

HyNet North West Hydrogen Pipeline

Delivering clean growth



Appendix 11A

Preliminary Construction Traffic Management Plan

September 2022

Revision 1

Volume 0001

Document ref. 0001

Contents

1.	Introduction	5
1.2	Structure of the Preliminary CTMP	7
2.	The Project	8
	West Corridor	8
	North Corridor	8
	East Corridor	9
	South Corridor	9
2.2	Additional construction phase details	10
	Construction Site Preparation	10
	Crossing Techniques	11
	Compounds	12
	Working hours and employment proposals	12
	Pipeline Proposed in the Highway	13
	Preliminary CTMP Study Area	14
3.	Proposed Access Strategy	15
3.2	Location of Proposed Temporary Construction Accesses	15
3.3	Standard Access Design and Access Types	30
	Existing field gate access	30
	Existing bellmouth access	30
	New accesses	30
	End of highway	30
3.4	Temporary Construction Access	30
3.5	PEIR Preliminary Order Limits and Visibility Standards	31
3.6	Vehicle Classification	33
3.7	Abnormal Indivisible Loads	33
4.	HGV Routeing Strategy	34
4.1	Introduction	34
4.2	Overview of HGV Routeing Strategy	34
4.3	Strategic Routes	34
	M56	35
	M6	35
	M62	36
	M60	36
	SRN Network Entry/Exit Points	36
4.4	Local Routes	36

4.5	HGV Local Road Routes Issues/Constraints	42
5.	Light Vehicle Routeing Strategy	44
5.1	Introduction	44
	LV construction staff traffic	44
	LV construction traffic	44
5.2	Overview of LV Routeing Strategy	45
	LV construction staff traffic	45
	Construction staff traffic distribution	45
6.	Crossing Schedule	52
6.1	Introduction	52
6.2	Highways crossing schedule	52
6.3	Rail Network Crossing Schedule	56
	Navigable watercourse crossing schedule	58
7.	Potential Mitigation Strategies	60
7.2	Site Specific Mitigation	60
	Potential road closures and diversions	60
	Locations requiring traffic management	60
7.3	General Construction Traffic Management/Mitigation	61
	Traffic Signage	61
	Access route and point signing	61
	Access road signage	61
	Other signage	61
	Core working hours	62
	HGV and LV construction vehicle records	62
	HGV emissions	62
	Banksmen or presence of qualified personnel at the access	62
	Timing of HGV movements	62
	Exceptional circumstances	63
	Cleaning of vehicles	64
	Highway condition surveys	64
	Delivery management systems	64
	Information packs and communication	64
8.	Management of CTMP and Enforcements	66
8.1	Introduction	66
8.2	Monitoring and review	66
	Monitoring strategy	66
	Review	66
	Compliance	66
	Enforcement and corrective measures	67

Table 3.1	Construction Accesses – West Corridor (30 Accesses)	16
Table 3.2	North Corridor Construction Accesses (62 Accesses)	18
Table 3.3	East Corridor Construction Accesses (52 Accesses)	21
Table 3.4	South Corridor Construction Accesses (57 Accesses)	25
Table 3.5	Visibility Standards	32
Table 3.6	Vehicle Classifications	33
Table 4.1	Local road routes to construction accesses – West Corridor	37
Table 4.2	Local road routes to construction accesses – North Corridor	38
Table 4.3	Local road routes to construction accesses – East Corridor	39
Table 4.4	Local road routes to construction accesses – South Corridor	40
Table 4.5	Issues and constraints management of HGV local road routes	42
Table 5.1	LV construction staff traffic distribution and assignment onto road network	47
Table 6.1	Management of Highways Crossings (West Corridor)	52
Table 6.2	Management of Highways Crossings (North Corridor)	53
Table 6.3	Management of Highways Crossings (East Corridor)	54
Table 6.4	Management of Highways Crossings (East Corridor)	55
Table 6.5	Management of Rail Crossings	57
Table 6.6	Management of Navigable Waterways	58

1. Introduction

- 1.1.1 This Preliminary Construction Traffic Management Plan (CTMP) is Appendix **1A** to **Chapter 11: Traffic and Transport** of the Preliminary Environmental Information Report (PEIR) for the HyNet North West Hydrogen Pipeline Project (here after referred to as ‘the Project’) which is a proposal by Cadent Gas Ltd (hereafter ‘the Applicant’). This appendix should be read in conjunction with **Chapter 2: The Project and Chapter 11: Traffic and Transport**. This Preliminary CTMP is the first draft of what will be an evolving document throughout the Development Consent Order (DCO) application process. It will be updated as the elements of the Project are further developed through the ongoing design process and following feedback from statutory consultation. Further engagement will be undertaken with the following key stakeholders;
- Cheshire West and Chester Council (CWCC);
 - Cheshire East Council (CEC);
 - Warrington Borough Council (WBC);
 - St Helens Borough Council (SHBC);
 - Halton Borough Council (HBC);
 - Trafford Borough Council (TBC); and
 - National Highways.
- 1.1.2 Ongoing consultation will be undertaken to develop a management and mitigation strategy for construction traffic and for traffic affected by construction of the Project. An updated version of this Preliminary CTMP will be submitted in support of the DCO application.
- 1.1.3 This document details the environmental measures which may be implemented in relation to the traffic generated during the construction phase of the Project. It has been prepared to ensure that the proposed management and mitigation measures minimise the likely effects on existing road users during the construction phase. The primary objectives of the Preliminary CTMP are as follows:
- ensure the movement of people and materials in a safe, efficient, timely, and sustainable manner;
 - keep construction traffic to a minimum during peak network periods to reduce the impact on the highway network;
 - ensure that effects and disruption on local communities is minimised;
 - minimise vehicle trips where possible; and
 - limit the impacts on the natural and built environment.
- 1.1.4 The Project is a proposal to construct and operate the UK’s first 100 percent hydrogen pipeline network. It will deliver hydrogen – a clean energy source – to

multiple industrial users and power generators, and to blending points for introduction into the existing gas network.

- 1.1.5 The Project is part of the wider ‘HyNet North West’ programme that will produce, store and distribute hydrogen as well as capture and store carbon from industry in the North West of England and North Wales. This project has the potential to reduce carbon dioxide emissions by 10 million tonnes every year by 2030 – the equivalent of taking four million cars off the road. By achieving this, the HyNet North West Hydrogen Pipeline will create and maintain thousands of local jobs, enabling long-term sustainability for businesses and supporting financial security for communities across the region.
- 1.1.6 The Project includes the construction, operation and maintenance of up to 125km of new pipeline to distribute hydrogen to industry and for blending with the gas network in the north-west, and a number of Hydrogen Above Ground Installations (HAGIs) (including Block Valves described in **Chapter 2: The Project**) required to control the flow and pressure of hydrogen at key points along the proposed pipeline.
- 1.1.7 The Project would connect to the Hydrogen Production Facility at the Essar Stanlow site as the source of hydrogen for onward distribution across the Project. The pipeline would continue to the Central Hub which serves as the connection point for onward distribution to the South, East and North corridors, which would extend to locations near Middlewich, Partington, and St. Helens respectively.
- 1.1.8 The proposed key components of the Project are as follows:
- Hydrogen Pipeline Network (HPN) across the north-west region:
 - ▶ West Corridor: Stanlow Hydrogen Production Plant (HPP) to Central Hub HAGI, incorporating Rocksavage HAGI; spurs to customers at Intergen, Rocksavage; and The Heath Industrial and Business Park via Runcorn HAGI.
 - ▶ North Corridor: Central Hub HAGI to St Helens HAGI, incorporating HAGIs at Clock Face and Higher Walton; spurs to customers at Solvay, Warrington and Ingevity, Warrington (shared single connection); Novelis, Warrington; NGF Europe Ltd., Clock Face; NSG Pilkington Greengate Works, St Helens; and Glass Futures, St Helens.
 - ▶ East Corridor: Central Hub HAGI to Partington HAGI, incorporating a HAGI at Warburton and Block Valve near Sworton Heath (three options currently under consideration); spurs to National Grid AGI, Warbuton; and customers at SAICA, Partington; Partington National Grid AGI; Bassel Polyfins, Partington; and Carrington Power Station, Carrington.
 - ▶ South Corridor: Central Hub HAGI to Hydrogen Storage Facility at salt caverns located north of Middlewich (four routeing options currently under consideration), incorporating a Block Valve (five options currently under consideration); spur to Tata Chemicals, Winnington
- 1.1.9 During the construction phase, construction compounds, accesses and on-site haul roads. The Project would have a direct effect on local roads through

crossings of the highway network and the conveyance of construction traffic on the highway network, resulting in the need for a CTMP.

1.2 Structure of the Preliminary CTMP

1.2.1

The remainder of this Preliminary CTMP is set out as follows:

- **Section 2: The Project** – sets out the description of the Project and the components and vehicles that will required, this is to inform the Preliminary CTMP;
- **Section 3: Proposed Access Strategy** – sets out the Access Strategy proposed during the construction phase;
- **Section 4: HGV Access Strategy** – sets out the construction Heavy Goods Vehicle (HGV) Access Strategy;
- **Section 5: Light Vehicle Routeing Strategy** – sets out the Light Vehicles (LV) Access Strategy;
- **Section 6: Crossing Schedule** – sets out other construction impacts;
- **Section 7: Potential Mitigation Strategies** - sets out the potential mitigation strategies; and
- **Section 8: Management of the CTMP and enforcement** – sets out the proposed management structure for the CTMP.

2. The Project

- 2.1.1 This Preliminary CTMP has been prepared to set out the framework for the management and mitigation on the strategic and local road network, related to the construction works required for the Project across the north-west region. Details on the Project are set out in **Chapter 2**. The Project includes for four corridors across the north-west and the details of each are set out as below. It should be noted the Central Hub HAGI links and forms a part of all four corridors.

West Corridor

- 2.1.2 The West Corridor is comprised of the following elements:
- Pipeline - Stanlow Hydrogen Production Plant (HPP) to Central Hub HAGI (via Rocksavage HAGI);
 - Rocksavage HAGI;
 - Runcorn HAGI;
 - Pipeline spur routes to customers at Intergeren, Rocksavage and The Heath Industrial and Business Park (via Runcorn HAGI) – Referred to as the Runcorn Spur.
- 2.1.3 At this stage there is some route optionality to consider:
- There are two pipeline route options (Option WP1 and WP2) around the Hover Force Outdoor Activity Centre;
 - There are three options identified for the location of the Rocksavage HAGI (Options RSH1, RSH2 and RSH3);
 - There are two further pipeline options (Option WP3 and WP4 south-east of the Rocksavage HAGI).
- 2.1.4 In traffic and transport terms the West Corridor broadly follows the M56 corridor before a spur north crosses the River Weaver and Weaver Navigation into south Runcorn along broad route of the Western Point Expressway. The remainder of the route runs south of the M56 along the route of the A533 before crossing this into the central HAGI.

North Corridor

- 2.1.5 The North Corridor is comprised of the following elements:
- Pipeline – Central Hub HAGI to St Helens HAGI (via Clock Face and Higher Walton HAGIs);
 - Clock Face HAGI;
 - Higher Walton HAGI; and
 - Pipeline Spur routes to customers at Solvay, Warrington and Ingevity, Warrington (shared single connection); Novelis, Warrington; NGF Europe Ltd.,

Clock Face; NSG Pilkington Greengate Works, St Helens and Glass Futures, St Helens. These spurs are referred to as the Warrington Spurs, Clock Face Spur and St Helens Spur.

2.1.6 At this stage there is some optionality to consider:

- There are several routes considered in the Creamfields Site area (NP1 to NP3);
- Two options at Higher Walton (Option NP4 and NP5); and
- Two Higher Walton HAGI Locations (HWH1 and HWH2).

2.1.7 In traffic and transport terms this North Corridor heads north from the central HAGI crossing the M56 and A56 south and south-west of Warrington. In Warrington there is a spur that results in approximately 3.6km of pipeline to be installed in the highway from the town centre to a site on Thelwall Lane. The route continues north/north-west from Warrington over the Manchester Ship Canal and River Mersey to the crossing the A5080 and then M62 before entering southern St Helens and broadly entering the town on the St Helens Link Way corridor.

East Corridor

2.1.8 The East Corridor comprises the following elements:

- Pipeline - Central Hub HAGI to Partington HAGI via Warburton HAGI;
- Partington HAGI;
- Sworton Heath Block Valve; and
- Pipeline spur to National Grid AGI, Warbuton and Carrington Power Station, Carrington; and customers at SAICA, Partington; Partington National Grid AGI; Bassel Polyfins, Partington; and Carrington Power Station, Carrington. These are referred to as the Warburton Spur and Partington Spur.

2.1.9 At this stage there is some optionality to consider:

- There are three proposed locations for the east Block Valve (EBV1 – EBV3).

2.1.10 In traffic and transport terms the east corridor runs from the Central Hub HAGI north-east across a rural area across the A49 and A559 before crossing the M6. East of the M6 the route continues north-east across the M56 and A56 before continuing through rural areas to Partington.

South Corridor

2.1.11 The South Corridor is comprised of the following elements:

- Pipeline - Central Hub HAGI to Hydrogen Storage Facility at salt caverns located north of Middlewich (four routeing options currently under consideration), incorporating a Block Valve (five options currently under consideration); and
- Pipeline spur to Tata Chemicals, Winnington referred to as the Northwich Spur.

- 2.1.12 At this stage there is some optionality to consider:
- South of the trenchless crossing of the A556 (Chester Road) there are four options (Option SP1 to SP4); and
 - The south option Block Valve has five potential locations (SBV1-SBV5).
- 2.1.13 In traffic and transport terms, the South Corridor runs along the route of the A49, crossing the A49 north of Sandiway. The route then runs south-east over the River Weaver to just north of Winsford and then east across the A553 and A530 to the salt caverns located north of Middlewich.
- 2.1.14 **Figure 2.1** illustrates the Preliminary Order Limits and some of the key roads in the north-west.

2.2 Additional construction phase details

Construction Site Preparation

Public Rights of Way (PRoW)

- 2.2.1 Safe crossing points would be implemented e.g. where a Public Right of Way (PRoW) crosses the working width. Where necessary, a temporary closure and diversion will be put in place and signage provided. Where an access point is required along a PRoW creation of a temporary shared route with users will be proposed. A Preliminary PRoW Management Plan (PRoWMP) has been developed for the PEIR Submission (**Appendix 11B Preliminary PRoWMP**) which sets out details of the impacts, management and proposed mitigation.

Access

- 2.2.2 At this stage, accesses to the project working area have been identified and details on these locations, as well as the proposed access strategy, are set out in this Preliminary CTMP. The accesses and requirements for improvements at these points e.g. visibility splays, and bellmouths and widening will be subject to further design and consultation with the appropriate highways authorities. **Figure 2.2 to 2.4** sets out the anticipated initial bellmouth designs for the three types of access on the project that may be used and can inform future consultation. The access track design would be informed by the particular site conditions along the access route.
- 2.2.3 Access routes to construction working areas would be implemented prior to any works commencing to provide suitable access for construction plant and traffic. This element of construction could also include vegetation removal and management, the construction of bellmouths at access entrances from the public highway, wheel wash/'rumble strip' facilities, where required, to remove excess material before vehicles re-join the highway, fencing and gateways to keep livestock and the public away from construction activities, drainage, and where required culvert crossings and temporary bridges to cross watercourses. Construction works would be phased, and access routes implemented prior to each element or phase of the Project being constructed. Various surfaces would

be used for the temporary access tracks depending on ground conditions. Access routes will be prepared using the following list of activities:

- Minor Access: Use of existing access routes with minimal, if any, improvements required.
- Panel: These comprise temporary metal, timber (bog mats) or plastic interlocking panels normally laid directly onto the ground and delivered to site by HGV, which would off load and layout panels. This form of access would be typically 3m in width and all panels would be removed once construction works have been completed.
- Stone: These surfaces are typically formed of imported stone (or crushed rock) on a geotextile membrane. Topsoil is removed and stockpiled, and a geotextile membrane laid to separate the stone from the underlying soil. Stone is delivered via tipper trucks, spread on site and using a vibrating roller compacted to the desired finish. The final finish is generally gently cambered to aid with removal of water and sits just above the existing ground level on either side. The stone road is dismantled in the reverse procedure, geotextile membrane recovered and ground reinstated. Stone access routes would be 4.5m - 7.0m wide excluding any soil storage or fencing running along the access.

Crossing Techniques

2.2.4 A crossing schedule has been developed to inform the PEIR assessments and details relevant to traffic and transport are set out in further detail in this Preliminary CTMP. The types of crossings proposed are set out in the following sections.

Open Cut

2.2.5 Open cut installation involves the excavation of a trench across the feature to be crossed and the installation of the pipeline in the trench. This method is typically used for minor roads, tracks, streams and ditches.

2.2.6 At each crossing point it is necessary to install the pipeline beneath the feature being crossed and provide a means of crossing for construction plant and vehicles.

2.2.7 Open cut installation at minor roads would typically involve the following stages:

- Implementation of traffic control measures (subject to agreement with the Highways Authority) to ensure safety and minimise disruption. Works would be undertaken in as short a timeframe as possible, typically five days or less;
- Identification of services and protection as required;
- Cutting of the road surface at the trench edges using a road saw;
- Excavation of the trench to the required depth;
- Installation of the pipe or a construction sleeve for installation of the pipeline at a later date; and

- Backfilling of the trench and resurfacing undertaken in accordance with the requirements of the relevant highways authority.

- 2.2.8 Construction plant and vehicles must be able to cross from one side of a road for onward access to the route. This involves tracking major plant across the road for which traffic control measures and service protection would be undertaken as above. The road surface would be protected using rubber matting or similar, or by use of a temporary surface such as sand or a temporary sacrificial tarmac surface. Measures would be put in place to ensure the highway is clear of debris and any restoration works would be subject to agreement with the highway authority.
- 2.2.9 The crossing points would be required for the duration of the construction period within the particular section. However, the crossing point would only be in operation when it is necessary to transfer plant or vehicles across. The highway would otherwise remain open to the public as normal for the majority of the time a crossing is in place.

Trenchless crossing techniques

- 2.2.10 Major road, all rail and navigable waterways are proposed to be crossed using trenchless crossing techniques. There are a number of methods by which these crossings would be undertaken, the choice of which is determined by a number of factors including; the feature being crossed; agreements with third parties regarding asset protection; ground conditions; and the length/depth of the crossing. It is not possible to determine which method would be used at each trenchless crossing prior to the establishment of these factors and appointment of the Contractor(s) to undertake the works. The types of crossing could be one of the following;
- Horizontal Directional Drilling (HDD);
 - Auger Boring;
 - Micro-tunnelling;
 - Direct Pipe.
- 2.2.11 For all of the methods above, there would be no surface effects or impacts on roads that are crossed.

Compounds

- 2.2.12 Temporary Construction Compounds (TCCs) would be established to support the construction of the pipeline and HAGIs. The location and area required for temporary compounds will be subject to further design and route refinement. Key locations are likely to include the HAGI construction sites.
- 2.2.13 All construction compounds would require vehicle/plant parking and storage areas, as well as associated fuels.

Working hours and employment proposals

- 2.2.14 Standard construction working hours would be 10 hours per day (08:00 to 18:00) from Monday to Saturday, with no works on Sundays or Bank Holidays. There may

be the need for some extended working hours for certain activities, but this would be subject to agreement with the local Planning Authority

2.2.15 There would be the need for continuous (24-hour) working for some activities including the following:

- Tunnelling and HDD;
- Pipe pulling at trenchless crossings;
- Highways works, to ensure temporary closures minimise the potential for daytime disruption;
- Pipeline testing.

2.2.16 A number of works would be expected to occur in parallel, however, the exact phasing of the works has yet to be determined. Further details of the likely construction programme and phasing will be developed for the ES.

2.2.17 Construction is expected to commence in late 2024 with site establishment, with pipeline construction commencing in 2025 with commission in 2027. The Project would be fully operational by late 2027 or early 2028.

2.2.18 Pipelines are constructed within the pipeline “spread” or temporary working width which is a corridor of land extending along the route. Pipe laying can be likened to a production line with successive activities moving along the spread. Activities include site preparation, pipeline stringing, welding, inspection, laying and testing. Once complete, reinstatement would be undertaken across the temporary working width.

2.2.19 During construction, there would be several phases of works and some of these would have effects on differing elements of the highways network at differing times. It is estimated that the peak of construction works would occur in 2025/2026 as set out in **Chapter 11: Traffic and Transport** of the PEIR.

Pipeline Proposed in the Highway

2.2.20 The proposals for the routes at this stage of the Project include key sections of pipeline to be constructed in the adopted highway for which no dedicated access point is required. These are all within the North Corridor and the urban areas. The sections of pipeline are as follows.

- Section 1 - A 2.73km route in Warrington that runs from the junction Gainsborough Road and the A5060 and routes east along Gainsborough Road, Loushers Lane, Wash Lane, Station Road to the A50.
- Section 2 - A 425m route in east Warrington that runs from the junction of Clearwater Quays, Thelwall Lane/Powder Mill Road along Thelwall Lane to the east to the entrance to an industrial facility.
- Section 3 - A 185m route in south St Helens along Lea Green Road between the junction with Chapel Lane and the entrance to industrial properties.

- Section 4 - A 1.896km route in west St Helens along the B5204 and Sherdley Road in Sutton Heath. This links from near the junction of The Broads/B5204 and Sherdley Road and Sutton Heath Road.
- Section 5 - A 686m route in St Helens along Burtonhead Road between the St Helens Linkway and the St Helens HAGI.

2.2.21 **Figure 2.5** sets out the proposed sections of pipeline in the highway.

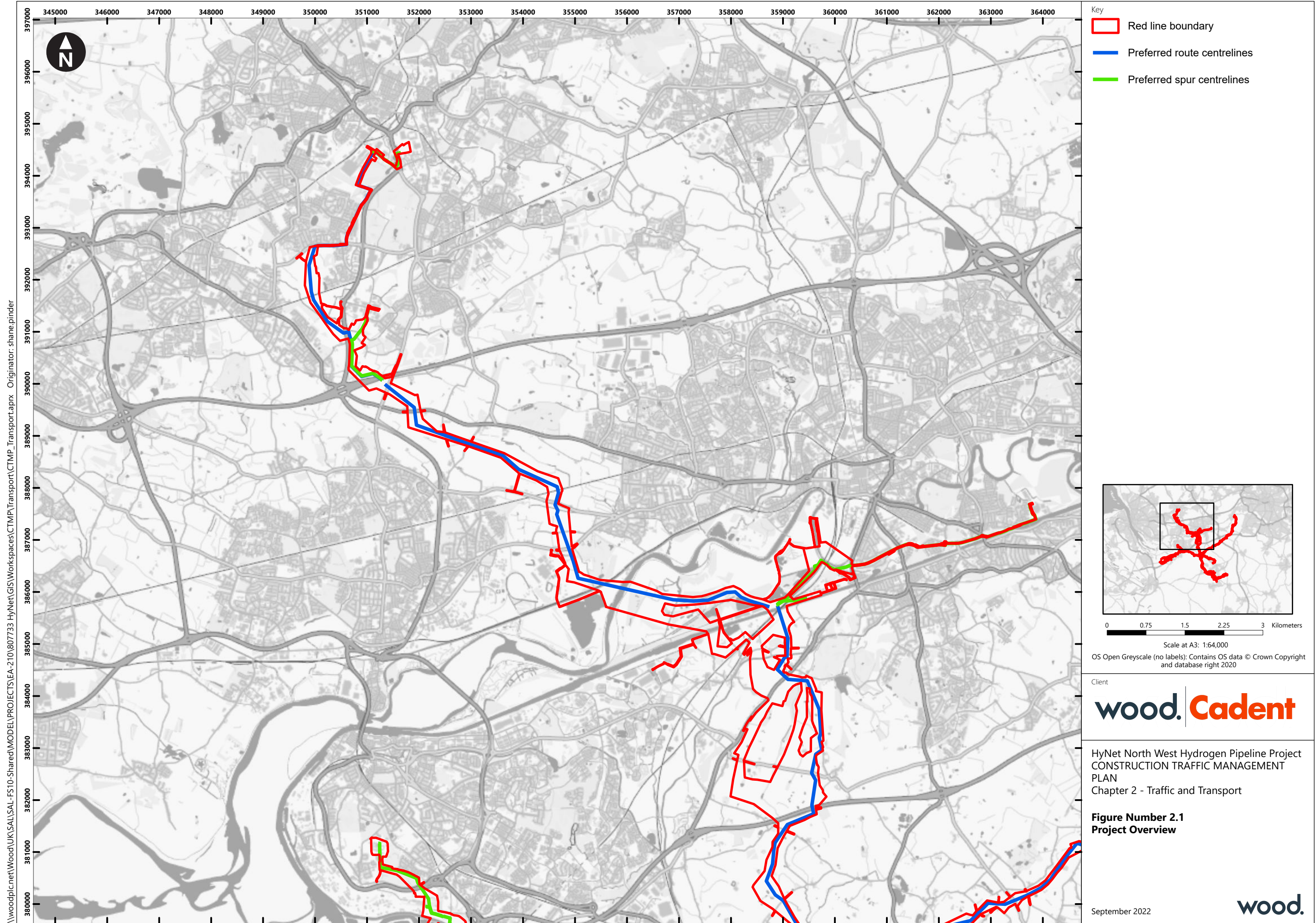
Preliminary CTMP Study Area

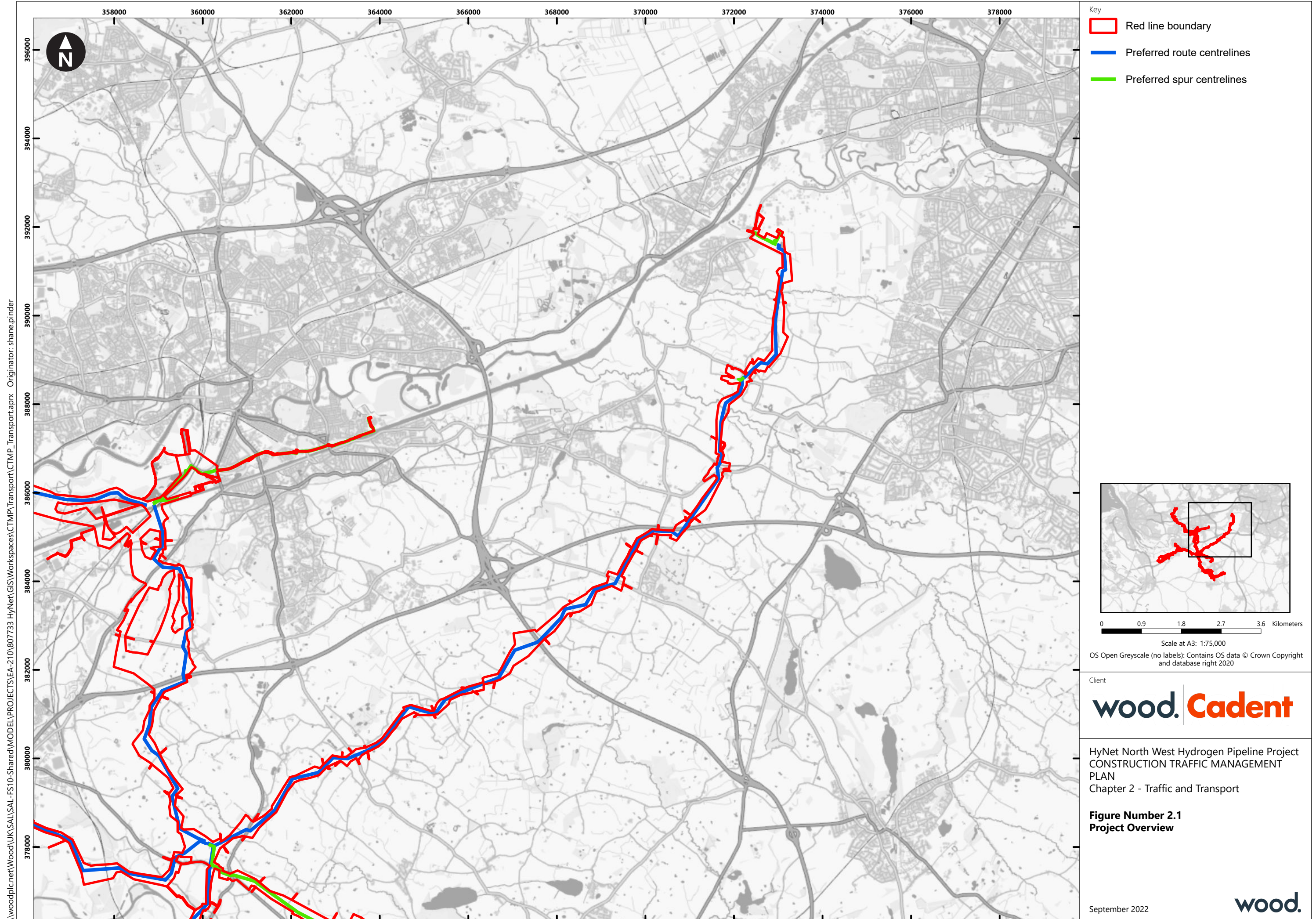
2.2.22 The Study Area in the Preliminary CTMP is the same as that which is presented in **Chapter 11: Traffic and Transport** of the PEIR and is shown in **Figure 2.3**.

