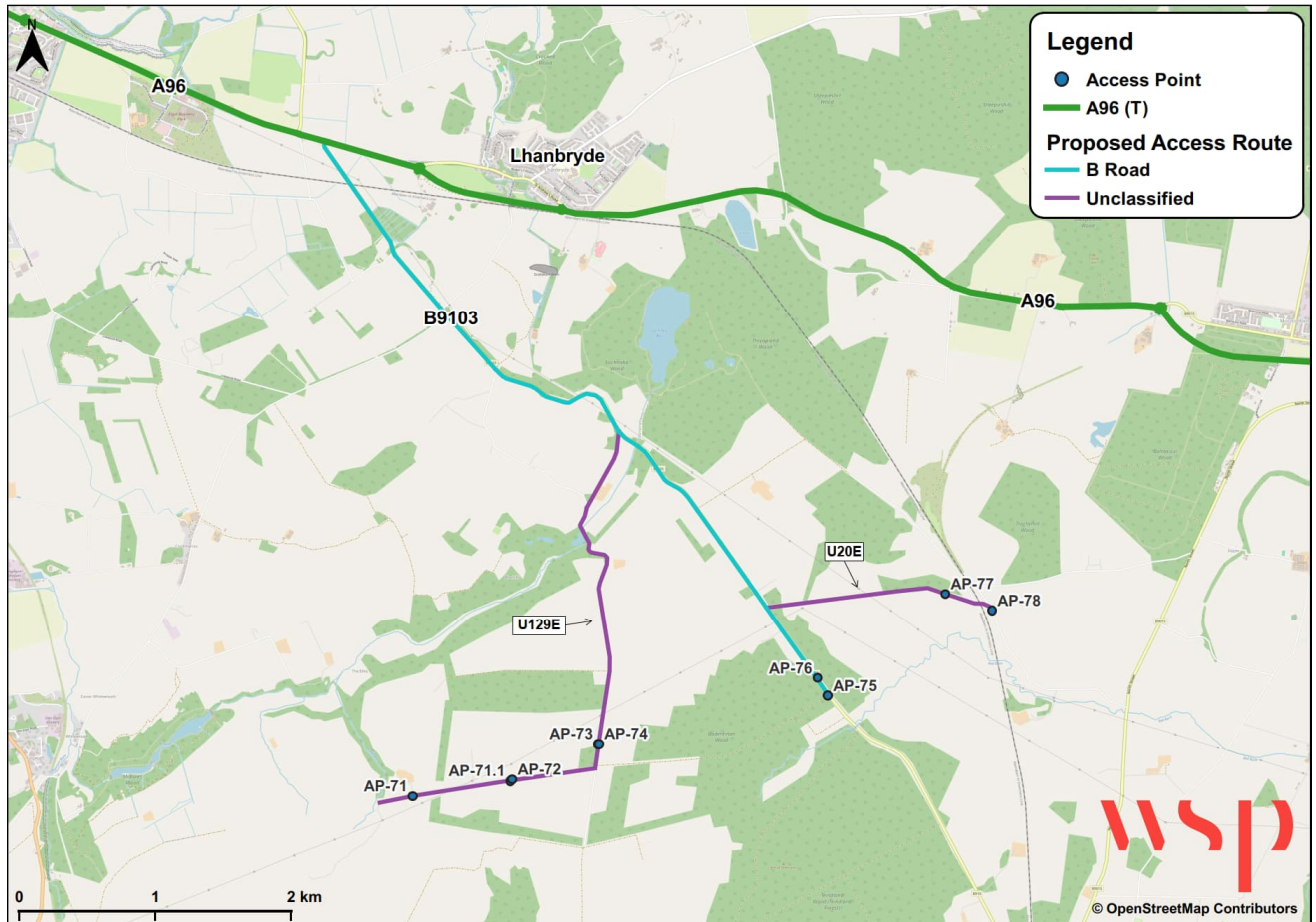


- 7.2.27. Section 15 will be accessed directly from the A941 which is considered to be of a suitable standard to accommodate the temporary increase in traffic movements generated by construction activities. There is therefore no requirement to introduce any measures to mitigate the impact of these movements on the road's operation.

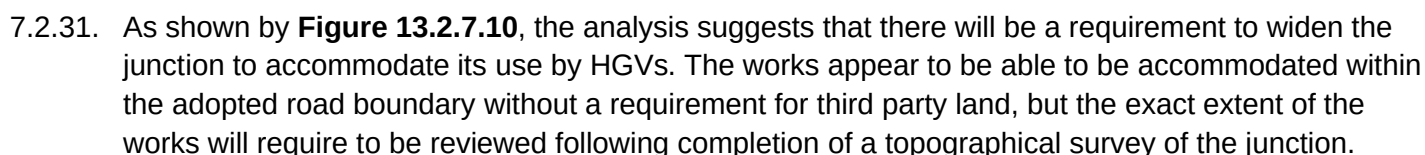
SECTION 16

7.2.28. **Figure 13.2.7.9** shows the routes that construction traffic would use to access the tower installation sites associated with Section 16 of the Proposed Development.

Figure 13.2.7.9: Section 16 Access Route



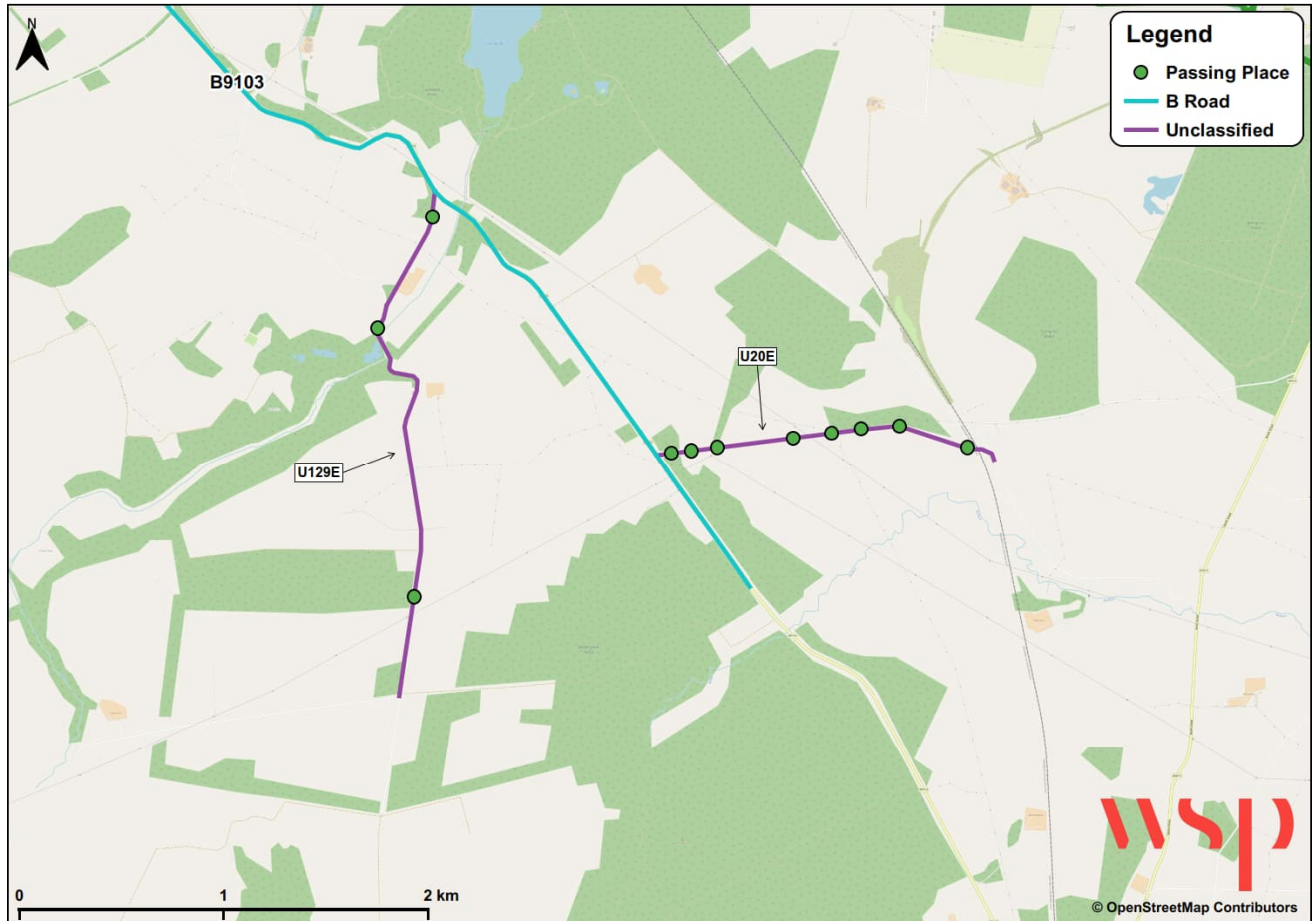
- Figure 13.2.7.10: Potential Constraint on U129E**



Passing Place Provision

- 7.2.32. **Figure 13.2.7.11** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 16 of the Proposed OHL Alignment.

Figure 13.2.7.11: Section 16 - Passing Places



- 7.2.33. The U129E is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 4000 m of the U129E for access. As shown by **Figure 13.2.7.11**, there are currently four passing places on the U129E between the B9103 and the access point.
- 7.2.34. The U20E is a single-track road approximately 3 m in width. Construction vehicles will use approximately 1440 m of the U12E for access. As can be seen by **Figure 13.2.7.11**, there are currently eight passing places on the U20E between the B9103 and the access point.

