



ODYSSEY

DEVELOPING JOURNEYS

**CNG FUELLING FACILITY, WATLING
STREET, HINCKLEY, LE10 3ED**

TRANSPORT STATEMENT



**CNG FUELLING FACILITY, WATLING STREET, HINCKLEY, LE10
3ED**

**TRANSPORT STATEMENT
ON BEHALF OF CNG FUELS LIMITED**

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1.0 INTRODUCTION

1.1 *General*

1.1.1 This Transport Statement (TS) has been prepared by Odyssey as part of a planning application on behalf of CNG Fuels Limited, hereafter referred to as “CNG”. This TS examines highways and transport matters associated with the proposed development of a bio-gas vehicle fuelling facility on land to the south of the A5 Watling Street, Hinckley.

1.1.2 The site is located south of the A5 Watling Street, west of an existing BP petrol filling station and approximately 200 metres (m) from the Watling Street / Hammonds Way roundabout. **Figure 1** shows the site location.

1.1.3 The site lies in the administrative boundary of Hinckley and Bosworth Borough Council (HBBC) who act as the local planning authority while Leicestershire County Council (LCC) are the local highway authority. The A5 itself is however part of the Strategic Road Network (SRN) managed by National Highways (NH). The site is also situated closed to the boundary of Warwickshire County Council (WCC).

1.1.4 CNG already operates several environmentally friendly, bio-gas heavy goods vehicles (HGVs) refuelling stations in a network across the UK. The proposed facility would primarily serve vehicles associated with the existing distribution units located nearby; the majority of CNG’s clients are distribution and logistics firms.

1.1.5 Vehicles that utilise the bio-compressed natural gas fuel source see a 90% reduction in carbon dioxide emissions, up to a 75% reduction in nitrogen oxide emissions, and a circa 50% reduction in noise pollution, compared to traditional diesel-based power generation. Therefore, swapping existing vehicles to this new more environmentally friendly fuel source is a positive step in reducing emissions from the distribution and logistics sector.

1.1.6 This TS considers the suitability of the development proposals in respect of transport policy, site access, operation and vehicle trip generation. The potential impact of the development on the surrounding transport network is also considered.

1.2 *Pre-Application Scoping*

1.2.1 Prior to the preparation of this TS, a Transport Pre-Application Scoping Note was prepared and sent to NH for review and comment. This Scoping Note is included in **Appendix A** with NH’s response contained in **Appendix B**.



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1.2.2 The same Transport Pre-Application Scoping Note was also sent to LCC for review and comment, whose feedback is also included in **Appendix C**.

1.2.3 The matters raised by NH and LCC have been responded to within the TS.

1.3 Scope of Assessment

1.3.1 The content of this TS is as follows:

- **Section 2.0** considers national and local planning policy.
- **Section 3.0** includes the site description as well as reviewing the existing highway and transport conditions in the vicinity of the site, incorporating a brief summary of access to sustainable transport.
- **Section 4.0** provides a description of the development proposals, access to the site and operation.
- **Section 5.0** provides an analysis of the estimated development vehicle trips.



2.0 POLICY

2.1 *General*

2.1.1 This section sets out the relevant national and local planning policy relevant to the delivery of the development proposals.

2.2 *National Policy*

National Planning Policy Framework - July 2021

2.2.1 The National Planning Policy Framework (NPPF), first published in March 2012 and most recently updated in July 2021, provides a structure for development within the UK, with a presumption in favour of sustainable development and the promotion of economic growth.

2.2.2 The NPPF sets out in paragraph 110 that:

“In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) appropriate opportunities to promote sustainable transport modes can be – or have been taken up, given the type of development and its’ location.*
- b) safe and suitable access to the site can be achieved for all users.*
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance including the National Design Guide and the National Model Design Code; and*
- d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”*

2.2.3 Paragraphs 111 to 113 of the NPPF state that:

111. *“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”*

112. *“Within this context, applications for development should:*



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- a) *give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use.*
- b) *address the needs of people with disabilities and reduced mobility in relation to all modes of transport.*
- c) *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards.*
- d) *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- e) *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.”*

113. *“All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”*

Department for Transport Circular 01/2022

2.2.4 The Department for Transport (DfT) Circular 01/2022 ‘*Strategic Road Network and the delivery of sustainable development*’ sets out policy in relation to the SRN of which the A5 Watling Street forms part. This policy paper explains how NH will engage with the planning system and fulfil its remit to be a delivery partner for sustainable economic growth whilst maintaining, managing and operating a safe and efficient strategic road network.

