

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

**Appendix 13.3 – Aberdeenshire Council -
Transport Assessment**





Scottish and Southern Electricity Networks Transmission

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

Appendix 13.3: Aberdeenshire Transport Assessment





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

Appendix 13.3: Aberdeenshire 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.

Aberdeenshire Council (AC) 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 generate a maximum trip generation equating to 8-10 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**. 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 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, 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 / Amey NE / AWPR NE, Network Rail and AC 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
20	C106S	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U108S	Liaise with property owner to minimise the impact of construction traffic on the operation of the road.
21	C100S	Lengthen a proportion of the existing passing places
	U102S	Lengthen a proportion of the existing passing places
	C88S	Form areas where larger vehicles could pass
	C89S	Liaise with property owner to minimise the impact of construction traffic on the operation of the road
	U89S	Form areas where larger vehicles could pass
	U87S	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U90S	Liaise with property owner to minimise the impact of construction traffic on the operation of the road
	U94L	Form areas where larger vehicles could pass
	U93bL	Form areas where larger vehicles could pass
	U92S	Form areas where larger vehicles could pass
	U33S	Form areas where larger vehicles could pass
22	C22S	None - Sufficiently wide to enable two vehicles to pass
	C25S	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U24S	Form areas where larger vehicles could pass
	U25S	Lengthen a proportion of the existing passing places
	C21S (north of Mill of Colp)	Lengthen existing passing places and form additional areas where larger vehicles could pass
	C21S (north of Little Idoch)	Form areas where larger vehicles could pass
	C26S	Form areas where larger vehicles could pass

Section	Road	Potential Mitigation Measure
	U1S (W)	Form areas where larger vehicles could pass
	U1S (E)	Lengthen a proportion of the existing passing places
	U130S	Form areas where larger vehicles could pass
23	C123B	None - Sufficiently wide to enable two vehicles to pass
	C125B	None - Sufficiently wide to enable two vehicles to pass
	C127B	Form areas where larger vehicles could pass
	U122B	Form areas where larger vehicles could pass
24	C97B	Lengthen a proportion of the existing passing places
	C100B	Form areas where larger vehicles could pass
	C103B	Lengthen a proportion of the existing passing places
25	C56B	None - Two-way Road
	C38B	None - Sufficiently wide to enable two vehicles to pass
	C39B	Lengthen a proportion of the existing passing places
	U52B (N)	Lengthen a proportion of the existing passing places
	U52B (W)	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U55B	Lengthen a proportion of the existing passing places
	U70B	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
20	C106S	C106S / U108S junction	Junction widening
21	U102S	Bridge of Pitfancy	Road widening
	C88S	C88S / C88S junction	Junction widening
	C89S	Tight bends on C89S	Road widening
	U89S	U89S / C89S junction	Junction widening
	C87S	C87S / U90S junction	Junction widening
	B9024	B9024 / U94L junction	Junction widening
	U94L	Tight bends on U94L	Road widening
	U94L	U94L / U93bL junction	Junction widening
22	U127B	U127B / U122B junction	Junction widening
	U1S	U1S / C26S junction	Junction widening
		Tight bend on U1S	Road widening
	U24S	C22S / U24S junction	Junction widening

Section	Road	Location	Potential Mitigation Measure
		C25S / U24S junction	Junction widening
23	U122B	U122B / U127B junction	Junction widening
24	C100B	C97B / C100B junction	Junction widening
25	U55B	C38B / U55B 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 AC 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. Aberdeenshire Council (AC) identified a requirement 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 routes 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, AC 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 AC's Roads Officer (ACRO) 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
Aberdeenshire Council - Roads Officer (ACRO)	EIA Scoping Request - August 2024	Roads Development have already commented on the linked enquiry ENQ/2024/0242, and further information on the main construction elements of the Project was included on the response to that earlier enquiry.	Noted.
		Aberdeenshire Council (AC) state that as the proposed corridor will be crossing the Trunk Roads A96 (T) and A90, then Transport Scotland should be consulted throughout this study, where proposed works may impact these roads.	Noted.
		AC would be in a position to comment on specific locations for any new site compounds, temporary and permanent site accesses once these have been confirmed.	Noted. The locations of the indicative compound locations (also referred to as Yards), and site accesses are indicative at this stage and which Chapter 13: Traffic has been based on. It is considered that the exact location of these can be agreed in consultation.
		It is understood that construction of the pylon towers would take place on-site, as opposed to the towers being pre constructed and then transported to their intended locations. Although this may have a favourable impact upon the possible number of over-sized loads which will require transportation on the local road network, there will still be the requirement for significant construction movements throughout the construction period. For this it will be necessary for the scheme promoter to submit detailed Construction Traffic Management Plans to Aberdeenshire Council, as well as to Transport Scotland (where proposed construction traffic routes are impacting the Trunk Road Network - i.e. the A90 and A96).	Noted. 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 . 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 and Council – Transport Assessment, Appendix 13.2: Moray Council – Transport Assessment and Appendix 13.3: Aberdeenshire Council – Transport Assessment . An outline CTMP has been included within Appendix 3.4: Outline Construction Traffic Management Plan which sets out the proposed construction traffic

Body / Organisation	Type of Consultation and Date	Response Outlining a Requirement to Discuss	How Response has been Considered
			routes and potential mitigation measures. It is considered that following submission, the detailed CTMP will be finalised by the Principal Contractor and will set out in full, the agreed mitigation measures which will be implemented during construction. Until this time, it is not possible to finalise the CTMP.
		At this stage, Roads Development has no objections to the proposed corridor route, although they would welcome the opportunity to comment further as and when construction traffic routes are identified, as well as temporary and permanent work sites and their accesses.	Noted. A Draft TA was submitted for comment on 21 February 2025, however, to date no response has been received. The Applicant is committed to working with AC to determine suitable routes and access points.

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	Aberdeen City and Shire Local Transport Strategy (2012) ²
		Nestrans Regional Transport Strategy (2021) ³
		Aberdeenshire Local Development Plan ⁴
Standards	National Roads Development Guide (2014) ⁵	
	Designing Streets: A Policy Statement for Scotland (2010) ⁶	
Guidance	Planning Advice Note (PAN) 75 (2005) ⁷	
	Transport Assessment Guidance (2012) ⁸	
	Environmental Impact Assessment Handbook (2018) ⁹	

¹The 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>

² Aberdeenshire Council (2012). Aberdeenshire Council Local Transport Strategy 2012. Available at: <https://www.aberdeenshire.gov.uk/media/2374/2012finaltts.pdf>

³ Nestrans (2021). REGIONAL TRANSPORT STRATEGY FOR THE NORTH EAST OF SCOTLAND. Available at: https://www.nestrans.org.uk/wp-content/uploads/2021/12/Nestrans-RTS_PUBLISHED.pdf

⁴ Aberdeenshire Council (2023) Aberdeenshire Local Development Plan. (Online). Available at: <https://www.aberdeenshire.gov.uk/planning/plans-and-policies/ldp-2023>

⁵ Scottish Collaboration of Transportation Specialists (2014). National Roads Development Guide. (Online). Available at:

https://www.scotsnet.org.uk/_data/assets/pdf_file/0035/45998/National-Roads-Development-Guide.pdf

⁶ The Scottish Government, (2010). Designing Streets: A Policy Statement for Scotland. (Online). Available at: <https://www.gov.scot/publications/designing-streets-policy-statement-scotland/>

⁷ The Scottish Government, (2005). Planning Advice Note: Pan 75 - Planning For Transport. (Online). Available at: <https://www.gov.scot/publications/planning-advice-note-pan-75-planning-transport/>

⁸ Transport Scotland, (2012). Transport Assessment Guidance. (Online). Available at: https://www.transport.gov.scot/media/4589/planning_reform_-_dpmtag_-_development_management_dpmtag_ref_17_-_transport_assessment_guidance_final_-_june_2012.pdf

⁹ Nature Scot (2018). Environmental Impact Assessment Handbook. (Online). Available at:

<https://web.archive.org/web/20220901050635/https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf>

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. The following Chapters of the Appendix outline 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 anticipated 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. Therefore, together the sections in each local authority boundary form the overall Study Area for construction traffic.
- 3.2.3. The sections of the Proposed OHL Alignment that are relevant to this report, within Aberdeenshire Council area, are outlined within **Table 3.1**.

Table 3.1: Aberdeenshire Proposed OHL Alignment Sections

Proposed OHL Alignment Aberdeenshire Section Number	Location	Study Area
20	Coachford to Huntly	Section 20 Study Area comprises the construction traffic routing on the roads used to reach the towers between Coachford and Huntly.
21	Huntly to Turriff	Section 21 Study Area comprises the construction traffic routing on the roads used to reach the towers between Huntly and Turriff.
22	Turriff to New Deer	Section 22 Study Area comprises the construction traffic routing on the roads used to reach the towers between Turriff and New Deer
23	New Deer to Maud	Section 23 Study Area comprises the construction traffic routing on the roads used to reach the towers between New Deer and Maud.
24	Maud to Mintlaw	Section 24 Study Area comprises the construction traffic routing on the roads used to reach the towers between Maud and Mintlaw.

Proposed OHL Alignment Aberdeenshire Section Number	Location	Study Area
25	Mintlaw to Peterhead	Section 25 Study Area comprises the construction traffic routing on the roads used to reach the towers between Mintlaw and Peterhead.

- 3.2.4. The Proposed OHL Alignment through Aberdeenshire is shown in **Figure 13.3.3.1**, 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 13.3.3.1: Site Context



VEHICLE CLASSIFICATION

- 3.2.6. This report has been prepared using information supplied by the Applicant's Principal Contractor who has 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. 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 this TA.

PROJECT 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 Proposed Development will be constructed in a phased manner working from west to east along the Proposed OHL Alignment.

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 AC. 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 13.3.3.1**, there are three potential Yards to be provided in the Aberdeenshire area, with these located at Keith, Turriff and Peterhead. 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), where possible, via the most direct route.

3.4 POTENTIAL ACCESS ROUTES

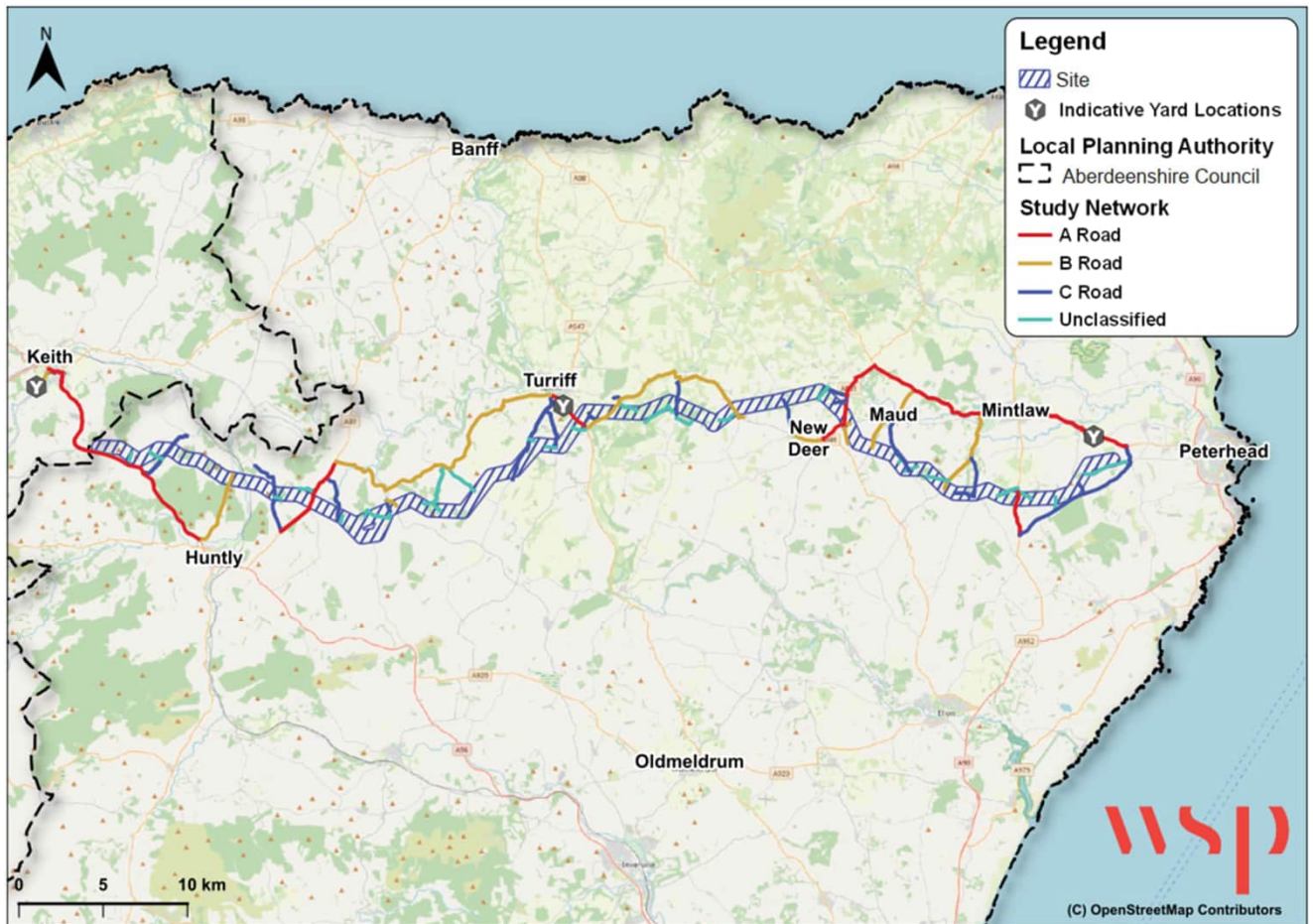
- 3.4.1. This Chapter of the Appendix aims to identify the potential access routes that could be used to support the delivery of materials and equipment from each of the Yards, with this forming the Study Area for the purpose of this assessment, with this appraisal looking to make use of the classified 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 Aberdeenshire Proposed OHL Alignment has been divided into six geographically defined sections, (Sections 20-25), as stated in **Table 3.1**, with these defined taking cognisance of the intention to provide Yards at Keith, Turriff and Peterhead. **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 20-25 Access Point Determination

Proposed Development Sections (Location)	Access Points for this Section	Yard Serving these Access Points	Roads Utilised from the RN
20 (Coachford to Huntly)	Access Points (AP 1 - 8, 10 - 13)	Keith Yard	A96, B9022, C106S, U108S, U111S
21 (Huntly to Turriff)	Access Points (AP 14 - 34)	Turriff Yard	A97, B9024, B9001, C100S, C87S, C88S, C89S, C100S, U33S, U89S, U90S, U92S, U93bL, U94L, U102S
22 (Turriff to New Deer)	Access Points (AP 35 - 64)	Turriff Yard	A947, B9170, C21S, C22S, C25S, C26S, U1S, U24S, U25S, U130S
23 (New Deer to Maud)	Access Points (AP 65 - 76)	Peterhead Yard	A950, A981, B9029, B9028, B9170, C123B, C125B, C127B, U122B
24 (Maud to Mintlaw)	Access Points (AP 77 - 93)	Peterhead Yard	A950, B9030, B9029, B9106, C97B, C100B, C103B
25 (Mintlaw to Peterhead)	Access Points (AP 94 - 108)	Peterhead Yard	A950, A952, C56B, C38B, C39B, U52B, U55B, U70B

3.4.4. The identified access routes are shown in **Figure 13.3.3.2.**

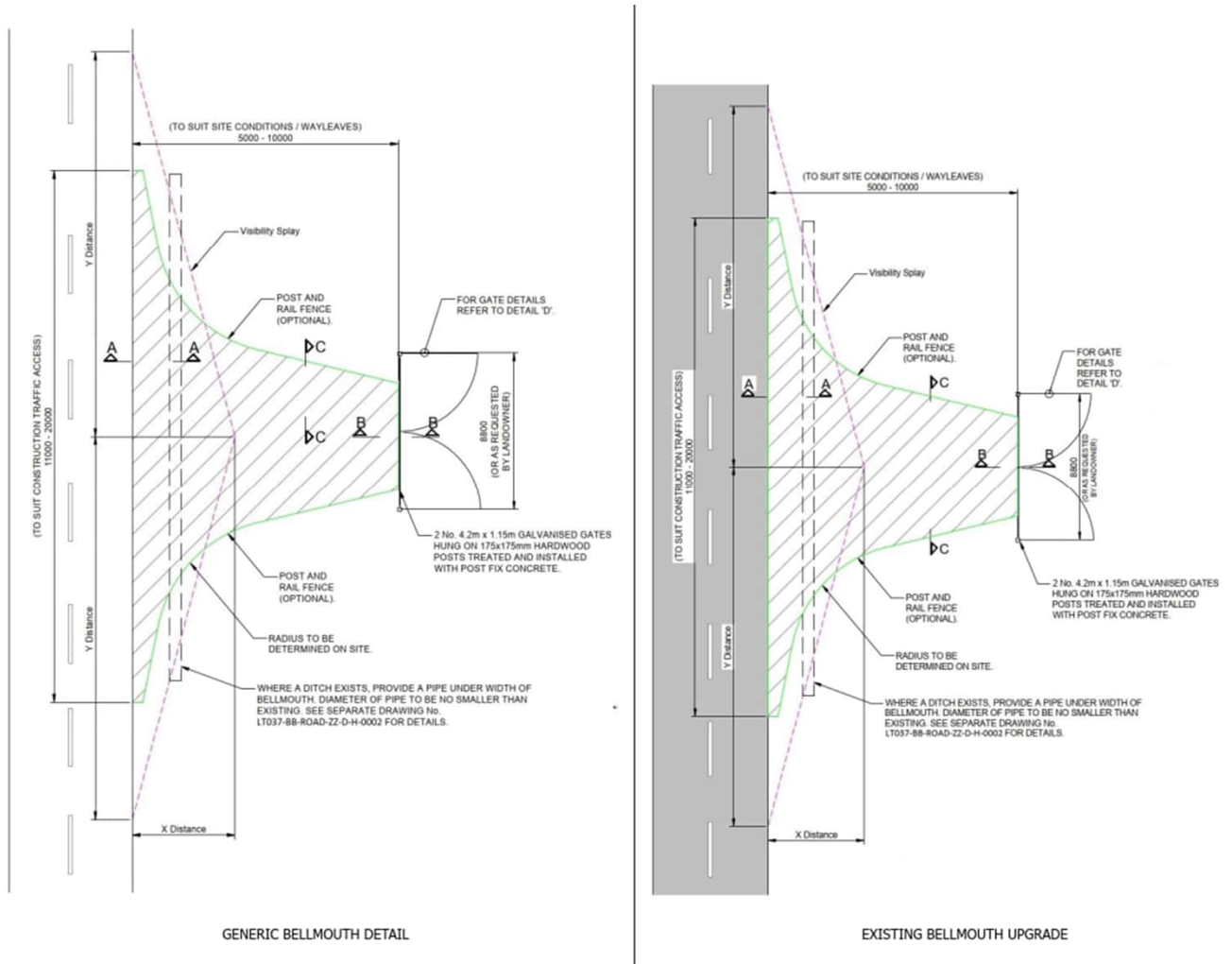
Figure 13.3.3.2: Proposed OHL Alignment Sections 20-25 Study Area



3.5 ACCESS JUNCTIONS

- 3.5.1. All the tower installation sites will be accessed via existing or new junctions to be formed on the adopted road network and the indicative form of these proposed junctions are shown in **Figure 13.3.3.3** with full detail presented in **EIA Report Figure 3.7**.

Figure 13.3.3.3: Indicative Form of the Proposed Bellmouth Access Junctions



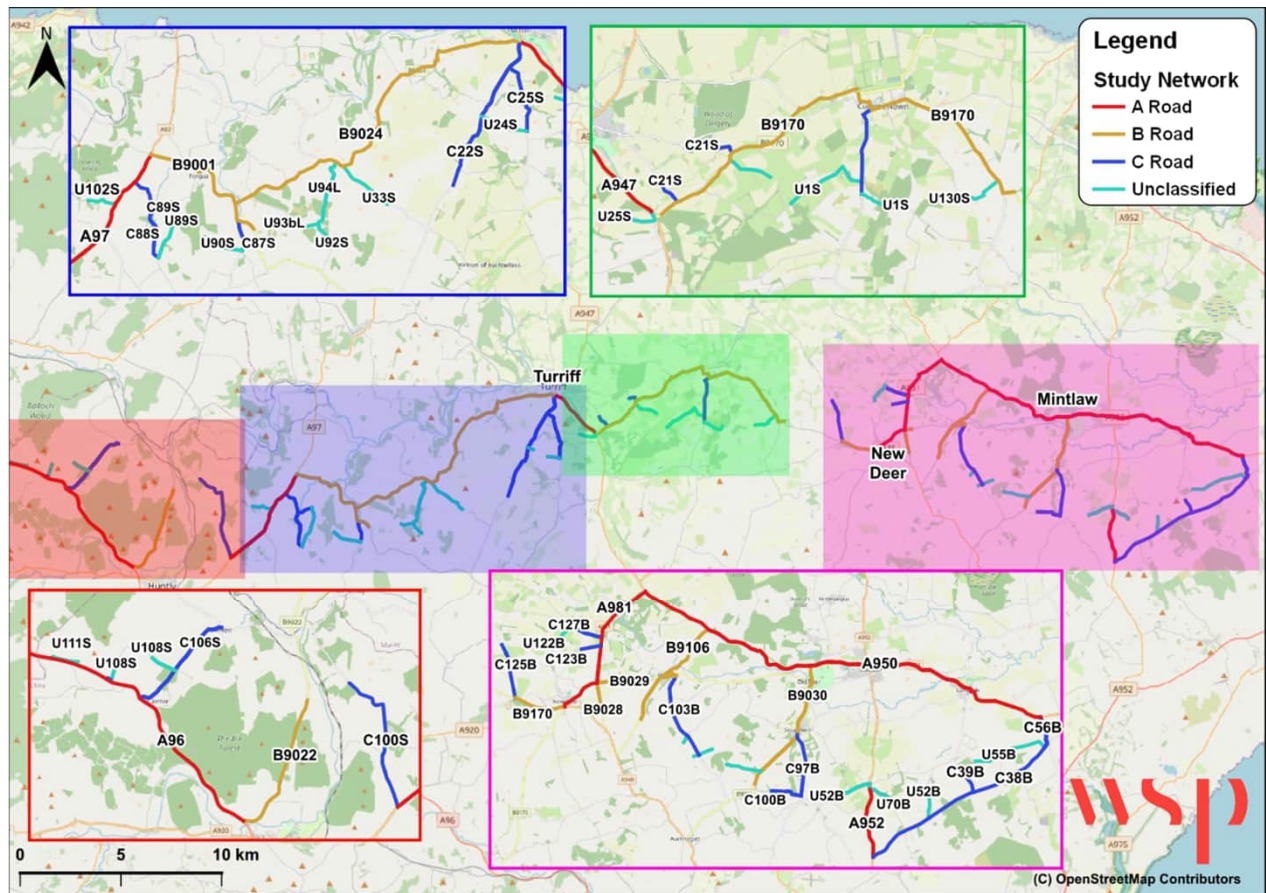
- 3.5.2. A total of 107 access points has been identified where construction traffic will access the site from the adopted road network. The formation of these junctions may be supported by the installation of temporary speed limits to support the provision of an appropriate level of visibility at each 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 TRANSPORT NETWORK

- 4.1.1. This Chapter of the Appendix discusses the local transport network to be used throughout the duration of the construction of the Proposed Development. **Figure 13.3.4.1** 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 13.3.4.1: Aberdeenshire Road Network



TRUNK ROAD NETWORK

A96 (T)

- 4.1.2. The A96 (T) is a predominantly 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.

LOCAL ROAD NETWORK

A947

- 4.1.3. The A947 is a two-way single carriageway road which and provides a connection between Turriff and Oldmeldrum. The A947 is generally subject to the national speed limit, which reduces to 30vmp/h when passing through villages such as Turriff.

A950

- 4.1.4. The A950 is a two-way single carriageway road which and provides a connection between Peterhead Bypass and the A98, north of New Pitsligo. The A950 is generally subject to the national speed limit, which reduces when passing through villages.

A952

- 4.1.5. The A952 is a two-way single carriageway road which provides a connection between Mintlaw and the A90, at Toll of Birness. The A952 is generally subject to the national speed limit, which reduces when passing through villages.

A97

- 4.1.6. The A97 is a two-way single carriageway road which provides a connection between Banff and Huntly via Aberchirder. Within the Study Area, the A97 is of good standard and subject to the national speed limit.

A981

- 4.1.7. The A981 is a two-way single carriageway road which and provides a connection between the A950 northeast of Brucklay and New Deer. The A981 is generally subject to the national speed limit, which reduces to 30 mph when passing through villages.

B9001

- 4.1.8. The B9001 is a two-way single carriageway road which provides a connection between the A97 at Bogniebrae and Inverurie. Within the Study Area, the road is subject to the national speed limit and is of good condition between the A97 and Forgue.

B9022

- 4.1.9. The B9022 is a two-way single carriageway road which connects the A96 at Huntly with the A95 at Gordonstown to the north. Within the Study Area, the road is of good condition and is subject to the national speed limit.

B9024

- 4.1.10. The B9024 is a two-way single carriageway road which connects Turriff with the B9001 at Forgue to the west. Within the Study Area, the road is of reasonable standard and is subject to the national speed limit which reduces when passing through villages

B9028

- 4.1.11. The B9028 is a two-way single carriageway road which connects the A948 at mains of Drum with the A981 at Artamford Crossroads. The road is subject to the national speed limit and is generally of good standard.

B9029

- 4.1.12. The B9029 is a two-way single carriageway road which provides a connection between Maud and Old Deer. The road is subject to the national speed limit and is generally of good standard.

B9030

- 4.1.13. The B9030 is a two-way single carriageway road which connects the A950 at Old Deer with the A948 at Auchnagatt. Within the Study Area, the road is of reasonable standard and is subject to the national speed limit which reduces when passing through villages such as Stuartfield.

B9106

- 4.1.14. The B9106 is a two-way single carriageway road which connects the A950 north of Maud with the A948 north of Nethermuir. Within the Study Area, the road is of reasonable standard and is subject to the national speed limit.

B9170

- 4.1.15. The B9170 is a single carriageway road which provides a connection between Turriff and New Deer, via Cuminestown. Within the Study Area, the B9170 is of a reasonable standard and is subject to the national speed limit which reduces when passing through villages.

C21S

- 4.1.16. The C21S two-way carriageway road which provides connections between Turriff and the B9170 via two sections: via Meikle Colp and Bridge of Delgaty. Within the Study Area, the C21S is of reasonable standard, approximately 5 m in width and subject to the national speed limit.

C22S

- 4.1.17. The C22S is a two-way single carriageway road which connects the B9024 at Turriff with the B9001 at Thorneybank. Within the Study Area, the road is approximately 6 m wide, of reasonable standard and is subject to the national speed limit.

C25S

- 4.1.18. The C25S is a single carriageway road which connects the C22S south of Turriff with the B992 at Dykeside. Within the Study Area, the road is approximately 3 m wide, subject to the national speed limit and not supported by passing places.

C26S

- 4.1.19. The C26S is a single carriageway road of 4-5 m width which connects Cuminestown with Fyvie to the south. The road is subject to the national speed limit, of reasonable standard and currently not supported by passing places.

C38B

- 4.1.20. The C38B is a two-way carriageway road which connects the A952 west of Kinknockie with the A950 south of Longside Airfield. Within the Study Area, the road is approximately 5 m wide, subject to the national speed limit.

C39B

- 4.1.21. The C39B is a single carriageway road which connects the C38B at Redbrae with Longside to the north. The road is subject to the national speed limit and is approximately 4 m wide, supported by both formal and informal passing places.

C56B

- 4.1.22. The C56B is a single carriageway road which connects the A950 east of Flushing with the A90 east of Hatton. The road is subject to the national speed limit, is approximately 5 m wide, and of good standard.

C87S

- 4.1.23. The C87S is a single carriageway road which connects the B9001 at Glen Dronach with the A96 at Fordmouth to the south. The road is subject to the national speed limit and is approximately 3 – 4 m wide, supported by informal passing places.

C88S

- 4.1.24. The C88S is a single carriageway road which connects the A97 south of Bogniebrae with the U89S at Comisty to the south. The road is subject to the national speed limit and is approximately 4 m wide, currently not supported by formal passing places.

C97B

- 4.1.25. The C97B is a single carriageway road which connects the B9030 at Stuartfield with the A948 at Lammermuir to the south. The C97B is of approximately 4-5 m width, of good standard and subject to national speed limit.

C100B

- 4.1.26. The C100B is a single carriageway road which provides a connection between Cairnie and the B9022, via Ruthven. Within the Study Area, the C100B is of a reasonable standard, approximately 4 m wide, currently not supported by passing places, and is subject to the national speed limit.

C100S

- 4.1.27. The C100S is a single carriageway road which connects the A97 at Blackblair with Milltown of Rothiemay, via Millburn. The road is subject to the national speed limit and is approximately 4.5 m wide, which widens at bends, and is currently not supported by formal passing places.

C103B

- 4.1.28. The C103B is a single carriageway road which provides a connection between Maud and the B9030, via Bulwark. Within the Study Area, the C103B is of a reasonable standard, approximately 4 m wide, not currently supported by passing places, and is subject to the national speed limit which reduces to 30 mph when passing through villages.

C106S

- 4.1.29. The C106S is a single carriageway road which provides a connection between Cairnie and the B9022, via Ruthven. Within the Study Area, the C106S is of a reasonable standard, approximately 4 – 5 m wide, and is subject to the national speed limit which reduces to 30 mph when passing through villages.

C123B

- 4.1.30. The C123B is a single carriageway road which connects the A981 north of New Deer with Mains of Culsh to the west. Within the Study area, the C123B is of good standard, approximately 5 m in width and subject to the national speed limit.

C125B

- 4.1.31. The C125B is a single carriageway road which connects the B9170 west of New Deer with New Byth to the northeast. Within the Study area, the C125B is of good standard, approximately 5-6 m in width, and subject to the national speed limit.

C127B

- 4.1.32. The C127B is a single carriageway road which connects the A981 north of New Deer with Loanhead of Fedderate to the west. Within the Study area, the C127B is of good standard, approximately 4 m in width, currently not supported by formal passing places and subject to the national speed limit.

U1S

- 4.1.33. The U1S is also a single-track road of which connects the B9170 at Mill of Colp with Northburnhill via the C26S. The U1S is of approximately 3 m width, of reasonable standard and subject to the national speed limit, and is currently not supported by passing places.

U24S

- 4.1.34. The U24S is a single carriageway road that provides a connection between the C22S and the C25S south of Turriff. The U24S is approximately 3 m wide, subject to the national speed limit and is supported by informal passing places.

U25S

- 4.1.35. The U25S is a single carriageway road that provides a connection between the A947 at Darra and the C25S south of Turriff. The U25S is approximately 4 m wide, subject to the national speed limit and is supported by passing places along the eastern section close to Darra Centre.

U33S

- 4.1.36. The U33S is a single-track carriageway road approximately 3 m in width, providing a connection between B9024 at Mains of Tollo and the B992 at Kirktown of Auchterless. Within the Study Area, the U33S is subject to the national speed limit and is supported by informal passing places.

U52B

- 4.1.37. The U52B is a single carriageway road that provides a connection between the C38B east of Newton and Skelmuir Cottages to the west via the A952. The U52B is approximately 3 – 4 m wide, subject to the national speed limit and is currently not supported by formal passing places.

U55B

- 4.1.38. The U55B is a single carriageway road that provides a connection between the C38B at Toddlehills and Newmill to the west. The U55B is approximately 3 m wide, subject to the national speed limit and is currently not supported by formal passing places other than local carriageway widening at farming accesses.

U70B

- 4.1.39. The U70B is a single carriageway road that provides a connection between the A952 at Clola and the C38B to the south. The U70B is approximately 3 m wide, subject to the national speed limit and is currently not supported by formal passing places other than local carriageway widening two locations.

U89S

- 4.1.40. The U89S is a single-track carriageway road which provides a connection between the C89S at Conland and Comisty to the south. The U89S is of approximately 3 m width, subject to the national speed limit and currently not supported by passing places.

U90S

- 4.1.41. The U90S is a single-track carriageway road which provides a connection between the C87S just south of the B9001 and Bogcoup to the west. The U90S is of approximately 3 m width, subject to the national speed limit and currently not currently supported by passing places.

U92S

- 4.1.42. The U92S is a single-track carriageway road approximately 3 m in width, providing a connection between the U93bL at Hare Moss and the B9001 at Den Moss to the south. Within the Study Area, the U92S is subject to the national speed limit and is currently not supported by passing places.

U93bL

- 4.1.43. The U93bL is a single-track carriageway road approximately 3 m in width, providing a connection between B9024 at Glendronach Distillery and the U92S at Hare Moss. Within the Study Area, the U93bL is subject to the national speed limit and is currently not supported by passing places.

U94L

- 4.1.44. The U94L is a single-track carriageway road approximately 3 m in width, providing a connection between the B9024 at Mains of Tollo and the U92S at Hare Moss to the south. Within the Study Area, the U94L is subject to the national speed limit and is currently not supported by passing places.

U102S

- 4.1.45. The U102S is a rural single-track road approximately 3 m in width which connects the A97 and Boghead of Cobairdy. The U102S is subject to the national speed limit and is currently supported by passing places.

U108S

- 4.1.46. The U108S is a single-track rural road of approximately 3 m width and connects the A96 and the B9022 with Braehead via Hollowdyke and Riggins. The road is subject to the national speed limit and currently not supported by passing places.

U111S

- 4.1.47. The U111S is a single carriageway rural road of approximately 6 m width and connects the A96 at Auchairn to Coachford to the east. The road is subject to the national speed limit and built to a standard to accommodate larger vehicles.

U122B

- 4.1.48. The U122B is a single-track carriageway road of approximately 3 m width and connects the C127B at Loanhead of Fedderate with New Deer to the south. The road is subject to the national speed limit and is currently not supported by passing places.

U130S

- 4.1.49. The U130S is a single-track carriageway road which connects the B9170 to the east with Northburn to the west. The U130S is of approximately 3 m width, subject to the national speed limit, and currently not supported by passing places however, local widenings are present at bends.

PEDESTRIAN, CORE PATH AND CYCLIST FACILITIES

Pedestrian Facilities

- 4.1.50. 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.
- 4.1.51. There are pedestrian facilities provided by way of footways adjacent to carriageways on several sections of the access routes, predominantly within the towns of Huntly and Turriff. These towns are served by comprehensive pedestrian networks supported by controlled pedestrian crossings.
- 4.1.52. Pedestrian facilities are also present in the villages of Cuminestown, New Deer, Maud, Old Deer, Stuartfield, Mintlaw and Longside, which support local pedestrian access.

Core Paths

- 4.1.53. A review of the Core Paths within Aberdeenshire indicates that the following Core Paths detailed in **Figure 13.3.4.2** to **Figure 13.3.4.5** are located within the vicinity of the access routes.