Proposed Mitigation

- 7.2.35. As previously noted, there will be a requirement to widen the existing access junction which is to be used to support access to the tower installation site located on the western side of the B9103 within Section 16 of the Proposed OHL Alignment.
- 7.2.36. As highlighted in **Table 7.1**, it is estimated that construction activities could generate up to 21 two-way movements an hour. While the U129E does not provide a through route and only serves a minimal number of residential properties, it is considered that there may be merit in lengthening the

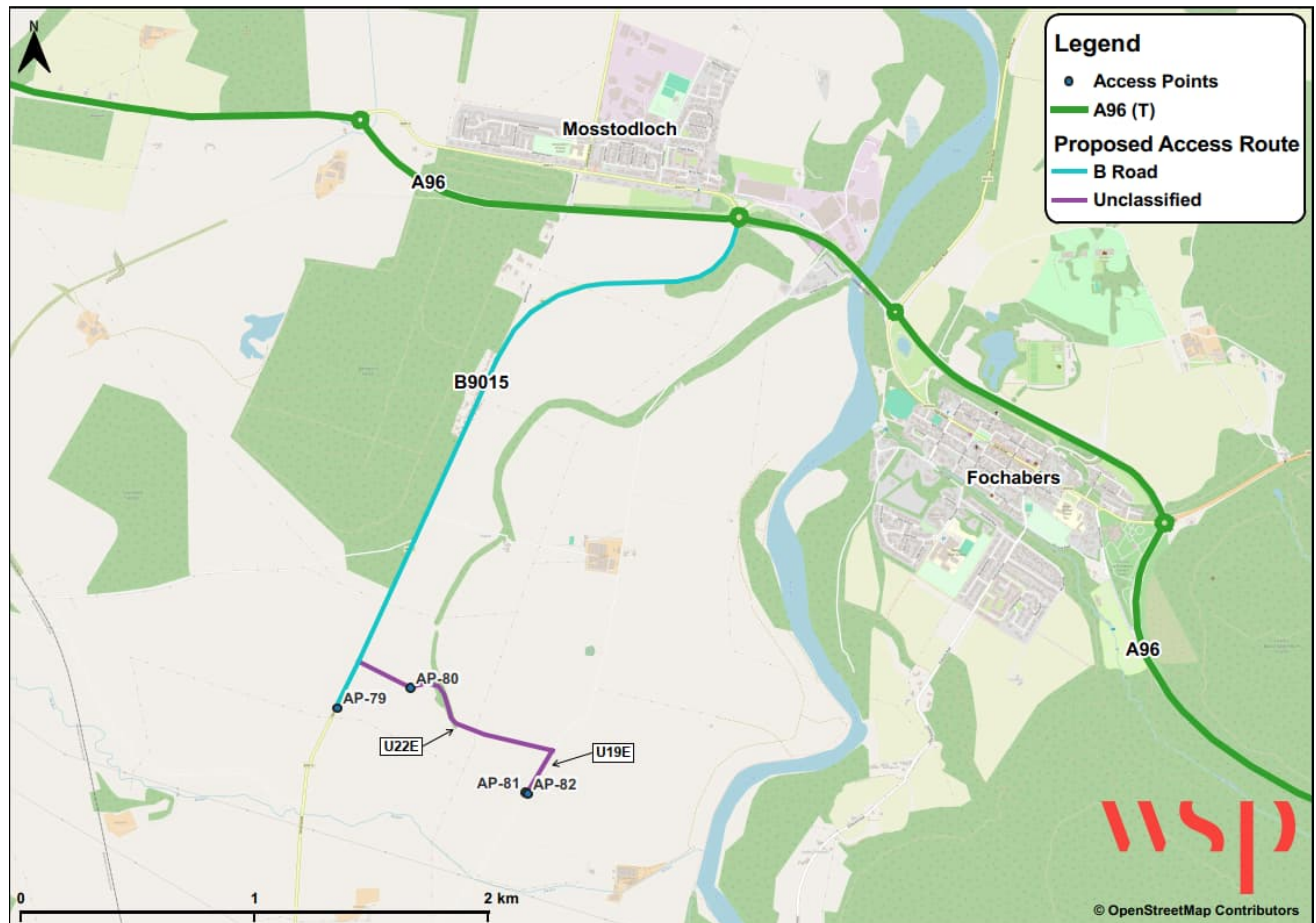
existing passing places and forming areas where larger vehicles could pass given that the increase in construction traffic is likely to be generated over a 1-2 month period.

- 7.2.37. While the U20E is a single-track road, it is supported by a number of passing places at an average spacing of 200 m. The spaces are of a reasonable length and the alignment of the results in all passing places being visible from the adjacent facility. It is therefore considered that there is no requirement to introduce any further passing places on the U20E to support the temporary increase in traffic over a 1-2 month period generated by construction of this section of the Proposed Development.

SECTION 17

- 7.2.38. **Figure 13.2.7.12** shows the route that construction traffic would use to access the tower installation sites associated with Section 17 of the Proposed Development.

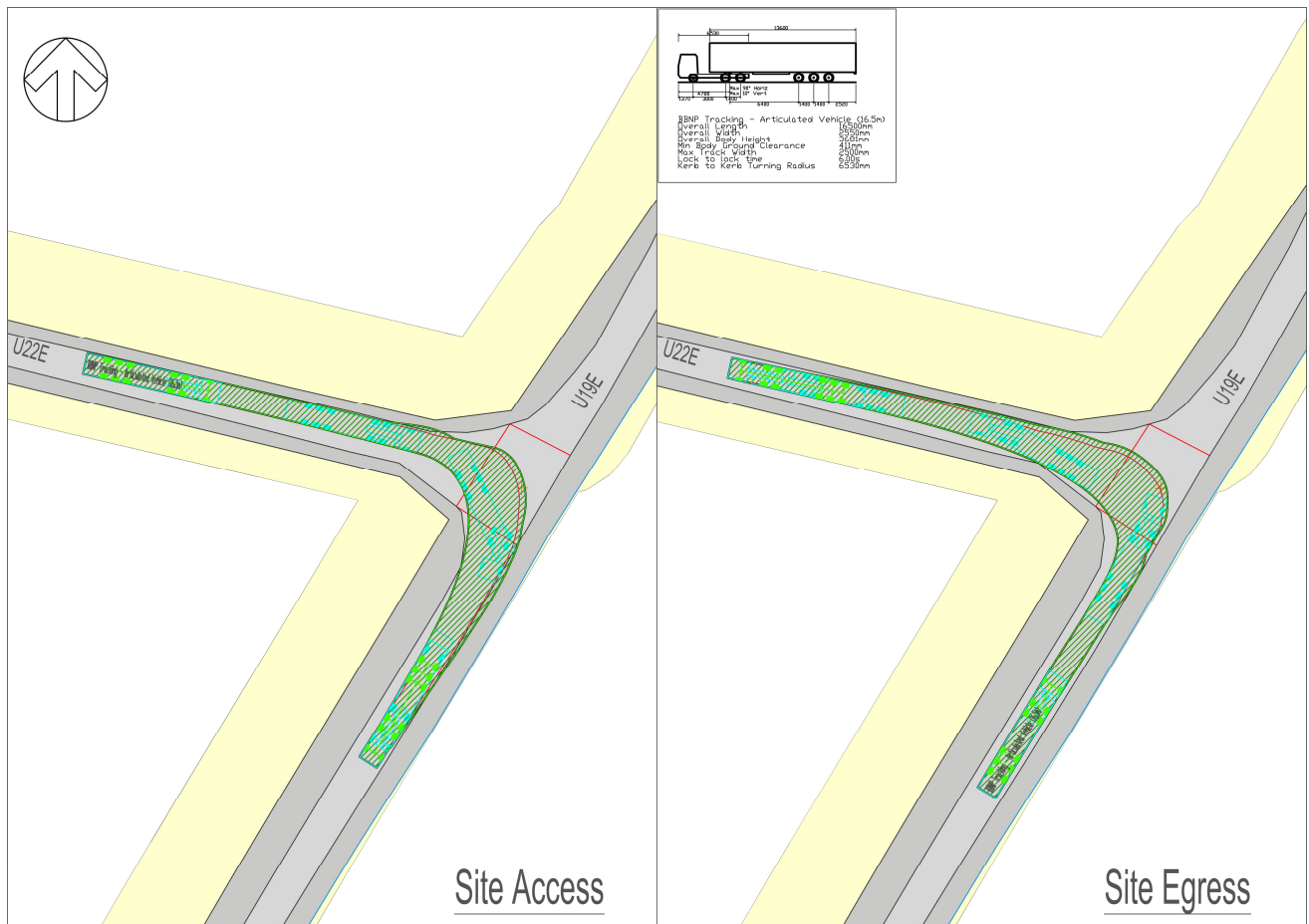
Figure 13.2.7.12: Section 17 Access Route



Pinch Point Analysis

- 7.2.39. As highlighted in **Chapter 5 of this Appendix**, a potential constraint was highlighted at the U22E / U19E junction through which HGVs would pass when accessing the tower installation sites associated with Section 17. AutoTrack was used to review the ability for HGVs to leave and return to the U129E when travelling to and from the tower installation sites. The result of the assessment is shown in **Figure 13.2.7.13**.