2.2.5 It is the aim of Circular 01/2022 to also address the requirements for roadside facilities, including HGV driver services and new provisions for zero emissions vehicles.

2.3 Local Policy

Hinckley & Bosworth Borough Council Core Strategy DPD 2009

2.3.1 The Hinckley & Bosworth Borough Council Core Strategy DPD [Development Plan Document] 2009 makes up a part of HBBC’s Local Plan. Of relevance to the proposed development ‘Spatial Objective 12: Climate Change and Resource Efficiency’ states:



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“To minimise the impacts of climate change by promoting the prudent use of resources through sustainable patterns of development, investment in green infrastructure, minimising the use of resources and energy, increasing reuse and recycling of natural resources, increasing the use of renewable energy technologies and minimising pollution, including greenhouse gas emissions.”

Site Allocations and Development Management Policies DPD July 2016

2.3.2 Similarly, the above DPD also forms part of the HBBC Local Plan. Policy ‘DM2 Delivering Renewable Energy and Low Carbon Development’ states:

“The Borough Council is committed to reducing its environmental impact through carbon reduction measures and through the support of appropriately designed and sited renewable energy and low carbon developments.

Planning applications for the development of renewable energy and low carbon development installations at the domestic, community and commercial scales will be supported where:

- a) All reasonable steps have been taken to avoid or mitigate any adverse impacts including, but not limited to, landscape, noise, visual and cumulative impacts; and*
- b) The proposed development accords with other policies of this plan, with specific regard to DM11 and DM12.*

The impact of ancillary structures included as part of the proposed scheme will also be assessed.

Community-led renewable energy schemes for low carbon developments which can demonstrate direct community benefit will be encouraged.”

2.3.3 In respect of Air Quality the DPD states:

“13.55: Air pollution is the release of greenhouse gas and other emissions, dust, fumes, odours and particulates being released into the atmosphere resulting in adverse impacts on health, amenity and the natural environment. Impacts can arise from construction, demolition and site works, related transport movements and industrial processes. Applicants will be required to demonstrate that new development should not result in adverse impacts, including cumulative impacts upon air quality. Appropriate construction design and mitigation measures, appropriate distances and screening between developments and sensitive uses will protect the amenity of residents and workers and the environment.”



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2.3.4 Policy 'BE1: Design and Siting of Development' states:

"14.5: Facilities for charging plug-in and other ultra-low emission vehicles should be maximised in line with national planning policy."

2.3.5 Policy 'DM17 Highways and Transportation' states:

"Development proposals will be supported where they:

a) Seek to make the best use of existing public transport services and, where appropriate, provide opportunities for improving and sustaining the viability of those services;

d) That the development is located where the need to travel will be minimised and the use of sustainable transport modes can be maximised."

2.4 Planning Policy Summary

2.4.1 Based on the review of national and local planning policy, it is considered the site is compliant with relevant planning policy. The fuel used by CNG is sourced from food, animal and water waste and so provides a sustainable alternative to normal diesel in terms of emissions, noise pollution and cost. Further to this the nature of the site on a strategically important road, near distribution hubs, means that trips associated with the development would be diverted and not generated, as will be demonstrated by this Transport Statement.



3.0 EXISTING CONDITIONS AND SUSTAINABLE TRANSPORT

3.1 *Site Location and Context*

3.1.1 The site is situated southwest of and is proposed to be connected to, the A5 Watling Street. The site is approximately 2.5 kilometres (km) southwest of Hinckley town centre and is located adjacent to an existing BP petrol filling station. It is located on greenfield land, with agricultural land to the south and west. Beyond the A5 to the east and north lies existing industrial and distribution uses.

3.1.2 It is noted that a railway bridge passes over the A5 approximately 160m to the north-west of the site, with a height restriction of 4.6m. It is further noted however that existing HGV fleets already use the A5 and pass under this bridge, which can accommodate typical HGV heights of 4.5m and under.

3.1.3 A nearby planning application (HBBC ref. 21/01191/HYB) some 500m east of the site proposes a *'hybrid application comprising outline application (all matters reserved except for site access from the A5) for the demolition of existing structures and the erection of distribution and industrial buildings (use class B2 and B8) including ancillary offices and associated earthworks, infrastructure and landscaping; a full application for the development of a distribution building (use class B8), and landscaping. The proposals include improvements to increase the height clearance of the existing railway bridge on the A5 Watling Street. A cross boundary application with Rugby Borough Council and Nuneaton and Bedworth Borough Council (EIA development)'*.