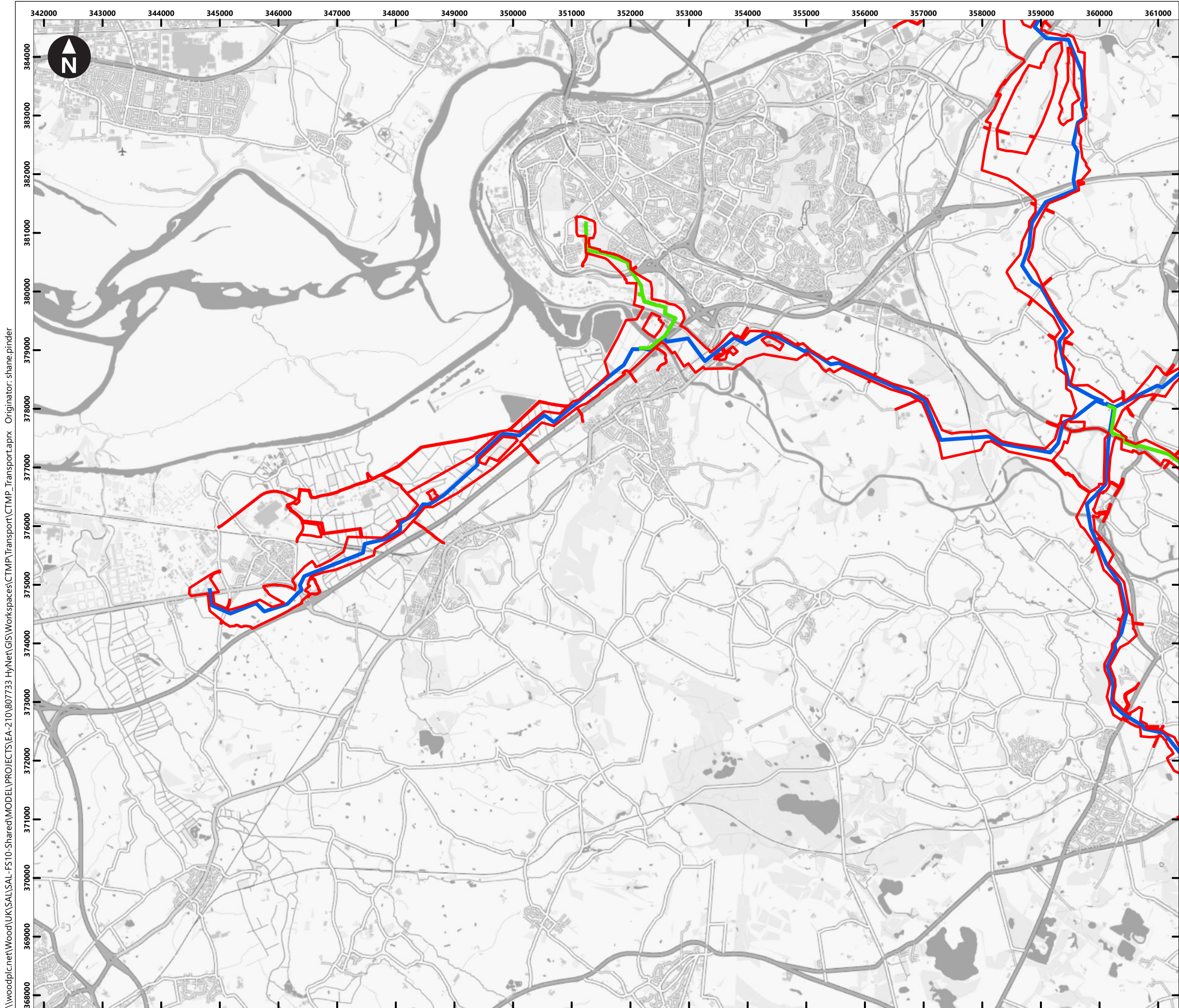
2.2.23 The spatial scope of the Preliminary CTMP is based on the most probable routes for construction traffic generated by the Project, comprising the movement of deliveries, equipment and of construction staff. Identification of appropriate construction routes takes into consideration the following:

- restrictions such as weight and height limits;
- existing HGV restrictions; and
- suitability of routes based on a review of road types and widths.

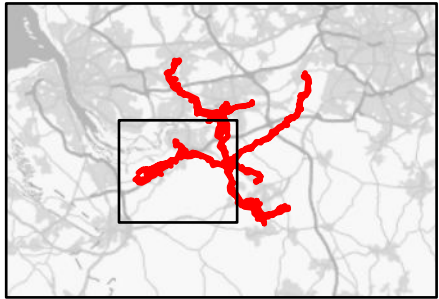
2.2.24 The Study Area includes roads operated and maintained by CWCC, CEC, TBC, HBC, WBC, SHBC and as local highway authorities and National Highways as the strategic highway authority.







- Key
- Red line boundary
 - Preferred route centrelines
 - Preferred spur centrelines



0 0.75 1.5 2.25 3 Kilometers

Scale at A3: 1:62,000

OS Open Greyscale (no labels): Contains OS data © Crown Copyright and database right 2020

Client

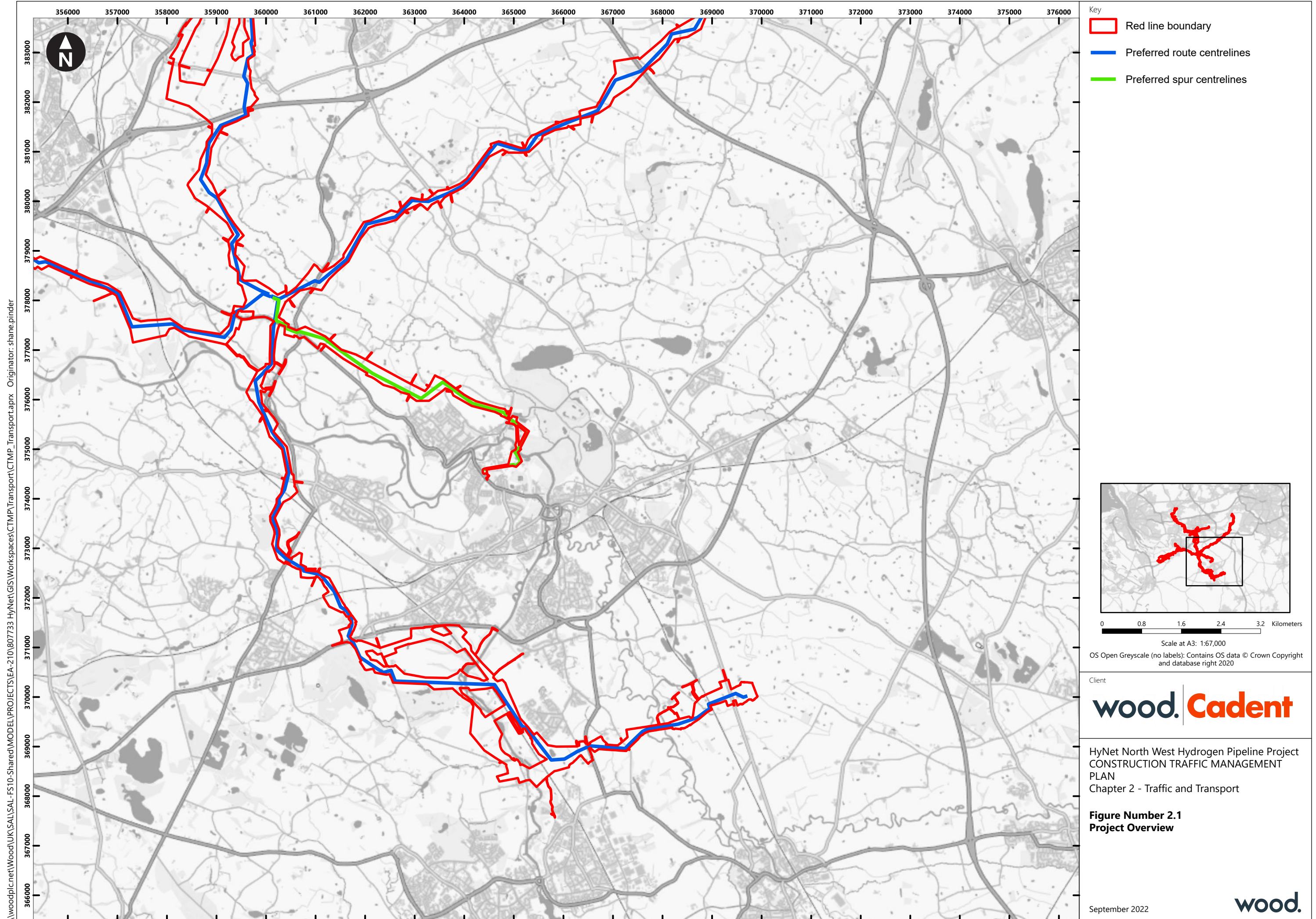
wood. Cadent

HyNet North West Hydrogen Pipeline Project
CONSTRUCTION TRAFFIC MANAGEMENT
PLAN
Chapter 2 - Traffic and Transport

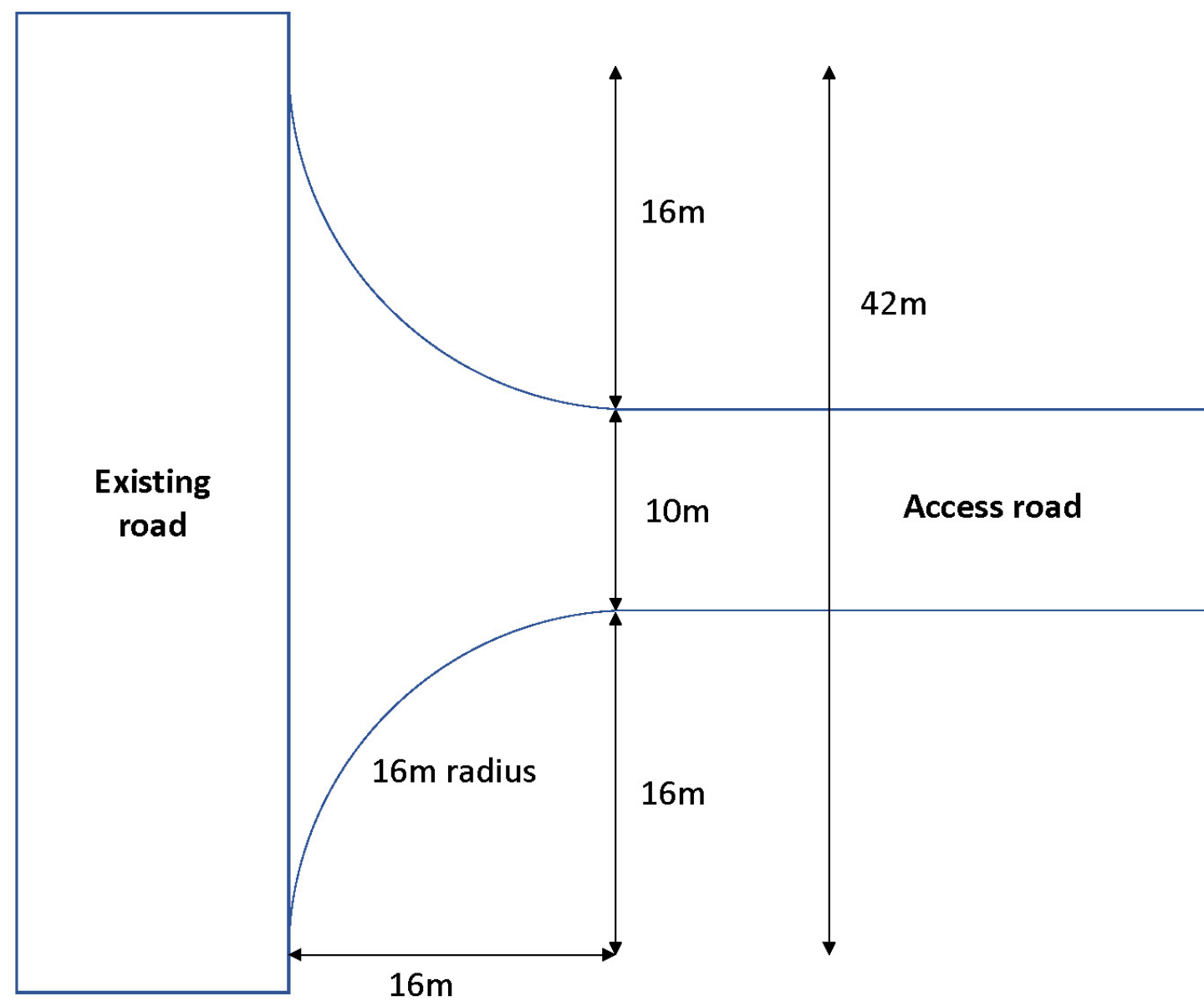
Figure Number 2.1
Project Overview

September 2022

wood.



HGV & LGV access both directions.



Client

wood. **Cadent**

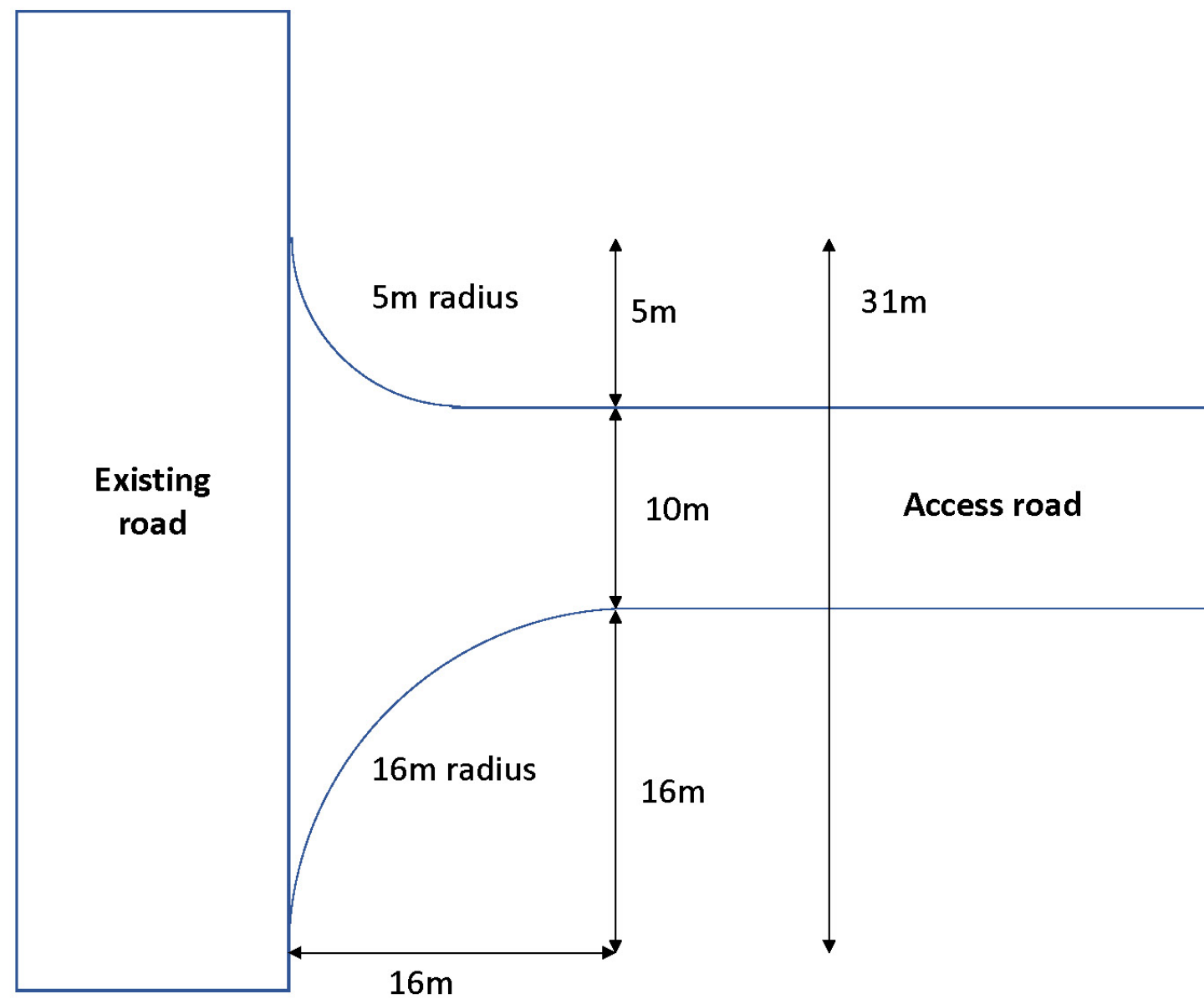
HyNet North West Hydrogen Pipeline Project
Construction Traffic Management Plan

Figure 2.2
Typical Bellmouth
Example 1

September 2022

wood.

HGV access in one direction, LGV access in both directions.



Client

wood. **Cadent**

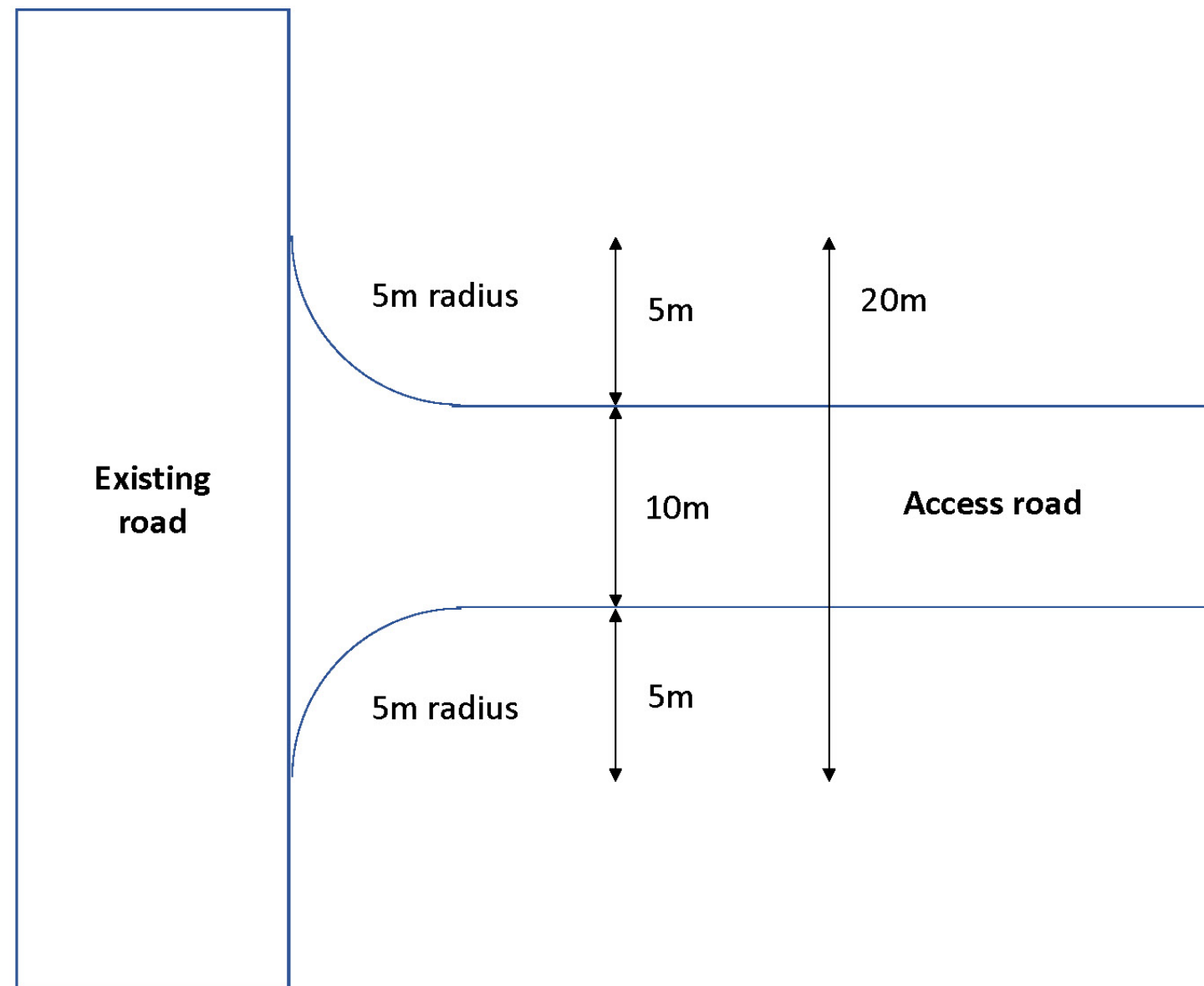
HyNet North West Hydrogen Pipeline Project
Construction Traffic Management Plan

Figure 2.3
Typical Bellmouth
Example 2

September 2022

wood.

LGV access only.