Figure 13.3.4.2: Core Path and Cyclist Network Overview

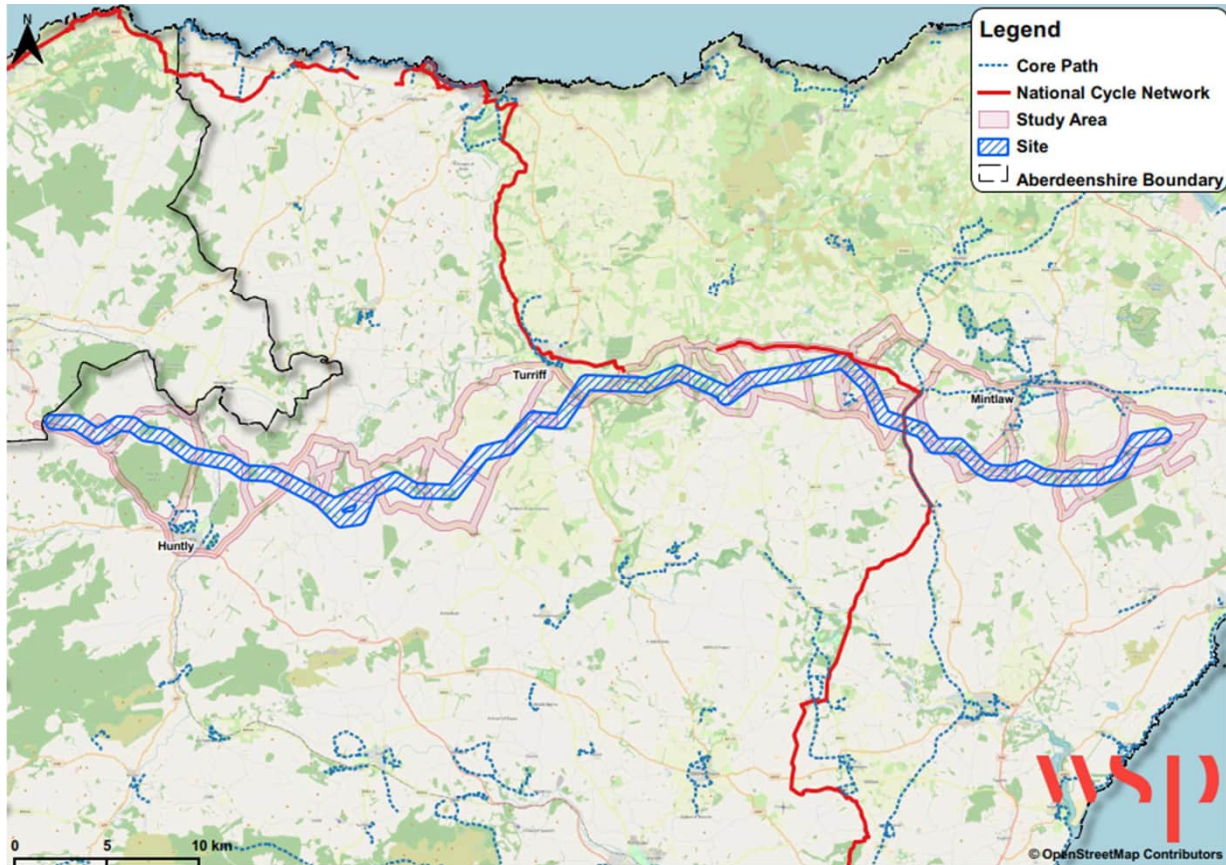


Figure 13.3.4.3: Huntly Core Path and Cyclist Network

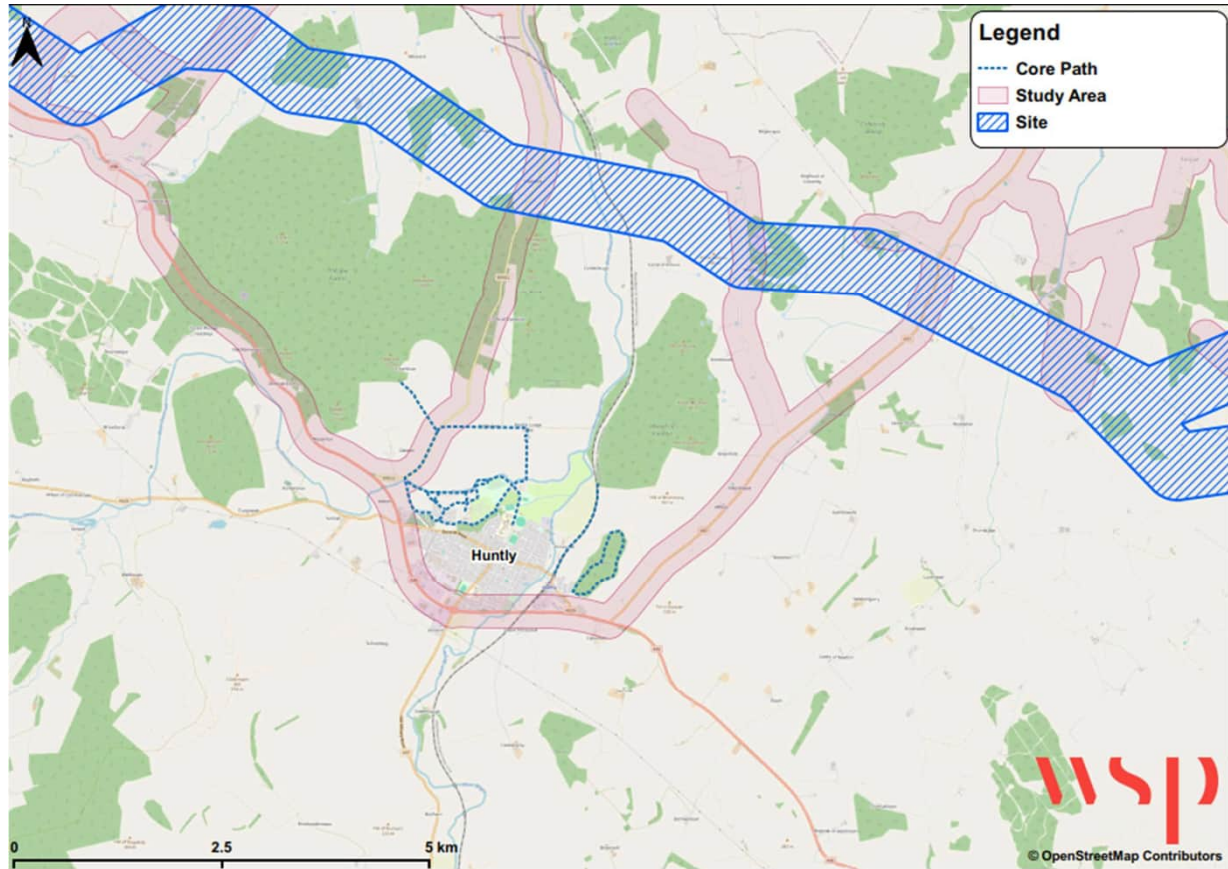


Figure 13.3.4.4: Turriff Core Path and Cyclist Network

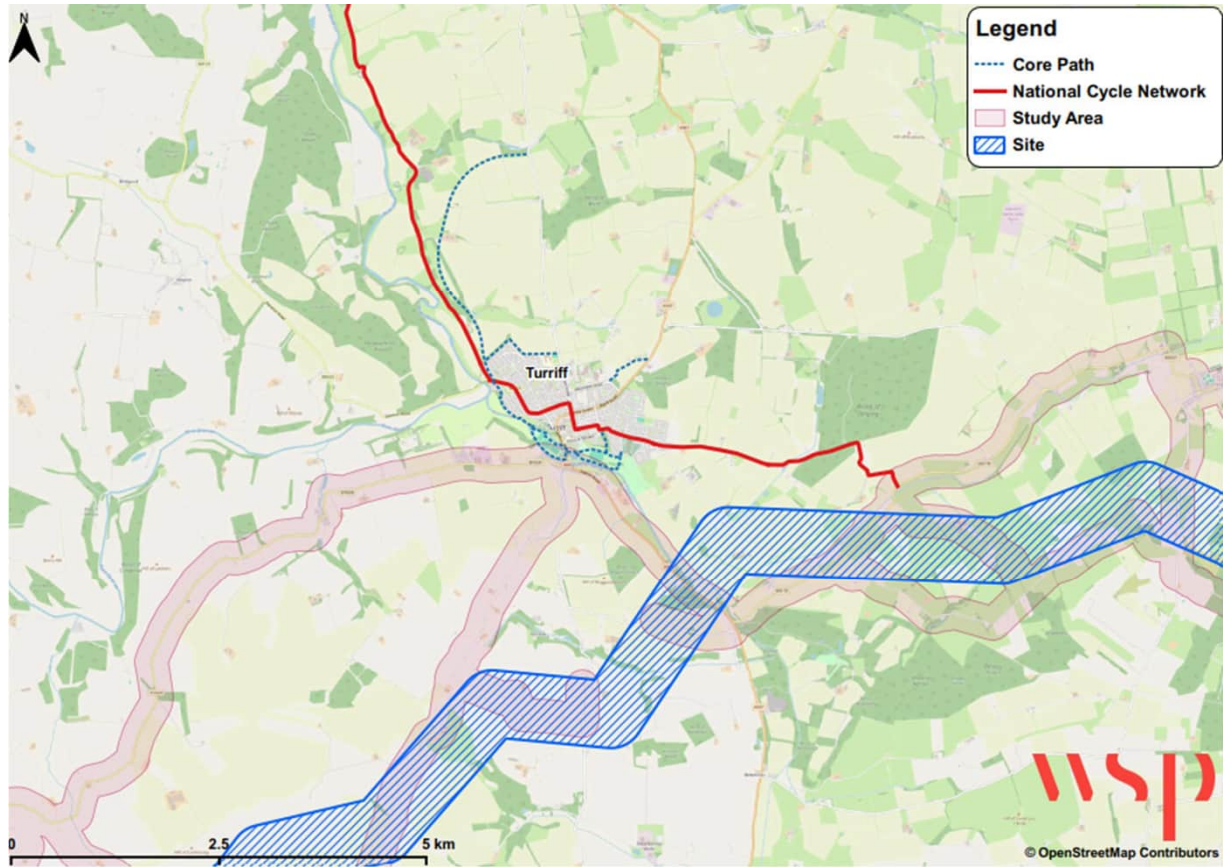
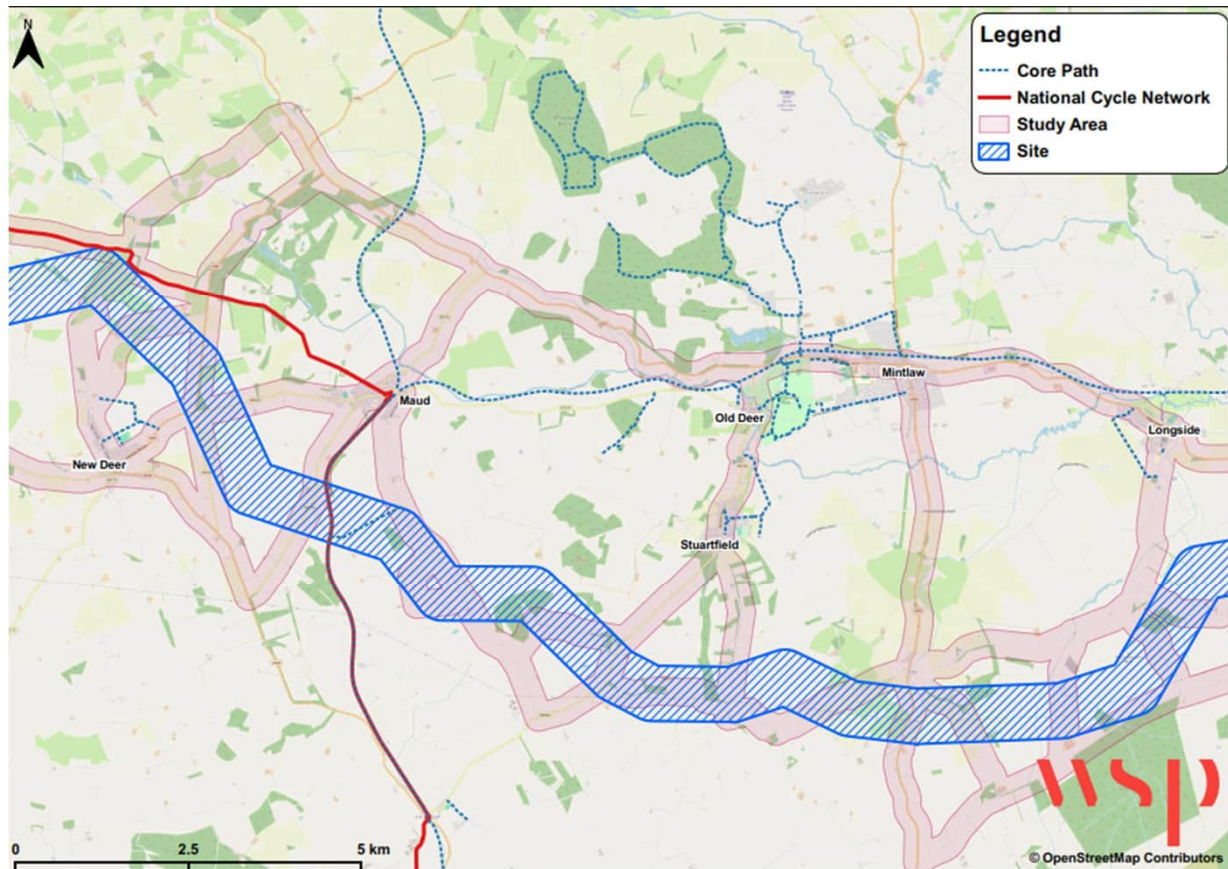


Figure 13.3.4.5: New Deer to Longside Core Path and Cyclist Network



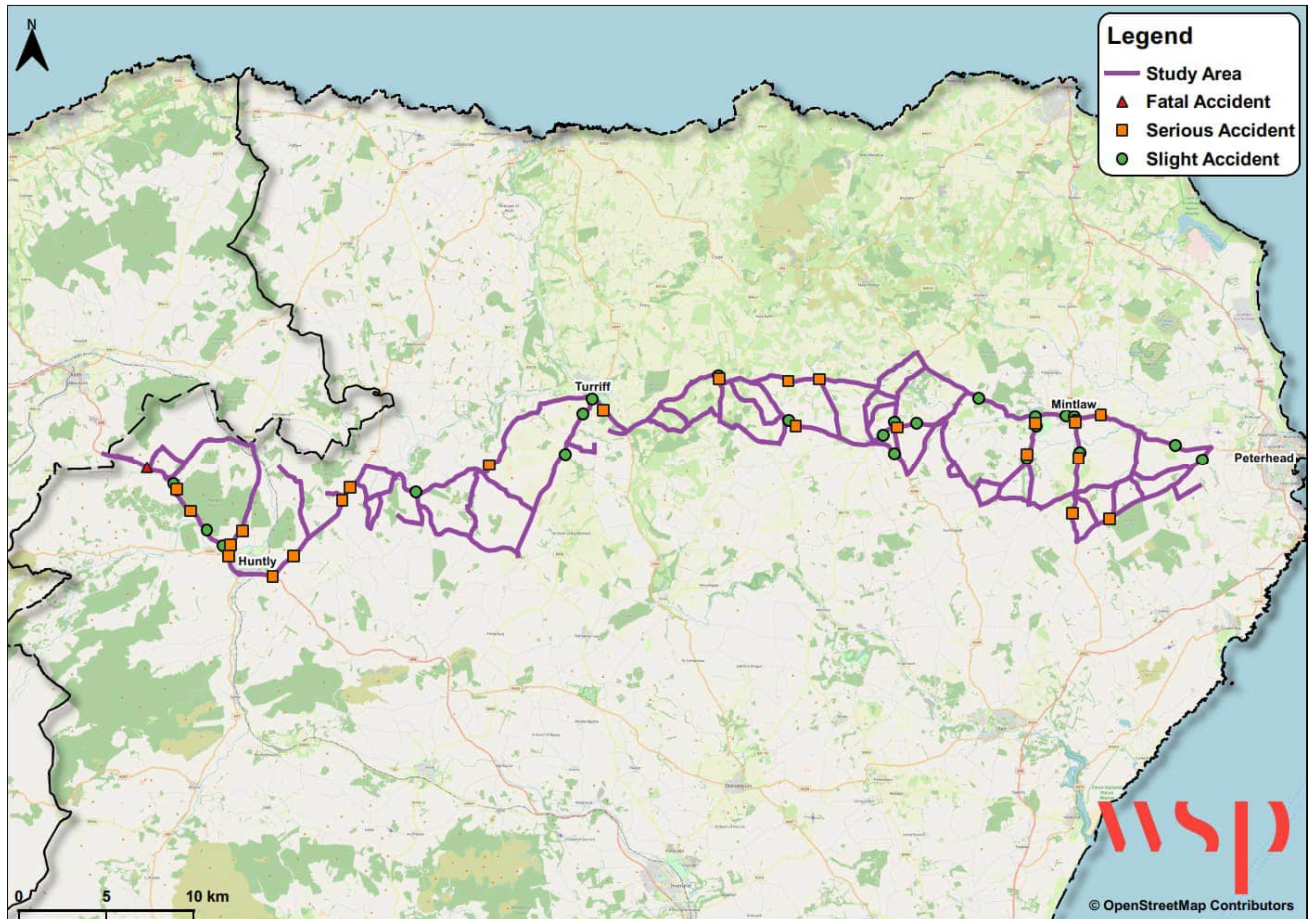
Cycle Facilities

- 4.1.54. There are limited cycle facilities in the vicinity of the proposed development.
- 4.1.55. The Formartine and Buchan Way, which forms part of Aberdeenshire's core path network, is a long-distance off-road trail that links Dyce with Peterhead and Fraserburgh. The route passes through Maud, Mintlaw and Longside within the study area.
- 4.1.56. A review of Sustrans' National Cycle Network (NCN) map indicates that NCN Route 1 passes through Maud, Cuminestown and Turriff, 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 13.3.4.6** and are summarised below.

Figure 13.3.4.6: Personal Injury Accident Data 2018-2022



- 4.2.2. A total of 55 accidents were recorded on roads within Aberdeenshire in the vicinity of the proposed access routes. There were 28 slight accidents, 26 serious accidents and one fatality recorded.
- 4.2.3. The fatal accident was recorded on the A96 (T) to the northwest of Huntly. The accident involved a collision between two cars and was as a result of driver error.
- 4.2.4. One accident involving pedestrians was recorded within the Study Area. The accident which occurred on the A950 within Mintlaw and resulted in slight injuries to three pedestrians.
- 4.2.5. Three accidents involving cyclists were recorded in the Study Area. All three accidents resulted in serious injuries, with one occurring on the C38B near Newton, the second on the B9170 to the northwest of Cuminestown and the third on the A97 to the northeast of Huntly. All three accidents were likely as a result of driver / rider error.
- 4.2.6. Two accidents involving motorcyclists were recorded across the Study Area. One of the accidents resulted in serious injuries occurred on the A947 to the southeast of Turriff. The second accident

which resulted in slight injuries occurred on the B9170 to the northwest of Cuminstown. Both accidents were likely as a result of driver / rider error.

- 4.2.7. A total of eleven accidents involved HGVs, of which five were recorded as slight and six recorded as serious. The majority of these accidents were caused by driver error or weather conditions, rather than an issue with the road network.
- 4.2.8. 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. The review highlighted the A96 (T) / A920 junction as accident cluster site, with five accidents occurring at the junction over the 5-year study period. Road improvements have been introduced at the junction in recent years to improve safety for all road users.
- 4.2.9. **Figure 13.3.4.1** 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
A97 between A96 and B9001	Rural A road	1	3	0	4	0.15	0.12	Above
B9001 between the A97 and B9024	Rural other road	1	0	0	1	0.11	0.20	Below
B9170 between the A947 and Cuminstown	Rural other road	1	1	0	2	0.13	0.20	Below
A981 between the A948 and the A950	Rural A road	2	0	0	2	0.12	0.12	Below
A950 between the A952 and the C38B	Urban A road	2	0	0	2	0.11	0.43	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**, of the local roads that experienced the highest number of accidents, the majority of the road network is shown to have annual accident rates that are below the respective national average for each of the road's characteristics. This suggests that there are no existing safety concerns on the majority of the network.
- 4.2.11. However, as shown, the section of the A97 between the A96 (T) and the B9001 is slightly above the national average. Four accidents occurred on this link, with one of the accidents occurring at a junction. Further analysis of the data suggests all of the accidents are likely attributable to driver error or weather conditions.

- 4.2.12. The accident data review has therefore confirmed that there are no specific safety concerns within the Study Area.

4.3 EXISTING TRAFFIC FLOWS

- 4.3.1. To establish baseline traffic flows, Automatic Traffic Counters (ATCs) were installed in June 2024 at the following locations:
- ATC 1: B9170 (southeast of Cuminestown) at Cairncake;
 - ATC 2: B9170 (northwest of New Deer) at Brucehill;
 - ATC 3: B9016 (southwest of Maud) at Mains of Old Maud; and
 - ATC 4: B9030 (southeast of Stewartfield) at Crichtie.
- 4.3.2. To supplement the ATC surveys, traffic survey data has been obtained from the following Green Volt Offshore Windfarm EIA and Department for Transport (DfT) traffic count sites for the remaining road network contained within the Study Area:
- Green Volt ATC 9 - Automatic Traffic Counter 2023: A950 (East of Mintlaw);
 - DfT Traffic Count ID 804934 - Manual Count 2018: U108S (East of Coachford);
 - DfT Traffic Count ID 40782 - Manual Count 2023: A96 at Cairnie;
 - DfT Traffic Count ID 40870 - Manual Count 2011: A97 (southwest of Cruchie);
 - DfT Traffic Count ID 804729 - Manual Count 2018: B9170 (northwest of Cuminestown);
 - DfT Traffic Count ID 811574 - Manual Count 2023: B9170 (centre of Cuminestown);
 - DfT Traffic Count ID 21004 - Manual Count 2011: A981 (Centre of New Deer);
 - DfT Traffic Count ID 41009 - Manual Count 2019: A981 (North of B9029) at Main of Culsh; and
 - DfT Traffic Count ID 20990 - Manual Count 2012: A950 (North of Waterhill of Bruxie).

- 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 13.3.4.7**.

Figure 13.3.4.7: Traffic Count Site Locations

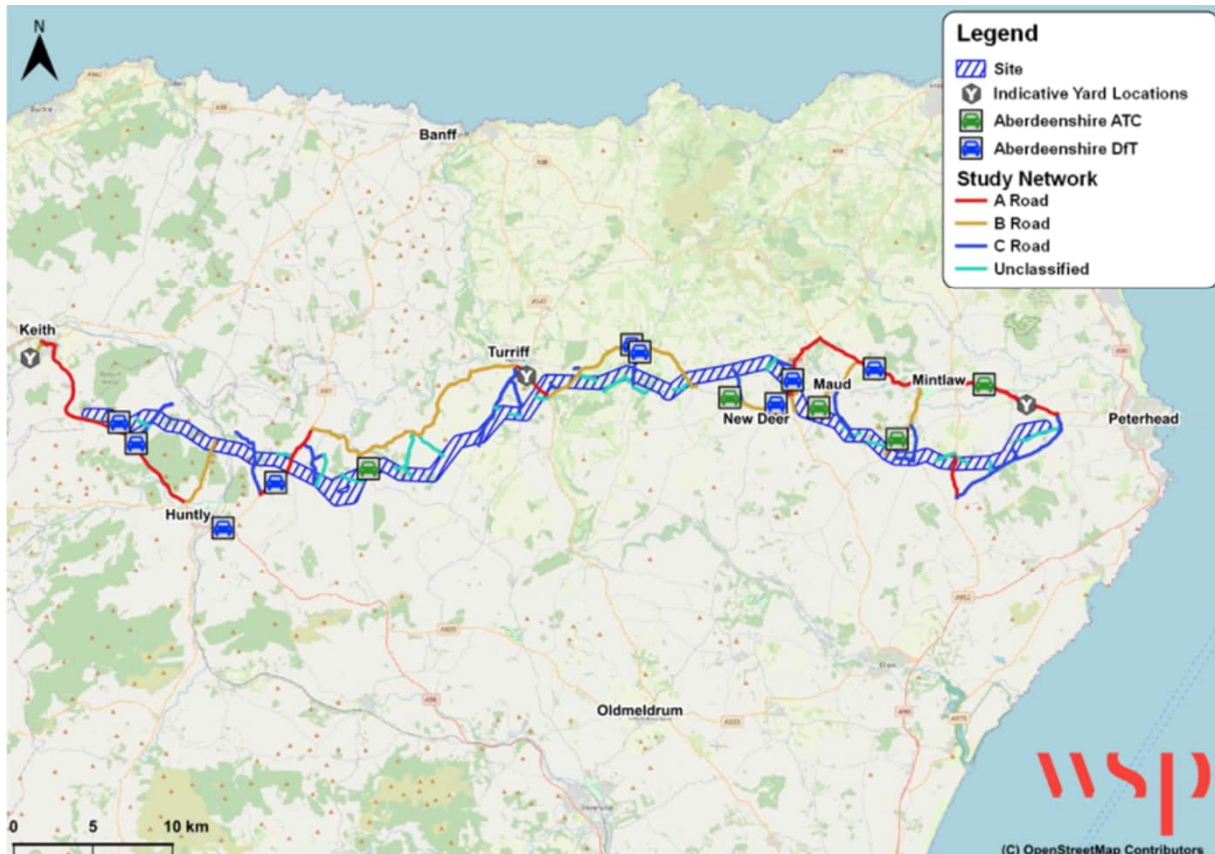


Table 4.2: 2024 Annual Average Daily Two-Way Traffic Flows (24-hour)

Section	Road Link (of Route) from the TRN	Survey Location	Manual / Automatic Survey Year	Survey Year 24hr Two-Way Flows		HGV Proportion (%)
				HGV	Total	
20	U108S	U108S (east of Coachford)	2018	2	34	6%
	A96	A96 at Cairnie	2023	695	7632	9%
21	A97	A97 (southwest of Cruchie)	2011	91	1771	5%
	B9001	B9001 (northeast of Huntly) at Drumblair	2024	34	835	4%
22	B9170	B9170 (northwest of Cuminestown)	2018	67	2355	3%
	B9170	B9170 (northwest of Cuminestown)	2023	40	1166	3%
23	B9170	B9170 (northwest of New Deer) at Brucehill	2024	30	1013	3%
	A981	A981 (Centre of New Deer)	2011	131	2613	5%
	A981	A981 (north of B9029) at Main of Culsh	2019	94	1397	7%
24	B9016	B9016 (southwest of Maud) at Mains of Old Maud	2024	7	568	1%
	A950	A950 (north of Waterhill of Bruxie)	2012	194	2119	9%
	B9030	B9030 (southeast of Stewartfield) at Crichtie	2024	8	487	2%
	A950	A950 (east of Mintlaw)	2023	904	6647	14%
25	-	No Data*	-	-	-	-

- 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, 2023¹⁰, to convert the DfT and ATC 5 AADT flows to 11-hour flows.

¹⁰ Department for Transport, (2024). Road Traffic Estimates (TRA). (Online). Available at: <https://www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra>

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.

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

Section	Road Link (of Route) from the TRN	Survey Location	Manual / Automatic Survey Year	Survey Year 24hr Two-Way Flows		HGV Proportion (%)
				HGV	Total	
20	U108S	U108S (east of Coachford)	2018	1	25	6%
	A96	A96 at Cairnie	2023	495	5674	9%
21	A97	A97 (southwest of Cruchie)	2011	65	1317	5%
	B9001	B9001 (northeast of Huntly) at Drumblair	2024	24	621	4%
22	B9170	B9170 (northwest of Cuminestown)	2018	48	1751	3%
	B9170	B9170 (northwest of Cuminestown)	2023	28	867	3%
23	B9170	B9170 (northwest of New Deer) at Brucehill	2024	21	753	3%
	A981	A981 (Centre of New Deer)	2011	93	1943	5%
	A981	A981 (north of B9029) at Main of Culsh	2019	67	1039	6%
24	B9016	B9016 (southwest of Maud) at Mains of Old Maud	2024	5	422	1%
	A950	A950 (north of Waterhill of Bruxie)	2012	138	1575	9%
	B9030	B9030 (southeast of Stewartfield) at Crichtie	2024	6	362	2%
	A950	A950 (east of Mintlaw)	2023	644	4942	13%
25	-	No Data*	-	-	-	-

4.4 FUTURE TRAFFIC FLOWS

- 4.4.1. Construction of the Proposed Development within Aberdeenshire could commence during 2026 if planning 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 National Road Traffic Forecast 1997 (NRTF97) low growth factors to the individual 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	Survey Location	Manual / Automatic Survey Year	Survey Year 24hr Two-Way Flows		HGV Proportion (%)
				HGV	Total	
20	U108S	U108S (east of Coachford)	2018	1	27	6%
	A96	A96 at Cairnie	2023	503	5765	9%
21	A97	A97 (southwest of Cruchie)	2011	73	1488	5%
	B9001	B9001 (northeast of Huntly) at Drumblair	2024	24	628	4%
22	B9170	B9170 (northwest of Cuminestown)	2018	50	1842	3%
	B9170	B9170 (northwest of Cuminestown)	2023	29	881	3%
23	B9170	B9170 (northwest of New Deer) at Brucehill	2024	22	761	3%
	A981	A981 (Centre of New Deer)	2011	105	2195	5%
	A981	A981 (north of B9029) at Main of Culsh	2019	70	1083	6%
24	B9016	B9016 (southwest of Maud) at Mains of Old Maud	2024	5	427	1%
	A950	A950 (north of Waterhill of Bruxie)	2012	155	1761	9%
	B9030	B9030 (southeast of Stewartfield) at Crichie	2024	6	366	2%
	A950	A950 (east of Mintlaw)	2023	654	5021	13%
25	-	No Data*	-	-	-	-

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 Alignment 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 Keith, Turriff and Peterhead 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.

PLANNED ASSESSMENT OF STRUCTURES

- 5.1.4. Transport Scotland / Amey NE / AWPR NE, Network Rail and AC have been consulted to advise on the current structural capacity of the routes proposed.
- 5.1.5. 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).

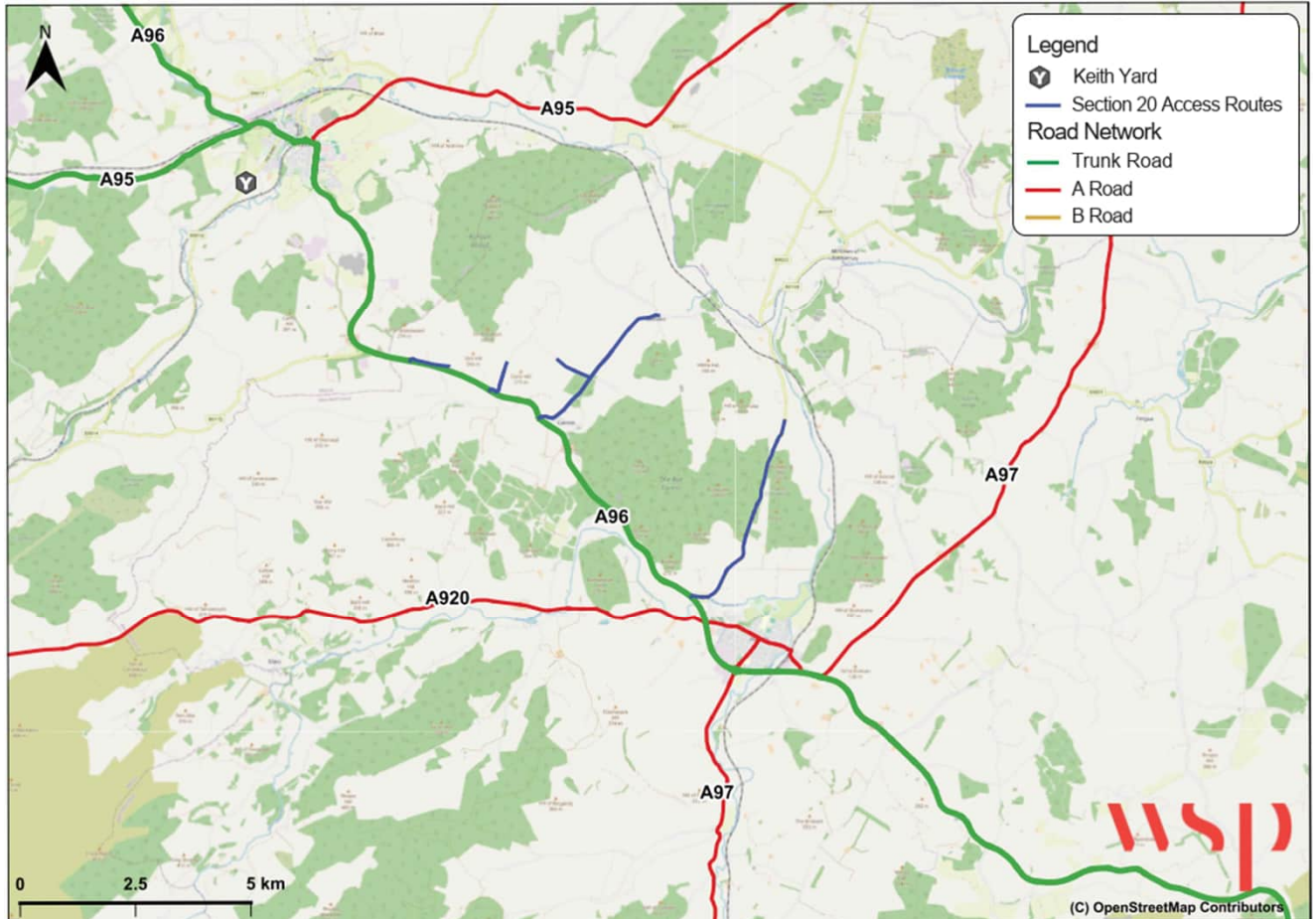
5.2 IDENTIFICATION AND APPRAISAL OF POTENTIAL ACCESS ROUTE OPTIONS

- 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 Keith, Turriff and Peterhead Yards will support delivery of six sections of the Proposed OHL Alignment within Aberdeenshire. 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.

KEITH YARD

- 5.2.3. One section of the Proposed OHL Alignment's installation is to be served by the Yard located within Keith. **Figure 13.3.5.1** shows an overview of the routes that construction vehicles will be using to access each of the sections.

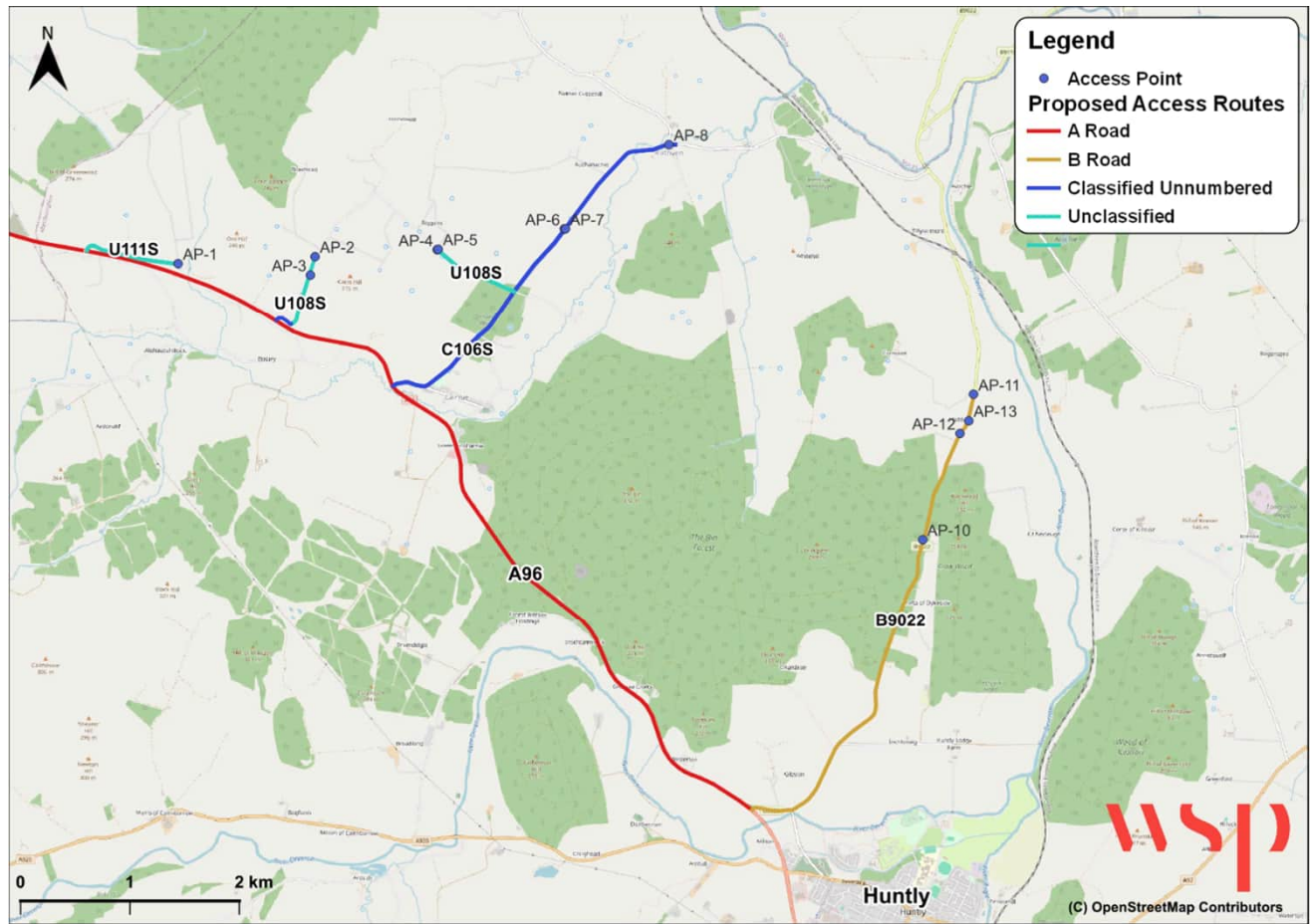
Figure 13.3.5.1: Keith Yard Access Routes



Section 20 - Proposed Access Route

- 5.2.4. Section 20 of the Proposed OHL Alignment is located to the southeast of Keith and includes the towers that are located between Coachford and Huntly. There are 12 access points within this section. The proposed routes from the local road network to each of the access points is shown in **Figure 13.3.5.2**.

Figure 13.3.5.2: Section 20 Access Point Route Options



- 5.2.5. As shown by **Figure 13.3.5.2**, it is proposed that all construction vehicles accessing Section 20 of the Proposed OHL Alignment will utilise the trunk road network at Keith to head south on the A96 (T). The A96 (T) 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. Vehicles will then take the following routes to access their associated access points:
- **AP1:** Construction vehicles will leave the A96 at its junction with the U111S, before traveling east on the unclassified U111S to reach the access point. The U111S is a road of approximately 6 m. The desktop review also highlighted that the road is used for agricultural activities and therefore is likely to be able to accommodate larger vehicles.
 - **AP2 - AP3:** Construction vehicles will leave the A96 at its junction with the C111S, before traveling east on the C111S to turn left onto the U108S to reach the access points. The U108S is a single-track road of approximately 3 m which is not supported by passing places.

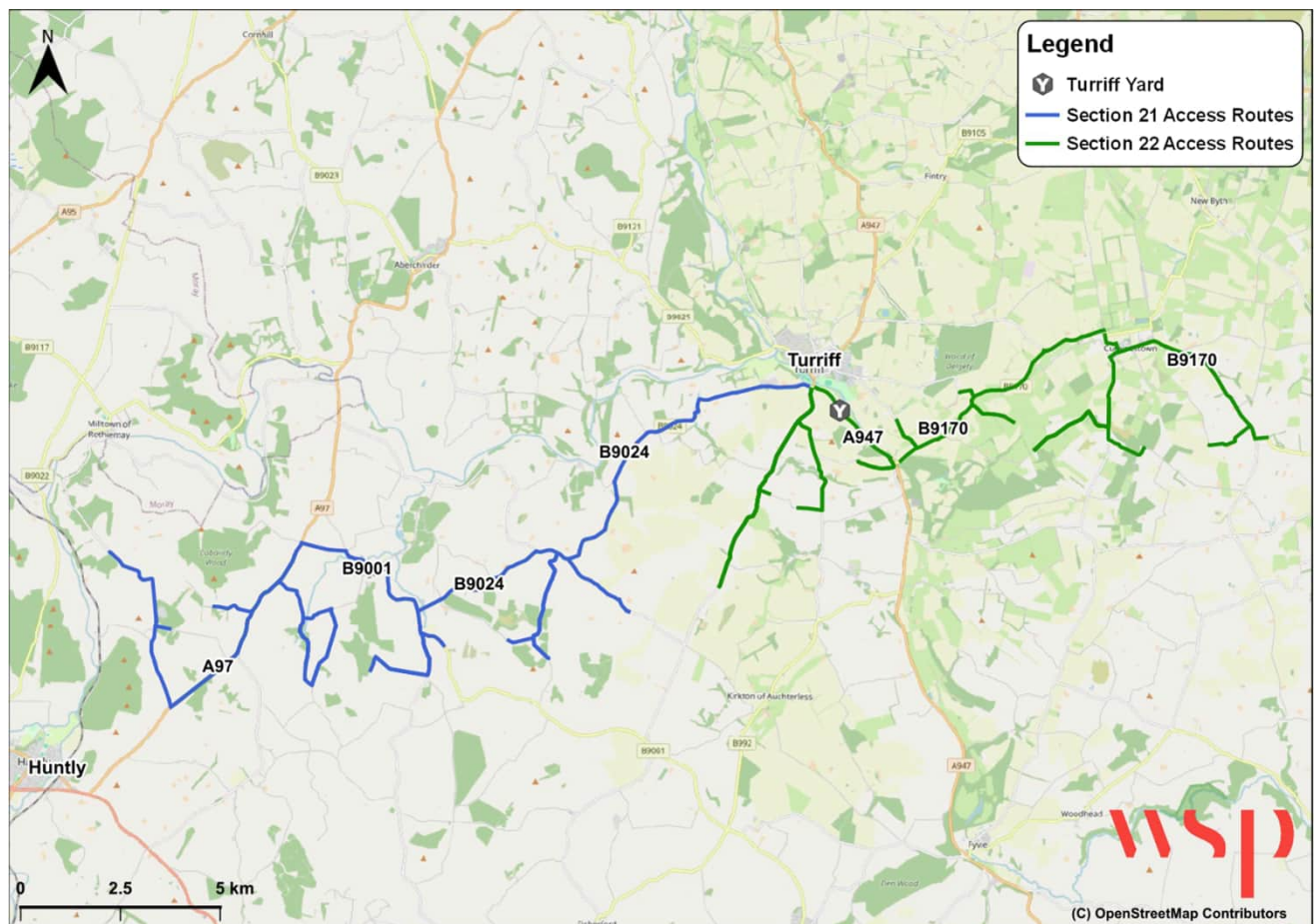
- **AP4 - AP8:** Construction vehicles will leave the A96 at its junction with the C106S traveling north on the C106S before turning left onto the U108S to reach the AP4 and AP5 access points. Vehicles serving AP6, AP7 and AP8 will continue north on the main section of the C106S to reach their access points. The main section of the C106S is a single-track road of approximately 6 m width subject to the national speed limit.
- **AP10 - AP13:** Construction vehicles will leave the A96 at its junction with the B9022, before traveling north to reach the access points taken directly off the B9022. The B9022 is a single-track road of approximately 6 m width with central line markings.