3.1.4 The 21/01191/HYB planning application proposes to lower the level of the A5 carriageway under the existing railway bridge to increase the available space between the carriageway surface and the railway bridge, to help alleviate the potential risk of bridge strikes.

3.1.5 The CNG proposal does not rely on the bridge works proposed as part of the 21/01191/HYB application being implemented.

3.2 *Local Highway Network*

A5 Watling Street

3.2.1 The site is located immediately to the south of the A5 Watling Street. The A5 is a two-way designated trunk road running in a north-west to south-east orientation with a 50 mile per hour (mph) speed restriction. It is lit along its length and provides access along the southern edge of Hinckley as well as further afield including connection south-east to Junction 1 of the M69 and north-west to



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Junction 10 of the M42. **Photographs 3.1** and **3.2** below show the A5 in each direction in the vicinity of the site. These photographs show the existing footway located on the north-eastern side of the road which is provided between the railway bridge to the north and the wider footway network emanating from the A5 / Hammonds Way roundabout.

Photograph 3.1: View South East on The A5 from the Site Frontage





Photograph 3.2: View North West on The A5 from the Site Frontage



M69 and M42

3.2.2 The M69 is a major strategic route providing connections between the M6 at Coventry and the M1 at Leicester. The M69 runs in a northeast – southwest orientation circa 3km to the south of the site.

3.2.3 The M42 is a major strategic route connecting the M5 (from south of Birmingham) to the A42, in the East Midlands, leading towards Nottingham. The M42 runs in a northeast – southwest orientation circa 20km to the north of the site.

3.3 Highway Safety

3.3.1 Road Traffic Collision (RTC) data has been obtained from Leicestershire Police for the most recently available five-year period at the time of request. **Figure 2** shows the collisions labelled on a map with slight or serious collisions shown.

3.3.2 Seven slight accidents have occurred as well as three serious; **Table 3.1** summarises the relevant information, whilst **Appendix D** contains the source data.

**Table 3.1: Road Traffic Collision Data (Filtered for the A5 and associated roundabouts)**

Police Reference	Location	Vehicles/People Involved	Description	Severity
201900005	Dodwells Roundabout	3 cars, 1 goods vehicle	2 vehicles go through red light and goods vehicle collides with them	Slight
201901533	A5, outside Paynes Ford Garage	2 cars	No description available	Slight
201900478	A5, coming onto Dodwells Roundabout	2 cars	Vehicle goes through red light and other vehicle collides with them	Slight
201900601	Dodwells Roundabout	1 goods vehicle	Goods vehicle enters roundabout, loses control and overturns	Serious
201900793	Dodwells Roundabout	3 cars	Vehicle 1 unable to break sufficiently and collides with rear of vehicle 2 which then collides with rear of vehicle 3	Slight
201900787	A5 Railway Bridge	1 goods vehicle	Goods vehicle becomes wedged under railway bridge	Serious
20201143	A5, exact location unknown	4 cars and 1 goods vehicle	Report not received	Slight
202200434	A5 Railway Bridge	1 goods vehicle	Goods vehicle collides with bridge roof	Slight
202200964	A5, 150m SE from Railway Bridge	2 cars	Vehicle 1 fails to break sufficiently due to slippery road and collides with vehicle 2	Slight
20221036	Dodwells Roundabout	1 motorcycle and 1 goods vehicle	Goods vehicle indicated left but did not turn and collides with motorcycle	Slight

3.3.3 As presented in **Table 3.1**, within the past five years, all incidents occurring in the proximity of the site have involved motorised vehicles. Six incidents involved goods vehicles.

3.3.4 It is considered that the fault of multiple of these collisions owes to driver error, vehicle mechanical failure or icy conditions and therefore not the design of the road itself.

3.3.5 Whilst two of the recorded accidents involved HGVs striking the railway bridge, it should be noted that the proposed development is designed to cater for existing HGVs travelling along this section of the A5 and would not therefore generate any new dedicated HGV trips. It is considered therefore that the proposed development would not lead to a worsening of road safety conditions in the vicinity of the site. Additionally, it is considered that whilst the proposals (by others) to alter the A5 carriageway under the railway bridge would increase general highway safety, the proposed CNG development is not reliant on this.