Client

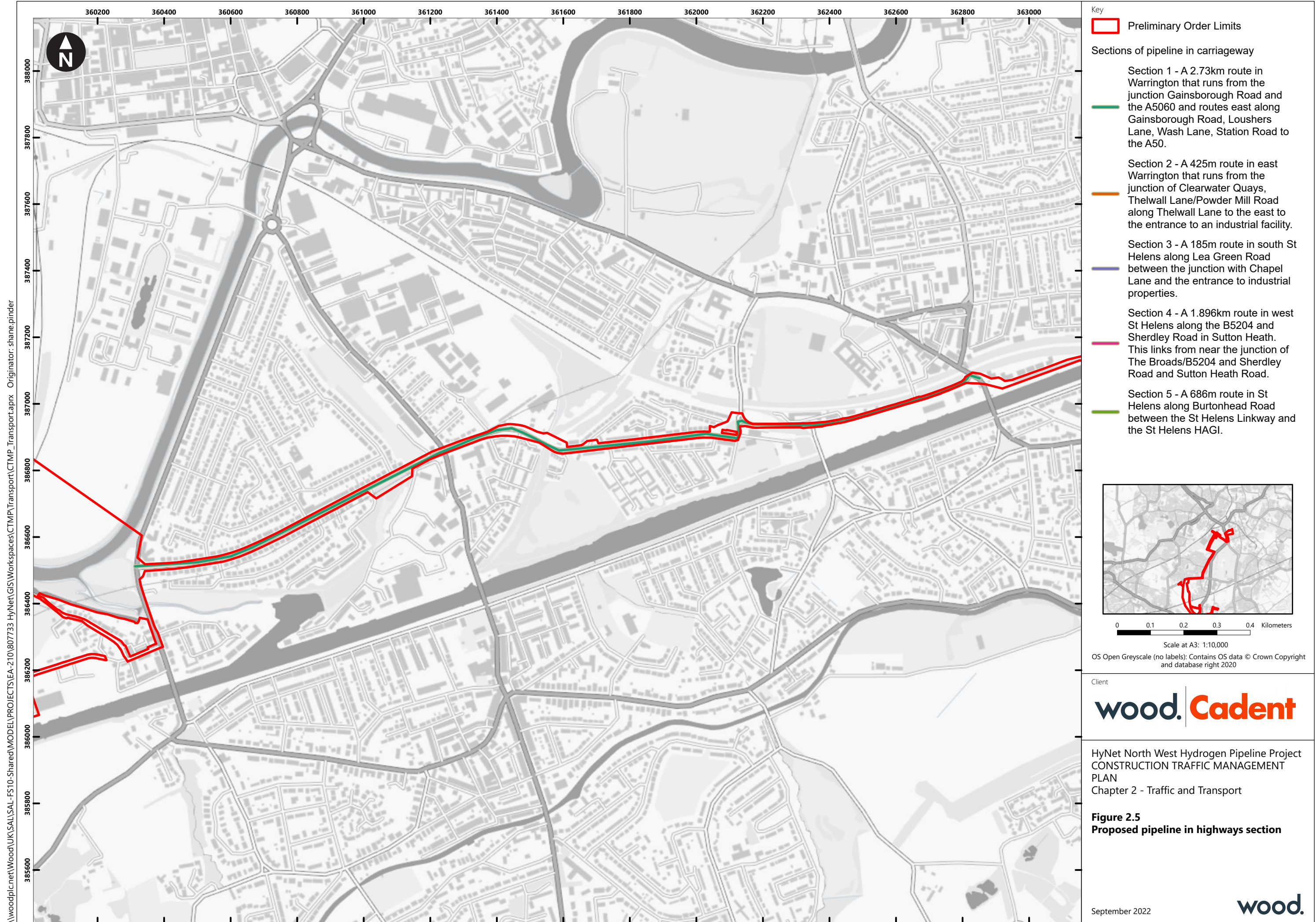
wood. **Cadent**

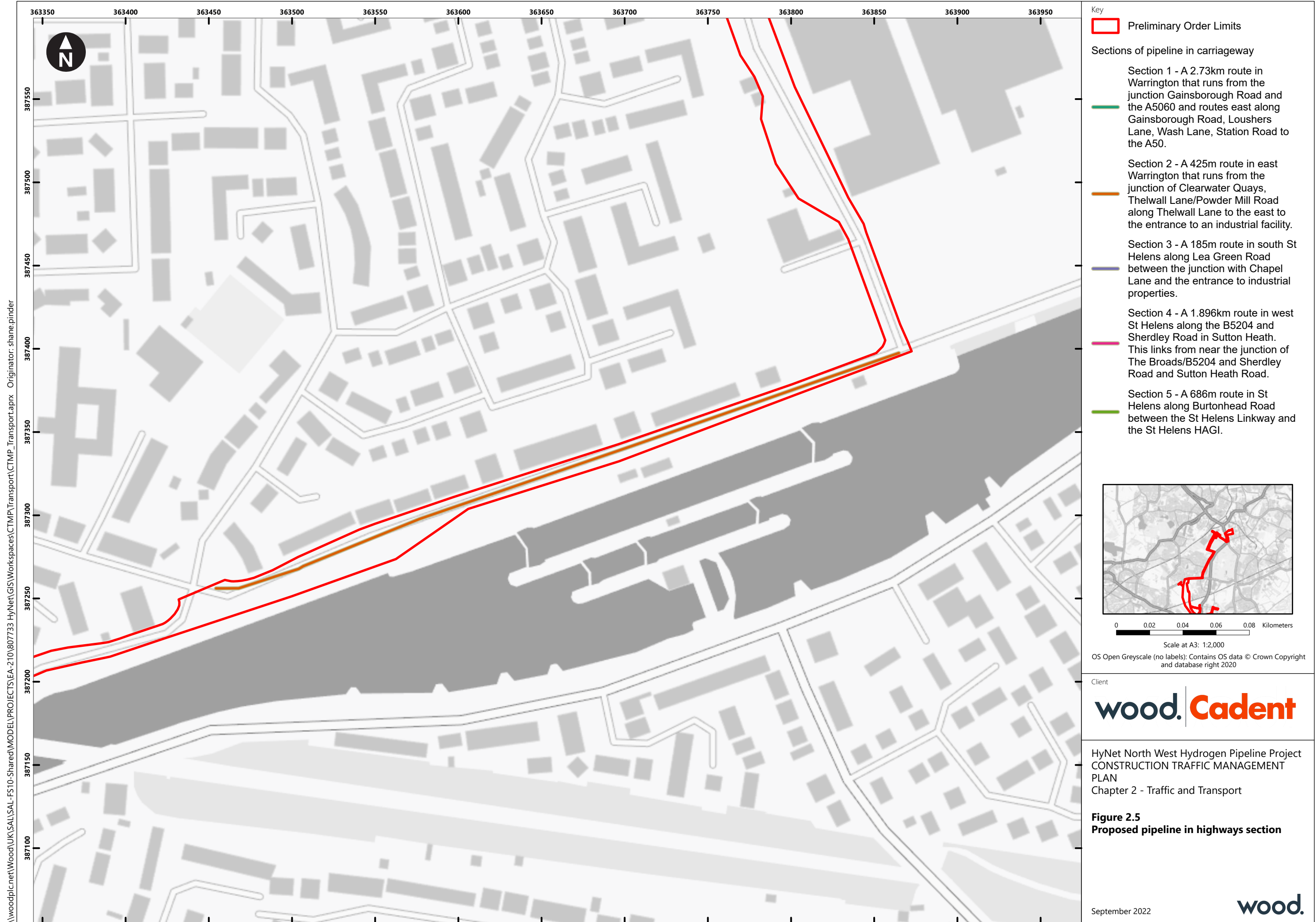
HyNet North West Hydrogen Pipeline Project
Construction Traffic Management Plan

Figure 2.4
Typical Bellmouth
Example 3

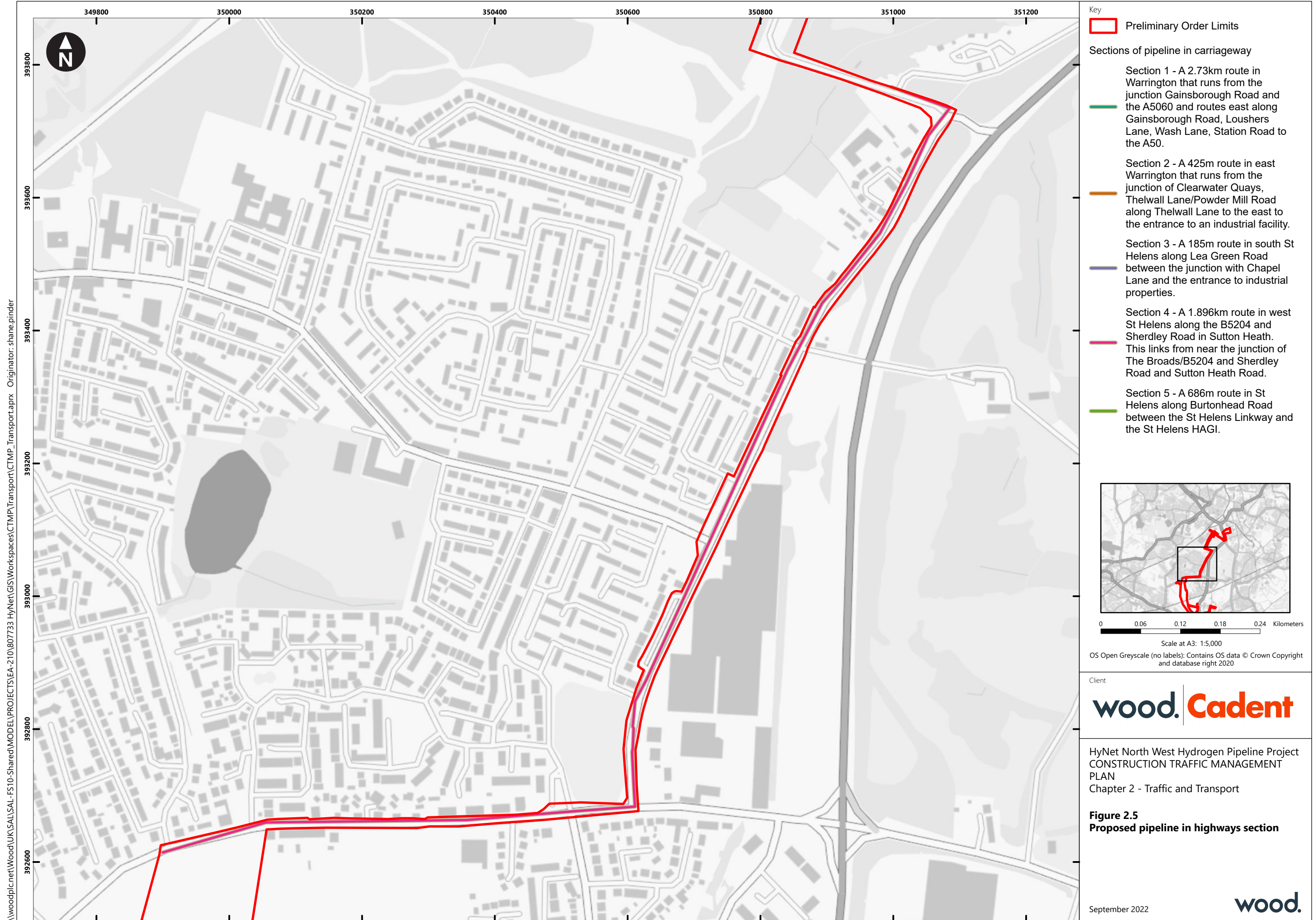
September 2022

wood.











3. Proposed Access Strategy

- 3.1.1 During the construction phase of the Project, temporary construction accesses would be required onto and from the public highway. There would also be a requirement for permanent access during the operation and maintenance phase to allow routine maintenance and inspection of the Project infrastructure. The management of temporary construction accesses during the construction phase is covered within this Preliminary CTMP.
- 3.1.2 Different temporary construction access designs will be proposed for the Project which will reflect the volume of movements as well as the physical size of the vehicles anticipated to use the respective access points. The construction phase access points would not all be used by significant amounts of traffic as some accesses would be used for LVs only, smaller deliveries or minor works
- 3.1.3 At this stage, a worst-case access design has been used at all locations, with visibility splay requirements at each location based on the speed limit of the road at each location. Ongoing assessment may lead to a reduction in the Preliminary Order Limits presented PEIR when the submission of the DCO application is made to allow for more appropriate access arrangements following engagement with relevant highways authorities. A standard access bellmouth, which provides adequate access provision for construction vehicles, is currently proposed for all accesses.
- 3.1.4 The preliminary design for the Project has identified 201 accesses.

3.2 Location of Proposed Temporary Construction Accesses

- 3.2.1 During the construction phase, temporary construction accesses would be required across the Project spanning a large geographical area across the north-west. Temporary construction accesses would be taken from a range of A, B, C and Unclassified roads as appropriate to provide access to all project locations. **Figure 3.1** shows all proposed access locations. **Table 3.1** to **Table 3.4** set out each of the temporary construction accesses including identification (ID) numbers, the type of access required (including what the access is currently like and works required at the access) and the road from which they would be accessed. **Table 3.1** to **Table 3.4** cover the four corridors.
- 3.2.2 It should be noted the tables include all accesses for all the optionality included in the current design; in the final design the number of accesses will reduce.

Table 3.1 Construction Accesses – West Corridor (30 Accesses)

ID	Road Accessed From	Type of Access	Existing Access	Accessing
WH-01	Pool Lane	Construction	Existing Bemouth	Pipeline, HDD, Pipe Dump, Rocksavage HAGI (RSH1), HAGI Compound
WH-02	Pool Lane	Construction	Existing Bellmouth	Stanlow HPP HAGI, Pipeline, Pipe Dump, HAGI Compound, Trenchless Crossing
WH-03	Cryers Lane	Construction	None	Trenchless Crossing, Pipeline
WH-04	Cryers Lane	Construction	None	Pipeline
WH-05	A5117	Construction	Existing Bellmouth	Pipe Dump, Pipeline, Trenchless Crossing
WL-01	Ash Road	LV	End of Highway	Pipeline, Pipe Dump,
WH-06	Ince Road	Construction	Existing Field Gate Access	Trenchless Crossing, Pipeline
WH-07	A5117	Construction	Existing Bellmouth	Trenchless Crossing, Pipeline
WL-02	Lower Rake Lane	LV	End of Highway	Pipeline
WL-03	Hatley Lane	LV	Existing Bellmouth	Pipeline
WL-04	Marsh Lane	LV	End of Highway	Pipeline
WL-05	Ship Street	LV	Existing Bellmouth	Pipeline, Rocksavage HAGI (RSH1), HDD, HAGI Compound
WL-06	Ship Street	LV	Existing Bellmouth	Pipeline, Rocksavage HAGI (RSH1), HDD, HAGI Compound
WH-08	Rocksavage Way	Construction	Existing Bellmouth	Pipeline
WH-09	Rocksavage Way	Construction	None	Pipeline, Trenchless Crossing
WH-10	Weaver View	Construction	End of Highway	Pipeline

ID	Road Accessed From	Type of Access	Existing Access	Accessing
WS2	Cholmondeley Road	Construction	None	Runcorn HAGI, HAGI Compound, Pipeline
WH-11	Cholmondeley Road	Construction	None	Pipeline, Trenchless Crossing
WH-12	A56	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing, Rocksavage HAGI (RSH2 and RSH3), HAGI Compound,
WH-13	A56	Construction	Existing Field Gate Access	Pipeline
WH-14	A56	Construction	Existing Field Gate Access	Trenchless Crossing, Pipeline,
WH-15	A56	Construction	Existing Field Gate Access	Trenchless Crossing, Pipeline, Pipe Dump
WH-16	Aston Lane	Construction	None	Trenchless Crossing, Pipeline, Pipe Dump
WH-17	Aston Lane	Construction	None	Pipeline
WH-18	Aston Lane	Construction	None	Pipeline
WH-19	Aston Lane	Construction	None	Pipeline, Trenchless Crossing
WH-20	Aston Lane	Low HGV Construction	End of Highway	Pipeline
WH-21	A533	Construction	None	Pipeline, Trenchless Crossing
WH-22	A533	Construction	None	Pipeline, Trenchless Crossing, Central Hub HAGI (Alternate), HAGI Compound, Pipe Dump
WH-23	A533	Construction	Existing Bellmouth	Pipeline, Central Hub HAGI, HAGI Compound, Pipe Dump

3.2.3

On the West Corridor there are 30 accesses proposed. Of these accesses:

- 23 are full construction accesses onto the easement for HGV and LV construction traffic from the local highway network;
- Six are LV only construction accesses onto the easement from the local highway network; and

- One is a low number HGV access – This access is one in which a small number of HGVs are required but for the majority of the construction programme it will function as a LV access only.

3.2.4 Eleven of the proposed accesses on the corridor are proposed in locations where no access from the highway exists currently. Ten of the accesses would use existing bellmouths from the highway, five are located at the end of the highway where a track changes from being adopted to private and four are in locations where field gate access is currently provided.

Table 3.2 North Corridor Construction Accesses (62 Accesses)

ID	Road Accessed From	Type of Access	Existing Access	Accessing
NH-01	Marsh Lane	Crossing	None	Crossing Only
NH-02	Marsh Lane	Crossing	None	Crossing Only
NH-03	Higher Lane	Construction	Existing Field Gate Access	Pipeline
NH-04	Higher Lane	Construction	Existing Field Gate Access	Pipeline, Pipe Dump, Trenchless Crossing
NH-05	Newton Lane	Crossing	None	Crossing Only
NH-06	Newton Lane	Crossing	None	Crossing Only
NH-07	Summer Lane	Crossing	None	Crossing Only
NH-08	Summer Lane	Crossing	None	Crossing Only
NH-09	Daresbury Lane	Crossing	Existing Field Gate Access	Crossing Only
NH-10	Daresbury Lane	Crossing	None	Crossing Only
NH-11	Daresbury Lane	Crossing	None	Crossing Only
NH-9A	Warrington Road	Crossing	None	Crossing Only
NH-10A	Warrington Road	Crossing	None	Crossing Only
NH-12	Daresbury Lane	Crossing	None	Crossing Only

NH-13	A56	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
NH-14	A56	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
NH-15	Warrington Road	Crossing	None	Crossing Only
NH-16	Warrington Road	Crossing	None	Crossing Only
NH-17	Holly Hedge Lane	Crossing	None	Crossing Only
NH-18	Holly Hedge Lane	Crossing	None	Pipeline, Trenchless Crossing
NH-19	Runcorn Road	Construction	None	Pipeline, Trenchless Crossing
NH-20	Runcorn Road	Construction	None	Pipeline, Trenchless Crossing
NH-21	Runcorn Road	Construction	None	Pipeline, Trenchless Crossing
NH-22	Runcorn Road	Construction	None	Pipeline, Trenchless Crossing
NH-23	Runcorn Road	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
NH-24	Bellhouse Lane	Crossing	None	Crossing Only
NH-25	Bellhouse Lane	Crossing	None	Crossing Only
NH-26	Moore Lane	Crossing	None	Crossing Only
NH-27	Moore Lane	Crossing	None	Crossing Only
NH-28	Eastgate Road	Construction	End of Highway	Pipeline, Trenchless Crossing
NH-29	Eastford Road	Construction	End of Highway	Pipeline, Trenchless Crossing
NH-30	Taylor Street	Construction	Existing Bellmouth	Pipeline
NH-31	Westford Road	Construction	End of Highway	Pipeline

NH-32	Knutsford Road	Construction	Existing Bellmouth	Pipeline
NH-33	Thelwell Lane	Construction	End of Highway	Pipeline
NH-34	Forrest Way	Construction	End of Highway	Pipeline, Trenchless Crossing, Higher Walton HAGI (and Alternatives), HAGI Compound
NH-36	A562	Construction	None	Pipeline, Trenchless Crossing, Pipe Dump
NH-37	A562	Construction	None	Pipeline, Trenchless Crossing, Pipe Dump
NH-W38	A562	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing, Pipe Dump
NH-39	Mowcroft Lane	Crossing	None	Crossing Only
NH-40	Mowcroft Lane	Crossing	None	Crossing Only
NH-41	A5080	Construction	None	Pipeline, Pipe Dump
NH-42	A5080	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing, Pipe Dump
NH-43	A5080	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing, Pipe Dump
NH-44	Mill Lane	Construction	None	Pipeline
NH-45	Mill Lane	Construction	None	Pipeline
NH-46	Twyford Lane	Construction	None	Pipeline
NH-47	Twyford Lane	Construction	None	Pipeline, Pipe Dump
NH-48	A57	Construction	None	Pipeline, Pipe Dump
NH-49	A57	Construction	None	Pipeline, Pipe Dump
NH-50	B5419	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing, Pipe Dump
NH-51	B5419	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing, Clockface HAGI, HAGI Compound
NH-52	B5419	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing, Pipe Dump

NH-53	School Lane	Crossing	None	Crossing Only
NH-54	School Lane	Crossing	None	Crossing Only
NH-55	Chapel Lane	Construction	None	Pipeline, Trenchless Crossing, Pipe Dump
NH-56	Chapel Lane	Construction	None	Pipeline, Trenchless Crossing
NH-57	A570	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
NH-58	B5204	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
NH-59	Sutton Heath Road	Construction	End of Highway	Pipeline, Trenchless Crossing
NH-60	Burtonhead Road	Construction	None	Pipeline, St Helens HAGI, HAGI Compound
NH-61	Spur Road to St Helens Stadium	Construction	None	Pipeline
NH-62	A5060 (Chester Road)	Construction	None	Pipeline into highway

3.2.5 On the North Corridor there are 62 accesses proposed. Of these accesses:

- 38 are full construction accesses onto the easement for HGV and LV construction traffic from the local highway network; and
- 24 are crossings of the highway network – This is an access in which a limited number of HGVs are required for the installation and reinstatement of the crossing points.

3.2.6 Forty of the proposed accesses on the corridor are proposed in locations where no access from the highway exists currently. Eleven of the accesses would use existing bellmouths from the highway, six are at the end of the highway where a track changes from being adopted to private and five are in locations where field gate access is currently provided.

Table 3.3 East Corridor Construction Accesses (52 Accesses)

ID	Road Accessed From	Type of Access	Existing Access	Accessing
EH-01	Marsh Lane	Construction	None	Pipeline

ID	Road Accessed From	Type of Access	Existing Access	Accessing
EH-02	Marsh Lane	Construction	None	Pipeline
EH-03	A49	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing, Pipe Dump
EH-04	A49	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
EH-05	Norman's Lane	Crossing	None	Crossing Only
EH-06	Norman's Lane	Crossing	None	Crossing Only
EH-07	Old Mill Lane	Crossing	None	Crossing Only
EH-08	Old Mill Lane	Crossing	None	Crossing Only
EH-09	A559	Construction	None	Pipeline, Trenchless Crossing, Pipe Dump
EH-10	A559	Construction	None	Pipeline, Trenchless Crossing
EH-11	Knutsford Road	Crossing	None	Crossing Only
EH-12	Knutsford Road	Crossing	None	Crossing Only
EH-13	Barber's Lane	Crossing	None	Crossing Only
EH-14	Barber's Lane	Crossing	None	Crossing Only
EH-15	Pools Platt Lane	Crossing	None	Crossing Only
EH-16	Pools Platt Lane	Crossing	None	Crossing Only
EH-17	Arley Road	Construction	None	Pipeline, Trenchless Crossing
EH-18	Arley Road	Construction	None	Pipeline, Trenchless Crossing
EH-19	Caldwell's Gate Lane	Crossing	Existing Field Gate Access	Crossing Only
EH-20	Caldwell's Gate Lane	Crossing	None	Crossing Only

ID	Road Accessed From	Type of Access	Existing Access	Accessing
EH-21	Moss Lane	Crossing	None	Crossing Only
EH-22	Moss Lane	Crossing	None	Crossing Only
EH-23	Moss Lane	Crossing	Existing Field Gate Access	Crossing Only
EH-24	Moss Lane	Crossing	None	Crossing Only
EH-25	A50	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing, Pipe Dump
EH-26	A50	Construction	Existing Field Access	Pipeline, Trenchless Crossing, Pipe Dump
EH-27	Mowpen Brow	Crossing	None	Crossing Only
EH-28	Mowpen Brow	Crossing	None	Crossing Only
EH-29	B5159	Construction	None	Pipeline
EH-30	B5159	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing
EH-31	Froghall Lane	Crossing	None	Crossing Only
EH-32	Froghall Lane	Crossing	None	Crossing Only
EH-33	Agden Lane	Crossing	None	Crossing Only
EH-34	Agden Lane	Crossing	None	Crossing Only
EH-35	A56	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
EH-36	Warrington Lane	Construction	Existing Field Gate Access	Crossing Only
EH-37	Warrington Lane	Construction	None	Trenchless Crossing Monitoring Only

ID	Road Accessed From	Type of Access	Existing Access	Accessing
EH-38	Spring Lane	Crossing	None	Crossing Only
EH-39	Spring Lane	Crossing	None	Crossing Only
EH-40	Spring Lane	Crossing	None	Crossing Only
EH-41	Spring Lane	Crossing	None	Crossing Only
EH-42	Carrgreen Lane	Construction	Existing Bellmouth	Pipe Dump
EH-43	Carrgreen Lane	Construction	None	HAGI Compound
EH-44	Carrgreen Lane	Construction	None	Warburton HAGI, Pipeline, Trenchless Crossing
EH-45	B5160	Construction	None	Warburton HAGI, Pipeline, Trenchless Crossing
EH-46	B5160	Construction	None	Pipeline, Pipe Dump,
EH-47	Sawpit Street	Crossing	None	Crossing Only
EH-48	Sawpit Street	Crossing	None	Crossing Only
EH-49	Sinderland Lane	Crossing	None	Crossing Only
EH-50	Sinderland Lane	Crossing	None	Crossing Only
EH-51	A6144	Construction	Existing Bellmouth	Pipeline
EH-52	A6144	Construction	Existing Bellmouth	Pipeline, Partington HAGI, HAGI Compound,

3.2.7 On the East Corridor there are 52 accesses proposed. Of these accesses:

- 22 are full construction accesses onto the easement for HGV and LV construction traffic from the local highway network; and
- 30 are crossings of the highway network – This is an access in which a limited number of HGVs are required for the installation and reinstatement of the crossing points.

3.2.8 Forty of the proposed accesses on the corridor are proposed in locations where no access from the highway exists currently. Five of the accesses would use existing bellmouths from the highway and seven are in locations where field gate access is currently provided.

Table 3.4 South Corridor Construction Accesses (57 Accesses)

ID	Road Accessed From	Type of Access	Existing Access	Accessing
SH-01(A)	A533	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing
SH-02(A)	A533	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing
SH-01	A533	Construction	New	Pipeline, Trenchless Crossing
SH-02	A533	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing
SH-03	A49	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
SH-04	A49	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing (Access to west Corridor)
SH-05	Acton Lane	Construction	New	Pipeline, Trenchless Crossing
SH-06	Acton Lane	Construction	New	Pipeline, Pipe Dump
SH-07	Station Road	Construction	Existing Field Gate Access	Pipeline, Pipe Dump
SH-08	Station Road	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing
SH-09	Hefferston Rise	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
SH-10	Millington Lane	Construction	Existing Bellmouth	Pipeline, Trenchless

ID	Road Accessed From	Type of Access	Existing Access	Accessing
				Crossing, Pipe Dump
SH-11	Millington Lane	Construction	New	Pipeline, Trenchless Crossing, Pipe Dump
SH-12	Millington Lane	Construction	New	Pipeline
SH-13	Weaverham Road	Construction	New	Pipeline
SH-14	Weaverham Road	Construction	New	Pipeline, Trenchless Crossing
SH-15	A556	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing, Pipe Dump, Block Valve
SH-16	Whitegate Lane	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing, Block Valve (option),
SH-17	Whitegate Lane	Construction	Existing Field Gate Access	Block Valve (option), Pipeline, Trenchless Crossing
SH-18	A556	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
SH-19	A556	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
SH-19(A)	A556	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
SH-20	A556	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing

ID	Road Accessed From	Type of Access	Existing Access	Accessing
SH-21	Eaton Lane	Construction	End of Highway	Pipeline, Trenchless Crossing
SH-22	Whitegate Lane	Construction	Existing Bellmouth	Block Valve (option), Pipeline, Trenchless Crossing
SH-23	Whitegate Lane	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing
SH-24	Mill Lane	Crossing	New	Crossing Only
SH-25	Mill Lane	Crossing	New	Crossing Only
SH-26	Bradford Road	Construction	New	Pipeline, Trenchless Crossing
SH-27	Bradford Road	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
SH-28	Thrus Way	Construction	End of Highway	Pipeline, Trenchless Crossing
SH-29	Jack Lane	Crossing	New	Crossing Only
SH-30	Jack Lane	Crossing	New	Crossing Only
SH-31	A533	Construction	New	Pipeline, Trenchless Crossing, Pipe Dump, Block Valve (option),
SH-32	A533	Construction	New	Pipeline, Trenchless Crossing, Pipe Dump
SH-33	London Road	Construction	New	Pipeline

ID	Road Accessed From	Type of Access	Existing Access	Accessing
SH-34	London Road	Construction	New	Pipeline, Trenchless Crossing
SH-35	Whatcroft Hall Lane	Construction (High Restricted)	End of Highway	Pipeline, Trenchless Crossing
SH-36	Whatcroft Hall Lane	Construction (High Restricted)	Existing Field Gate Access	Pipeline, Trenchless Crossing
SH-37	A530	Construction	New	Pipeline, Trenchless Crossing, Pipe Dump
SH-38	A530	Construction	Existing Bellmouth	Inovyn Storage HAGI, HAGI Compound, Trenchless Crossing
SH-39	A49	Construction	New	Pipeline
SH-40	A533	Construction	New	Pipeline, Trenchless Crossing
SH-41	Ash House Lane	Crossing	New	Crossing Only
SH-42	Ash House Lane	Crossing	New	Crossing Only
SH-43	Shutley Lane	Crossing	New	Crossing Only
SH-44	Shutley Lane	Crossing	New	Crossing Only
SH-45	Stone Heyes Lane	Crossing	Existing Field Gate Access	Crossing Only

ID	Road Accessed From	Type of Access	Existing Access	Accessing
SH-46	Stone Heyes Lane	Crossing	Existing Field Gate Access	Crossing Only
SH-47	Hough Lane	Crossing	Existing Field Gate Access	Crossing Only
SH-48	Hough Lane	Crossing	Existing Field Gate Access	Crossing Only
SH-49	Cogshall Lane	Crossing	New	Crossing Only
SH-50	Cogshall Lane	Crossing	New	Crossing Only
SH-51	Marbury Road	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
SH-52	Uplands Road	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing
SH-53	Uplands Road	Construction	Existing Field Gate Access	Pipeline, Trenchless Crossing
SH-54	A533	Construction	Existing Bellmouth	Pipeline, Trenchless Crossing

3.2.9 On the South Corridor there are 57 accesses proposed. Of these accesses:

- 43 are full construction accesses onto the easement for HGV and LV construction traffic from the local highway network (two of these are access routes which are high restricted); and
- 14 are crossings of the highway network – This is an access in which a limited number of HGVs are required for the installation and reinstatement of the crossing points.