5.2.6. Some potential constraints have been identified on this section, further discussed in **Chapter 7 of this Appendix**.

TURRIFF YARD

5.2.7. Two sections of the Proposed OHL Alignment's installation are to be served by the Yard located within Turriff. **Figure 13.3.5.3** shows an overview of the routes that construction vehicles will be using to access each of the sections.

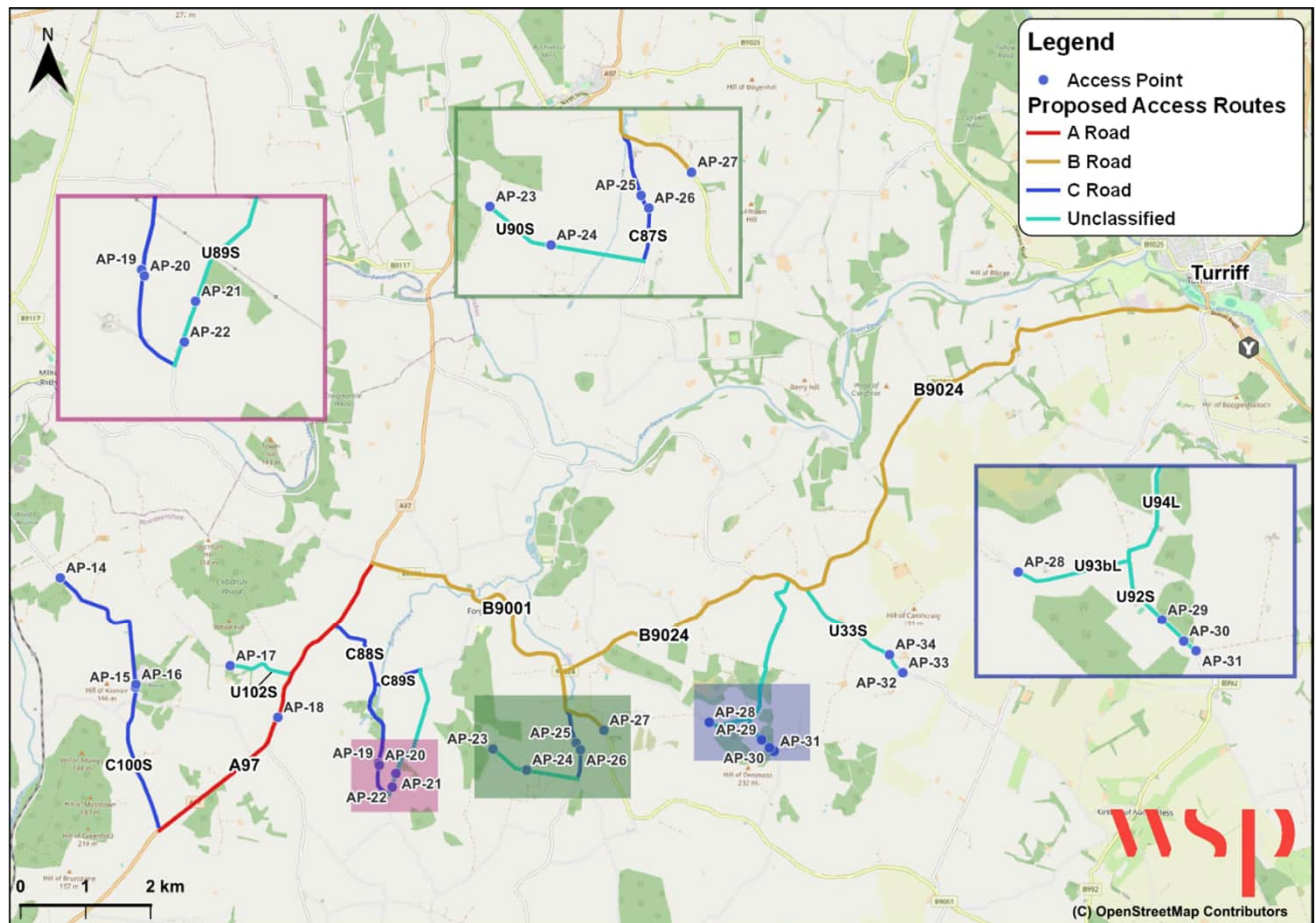
Figure 13.3.5.3: Turriff Yard Access Routes



Section 21 - Proposed Access Route

- 5.2.8. Section 21 of the Proposed OHL Alignment is located to the northeast of Huntly and includes the towers that are located between Huntly and Turriff. There is 21 access points within this section and the proposed access route along the local road network to the access point is shown in **Figure 13.3.5.4**.

Figure 13.3.5.4: Section 21 Access Point Route Options



- 5.2.9. As shown by **Figure 13.3.5.4**, it is proposed that construction vehicles accessing Section 21 of the Proposed OHL Alignment will leave the B9024, B9001 and A97 at various locations between Huntly and Turriff. The B9024 and B9001 are both two-way single-track carriageway roads that connects the A97 with Turriff. The A97 is a two-way single carriageway road that forms the main route from Huntly to Banff. All of the above roads are approximately 6-7 m wide and are subject to national speed limits. Vehicles will then take the following routes to access their associated access points:

- **AP14 - AP16:** Construction vehicles will leave the A97 at its junction with the C100S, before traveling north to reach the access points taken directly of the C100S. The C100S is a single-track road of approximately 4.5 m width with passing places present.
- **AP17 - AP18:** For AP17, construction vehicles will leave the A97 at its junction with the U102S, before traveling west to reach the access points taken directly of the U102S. The U102S is a single-track road of approximately 3 m with few formal passing places present. Vehicles serving

AP18 will continue south along the A97 where access will be taken directly of the A97 via a new permanent bellmouth.

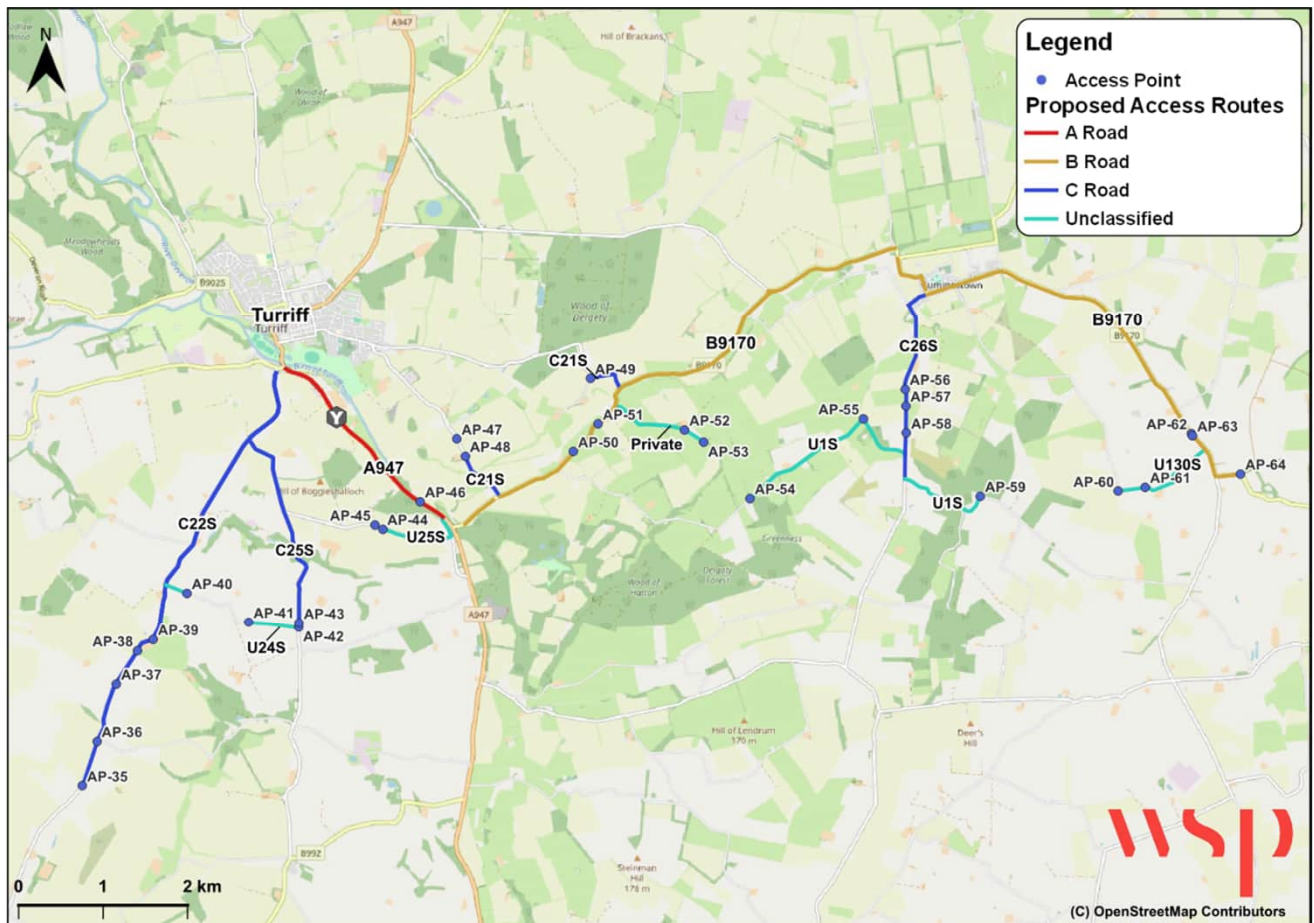
- **AP19 - AP22:** Construction vehicles will leave the A97 at its junction with the C88S, before traveling south to reach the access points AP19 and AP20 which are taken directly of the C88S. Vehicles serving AP21 and AP22 will continue south, turning left onto U89S where access will be taken. The C88S and U89S are both single-track carriageway roads of 3 m widths not currently supported by passing places other than at farming field accesses.
- **AP23 - AP26:** Construction vehicles will leave the B9001 at its junction with the C87S, before traveling south to reach the access points AP25 and AP26 which are taken directly of the C87S. Vehicles serving AP23 and AP24 will continue south, turning right onto U90S where access will be taken. The C87S and U90S are both single-track carriageway roads of 3-4 m widths currently not supported by any formal passing places.
- **AP27:** Construction vehicles will continue south along the B9001 past its junction with the B9024 to reach the access point taken directly of the B9001. The B9001 is a single-track road of approximately 6 m width subject to the national speed limit.
- **AP28 - AP31:** Construction vehicles will leave the B9024 at its junction with the U94L, before traveling south along the U94L to reach the access points. Vehicles serving AP28 will turn right onto U93bL where access will be taken whereas, for AP29, AP30 and AP31, vehicles will turn left onto the U92S to the access points. The U94L, U93bL and U92S are all single-track carriageway roads of 3-4 m widths with no formal passing places present.
- **AP32 - AP34:** Construction vehicles will leave the B9024 at its junction with the U33S, before traveling southeast along the U33S to reach the access points. The U33S is a single-track carriageway road of 3 m with no formal passing places present other than at farming field accesses.

5.2.10. Some potential constraints have been identified on this section, further discussed in **Chapter 7 of this Appendix**.

Section 22 - Proposed Access Route

- 5.2.11. Section 22 of the Proposed OHL Alignment is located to the south of Turriff and includes the towers that are located between Turriff and New Deer. There is a total of 30 access points within this section. The proposed access routes from the local road network to each of the access points is shown in **Figure 13.3.5.5**.

Figure 13.3.5.5: Section 22 Access Point Route Options



- 5.2.12. As shown by **Figure 13.3.5.5**, the proposed route for construction vehicles accessing Section 22 of the Proposed OHL Alignment will see vehicles leaving the local road network in Turriff from the A947, before heading south or east on the B9170. The B9170 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. Construction vehicles will take the following routes to access their associated access points:

- **AP35 - AP43:** Construction vehicles will leave the B9024 at Turriff at its junction with the C22S, before traveling south to reach the access points AP35, AP36, AP37, AP38 and AP39 which are accessed directly from the C22S. The C22S is a road of approximately 5.5 m width with no centreline markings present. For AP40, vehicles will take a left turn onto U24S where access will be taken provided a new temporary bellmouth. The U24S is a single-track road of approximately 3 m with passing places present. Vehicles accessing AP41, AP42 and AP43 will take a left turn off of the C22S onto the C25S and continue south to the access points.

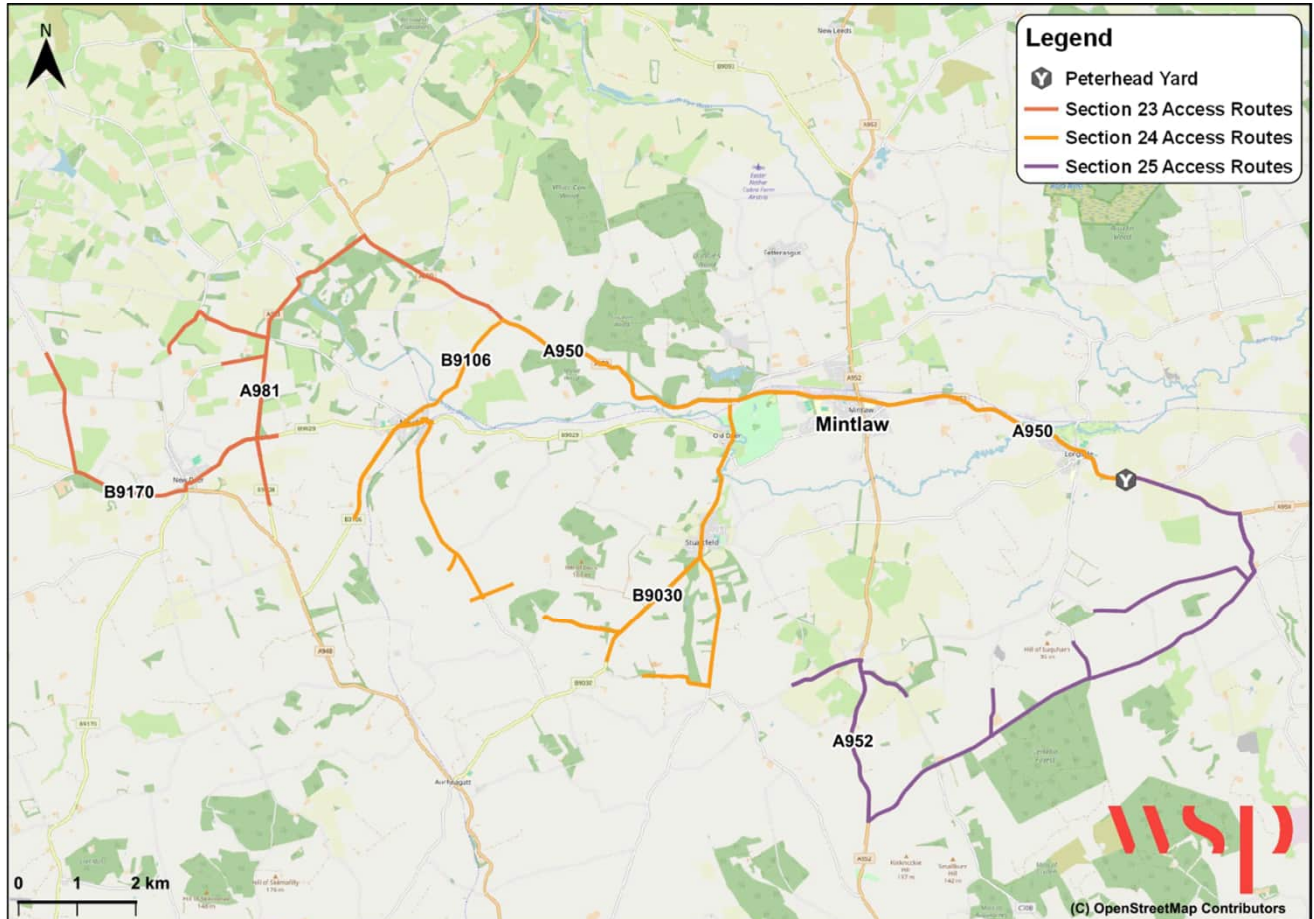
- **AP44 - AP48:** Construction vehicles will leave the A947 at Darra at its junction with the U25S, before traveling west to reach the access points AP44 and AP45 which are accessed directly from the U25S. The U25S is a single-track carriageway road of approximately 3 m with passing places provided at regular intervals. For AP47 and AP48, vehicles will leave the A947 and take a left onto B9170 to then take a further left onto C21S, continuing north to the access points. The C21S is a single-track carriageway road of approximately 5.5 m and subject to the national speed limit.
- **AP49 - AP53:** Construction vehicles will leave the A947 at its junction with the B9170, before traveling east to reach the access points AP50 and AP51 which are taken directly of the B1970. Vehicles serving AP49 will continue northeast, turning left onto C21S where access will be taken. AP52 and AP53 will be access via a right turn from the B1970 onto a private road near Burnside Cottage. The C21S is a single-track carriageway road of 3 m widths with no formal passing places present other than at farming field accesses.
- **AP54 - AP59:** Construction vehicles will leave the A947 at its junction with the B9170, before traveling east to reach Cuminestown. From here vehicles will take a right onto the C26S and continue heading south where AP56, AP57 and AP58 are accessed. Vehicles serving AP54 and AP55 will then take a left onto U1S where access will be taken and similarly AP59 will be access taking a left off the C26S onto another part of the U1S. The C26S is a single carriageway road of 4-5 m width with passing places present and subject to national speed limit. The U1S is also a single-track road of 3 m width with no passing places present.
- **AP60 - AP64:** Construction vehicles will leave the A947 at its junction with the B9170, before traveling east through Cuminestown and continuing along the B9170 where AP62 and AP63 are accessed near Northburn. Continuing south along the B9170, vehicle will take a right onto the U130S where AP60 and AP61 will be accessed. Finally, AP64 will be accessed directly from the B9170 slightly further southeast along the road. The U130S is also a single-track road of 3 m width with no passing places present however, local widenings are present at bends.

5.2.13. Some potential constraints have been identified on this section, further discussed in **Chapter 7 of this Appendix**.

PETERHEAD YARD

- 5.2.14. Three sections of the Proposed OHL Alignment's installation are to be served by the Yard located within Peterhead. **Figure 13.3.5.6** shows an overview of the routes that construction vehicles will be using to access each of the sections.

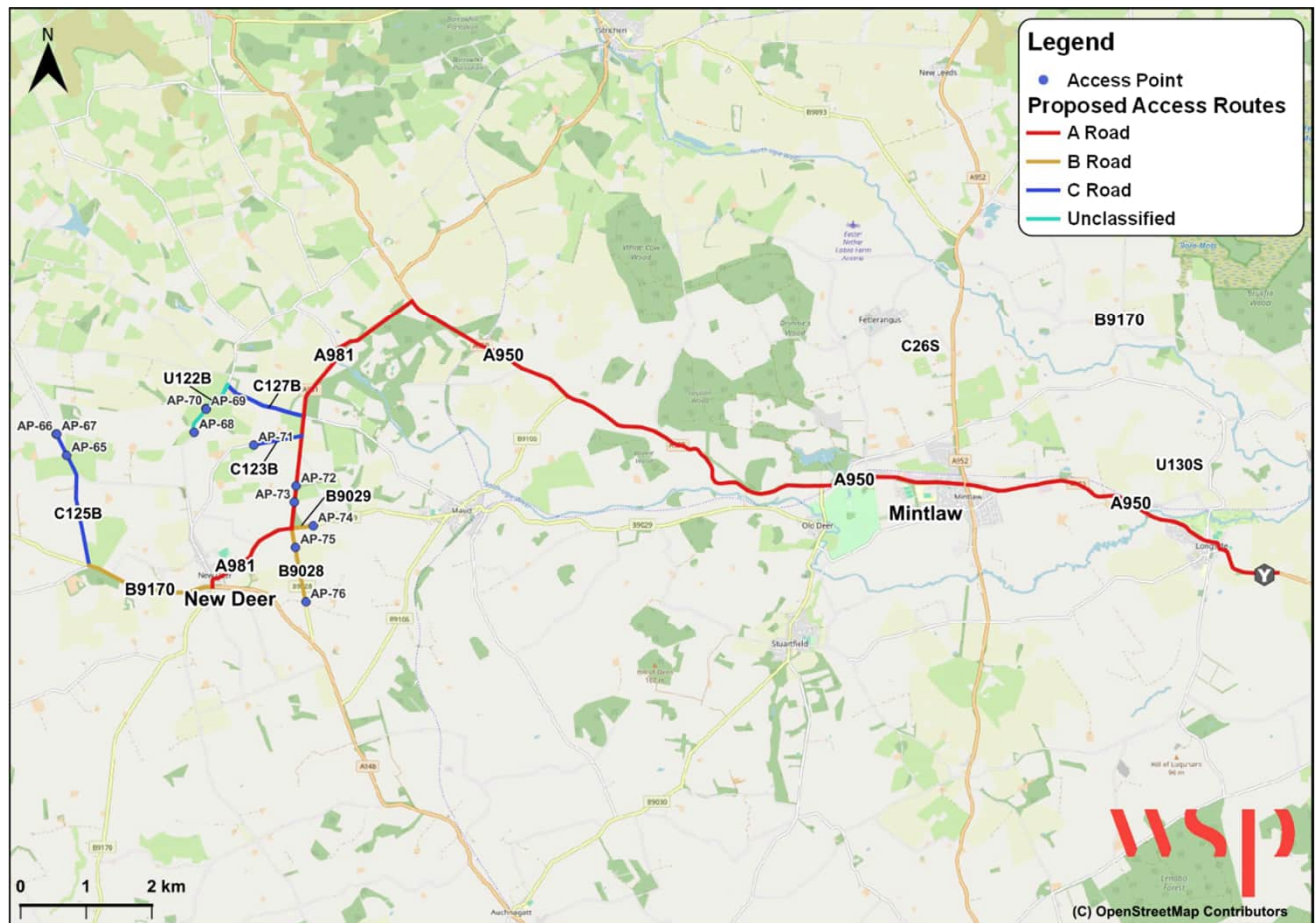
Figure 13.3.5.6: Peterhead Yard Access Routes



Section 23 - Proposed Access Route

- 5.2.15. Section 23 of the Proposed OHL Alignment is located to the east of New Deer and includes the towers that are located between New Deer and Maud. There is a total of 12 access points within this section. The proposed access routes from the local road network to each of the access points are shown in **Figure 13.3.5.7**.

Figure 13.3.5.7: Section 23 Access Point Route Options.



- 5.2.16. As shown by **Figure 13.3.5.7**, the proposed route for construction vehicles accessing Section 23 of the Proposed OHL Alignment will see vehicles leaving the local road network in the vicinity of Peterhead from the A950, before heading west or east along the A950 to continue south onto a series of A, B and classified roads to reach the access points. The A950 is generally a single carriageway of approximately 6 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. Construction vehicles will take the following routes to access their associated access points:

- **AP65 - AP67:** Construction vehicles will leave the Yard via the A950 at Peterhead before traveling west to its junction with the A981 before continuing south along the A981 to reach New Deer. From here, vehicles will continue west along the B9170 before taking a right onto the C125B where the access points are found. The A981 is a two-way carriageway road is a road of approximately 5.5 m width with centreline markings present. The C125B is a single-track road of approximately 5-6 m subject to national speed limit.

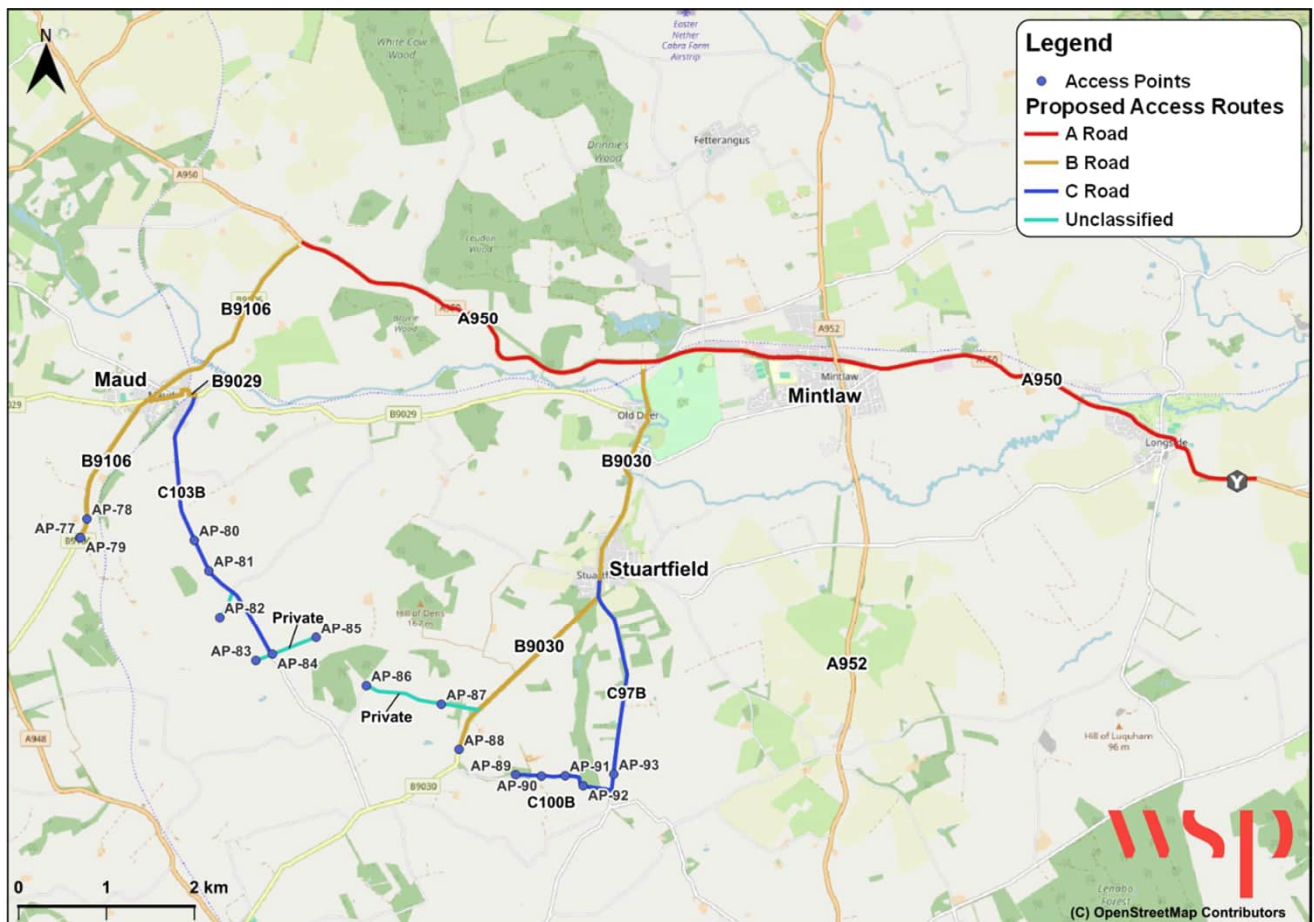
- **AP68 - AP71:** Construction vehicles will leave the Yard via the A950 at Peterhead before traveling west to its junction with the A981 before continuing south along the A981. For AP68, AP69 and AP70 vehicles will take a right from the A981 onto the C127B, continue west before taking a left onto the U122B where access will be taken. Both the C127B and U122B are single-track carriageway roads of approximately 4 m and 3 m widths respectively, with no passing places present and subject to national speed limit. For AP71, vehicles will continue south and turn right onto the C123B where access will be taken directly off the road. The C123B is single-track carriageway road of approximately 5 m width and is subject to the national speed limit.
- **AP72 - AP76:** Construction vehicles will make their way onto the A981 from the Yard continuing south towards New Deer. For AP72 and AP73, access will be taken directly from the A981 whilst for AP74, vehicles will take a left turn onto B9029 where access will be taken. At the A981 / B9029, vehicles will continue south onto the B9028 for access to AP75 and AP76. The B9029 is a two-way carriageway road of approximately 6 m width with centreline marking present. The B9028 is a single-track carriageway road of approximately 5 m width without centreline marking present.

5.2.17. Some potential constraints have been identified on this section, further discussed in **Chapter 7 of this Appendix**.

Section 24 - Proposed Access Route

5.2.18. Section 24 of the Proposed OHL Alignment is located to the southeast of Maud and includes the towers that are located between Maud and Mintlaw. There is a total of 17 access points within this section. The proposed access routes from the local road network to each of the access points is shown in **Figure 13.3.5.**

Figure 13.3.5.8: Section 24 Access Point Route Options



5.2.19. As shown by **Figure 13.3.5.**, the proposed route for construction vehicles accessing Section 24 of the Proposed OHL Alignment will see vehicles leaving the local road network in the vicinity of Peterhead from the A950, before heading west or east along the A950 to continue south onto a series of A, B and classified roads to reach the access points. Construction vehicles will take the following routes to access their associated access points:

- **AP77 - AP79:** Construction vehicles will leave Yard and head west along the A950 to its junction with the B9106 at which vehicles will turn left onto the B9106 towards Maud. Vehicles will continue south through Maud to reach the access points. The B9106 is a two-way single carriageway road with centre line markings present of approximately 5 m width.
- **AP80 - AP85:** Construction vehicles will leave Yard and head west along the A950 to its junction with the B9106 at which vehicles will turn left onto the B9106 towards Maud. At Maud, vehicles will turn left, briefly joining the B9029 to later take right onto the C103B just to the east of Maud. The access points are then accessed either directly off the C103B or via private roads. The

C103B is a single-track carriageway road of approximately 3-4 m width and is currently not supported by passing places.

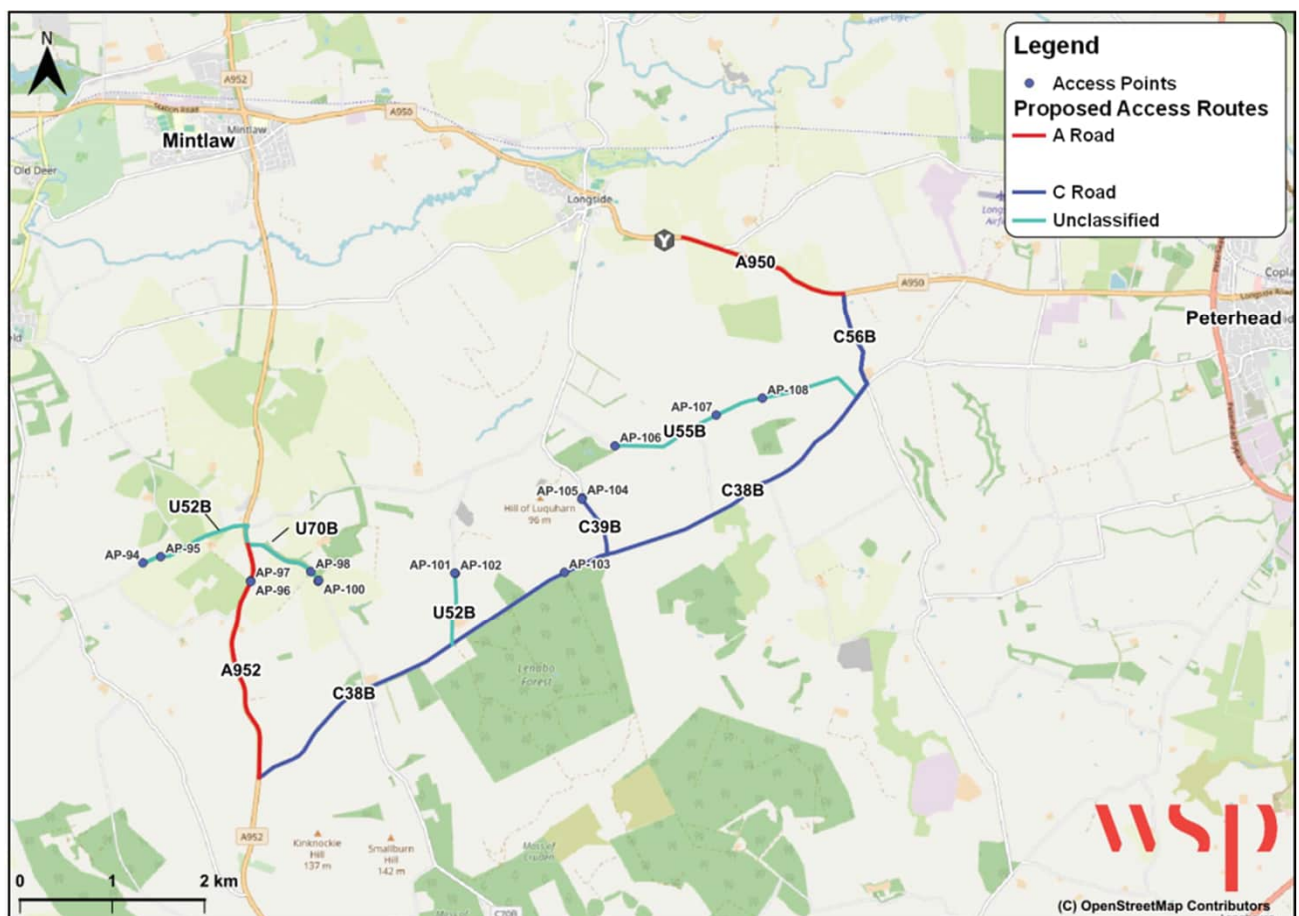
- **AP86 - AP93:** Construction vehicles will leave Yard and head west along the A950 to its junction with the B9030 at which vehicles will turn left onto the B9030 towards Old Deer. Continuing south along the B9030 through Stuartfield, for AP86 and AP87, vehicles will take a right from the B9030 onto a private road where access is taken whilst access for AP88 is taken directly of the B9030. For AP89, AP90, AP91, AP92 and AP93, vehicles will take a right just south of Stuartfield onto the C97B and continue south. AP93 is accessed directly from the C97B via a new temporary bellmouth. The remaining access points are located a right turn of the C97B onto the C100B. The C97B is a single-track carriageway road of approximately 4-5 m width, and subject to national speed limit. The C100B is single-track carriageway road of approximately 4 m width, subject to the national speed limit and currently not supported by passing places.

- 5.2.20. Some potential constraints have been identified on this section, further discussed in **Chapter 7 of this Appendix**.

Section 25 - Proposed Access Route

- 5.2.21. Section 25 of the Proposed OHL Alignment is located to the southeast of Mintlaw and includes the towers that are located between Mintlaw and Peterhead. There is a total of 15 access points within this section. The proposed access routes from the local road network to each of the access points is shown in **Figure 13.3.5.9**.

Figure 13.3.5.9: Section 25 Access Point Route Options



5.2.22. As shown by **Figure 13.3.5.9**, the proposed route for construction vehicles accessing Section 25 of the Proposed OHL Alignment will see vehicles leaving the local road network in the vicinity of Peterhead from the A950, before heading east along the A950 to continue south onto a series of B and classified roads to reach the access points. Construction vehicles will take the following routes to access their associated access points:

- **AP94 - AP100:** Construction vehicles will leave Yard and head east along the A950 to its junction with the C56B at which vehicles will turn right onto the C56B continuing south. After this, vehicles will turn right again onto C38B and continue along it until its junctions with the A952. After another right turn northbound onto the A952, AP96 and AP97 are accessed. Further north, AP98 and AP99 can be accessed to the east via the U70B and AP94 and AP95 via the U52B to the west. The C56B is a two-way carriageway road of approximately 5 m width, supported by centreline marking and subject to national speed limit. The C38B is single-track carriageway road of approximately 4 m width, subject to the national speed limit. The U70B is a single-track carriageway road of approximately 3-4 m width, currently supported by passing places and subject to the national speed limit. The U52B is a single-track carriageway road of approximately 3-4 m width and currently not supported by formal passing places however, informal passing places present at accesses and bends.
- **AP101 - AP105:** Construction vehicles will leave Yard and head east along the A950 to its junction with the C56B at which vehicles will turn right onto the C56B continuing south. After this, vehicles will turn right again onto C38B where AP103 can be accessed. For AP101 and AP102, vehicles will make a tight turn onto the U52B opposite Lenabo Forest to reach the access points. For access to AP104 and AP105, vehicles will make a right turn onto C39B close to Hill of Luquharn and continue north to the access points. The C39B is a single-track carriageway road of approximately 3 m width currently not supported by passing places and subject to the national speed limit.
- **AP106 - AP108:** Construction vehicles will leave Yard and head east along the A950 to its junction with the C56B at which vehicles will turn right onto the C56B continuing south. After this, vehicles will turn right onto C38B and then a further right onto the U55B where all the access points can be found. The U55B is a single-track carriageway road of approximately 3 m width currently not supported by passing places other than farm access locations.

5.2.23. Some potential constraints have been identified on this section, further discussed in **Chapter 7 of this Appendix**.