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3.3.6 Additionally, contrary to LCC's raised concerns for the development proposals proximity to the railway bridge and potential conflict between HGV's and the railway bridge; the relatively infrequent nature of the incidents as shown in **Table 3.1** indicates that the low bridge does not pose an issue to the majority of HGV's, which are between 4m and 4.5m high.

3.3.7 The relatively infrequent nature of incidents on the A5, just an average of two accidents per year, demonstrates the relative safety of the A5, especially considering the role of the A5 as an important strategic road.

3.4 Access to Public Transport

3.4.1 Due to the nature of the proposed development as an HGV refuelling station, it is not expected that the development will generate any public transport trips. Notwithstanding this the availability of public transport options have been outlined.

Bus

3.4.2 The nearest bus stop to the site is the Nutts Lane bus stop, which is located on Coventry Road just east of the Coventry Road / Nutts Lane junction, approximately 1km or a 12-minute walk from the site. The stop is served by the 148 and 158 bus services.

3.4.3 The 148 bus service is operated by Stagecoach, and links Leicester to Coventry via Hinckley and Nuneaton. The 158 is operated by Arriva Fox County and links Leicester, Hinckley and Nuneaton along the same route as the 148. The timetables of the two routes are co-ordinated such that they operate at a typical 15-minute frequency.



4.0 PROPOSED DEVELOPMENT

4.1 *Overview*

4.1.1 The proposed development would consist of dispensing pumps that would provide bio-gas vehicle fuel, with associated parking and infrastructure. Access to the site would be provided by a new ghost island right turn lane junction on the A5 Watling Street. The proposed site layout plan is attached at **Appendix E**.

4.1.2 The proposed site layout would include twelve dispensing pumps in six rows of two. Five vehicle parking spaces are proposed on the site, three at the eastern and two at the western sides of the site, all of which would be used on an ad-hoc basis by occasional maintenance vehicles. These would be provided as per the standards within part 3 of the interim Leicestershire Highways Design Guide (LHDG).

4.1.3 Additionally, four HGV maintenance bays would also be located on-site and would be shut and locked when not in use for maintenance. This would be dependent on the requirement to visit the site for repairs and / or servicing. It is not anticipated that a permanent staff presence would be necessary, as is the case for existing operational CNG sites. These trailer bays would not be required during normal operation, nor for day-to-day vehicle manoeuvring.

4.1.4 The proposed site location is considered to be appropriate for this type of land use given the existing industrial and distribution uses located within close proximity, together with its location on the SRN.

4.1.5 As per the Pre-Application Scoping, NH noted that the site should be compliant with DfT Circular 02/2013, whereby no water runoff that may arise due to any change of use will be accepted into the highway drainage systems. Further information relating to the site drainage strategy are set out within the Flood Risk Assessment/ Surface Water Drainage Strategy prepared by Thomas Consulting which accompanies the planning submission.

4.2 *Access*

4.2.1 It is proposed that the site would be accessed via a priority junction on the A5 Watling Street. The location of the proposed access is shown in **Photo 4.1** below, and the location of the existing field access onto the A5 is shown in **Photo 4.2** below.



Photograph 4.1: Location of Proposed Access onto the A5 (looking south)



Photograph 4.2: Location of Existing Field Access onto the A5



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4.2.2 It is proposed that eastbound vehicles would access the site via a ghost-island right-turn lane arrangement. This ghost island junction would allow through traffic on the A5 to be unimpeded by vehicles associated with the CNG facility.

4.2.3 **Drawing 22-240-001** shows the proposed right turn lane arrangement. The proposals show 3.15m wide running lanes and a 3.65m right turn lane. The right turn lane is 0.5m wider than the running lanes to allow the HGV additional space to turn without the vehicle impeding the eastbound running lane.

4.2.4 It is proposed that all the widening would occur on the southern, site-side, of the A5, with the northern kerb to remain untouched. The proposed access would tie into the existing kerbs to the east and west of the site.

4.2.5 The proposed access junction has been designed in compliance with the guidance set out in CD123 of the DMRB. The Pre-Application Scoping note submitted to NH showed a 'one step below' approach, as per CD109. However, in response to the comments made by NH, the proposals within this TS have been designed to CD123 standards without any deviations from standards required.

4.2.6 On this basis, the taper length would be based on a ratio of 1:25, or 90m long, and the deceleration length of the right turn lane would be 55m in length. In addition to this, an extra 17m of queuing length would be provided in order to accommodate two waiting HGVs, and the proprietary 10m turning length within the right turn lane would also be provided.