3.2.10 Twenty-five of the proposed accesses on the corridor are proposed in locations where no access from the highway exists currently. Fifteen of the accesses would use existing bellmouths from the highway, three are at locations at the end of the adopted highway and fourteen are in locations where field gate access is currently provided.

- 3.2.11 In developing the temporary construction access strategy, a balance has been struck between the need to access each construction location, and the objective of avoiding the over-provision of new accesses onto the highway network, and/or provide numerous accesses onto the same section of road. All proposed accesses for PEIR are within the Preliminary Order Limits.

3.3 Standard Access Design and Access Types

- 3.3.1 **Table 3.1** to **Table 3.4** above identify five different types of existing accesses, as discussed below.

Existing field gate access

- 3.3.2 Where access is proposed via an existing field gate. A standard bellmouth design will be created in these locations where gateways are too narrow. Design improvements to widen the access to accommodate construction vehicles and an appropriate visibility splay would be made if necessary. These designs will be agreed with the local highways authorities.

Existing bellmouth access

- 3.3.3 Where access is proposed via an existing bellmouth. Design improvements to widen the access to accommodate construction vehicles and an appropriate visibility splay would be made if necessary.

New accesses

- 3.3.4 New accesses are required where access is proposed but no current facility exists. May new accesses are at the edges of agricultural fields and require the removal of hedgerow or other vegetation management. The majority of new accesses are required at crossing locations. The design of these crossings will be defined as the Project evolves.

End of highway

- 3.3.5 In addition to the access types set out above, several construction sites to be used for the Project require extensions to the end of the existing road network (for example, where the highway terminates and forms a private road/track). Significant works would not be required where access is taken from the end of the highway.

3.4 Temporary Construction Access

- 3.4.1 Temporary construction accesses will be designed to follow standard construction practice as set out in Design Manual for Road and Bridges (DRMB) and to meet relevant local highway authority requirements, details of which are provided in the following section. The final specific access arrangements for temporary construction accesses will be discussed with the six local highway authorities. Access is not proposed from the Strategic Road Network (SRN) and therefore

there will not be a requirement to consult with National Highways (NH) on access design. At this stage, the following is assumed for the types of access:

- Where it is proposed to use existing tracks/private farm bellmouth accesses, which are already provided with suitable visibility splays, no changes to the existing access layouts would be made but the access would be supplemented with traffic management and signage.
- Where it is proposed to use an existing field gate access or farm tracks where there is no existing visibility splay, a visibility splay would be provided by coppicing vegetation to below 1m, in accordance with Figure 3.3 of DMRB, CD123 Geometric Design of At Grade Priority and Signal Controlled Junctions, August 2020. At this preliminary stage, visibility splay requirements are based on the speed limit of the road as a worst case. This assumption would be reconsidered in light of any site-specific visibility requirements based on speed surveys, proposed to be undertaken to inform the DCO application and will be included within the related CTMP.
- Where it is proposed to use an existing field gate access or farm tracks where there is no existing visibility splays or where visibility splays are not appropriate (for example for ecological reasons such as the presence of woodlands) then these would be managed through traffic management measures.
- Where temporary construction access is taken from the end of a highway leading directly into a private farm track there would not be a need for a visibility splay.
- Where a new temporary construction access is proposed, a standard bellmouth access design would be used with implementation of a full visibility splay.

3.4.2 Post-construction it is likely that temporary construction accesses would be removed or reinstated to existing layouts/condition (unless these are required for access during the operation and maintenance of the Project). However, should the landowner wish to retain an improved access then this would be discussed with the relevant highways authority.

1.1.1 **Figures 2.2 to 2.4** set out the nature of the bellmouth designs anticipated on the Project, which will be discussed with the relevant local highways authorities post Section 42 consultation.

3.5 PEIR Preliminary Order Limits and Visibility Standards

3.5.1 Each of the temporary construction accesses has been included in the Preliminary Order Limits. The Preliminary Order Limits include access tracks to the highway with an allowance for a temporary construction access as well as the required visibility splays. This is to ensure any clearance works required to achieve these splays can be undertaken. It is assumed that the coppicing of hedgerows, pushing hedgerows back or removal of hedgerows may be required, depending on site specific issues. Such activity will facilitate temporary construction access from the carriageway along with using traffic management as well as standard hedgerow maintenance.

- 3.5.2 It is assumed that visibility splays would be based on the guidance and standards set out the DMRB.
- 3.5.3 Prior to submission of the DCO application, visibility splay requirements would be agreed with the relevant highways authorities on a case-by-case basis, considering: individual temporary construction/operational access sites, likely traffic demands and durations and site-specific speed surveys.
- 3.5.4 **Table 3.5** sets out the stopping sight distances according to the speed of the road derived from DMRB standards. The “y” distance is the distance from the temporary construction and operational access to the kerb edge in either direction that can be seen.

Table 3.5 Visibility Standards

Design speed of road (KPH)	Signed speed limit of road (MPH)	Visibility “Y” distance (m)
50	20	70
60	30	90
70	40	120
85	50	160
100	60	215
120	70	295

- 3.5.5 These visibility splays have been adopted for all construction accesses other than the following:
- All end of highway accesses – not required as traffic flows directly from the highway onto a private track with no turn;
 - All LV Only accesses – only used by light vehicles and as such full visibility splays not required;
 - WH-01 – Existing roundabout arm access to Protos;
 - WH-02 – Existing access to Stanlow Refinery;
 - WH-06 – Due to presence of junctions either side of the access;
 - NH31 and NH32 – Existing access bellmouths to Clearwater Quays;
 - NHW-38 – Existing bellmouth to the Power Station;
 - NH-61 – Existing roundabout arm access at St Helens Stadium;
 - EH-42 – Existing access to a gas facility;
 - EH-51 – Exiting access into an industrial site;

- SH-39 – Access from A49 only needed for very minor works; and
- SH-19A – SH-19 and SH-19A are the off and on merge into a layby area. SH-19A is the “in” section of this arrangement and does not need a visibility splay.

3.5.6 It should also be noted that when drafting the visibility splays that in locations where proposed accesses are adjacent to other road junctions on the highways network, the visibility has been cut short of DRMB “Y” distances. The splays stop at that junction.

3.6 Vehicle Classification

3.6.1 A number of vehicle types will be used for the construction of the Project. Table 3.6 provides a list of the types of vehicles required during construction of the elements of the Project, outlined by classification.

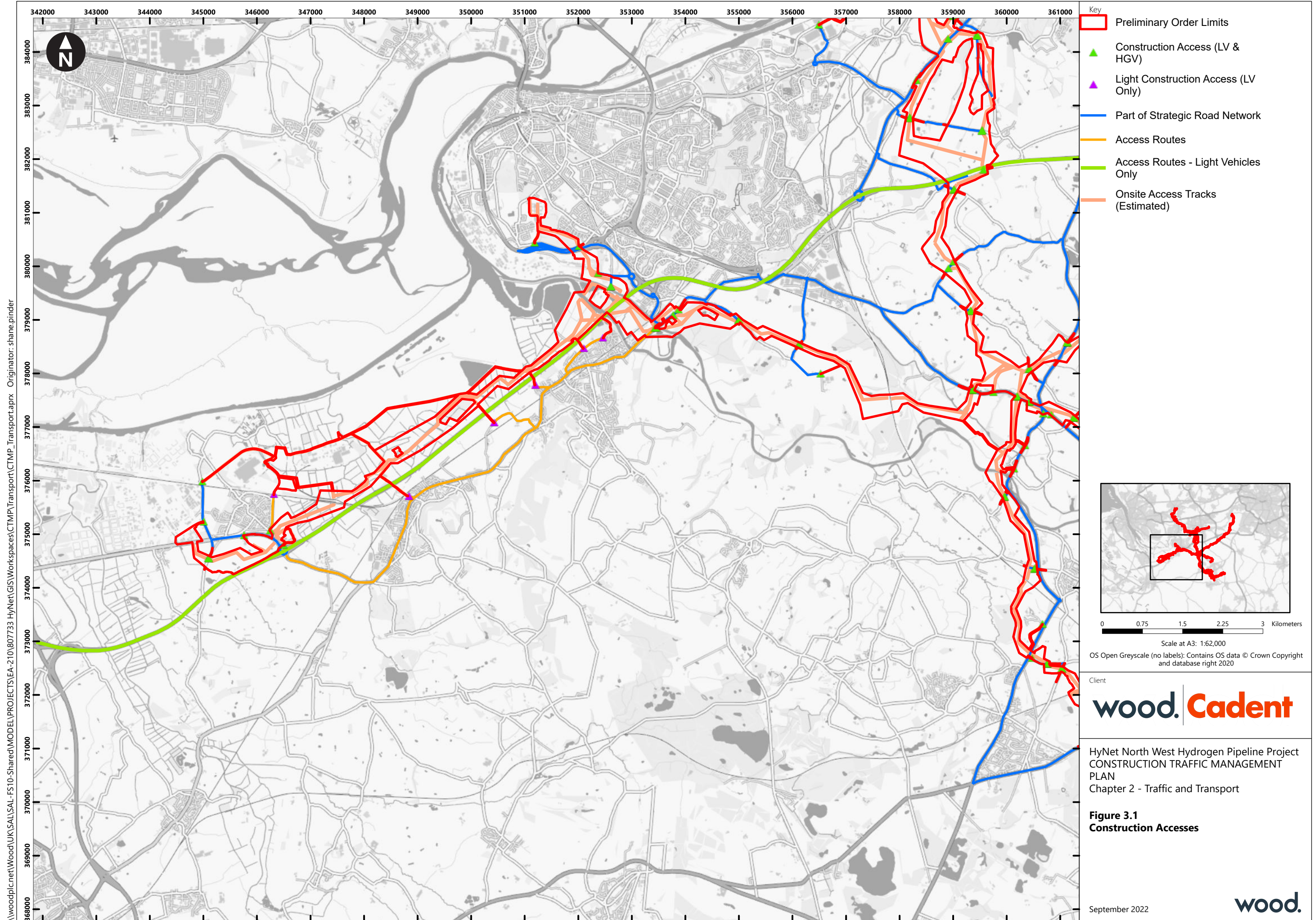
Table 3.6 Vehicle Classifications

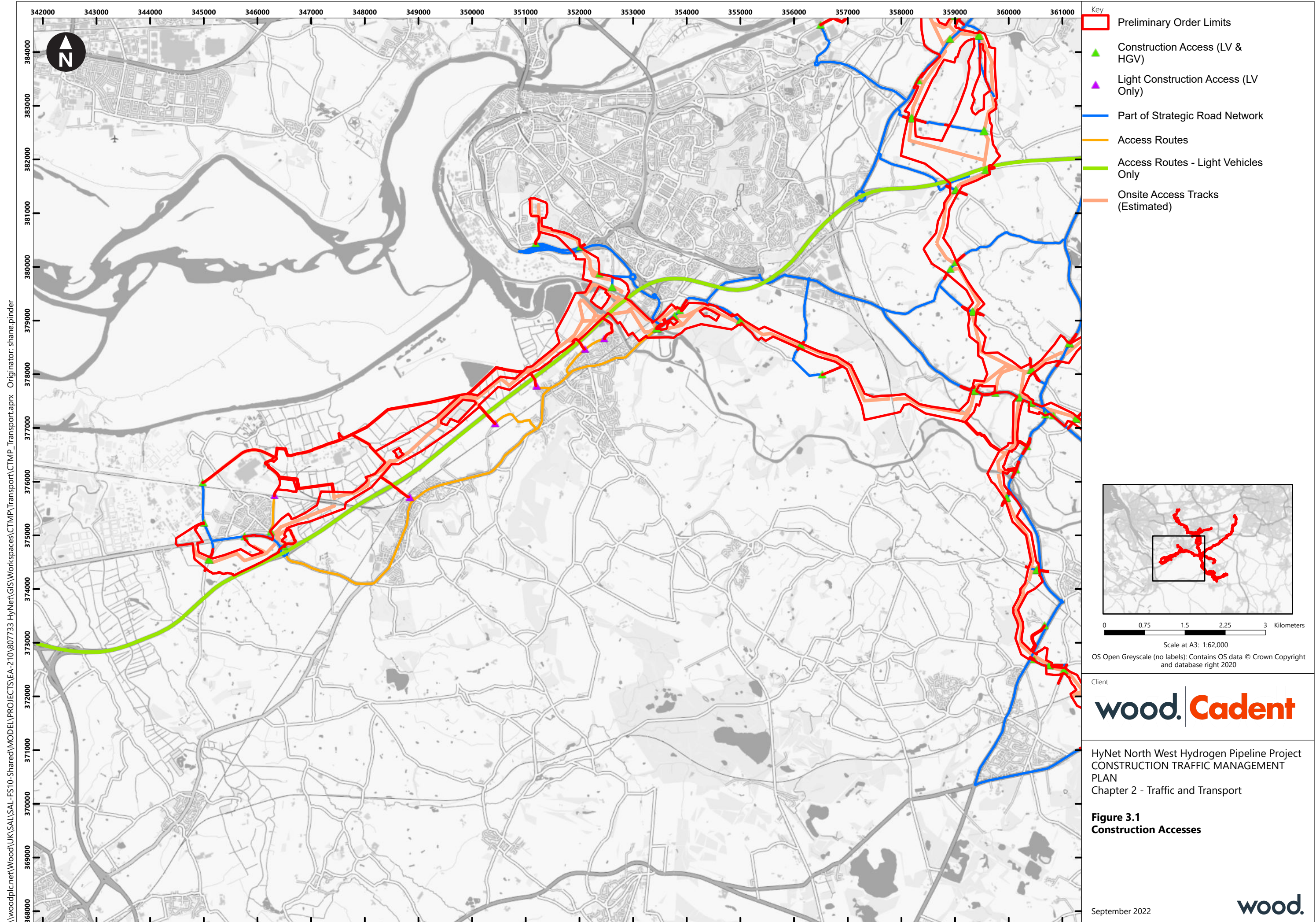
Light Vehicles (LV)	Heavy Goods Vehicles (HGVs)
Light Goods Vehicles (LGVs)	20 Tonne Tipper HGVs
Cars	Articulated Pipe Trailer HGV
Minibus	Water/Slurry Tankers
Transit Van	Concrete Mixer
Welfare Van	Cranes (Small/Medium)
4x4s	Grab Wagons
All-Terrain Vehicles (ATVs)	Low Loader
	Road Sweeper
	Skip Wagons

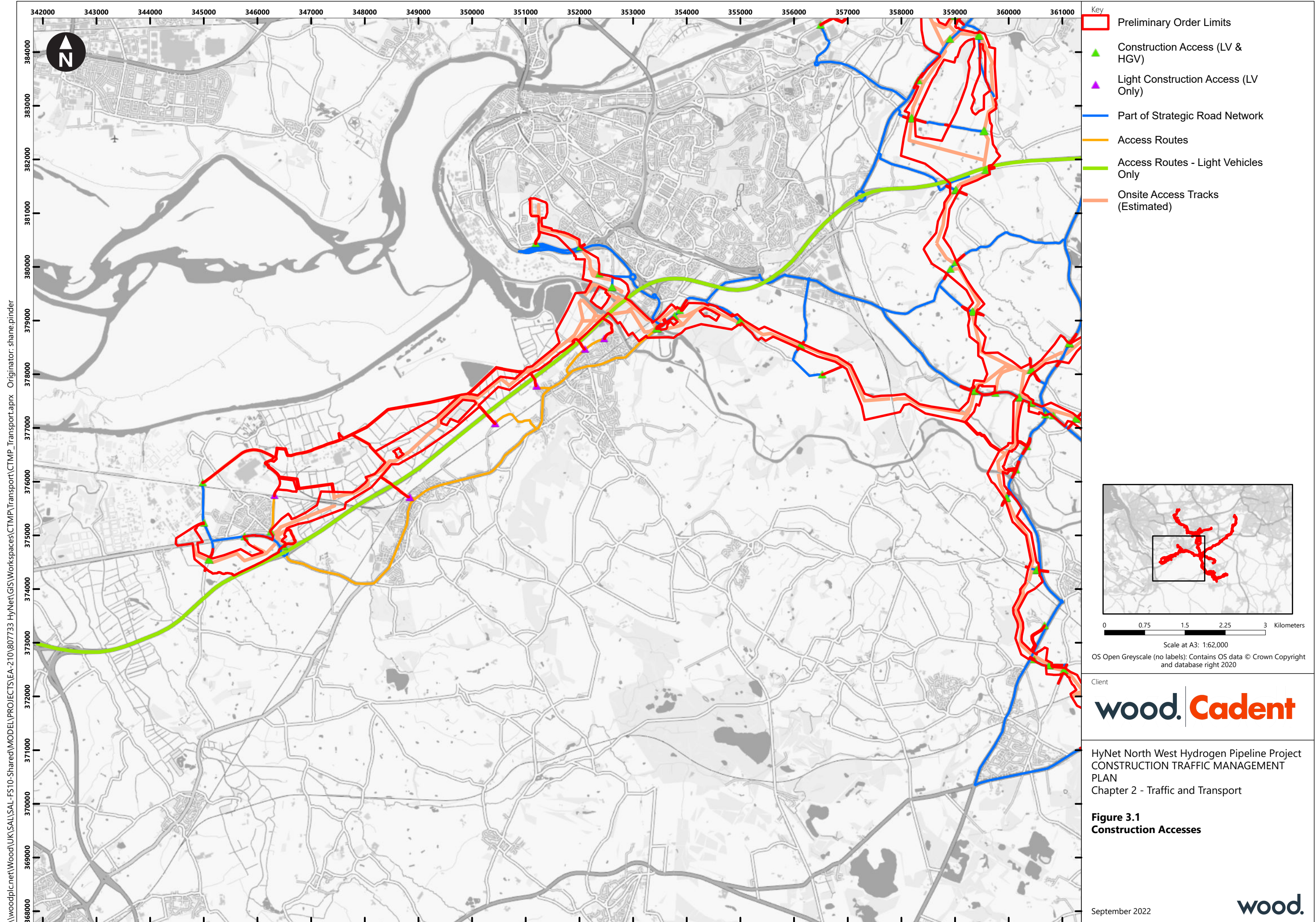
3.6.2 The list of vehicle types provided in Table 3.6 is not exhaustive and has been based on projects of a similar type/scale/complexity. Construction machinery and onsite plant, vehicles and generator fuel tanks would be re-fuelled on site.

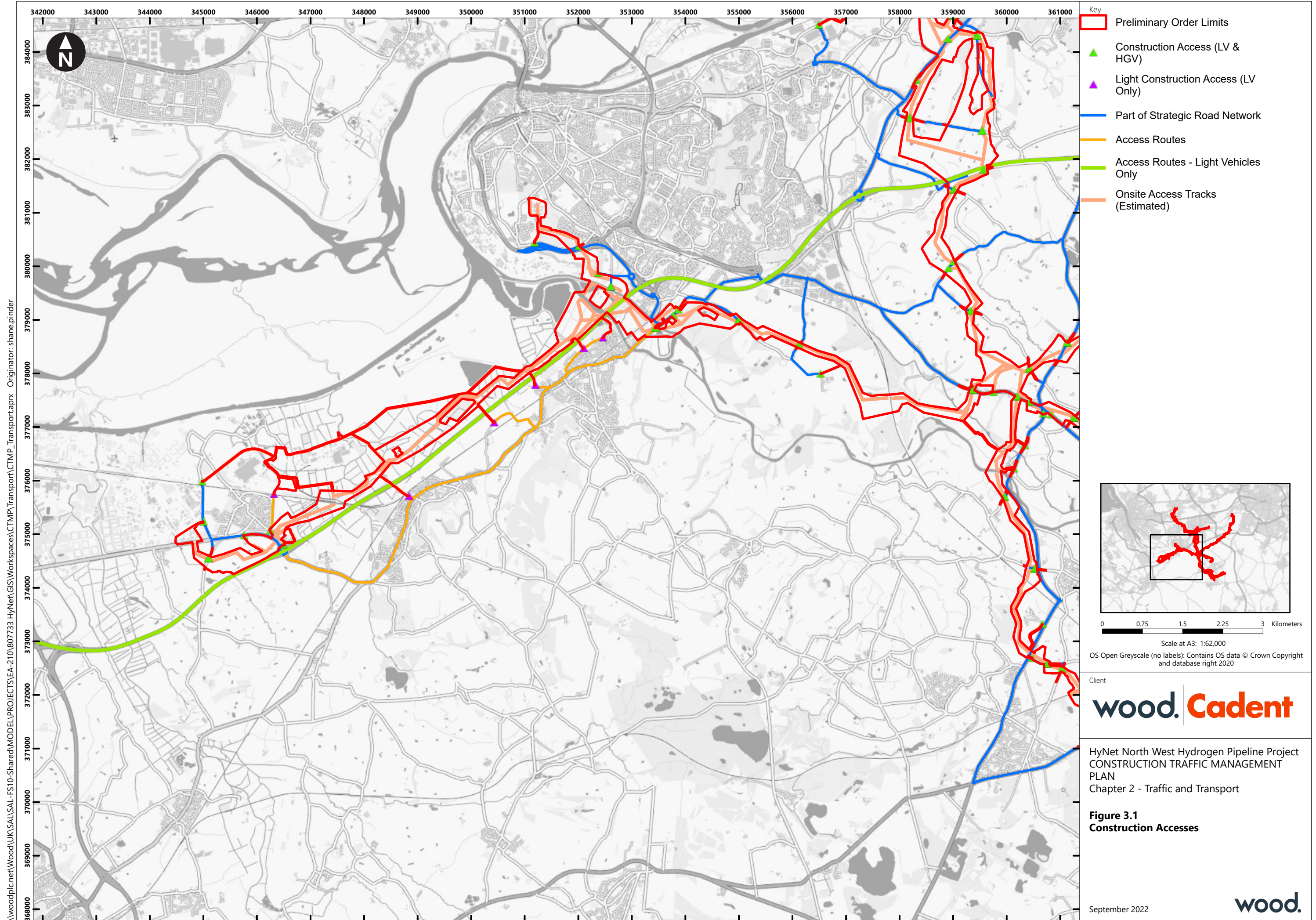
3.7 Abnormal Indivisible Loads

3.7.1 There are no requirements for the use of Abnormal Indivisible Loads (AILs) on the Project.









4. HGV Routeing Strategy

4.1 Introduction

- 4.1.1 The Project requires construction HGVs to route through urban and rural locations, to access the numerous site areas, both of which present challenges in terms of traffic levels, road widths, pedestrian and cyclist numbers, etc. An HGV Routeing Strategy has been developed to minimise the impact of HGVs during the construction of the Project. **Section 4** sets out how the HGV Routeing Strategy has been developed.

4.2 Overview of HGV Routeing Strategy

- 4.2.1 To aid development of the HGV Routeing Strategy, two types of routes have been considered as follows:

- Strategic – the SRN routes which link with the transport Study Area for the Project comprise the M6, M56, M62, M60 and A556. These routes are managed and maintained by National Highways and the scope of these have been agreed; and
- Local – the local roads that link to the construction and operational accesses are managed and maintained by the six local highways authorities.

- 4.2.2 Access to each of the temporary construction accesses would utilise strategic routes on the road network as far as practically possible before routeing onto local roads.

4.3 Strategic Routes

- 4.3.1 The M6 is one of the most important roads in England routeing from Birmingham to the Scottish border and one of the busiest stretches of the road runs from Stoke to Preston through the Study Area of the Project. The M56 is a key east-west corridor linking North Wales (via the A55) and the major cities of the North West. The M62 is a key route on the SRN linking Liverpool and Manchester in the Study Area but also running over the Pennines to Leeds. The M60 is the orbital motorway that runs around Greater Manchester and the A556 is a vital key link between the M6 and M56, reducing pressure on the M6/M56 junction further north.
- 4.3.2 Within the side scope of the Study Area there are numerous junctions on the motorway network, which are proposed to be used as part of the access strategy as set out in the following section.

M56

Junction 14

- 4.3.3 Junction 14 will provide access from the SRN to the A5117 north and south of the Junction.

Junction 12

- 4.3.4 Junction 12 will provide access to the A557 (Western Point Expressway) north and south of the Junction.

Junction 11

- 4.3.5 Junction 11 will provide access to the A56 north of the Junction only.

Junction 10

- 4.3.6 Junction 10 will provide access to the A49 (Tarporey Road) and A559 south of the Junction.

Junction 9

- 4.3.7 Junction 9 is the Junction with the M6 (junction 20).

Junction 8/7

- 4.3.8 Junction 8/7 will provide access to the A56 north of the Junction.

Junction 1/3A

- 4.3.9 Junction 1 and 3A is the Junction with the M60.

M6

M6 Junction 19

- 4.3.10 Junction 19 provides a connection to the A556 north and south of the Junction.

Junction 20/20A

- 4.3.11 Junction 20/20A provides a connection to the A50 east of the junction and the B5356 west of the junction.

Junction 21

- 4.3.12 Junction 21 provides access to the A57 west of the Junction.

Junction 21A

- 4.3.13 Junction 21A is the Junction between the M6 and M62.

M62

Junction 7

- 4.3.14 Junction 7 provides access to the A557 and Warrington Road south of the Junction and the A557 (St Helens Linkway) north of the Junction.

Junction 12

- 4.3.15 This junction is the between the M62 and M60.

M60

Junction 7

- 4.3.16 This Junction provide access to the Carrington Spur south of the Junction.

SRN Network Entry/Exit Points

- 4.3.17 From the network of the SRN in the scope of assessment there are six strategic access routes into the Study Area:

- M60/M62 north-east strategic access route;
- M60 east strategic access route;
- M6 south strategic access route;
- M56 west strategic access route;
- M62 west strategic access route
- M6 north strategic access route.

- 4.3.18 The strategic access routes described are illustrated in **Figure 4.1**.

4.4 Local Routes

- 4.4.1 From the SRN there are a series of main routes on local roads that provide access to the project construction site areas.