Figure 13.2.7.13: Potential constraint at U22E / U19E junction

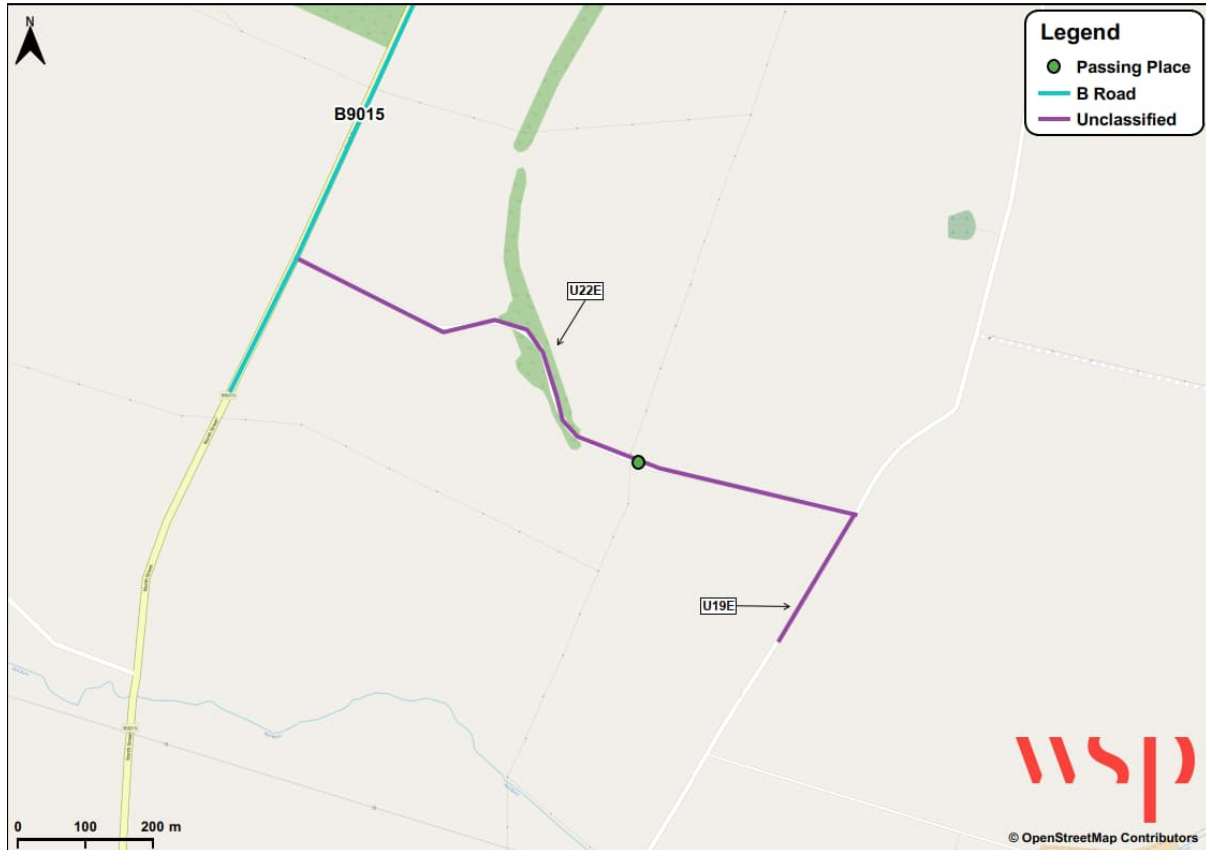


- 7.2.40. As shown by **Figure 13.2.7.13**, the analysis suggests that the junction will be able to accommodate HGV movements.

Passing Place Provision

- 7.2.41. **Figure 13.2.7.14** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 17 of the Proposed OHL Alignment.

Figure 13.2.7.14: Section 17 - Passing Places



- 7.2.42. The U22E is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 960 m of the U19E for access. As can be seen by **Figure 13.2.7.14**, there is currently one passing place on the U22E between the B9015 and the U19E.
- 7.2.43. The U19E is a single-track road of approximately 3 m in width, which is not currently supported by passing places. Construction vehicles will use approximately 270 m of the U19E for access.

Proposed Mitigation

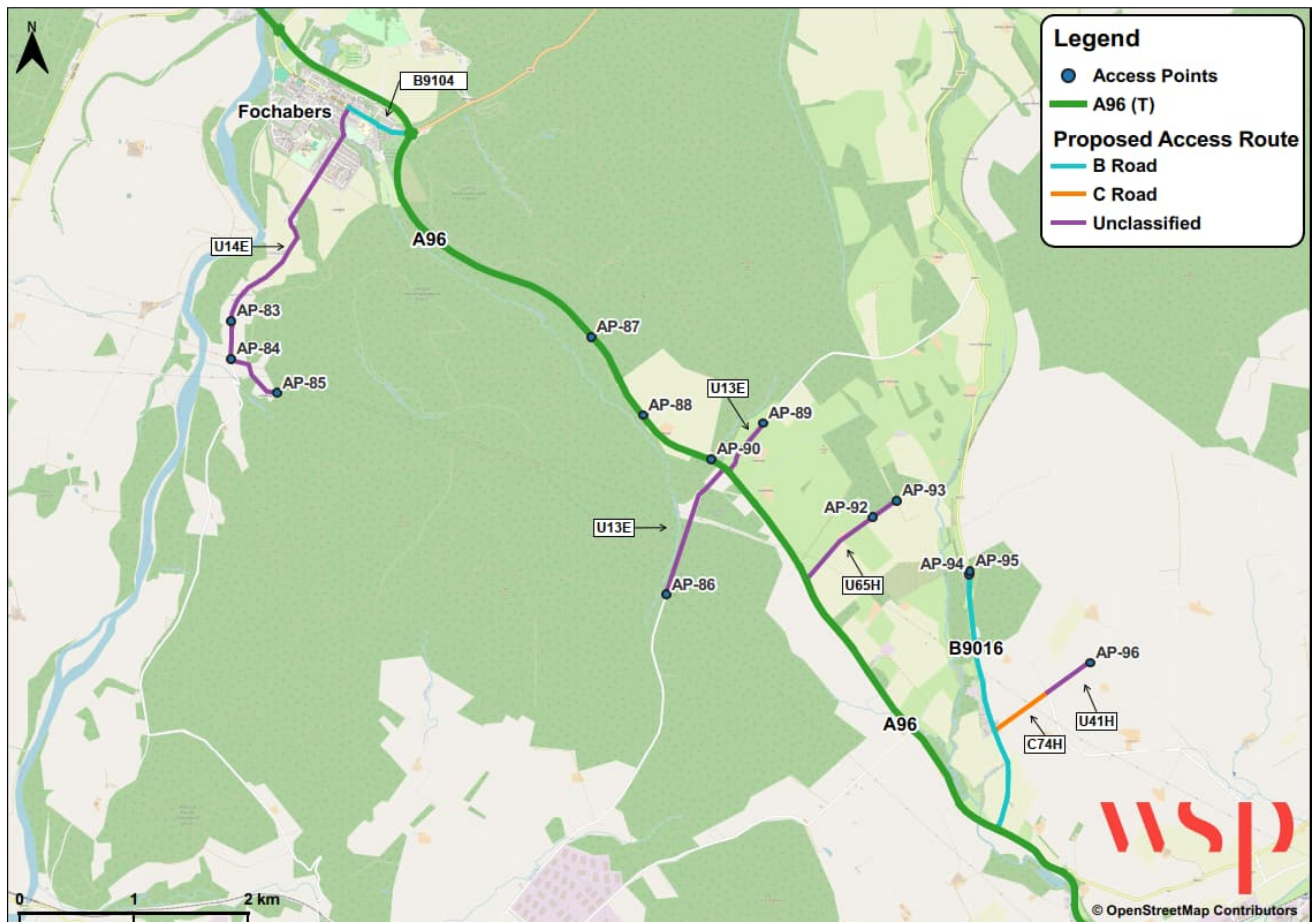
- 7.2.44. The B9015 is an agreed timber haulage route and is therefore considered suitable to accommodate the increase in construction traffic.
- 7.2.45. While the U22E connects the B9015 with the U19E, it serves no residential properties and it is therefore proposed to temporarily close the road for the short time period where this section of the Proposed OHL Alignment is being constructed (anticipated to be around 1-2 months), with the road only available for construction traffic which will be managed to ensure that two vehicles do not meet on the road.
- 7.2.46. Construction traffic will only be required to travel along the U19E for 270 m. The road is straight, with excellent visibility and it is considered that the form of the road network is appropriate to

accommodate the temporary increase in traffic generated by construction activities, with movements managed to minimise the potential for two vehicles to meet.

SECTION 18

7.2.47. **Figure 13.2.7.15** shows the routes that construction traffic would use to access the tower installation sites associated with Section 18 of the Proposed Development.

Figure 13.2.7.15: Section 18 Access Route



Pinch Point Analysis

7.2.48. As highlighted in **Chapter 5 of this Appendix**, potential constraints were identified at the following locations through which HGVs would pass when accessing the tower installation sites associated with Section 18:

- B9104 / U14E junction (**Figure 13.2.7.16**)
- A96 (T) / U65H junction (**Figure 13.2.7.17**)
- B9016 / C74H junction (**Figure 13.2.7.18**)

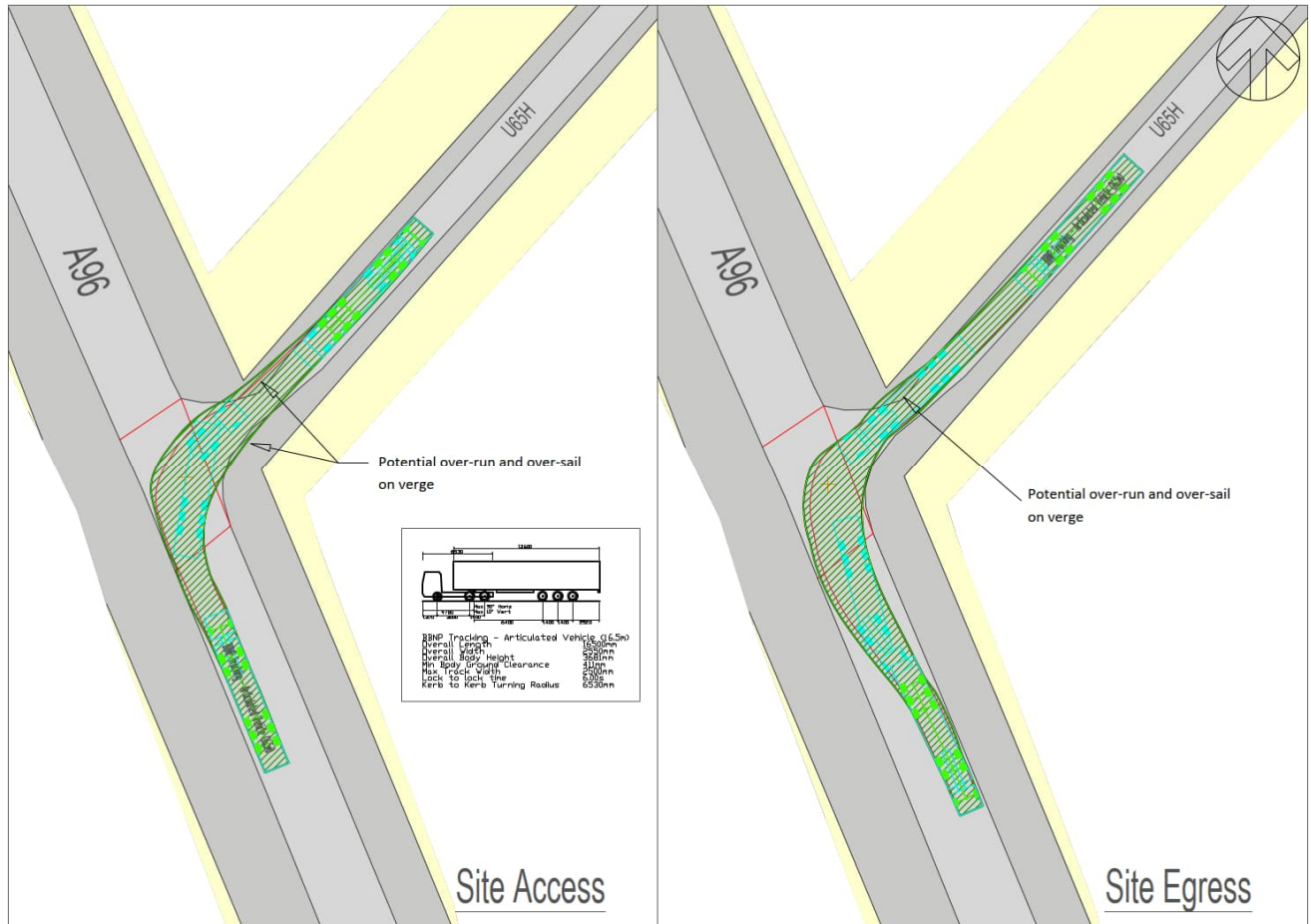
7.2.49. AutoTrack was used to review the ability for HGVs to pass through the three potential constraints to and from the tower installation sites. The result of the assessment is shown in **Figure 13.2.7.16 - Figure 13.2.7.18**.