4.2.7 4.5m x 160m visibility splays are achievable from the proposed access in either direction commensurate with the 50mph speed limit. To the west, the visibility splay is offset 1m from kerb in order to demonstrate clearance of the railway bridge abutments. This is considered to be acceptable as the visibility splay to the west is to the westbound lane, which is not oncoming traffic. Additionally, the low bridge acts as a minor speed deterrent and as such, vehicles are unlikely to attempt an overtake manoeuvre under the bridge.

4.2.8 The visibility splay to the east crosses the existing egress for the adjacent BP petrol filling station, around 100m east of the proposed site. NH previously raised concern about the visibility splays from the proposed site crossing the existing egress. However, investigation of the existing situation has found that the growth of the hedgerow on the southern side of the A5 currently restricts visibility from the BP fuel station to significantly less than 4.5m x 160m. The proposed development would enable restoration of the full 4.5m x 160m visibility splay by a programme of roadside vegetation maintenance.

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4.2.9 Additionally, as the vehicles exiting the proposed CNG site are HGVs, the height of the visibility splay is also a factor that needs to be considered. The average HGV driver sits over 2m off the ground in the cab, with an average eye height of approximately 2.5m above the ground. Therefore, it is considered that the proposed 160m visibility sight line is sufficient for the HGV driver to look past egressing vehicles from BP fuel station and see oncoming vehicles on the A5, should the two vehicles be egressing at the same time. It is also important to note that should visibility not be clear; the HGV would not egress the site and would wait at the egress until the driver is satisfied that there is sufficiently clear visibility allow them to pull out. For the avoidance of doubt, the full 4.5m x 160m visibility splay to the right is achievable within the proposed development site and available public highway.

4.2.10 **Drawing 22-240-001** shows the known highway boundary as published online by NH. As shown, the proposed access / egress design is within NH controlled land or applicant-controlled land and thus no third-party land is required.

4.2.11 As shown on **Drawing 22-240-001**, the proposed access design would tie into the existing road markings to the east and west of the site. As detailed previously, nearby planning application (HBBC ref. 21/01191/HYB) is proposing to alter the A5 carriageway to the west of the site, lowering the carriageway level under the railway bridge. It is not anticipated that this will impact the proposals within this application, and any level changes will be dealt with at the detailed design stage.

4.2.12 Additionally, in order to alert HGV drivers refuelling at the proposed CNG site, it is proposed to implement signage to TSRGD standards within the site indicating that there is a height restriction on the bridge to the west (left). TSRGD Diagram 818.4 would show the clearance height of the bridge and would be placed on a signpost by the egress. This would enable drivers of vehicles in excess of the height limit to avoid the bridge. The location of the proposed signage is shown on **Drawing 22-240-001**.

4.2.13 **Drawing 22-240-002** shows swept path analysis of an articulated vehicle using the proposed site access junction in each direction. As this drawing shows, the proposed right turn lane provides sufficient width for an HGV to turn into the site using the right turn lane only. Adequate turning space would also be provided for an articulated lorry to turn left out of the site without overrunning the right turn lane.

4.2.14 Swept path analysis of the proposed internal site layout is shown on **Drawing 22-240-003**. As this drawing shows, the site layout is suitable for an articulated vehicle to access the pumps and to park in the HGV maintenance bays.



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4.2.15 No gates or barriers would be required at the access / egress as each dispenser pump would be operated with a fob system linked to the CNG head office, therefore there is no likelihood of a build-up of vehicles waiting to enter the site.

4.2.16 The site would be unmanned, except for occasional maintenance, but with all necessary CCTV and lighting as is common with existing operational CNG sites.

4.2.17 Similar to other comparable CNG sites, the vehicle trips associated with the proposed development are anticipated to be spread across the day, with the majority being linked or minor diverted trips from the surrounding road network, refer **Section 5.0**. As such the proposed development is not expected to add materially to the existing peak period traffic on the surrounding highway network.

4.2.18 It is considered, given the proposed access / egress arrangements, the proximity to the SRN (A5), the expectation of a high proportion of linked vehicle trips, and the 24/7 nature of the proposals, that the proposed development would not have a material impact on the local highway network, including during the peak periods.

4.2.19 NH noted that the position of the highway boundary and the site boundary appeared to be incorrect in their Pre-App response document. The Applicant can confirm that the site boundary shown is correct, and that the highway boundary was sourced from NH's own website and is therefore believed to be accurate. Any hedgerow or other obstructions in the visibility splay would be removed by the Applicant to ensure a complete visibility splay could be achieved.