- 4.4.2 These local routes have been identified as suitable for construction HGVs through evaluation of the parameters listed below. The routes with the least constraints have been chosen for the HGV Routeing Strategy, where possible:

- height restrictions;
- weight restrictions;
- road classification;
- road layout;
- existing pedestrian crossing facilities;
- existing traffic calming measures;

- sensitive receptors adjacent to the public highway;
- visibility constraints;
- speed limits and traffic speeds;
- areas prone to congestion;
- significant changes in gradient; and
- vulnerable road users (pedestrians, cyclists and equestrians).

4.4.3 Based on the parameters outlined above, relevant embedded environmental measures outlined in **Chapter 11: Traffic and Transport (Table 11.23)** have been incorporated into the design of the Project.

4.4.4 In terms of HGV access, and as set out in **Section 3**, there are two types of accesses on the Project, main construction accesses and crossings where only very small numbers of HGVs will be required in the establishment and reinstatement of crossing points. All of these accesses are considered in the HGV Access Strategy. **Figure 4.2** sets out the HGV Access Strategy presented in this Section. In **Figure 4.2** the main construction traffic routes to main construction accesses are presented as yellow routes. The extensions to crossing points for limited HGVs are shown as white routes.

4.4.5 The resultant HGV Routeing Strategy, considering all the local constraints, access locations and embedded environmental measures, comprises 18 local HGV routes which are illustrated in **Figure 4.2** and set out in **Table 4.1** to **Table 4.4** (for the four corridors). The locations of the construction accesses are set out in **Section 3.2**. The tables only set out routes to the construction accesses for HGVs.

Table 4.1 Local road routes to construction accesses – West Corridor

Route number	Key Road from SRN	Route via local road network	Construction access
1	M56 (Junction 14) – A5117	A5117 – Pool Lane	WH-01, WH-02, WH-05, WH-07
		A5117 – B5132	WH-03, WH-04
		A5117 – Ince Lane	WH-06
2	M56 (Junction 12) - north	M56 – Weaver View	WH-10
		M56 -Weaver View – Cholmondeley Road	WH-11, WH-12
		M56– Weston Point Express Way – Rock Savage Way	WH-08, WH-09
3		M56 – A557 – A56 (west)	WH-12, WH-13

Route number	Key Road from SRN	Route via local road network	Construction access
	M56 (Junction 12) - south	M56 – A557 – A56 (east) – Aston Lane	WH-14, WH-15, WH-16, WH-17
		M56 – A557 – A56 (east) – A533 Aston Lane	WH-18, WH-19, WH-20
		M56 – A557 – A56 (east) – A533 -	WH-21, WH-22, WH-23,

Table 4.2 Local road routes to construction accesses – North Corridor

Route number	Key Road from SRN	Route via local road network	Construction access
1	M56 (junction 10) – A49 south	A49 – Grimsditch Lane – Higher Lane – Marsh Lane	NH-01, NH-02, NH-03, NH-04
		A56 - Newton Lane – Summer Lane – Newton Lane	NH-05, NH-06
2	M56 (Junction 9) – A56 north	A56 - Newton Lane – Summer Lane	NH-08, NH-07
		A56 – B5356	NH-10, NH-11, NH-12, NH-13
		A56 – A558 – Blackheath Lane – Eastgate Road	NH-28
		A56 – Park Lane – Warrington Road	NH-13, NH-14, NH-15, NH-16
		A56 – Holly Hedge Lane	NH-18, NH-19
		A56 – Runcorn Road – Bellhouse Lane or Moore Lane	NH-19, NH-20, NH-21, NH-22, NH-23, NH-24, NH-25, NH-26, NH-27
		A56 – A5060 – Baronet Road	NH-31
		A56 – A5060 – Baronet Road – Eastford Road	NH-29
		A56 – A5060 – Slutchers Lane	NH-30, NH-62

3	M6 (junction 21) – A57 east	A57 – A50 – Thelwell Lane	NH-33
		A57 – A50	NH-32
4	M62 (junction 7) – A557 south	A557 – A5080 – Mill Lane – Twyford Lane	NH-46, NH-47
		A557 – A5080 – Mill Lane	NH-44, NH-45
		A557 – A5080 – A562 (west)	NH-43, NH-412, NH-42, NH36, NH-37, NH-W38
		A557 – A5080 – A562 (west) – Mowcroft Lane	NH-39, NH-40
		A557 – A5080 – A562 (east) – Liverpool Road – Barnard Street – Forrest Way	NH-34
5	M62 (junction 7) – Warrington Road south	Warrington Road	NH-48, NH-49
		Warrington Road – B5419	NH-50, NH-51, NH-52
6	M62 (junction 7) A557 north	A557 – Chapel Lane - School Lane	NH-53, NH-54, NH-55, NH-56
		A557 – B5204	NH-57, NH-58
		A557 – Sutton Heath Road	NH-59
		A557 – Burtonhead Road	NH-60
		A557 – Access Road to St Helens Stadium	NH-61

Table 4.3 Local road routes to construction accesses – East Corridor

Route number	Key Road from SRN	Route via local road network	Construction access
1	M56 (junction 10) – A49 south	A49 – Grimditch Lane — Marsh Lane	EH-01, EH-02, EH-03, EH-04

2	M56 (junction 10) – A559	A559	EH-09, EH-10
		A559 – Lake Lane – Old Mill Lane – Norman's Lane	EH-05, EH-06, EH-07, EH-08
		A559 – Knutsford Road	EH-11, EH-12
3	M6 (junction 20) – A50 west	A50 – B5356 – Arley Road – Caldwell's Gate Lane	EH-18, EH-17, EH-19, EH-20
		A50 – B5356 – Arley Road – Pools Platt Lane	EH-15, EH-16
		A50 – B5356 – Arley Road – Barbers Lane	EH-13, EH-14
4	M6 (junction 20) – A50 east	A50 – Swineyard Lane – Moss Lane	EH-21, EH-22, EH-23, EH-24
		A50 – B5159	EH-25, EH-26, EH-29, EH-30
		A50 – B5159 – Mowpen Brow	EH-26, EH-27
5	M56 (junction 7/8) – A56 west	A56 – Agden Park Lane – Froghall Lane	EH-31, EH-32, EH-35,
		A56 – Agden Park Lane – Agden Lane	EH-33, EH-34
		A56 – Warrington Lane	EH-36, EH-37
		A56 – B5159 – Bradshaw Lane – Spring Lane -	EH-38, EH-39, EH-40, EH-41
6	M6 (junction 7) – A6144	A6144 – Moss Lane – Covershaw Lane – Sinderland Lane	EH-49, EH-50
		A6144 – B5160 – Carrgreen Lane	EH-42, EH-43, EH-44, EH-45, EH-46
		A6144 – B5160 – Barns Lane – Sawpit Street	EH-47, EH-48

Table 4.4 Local road routes to construction accesses – South Corridor

Route number	Key Road from SRN	Route via local road network	Construction access
1	M56 (junction	A49 – A553 (west)	SH-01, SH-02, SH-01(A), SH-02(A)

2	10) – A49 south	A49 – Millington Lane – Weaverham Road	SH-13, SH-14, SH-11, SH-12, SH-10, SH-09, SH-04, SH-03, SH-39
		A49 – Acton Lane	SH-06, SH-07
		A49 – Sandy Lane – Station Road	SH-08, SH-09
		A49 – Hefferston Rise	SH-09
		A49 – A533 (east) - Marbury Road – Uplands Road	SH-52, SH-53, SH-51, SH-40
		A49 – A533 (east) – Broomsfield Lane – Stone Heyes Lane – Hough Lane – Cogshall Lane	SH-49, SH-50, SH-47, SH-48, SH-45, SH-46
		A49 – A533 (east) – Shutley Lane	SH-43, SH-44
		A49 – A533 (east) – Ash House Lane	SH-41, SH-42
	M6 (junction 19) – A556 west	A556 – (Including U Turn on road east of Sandiway)	SH15 – SH-18, SH-19, SH-19A, SH-20
		A556– (Including U Turn on road east of Sandiway) – A559 – Whitegate Lane	SH-17, SH-16, SH-23, SH-22
		A556 – Hartford Road – Eaton Lane	SH-21
		A556 – A533 – A5018 - Bradford Road – Mill Lane	SH-25, SH-24, SH-26, SH-27, SH-31, SH-32
		A556 – A533– Jack Lane	SH-29, SH-30
		A556 – A533– London Road	SH-33, SH-34
		A556 – A530	SH-37, SH-38
		A556 – A530 – Whatcroft Hall Lane (height restricted)	SH-36, SH-35

4.4.6

In addition to the accesses, a route for HGV access is also required for the sections of pipeline in the carriageway from the SRN, which is proposed as follows:

- Section 1 – Access to pipeline in carriageway from two directions:

- ▶ M56 – Junction 11 – A56 north – Gainsborough Road;
- ▶ M6 – Junction 21 – A57 west – A50 south – A5061 (Knutsford Road) – Loushers Lane;
- Section 2 – M6 Junction 21 – A57 west – A50 south – Thelwall Lane;
- Section 3 – M62 Junction 7 – A570 (St Helens Linkway) – Eurolink – Chapel Lane;
- Section 4 - M62 Junction 7 – A570 (St Helens Linkway) – B5204 – Sherdley Road; and
- Section 5 - M62 Junction 7 – A570 (St Helens Linkway) – Burtonhead Road.

4.4.7

The HGV routes to these sections of in carriageway pipeline are also included in **Figure 4.2**.

4.5 HGV Local Road Routes Issues/Constraints

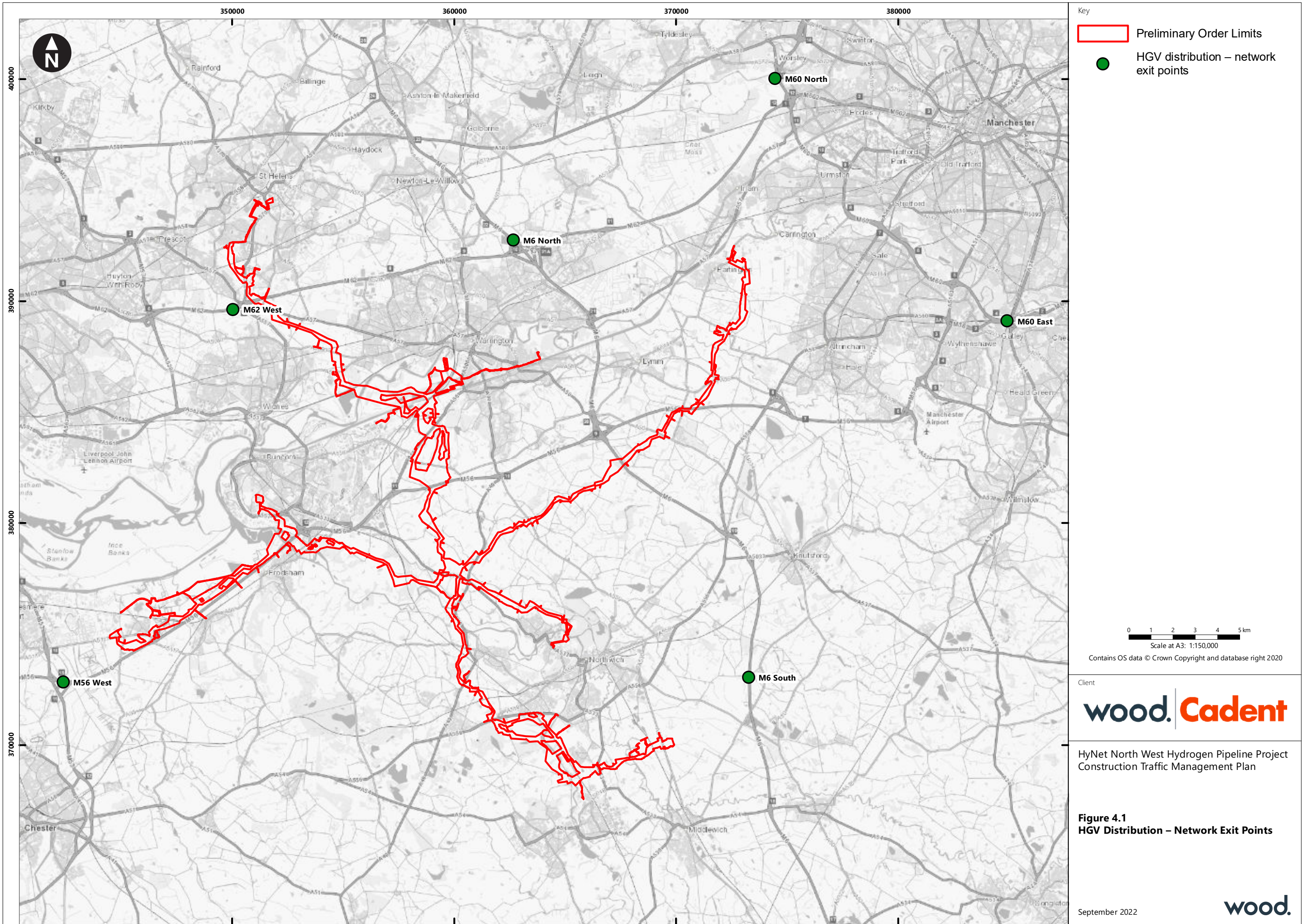
4.5.1

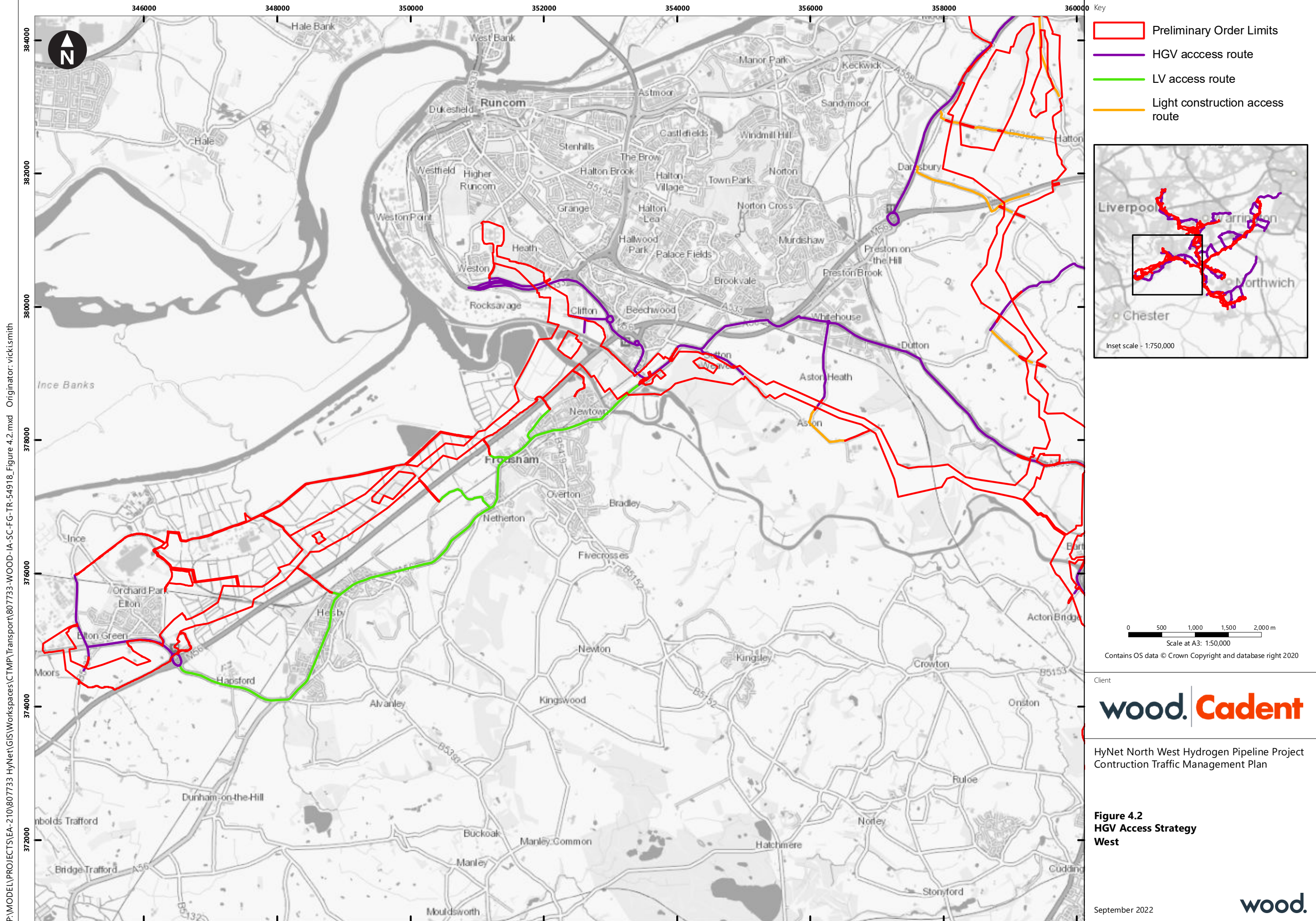
The local road routes encompass the HGV routes to be used between the Project and the SRN. A number of common issues and constraints have been identified that are consistent across these routes and details of the mitigation proposed are set out in **Table 4.5**.

Table 4.5 Issues and constraints management of HGV local road routes

No.	Issue/constraint	Mitigation
1	Sensitive, built-up areas (villages, towns) to be avoided by temporary construction traffic due to impacts on congestion, highway safety and air and noise pollution.	The HGV Routeing Strategy and the temporary construction access locations and onsite haul roads have ensured that several settlements would be avoided by construction HGV traffic. These settlements include Frodsham, Helsby, Elton, Hartford, Davenham, Bostock Green, Middlewich, Wincham, Lostock Gralam, Pickmere, Comberbach, Arley, Antrobus, Stretton, Lymm, Hearley, Great Sankey, Rainhill and Sutton Manor. This measure would limit the impacts of the Project in local villages and settlements.
2	Avoidance, if possible, of built-up areas to minimise conflict with parking areas, local roads and streetscapes.	The HGV Routeing Strategy and the temporary construction access locations and onsite haul roads have ensured that several settlements would be avoided by construction HGV traffic. These settlements include the built-up urban centres of Warrington, St Helens, Widnes, Runcorn, Greater Manchester, Sale, Altrincham, Nantwich, Weaverham.
3	Avoidance of narrow rural roads.	The HGV Routeing Strategy approach has been to avoid the use of small single-track roads as much as possible. The only elements of single-track roads (less than 4m

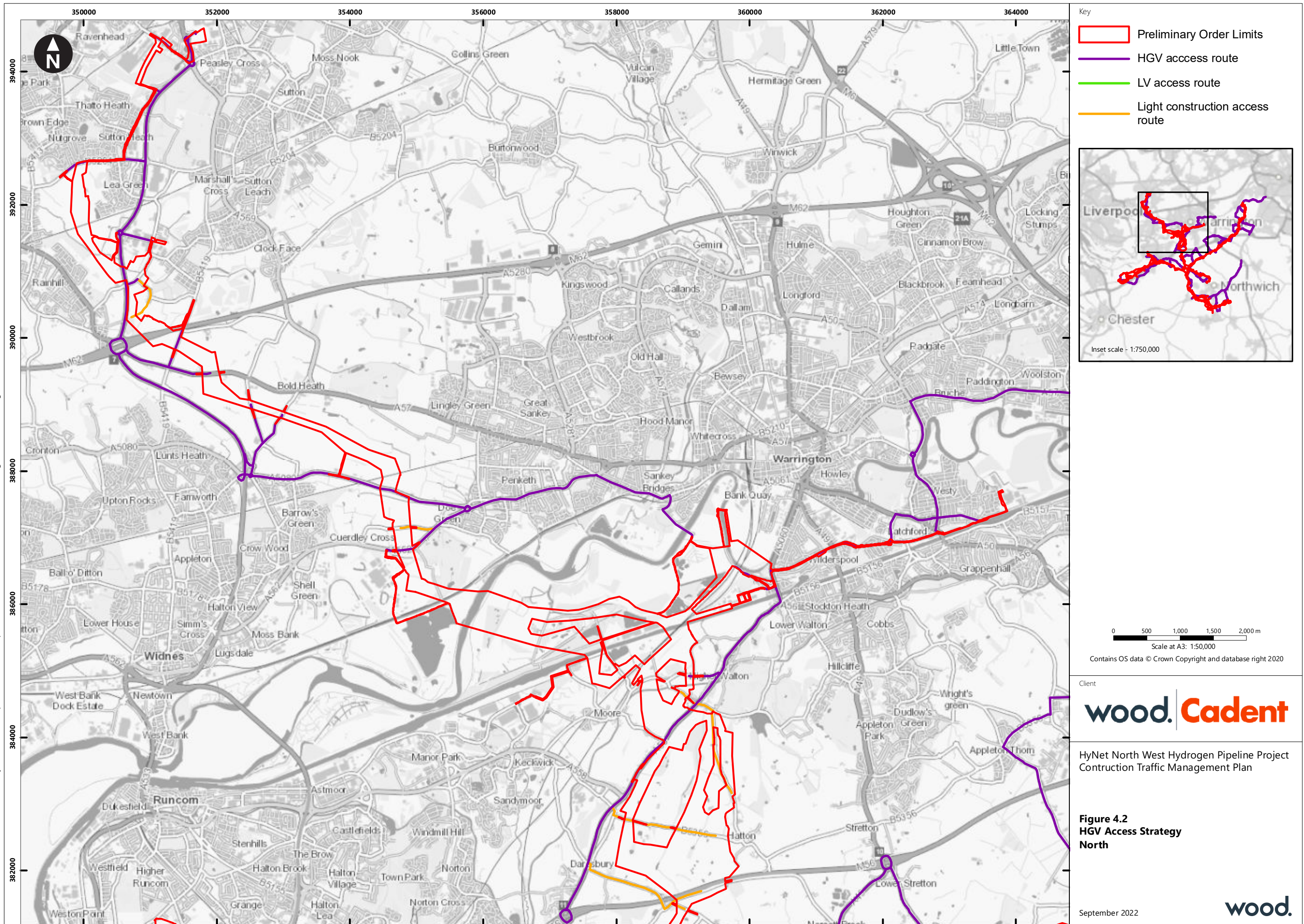
No.	Issue/constraint	Mitigation
		width) required for major construction HGV access are as follows: • 210m of Cholmondeley Road; • 396m of Marsh Labe; • 287m of Carrgreen Lane; and • 1,010m of Whatcroft Hall Lane More single-track elements of the local highways network are needed for the limited HGVs, on the white routes in Figure 4.2, but these will be used infrequently and only in the installation and reinstatement stages of the project.
4	Limited visibility at temporary construction access junctions.	Selected temporary construction accesses will have appropriate visibility splays.
5	Impacts on pedestrians (PRoW), cyclists (National Cycle Network, Sustrans and local routes) and equestrians (local routes).	A Preliminary Public Rights of Way Management Plan (PRoWMP) has been prepared and is provided as Appendix 11B in support of Chapter 11: Traffic and Transport .
6	Construction traffic impacts on capacity of junctions and links on the construction routes (SRN and local highway network).	The assessment of construction traffic generation from the Project on 60 highways links has been set out in Chapter 11: Traffic and Transport . The environmental measures required to mitigate the impact of construction traffic are also provided.