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 provides a summary of the Proposed OHL Alignment section 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 RN
20 (Coachford to Huntly)	Access Points (AP 1 - 8, 10 - 13)	Keith Yard	A96, B9022, C106S, U108S, U111S
21 (Huntly to Turriff)	Access Points (AP 14 –34)	Turriff Yard	A97, B9024, B9001, C100S, C87S, C88S, C89S, C100S, U33S, U89S, U90S, U92S, U93bL, U94L, U102S
22 (Turriff to New Deer)	Access Points (AP 35 - 64)	Turriff Yard	A947, B9170, C21S, C22S, C25S, C26S, U1S, U24S, U25S, U130S
23 (New Deer to Maud)	Access Points (AP 65 - 76)	Peterhead Yard	A950, A981, B9029, B9028, B9170, C123B, C125B, C127B, U122B
24 (Maud to Mintlaw)	Access Points (AP 77 - 93)	Peterhead Yard	A950, B9030, B9029, B9106, C97B, C100B, C103B
25 (Mintlaw to Peterhead)	Access Points (AP 94 - 108)	Peterhead Yard	A950, A952, C56B, C38B, C39B, U52B, U55B, U70B

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 Alignment towers, this can be found in **Table 3.5 of Chapter 3: Project Description, Volume 2** 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
20	AP1	75	18
	AP2	76	18
	AP3	76	18
	AP4	76	18
	AP5	76	18
	AP6	76	18
	AP7	76	18
	AP8	75	18
	AP10	83	20
	AP11	81	19
	AP12	76	18
	AP13	76	18
21	AP14	76	18
	AP15	75	18
	AP16	75	18
	AP17	75	18
	AP18	75	18
	AP19	76	18
	AP20	76	18
	AP21	76	18
	AP22	76	18
	AP23	79	18
	AP24	88	21
	AP25	76	18
	AP26	76	18
	AP27	83	20
	AP28	81	19

Section	Access Point	Car / LGV Two-Way Trip Generation	HGV Two-Way Trip Generation
	AP29	76	18
	AP30	76	18
	AP31	81	19
	AP32	83	20
	AP33	76	18
	AP34	83	20
22	AP35	83	20
	AP36	76	18
	AP37	76	18
	AP38	76	18
	AP39	76	18
	AP40	76	18
	AP41	76	18
	AP42	88	21
	AP43	88	21
	AP44	88	21
	AP45	76	18
	AP46	76	18
	AP47	76	18
	AP48	106	26
	AP49	88	21
	AP50	106	26
	AP51	88	21
	AP52	76	18
	AP53	106	26
	AP54	88	21
	AP55	81	19
	AP56	106	26
	AP57	106	26
	AP58	106	26
	AP59	79	18
	AP60	88	21
	AP61	76	18
	AP62	76	18
	AP63	76	18
	AP64	80	19

Section	Access Point	Car / LGV Two-Way Trip Generation	HGV Two-Way Trip Generation
23	AP65	88	21
	AP66	76	18
	AP67	76	18
	AP68	81	19
	AP69	88	21
	AP70	88	21
	AP71	88	21
	AP72	76	18
	AP73	106	26
	AP74	76	18
	AP75	76	18
	AP76	88	21
24	AP77	76	18
	AP78	76	18
	AP79	76	18
	AP80	88	21
	AP81	88	21
	AP82	76	18
	AP83	76	18
	AP84	76	18
	AP85	88	21
	AP86	83	20
	AP87	88	21
	AP88	76	18
	AP89	106	26
	AP90	76	18
	AP91	76	18
	AP92	76	18
	AP93	83	20
25	AP94	88	21
	AP95	106	26
	AP96	88	21
	AP97	106	26
	AP98	106	26
	AP99	76	18
	AP100	83	20

Section	Access Point	Car / LGV Two-Way Trip Generation	HGV Two-Way Trip Generation
	AP101	88	21
	AP102	106	26
	AP103	88	21
	AP104	106	26
	AP105	106	26
	AP106	81	19
	AP107	88	21
	AP108	88	21

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

Section	Daily Cars / Vans	Daily HGVs	Hourly Cars / Vans	Hourly HGVs
20	83	20	8	2
21	88	21	8	2
22	106	26	10	2
23	106	26	10	2
24	106	26	10	2
25	106	26	10	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 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
20	Assumed to route the most direct route from Cairdshill Quarry.
21	Assumed to route the most direct route from Tennants Ltd Quarry.
22	Assumed to route the most direct route from Greystone Quarry.
23	Assumed to route the most direct route from Greystone Quarry.

Section	Assumed Quarry
24	Assumed to route the most direct route from Lovie Quarry.
25	Assumed to route the most direct route from Savoch 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 summaries the total traffic movements over the full construction period for each section.

Table 6.5: Trip Generation per Section

Section	Daily Cars / Vans	Daily HGVs	Hourly Cars / Vans	Hourly HGVs	Construction Period (Days)	Total Movements over Full Construction Period
20	83	152	8	14	41	9633
21	88	153	8	14	39	9399
22	106	158	10	14	39	10296
23	106	158	10	14	25	6600
24	106	158	10	14	18	4752
25	106	158	10	14	25	6600

- 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 the 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
20	U108S	1	27	83	152	8	14
	A96	503	5765	83	152	8	14
21	A97	73	1488	88	153	8	14
	B9001	24	628	88	153	8	14
22	B9170	50	1842	106	158	10	14
	B9170	29	881	106	158	10	14
23	B9170	22	761	106	158	10	14
	A981	105	2195	106	158	10	14
	A981	70	1083	106	158	10	14
24	B9016	5	427	106	158	10	14
	A950	155	1761	106	158	10	14
	B9030	6	366	106	158	10	14
	A950	654	5021	106	158	10	14
25	Various	-	-	158	158	10	14

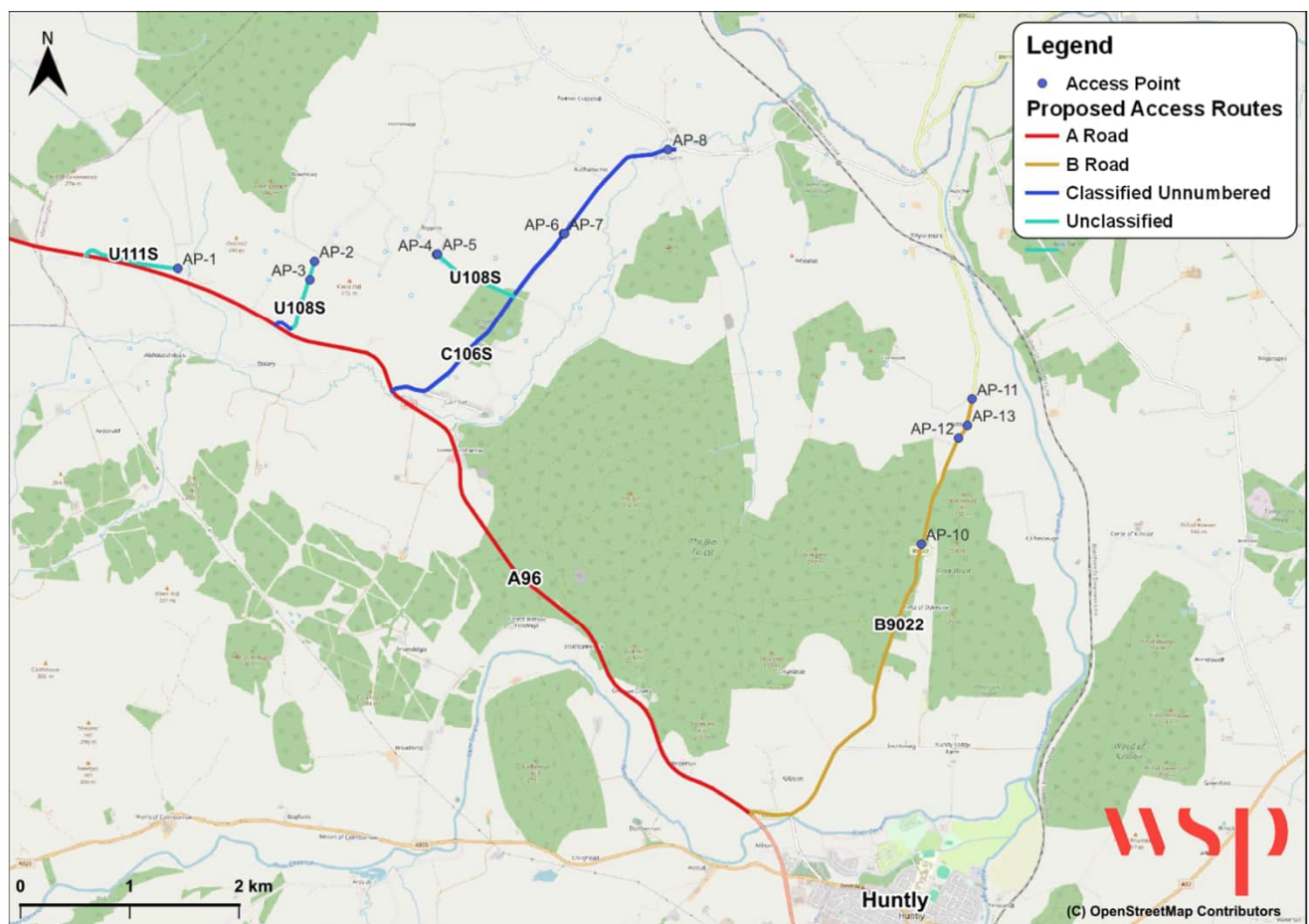
7.2.2. As can be seen from the above summary, construction activities are generally forecast to generate a maximum of 24 two-way traffic flows per hour, with the majority of these movements (14) generated by HGVs transporting aggregates to the construction sites. Where possible these movements will be 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.

7.3 CONSTRUCTION ROUTE IMPACT ANALYSIS

SECTION 20

7.3.1. **Figure 13.3.7.1** shows the routes that construction traffic would use to access the tower installation sites associated with Section 20 of the Proposed Development.

Figure 13.3.7.1: Section 20 Access Route



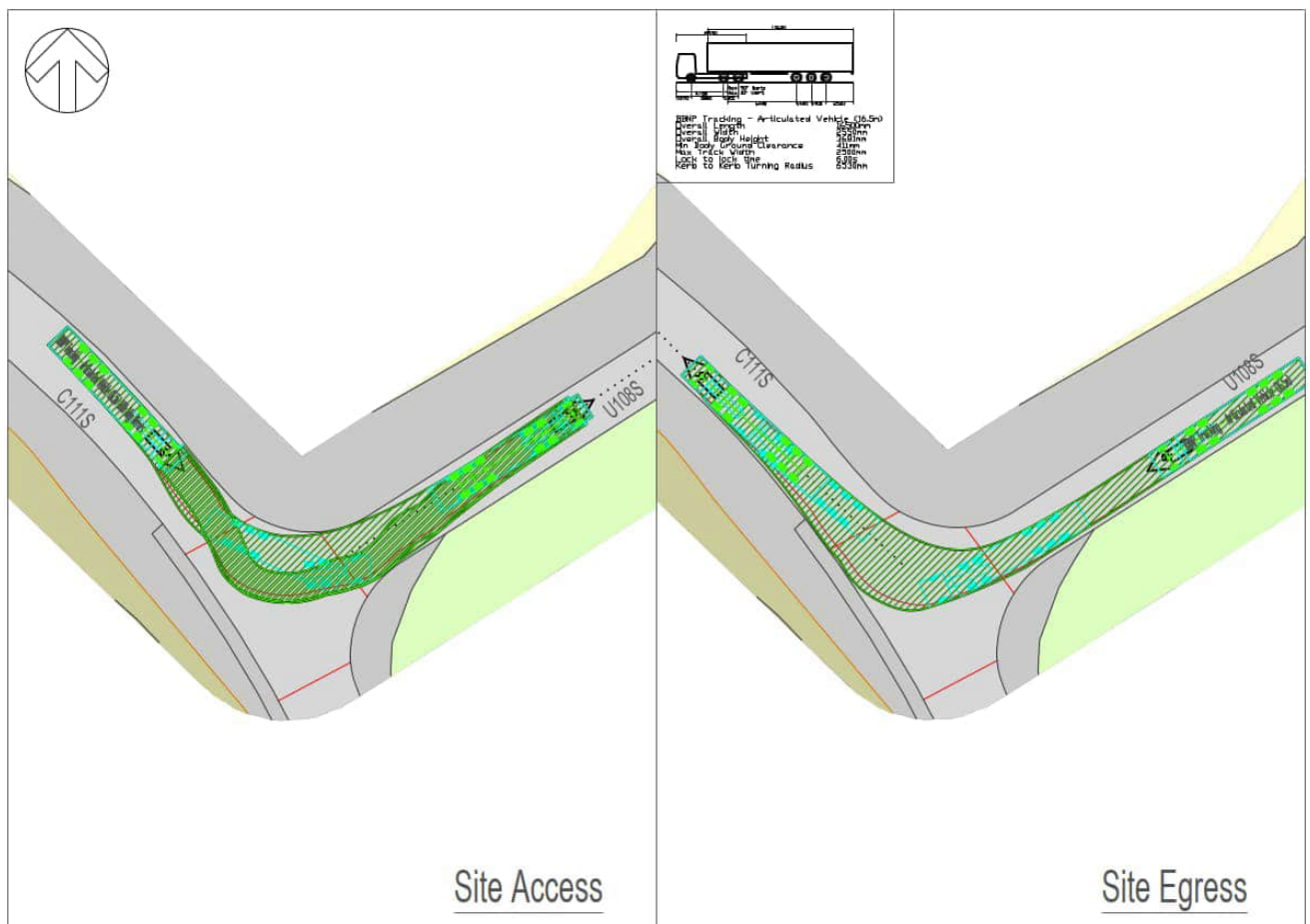
Pinch Point Analysis

7.3.2. A review of the potential access route has identified potential constraints at the following locations:

- C111S / U108S junction;
- C106S / U108S junction;

7.3.3. 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 13.3.7.2** and **Figure 13.3.7.3**.

Figure 13.3.7.2: Potential Constraint at C111S / U108S Junction

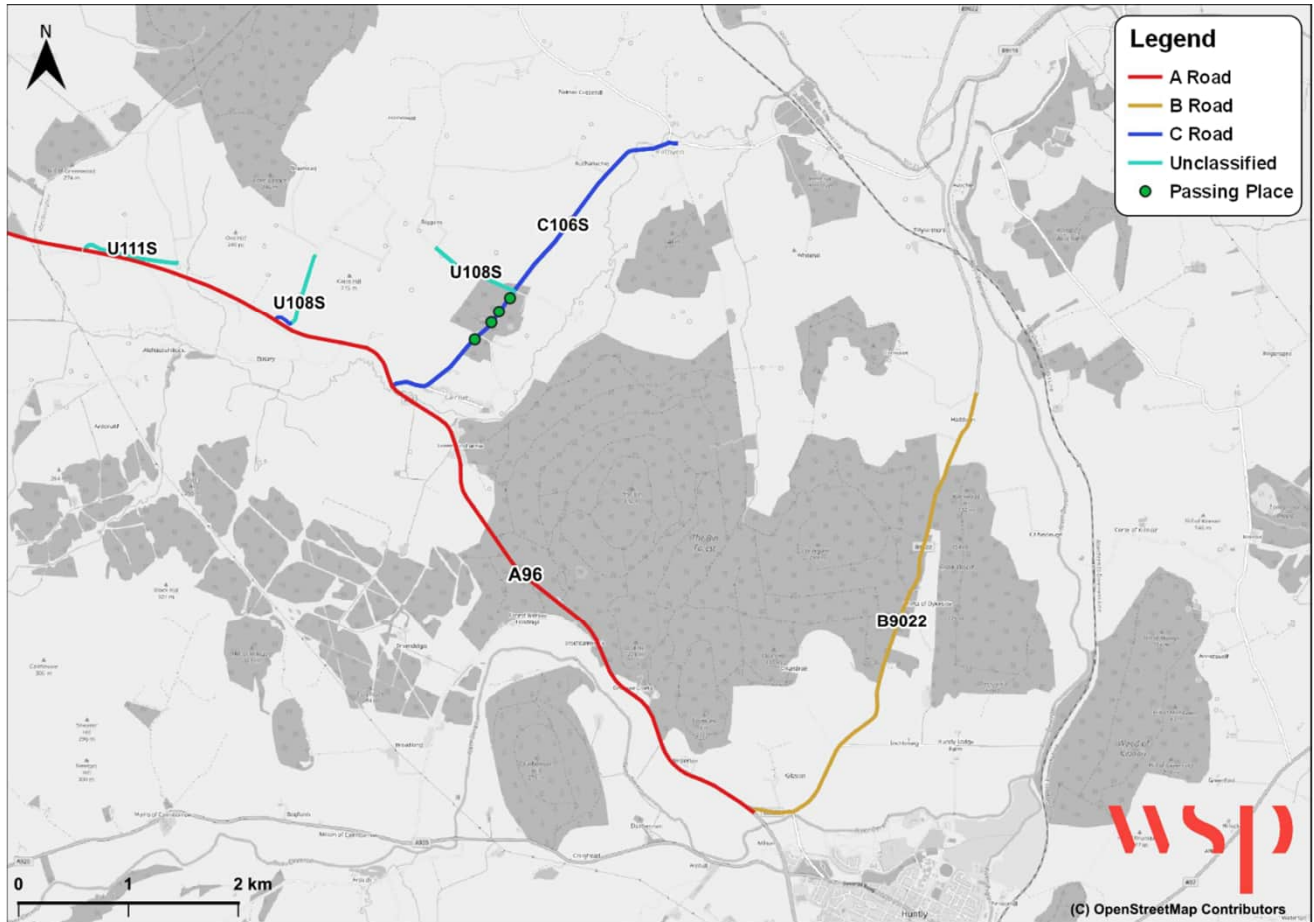


7.3.4. As shown by **Figure 13.3.7.2**, the analysis suggests that the C111S / U108S junction will be able to accommodate HGV movements.

Passing Place Provision

- 7.3.6. **Figure 13.3.7.4** shows the unclassified roads which are proposed to be used to support construction activities including any existing passing places.

Figure 13.3.7.4: Section 20 - Passing Places



- 7.3.7. The main section of the U111S is a single-track road of approximately 6 m in width. Construction vehicles will use approximately 900 m of this section of the U111S for access. As shown in **Figure 13.3.7.4**, there are no formal passing places on the U111S between the A96 and site access points.
- 7.3.8. The U108S is also approximately 3 m in width and is also not currently supported by passing places. Construction vehicles will use approximately 1500 m of this section of the U108S for access.
- 7.3.9. The C106S is a single-track road of approximately 6 m in width, which is currently supported by four passing places. Construction vehicles will use approximately 3200 m of the C106S when accessing the tower installation sites from the A96.

Proposed Mitigation

- 7.3.10. As previously noted, there may be a requirement to widen a short section of the U108S in the vicinity of the Chalybeate Spring within Section 20 of the Proposed OHL Alignment.
- 7.3.11. As highlighted in **Table 7.1**, it is estimated that construction activities could generate up to 22 two-way movements an hour. It is considered that while U108S lack existing passing place provision, it

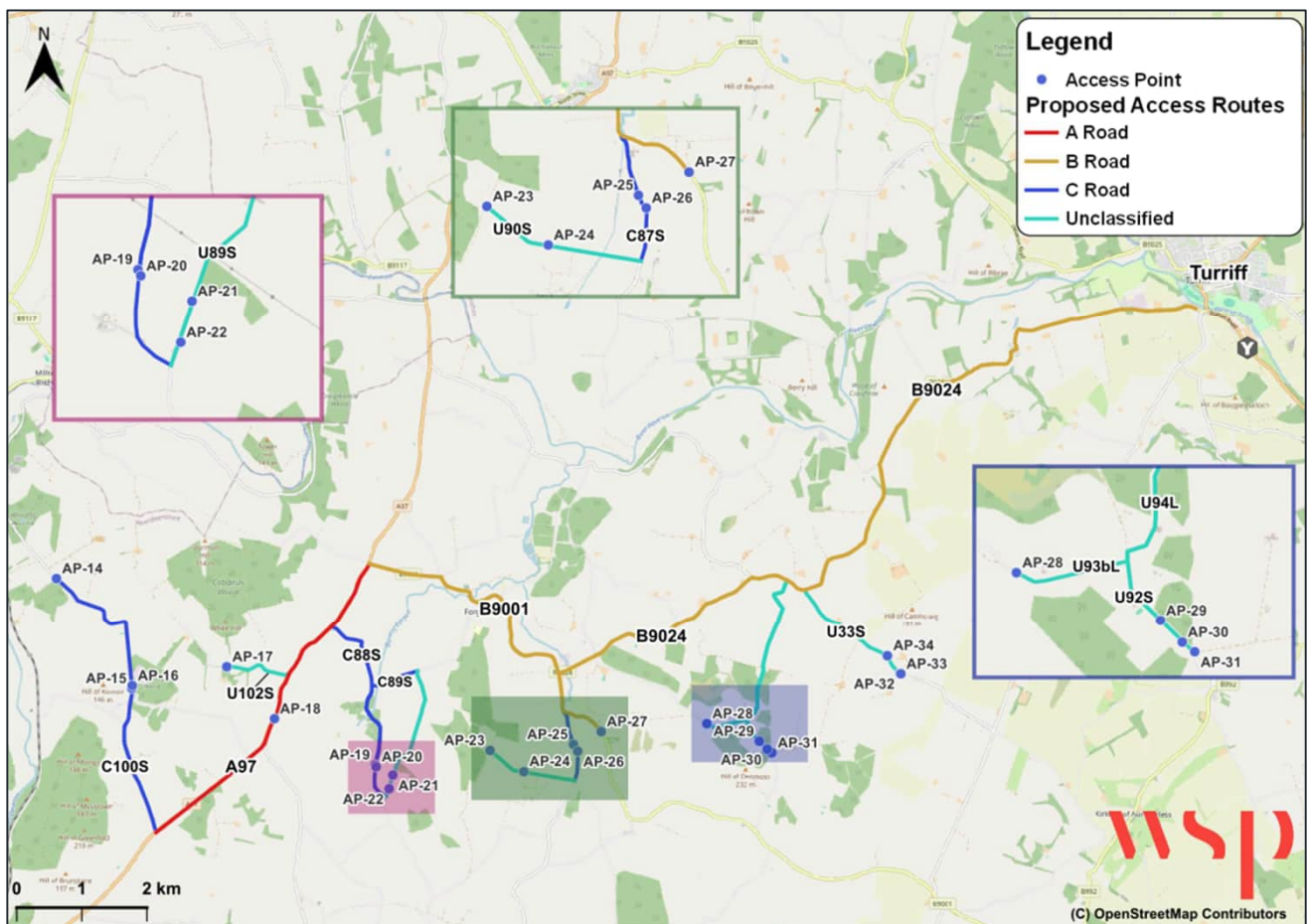
may be able to accommodate the eight hourly two-way car / van movements without passing provisions being introduced with suitable traffic management. Additionally, local carriageway widening might be required at the U108S / C106S junction to accommodate turning HGVs accessing the access points.

- 7.3.12. There might also be a requirement to provide additional passing places large enough to accommodate HGVs along the C106S to allow for construction traffic and ensure minimal disruption to general traffic as the road may be used as a through route between the A96 and B9022.

SECTION 21

- 7.3.13. **Figure 13.3.7.5** shows the route that construction traffic would use to access the tower installation sites associated with Section 21 of the Proposed Development.

Figure 13.3.7.5: Section 21 Access Route



Pinch Point Analysis

7.3.14. A review of the potential access route has identified potential constraints at the following locations:

- A97 / C100S junction; (**Figure 13.3.7.6**)
- At bend along C100S near Burn of Auchmull; (**Figure 13.3.7.7**)
- A97 / U102S junction; (**Figure 13.3.7.8**)
- At bends along U102S near Cobairdy; (**Figure 13.3.7.9**)
- Further bend along U102S; (**Figure 13.3.7.10**)
- A97 / C88S junction; (**Figure 13.3.7.11**)
- At bend along C88S near Brackenbraes; (**Figure 13.3.7.12**)
- C88S / C89S junction; (**Figure 13.3.7.13**)
- Bends along C89S near Conland; (**Figure 13.3.7.14**)
- C89S / U89S junction; (**Figure 13.3.7.15**)
- At bridge along C87S near B9001; (**Figure 13.3.7.16**)
- C87S / U90S junction; (**Figure 13.3.7.17**)
- B9024 / U94L; (**Figure 13.3.7.18**)
- At bend along U94L; (**Figure 13.3.7.19**)
- Further bend along U94L near Whin Burn; (**Figure 13.3.7.20**)
- U94L / U93bL junction; (**Figure 13.3.7.21**) and
- B9024 / U33S junction. (**Figure 13.3.7.22**)

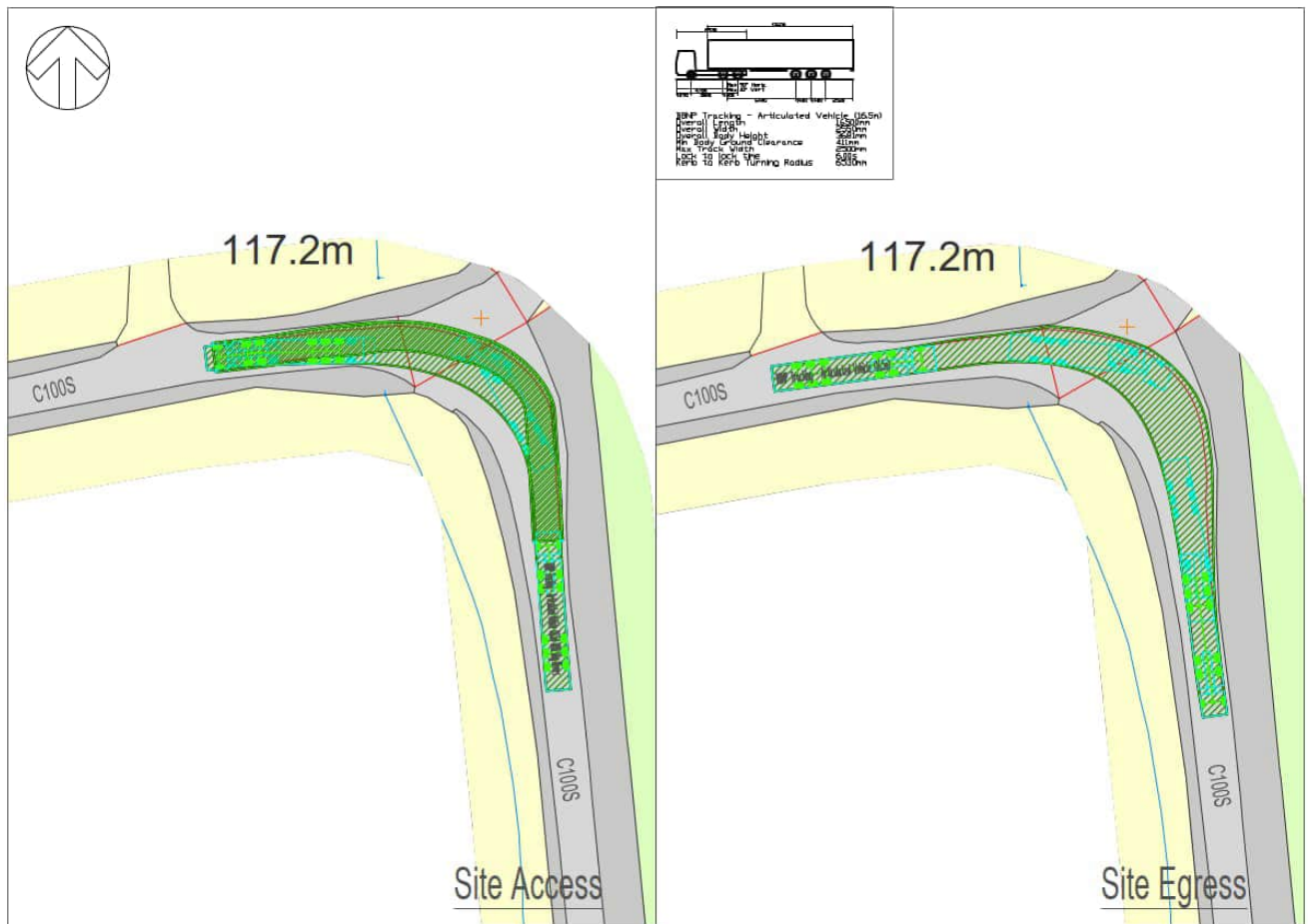
- 7.3.15. Swept Path Analysis using OS mapping was undertaken at this location to assess whether the construction vehicles can be accommodated using the existing road and junction layouts. The SPA was undertaken using AutoTrack and the result of the assessment is shown in **Figure 13.3.7.6** to **Figure 13.3.7.22**.

Figure 13.3.7.6: Potential Constraint at A97 / C100S Junction



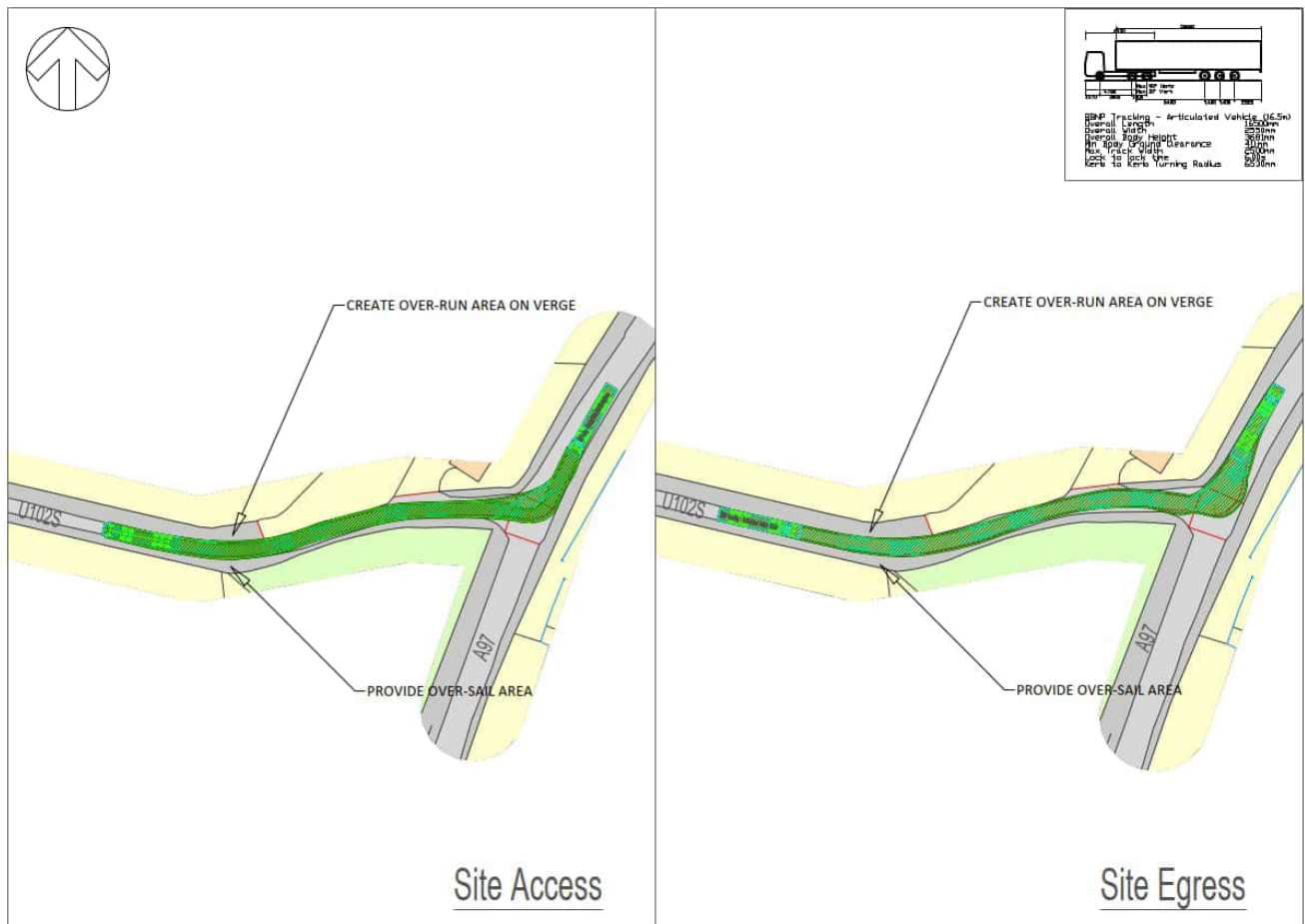
- 7.3.16. As shown by **Figure 13.3.7.6**, the analysis suggests that the A97 / C100S junction will be able to accommodate HGV movements.

Figure 13.3.7.7: Potential Constraint on C100S Bend near Burn of Auchmull



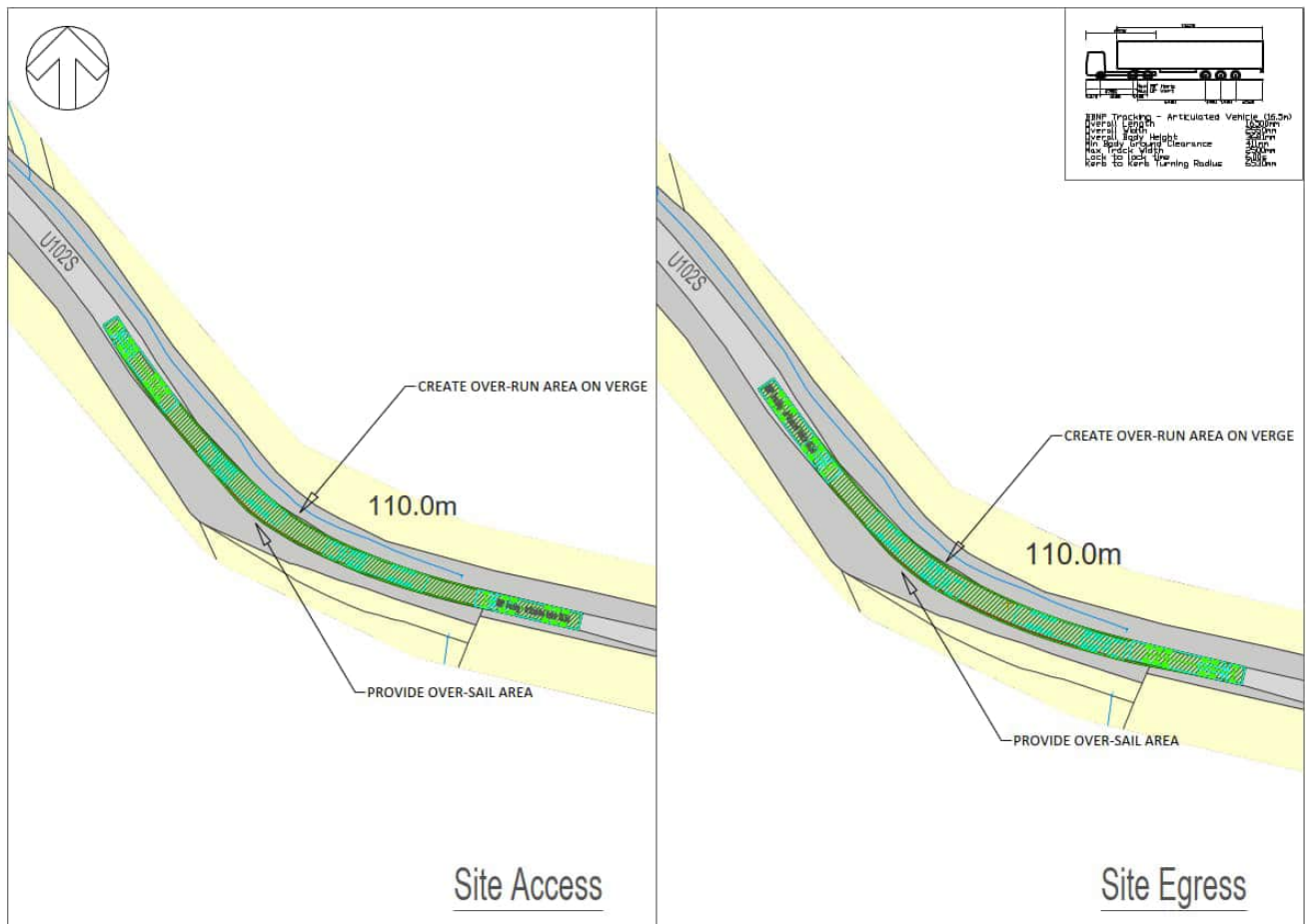
7.3.17. As shown by **Figure 13.3.7.7**, the analysis suggests that bend along C100S near Burn of Auchmull will be able to accommodate HGV movements.

Figure 13.3.7.8: Potential Constraint at A97 / U102S Junction



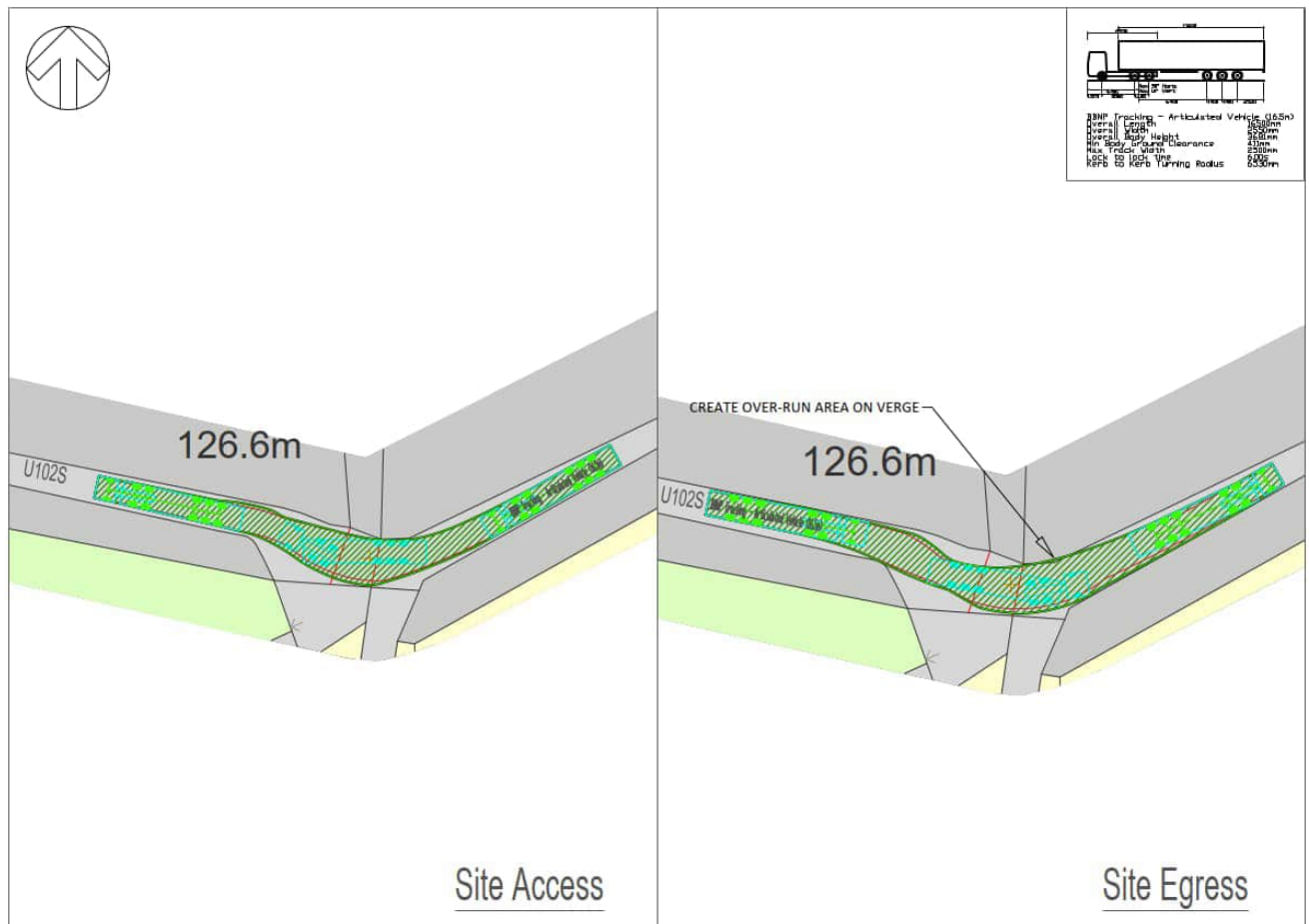
- 7.3.18. As shown by **Figure 13.3.7.8**, there may be a requirement to slightly widen the carriageway and provide a load-bearing over-run area over a short section along the U102S junction in the vicinity of the junction with the A97, to accommodate its use by HGVs, although the need for this will 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.