4.3 Operational Management

4.3.1 The proposed development would operate over a 24-hour period, seven days a week. This is due to the continuous supply chain of the distribution and logistics industry, and the aspiration to limit / spread the impact of the HGVs visiting the development over a wide period.

4.3.2 It has been demonstrated through swept path analysis that the site layout can safely accommodate multiple HGV's using the pumps. CNG Fuels are keen to avoid any waiting of vehicles for refuelling, hence the number of pumps is a robust provision. It is considered that the demand would be such that the provision of twelve pumps would allow a reasonable level of operational resilience for unexpected demand during a short period, or for pump maintenance / repair. It is not anticipated that there would be a significant dwell time on site, and therefore there should be no cause for vehicles to queue within the site or onto the A5; as set out in **Section 5.0** the demand per pump is effectively circa one HGV per hour.



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4.3.3 Vehicles permitted to use the development for fuelling would be fitted with fobs which would allow refuelling via the pumping units, allowing only permitted HGVs to use the pumps, whilst not restricting access to the site itself. In the unlikely case of a vehicle arriving at the site in error, they would still be able to access the development and turn clear of the A5 within the site, before egressing in a forward gear.

4.3.4 It is noted that all vehicles anticipated refuelling locations would be tracked to estimate fuel demand, pump demand, and the anticipated number of vehicles that would require refuelling over a given period. The site would be well located for vehicles arriving and departing from the nearby industrial and commercial units.

4.3.5 It is not anticipated that there would be any vehicle conflicts on site. As shown in the site layout and swept path analysis drawings within this TS, the proposed site allows for sufficient space for stop/start/reversing manoeuvres. Should a vehicle be manoeuvring on site, such as reversing into the maintenance bays while another HGV wishes to access the site, there is sufficient space within the proposed site for the HGV to wait without causing any blocking issues onto the A5.

4.3.6 It is noted in the Pre-Application response that LCC raised a concern over the site being used as a rest stop for HGVs. The Applicant does not permit any HGVs to use the site as a rest stop, only as a refuelling centre. This would be monitored by the on-site CCTV system. As such, no parking area is proposed and signage indicating as such will be installed, similarly, no driver welfare facilities offered e.g., toilets, cafes, or seating are proposed on site. Specific HGV rest stops are available on the A5 should HGV drivers need to stop for breaks.

4.3.7 As mentioned previously, space will be provided on site to allow vehicles who wrongly enter the site to turn around and egress the site.



5.0 TRIP GENERATION

5.1 *General*

5.1.1 As a result of its unique use as a bio-gas fuelling facility, vehicle trips for the development have been estimated based on a “first principles” assessment using existing data for an operational CNG fuelling facility in Warrington. The methodology is similar in process to a TRICS assessment. This approach, in Odyssey’s view, is a more accurate representation of the impact of this development than a purely theoretical capacity approach, which may not be realised in practice.

5.1.2 This methodology is considered to provide the most accurate and robust assessment of the potential trip attraction for the proposed development, and a similar assessment has been undertaken successfully for other existing and forthcoming (approved) CNG Fuels developments.

5.2 *Trip Generation – Proposed Use*

5.2.1 The ‘first principles’ trip assessment uses existing operational site arrival data to derive the potential trips that could arise from the proposed Hinckley site. On this basis, the arrival data for CNG Warrington from a typical week in March 2022 has been used as a baseline. CNG Warrington has similar characteristics to the proposed Hinckley site, including its location near existing logistics / distributions and industrial uses, and being located close to the SRN.

5.2.2 LCC commented in their Pre-App response about the Warrington site not opening onto the SRN. While this is correct, the Warrington site remains as one of the largest operational CNG sites and therefore experiences a high level of demand. Accordingly, use of the CNG Warrington data is considered to provide a robust trip assessment.

5.2.3 The location of the development site being on the SRN is not overly significant, as the site is anticipated to attract the same number of trips whether or not it is located on the SRN. The proposed site access and ghost island right turn lane has been designed to provide stacking space for two HGV’s on the A5 should they arrive together, however this is not considered to be a likely occurrence.

5.2.4 The Warrington arrival data is included for reference at **Appendix F**. The arrival per hour data has been averaged for the weekday periods, when CNG fuels, and the local highway network demand is typically higher, with weekend data discounted; this allows for a robust assessment when deriving a “trip-per-hour” rate.