Figure 13.2.7.16: Potential constraint at B9104 / U14E junction



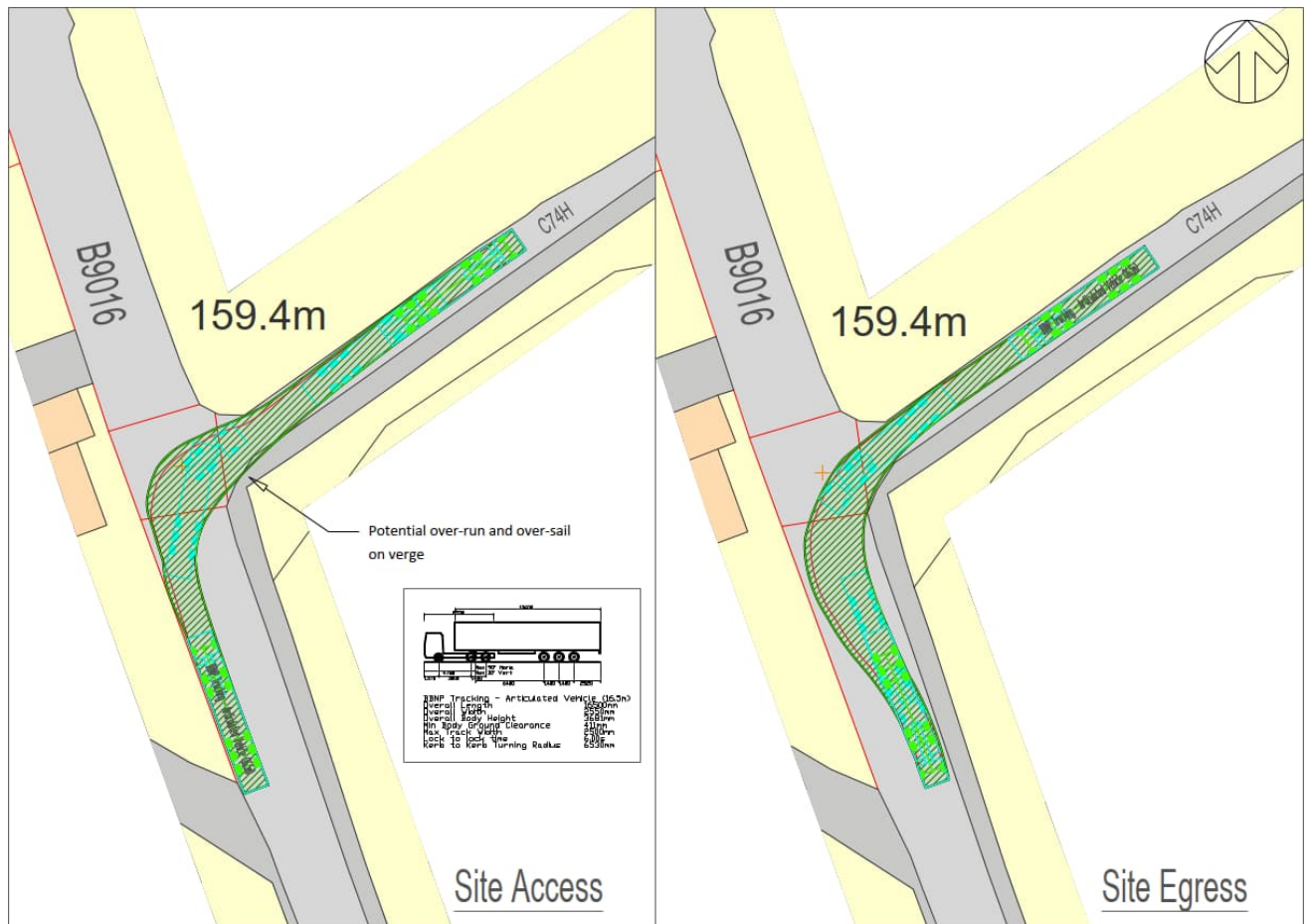
7.2.50. As shown by **Figure 13.2.7.16**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.2.7.17: Potential Constraint at A96 (T) / U65H junction



7.2.51. As shown by **Figure 13.2.7.17**, the analysis suggests that there will be a requirement to widen the junction to accommodate its use by HGVs. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land, but the exact extent of the works will require to be reviewed following completion of a topographical survey of the junction.

Figure 13.2.7.18: Potential constraint at B9016 / C74H junction

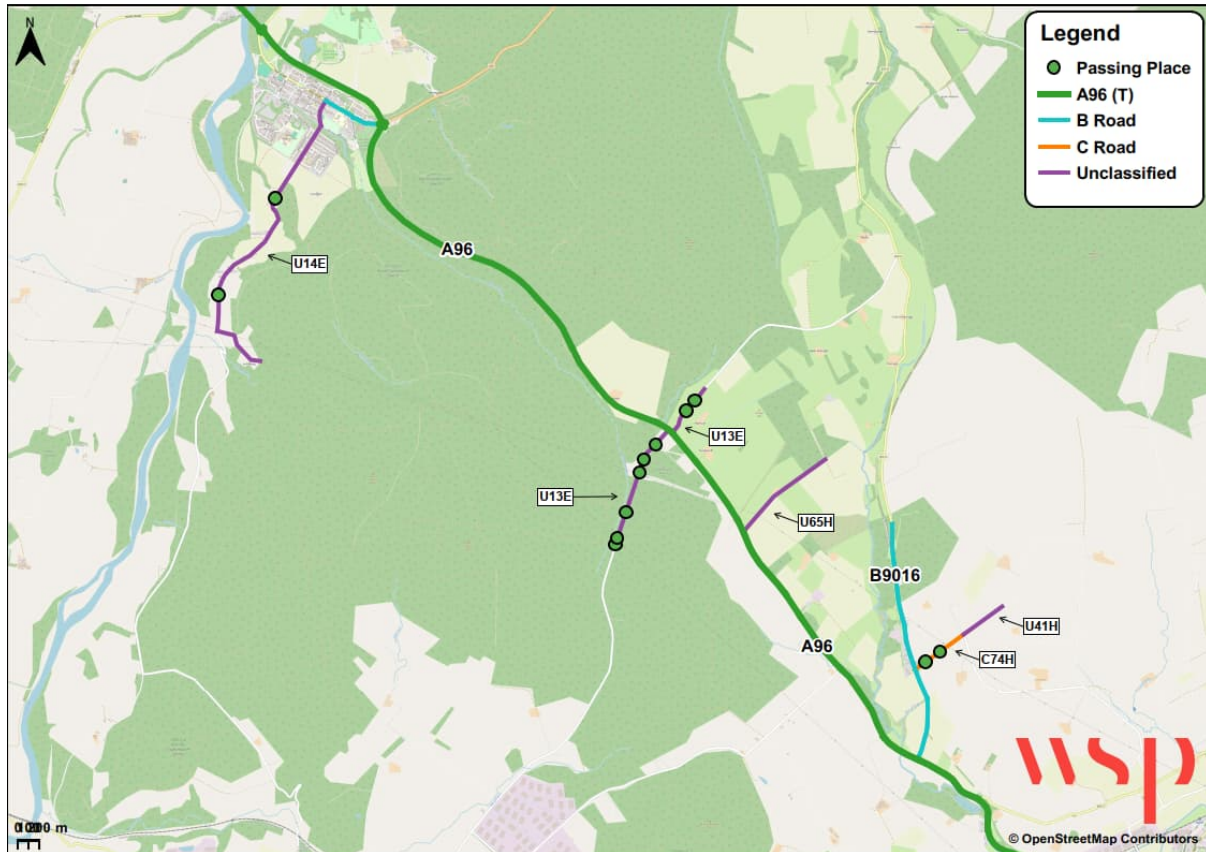


7.2.52. As shown by **Figure 13.2.7.18**, the analysis suggests that there will be a requirement to undertake a minimal amount of kerb realignment works to enable the junction to accommodate HGVs. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land, but the exact extent of the works will require to be reviewed following completion of a topographical survey of the junction.