Figure 13.3.7.9: Potential Constraints along U102S Bend near Cobairdy



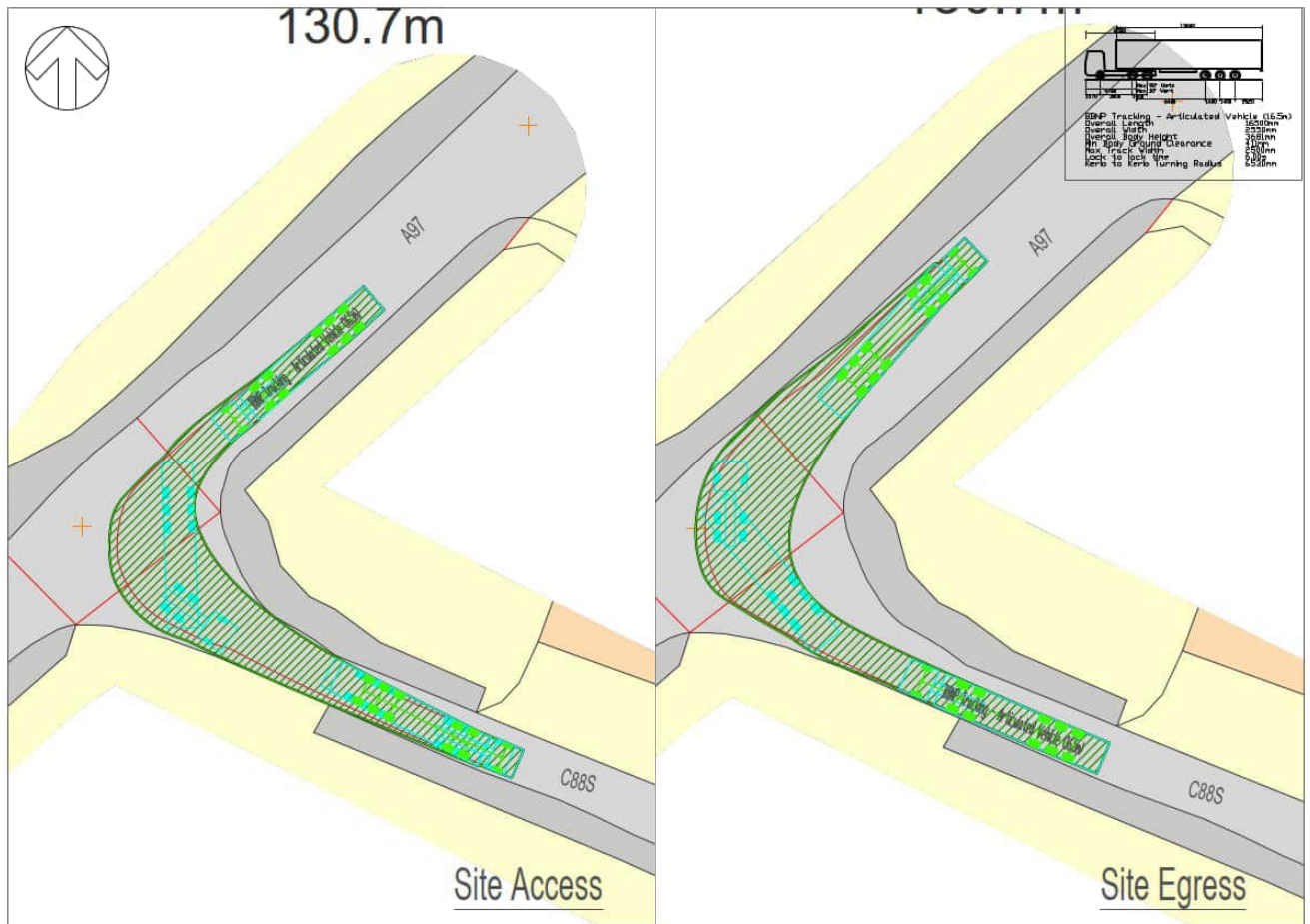
- 7.3.19. As shown by **Figure 13.3.7.9**, there may be a requirement to slightly widen the carriageway and provide a load-bearing over-run area over a short section along the U102S, to accommodate its use by HGVs, although the need for this will require to be confirmed by a topographical survey. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land.

Figure 13.3.7.10: Potential Constraints along U102S



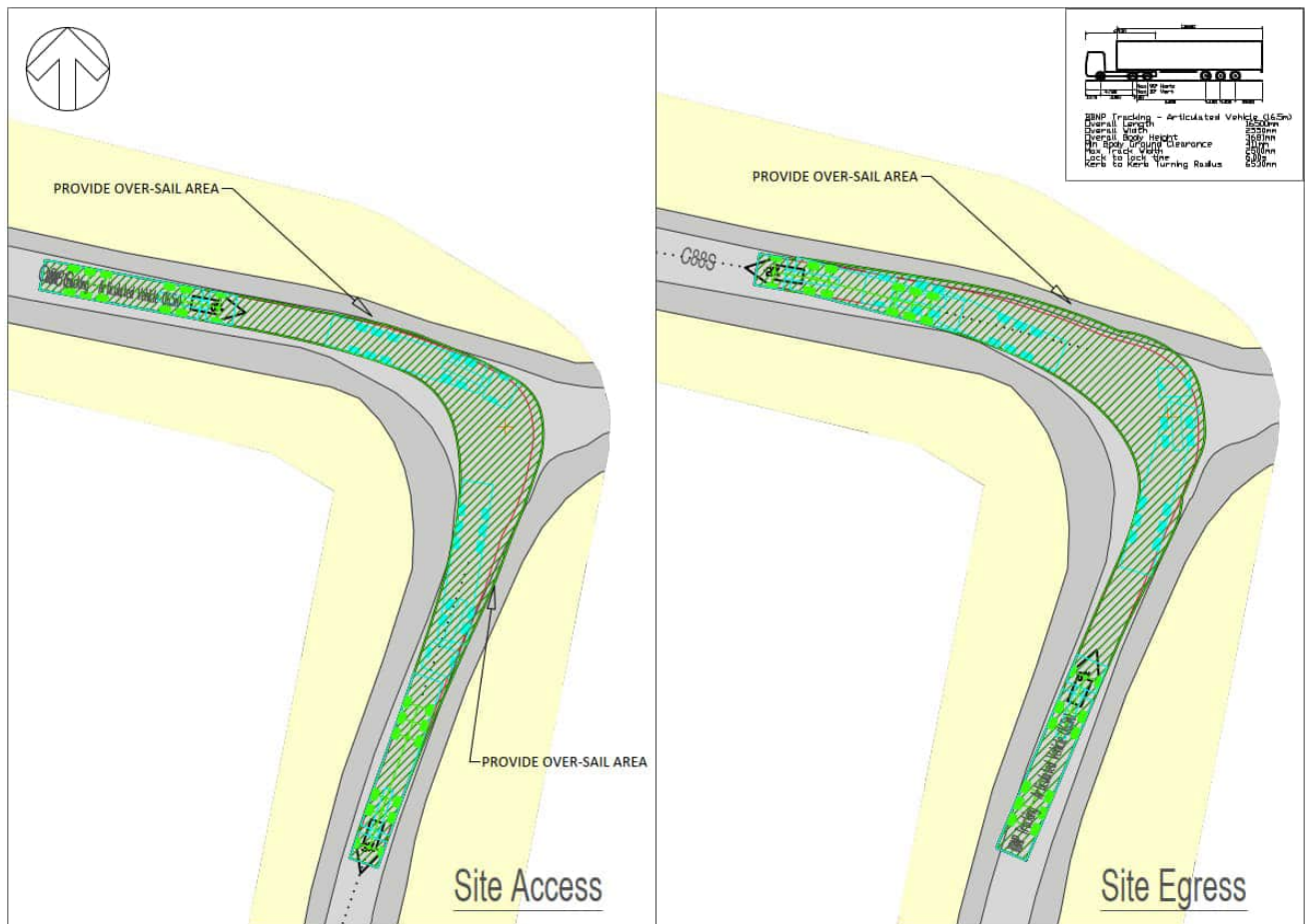
- 7.3.20. As shown by **Figure 13.3.7.10**, there may be a requirement to widen the carriageway and provide a load-bearing over-run area over a short section along the U102S, to accommodate its use by HGVs, although the need for this will require to be confirmed by a topographical survey. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land.

Figure 13.3.7.11: Potential Constraints at A97 / C88S Junction



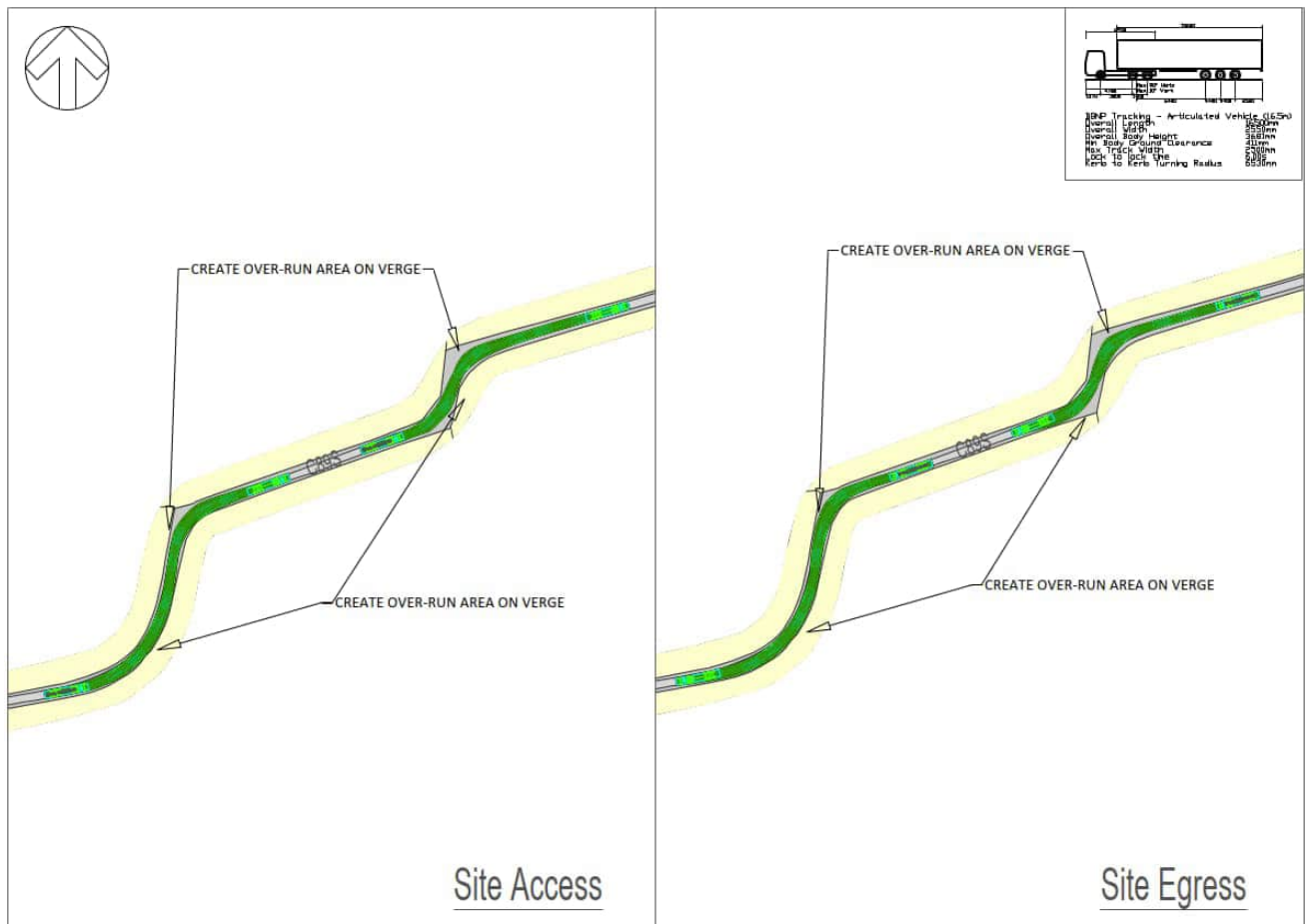
7.3.21. As shown by **Figure 13.3.7.11**, the analysis suggests that the A97 / C88S junction will be able to accommodate HGV movements.

Figure 13.3.7.12: Potential Constraints on Bend along C88S near Brackenbraes



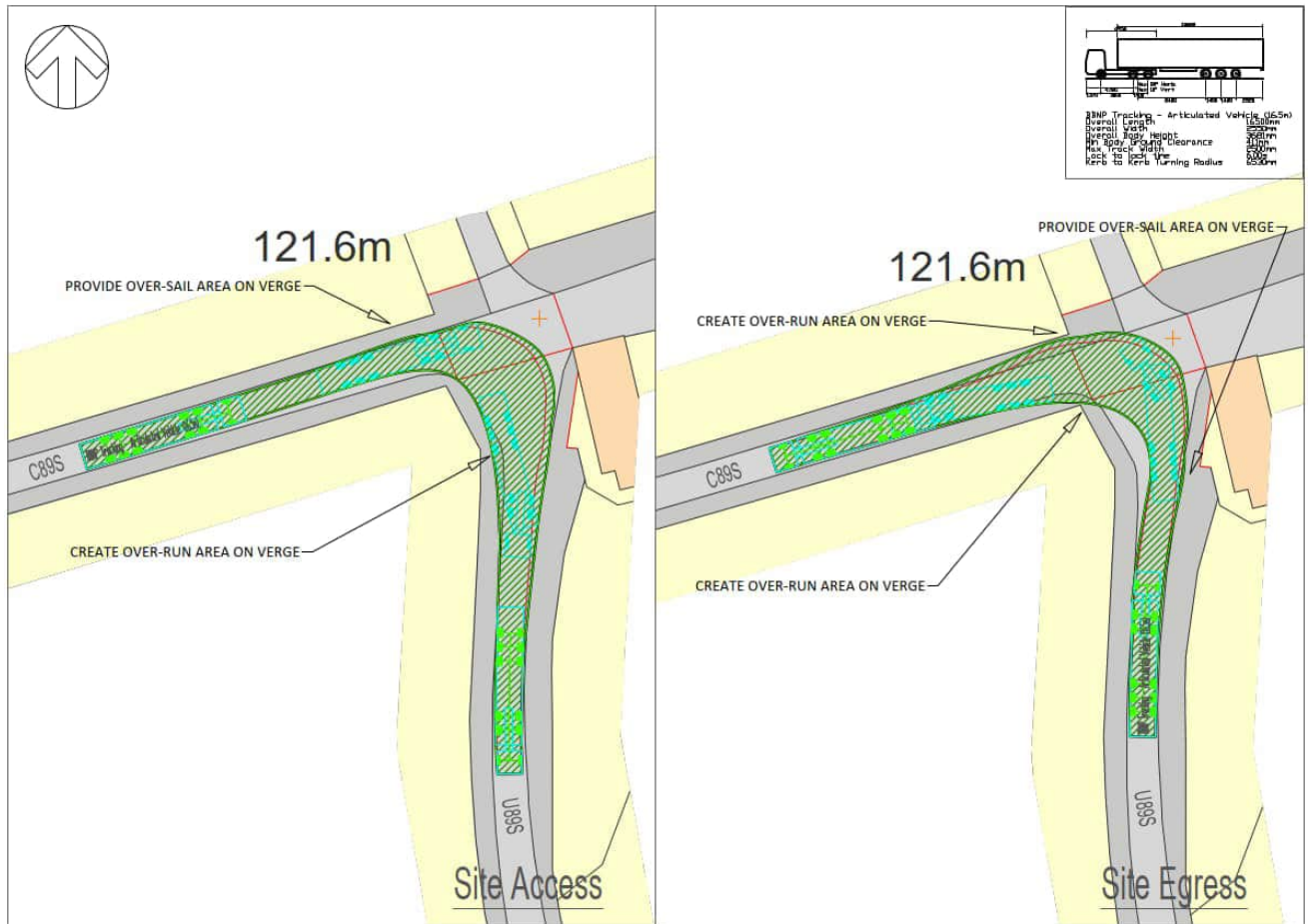
- 7.3.22. As shown by **Figure 13.3.7.12**, there may be a requirement to provide over-sail areas over a short section along the C88S, to accommodate its use by HGVs, although the need for this will require to be confirmed by a topographical survey. This appears to be able to be accommodated within the adopted road boundary without a requirement for third party land.

Figure 13.3.7.14: Potential Constraints on Bends along C89S near Conland



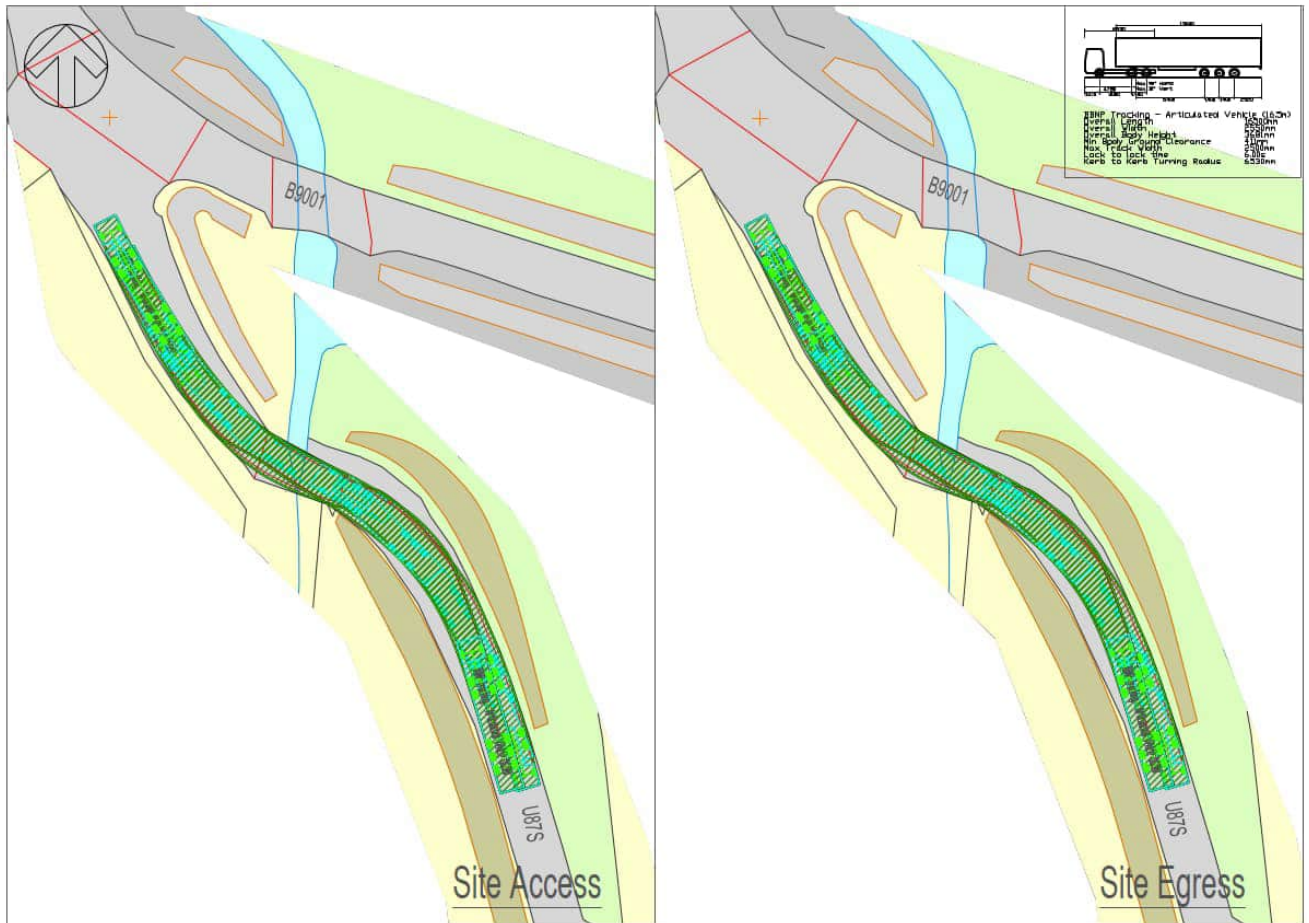
- 7.3.24. As shown by **Figure 13.3.7.14**, there may be a requirement to slightly widen the carriageway and create a load-bearing over-run areas over a section of the U89S junction, to accommodate its use by HGVs, although the need for this will require to be confirmed by a topographical survey. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land.

Figure 13.3.7.15: Potential Constraints at C89S / U89S Junction



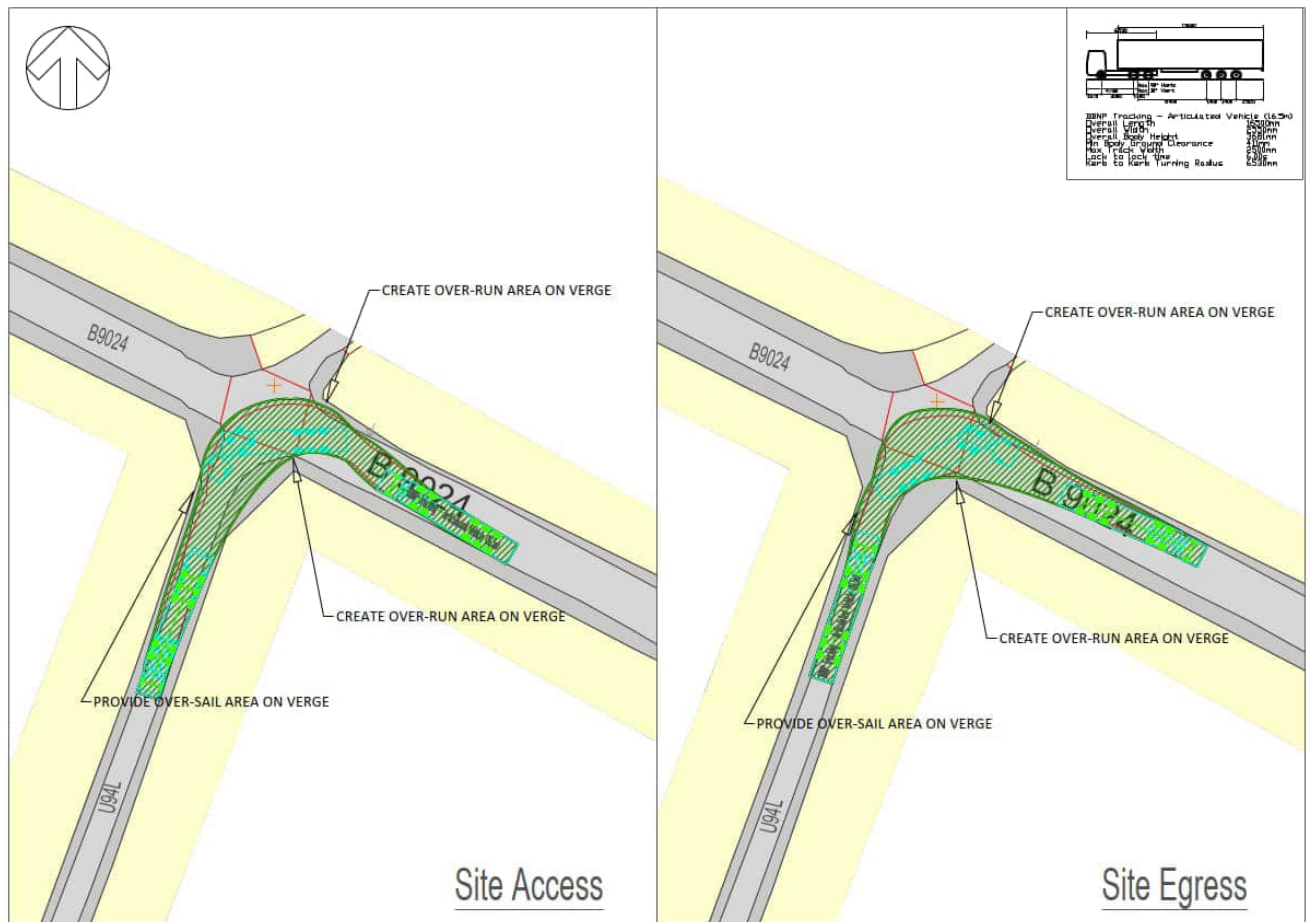
- 7.3.25. As shown by **Figure 13.3.7.15**, there may be a requirement to slightly widen the carriageway and create a load-bearing over-run areas over a section of the C89S / U89S junction, to accommodate its use by HGVs, although the need for this will require to be confirmed by a topographical survey. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land.

Figure 13.3.7.16: Potential Constraints at Bridge along C87S near B9001



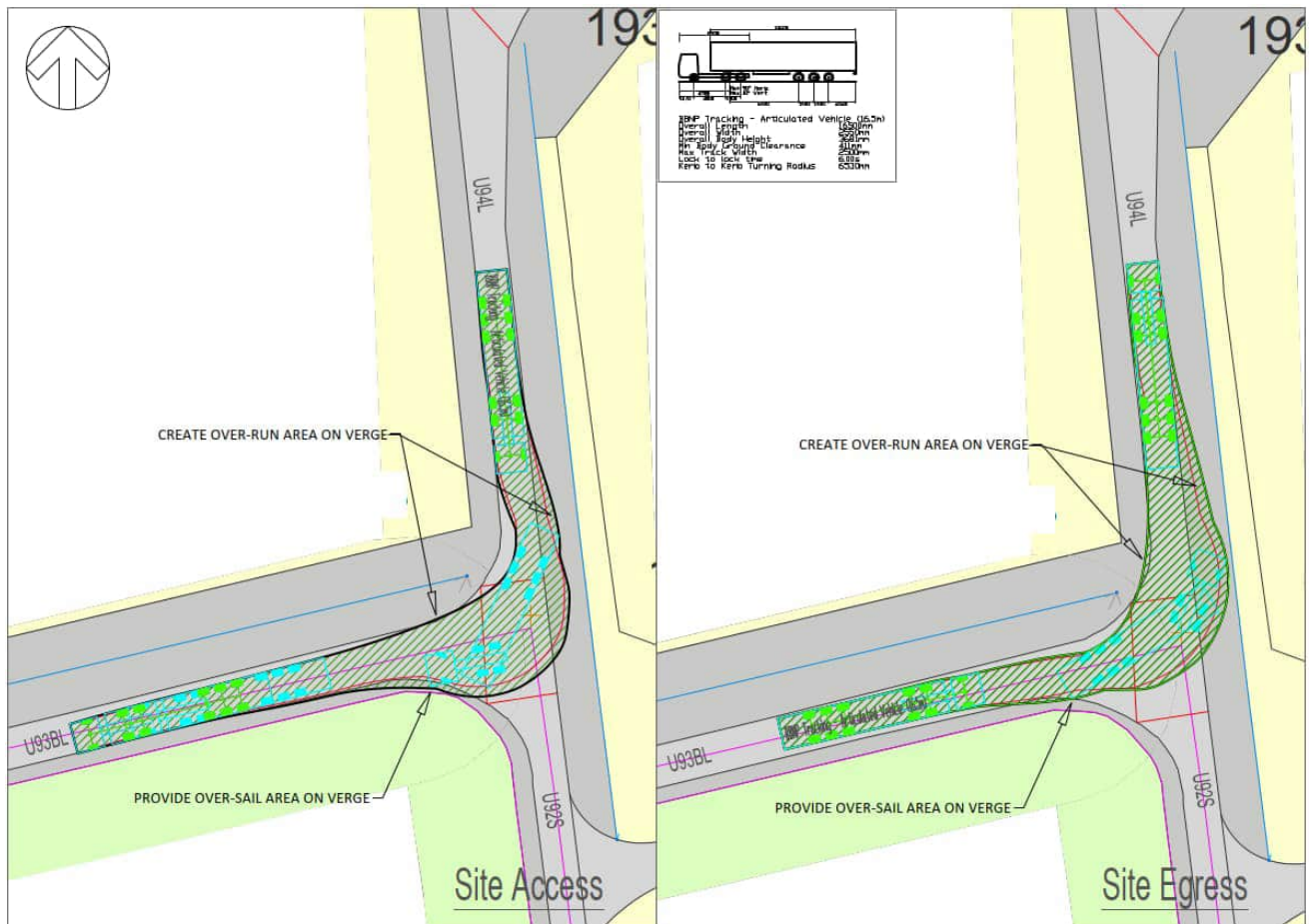
7.3.26. As shown by **Figure 13.3.7.16**, the analysis suggests that the A97 / C88S junction will be able to accommodate HGV movements.

Figure 13.3.7.18: Potential Constraints at B9024 / U94L Junction



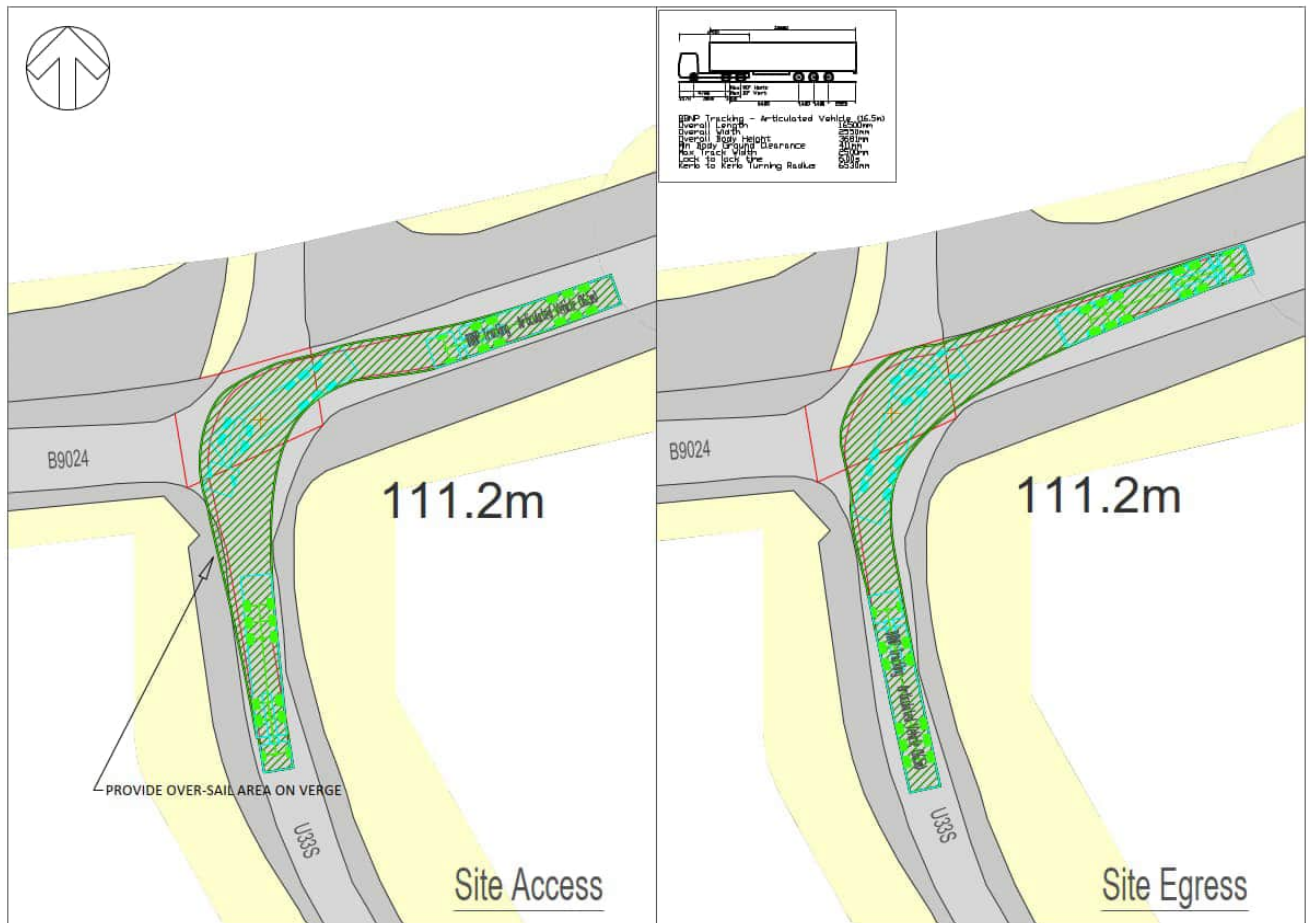
- 7.3.28. As shown by **Figure 13.3.7.18**, there may be a requirement to slightly widen the carriageway and create a load-bearing over-run areas at the B9024 / U94L junction, to accommodate its use by HGVs, although the need for this will require to be confirmed by a topographical survey. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land.

Figure 13.3.7.21: Potential Constraints at U94L / U93bL Junction



- 7.3.31. As shown by **Figure 13.3.7.21**, there may be a requirement to slightly widen the carriageway and create a load-bearing over-run areas at the U94L / U93bL junction, 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.

Figure 13.3.7.22: Potential Constraints at B9024 / U33S Junction

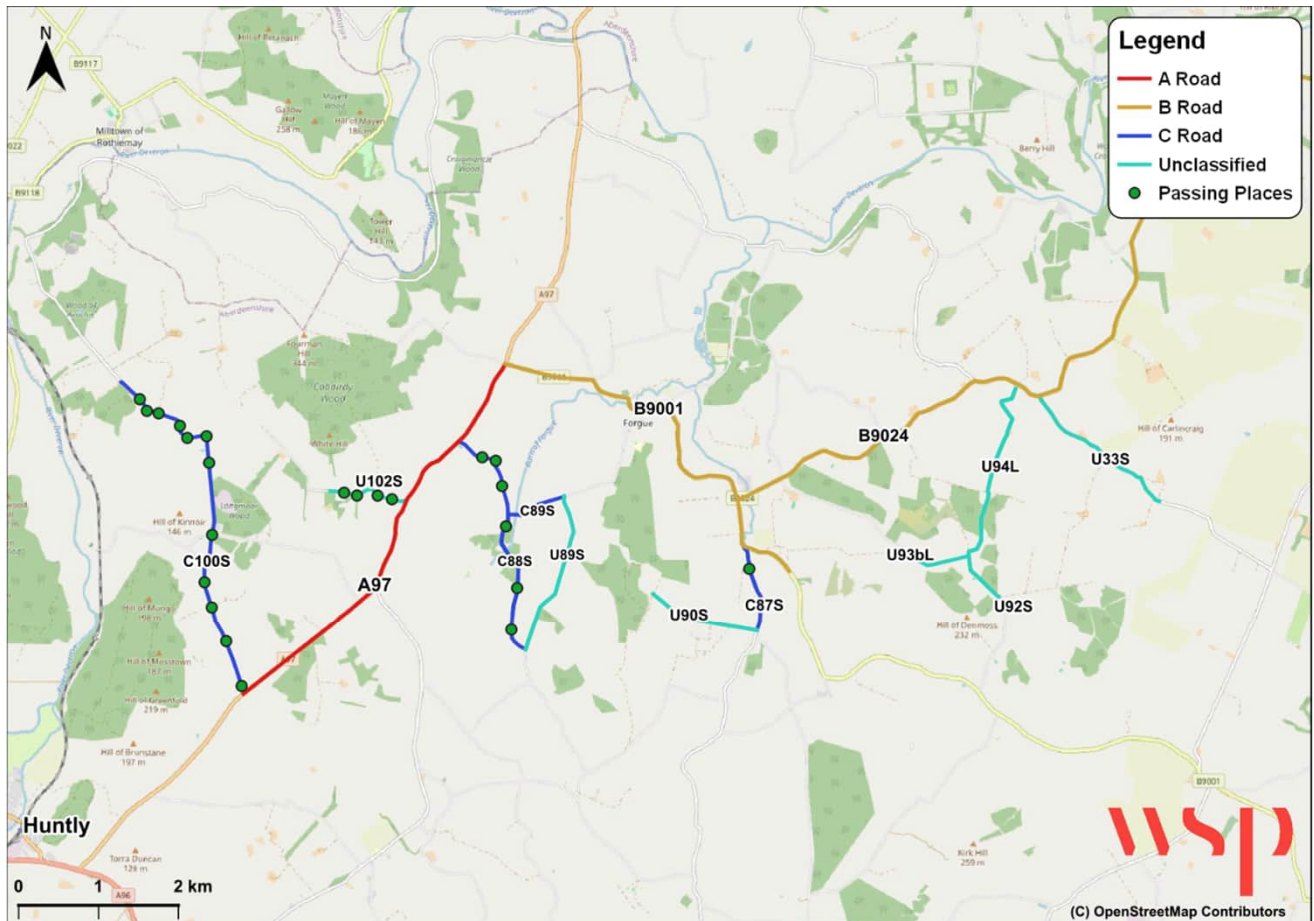


- 7.3.32. As shown by **Figure 13.3.7.22**, there may be a requirement to provide an over-sail area at the B9024 / U33S junction, to accommodate its use by HGVs, although the need for this will require to be confirmed by a topographical survey. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land.