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5.2.5 The average trip rates shown below in **Table 5.1** provides an indication of the anticipated number of trips to the site throughout the day, with the AM and PM peak periods highlighted for clarity.

Table 5.1: Watling Street, Hinckley – Estimated Hourly Demand (Twelve Pumps)

Time Start	Time End	Average Arrival Per Hour (weekday) Hinckley – 12 Pumps
0000	0100	15
0100	0200	11
0200	0300	8
0300	0400	7
0400	0500	8
0500	0600	9
0600	0700	6
0700	0800	7
0800	0900	9
0900	1000	10
1000	1100	10
1100	1200	7
1200	1300	7
1300	1400	8
1400	1500	6
1500	1600	14
1600	1700	11
1700	1800	11
1800	1900	15
1900	2000	12
2000	2100	15
2100	2200	13
2200	2300	12
2300	0000	14

5.2.6 It is demonstrated within **Table 5.1** that the proposed total of twelve pumps would attract circa 18 two-way movements (nine arrivals and nine departures) in the AM peak period, and circa 22 two-way movements in the PM peak period. This level of trips is not expected to cause any material impact on the surrounding highway network.

5.2.7 Additionally, the site is anticipated to see a peak hourly arrival figure of 15 HGV's. This equates to around 1 HGV every 4 minutes. It is therefore not anticipated that there would be any blocking back onto the A5 due to HGVs waiting to access the site. Should two HGVs arrive together however, the right turn lane has been designed to accommodate them.



5.3 Junction Capacity Assessment

5.3.1 In light of LCC's comment about the location of the site accessing onto the A5, a PICADY junction assessment has been undertaken. The localised traffic model has been prepared to show the forecast performance/ capacity of the junction and highlight if there are any potential issues.

Data Collection Methodology

5.3.2 The assessment of the proposed junction involved sourcing traffic count data to use as a basis. Traffic flow data was sourced from the adjacent planning application for distribution and industrial uses (HBBC ref. 21/01191/HYB), located north of the proposed CNG site.

5.3.3 The 21/01191/HYB application contained within it some Automated Traffic Count (ATC) data, for the assessment of the proposed access onto the A5. As this ATC data was collected relatively recently on the A5 between the M69 Junction 1 and the A47 and has been approved by Leicestershire and National Highways, it is considered suitable for use within this assessment.

5.3.4 The ATC data, a copy of which is attached in **Appendix G**, showed a 15-minute breakdown of vehicle flows northbound on the A5. However, given the ATC data did not include southbound flows/ the data was incomplete, the northbound flows have been applied to the southbound flow as well. A review of this data indicated that the peak hour was between 8am and 9am on the Monday of the survey, where a total of 791 vehicles were recorded. As such, a flow of 791 vehicles in both directions has been used in the capacity assessment.

5.3.5 However, while the ATC data from the adjacent application contains traffic flow data it does not contain a breakdown of the HGV percentage on the A5, which is important in order to model the link in a robust way. An HGV percentage has been derived from traffic surveys undertaken by the Department for Transport (DfT). The DfT also conducted traffic surveys on the link between the M69 Junction 1 and the A47, as the A5 is a National Highways road. The most recently available survey data was from 2021, and included an HGV percentage of 13%, which has been applied to the recorded traffic flows on the A5.

5.3.6 The assessment of the proposed access therefore used recent and accepted ATC data from an independent third party and data produced by a government agency. It is therefore considered to be a robust assessment of the existing A5 using the best publicly available data.

5.3.7 Finally, the trips from the proposed development were established. To provide a robust assessment, the peak hour of trips from the existing Warrington site (as shown in **Table 5.1**) was



selected. The peak hour was recorded as 8pm – 9pm, where a total of 15 vehicles refuelled at the Warrington site, therefore producing 30 two-way trips.

5.3.8 It is therefore considered that the data collection methodology used within this Transport Statement provides a robust basis for assessment using publicly available government data.

Junction Assessment

5.3.9 The ATC data with the DfT HGV percentage was combined with the proposed CNG trip generation and shown on a network diagram, as indicated at **Appendix H**. As there are no variations in AM or PM due to the limited data available, only one assessment has been conducted to cover the AM and PM peak periods.

5.3.10 A PICADY assessment of the proposed junction has been run to assess the performance of the proposed junction. A summary of the junction assessment is presented in **Table 5.2**, with the full modelling outputs included at **Appendix I**.