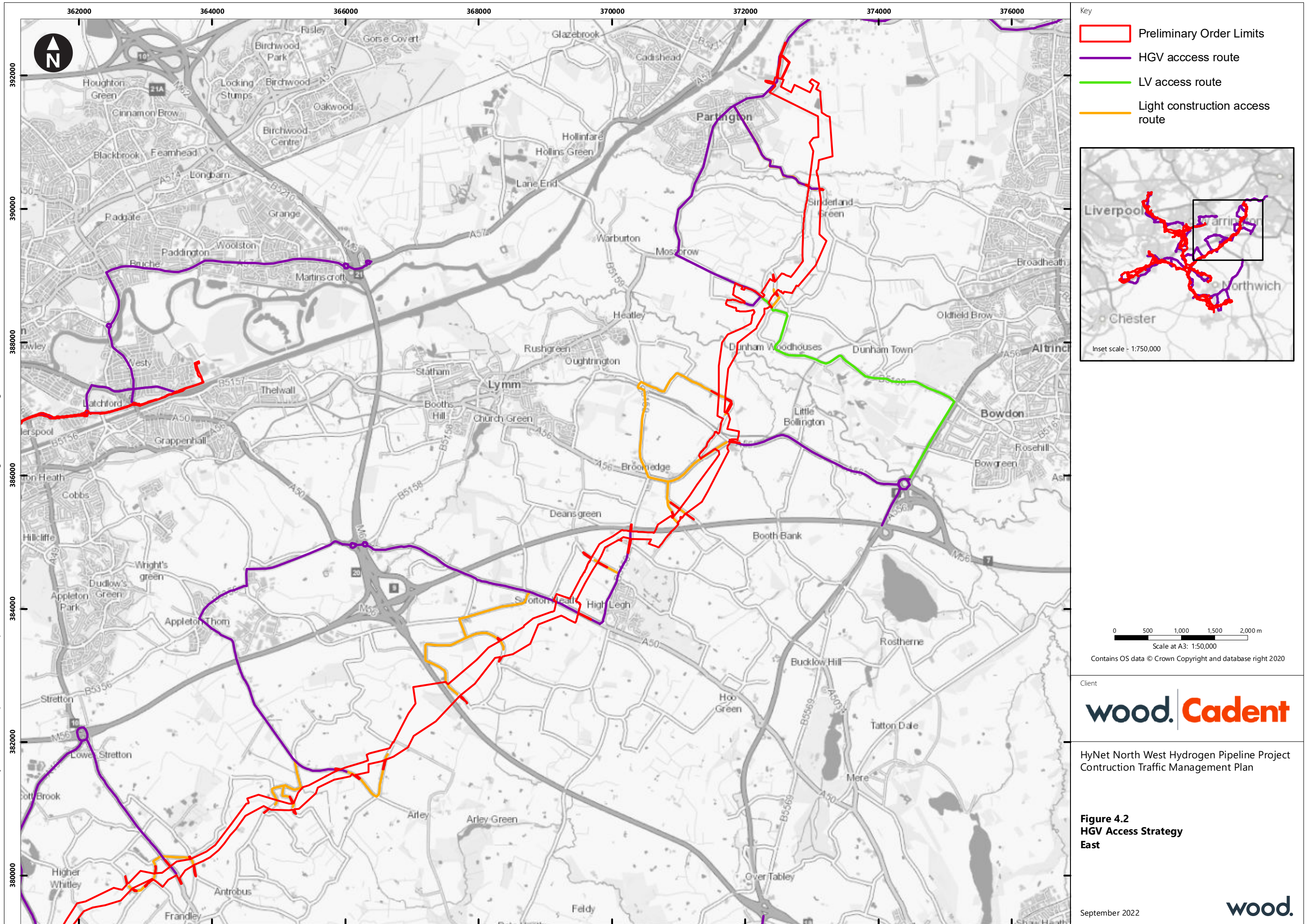




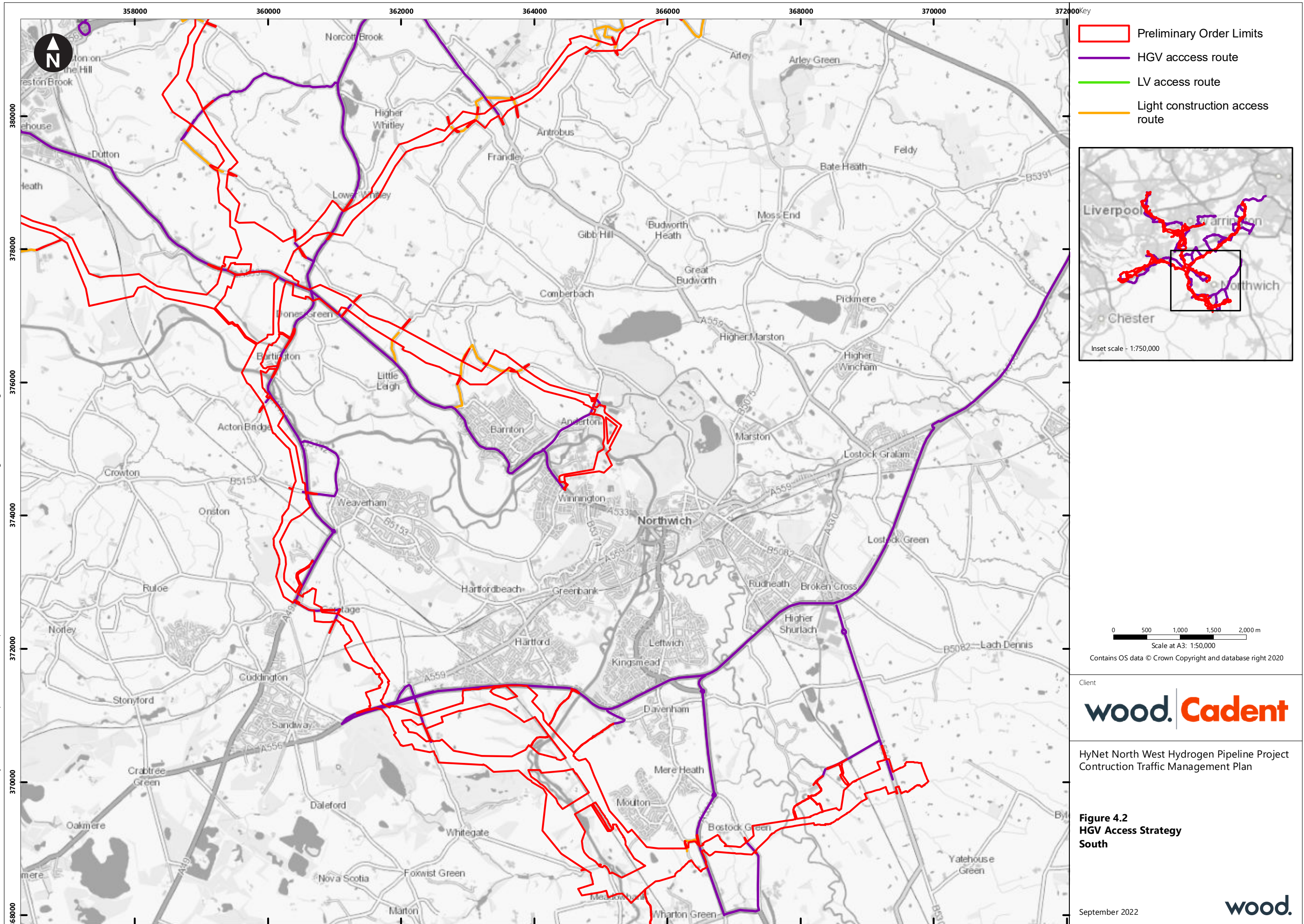
P:\MODEL\PROJECTS\EA-210\807733 HyNet\GIS\Workspaces\CTMP\Transport\807733-WOOD-IA-SC-FG-TR-54918_Figure 4.2.mxd Originator: vicksmith

P:\MODEL\PROJECTS\EA-210\807733_HyNet\GIS\Workspaces\CTMP\Transport\807733-WOOD-IA-SC-FG-TR-54918_Figure 4.2.mxd Originator: vickismith





P:\MODEL\PROJECTS\EA-210\807733 HyNet\GIS\Workspaces\CTMP\Transport\807733-WOOD-IA-SC-FG-TR-54918_Figure 4.2.mxd Originator: vicksmith



5. Light Vehicle Routeing Strategy

5.1 Introduction

5.1.1 The Project would generate two types of construction LV traffic as follows:

- LV construction staff traffic; and
- LV construction traffic including vans and smaller delivery vehicles.

5.1.2 **Section 5** sets out how the LV Routeing Strategy has been developed.

5.1.3 It should be noted that for the purpose of the PEIR, traffic generation has been assessed with all traffic (HGV and LV) routeing from the SRN direct to work sites. As the Project evolves post-PEIR, traffic calculations will be revised to understand the detailed interaction between construction compounds and individual site accesses.

LV construction staff traffic

5.1.4 This element of the LV construction traffic generation would comprise staff travelling to and from their home/overnight accommodation to one of the temporary construction compounds to commence work for the day, this activity would be required across the entire construction phase.

5.1.5 The trips would take place in private cars/work vans/minibuses. When construction of the Project commences, staff would gather in teams at the temporary construction compounds and then, following sufficient work briefings and collection of materials/plant, would travel to the relevant area of construction works related to the Project corridor in teams using minibuses, work vans or other site/work related vehicles. Some staff may arrive directly at sites during some stages of the programme such as for the line survey and in circumstances where staff would go directly to the HAGI sites staying all day before travelling home or to overnight accommodation.

LV construction traffic

5.1.6 Although not considered in the traffic generation calculations at this stage, this element of the LV construction traffic generation would comprise construction staff leaving a variety of construction compounds in teams and travelling to a proposed individual work site for their workday and then returning to the TCC at the end of the day.

5.1.7 These trips would take place in Light Goods Vehicles (LGV) predominantly, however they may also be undertaken in 4X4 vehicles and private cars (for management staff). Where required, these works vehicles would pick up materials and plant.

5.2 Overview of LV Routeing Strategy

LV construction staff traffic

- 5.2.1 To aid development of the LV Routeing Strategy, a preliminary estimation of the construction traffic generated by the Project has been undertaken. The construction traffic generation estimation has been applied to the preliminary construction traffic programme for the three-year construction schedule. This has resulted in construction vehicle movement predictions per vehicle type on a weekly basis per access point, split into HGVs and LVs.
- 5.2.2 The detailed methodology and construction traffic calculations undertaken to inform this output are presented in **Chapter 11: Traffic and Transport**, which sets out the detailed construction traffic generation methodology, assumptions, materials required and other matters that have informed the construction traffic generation output.
- 5.2.3 As set out above, at this stage the movement of LVs between TCCs and individual sites for construction has not been defined within the traffic calculations. However, consideration of the routes these movements would need to follow when they have been defined has been provided for the purpose of this preliminary LV access strategy. The LV Routeing Strategy provides details on two types of LV construction traffic:
- LV construction staff traffic – This has been calculated from journey to work data from the 2011 Census¹ for five local areas associated with the 4 corridors of the Project. **Figure 5.1** sets out the locations of the five locations used to inform construction staff distribution; and
 - LV construction traffic – Understanding the most appropriate routes of LV construction traffic between the temporary construction compounds and proposed works site temporary construction accesses along the project corridor set out in **Table 3.1**. This was undertaken using journey planning software and considering any local constraints.

Construction staff traffic distribution

- 5.2.4 For construction staff traffic movements into and out of the temporary construction accesses per day, a detailed distribution matrix has been required. This has been based on journey to work data from the 2011 Census for five local areas. These areas are as follows;
- Rural Cheshire comprising:
 - ▶ All of the South Corridor;
 - ▶ East Corridor from the Central Hub HAGI and Dunham Massey;

¹ Note – data from the 2021 census was not available at the time of production of this PEIR. It is anticipated in 2023 and it is proposed to use any new data from 2021 that might be available in the DCO submission.

- ▶ North Corridor from Central Hub HAGI to Manchester Ship Canal;
- ▶ West Corridor from Central Hub HAGI to Preston Brook.
- Coastal Industrial – comprising:
 - ▶ West Corridor from Stanlow to Preston Brook;
 - ▶ Runcorn/Rocksavage Spur.
- Manchester Fringe – comprising:
 - ▶ East Corridor Dunham Massey to the Partington HAGI.
- Warrington – comprising:
 - ▶ North Corridor, north of Manchester Ship Canal and Bold Heath;
 - ▶ Carriageway pipeline section in Warrington.
- St Helens – comprising:
 - ▶ North corridor from Bold Heath and section of corridor into St Helens north of M62.

5.2.5

The areas used for the assessment of the journey to work data for the five areas are as follows:

- Rural Cheshire – Industrial Areas around Tata Steel in Winnington (Super Output Area – Cheshire West and Chester 018)
- Coastal Industrial – Industrial Areas around the Stanlow Refinery (Super Output Area – Cheshire West and Chester 011)
- Manchester Fringe – Industrial Areas around Partington (Super Output Area – Trafford 017);
- Warrington – Industrial Areas around Factory Lane (Super Output Area – Warrington 018); and
- St Helens – Industrial Areas in Sutton Heath (Super Output Area – St. Helens 019).

5.2.6

The five areas have been selected to allow for an appropriate distribution of LV traffic across the Preliminary Order Limits. The distribution of traffic in the urban fringe of Manchester area would be different to that from work sites in rural Cheshire or north of the M56 near Ellesmere Port. This is a function of the wide scope of assessment for the Project

5.2.7

The resultant LV construction staff traffic distribution and assignment onto the road network within the Study Area that has been applied is set out in **Table 5.1** for the five areas of the Project. **Figure 5.2** sets out the geographical scope of the exit points from the highway network Study Area.

Table 5.1 LV construction staff traffic distribution and assignment onto road network

Entry/exit points from highways network Study Area scope	Rural Cheshire Accesses WH-16 to 23 NH-01 to 28 EH-01 to 39 SH-01 to 54	Costal Industrial Accesses WH-01 to 15	Manchester Fringe Accesses EH-39 to 52	Warrington Accesses NH-29 to 43	St Helens Accesses NH-44 to 61
A49 North	-	-	0.06%	9.66%	-
A49 North (to Warrington)	0.57%	0.15%	-	-	-
A49 South	1.89%	-	0.28%	0.20%	-
A50 South	-	-	1.16%	-	-
A50 West	-	-	0.55%	-	0.15%
A5033 East	2.02%	0.23%	-	0.69%	0.05%
A5117 West	-	51.58%	-	-	-
A530 South	9.22%	0.18%	-	0.24%	-
A533 South	9.39%	-	-	-	-
A533 West	0.23%	0.03%	0.17%	0.27%	0.03%
B5081 East	0.88%	-	-	-	-
A538 South	0.04%	0.09%	1.05%	0.29%	-
A5018 West	7.24%	-	0.06%	0.08%	0.03%
A555 East	0.55%	0.43%	-	0.55%	0.10%
A556 Chester Road West	2.67%	-	0.11%	0.12%	-
A557 South	-	-	0.17%	-	3.08%
A558 West	0.38%	-	0.17%	3.28%	-

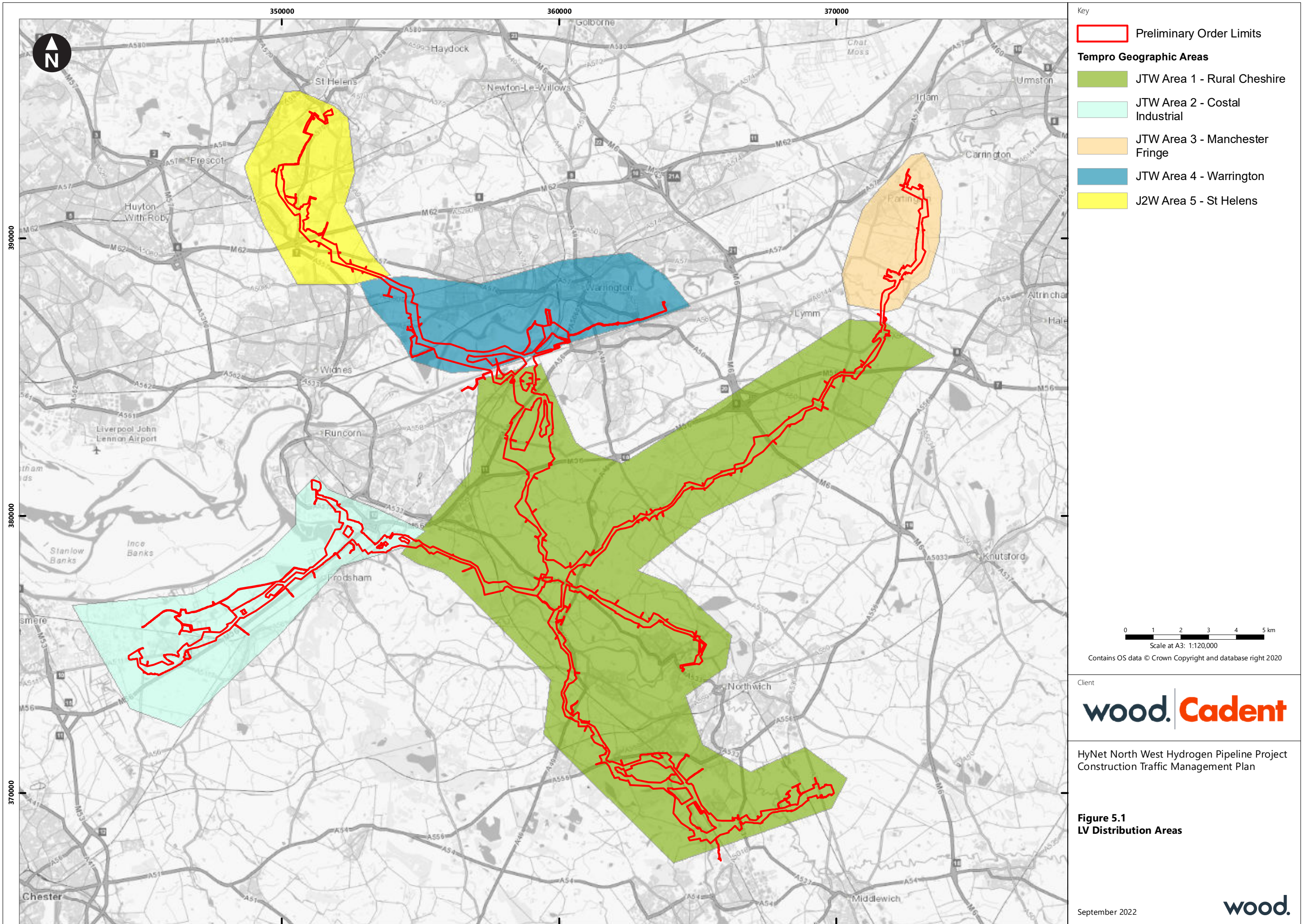
Entry/exit points from highways network Study Area scope	Rural Cheshire Accesses WH-16 to 23 NH-01 to 28 EH-01 to 39 SH-01 to 54	Costal Industrial Accesses WH-01 to 15	Manchester Fringe Accesses EH-39 to 52	Warrington Accesses NH-29 to 43	St Helens Accesses NH-44 to 61
A559 South	-	0.17%	-	0.46%	-
A56 South West	-	-	-	-	0.05%
Frodsham and Helsby	0.53%	0.88%	0.06%	1.02%	0.13%
A560 West	0.11%	-	0.06%	0.06%	-
A562 West	-	-	-	5.41%	0.00%
A57 East	0.19%	0.06%	3.03%	0.85%	-
A57 South	-	-	-	-	0.03%
A57 West	0.13%	0.05%	0.50%	1.93%	0.18%
A58 North	-	-	0.11%	1.31%	44.58%
Altrincham	0.74%	0.31%	8.43%	0.74%	0.23%
B5082 East	1.60%	-	0.22%	0.24%	-
B5132 South	-	16.92%	-	-	-
Hartford	3.77%	-	-	-	-
B5156 West	-	-	-	2.52%	-
B5167 East	0.11%	0.05%	-	0.00%	0.05%
B5204 East	-	-	-	-	12.96%
B5204 West	-	-	0.17%	0.97%	7.21%
A6114 South	-	-	2.15%	-	-
B5419 South	-	-	0.11%	-	0.56%

Entry/exit points from highways network Study Area scope	Rural Cheshire Accesses WH-16 to 23 NH-01 to 28 EH-01 to 39 SH-01 to 54	Costal Industrial Accesses WH-01 to 15	Manchester Fringe Accesses EH-39 to 52	Warrington Accesses NH-29 to 43	St Helens Accesses NH-44 to 61
Birchwood Way South	-	0.11%	-	-	0.49%
Broomsfield Lane East	3.22%	-	-	-	-
Chapel Lane East	-	-	0.06%	-	-
Clay Lane North	-	-	0.11%	3.39%	-
Flixton and Urmiston Area	0.08%	0.14%	6.94%	0.26%	0.08%
Greater Manchester	1.35%	1.07%	17.80%	2.97%	1.54%
Internal	5.47%	3.48%	7.82%	2.54%	6.49%
London Road South	3.66%	-	0.06%	0.12%	0.05%
Lymm	0.38%	0.09%	1.76%	1.25%	0.05%
M60 East	1.41%	0.55%	8.04%	1.07%	0.67%
M56 West	2.15%	9.81%	2.70%	5.00%	1.26%
M6 North	1.03%	1.20%	2.15%	0.77%	-
M6 South	-	1.01%	3.97%	3.06%	1.59%
M60 North	0.51%	0.51%	12.73%	3.03%	2.41%
M62 West	-	-	2.09%	6.21%	12.01%
Marshalls Cross Road North	-	-	-	0.15%	-

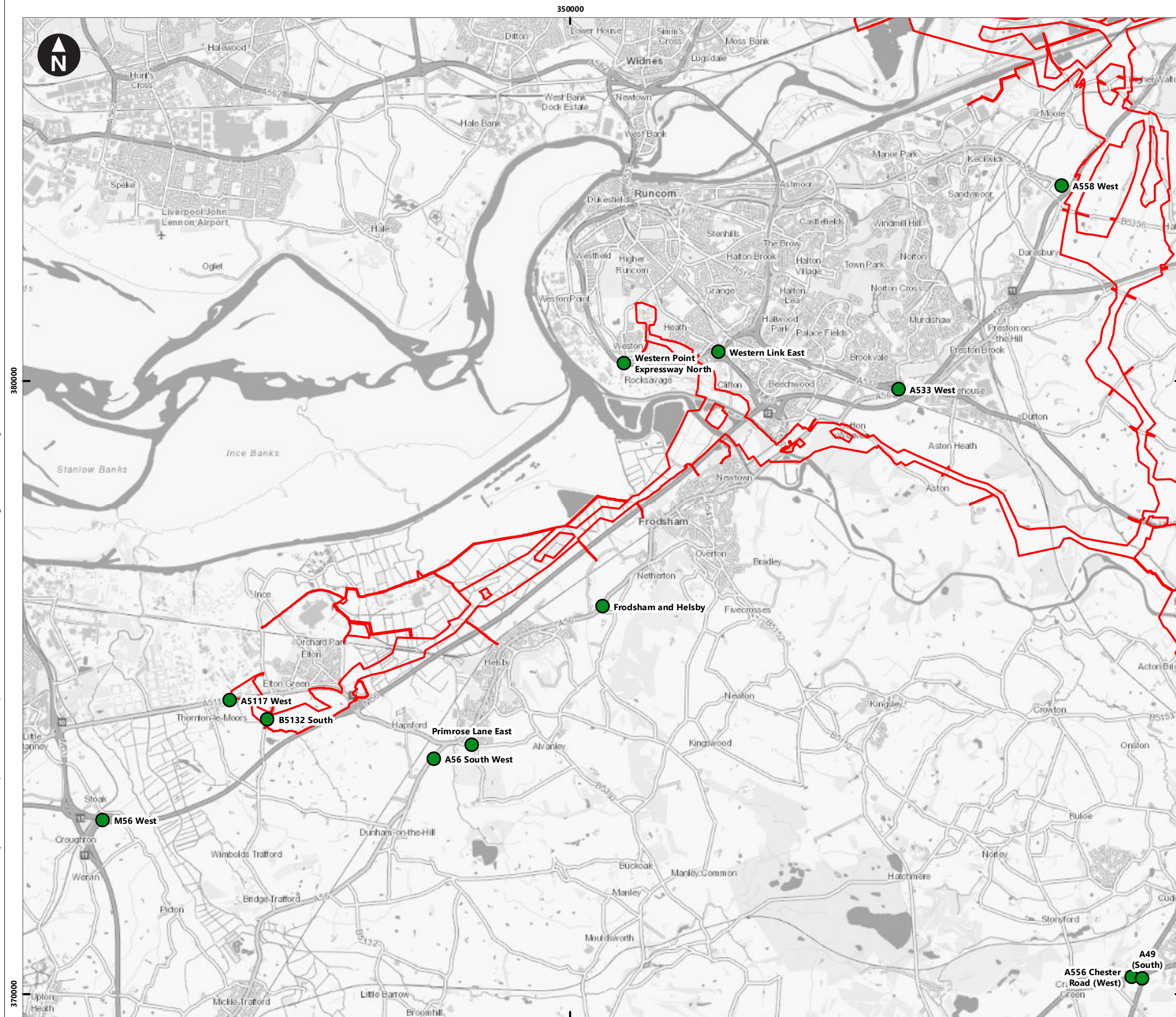
Entry/exit points from highways network Study Area scope	Rural Cheshire Accesses WH-16 to 23 NH-01 to 28 EH-01 to 39 SH-01 to 54	Costal Industrial Accesses WH-01 to 15	Manchester Fringe Accesses EH-39 to 52	Warrington Accesses NH-29 to 43	St Helens Accesses NH-44 to 61
Norley Road East	-	-	-	0.28%	-
Northwich	31.02%	1.18%	0.66%	0.99%	0.18%
Primrose Lane East	-	2.15%	-	-	-
Sale and Wythenshawe	0.38%	0.29%	10.63%	0.82%	0.10%
Station Road West	0.99%	-	0.06%	-	-
Warrington	2.44%	1.23%	3.42%	33.71%	2.87%
Warrington Road West	-	-	-	1.40%	0.74%
Weston Link East	3.39%	5.66%	0.11%	-	-
Woolston Grange Avenue North	-	-	0.28%	1.75%	-
Weston Point Expressway North	0.29%	0.38%	0.06%	-	-
Whitegate Lane South	-	-	-	0.33%	0.03%
TOTAL	100%	100%	100%	100%	100%

5.2.8

The staff construction traffic would not have a defined route to sites and construction compounds. Staff vehicles are proposed to be permitted to access sites at their own discretion based on: the day's work schedule (may be at multiple sites), local traffic conditions, weather and other work-based factors, as would be expected for any LV construction staff traffic routing to and from their place of work.