Passing Place Provision

- 7.2.53. **Figure 13.2.7.19** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 18 of the Proposed OHL Alignment.

Figure 13.2.7.19: Section 18 - Passing Places



- 7.2.54. The U14E to the south of Fochabers is approximately 5 m in width as it passes through the village, reducing to approximately 4 m in width to the south of Fochabers. Construction vehicles will use approximately 1900 m of the U14E for access. As can be seen by **Figure 13.2.7.19**, there are currently two passing places on the U14E between Fochabers and the access points.
- 7.2.55. The U13E (south) is a single-track road approximately 3 m in width. Construction vehicles will use approximately 1440 m of the U12E for access. As can be seen by **Figure 13.2.7.19**, there are currently six passing places on the southern section of the U12E between the A96 (T) and the access point.
- 7.2.56. The U13E (north) is a single-track road approximately 3 m in width. Construction vehicles will use approximately 500 m of the U13E for access. As shown by **Figure 13.2.7.19**, there are currently two signed passing places on the northern section of the U13E between the A96 (T) and the access point.
- 7.2.57. The U65H is a single-track road of approximately 3 m in width that is not currently supported by signed passing places. Construction vehicles will use approximately 1100 m of the U65H for access and therefore there is a requirement to introduce new passing places on this section of road.

- 7.2.58. The section of the C74H that is to be used for access in section 18 is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 650 m of the C74H for access. As shown by **Figure 13.2.7.19**, there are currently two passing places on the C74H between the B9016 and the U41H. The section of the U41H that is to be used for access in Section 18 is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 650 m of the U41H for access.

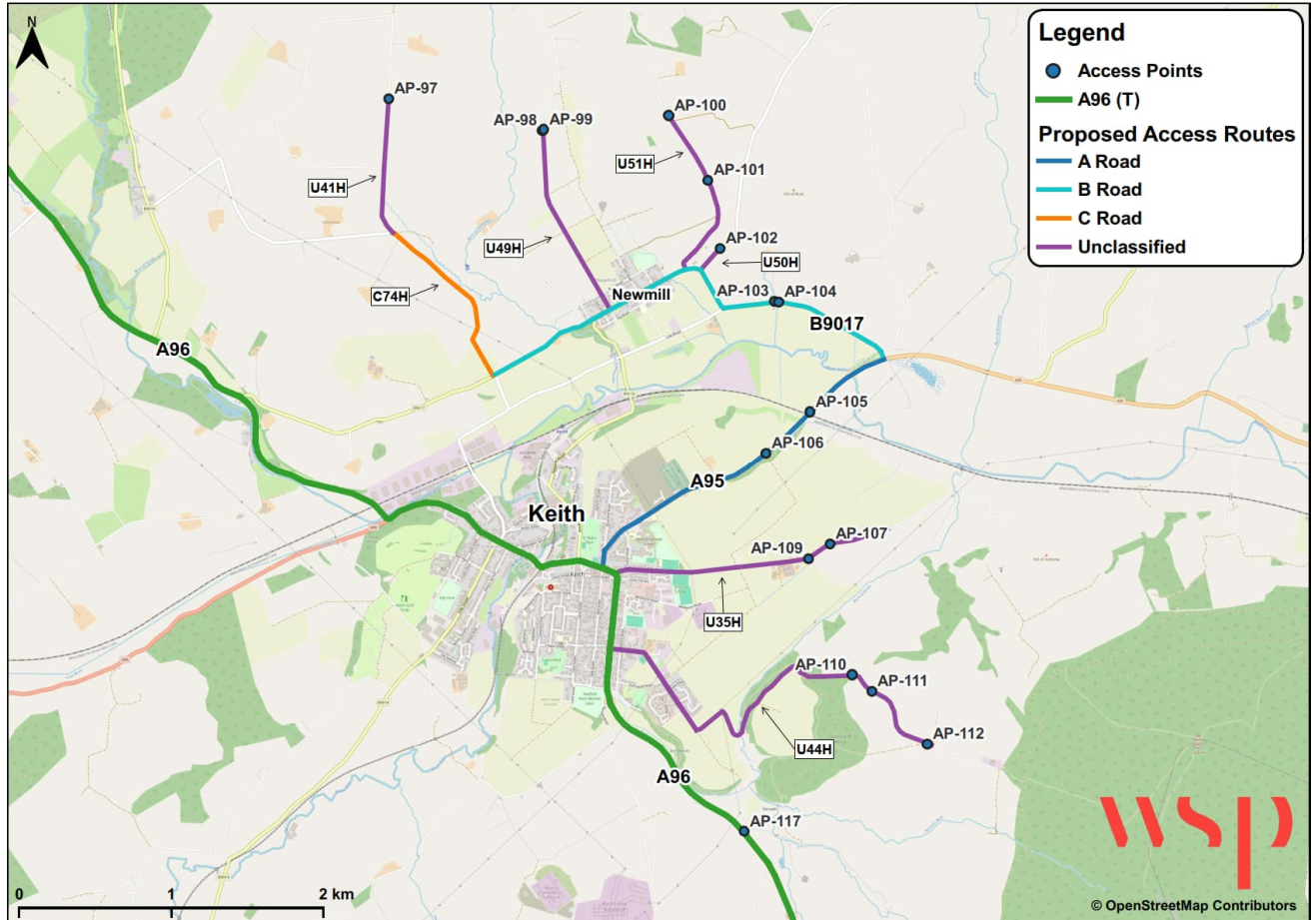
Proposed Mitigation

- 7.2.59. As previously highlighted, there is likely to be a requirement to widen the U65H at its junction with the A96 (T) and there is a potential requirement to widen the C74H at its junction with the B9016 to support access to the tower installation site located on the western side of the B9103 within Section 18 of the Proposed OHL Alignment.
- 7.2.60. It is considered that there may be merit in lengthening the existing passing places and forming areas where larger vehicles could pass on the U14E given that the increase in construction traffic is likely to be generated over a 1-2 month period.
- 7.2.61. The U13E has been identified as an Agreed Route to accommodate timber traffic and has been upgraded to provide suitably sized passing places at regular intervals. It is therefore considered that this road is appropriate to support access to the tower installations located close to the road.
- 7.2.62. The U65H provides access to two farms and is therefore considered to accommodate a minimal number of vehicle movements on a daily basis. While there are no formal passing places, there are locations where two vehicles could pass each other. With this in mind, it is suggested that the Principal Contractor will liaise with the owners of the farms to minimise the impact of construction traffic on their use of the road given that the road would only accommodate a temporary increase in traffic movements over a 1-2 month period. Arrivals and departures could also be managed by a banksman to be stationed at the southern end of the road, to avoid the need to introduce new passing places on this section of the road to accommodate the temporary increase in traffic movements.
- 7.2.63. While the B9016 is noted as being an agreed route for timber traffic, the C74H and U41H are only noted to be roads which are key to timber extraction activities. As indicated on **Figure 13.2.7.19**, there are passing places provided on the C74H, but none on the U41H. Both roads are straight with good levels of forward visibility, and it is considered that the existing passing place provision on the C74H will support the temporary increase in traffic movements over a 1-2 month period associated with construction activities.
- 7.2.64. The U41H serves a limited number of residential properties, and it forms a loop by connecting to the C74H in two locations. It is therefore considered that its arrangement could support its closure for a 1-2 month period along with the management of construction traffic arrivals and departures, to avoid a requirement to introduce any additional passing places to support the temporary increase in traffic.

SECTION 19

7.2.65. **Figure 13.2.7.20** shows the routes that construction traffic would use to access the tower installation sites associated with Section 19 of the Proposed Development.