Passing Place Provision

- 7.3.33. **Figure 13.3.7.23** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 21 of the Proposed OHL Alignment.

Figure 13.3.7.23: Section 21 - Passing Places



- 7.3.34. The C100S is a single-track road approximately 4.5 m in width on average, although its width varies for a proportion of its length. Construction vehicles will use approximately 4700 m of the C100S for access. As shown by **Figure 13.3.7.23**, there are currently 12 formal and informal passing places on the along the C100S between the A97 and the furthest access point.
- 7.3.35. The U102S is a single-track road of approximately 3 m with a few formal passing places present. Construction vehicles will use approximately 900 m of the U102S for access. As shown by **Figure 13.3.7.23**, there are currently four passing places on the U102S between the A97 and the furthest access points.
- 7.3.36. The C88S, C89S and U89S are all single-track carriageway roads of approximately 3 m widths supported by some formal passing places and additional informal ones at farming field accesses. Construction vehicles will use approximately 5200 m of the C88S, C89S and U89S for access. There are currently only six informal passing places on the C88S between the A97 and the U89S and no passing places along the C89S and the U89S.
- 7.3.37. The C87S is a single-track road of approximately 3-4 m width with only one informal passing place present. Construction vehicles will use approximately 1100 m of the C87S for access. Additionally,

the U90S is also a single-track road of approximately 3 m width with no passing places present with construction vehicles using approximately 1400 m of the U90S for access.

- 7.3.38. The U94L, U93bL and U92S are all single-track carriageway roads of approximately 3 m widths currently not supported by any passing places. Construction vehicles will use approximately 4000 m of these three roads for access.
- 7.3.39. The U33S is a single-track carriageway road of 3 m with no formal passing places present other than at farming field accesses. Construction vehicles will use approximately 2000 m of this road for access.

Proposed Mitigations

- 7.3.40. As previously noted, there may be a requirement to widen the carriageway at various locations within Section 21 of the Proposed OHL Alignment.
- 7.3.41. As highlighted in **Table 7.1**, it is estimated that construction activities could generate up to 22 two-way movements an hour. Even though it is considered that the C100S may be able to accommodate the eight hourly two-way car / van movements, measures might be required to ensure that passing provisions are long enough to accommodate larger vehicles. Additionally, part of the C100S has been 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.
- 7.3.42. As highlighted in **Table 7.1**, it is estimated that construction activities could generate up to 22 two-way movements an hour. While the U102S does not provide a through route and only serves a minimal number of farms and 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 mix with agricultural traffic.
- 7.3.43. The C88S is considered to be able to accommodate HGV movements for the majority of its length however, at the junction with the C89S a requirement for carriageway widening is recommended. Additionally, current passing place provision does not provide consistent spacing, and it is considered that additional formal passing places are constructed to allow minimal disruptions for vehicles serving the farms and residential properties along the C88S.
- 7.3.44. The C89S is considered to be able to accommodate HGV movements for only a shorter section due to tight bends, where a requirement for carriageway widening is recommended. Additionally, no passing places are present, and elevation differences can be seen at the verges on either side of the carriageway. At its junction with the U89S, local carriageway widening is recommended. Although it is estimated that construction activities could generate up to 22 two-way movements an hour, it is considered that access of larger vehicles can be facilitated by appropriate traffic management without the need for construction of additional passing places.
- 7.3.45. Along the U89S, it is estimated that construction activities could generate up to 22 two-way movements an hour. While the U89S only serves a minimal number of farms and residential properties, it could be used as a through route for local traffic and it is considered that there may be merit in constructing passing places and forming areas where larger vehicles could pass given that the increase in construction traffic is likely to mix with agricultural traffic.
- 7.3.46. Along the U87S, it is estimated that construction activities could generate up to 22 two-way movements an hour. While the U87S only serves a minimal number of farms and residential properties, it could be used as a through route for local traffic and it is considered that there may be

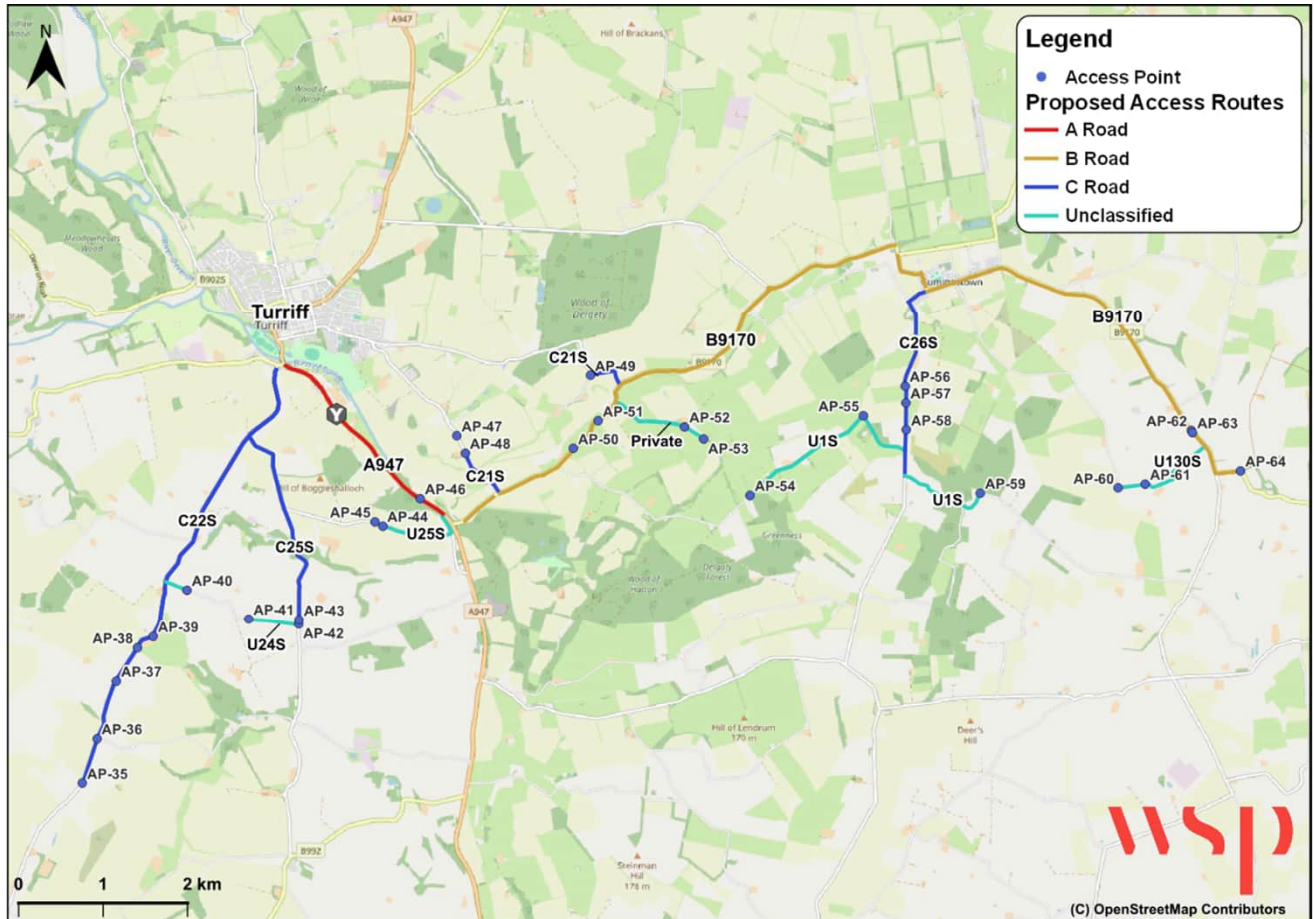
merit in constructing passing places and forming areas where larger vehicles could pass given that the increase in construction traffic is likely to mix with agricultural traffic. Additionally, there may be a requirement for carriageway widening at the junction with the U90S, further supported by the construction of strategically placed passing places along the U90S to allow for minimal disruption to private property access on this road, alternative suitable traffic management in coordination with local residents.

- 7.3.47. As highlighted in **Table 7.1**, it is estimated that construction activities could generate up to 22 two-way movements an hour. Due to the length of the section used by construction vehicles along the U94L and the lack of existing passing places, measures might be required to provide passing provisions long enough to accommodate larger vehicles along the full length of the road, as the U94L serves a number of farms and residential properties which could be impacted by the expected level and duration of construction traffic. Additionally, it is also considered that local carriageway widening at its junctions with the B9024 and at tighter bends along the road may be required.
- 7.3.48. Along the U93bL, it is estimated that construction activities could generate up to 22 two-way movements an hour. While the UU93bLS only serves a minimal number of farms and residential properties, it could be used as a through route for local traffic and it is considered that there may be merit in constructing passing places over a shorter section of the road, forming areas where larger vehicles could pass given that the increase in construction traffic is likely to mix with agricultural traffic. Additionally, it is also considered that local carriageway widening at its junctions with the U94L may be required.
- 7.3.49. The U92S which is continued from the U94L, it is estimated that construction activities could generate up to 22 two-way movements an hour. As the U92S serves a number of farms and residential properties which could be impacted by the expected level and duration of construction traffic, in addition to it being used as a through route for local traffic, it is considered that there may be merit in constructing passing places over a shorter section of the road, forming areas where larger vehicles could pass given that the increase in construction traffic is likely to mix with general and agricultural traffic.
- 7.3.50. As highlighted in **Table 7.1**, along the U33S it is estimated that construction activities could generate up to 22 two-way movements an hour. Due to the length of the section used by construction vehicles and the lack of existing passing places, measures might be required to provide passing provisions long enough to accommodate larger vehicles along the full length of the road. As the U33S serves a number of farms and residential properties which could be impacted by the expected level and duration of construction traffic. No other measures proposed along this route.

SECTION 22

7.3.51. **Figure 13.3.7.24** shows the routes that construction traffic would use to access the tower installation sites associated with Section 22 of the Proposed Development.

Figure 13.3.7.24: Section 22 Access Route



Pinch Point Analysis

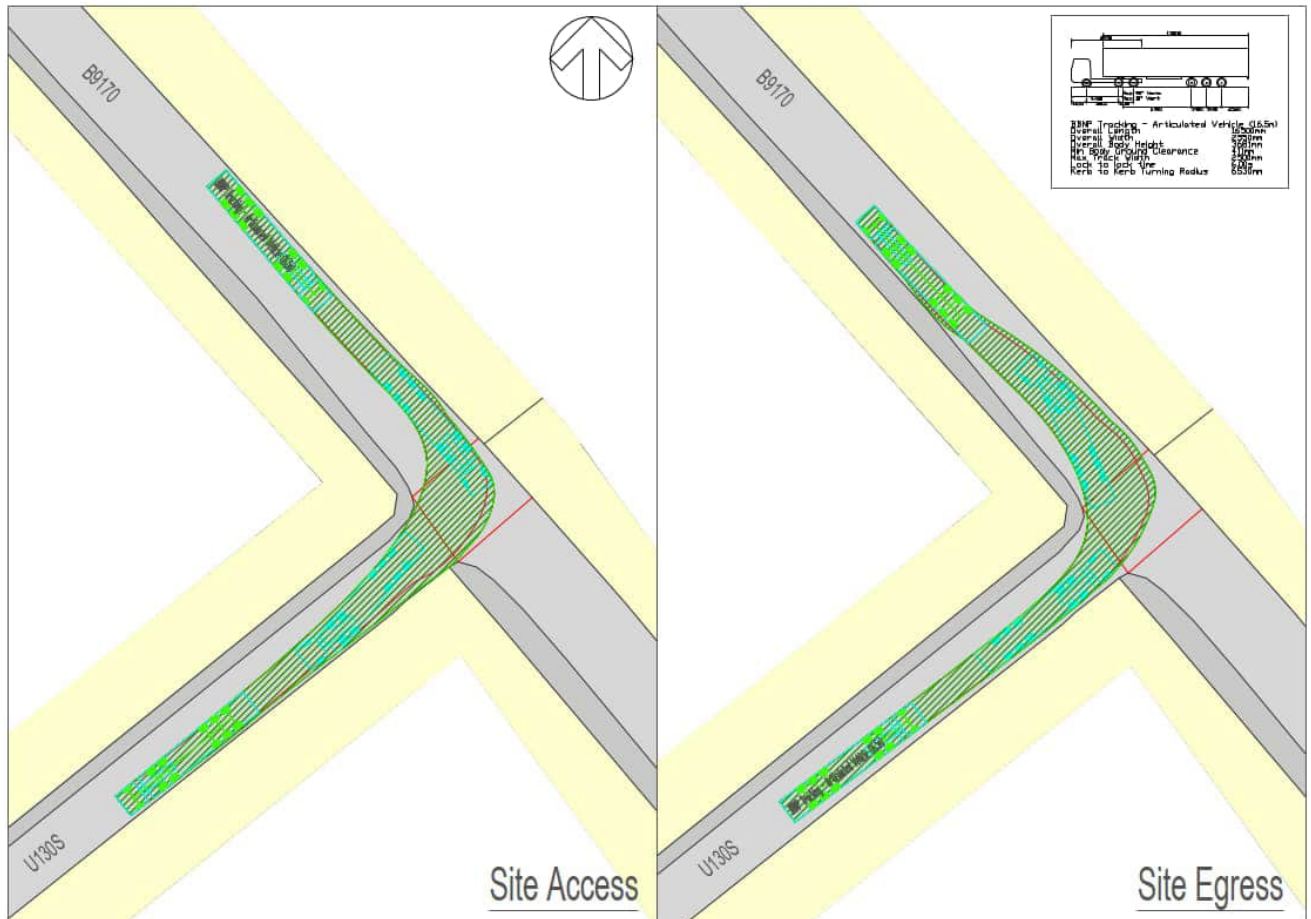
7.3.52. A review of the potential access route has identified potential constraints at the following locations through which HGVs would pass when accessing the tower installation sites associated with Section 22:

- B9170 / U130S junction (**Figure 13.3.7.25**)
- Bend on the C26S (**Figure 13.3.7.26**)
- B9170 / C125B junction (**Figure 13.3.7.27**)
- C127B / U122B junction (**Figure 13.3.7.28**)
- B9170 / U1S junction (**Figure 13.3.7.29**)
- C22S / C25S junction (**Figure 13.3.7.30**)
- A947 / U25S junction (**Figure 13.3.7.31**)
- Bend on U25S (**Figure 13.3.7.32**)
- C26S / U1S junction (**Figure 13.3.7.33**)
- Bend on U1S (**Figure 13.3.7.34**)
- C22S / U24S junction (**Figure 13.3.7.35**)

■ C25S / U24S junctions (**Figure 13.3.7.36**)

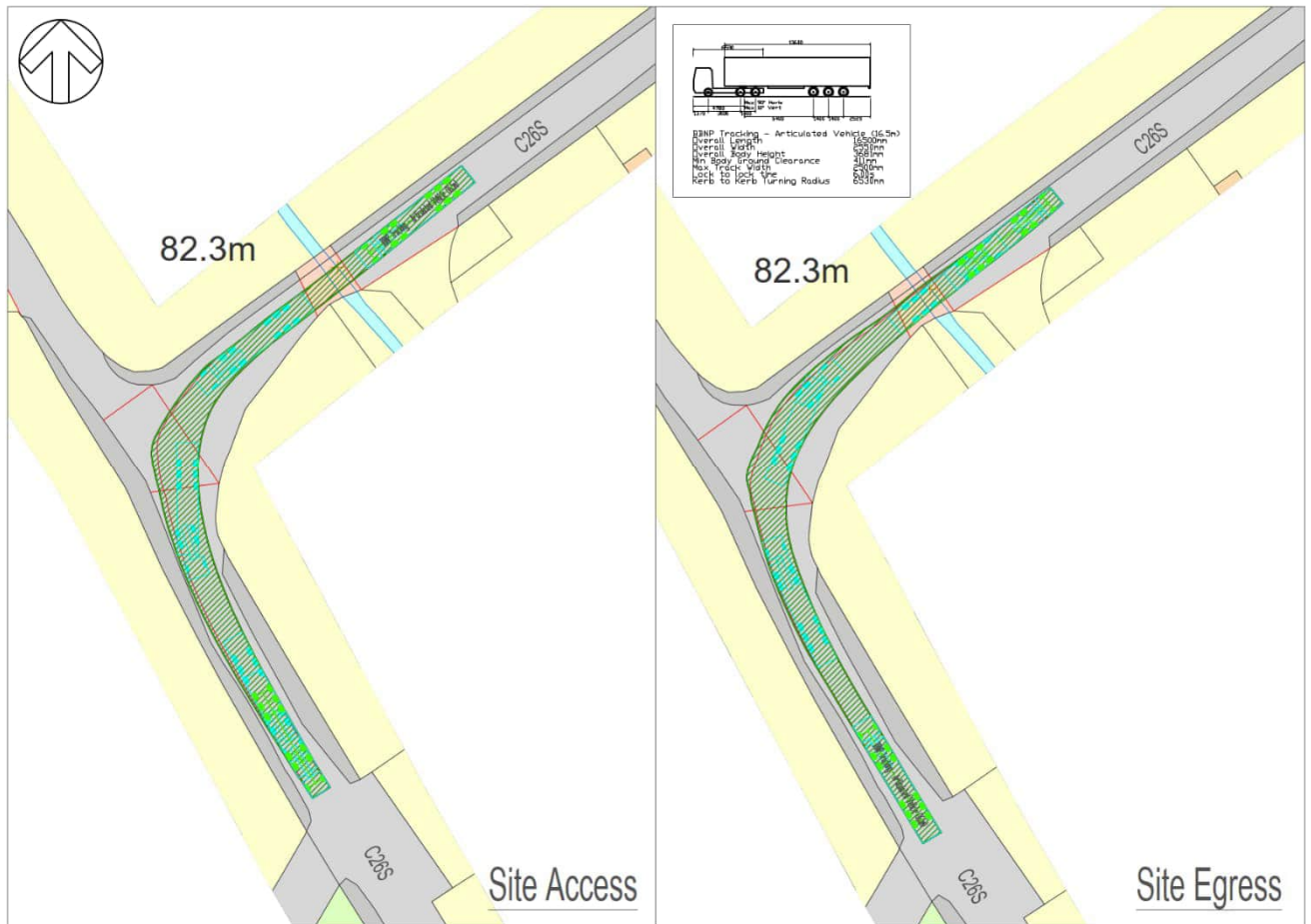
7.3.53. AutoTrack was used to review the ability for HGVs to pass through the twelve potential constraints to and from the tower installation sites. The result of the assessment is shown in **Figure 13.3.7.25 - Figure 13.3.7.36**.

Figure 13.3.7.25: Potential Constraint at B9170 / U130S Junction



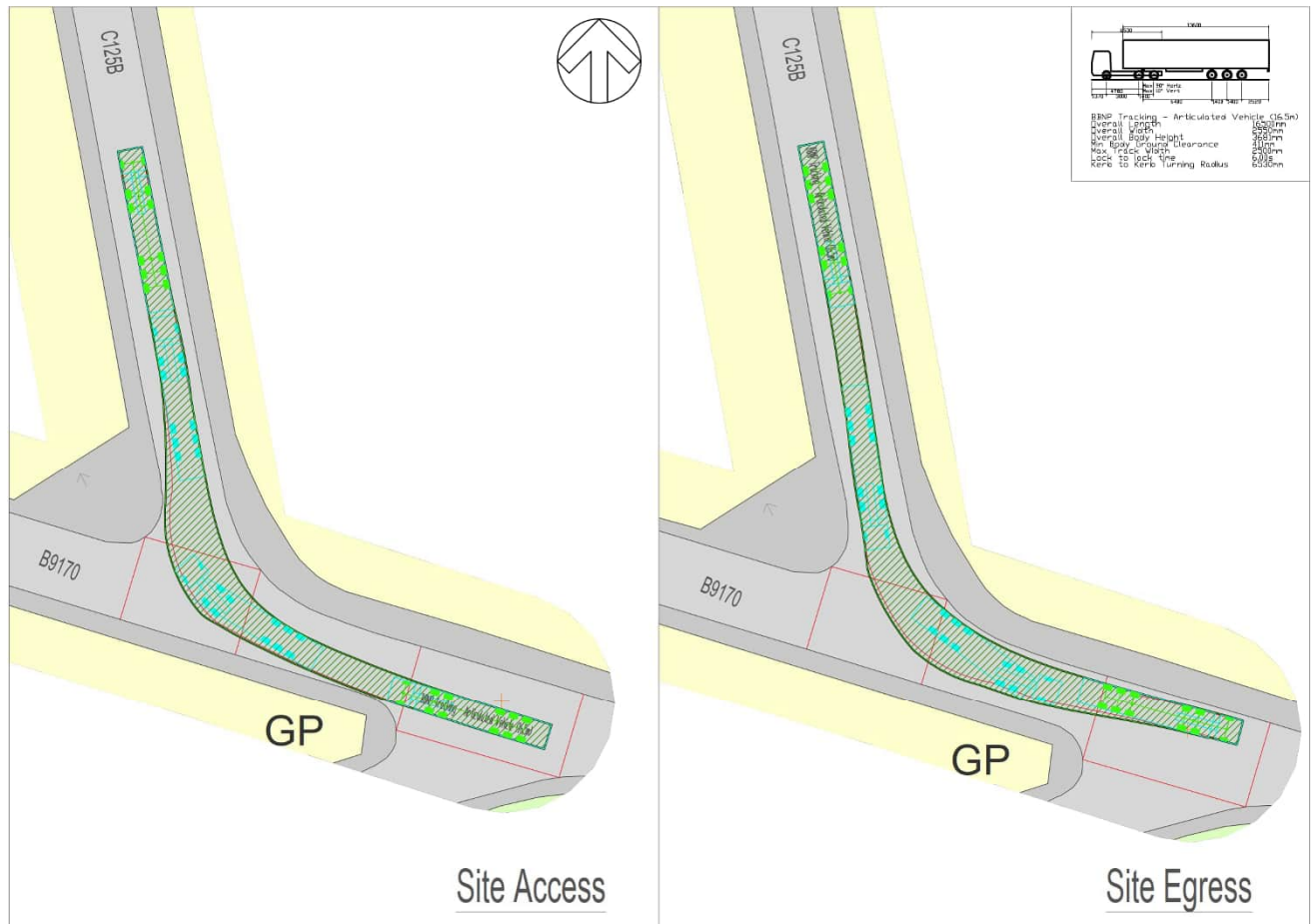
7.3.54. As shown by **Figure 13.3.7.25**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.26: Potential Constraint on the C26S



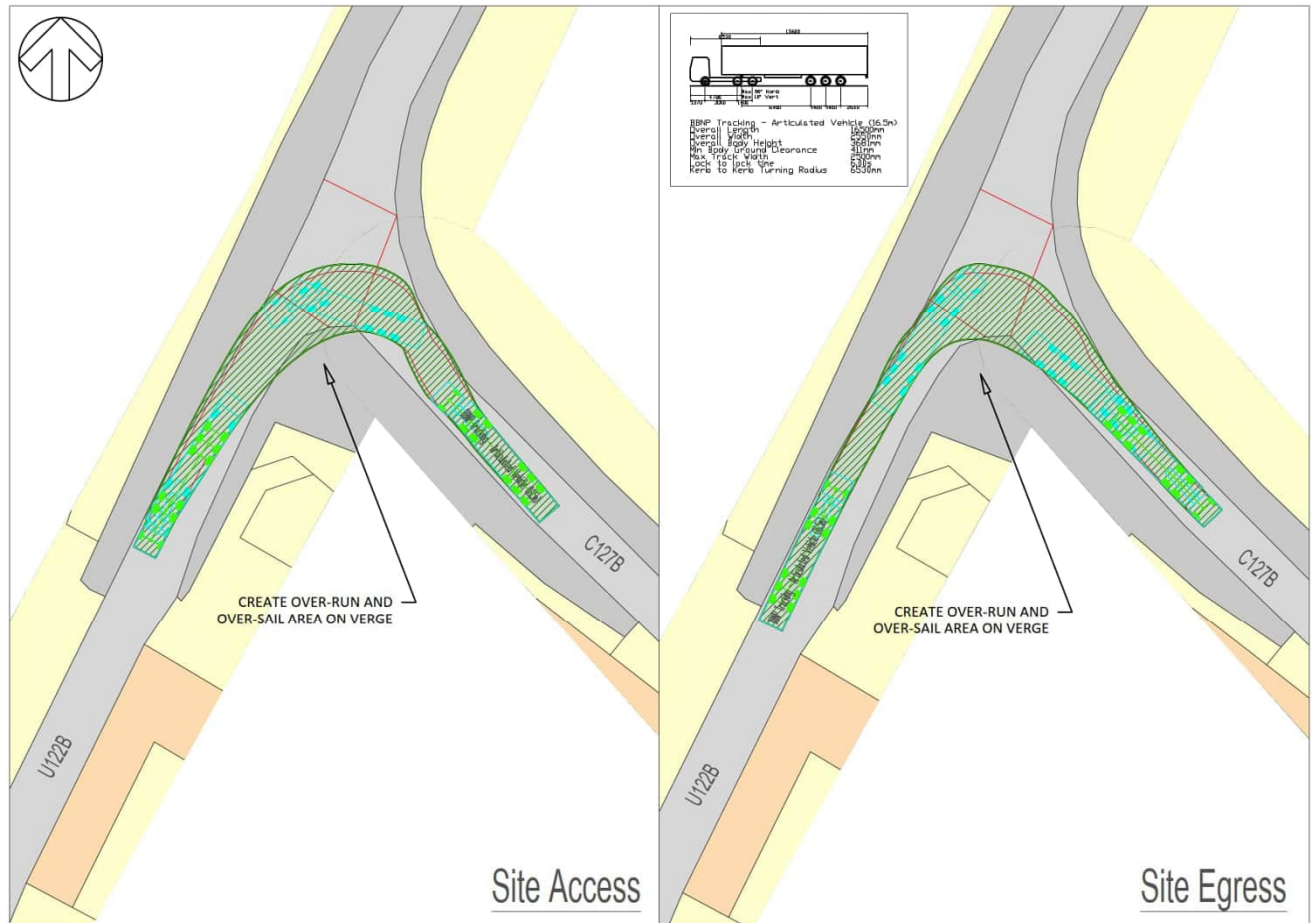
7.3.55. As shown by **Figure 13.3.7.26**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.27: Potential Constraint at B9170 / C125B Junction



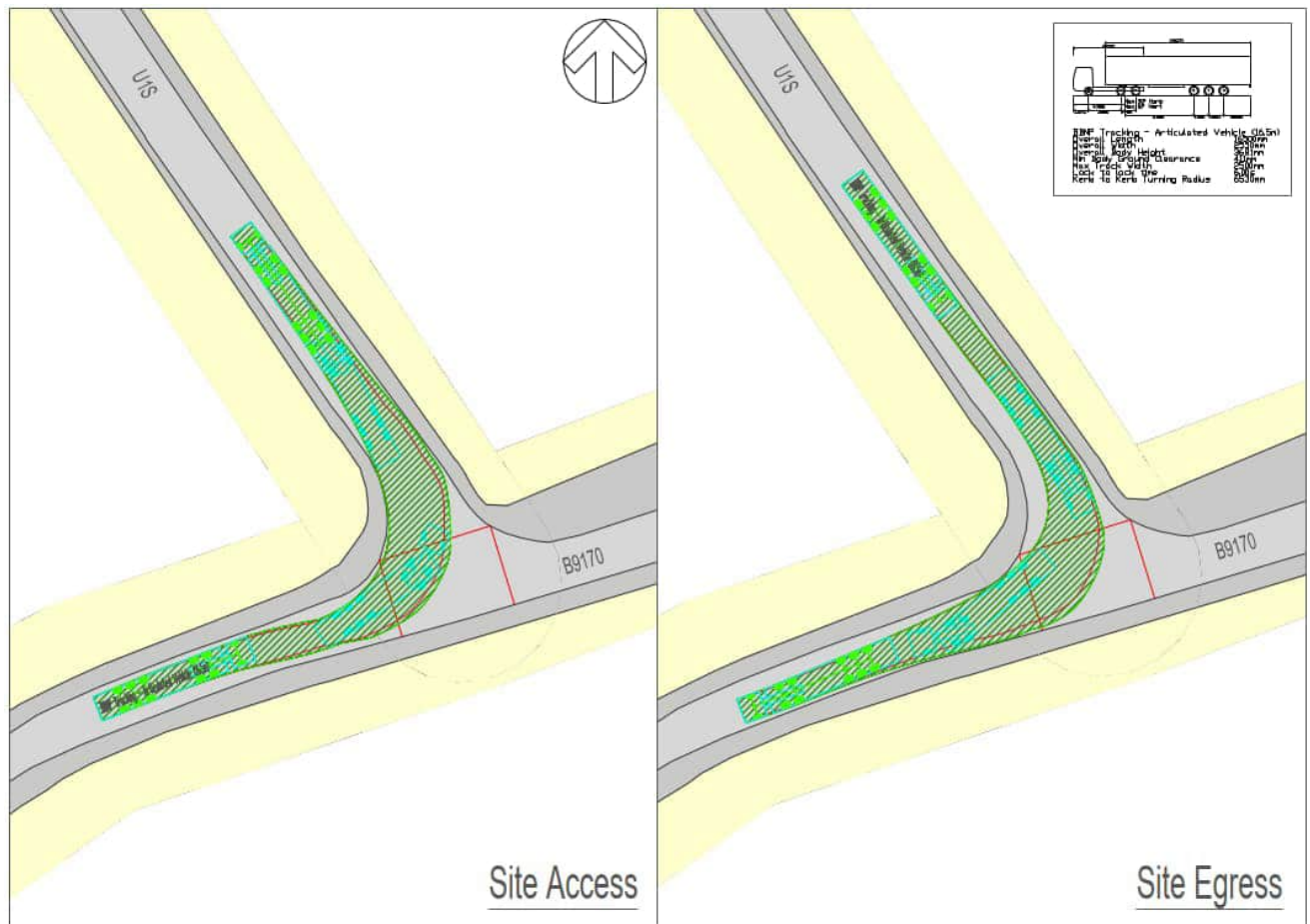
7.3.56. As shown by **Figure 13.3.7.27**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.28: Potential Constraint at C127B / U122B Junction



- 7.3.57. As shown by **Figure 13.3.7.28**, 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 13.3.7.29: Potential Constraint at B9170 / U1S Junction



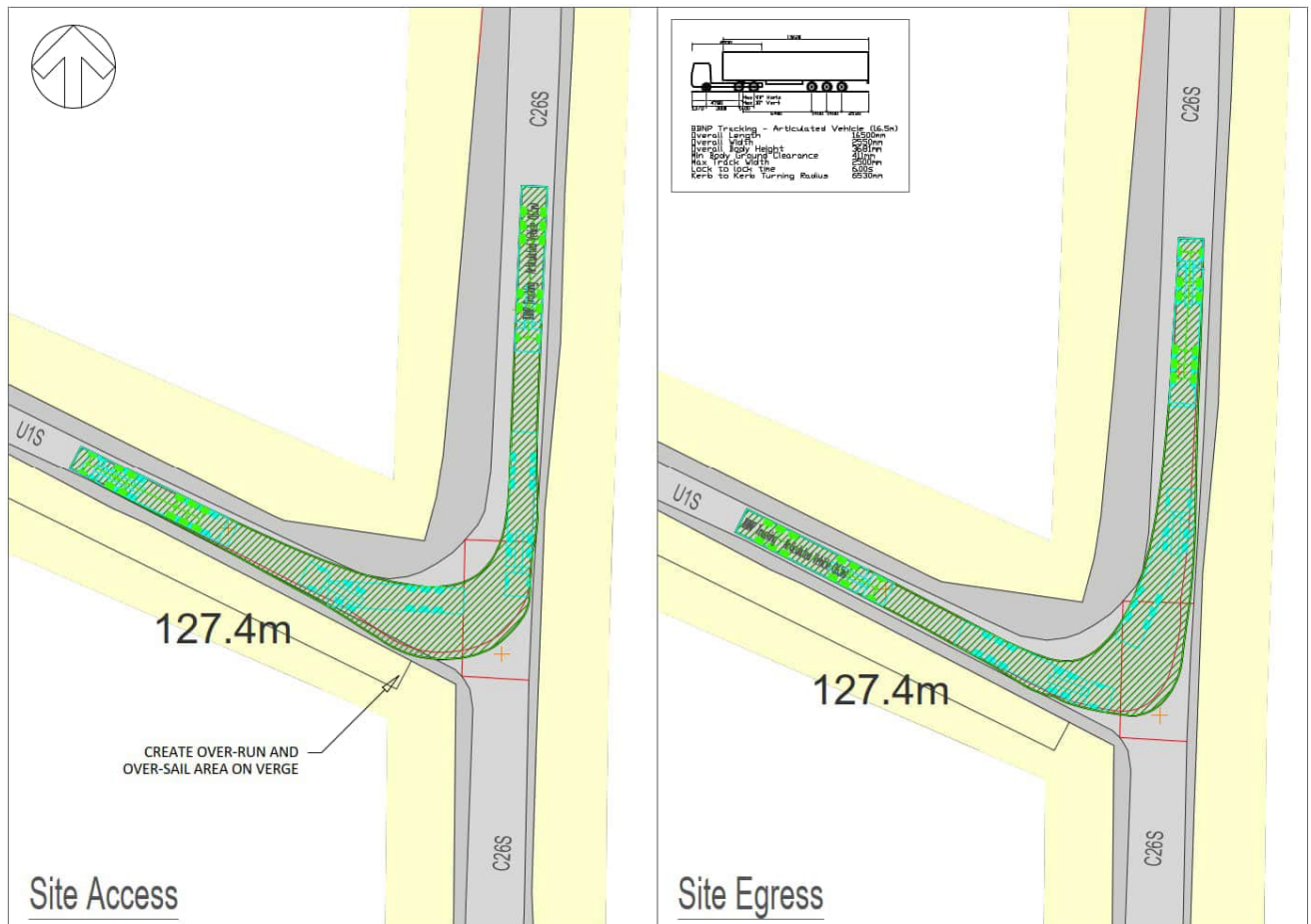
7.3.58. As shown by **Figure 13.3.7.29**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.30: Potential Constraint at C22S / C25S Junction



7.3.59. As shown by **Figure 13.3.7.30**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.33: Potential Constraint at C26S / U1S Junction



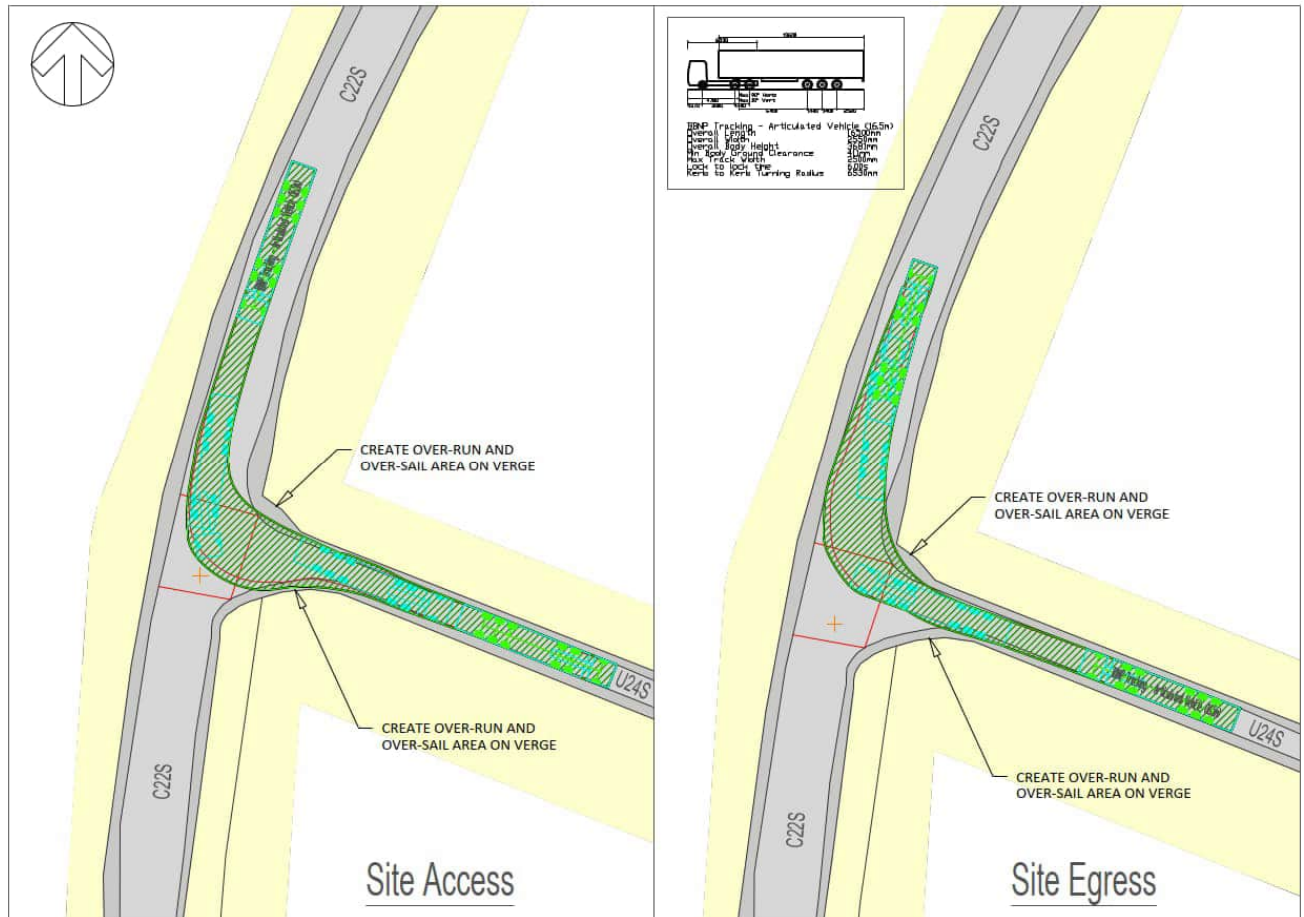
- 7.3.62. As shown by **Figure 13.3.7.33**, the analysis suggests that there will be a requirement to widen the junction to accommodate its use by HGVs. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land, but the exact extent of the works will require to be reviewed following completion of a topographical survey of the junction.