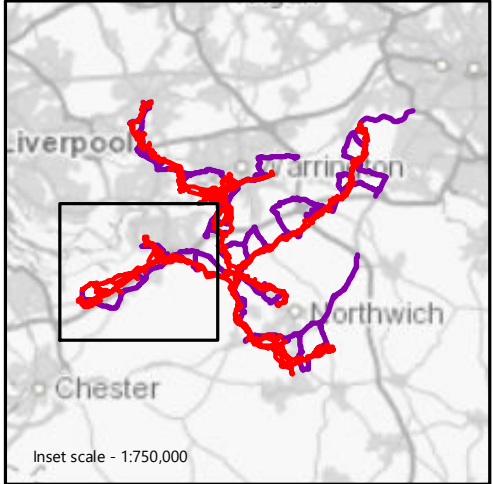


P:\MODEL\PROJECTS\EA-210\807733_HyNet\GIS\Workspaces\CTMP\Transport\807733-WOOD-IA-SC-FG-TR-80851_Figure 5.2.mxd Originator: vicksmith



Key

- Preliminary Order Limits
- LV distribution – network exit points



0 500 1,000 1,500 2,000 m
Scale at A3: 1:60,000
Contains OS data © Crown Copyright and database right 2020

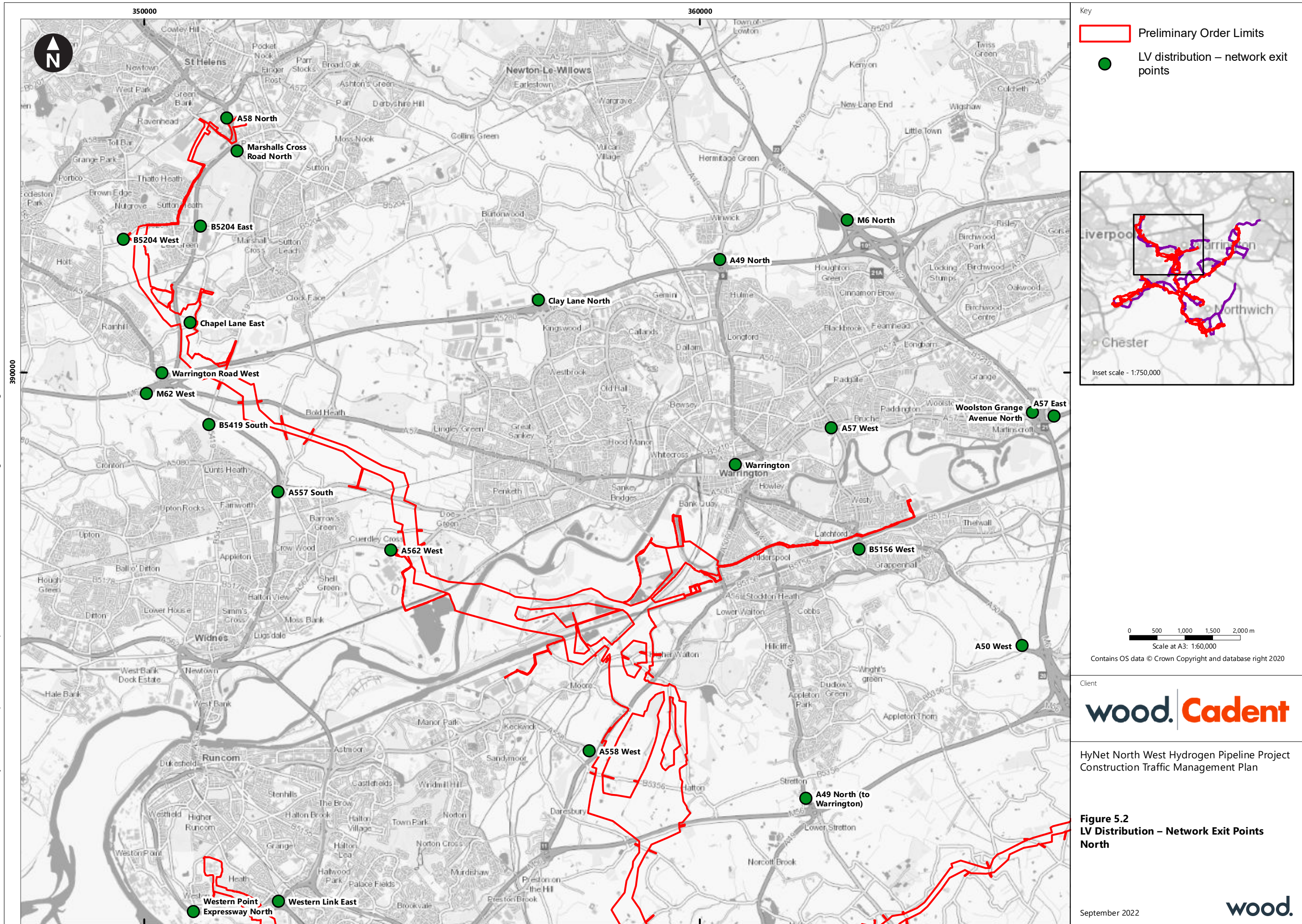
Client

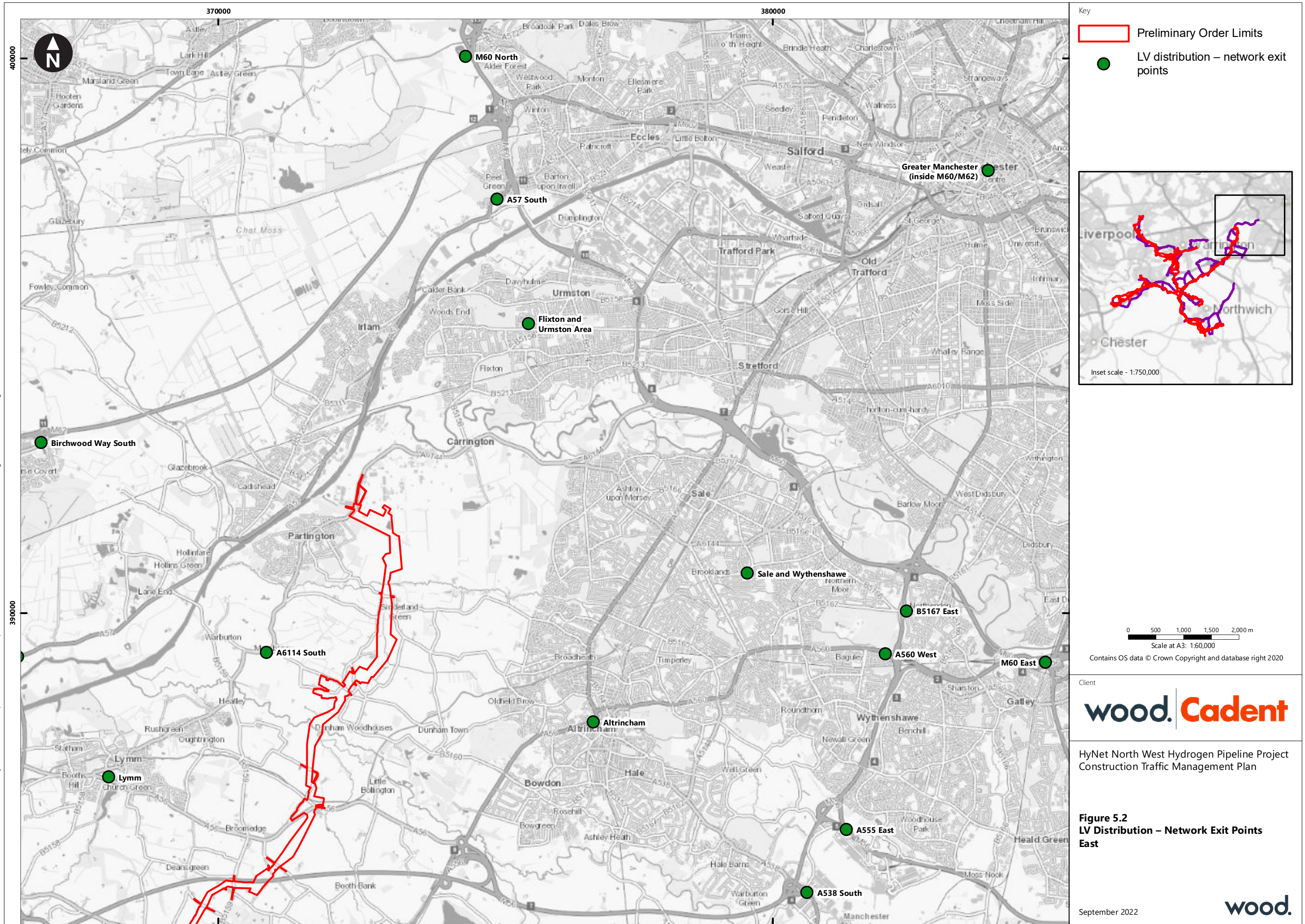
wood. Cadent

HyNet North West Hydrogen Pipeline Project
Construction Traffic Management Plan

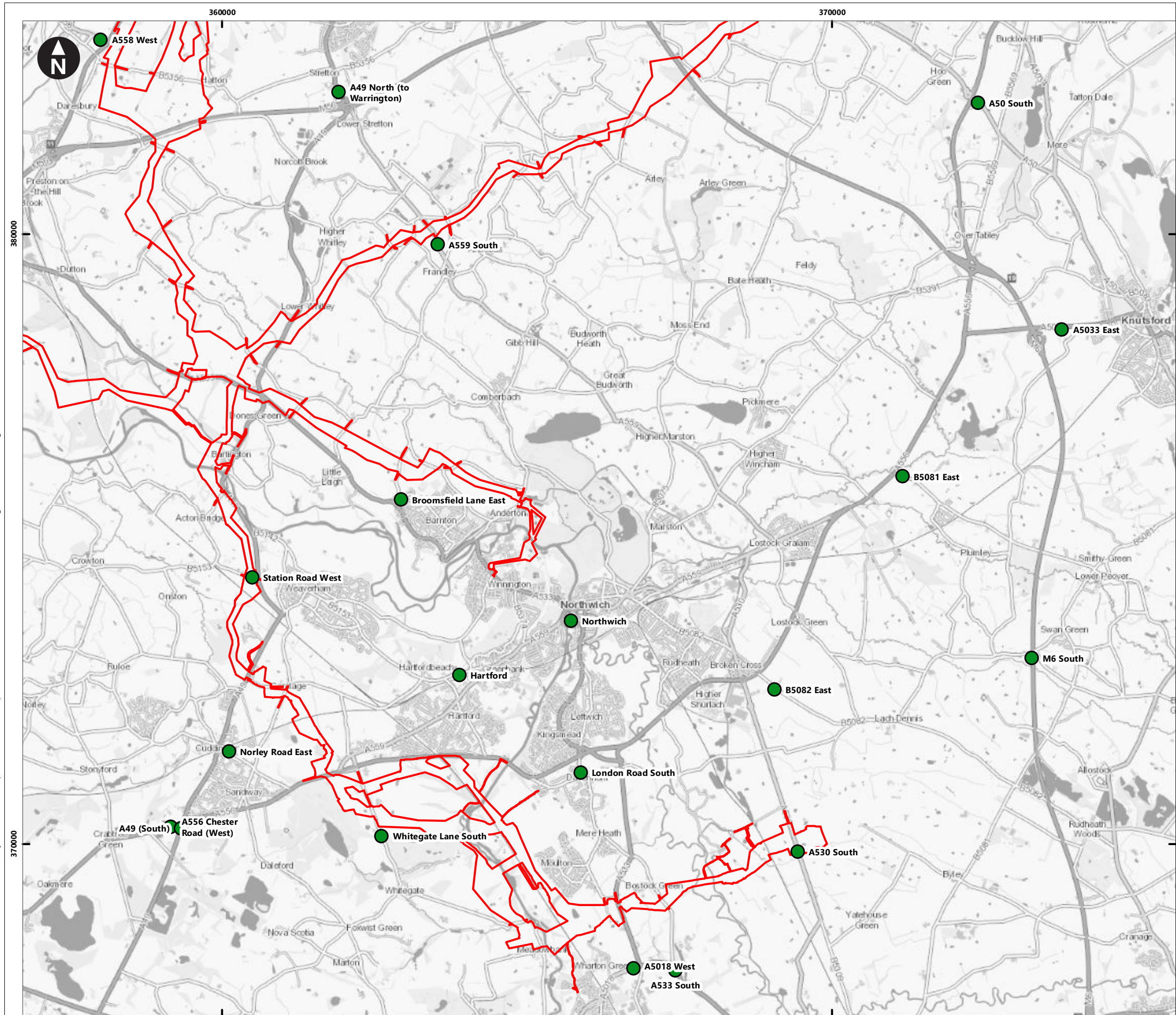
Figure 5.2
LV Distribution – Network Exit Points
West

P:\MODEL\PROJECTS\EA-210\807733 HyNet\GIS\Workspaces\CTMP\Transport\807733-WOOD-IA-SC-FG-TR-80851_Figure 5.2.mxd Originator: vicksmith



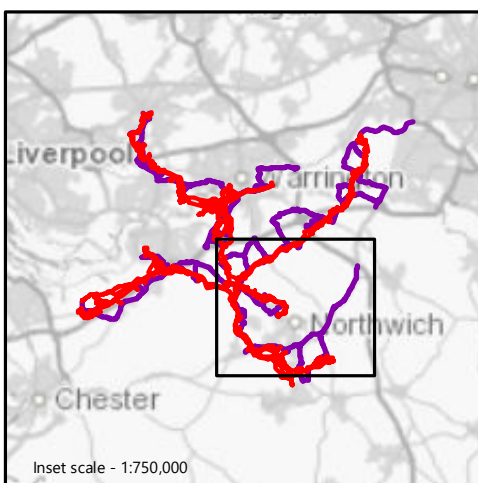


P:\MODEL\PROJECTS\EA-210\807733_HyNet\GIS\Workspaces\CTMP\Transport\807733-WOOD-IA-SC-FG-TR-80851_Figure 5.2.mxd Originator: vicksmith



Key

- Preliminary Order Limits
- LV distribution – network exit points



0 500 1,000 1,500 2,000 m

Scale at A3: 1:60,000

Contains OS data © Crown Copyright and database right 2020

Client

wood. Cadent

HyNet North West Hydrogen Pipeline Project
Construction Traffic Management Plan

Figure 5.2
LV Distribution – Network Exit Points
South

6. Crossing Schedule

6.1 Introduction

- 6.1.1 In addition to the HGV and LV construction traffic routeing, this Preliminary CTMP considers the impacts of all pipeline crossings of the local and strategic highways network as well as proposals for rail and navigable watercourse crossings.
- 6.1.2 It should be noted that in addition to the impacts on the adopted public highway and rail networks, the Project would also impact upon the PRow network. This is covered in a separate Preliminary PRowMP appended to **Chapter 11: Traffic and Transport**, which sets out the scale and nature of these impacts together with a draft management strategy.

6.2 Highways crossing schedule

- 6.2.1 A total of 91 highways crossing locations have been identified within the Preliminary Order Limits, where an overhead line is proposed to be installed (including reconductoring) or dismantled across the highway.
- 6.2.2 **Table 6.1** to **Table 6.4** below details all 91 crossing locations as shown in **Figure 6.1** and the roads which they affect. **Table 6.1** also outlines the Crossing Schedule Reference Number, type of crossing method required at each crossing location and which local highway authority area the crossing falls within. This table relates to the optionality that has been included at this stage of the design.

Table 6.1 Management of Highways Crossings (West Corridor)

Crossing Point	Road Name	Crossing Management	Local Authority
W1	A5117	Trenchless Crossing	CWCC
W2	B5132	Open Cut Crossing	CWCC
W3	A5117	Trenchless Crossing	CWCC
W4	M56	Trenchless Crossing	National Highways
W5	Cholmondeley Road	Open Cut Crossing	HBC
W6	Weaver View	Open Cut Crossing	HBC
W7	Weston Point Express Way	Trenchless Crossing	HBC
W8	Rocksavage Way	Trenchless Crossing	HBC

Crossing Point	Road Name	Crossing Management	Local Authority
W9	A56	Trenchless Crossing	CWCC
W10	A56	Trenchless Crossing	CWCC
W11	Aston Lane	Open Cut Crossing	CWCC
W12	Aston Lane	Open Cut Crossing	CWCC
W13	A533	Trenchless Crossing	CWCC

Table 6.2 Management of Highways Crossings (North Corridor)

Crossing Point	Road Name	Crossing Management	Local Authority
N1	Marsh Lane	Open Cut Crossing	CWCC
N2	Higher Lane	Open Cut Crossing	CWCC
N3	Newton Lane	Open Cut Crossing	HBC
N4	Summer Lane	Trenchless Crossing	WBC
N5	M56	Trenchless Crossing	National Highways
N6	B5356	Open Cut Crossing	WBC
N7	Warrington Road	Open Cut Crossing	WBC
N8	Warrington Road	Open Cut Crossing	WBC
N9	B5356	Open Cut Crossing	HBC
N10	A56	Trenchless Crossing	WBC
N11	A56	Trenchless Crossing	WBC
N12	Holly Hedge Lane	Open Cut Crossing	WBC
N13	Runcorn Road	Open Cut Crossing	WBC
N14	Runcorn Road	Open Cut Crossing	WBC
N15	Bellhouse Lane	Open Cut Crossing	WBC
N16	Moore Lane	Open Cut Crossing	HBC

Crossing Point	Road Name	Crossing Management	Local Authority
N17	A562	Trenchless Crossing	WBC
N18	Mowcroft Lane	Open Cut Crossing	WBC
N19	A5080	Open Cut Crossing	SHBC
N20	Mill Lane	Open Cut Crossing	SHBC
N21	Twyford Lane	Open Cut Crossing	SHBC
N22	A57	Open Cut Crossing	SHBC
N23	B5419	Trenchless Crossing	SHBC
N24	M62	Trenchless Crossing	National Highways
N25	School Lane	Open Cut Crossing	SHBC
N26	Chapel Lane	Open Cut Crossing	SHBC
N27	St Helens Linkway	Trenchless Crossing	SHBC
N28	St Helens Linkway	Open Cut Crossing	SHBC

Table 6.3 Management of Highways Crossings (East Corridor)

Crossing Point	Road Name	Crossing Management	Local Authority
E1	Marsh Lane	Open Cut Crossing	CWCC
E2	A49	Trenchless Crossing	CWCC
E3	Norman's Lane	Open Cut Crossing	CWCC
E4	Old Mill Lane	Open Cut Crossing	CWCC
E5	A559	Trenchless Crossing	CWCC
E6	Knutsford Road	Open Cut Crossing	CWCC
E7	Barber's Lane	Open Cut Crossing	CWCC
E8	Pool Platt Lane	Open Cut Crossing	CWCC
E9	Arley Road	Trenchless Crossing	CWCC

Crossing Point	Road Name	Crossing Management	Local Authority
E10	Caldwell's Gate Lane	Open Cut Crossing	CEC
E11	M6	Trenchless Crossing	CEC
E12	Moss Lane	Open Cut Crossing	CEC
E13	Moss Lane	Open Cut Crossing	CEC
E14	A50	Trenchless Crossing	CEC
E15	Mowpen Brow	Open Cut Crossing	CEC
E16	B5159	Open Cut Crossing	CEC
E17	M56	Trenchless Crossing	National Highways
E18	Froghall Lane	Open Cut Crossing	CEC
E19	Agden Lane	Open Cut Crossing	CEC
E20	A56	Trenchless Crossing	CEC
E21	Warrington Lane	Trenchless Crossing	CEC
E22	Spring Lane	Open Cut Crossing	CEC
E23	Spring Lane	Open Cut Crossing	WBC
E24	B5160	Open Cut Crossing	TBC
E25	Sawpit Street	Open Cut Crossing	TBC
E26	Sinderland Lane	Open Cut Crossing	TBC

Table 6.4 Management of Highways Crossings (East Corridor)

Crossing Point	Road Name	Crossing Management	Local Authority
S1	A533	Trenchless Crossing	CWCC
S2	Acton Lane	Open Cut Crossing	CWCC
S3	Station Road	Open Cut Crossing	CWCC
S4	A49	Trenchless Crossing	CWCC

Crossing Point	Road Name	Crossing Management	Local Authority
S5	Millington Lane	Open Cut Crossing	CWCC
S6	Weaverham Road	Open Cut Crossing	CWCC
S7	A559	Trenchless Crossing	CWCC
S8	Whitegate Lane	Open Cut Crossing	CWCC
S9	Whitegate Lane	Open Cut Crossing	CWCC
S10	Mill Lane	Open Cut Crossing	CWCC
S11	Bradford Road	Trenchless Crossing	CWCC
S12	Jack Lane	Open Cut Crossing	CWCC
S13	A522	Trenchless Crossing	CWCC
S14	London Road	Open Cut Crossing	CWCC
S15	A530	Trenchless Crossing	CWCC
S16	A533	Trenchless Crossing	CWCC
S17	A49	Trenchless Crossing	CWCC
S18	A533	Trenchless Crossing	CWCC
S19	Ash House Lane	Open Cut Crossing	CWCC
S20	Shutley Lane	Open Cut Crossing	CWCC
S21	Stone Heyes Lane	Open Cut Crossing	CWCC
S22	Hough Lane	Open Cut Crossing	CWCC
S23	Cogshall Lane	Open Cut Crossing	CWCC
S24	Marbury Road	Trenchless Crossing	CWCC

6.3 Rail Network Crossing Schedule

- 6.3.1 All rail crossings are proposed to use trenchless crossings, which should allow for the continued use of the railway lines during these periods.
- 6.3.2 The preliminary route requires a crossing of the rail network at 16 locations, taking into account PEIR route optionality. The 16 locations are shown in **Figure 6.2**.

There are, also, interactions where the Project crosses the proposed HS2 route Phase 2B (Crewe to Manchester) which has been included for completeness (two locations).

6.3.3 Engagement with Network Rail will take place to discuss the proposed crossings of the rail network. It is expected that there will be no additional management requirements of the rail network crossings during the construction of the Project.

6.3.4 **Table 6.5** provides details on the rail crossings.

Table 6.5 Management of Rail Crossings

Crossing Point	Corridor	Rail Line Between	Management
R1	West	Ellesmere Port and Frodsham	Trenchless Crossing
R2	West	Frodsham and Runcorn/Warrington	Trenchless Crossing
R3	West	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossing
R4	South	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossing
R5	South	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossing
R6	South	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossing
R7	South	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossing
R8	South	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossing
R9	South	Northwich to Middlewich	Trenchless Crossing
R10	South	Northwich to Chester	Trenchless Crossings
R11	North	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossings
R12	North	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossings
R13	North	Warrington/Runcorn and Winsford – West Coast Mainline	Trenchless Crossings

Crossing Point	Corridor	Rail Line Between	Management
R14	North	Warrington to Widnes	Trenchless Crossings
R15	North	Warrington to Liverpool	Trenchless Crossings
R16	North	Manchester to Liverpool	Trenchless Crossings
R17	East	HS2	Management to be discussed with relevant stakeholders
R18	South	HS2	Management to be discussed with relevant stakeholders

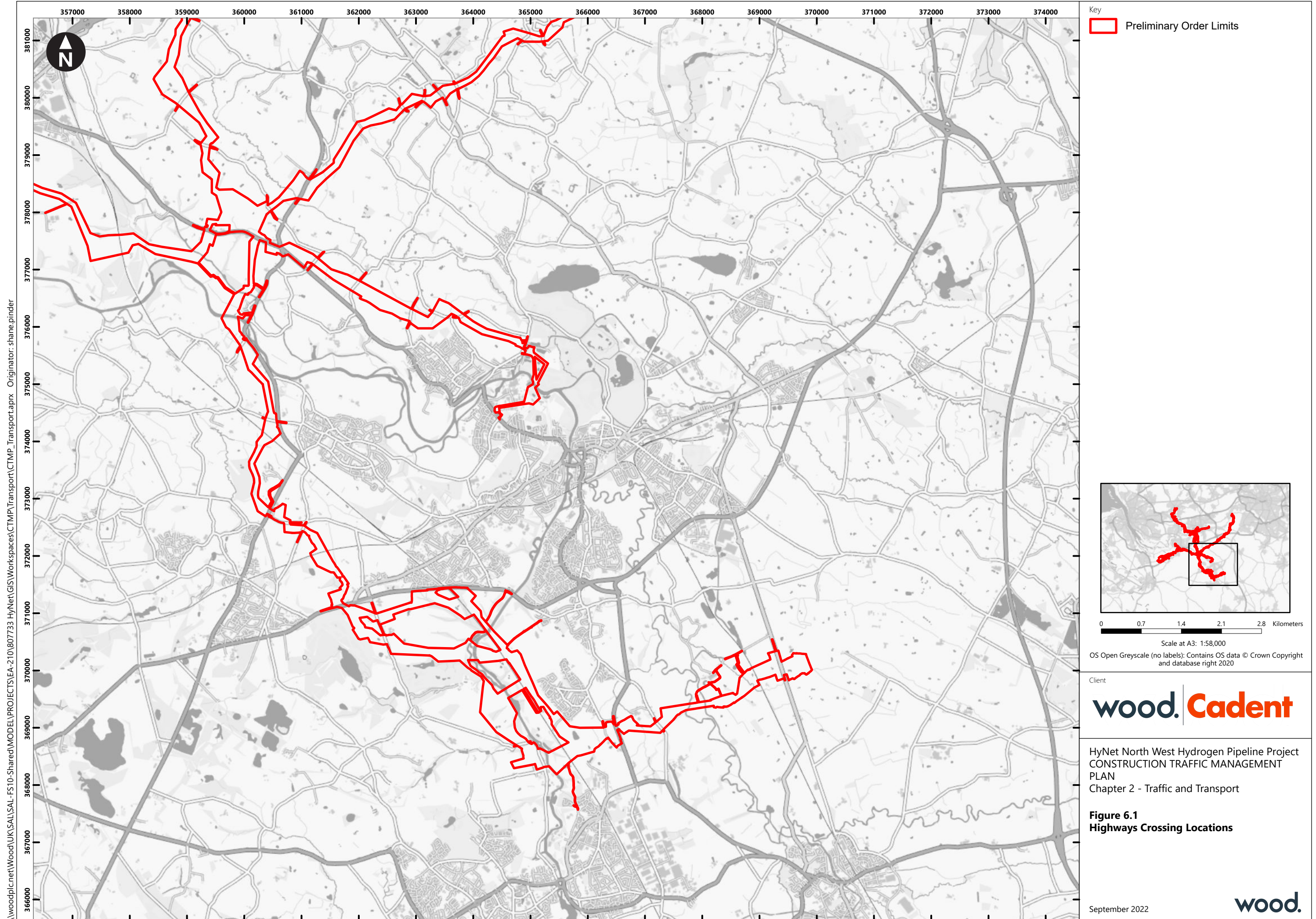
Navigable watercourse crossing schedule

- 6.3.5 All navigable watercourse crossings will be trenchless, which should allow for the continued use of the navigable watercourse during these periods.
- 6.3.6 The preliminary route requires a crossing of navigable waterways at 19 locations, taking into account PEIR route optionality. The 19 locations are shown in **Figure 6.3**.
- 6.3.7 Consultation and engagement with the Canals and River Trust and Peel Holdings/Group will take place to discuss the requirements of the Project up to and beyond DCO application submission.
- 6.3.8 **Table 6.6** provides details on the crossings of navigable waterways.