Figure 13.2.7.20: Section 19 Access Route



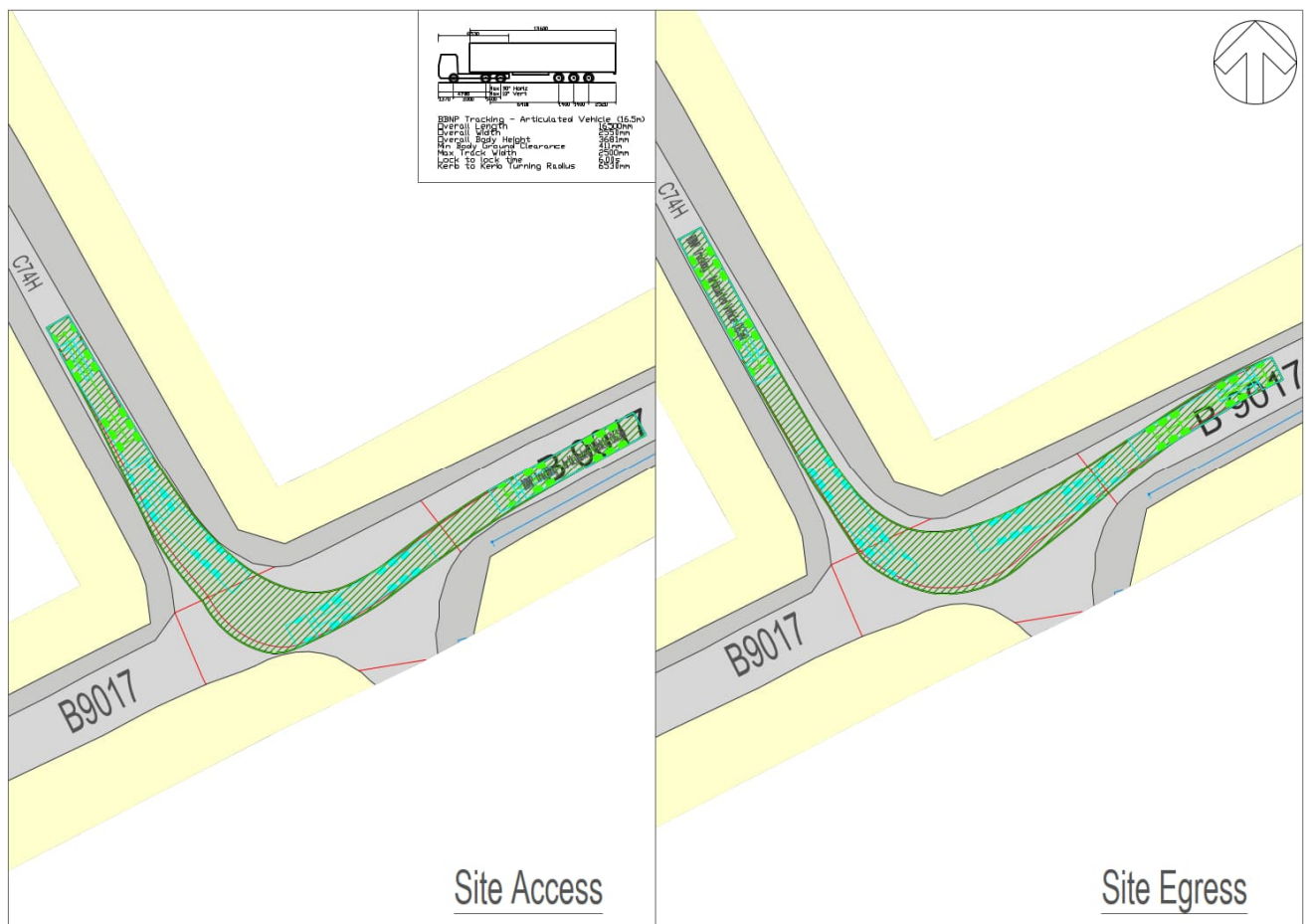
Pinch Point Analysis

7.2.66. As highlighted in **Chapter 5 of this Appendix**, a potential constraint was highlighted at the following locations:

- B9017 / C74H junction (**Figure 13.2.7.21**)
- B9017 / U49H junction (**Figure 13.2.7.22**)
- B9017 / C51H junction (**Figure 13.2.7.23**)
- B9017 / C50H junction (**Figure 13.2.7.24**)

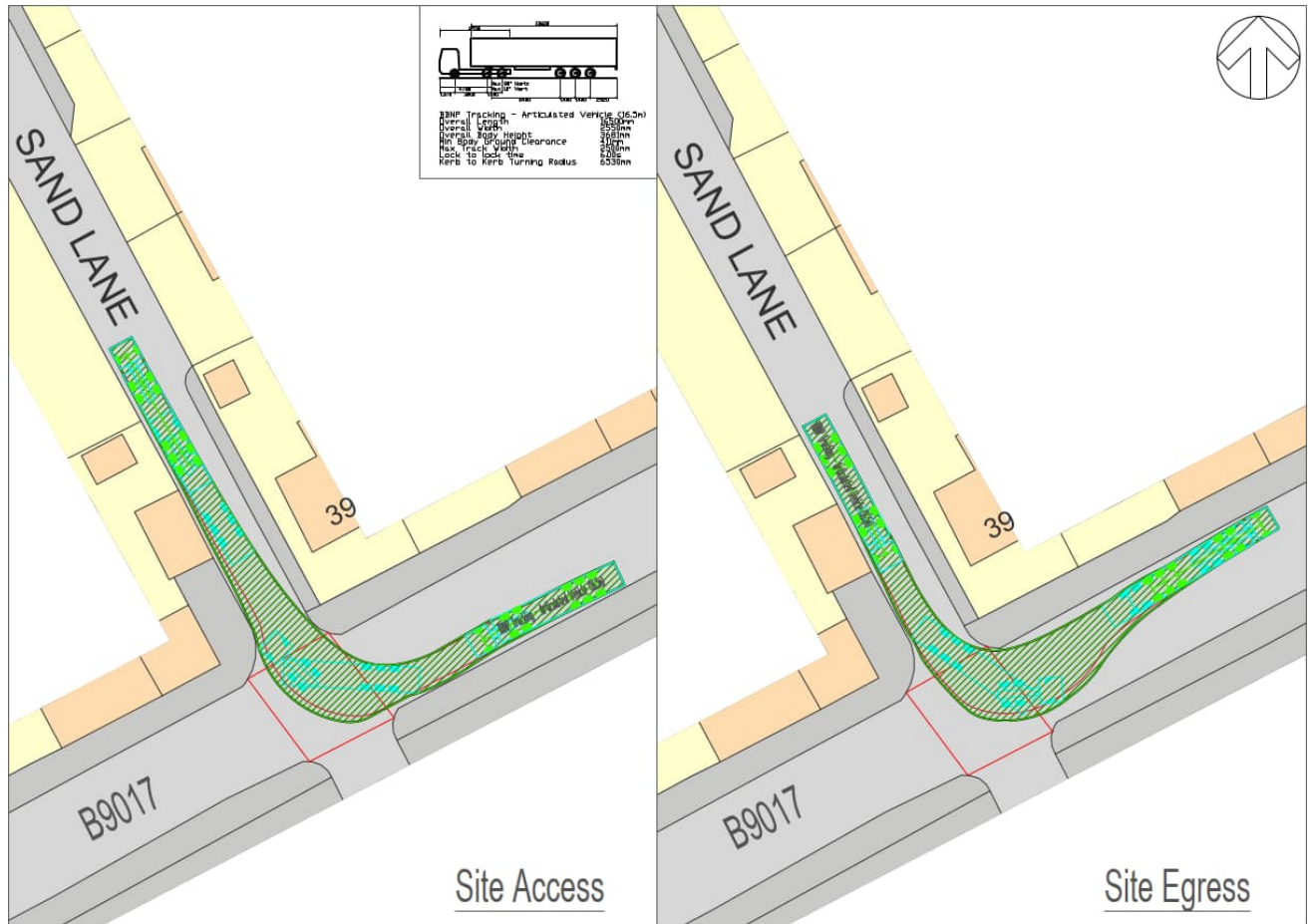
7.2.67. AutoTrack was used to review the ability for HGVs to pass through the three potential constraints to and from the tower installation sites. The result of the assessment is shown in **Figure 13.2.7.21 - Figure 13.2.7.24**.

Figure 13.2.7.21: Potential constraint at B9017 / C74H junction



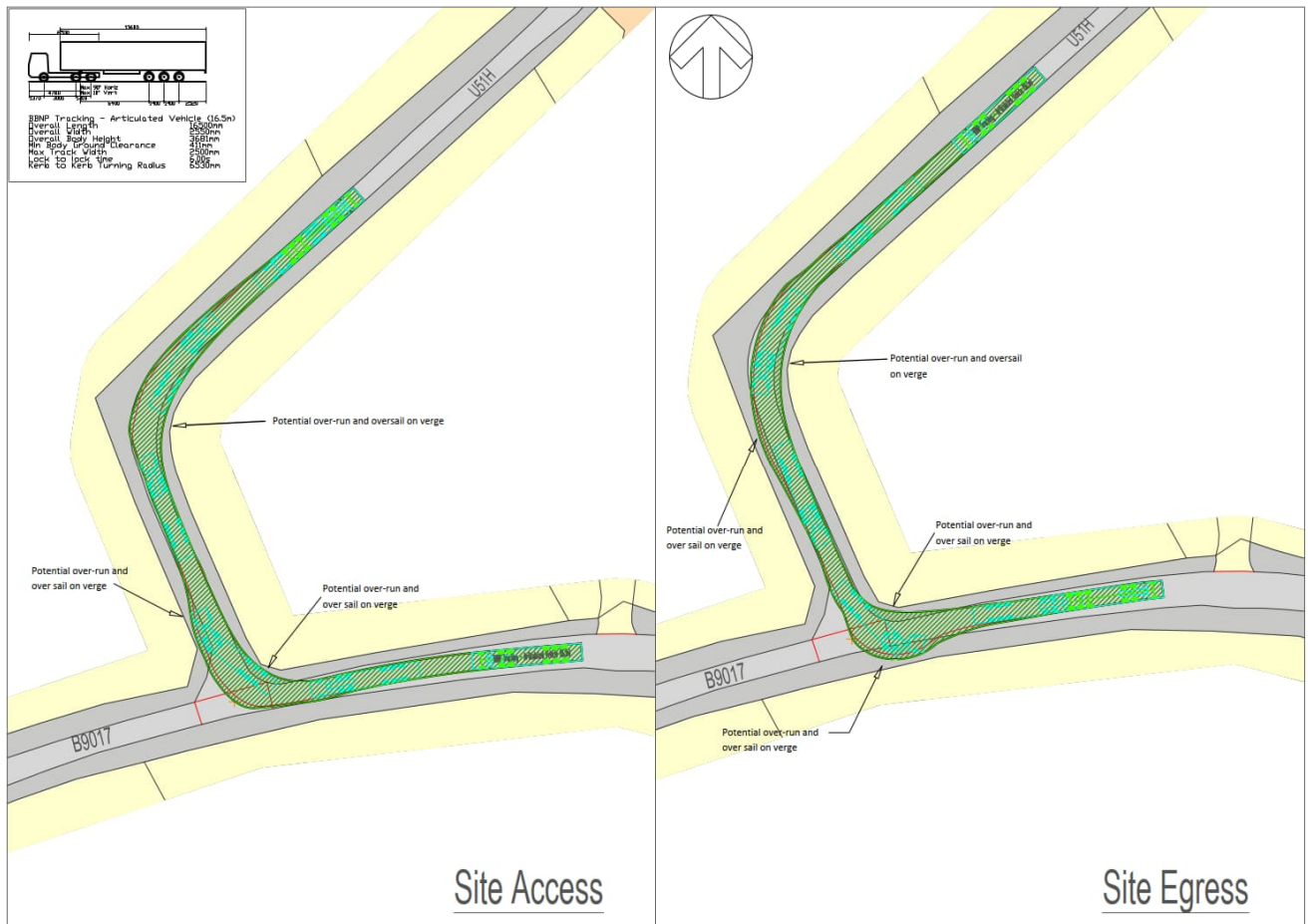
7.2.68. As shown by **Figure 13.2.7.21**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.2.7.22: Potential constraint at B9017 / U49H junction