Figure 13.3.7.34: Potential Constraint at Bend on U1S



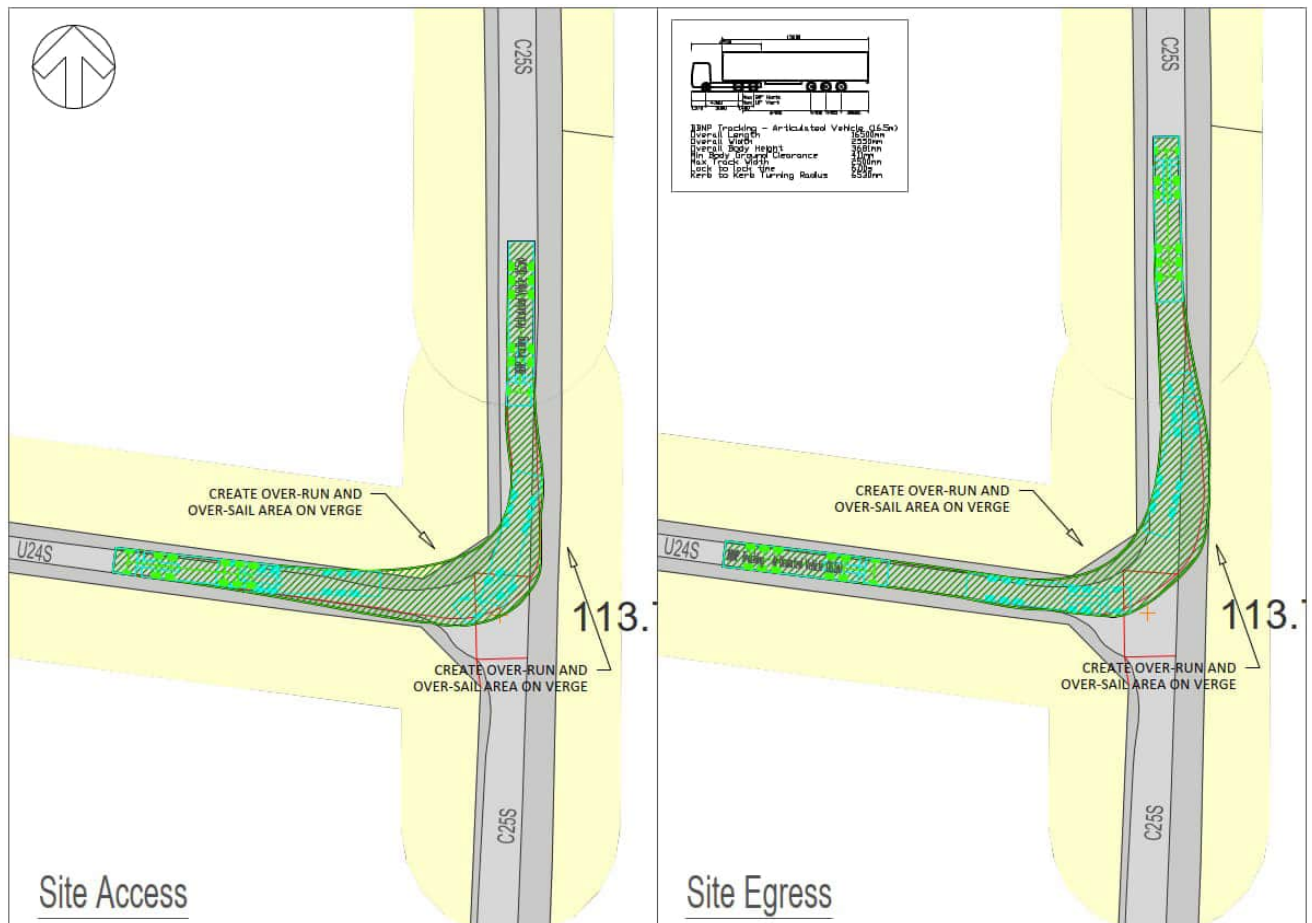
- 7.3.63. As shown by **Figure 13.3.7.34**, the analysis suggests that there will be a requirement to widen this section U1S to accommodate its use by HGVs. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land, but the exact extent of the works will require to be reviewed following completion of a topographical survey of the junction.

Figure 13.3.7.35: Potential Constraint at C22S / U24S Junction



- 7.3.64. As shown by **Figure 13.3.7.35**, 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 13.3.7.36: Potential Constraint at C25S / U24S Junction

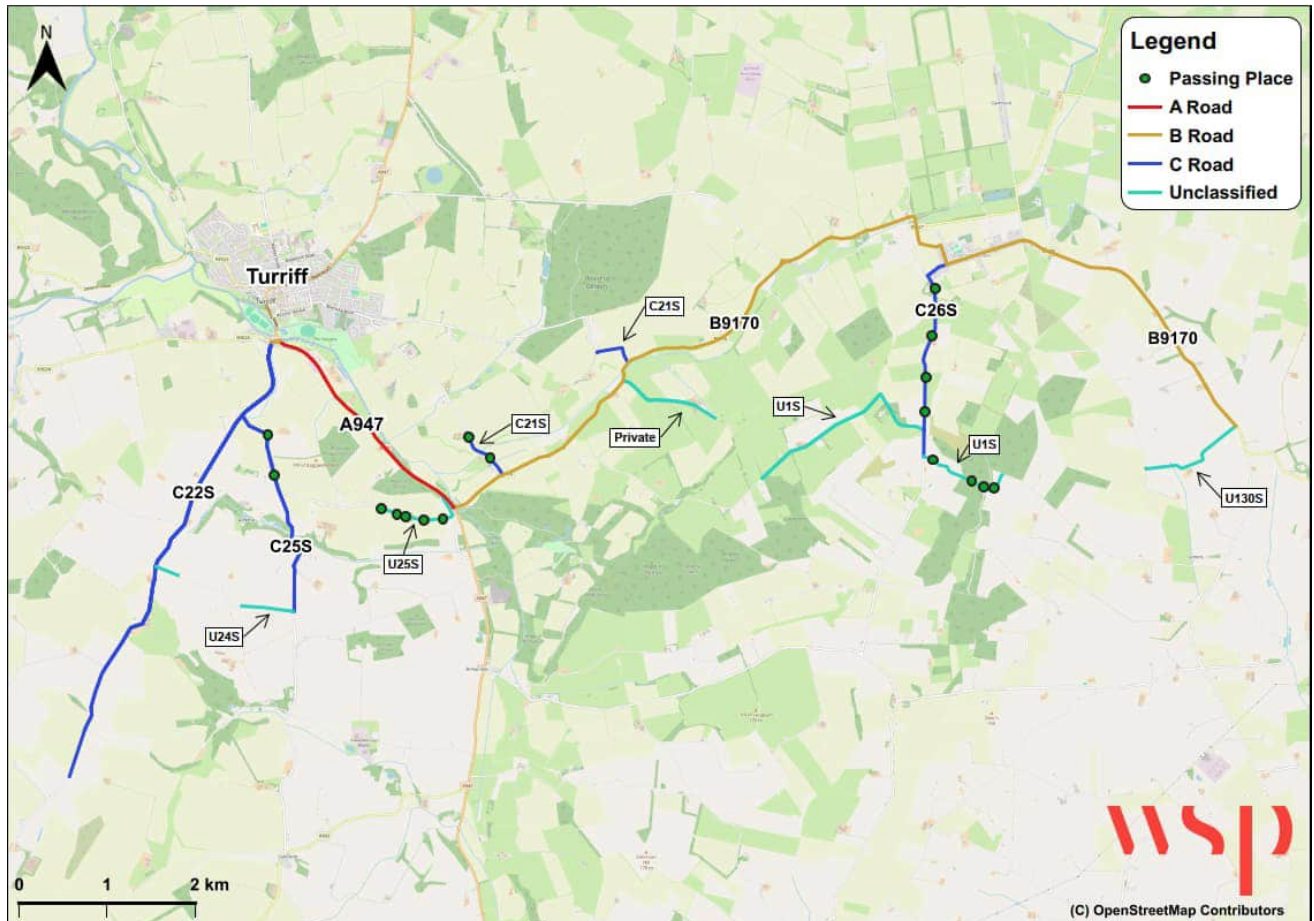


- 7.3.65. As shown by **Figure 13.3.7.36**, the analysis suggests that there will be a requirement to widen the junction to accommodate its use by HGVs. The works appear to require third party land, but the exact extent of the works will require to be reviewed following completion of a topographical survey of the junction.
- 7.3.66. There may also be a requirement to introduce localised widening on the U24S between the junction and the furthest access point to accommodate its use by HGVs.

Passing Place Provision

7.3.67. **Figure 13.3.7.37** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 22 of the Proposed OHL Alignment.

Figure 13.3.7.37: Section 22 - Passing Places



- 7.3.68. The 5700 m section of the C22S that forms part of access route 22 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 A947 and the furthest access point.
- 7.3.69. The C25S is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 2500 m of the C25S for access. As shown by **Figure 13.3.7.37**, there are currently two passing places on the C25S.
- 7.3.70. The U24S is a single-track road of approximately 3 m in width that is not currently supported by signed passing places. The U24S will be accessed from the west via the C22S and from the east via the C25S, utilising a 300 m and 600 m section of the U24S respectively.
- 7.3.71. The U25S is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 1200 m of the U25S for access. As shown by **Figure 13.3.7.37**, there are currently five passing places on the U25S.

- 7.3.72. The section of the C21S to the north of Mill of Colp is a single-track road of approximately 4 m in width. Construction vehicles will use approximately 900 m of this section of the C21S for access. As shown by **Figure 13.3.7.37**, there are currently two passing places on this section of the C21S.
- 7.3.73. The section of the C21S to the north of Little Idoch is a single-track road of approximately 3 m in width that is not currently supported by passing places. An approximate 500 m section of this section of the C21S is to be used for construction vehicle access.
- 7.3.74. The C26S is a single-track road of approximately 3 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 2300 m of the C26S for access. As shown by **Figure 13.3.7.37**, there are currently five passing places on the C26S.
- 7.3.75. The section of the U1S to the west of the C26S is a single-track road of approximately 3 m in width that is not currently supported by passing places. An approximate 2350 m section of the C21S is to be used for construction vehicle access.
- 7.3.76. The section of the U1S to the east of the C26S is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 1100 m section of the C21S for access. As shown by **Figure 13.3.7.37**, there are currently four passing places on this section of the U1S
- 7.3.77. The U130S is a single-track road of approximately 3 m in width that is not currently supported by passing places. An approximate 1250 m section of the U130S is to be used for construction vehicle access.

Proposed Mitigation

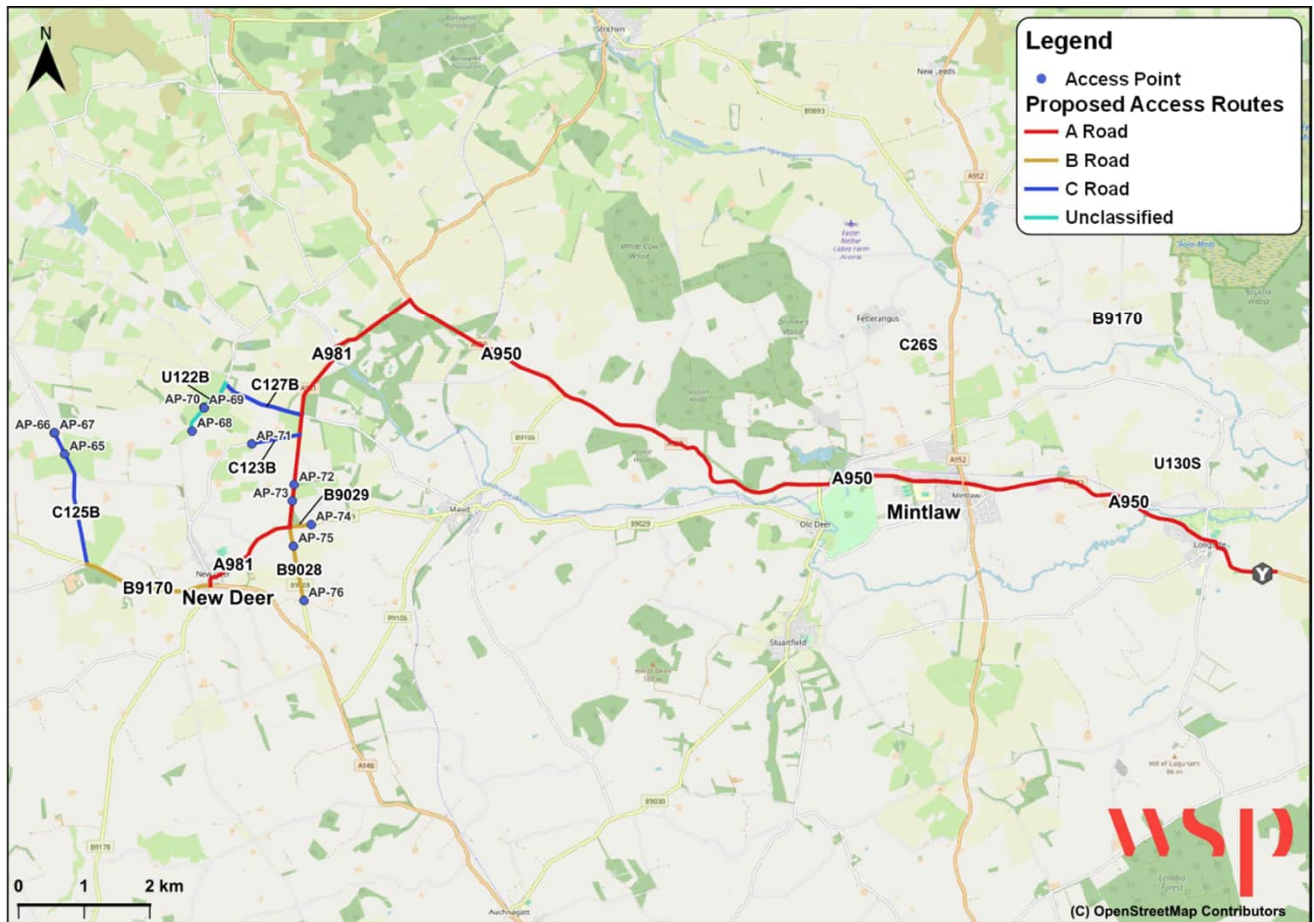
- 7.3.78. As previously highlighted, there is likely to be a requirement to widen the U127B at its junction with the U122B to support access to the tower installation sites on the U122B within Section 22 of the Proposed OHL Alignment.
- 7.3.79. There may also be a requirement to widen the U1S at its junction with the C26S, with further carriageway widening required on the U1S to the northwest of the junction at the identified tight bend.
- 7.3.80. Further widening will be required at both the U24S / C25S and the U24S / C22S junctions to support access to the tower installation sites on the U24S.
- 7.3.81. As the C22S is sufficiently wide to support two-way working, it is considered that the road is appropriate to support access to the tower installations sites located on the road.
- 7.3.82. It is considered that while both the U25S and U1S to the east of the C26S have an 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.
- 7.3.83. It is considered that there may be merit in lengthening the existing passing places and forming additional areas where larger vehicles could pass on the C25S, C26S and C21S to the north of Mill of Cop, given that the increase in construction traffic is likely to be generated over a 1-2 month period.
- 7.3.84. The C21S to the north of Little Idoch, the U24S, the U1S to the west of the C26S and the U130S serve a limited number of residential properties, with all three roads being approximately 3 m in

width and not currently supported by passing places. It is therefore considered that there may be merit in forming areas on the roads where larger vehicles could pass given that the increase in construction traffic is likely to be generated over a 1-2 month period.

SECTION 23

- 7.3.85. **Figure 13.3.7.38** shows the routes that construction traffic would use to access the tower installation sites associated with Section 23 of the Proposed Development.

Figure 13.3.7.38: Section 23 Access Route

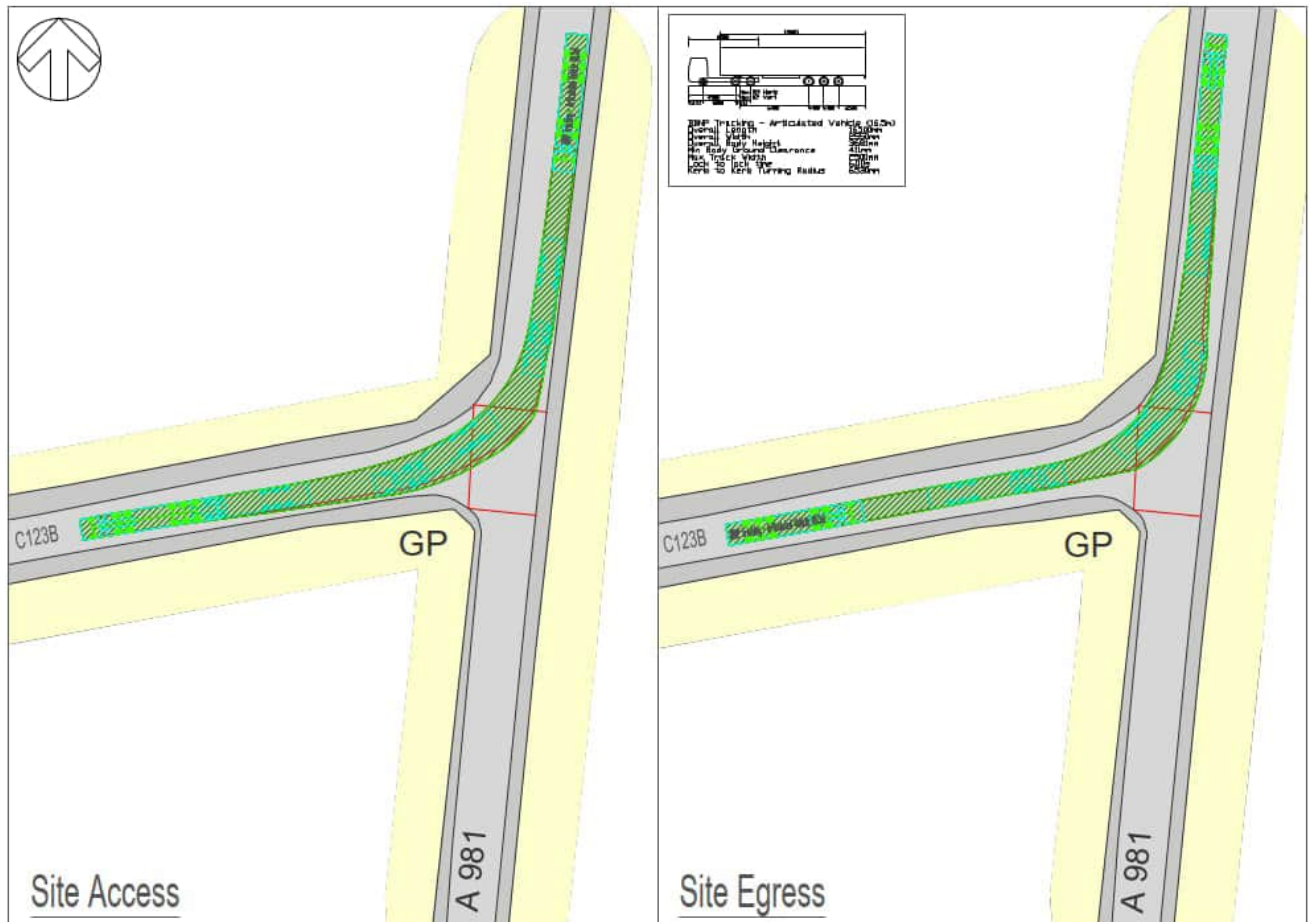


Pinch Point Analysis

- 7.3.86. A review of the potential access route has identified potential constraints at the following locations through which HGVs would pass when accessing the tower installation sites associated with Section 23:
- A981 / C127B junction (**Figure 13.3.7.39**)
 - A981 / C123B junction (**Figure 13.3.7.40**)
 - B9170 / C125B junction (**Figure 13.3.7.41**)
 - C127B / U122B junction (**Figure 13.3.7.42**)

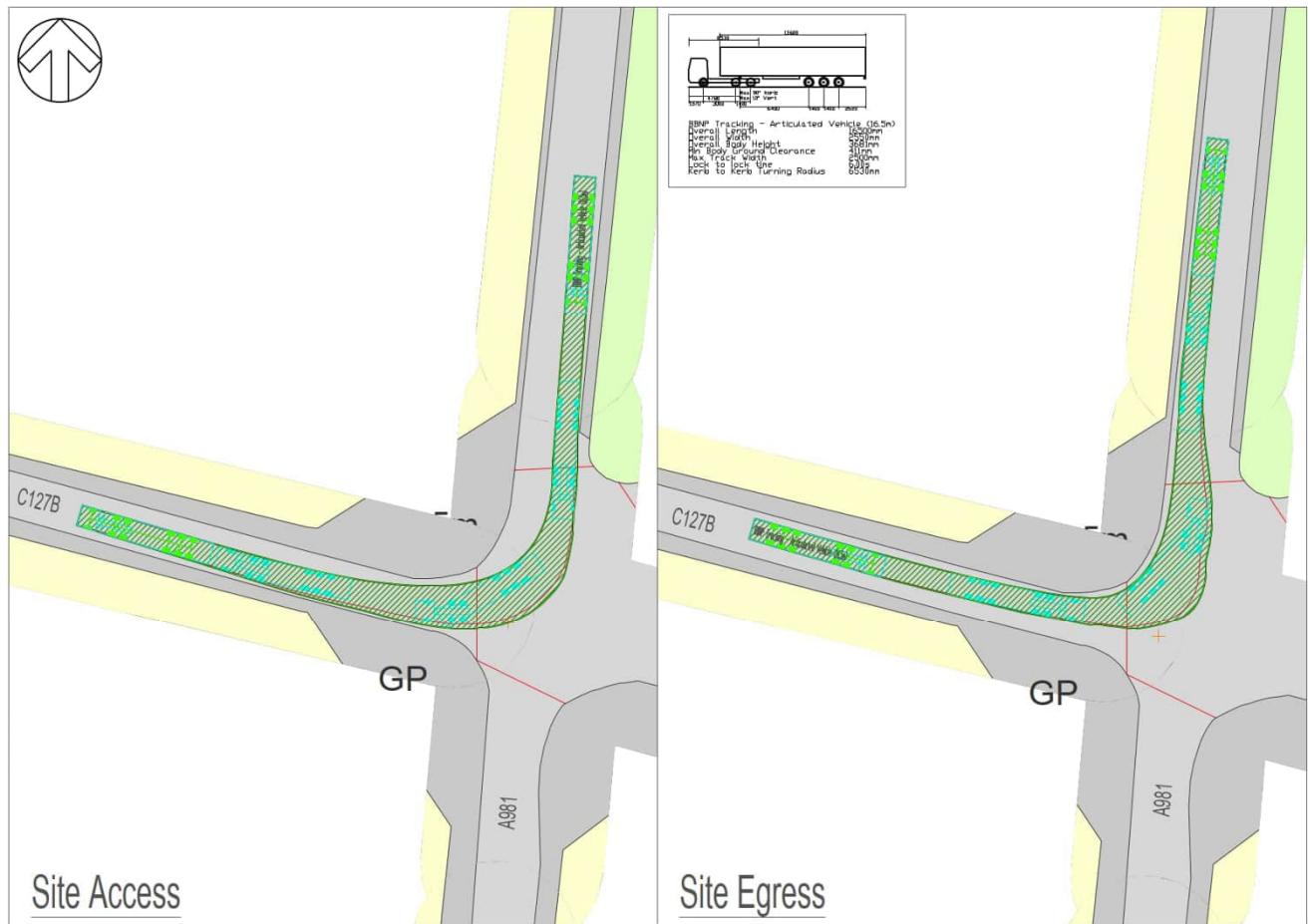
7.3.87. AutoTrack was used to review the ability for HGVs to pass through the four potential constraints to and from the tower installation sites. The result of the assessment is shown in **Figure 13.3.7.39 - Figure 13.3.7.42**.

Figure 13.3.7.39: Potential Constraint at A981 / C123B Junction



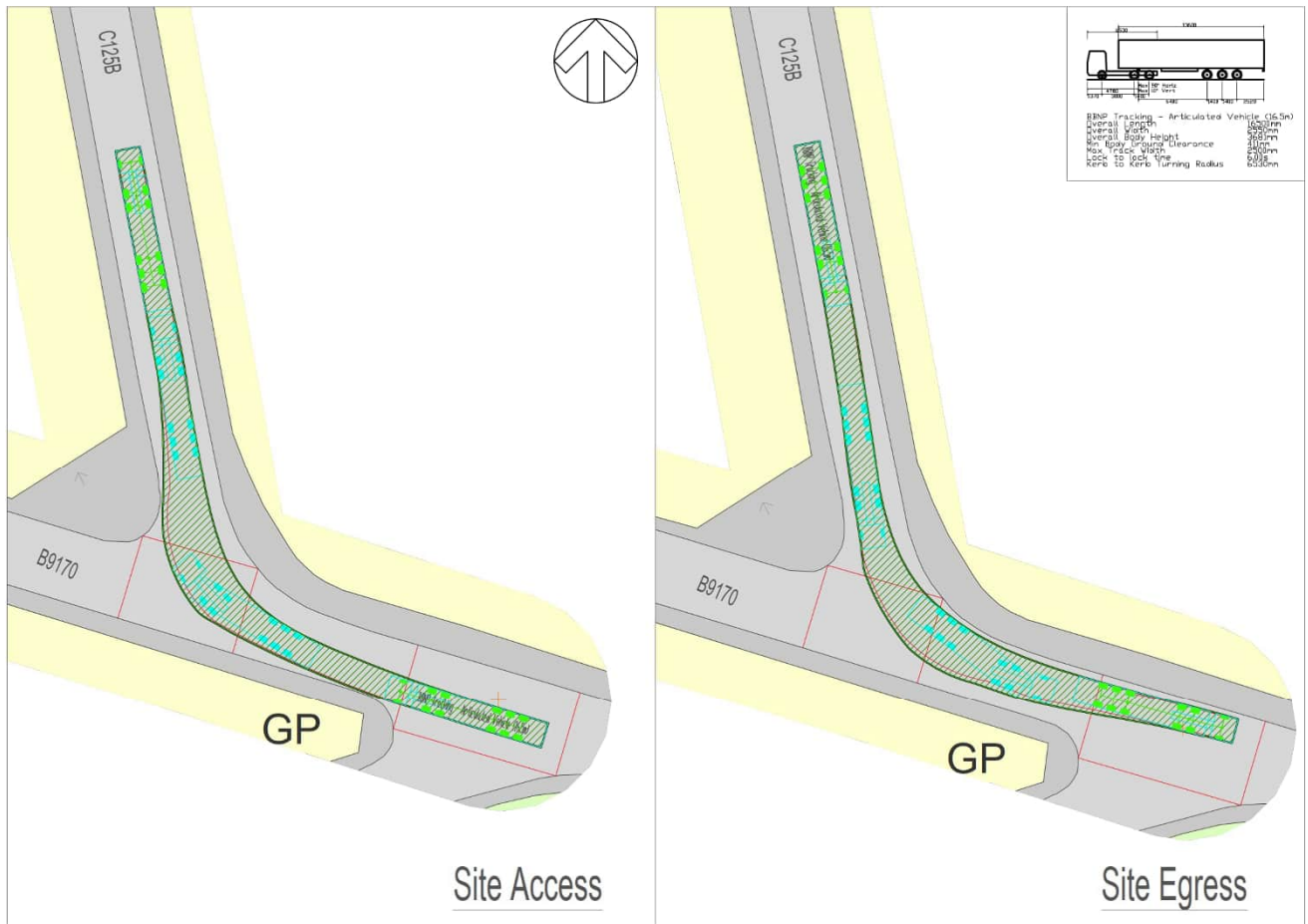
7.3.88. As shown by **Figure 13.3.7.39**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.40: Potential Constraint at A981 / C127B Junction



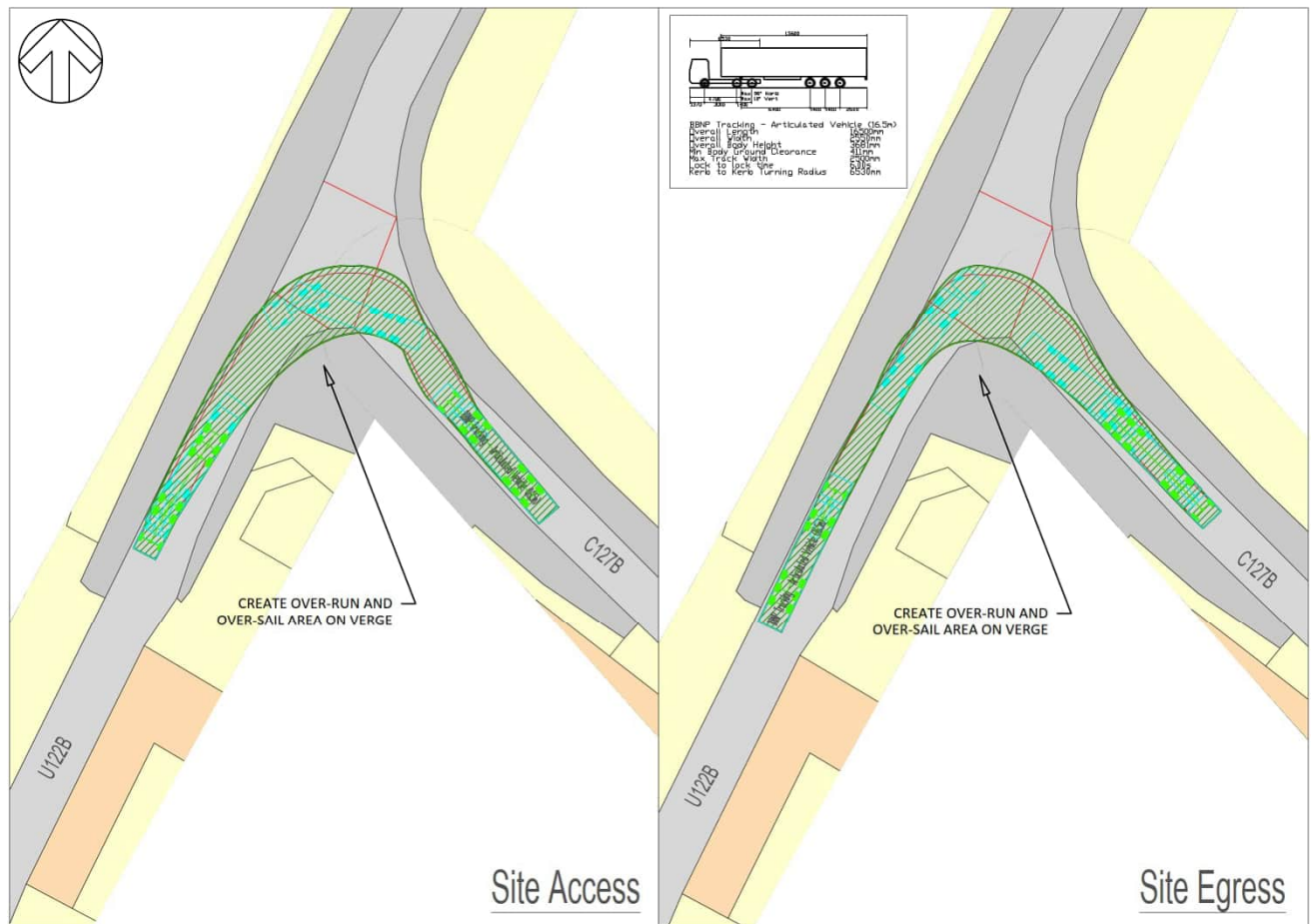
7.3.89. As shown by **Figure 13.3.7.40**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.41: Potential Constraint at B9170 / C125B Junction



7.3.90. As shown by **Figure 13.3.7.41**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.42: Potential Constraint at C127B / U122B Junction



- 7.3.91. As shown by **Figure 13.3.7.42**, 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.

Passing Place Provision

- 7.3.92. There is currently no passing place provision on the unclassified roads that form the access routes for Section 23 of the Proposed OHL Alignment.
- 7.3.93. The 2200 m section of the C125B that forms part of access route 22 is approximately 5 m in width and therefore sufficiently wide to enable two vehicles to pass. There is therefore no passing place provision on the road between the B9170 and the access points.
- 7.3.94. The 760 m section of the C123B that forms part of access route 22 is approximately 5 m in width and therefore sufficiently wide to enable two vehicles to pass. There is therefore no passing places provision on the road between the A981 and the access points.
- 7.3.95. The C127B is a single-track road of approximately 4 m in width that is not currently supported by passing places. Construction vehicles will use approximate 1200 m of the C127B for access.
- 7.3.96. The U122B is a single-track road of approximately 3 m in width that is not currently supported by passing places. Construction vehicles will use approximate 920 m of the U122B for access.

Proposed Mitigation

- 7.3.97. As previously highlighted, there is likely to be a requirement to widen the U122B at its junction with the U127B to support access to the tower installation sites within Section 23 of the Proposed OHL Alignment.
- 7.3.98. As both the C123B and C125B are sufficiently wide to support two-way working, it is considered that both roads are appropriate to support access to the tower installations sites located on the roads.
- 7.3.99. The C127B and U122B serve a limited number of residential properties and as both roads are approximately only 3 m – 4 m in width and not currently supported by passing places, it is considered that there may be merit in forming areas on the roads where larger vehicles could pass given that the increase in construction traffic is likely to be generated over a 1-2 month period.

SECTION 24

- 7.3.100. **Figure 13.3.7.43** shows the routes that construction traffic would use to access the tower installation sites associated with Section 24 of the Proposed Development.

Figure 13.3.7.43: Section 24 Access Route

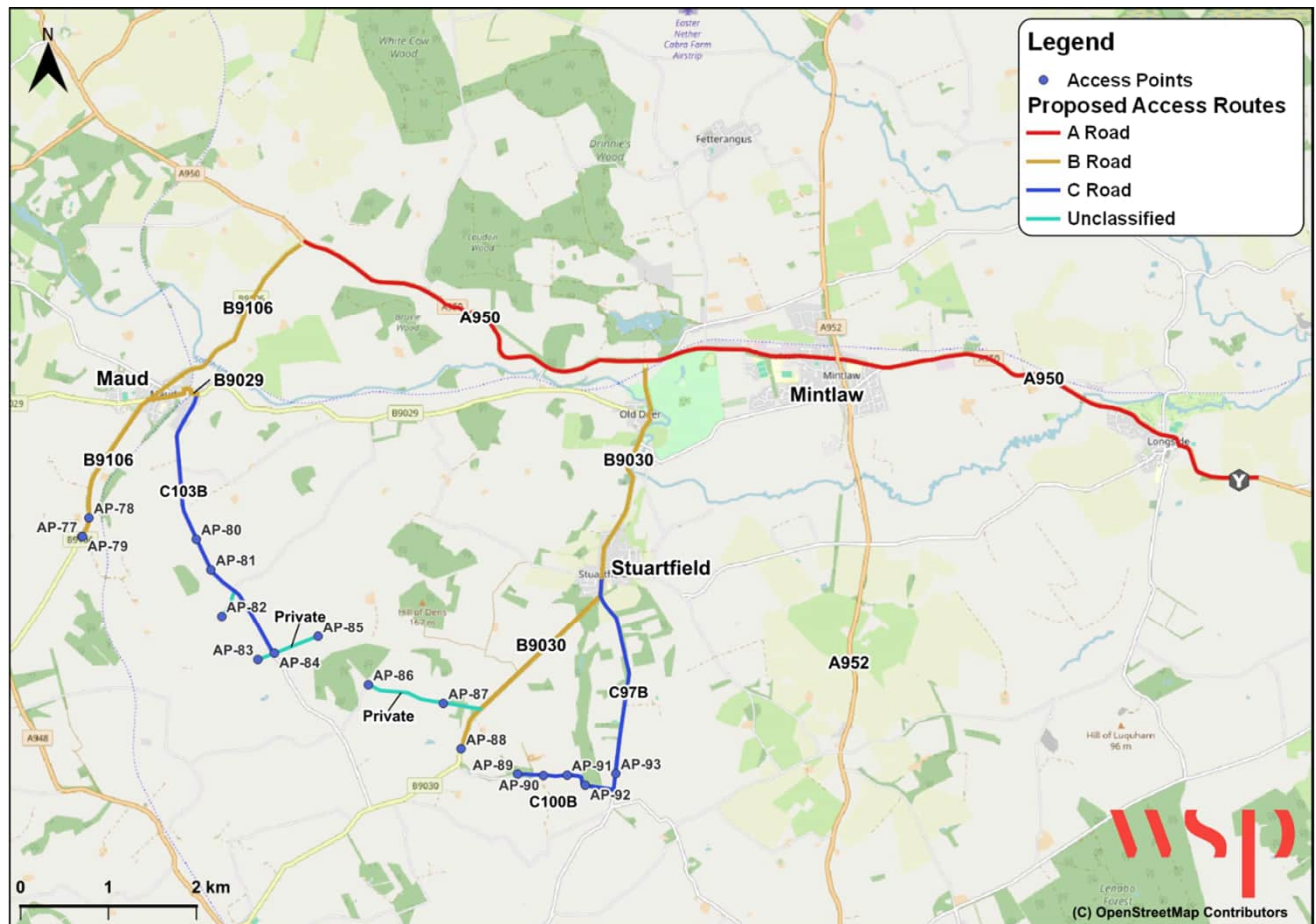


Figure 13.3.7.45: Potential Constraint at C97B / C100B Junction

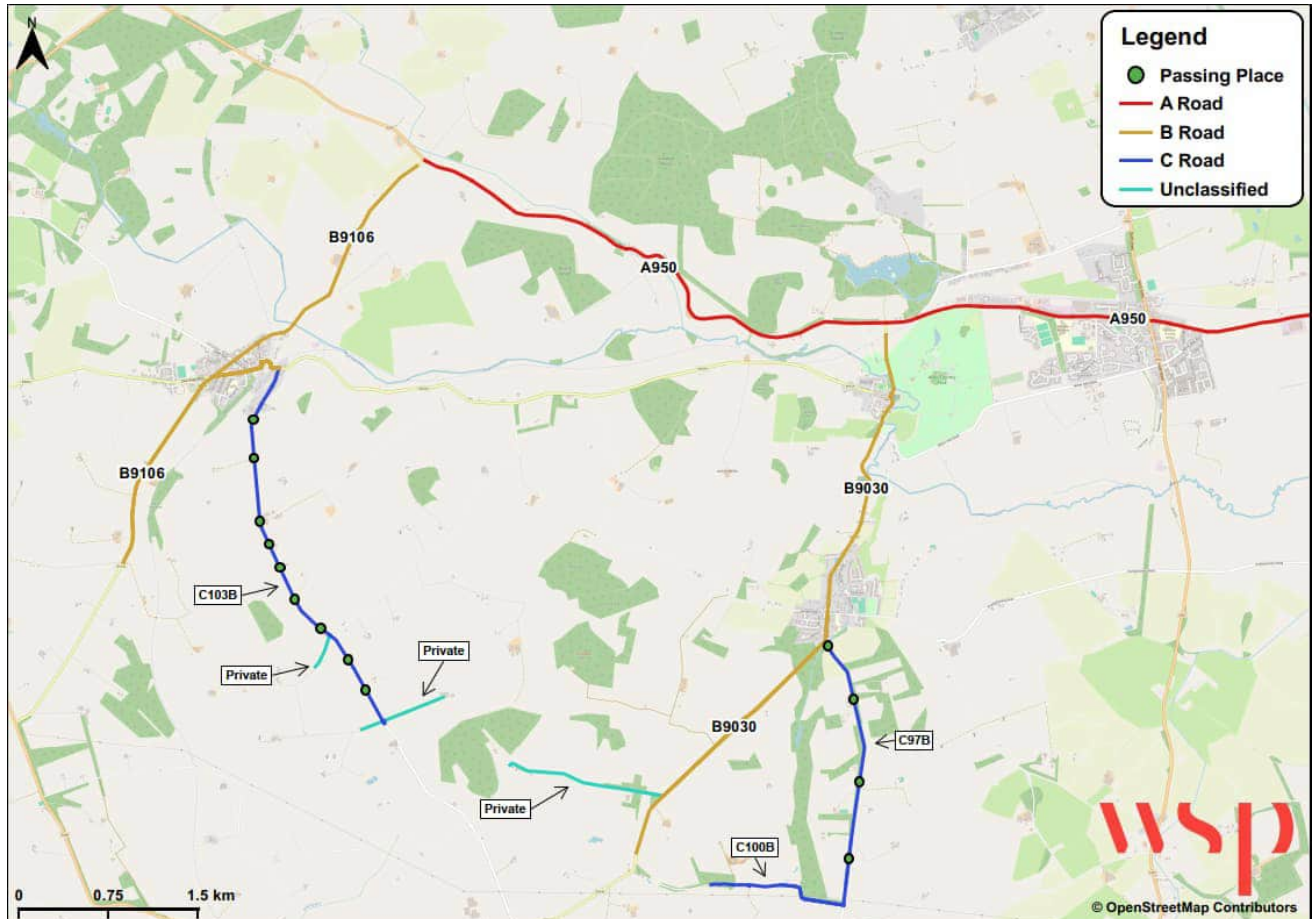


7.3.104. As shown by **Figure 13.3.7.45**, the analysis suggests that there will be a requirement to widen the junction to accommodate its use by HGVs. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land, but the exact extent of the works will require to be reviewed following completion of a topographical survey of the junction.