Table 6.6 Management of Navigable Waterways

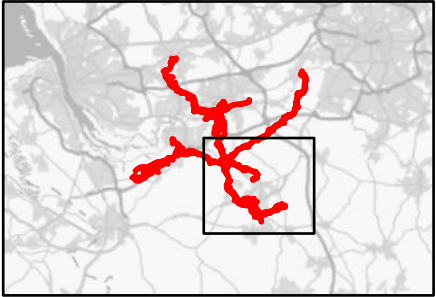
Crossing Point	Corridor	Name Of Navigable Waterway	Management
NW1	West	Weaver Navigation – Canal and River Trust	Trenchless Crossing
NW2	West	Weaver Navigation – Canal and River Trust	Trenchless Crossing
NW3	West	Weaver Navigation – Canal and River Trust	Trenchless Crossing

Crossing Point	Corridor	Name Of Navigable Waterway	Management
NW4	West	Weaver Navigation – Canal and River Trust	Trenchless Crossing
NW5	West	Trent and Mersey Canal – Canal and River Trust	Trenchless Crossing
NW6	South	Trent and Mersey Canal – Canal and River Trust	Trenchless Crossing
NW7	South	River Weaver – Canal and River Trust	Trenchless Crossing
NW8	South	River Weaver – Canal and River Trust	Trenchless Crossing
NW9	South	River Weaver – Canal and River Trust	Trenchless Crossing
NW10	South	River Weaver – Canal and River Trust	Trenchless Crossing
NW11	South	River Weaver – Canal and River Trust	Trenchless Crossing
NW12	South	Trent and Mersey Canal – Canal and River Trust	Trenchless Crossing
NW13	North	Bridgewater Canal – Peel Group	Trenchless Crossing
NW14	North	Bridgewater Canal – Peel Group	Trenchless Crossing
NW15	North	Manchester Ship Canal – Peel Holdings	Trenchless Crossing
NW16	North	Manchester Ship Canal – Peel Holdings	Trenchless Crossing
NW17	East	Bridgewater Canal – Peel Group	Trenchless Crossing
NW18	South	Trent and Mersey Canal – Canal and River Trust	Trenchless Crossing
NW19	South	River Weaver – Canal and River Trust	Trenchless Crossing





Key
Preliminary Order Limits



0 0.7 1.4 2.1 2.8 Kilometers

Scale at A3: 1:58,000
OS Open Greyscale (no labels): Contains OS data © Crown Copyright and database right 2020

Client

wood. Cadent

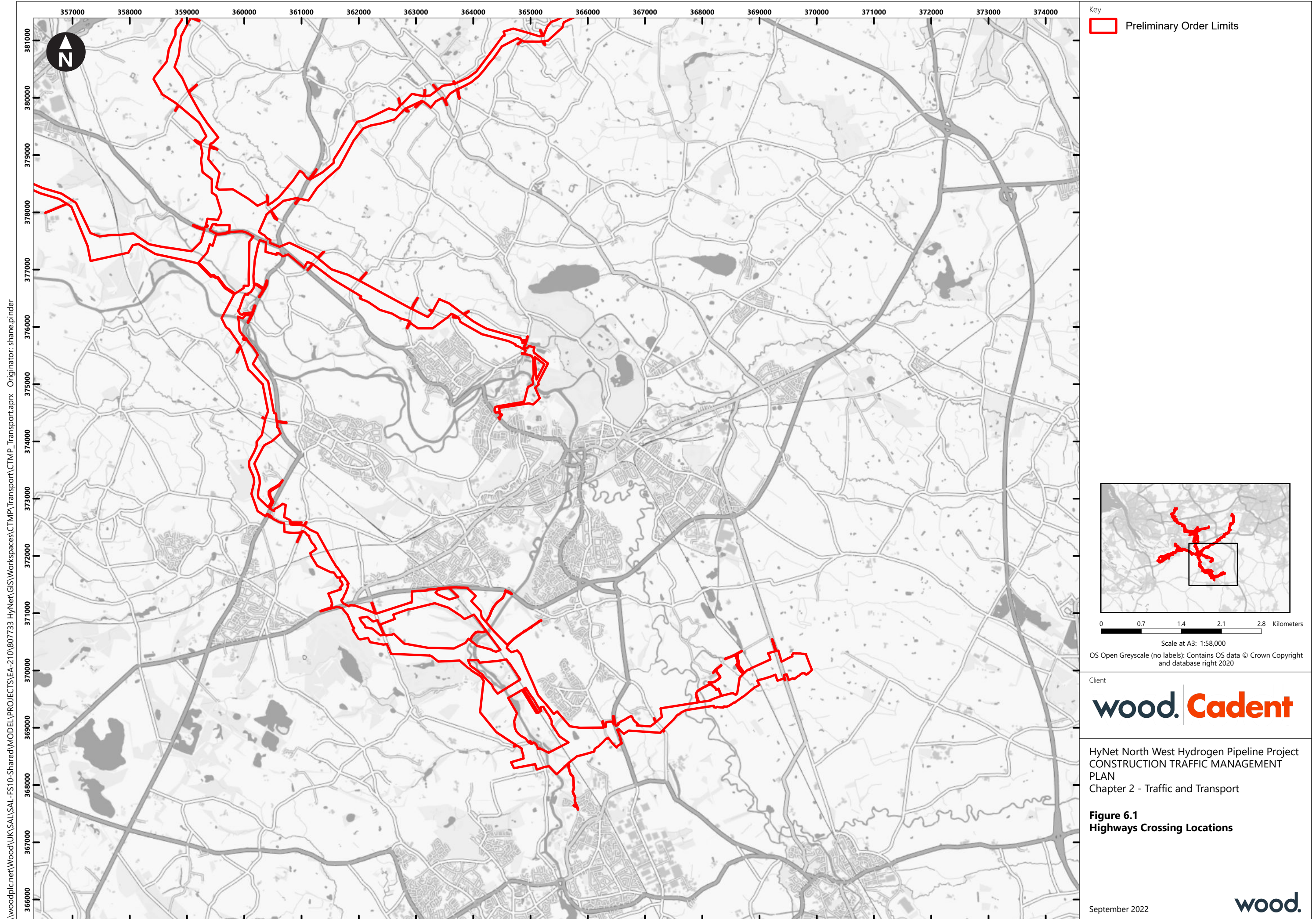
HyNet North West Hydrogen Pipeline Project
CONSTRUCTION TRAFFIC MANAGEMENT
PLAN
Chapter 2 - Traffic and Transport

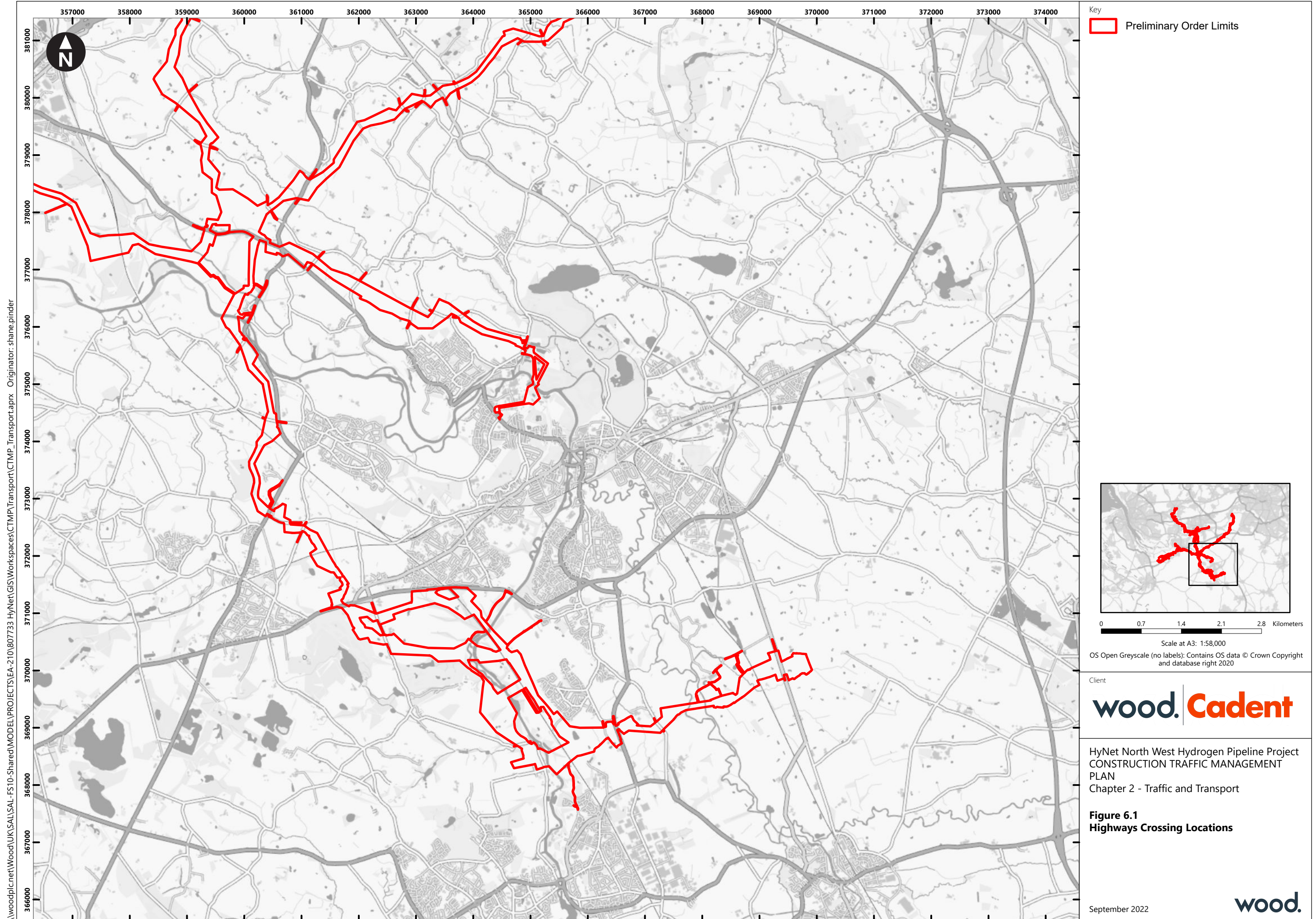
Figure 6.1
Highways Crossing Locations

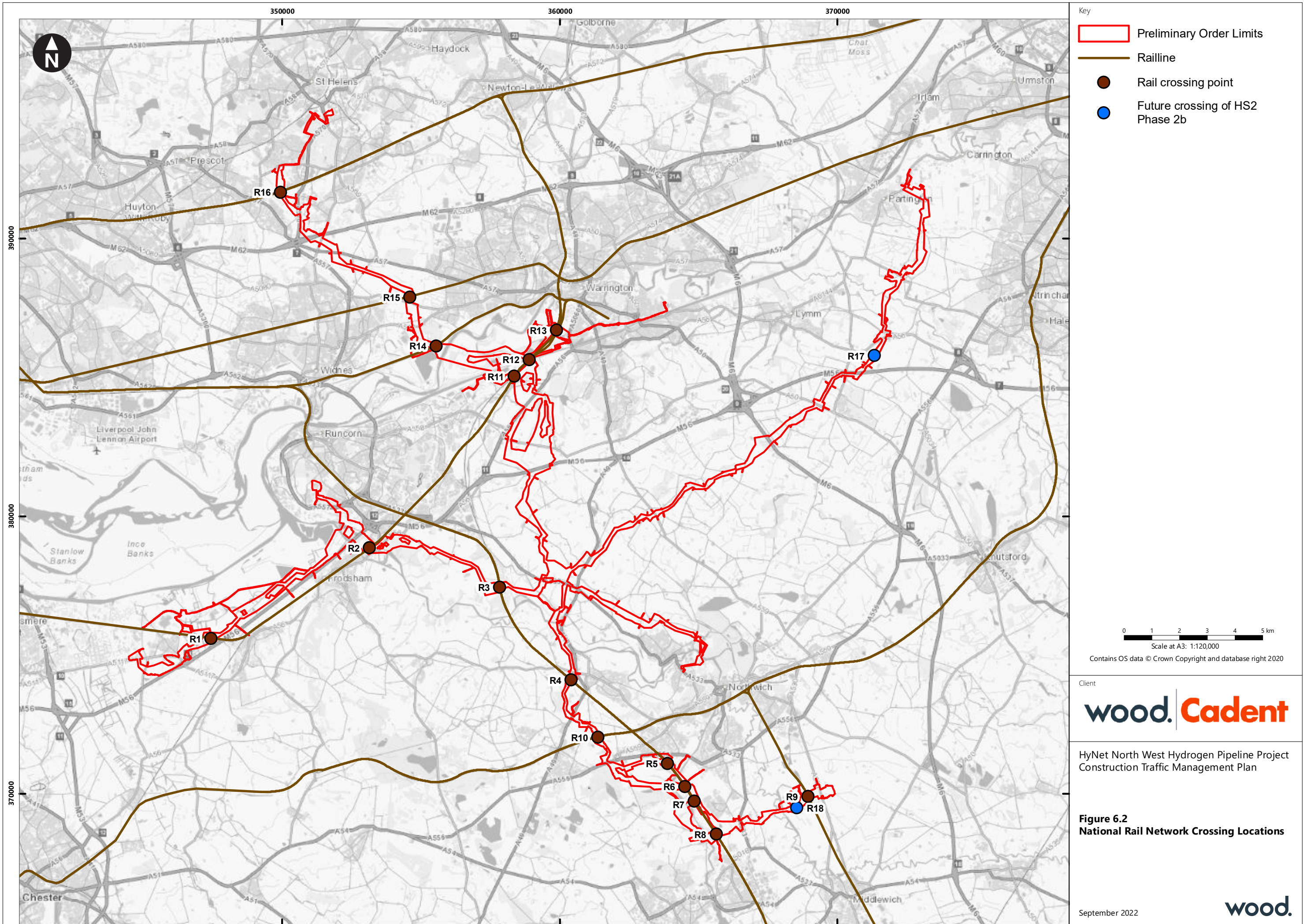
September 2022

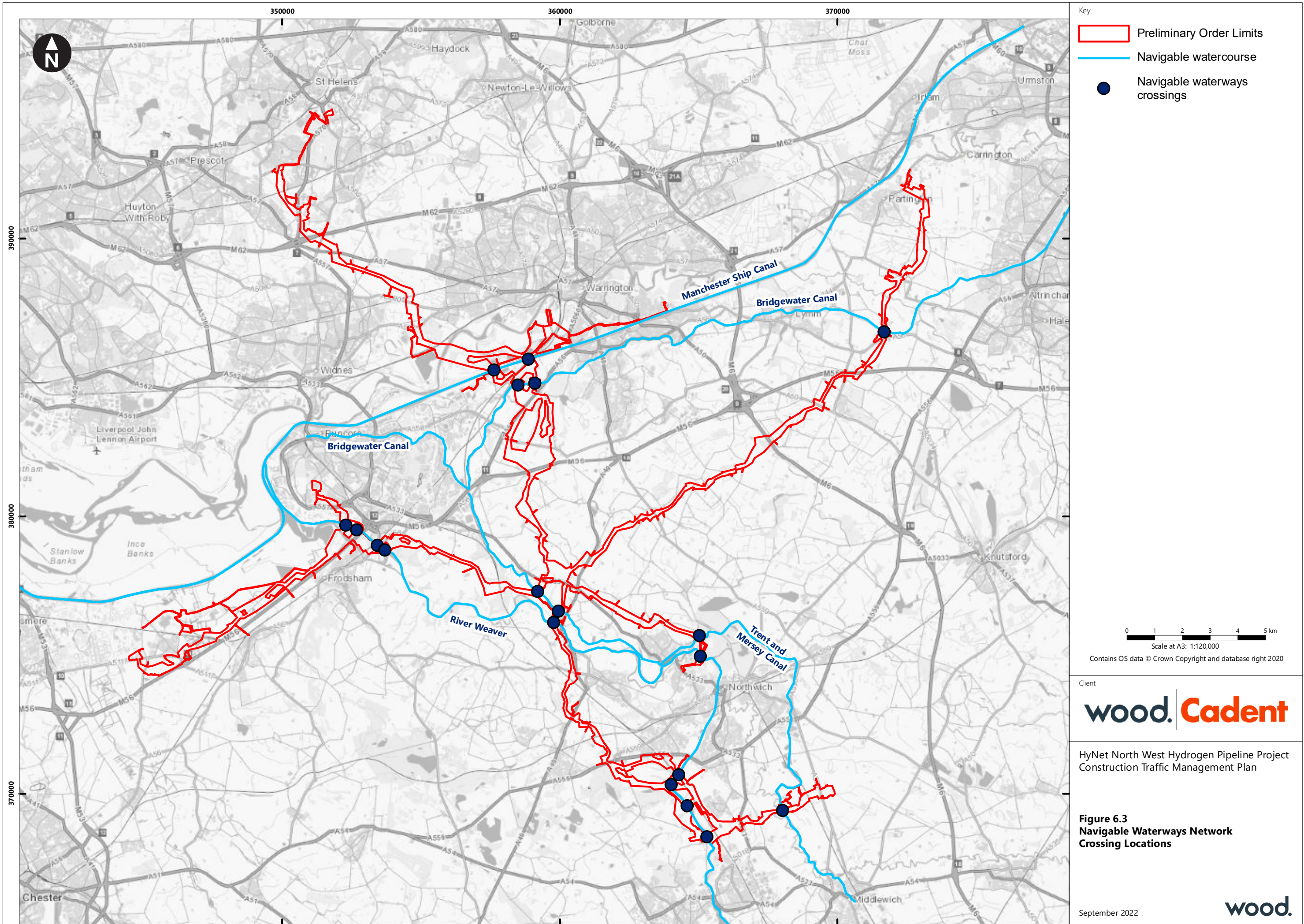
wood.

\\woodplc.net\Wood\UK\SAL\SAL-FS10-Shared\MODEL\PROJECTS\EA-210\807733_HyNet\GIS\Workspaces\CTMP\Transport\CTMP_Transport.aprx Originator: shane.pinder









7. Potential Mitigation Strategies

- 7.1.1 This section of the Preliminary CTMP explains the types of traffic management measures that may be required across the Project to allow for safe and convenient working practices and access to construction sites.
- 7.1.2 Cadent would implement a number of the mitigation measures, as set out below, but discussion with National Highways and the six local highways authorities will be undertaken to inform consideration of detailed traffic management and, if required, road closures and diversions.
- 7.1.3 The proposed traffic related mitigation measures, relating to the construction phase of the Project, are detailed in the following sections. These measures cover site specific issues that will be developed to support the DCO application, as well as general traffic management and mitigation proposals.

7.2 Site Specific Mitigation

Potential road closures and diversions

- 7.2.1 Given the number of crossings of the local highways network there is the potential requirement for some road closures and diversions. It is anticipated that this issue will be discussed with the relevant stakeholders following statutory consultation as the preliminary routes become better defined and options reduced. A review of all the crossings indicates there is a suitable diversion that can be provided.

Locations requiring traffic management

- 7.2.2 Temporary traffic management would be deployed throughout the construction programme at various locations either side of the highway crossings. Construction activities that may require temporary traffic management include but are not limited to:
- proposed access locations;
 - locations where pipe is being laid in the highway;
 - accesses to proposed construction compounds, pipe dumps and HAGI locations; and
 - roads being used for the delivery of materials to the work areas.
- 7.2.3 The type of temporary traffic management deployed would vary and could include temporary traffic signals, manned stop/go boards, road narrowing/widening and temporary speed restrictions.
- 7.2.4 All temporary traffic management implementation plans would need to be approved by National Highways and the six local highway authorities and will be applied in accordance with guidance and procedures set out within Section 14 of the Road Traffic Regulation Act 1984 (as necessary).

- 7.2.5 Temporary traffic management arrangements would be included as part of the detailed design submission for each of the construction sites and compounds, which would also be subject to approval by the relevant highway authority.

7.3 General Construction Traffic Management/Mitigation

Traffic Signage

- 7.3.1 Where traffic management measures are required, these will be agreed in advance with the relevant highway authorities. Any temporary road closures/diversions will be advertised in advance and alternative routes indicated through signage. Where required, temporary speed restrictions may be sought, either through the DCO or by way of Temporary Traffic Regulation Orders (TTRO).
- 7.3.2 Any works within the highway would be reinstated to a standard commensurate prior to the commencement of the works and agreed with National Highways and the six highways authorities where appropriate.

Access route and point signing

- 7.3.3 Temporary signage would be erected along construction traffic routes on the local road network to provide directional routeing information for construction vehicles, to ease navigation between the SRN and the construction sites and compounds.
- 7.3.4 Temporary signage warning other road users of the likely presence of construction vehicles would also be provided in the vicinity of each construction access location.
- 7.3.5 Where necessary warning signs at “short cuts” and “rat runs” would be erected to remind construction LV drivers to utilise the prescribed construction traffic routes.

Access road signage

- 7.3.6 In addition to the above, temporary signage would be erected along the proposed onsite construction access roads where necessary. The signage would provide construction vehicle drivers with information on the distances to construction sites (destinations) and warning (hazard) information related to potential vehicle conflict or pedestrian conflict areas. Further information on the strategy for signage of pedestrian crossing areas is contained within the **Preliminary PRowMP (Appendix 11B)**.

Other signage

- 7.3.7 All signage would be provided in accordance with Traffic Signs Regulations and General Directions (TSRGD) published by the DfT. Signage to be erected includes:
- Traffic warning signs for road closures;
 - Traffic warning signs with contact details of the relevant contractors so the public can request information/updates; and

- Advanced warning signs of road closures.

Core working hours

- 7.3.8 Standard construction working hours would be 10 hours per day (08:00 to 18:00) from Monday to Saturday, with no works on Sundays or Bank Holidays. There may be the need for some extended working hours for certain activities but this would be subject to agreement with the local planning authority.
- 7.3.9 Construction work would take place in accordance with set “construction hours” which will be secured in the DCO within a Code of Construction Practice (CoCP).
- 7.3.10 Except in the case of emergency, any work required to be undertaken outside of the core working hours (not including repairs or maintenance) would be agreed with the highway authorities prior to undertaking the works.
- 7.3.11 Details on exceptions circumstances are set out below in paragraph 7.3.17.

HGV and LV construction vehicle records

- 7.3.12 All HGV and LV construction vehicle movement associated with the Project would be recorded and timed as vehicles enter and leave all TCCs and sites as part of a delivery management system (DMS). DMS records would be compiled and stored centrally so that any complaints received concerning driver/vehicle conduct can be first referenced against the DMS to confirm whether the vehicle in question is associated with the Project. Poor conduct/management by the contractor will be addressed by the Applicant.

HGV emissions

- 7.3.13 All road-based vehicles used in the construction of the Project would be to a EURO standard V class or better.

Banksman or presence of qualified personnel at the access

- 7.3.14 Qualified personnel (banksperson) would be placed at key locations when necessary, during the construction of the Project. Key locations are likely to include construction accesses at key parts of the Project/highways network and at the PRow crossing points during busy periods. Further information on how this process would be managed is contained within the PRowMP. Qualified personnel can, also, be provided at other sensitive locations where conflict with the construction vehicles may arise.

Timing of HGV movements

- 7.3.15 HGV movements associated with the Project would normally take place during the core working hours as set out in **Section 2** of this Preliminary CTMP and for the hour before and after these core working hours due to the distances involved in reaching some of the remote construction sites.
- 7.3.16 A booking system (included in the DMS) would be used to ensure deliveries to the sites are spread across the working day (where feasible). This would minimise the

impact of HGV traffic during the peak periods. The booking schedule would also form part of and inform the monitoring processes of the CTMP.

1.1.2 As part of the mitigation for impacts related to the Project it is proposed to implement some HGV restrictions:

- B5204, Sutton Heath - It is proposed that there would be a Project HGV ban on the B5204 between 08:00 – 09:00 and 15:00 – 16:00 every school day;
- Arley Road, Appleton Thorn - It is proposed that there would be a Project HGV ban on the Arley Road between 08:00 – 09:00 and 15:00 – 16:00 every school day;
- A6114, Partington - It is proposed that there would be a Project HGV ban on the A6114 between 08:00 – 09:00 and 15:00 – 16:00 every school day; and
- New Road, Anderton – It is proposed that there is a Project HGV ban on New Road. The limits of this restriction have not yet been defined and will be agreed following consultation.

Exceptional circumstances

7.3.17 There may be exceptional circumstances when traffic routes on the SRN or the local road network are compromised, which would impact on construction vehicles not being able to use these routes. Exceptional circumstances are defined as one or more of the following:

- where continuous periods of construction work are required, such as concrete pouring or directional drilling, and local highways authorities have been notified prior to such works 72 hours in advance;
- instances where it would be preferable to undertake highway improvement works outside of the key working hours (or overnight) where the traffic flows are minimal;
- as otherwise agreed in writing with relevant highway authorities;
- where a traffic accident or other similar incident on the road network disrupts the normal operation of the highway network or results in a road closure;
- where a breakdown of a LV/HGV enroute to a construction site or compound occurs and then arrives later due to time critical reasons;
- where work is requested to be completed out of hours by highway authorities;
- where there is a need for emergency health and safety requirements (incident);
- where there is a need to implement urgent mitigation activities such as emergency flood prevention works.

7.3.18 In the event of an exceptional circumstance, the following impacts need to be considered with regards to highways and construction safety of the Project:

- Incidents on the road network could result in stoppage (at previously agreed locations) or rescheduling of deliveries;

- Incidents on the road network causing delays, resulting in construction vehicles travelling outside of approved movement hours; and
- Impacts of deliveries not being made, which could have impacts on health and safety due to a lack of equipment or materials or require a stop to construction works leading to delays to construction programme.

Cleaning of vehicles

- 7.3.19 Vehicles exiting from an access bellmouth would be checked and wheels cleaned, if necessary, prior to using the public highway to prevent debris from being transferred off the site onto the road. If required, a road sweeper would be utilised to further ensure that the local road network remains safe and clear of debris. Details of the methodologies for the cleansing of vehicles will be included in the CEMP to be included as part of the DCO submission, and secured via DCO requirement.

Highway condition surveys

- 7.3.20 Highway condition surveys of access points would be undertaken before first use, at intervals during the construction programme and following final use, to ensure that the surface of the highway remains in good repair and highway safety is maintained. The condition survey inspections would also enable any repairs to be made in a timely manner throughout the construction period.
- 7.3.21 At the end of the construction period, the accesses and crossing points shall be inspected and a programme of works to restore them to the condition they were in before the construction period began would be agreed with the relevant local and strategic highway authority.

Delivery management systems

- 7.3.22 The contractor will be required to have a Delivery Management System (DMS) to be agreed with Cadent. The objectives of the DMS will be to:
- Control the delivery of materials and equipment in line with the construction programme;
 - Minimise the number of construction vehicles on the road network (which will be scheduled to meet/adhere to any agreed restrictions); and
 - Ensure construction vehicles do not exceed any agreed restrictions i.e. peak period travelling through certain towns/villages/junctions.

Information packs and communication

- 7.3.23 Information packs will be provided to all contractors which will form part of the contractual agreement between the contractors and applicant. The information pack may contain the details of the following CTMP requirements:
- HGV restrictions;
 - Construction routes;

- Non-compliance guidance;
- Complaints procedure;
- CTMP protocols and indications required for all contractors including a code of good practice;
- Guidance on standard communication procedures between contractors and site; and
- CTMP contacts (emergency and non-emergency).

7.3.24

Information packs and communications details will be shared with relevant highway authorities ahead of any construction works.

8. Management of CTMP and Enforcements

8.1 Introduction

- 8.1.1 It is important that a strong management structure is in place to ensure the Preliminary CTMP objectives are met, and that it is continually monitored and reviewed.
- 8.1.2 A Transport Coordination Officer (TCO) will be appointed by the contractors to implement the CTMP (the CTMP will be approved by the relevant local planning authorities in consultation with all relevant highway authorities via a requirement of the DCO). As several contractors will be appointed to undertake the varying construction works, it is unknown whether one TCO will be required for the entire Project, or each contractor will appoint an individual TCO. This will be agreed as part of the CTMP process and it is likely that a single TCO will be expected to co-ordinate and oversee all TCOs should there be a need for multiple TCOs.
- 8.1.3 The TCO will be employed prior to commencement of the works and will have the following transport related responsibilities:
- monitor contractor obligations under the CTMP;
 - liaise with and report to the local highway authorities and National Highways on mitigation and remedial measures as required;
 - update the CTMP as required; and
 - resolve issues and problems through the liaison with relevant stakeholders.

8.2 Monitoring and review

Monitoring strategy

- 8.2.1 The TCOs appointed by the contractors will undertake monitoring as necessary to ensure compliance with the requirements of the CTMP and this will include the maintenance of records of the traffic management measures that have been implemented.

Review

- 8.2.2 The TCO will monitor and review the CTMP. These reviews are required to ensure that the CTMP delivers on the commitments and achieves the agreed goals as set out in this document.

Compliance

- 8.2.3 As part of the CTMP, a series of mechanisms will be established to provide all parties with a clear understanding of the enforcement procedures that will be

applied if the requirements contained within this CTMP are not achieved. It is anticipated that these mechanisms will be determined prior to construction and will include:

- Risk Assessment Method Statement (RAMS) procedures – The Contractor, through the TCO, will implement the CTMP, adhere to the requirements and meet the goals through management practices. This will include site inductions for contractors, briefing on the obligations of the Cadent standards, induction and adherence to RAMS procedures, DMS briefing, driver inductions and compliance guidance.
- Contractual conditions – to be employed as part of the CTMP compliance methodology and will be built into the Contractors' contract, this will be subject to a performance review by Cadent.
- Actions – To be employed if the commitments of the CTMP are breached.

Enforcement and corrective measures

- 8.2.4 The Applicant will ensure that appropriate measures are taken to ensure contractor behaviour and performance is monitored and where appropriate corrective measures are taken to resolve, redress and enhance service performance, which is in breach of the standard within the CTMP.
- 8.2.5 The Applicant will require that the appointed contractor's disciplinary procedures incorporate the Project commitments, including this Preliminary CTMP, and these items are reflected in the contract between Cadent and the relevant contractor. Cadent has the power to remove person(s) should it be required and deemed appropriate.

HyNet North West Hydrogen Pipeline

Delivering clean growth

Cadent
Your Gas Network