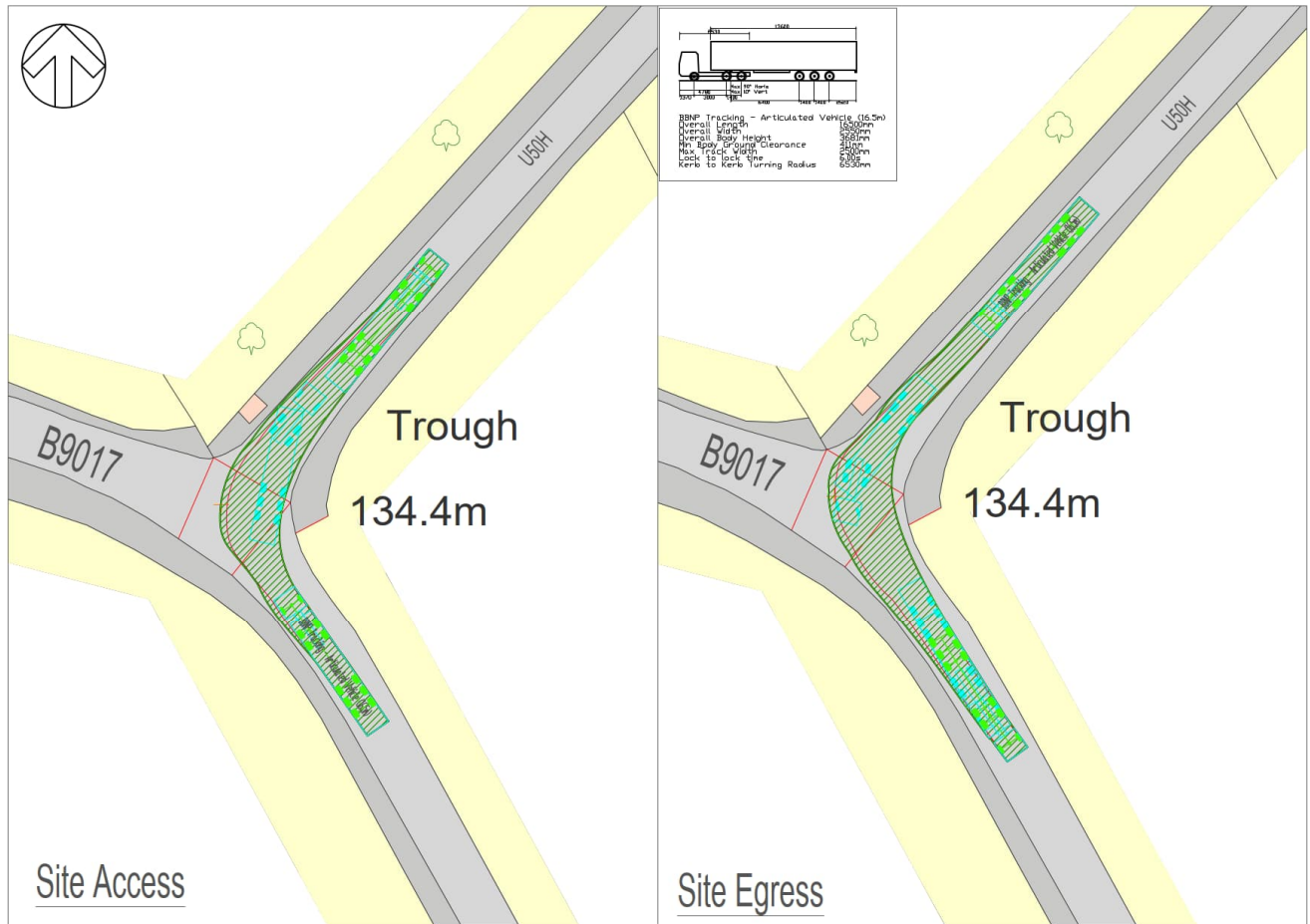
7.2.69. As shown by **Figure 13.2.7.22**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.2.7.23: Potential constraint at B9017 / U51H junction



- 7.2.70. As shown by **Figure 13.2.7.23**, the analysis suggests that there will be a requirement to widen the junction to accommodate its use by HGVs. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land, but the exact extent of the works will require to be reviewed following completion of a topographical survey of the junction.

Figure 13.2.7.24: Potential constraint at B9017 / U50H junction

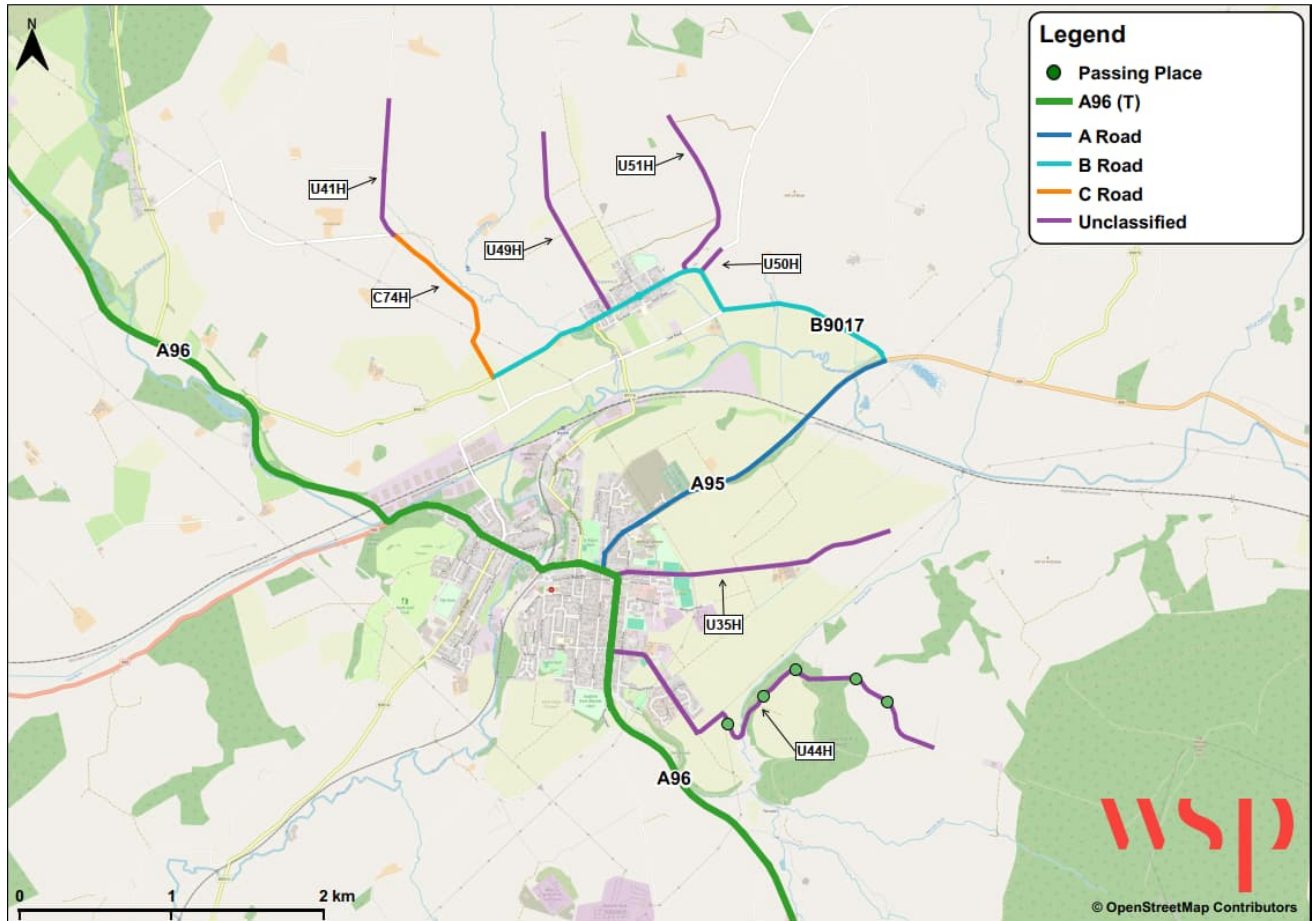


7.2.71. As shown by **Figure 13.2.7.24**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Passing Place Provision

7.2.72. **Figure 13.2.7.25** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 19 of the Proposed OHL Alignment.

Figure 13.2.7.25: Section 19 - Passing Places



- 7.2.73. The Timber Transport Forum confirms that the B9017 is an agreed route to support timber extraction activities.
- 7.2.74. The section of the C74H that is to be used for access in Section 19 is a single-track road of approximately 3 m in width that is not currently supported by signed passing places. An approximately 1300 m section of the C174H is to be used for construction vehicle access.
- 7.2.75. The section of the U41H that is to be used for access in Section 19 is a single-track road of approximately 3 m in width that is not currently supported by signed passing places. An approximately 950 m section of the U41H is to be used for construction vehicle access.
- 7.2.76. The U49H is a single-track road of approximately 3 m in width that is not currently supported by signed passing places. An approximately 1600 m section of the U49H is to be used for construction vehicle access.
- 7.2.77. The U51H is a single-track road of approximately 3 m in width that is not currently supported by signed passing places. An approximately 1100 m section of the U51H is to be used for construction vehicle access.

- 7.2.78. The U50H is a single-track road of approximately 3 m in width that is not currently supported by signed passing places. An approximately 320 m section of the U50H is to be used for construction vehicle access.
- 7.2.79. The U35H is a single-track road of approximately 3 m in width that is not currently supported by signed passing places. An approximately 1400 m section of the U35H is to be used for construction vehicle access.
- 7.2.80. The U44H is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 3200 m of the U44H for access. As shown by **Figure 13.2.7.25**, there are currently five passing places on the U44H.