Passing Place Provision

7.3.105. **Figure 13.3.7.46** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 24 of the Proposed OHL Alignment.

Figure 13.3.7.46: Section 24 - Passing Places



7.3.106. The C97B is a single-track road of approximately 3.5 m in width. Construction vehicles will use approximately 2300 mm of the C97B for access. As shown by **Figure 13.3.7.46**, there are currently four passing places on the C97B.

7.3.107. The C100B is a single-track road of approximately 3 m in width that is not currently supported by passing places. Construction vehicles will use approximate 1170 m of the C100B for access.

7.3.108. The C103B is approximately 5 m within Maud, reducing to approximately 3 m in width to the south of the village. Construction vehicles will use approximately 3300 m of the C103B for access. As shown by **Figure 13.3.7.46**, there are currently nine passing places on the C103B.

Proposed Mitigation

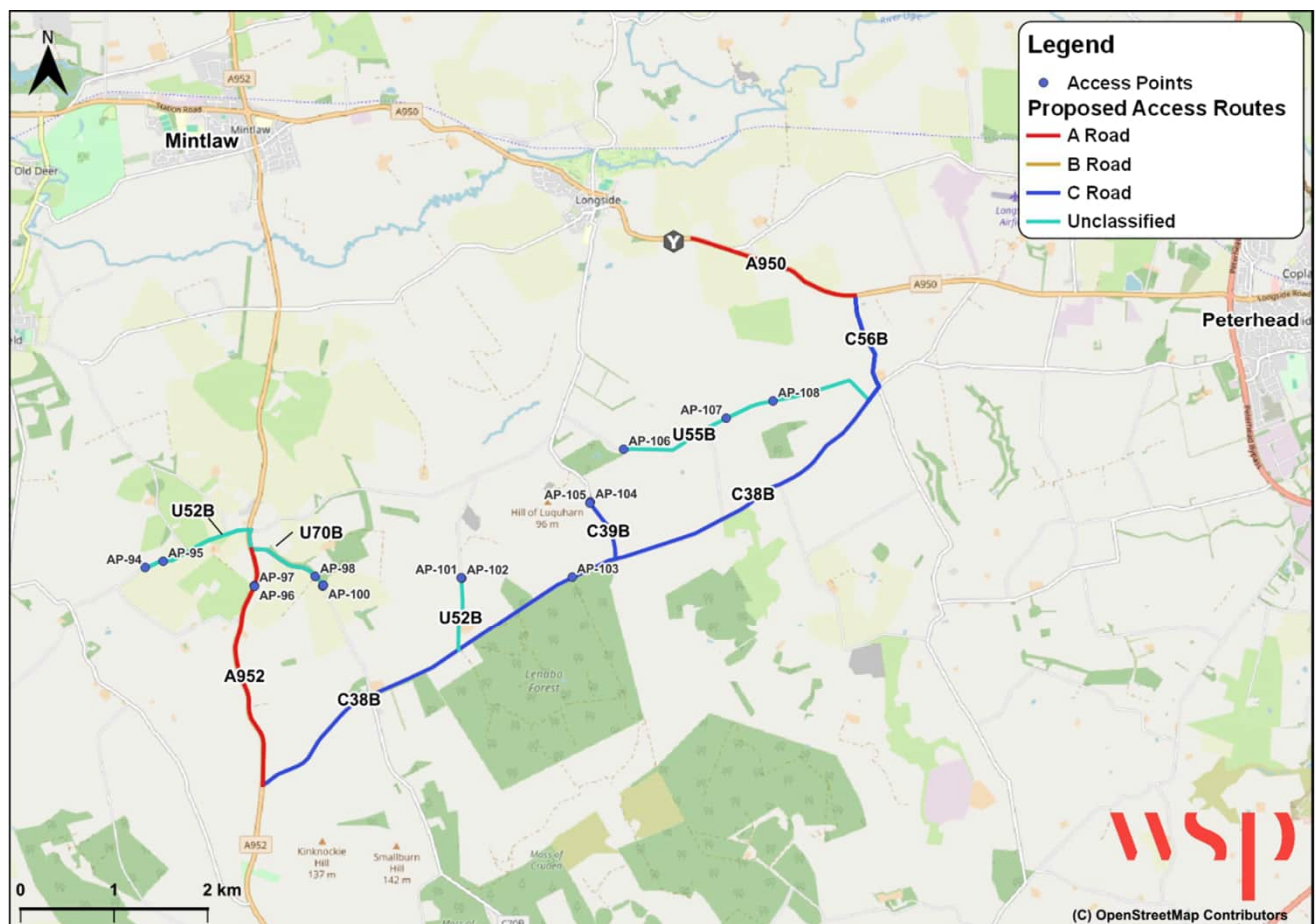
7.3.109. As previously highlighted, there is likely to be a requirement to widen the C100B at its junction with the C97B to support access to the tower installation sites within Section 24 of the Proposed OHL Alignment.

- 7.3.110. It is considered that there may be merit in lengthening the existing passing places and forming additional areas where larger vehicles could pass on the C97B given that the increase in construction traffic is likely to be generated over a 1-2 month period.
- 7.3.111. The C100B serves a limited number of residential properties and is approximately 3 m in width and not currently supported by passing places. It is considered that there may be merit in 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.
- 7.3.112. The C103B is a minimum of 5 m within Maud, reducing to approximately 3 m outwith the village. While the road only provides access to a limited number of properties, it is accepted that there may be merit in lengthening the existing passing places to support the Proposed Development's construction.

SECTION 25

- 7.3.113. **Figure 13.3.7.47** shows the routes that construction traffic would use to access the tower installation sites associated with Section 25 of the Proposed Development.

Figure 13.3.7.47: Section 25 Access Route



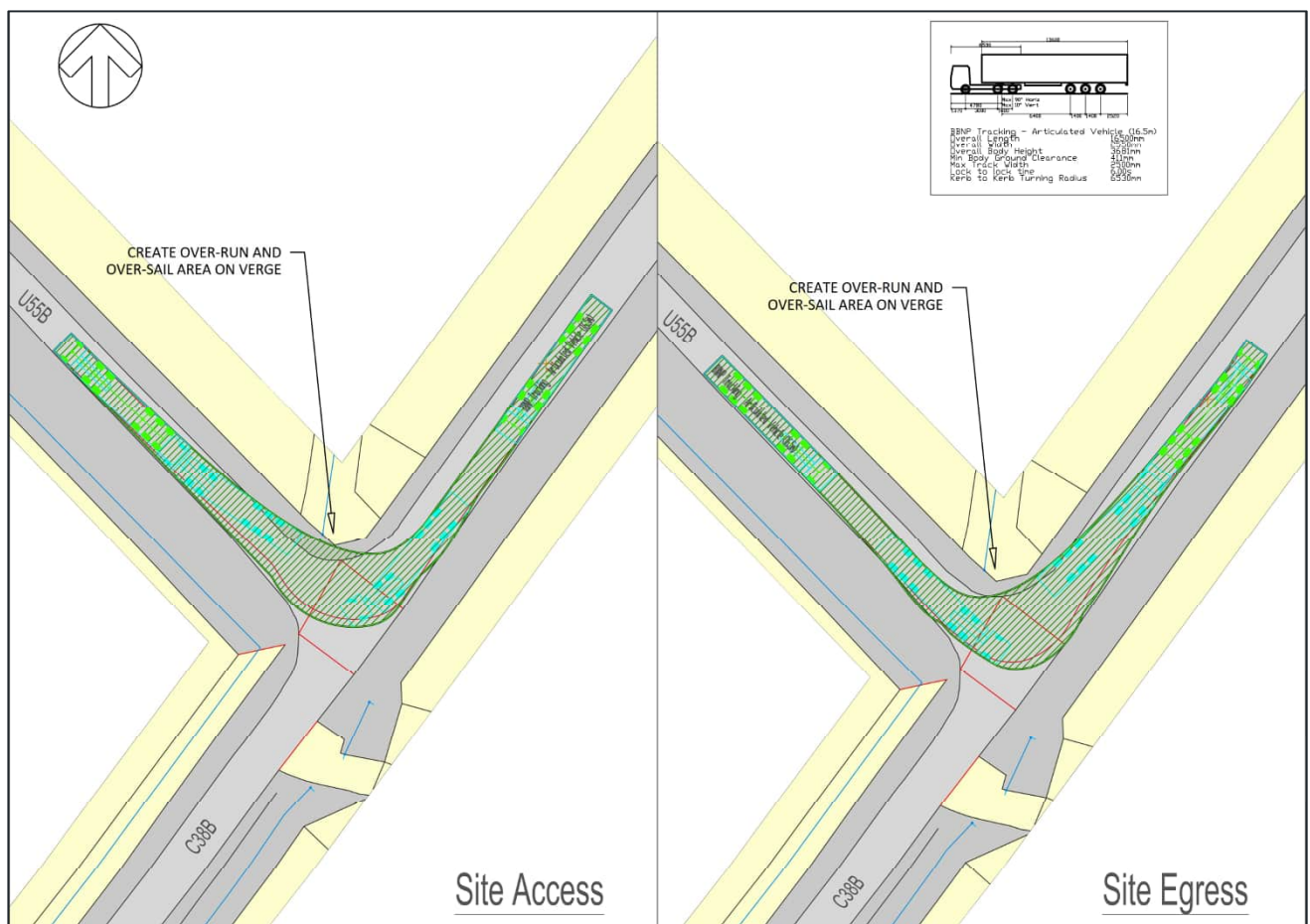
Pinch Point Analysis

7.3.114. A review of the potential access route has identified potential constraints at the following locations through which HGVs would pass when accessing the tower installation sites associated with Section 25:

- C38B / U55B junction (**Figure 13.3.7.48**)
- C38B / C39B junction (**Figure 13.3.7.49**)
- C38B / U52B junction (**Figure 13.3.7.50**)
- A952 / U70B junction (**Figure 13.3.7.51**)
- A952 / U52B junction (**Figure 13.3.7.52**)

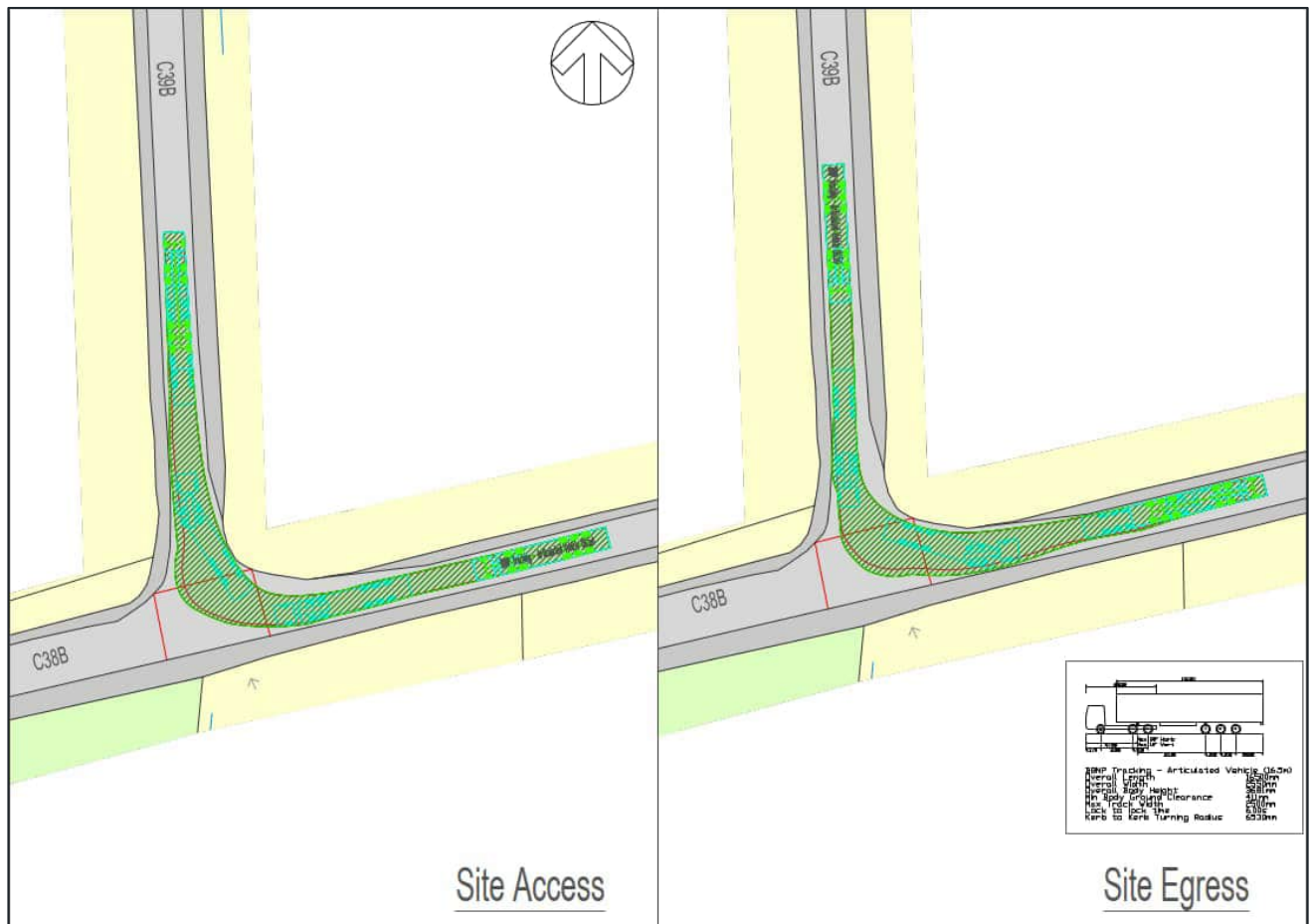
7.3.115. AutoTrack was used to review the ability for HGVs to pass through the five potential constraints to and from the tower installation sites. The result of the assessment is shown in **Figure 13.3.7.48** to **Figure 13.3.7.52**.

Figure 13.3.7.48: Potential Constraint at C38B / U55B Junction



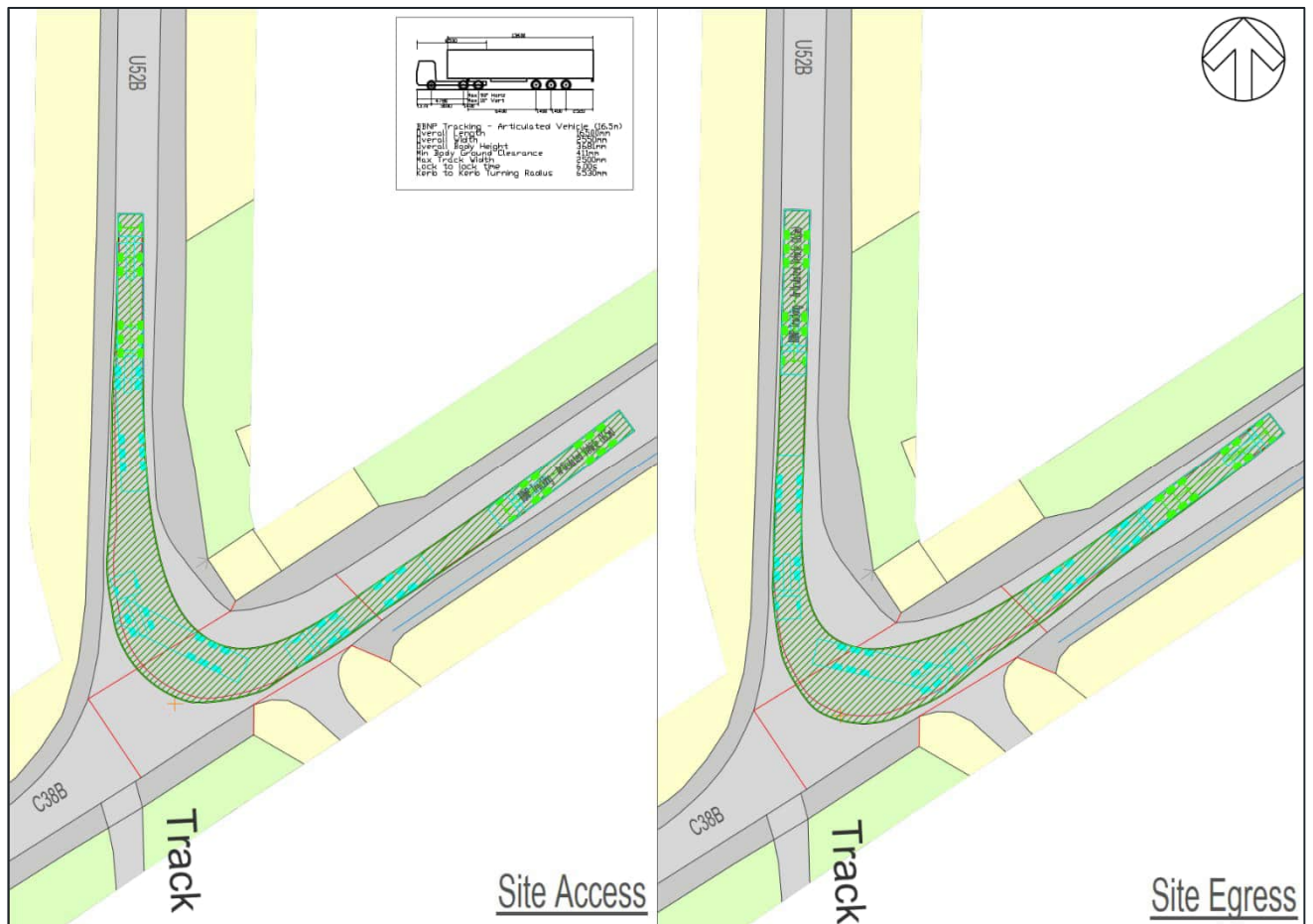
7.3.116. As shown by **Figure 13.3.7.48**, the analysis suggests that there will be a requirement to widen the junction to accommodate its use by HGVs. The works appear to be able to be accommodated within the adopted road boundary without a requirement for third party land, but the exact extent of the works will require to be reviewed following completion of a topographical survey of the junction.

Figure 13.3.7.49: Potential Constraint at C38B / C39B Junction



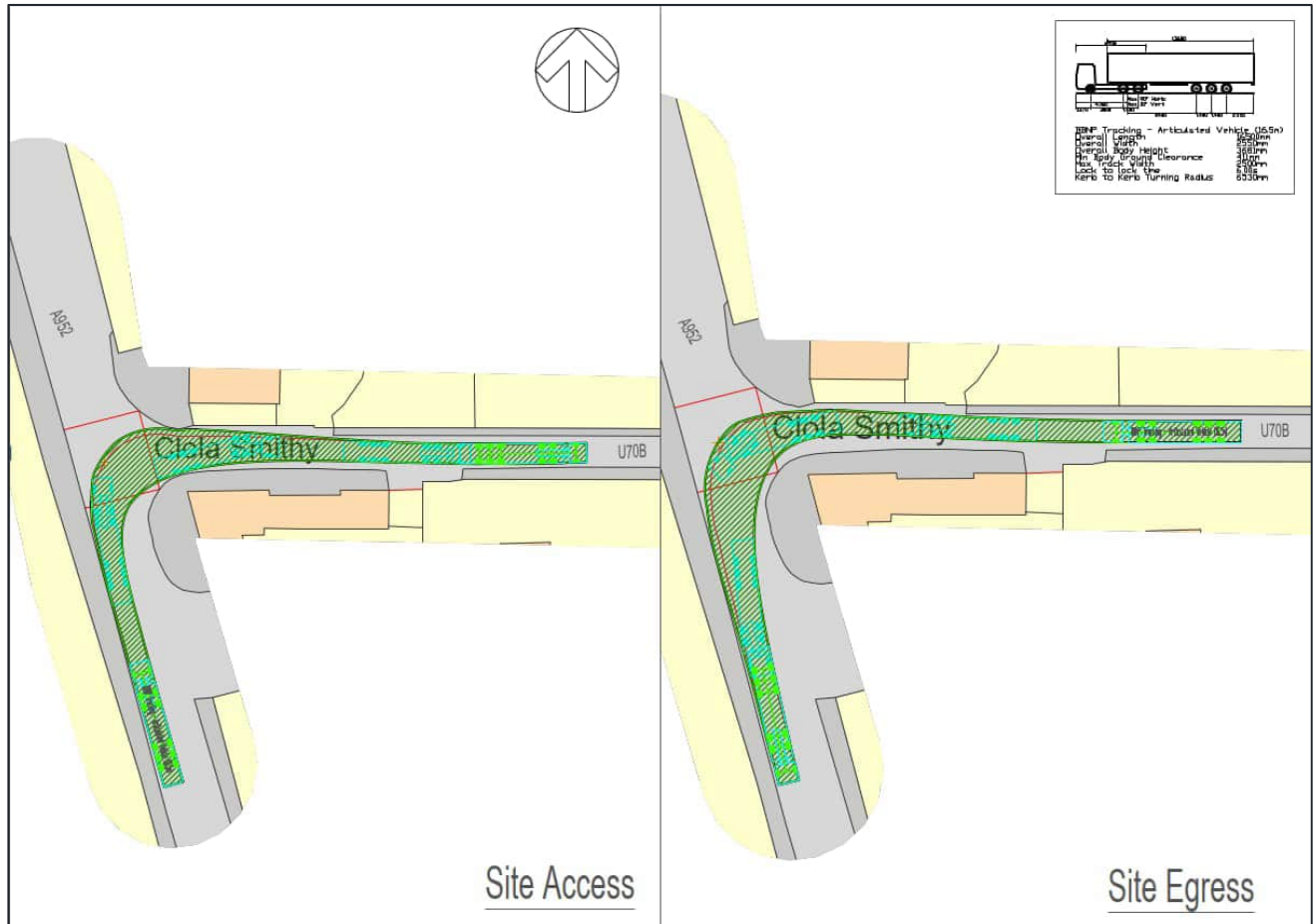
7.3.117. As shown by **Figure 13.3.7.49**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.50: Potential Constraint at C38B / U52B Junction



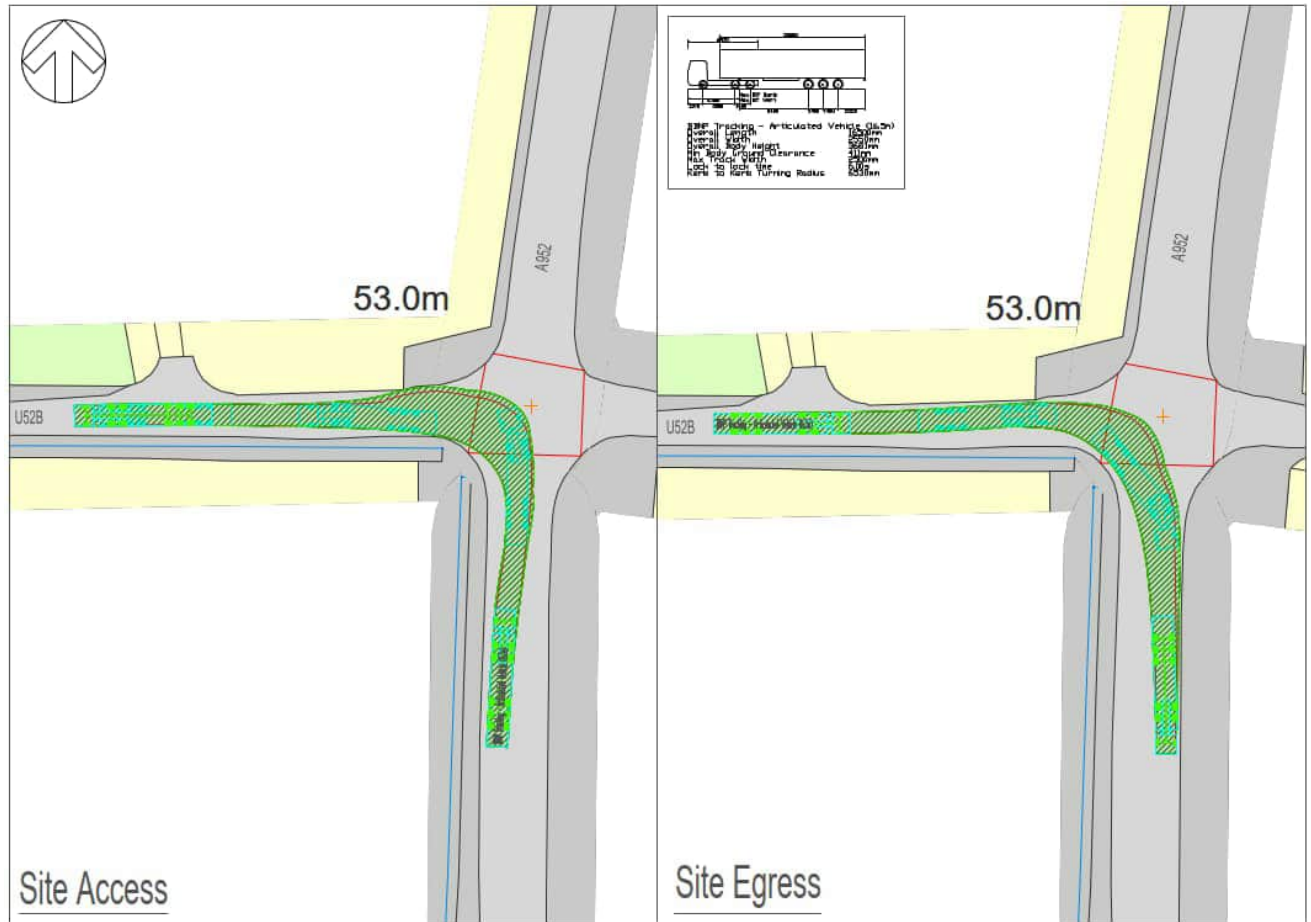
7.3.118. As shown by **Figure 13.3.7.50**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.51: Potential Constraint at A952 / U70B Junction



7.3.119. As shown by **Figure 13.3.7.51**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Figure 13.3.7.52: Potential Constraint at A952 / U52B Junction

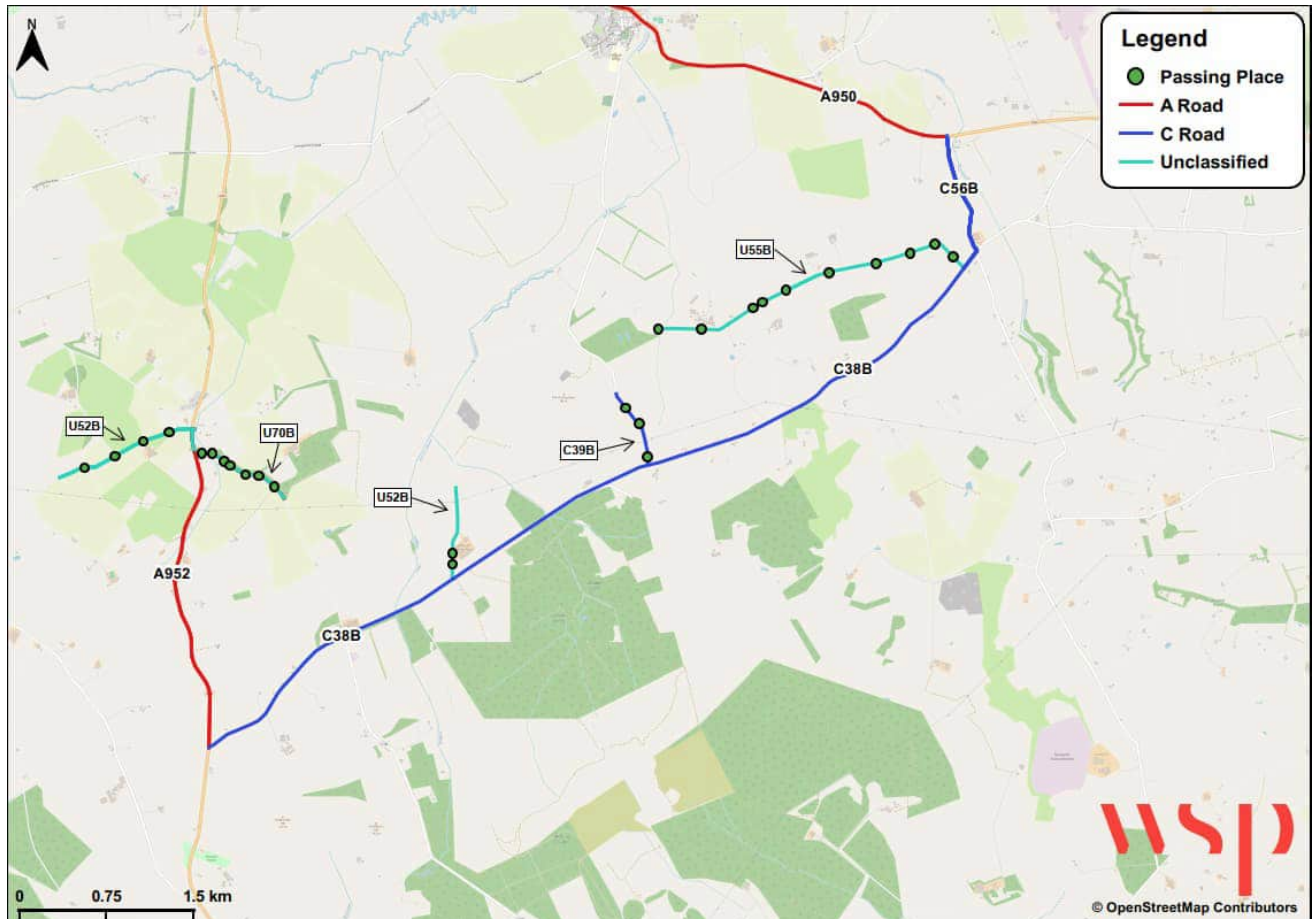


7.3.120. As shown by **Figure 13.3.7.52**, the analysis suggests that the junction will be able to accommodate HGV movements without a requirement to alter the junction.

Passing Place Provision

7.3.121. **Figure 13.3.7.53** shows the indicative locations the current passing place provision on the unclassified roads that form the access routes for Section 25 of the Proposed OHL Alignment.

Figure 13.3.7.53: Section 25 - Passing Places



7.3.122. The section of the C56B between the A950 and the C38B is a two-way carriageway road.

7.3.123. The 8000 m section of the C38B that forms part of access route 22 is approximately 5 m in width and therefore sufficiently wide to enable two vehicles to pass. There is therefore no passing places provision provided on the road between the A952 and the C56B.

7.3.124. The C39B is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 700 m of the C39B for access. As shown by **Figure 13.3.7.53**, there are currently three passing places on the C39B.

7.3.125. The U55B is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 2800 m of the U55B for access. As shown by **Figure 13.3.7.53**, there are currently ten passing places on the U55B.

7.3.126. The section of the U52B that runs northwards from the C38B is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 780 m of this section of the U52B for access. As shown by **Figure 13.3.7.53**, there are currently two passing places on this section of the U52B.

7.3.127. The section of the U52B that runs westwards from the A952 is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 1100 m of this section of the U52B for access. As shown by **Figure 13.3.7.53**, there are currently four passing places on this section of the U52B.

7.3.128. The U70B is a single-track road of approximately 3 m in width. Construction vehicles will use approximately 890 m of the U70B for access. As shown by **Figure 13.3.7.53**, there are currently seven passing places on the U70B.

Proposed Mitigation

7.3.129. As previously highlighted, there is likely to be a requirement to widen the U55B at its junction with the C38B to support access to the tower installation sites within Section 25 of the Proposed OHL Alignment.

7.3.130. It is considered that there may be merit in lengthening the existing passing places and forming areas where larger vehicles could pass on the section of the U52B running northwards from the C38B given that the increase in construction traffic is likely to be generated over a 1-2 month period.

7.3.131. The C39B, U55B, U70B and the U52B to the east of the A952 are currently supported by passing places at regular intervals. It is anticipated that the unclassified road network which supports access to the tower installation sites is likely trafficked given it supports access to a limited number of properties. It is likely that the access routes will be used by construction traffic for a maximum of two months and it is therefore considered that the existing passing place provision can support the increase in construction traffic, however a proportion of the passing places may need to be lengthened to support their use by HGVs.

7.4 PROPOSED MITIGATION SUMMARY

7.4.1. **Table 7.2** summarises the results of the impact assessment in terms of the potential 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: Potential Mitigation Measure Summary

Section	Road	Potential Mitigation Measure
20	C106S	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U108S	Liaise with property owner to minimise the impact of construction traffic on the operation of the road
21	C100S	Lengthen a proportion of the existing passing places
	U102S	Lengthen a proportion of the existing passing places
	C88S	Form areas where larger vehicles could pass
	C89S	Liaise with property owner to minimise the impact of construction traffic on the operation of the road
	U89S	Form areas where larger vehicles could pass
	U87S	Lengthen existing passing places and form additional areas where larger vehicles could pass

Section	Road	Potential Mitigation Measure
	U90S	Liaise with property owner to minimise the impact of construction traffic on the operation of the road
	U94L	Form areas where larger vehicles could pass
	U93bL	Form areas where larger vehicles could pass
	U92S	Form areas where larger vehicles could pass
	U33S	Form areas where larger vehicles could pass
22	C22S	None - Sufficiently wide to enable two vehicles to pass
	C25S	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U24S	Form areas where larger vehicles could pass
	U25S	Lengthen a proportion of the existing passing places
	C21S (north of Mill of Colp)	Lengthen existing passing places and form additional areas where larger vehicles could pass
	C21S (north of Little Idoch)	Form areas where larger vehicles could pass
	C26S	Form areas where larger vehicles could pass
	U1S (W)	Form areas where larger vehicles could pass
	U1S (E)	Lengthen a proportion of the existing passing places
	U130S	Form areas where larger vehicles could pass
23	C123B	None - Sufficiently wide to enable two vehicles to pass
	C125B	None - Sufficiently wide to enable two vehicles to pass
	C127B	Form areas where larger vehicles could pass
	U122B	Form areas where larger vehicles could pass
24	C97B	Lengthen a proportion of the existing passing places
	C100B	Form areas where larger vehicles could pass
	C103B	Lengthen a proportion of the existing passing places
25	C56B	None - Two-way Road
	C38B	None - Sufficiently wide to enable two vehicles to pass
	C39B	Lengthen a proportion of the existing passing places
	U52B (N)	Lengthen a proportion of the existing passing places
	U52B (W)	Lengthen existing passing places and form additional areas where larger vehicles could pass
	U55B	Lengthen a proportion of the existing passing places
	U70B	Lengthen a proportion of the existing passing places

7.4.2. 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.

- 7.4.3. 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
20	C106S	C106S / U108S junction	Junction widening
21	U102S	Bridge of Pitfancy	Road widening
	C88S	C88S / C88S junction	Junction widening
	C89S	Tight bends on C89S	Road widening
	U89S	U89S / C89S junction	Junction widening
	C87S	C87S / U90S junction	Junction widening
	B9024	B9024 / U94L junction	Junction widening
	U94L	Tight bends on U94L	Road widening
	U94L	U94L / U93bL junction	Junction widening
22	U127B	U127B / U122B junction	Junction widening
	U1S	U1S / C26S junction	Junction widening
		Tight bend on U1S	Road widening
	U24S	C22S / U24S junction	Junction widening
		C25S / U24S junction	Junction widening
23	U122B	U122B / U127B junction	Junction widening
24	C100B	C97B / C100B junction	Junction widening
25	U55B	C38B / U55B junction	Junction widening

7.5 ADDITIONAL MITIGATION MEASURES

- 7.5.1. 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 AC 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:
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 (banksmen) 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, banksmen 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 AC 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 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. The Aberdeenshire Council (AC) identified a requirement to identify 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 indicative temporary construction compounds (Yards) and quarries which will be used to support the Proposed Development's delivery.
- 8.1.4. The heaviest vehicles associated with construction activities 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 Loads 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 articulated 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**.
- 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.

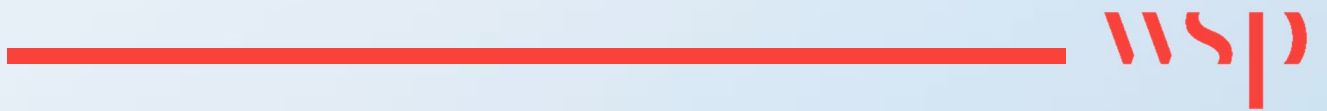
8.2 CONCLUSION

- 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 AC 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 AC 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 AC 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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