Proposed Mitigation

- 7.2.81. As previously highlighted, there is likely to be a requirement to widen the U51H at its junction with the B9017 to support access to the tower installation site located to the northwest of Newmill within Section 19 of the Proposed OHL Alignment.
- 7.2.82. All of the unclassified roads which it is intended to use to support the Proposed Development's construction are recognised to be key to timber extraction activities by the Timber Transport Forum, but none of the roads are supported by signed passing places.
- 7.2.83. The C74H and U41H serve a limited number of residential properties and farms and while neither road is currently supported by passing places, it is considered that the arrangement of the roads could provide opportunity for the Principal Contractor to liaise with local property and farm owners to close the roads to general traffic. The contractor will then work with owners to minimise the impact of construction traffic on their use of the roads given that the road would only accommodate a temporary increase in traffic movements over a 1-2 month period. A banksman could also be used to manage construction traffic movements if required.
- 7.2.84. The U49H also serves a limited number of residential properties and does not provide a through route for traffic. It is again considered that a banksman could be stationed at the southern end of the road to manage construction vehicle access to minimise disruption to existing road users while avoiding a requirement to form new passing places to support the temporary increase in construction traffic over a 1-2 month period.
- 7.2.85. The U51H serves a limited number of residential properties, and while it provides an option for traffic to travel from the B9017 to the U50H, it is considered that it could be closed to general traffic, with the management of construction traffic arrivals and departures to avoid a requirement to introduce any additional passing places to support the temporary increase in traffic over a 1-2 month period.
- 7.2.86. As previously highlighted, construction traffic would only travel along the U50H for 320 m. The road is relatively straight and therefore provides good levels of visibility between the location where vehicles would leave the B9017 and access the tower installation site and it is considered that there is no requirement to introduce any new passing places on the road to support the temporary increase in traffic over a 1-2 month period.
- 7.2.87. While the U35H currently has no formal passing places, there are plans to introduce new passing places as part of a consented development to be located on the road which is approximately 5 m in width within Keith, reducing to a single-track road to the east of the town. The road serves a limited number of properties to the east of the town and it is considered that there is no requirement to

introduce any passing places which are in addition to that to be delivered in association with the consented battery energy storage facility development to be located part way along the U35H.

- 7.2.88. The U44H is a minimum of 5 m within Keith, reducing to approximately 3 m outwith the town. While the road only provides access to a limited number of properties, it is used to support recreational access to Balloch Woods. The road is currently used to support timber extraction activities from the wood, but it is accepted that there may be merit in lengthening the existing passing places to support the Proposed Development's construction.

7.3 PROPOSED MITIGATION SUMMARY

- 7.3.1. **Table 7.2** summarises the results of the impact assessment in terms of the indicative measures it is proposed to implement on each road to mitigate the impact of the temporary increase in traffic generated by construction activities.

Table 7.2: Proposed Mitigation Measure Summary

Section	Road	Potential Mitigation Measure
12	U88E East	Lengthen a proportion of the existing passing places
	U88E South	Liaise with property owner to minimise the impact of construction traffic on the operation of the road
	C11E	Manage arrivals and departures to minimise the impact of construction traffic on the operation of the road
13	C12E	None - Timber Transport Forum Agreed Route
	U109E	None - Timber Transport Forum Agreed Route
14	C12E	None - Timber Transport Forum Agreed Route
	C13E	None - Timber Transport Forum Agreed Route
15	A941	None - Timber Transport Forum Agreed Route
16	U129E	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U20E	None - sufficient number of existing passing places
17	U22E	Temporary closure of the road
	U19E	None - construction traffic will travel on the road for less than 300 m before leaving the adopted road network
18	U14E	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U13E	None - Timber Transport Forum Agreed Route
	U65H	Liaise with owner of the two farms to minimise the impact of construction traffic on the operation of the road
	C74H	None - sufficient number of existing passing places
	U41H	Temporary closure of the road
19	C74H / U41H	Liaise with local property owners to minimise the impact of construction traffic on the operation of the road
	U49H	Liaise with local property owners to minimise the impact of construction traffic on the operation of the road

	U51H	Temporary closure of the road
	U50H	None - short length of the road to be used
	U35H	None - consented development to provide additional passing places
	U44H	Lengthen a proportion of the existing passing places

- 7.3.2. It is considered that the unclassified road network can accommodate the temporary increase in traffic generated by construction activities, with the main impact anticipated for a period of no more than two months on any of the unclassified road network. Where possible, HGV arrivals and departures will be managed to reduce the potential for two larger vehicles to meet on the unclassified roads which are to be used to support access to the installation sites.
- 7.3.3. There may also be the requirement to alter the alignment of the road network or kerblines at existing junctions to accommodate HGV movements associated with construction activities. While the requirement for these will require to be confirmed by a topographical survey of the potential constrained areas, the potential mitigation is summarised in **Table 7.3**.

Table 7.3: Potential Road Improvements

Section	Road	Location	Potential Mitigation Measure
12	C11E	Dorback Burn Bridge	Road widening
16	U1295	Site Access Point	Junction widening
18	U65H	A96 (T) / U65H junction	Junction widening
	C74H	B9016 / C74H junction	Junction widening
19	U51H	B9017 / U51H junction	Junction widening

7.4 ADDITIONAL MITIGATION MEASURES

- 7.4.1. In addition to the road improvements identified within **Table 7.2** and **Table 7.3**, **Table 7.4** summarises general measures which could be promoted as part of the implementation of the detailed CTMP to mitigate the impact of construction traffic on the operation of the local transport network.

Table 7.4: General Mitigation Measures

Mitigation Measure	Proposed Commitment Measure
Route Signage	Temporary signage will be erected on the roads in the vicinity of the proposed site accesses, and at other locations as considered necessary, to warn drivers of construction activities and the potential to encounter construction vehicles. The exact nature and location of the signage would be agreed with MC prior to the commencement of construction activities at each site.
Contractor Speed Limits	It is proposed to impose a reduced speed limit for all construction traffic on sections of the proposed access route deemed sensitive to the effects of construction traffic. As such, it is proposed to implement signage located at appropriate locations advising construction traffic of the reduced speed limit:

Mitigation Measure	Proposed Commitment Measure
Route Enforcement	The routes and time restrictions identified in the CTMP will be strictly enforced. The Principal Contractor and all subcontracting companies involved in the construction of the Proposed Development, will be required to ensure they follow the correct routes. The routes will be clearly defined in all contracts and clearly signposted for all drivers to see. This will be reinforced by inclusion within the Principal Contractor's site induction and regular toolbox talks for site operatives. The requirement to stay on the road surface, and avoid tracking off onto verges, will also be reinforced via these means.
Banksman	- Qualified personnel (banksman) with appropriate street works licences will be in place at key access points to assist deliveries entering or vehicles exiting the working areas where required. - In addition to the above, banksman may also be required to perform traffic management duties to minimise potential conflict with other road users.
Information Pack and Communications	- Driver information packs will be provided to all contractors which will form part of the contractual agreement between contractors and the principal constructor. The information pack is likely to include details of the following CTMP requirements: - Purpose and safety rules. - Construction routes. - Pre-booking sheet and TMP site contacts. - Vehicle compliance guidance. - Driver training help. - PPE requirements. - Driver Flashcards. - Finalised information packs and communication details will be shared with MC prior to the commencement of works.
Travel Plan	The Principal Contractor will develop and implement a Travel Plan, which will seek to reduce the effects of construction staff travelling to the sites on the local road network, in particular where they would be required to pass through local settlements. All on site construction staff using private vehicles to access each site will be required to park their vehicles in designated construction site car parks. No parking will be permitted on the public road network in the vicinity of the Proposed Development.

8 SUMMARY AND CONCLUSIONS

8.1 SUMMARY

- 8.1.1. WSP UK Limited has been appointed by Scottish Hydro Electric Transmission PLC (the Applicant) to provide consultancy advice in support of the Proposed Development which is described in **Chapter 1: Introduction and Background** of the EIAR, **Paragraph 1.1.2**.
- 8.1.2. Moray (MC) identified a requirement to prepare a Transport Assessment to consider the impact of construction traffic on the operation of the local transport network and this TA has been prepared in support of the application set out in **Chapter 1: Introduction and Background, Paragraph 1.1.2** of the EIAR.
- 8.1.3. The level of vehicle trips anticipated to be generated by construction activities has been derived from an estimate and an initial programme provided the Principal Contractor, with the trips assigned to the local road network on the basis of the anticipated locations of Yards and quarries which will be used to support the Proposed Development's delivery.
- 8.1.4. The largest vehicles associated with the development are mobile cranes of 150 t and 250 t as necessary. Mobile cranes have been assessed as AILs through an ALRA found within **Appendix 13.5: Abnormal Load Route Assessment**. For the purposes of HGV assessments, the longest vehicle type making the most frequent trips to site will be a 16.5 m artic HGV and this has been used to inform the TAs located within **Appendix 13.1: Highland Council - Transport, 13.2: Moray Council - Transport Assessment and 13.3: Aberdeenshire Council - Transport Assessment** of the EIAR.
- 8.1.5. The area is predominantly rural in nature and the transport network reflects this. A proportion of the roads which it is intended to use to support access to the Proposed OHL tower installation sites, are agreed timber haulage routes and therefore considered to be appropriate to accommodate the temporary increase in traffic generated by construction activities. None of the roads which form the proposed access routes are signed as being unsuitable for HGV use and there are no weight restrictions identified on the unclassified road network which would support access to the tower installation sites.
- 8.1.6. A detailed review of the proposed access routes has been undertaken, with the concept of measures identified to mitigate the impact of construction traffic on each of the unclassified roads which form the access routes.

8.2 CONCLUSION

- 8.2.1. This report is intended to stand as a snap-shot in time, and the indicative measures proposed will be developed and expanded as the project progresses up to the construction process. The mitigation measures will be further developed by the Principal Contractor, in conjunction with MC and Transport Scotland (TS) and other appropriate stakeholders.
- 8.2.2. Potential measures have been identified to manage construction traffic movements, and it is intended that this TA be submitted in support of the S37 application.

- 8.2.3. It is considered that these mitigation measures can form the basis of the PRIs necessary which when submitted to MC may assist in discharging any relevant Planning Conditions attached to the consent.
- 8.2.4. The Principal Contractor will subsequently have further detailed dialogue with MC as plans are refined, to ensure that a suitable set of measures are implemented in advance of the commencement of construction activities to mitigate the temporary increase in traffic on the operation of the local road network.

Annex A

FIGURES



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