Table 5.2: A5 Watling Street / Site Access Junction Assessment

Arm	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay
Site Egress	0.2	37.06	0.15	E	0.7
A5 Right Turn Lane	0.0	14.41	0.03	B	

5.3.11 As the results in **Table 5.2** show, the proposed junction on the A5 is expected to operate with a minimal delay and a very good Level of Service (LOS).

5.3.12 It is expected that vehicles wishing to enter the proposed site via the right turn lane would have a delay of around 14 seconds before being able to enter the site. Vehicles wishing to depart the proposed site would experience a slightly larger delay, which is not unreasonable given that HGV's would need to wait for a clear space to egress onto the A5. Additionally, vehicles waiting within the CNG site would not impact the flow on the A5.

5.3.13 The results shown in **Table 5.2** do not indicate that there would be any queuing issues either on the A5 or within the site. Therefore, it is reasonable to assume that the proposed development would not cause any issues being located on the SRN.



Summary

5.3.14 It is considered that the above trip estimates could be accommodated on the local highway network without detriment, in light of the existing local industrial and distribution uses located in the vicinity of the proposed development site.

5.3.15 Furthermore, it is expected that the trips associated with the CNG proposal would be linked/passby trips, with the HGVs already being on the local highway network. Therefore, the refuelling facility would only be diverting the existing trips on the local highway network, rather than adding new trips.

5.3.16 CNG Fuels sites are not outright trip generators as they only serve customers who have predetermined access to pumps, and for HGVs that have swapped to biofuel, therefore all trips that would use the future CNG site would be linked, pass-by or minor diverted trips.

5.3.17 It is considered that even with some future uplift in usage, the surrounding road network would be capable of accommodating the vehicle trips associated with the refuelling facility, given that these vehicles would primarily already be travelling on the highway network. This is underlined by the junction capacity assessment, which identified spare capacity at the junction and virtually no queuing based on current forecast demand.

5.3.18 The associated plant parking spaces are proposed to be used on an ad-hoc basis for maintenance vehicles, with no permanent staff. The unit is therefore unlikely to generate regular or significant vehicle trips. Vehicle movements associated with the maintenance of the site would therefore be judged to be of negligible impact.

5.3.19 It is noted that the proposals would allow a sufficient number of pumps to accommodate the expected demand, with some spare capacity during times of maintenance / repair of pumps. On this basis the facility would not lead to a build-up of vehicles and therefore the surrounding highway would be unimpeded.

5.3.20 It is considered that the above user-specific methodology provides the most accurate and robust assessment of the potential trip attraction for the proposed development.



6.0 SUMMARY AND CONCLUSION

6.1 *General*

6.1.1 This Transport Statement has been prepared by Odyssey as part of the planning application on behalf of CNG Fuels Limited in respect of the proposed development of a bio-gas vehicle fuelling facility on land to the south of the A5 Watling Street at Hinckley.

6.1.2 The site is located south of the A5 Watling Street, west of an existing BP petrol filling station and approximately 200m from the Watling Street / Hammonds Way roundabout. The A5 is part of the Strategic Road Network managed by National Highways.

6.1.3 Pre-Application Scoping with National Highways and with Leicestershire County Council (as local highway authority) has informed the content and format of this report. This report has also considered the proposals in the context of relevant national and local policy and has found the proposals to be compliant with such. Despite multiple attempts at follow up pre-app with National Highways, their further response has not been received.

6.1.4 It has been demonstrated that the proposed development is not reliant upon the bridge works associated with the pending hybrid application at Padge Hall Farm (ref: 21/01191/HYB) to come forward. Furthermore, it has been demonstrated that the existing railway bridge is not a constraint given the relatively low number of bridge strikes recorded in the most recently available five-year period and the proposed traffic signage mitigation on the CNG site.

6.1.5 A suitable priority junction with ghost island right turn lane is proposed to appropriately facilitate vehicular access to and from the site. This arrangement is capable of accommodating HGVs without impeding the flow of other traffic, these being the vehicles which will use the site most frequently.

6.1.6 An analysis of trips expected from the proposed development, using a first principles assessment, has been undertaken based on data from a similar facility in Warrington. This trip generation fed into a junction capacity assessment, which demonstrated that there is sufficient capacity on the network with the forecast demand applied to the network. Additionally, the assessment found that the proposed junction has the capacity to accommodate the proposals without causing queuing on the A5.

6.1.7 From the assessment, it has been determined that the proposed site would have sufficient capacity to accommodate these HGV trips, particularly in the context of the adjacent industrial,

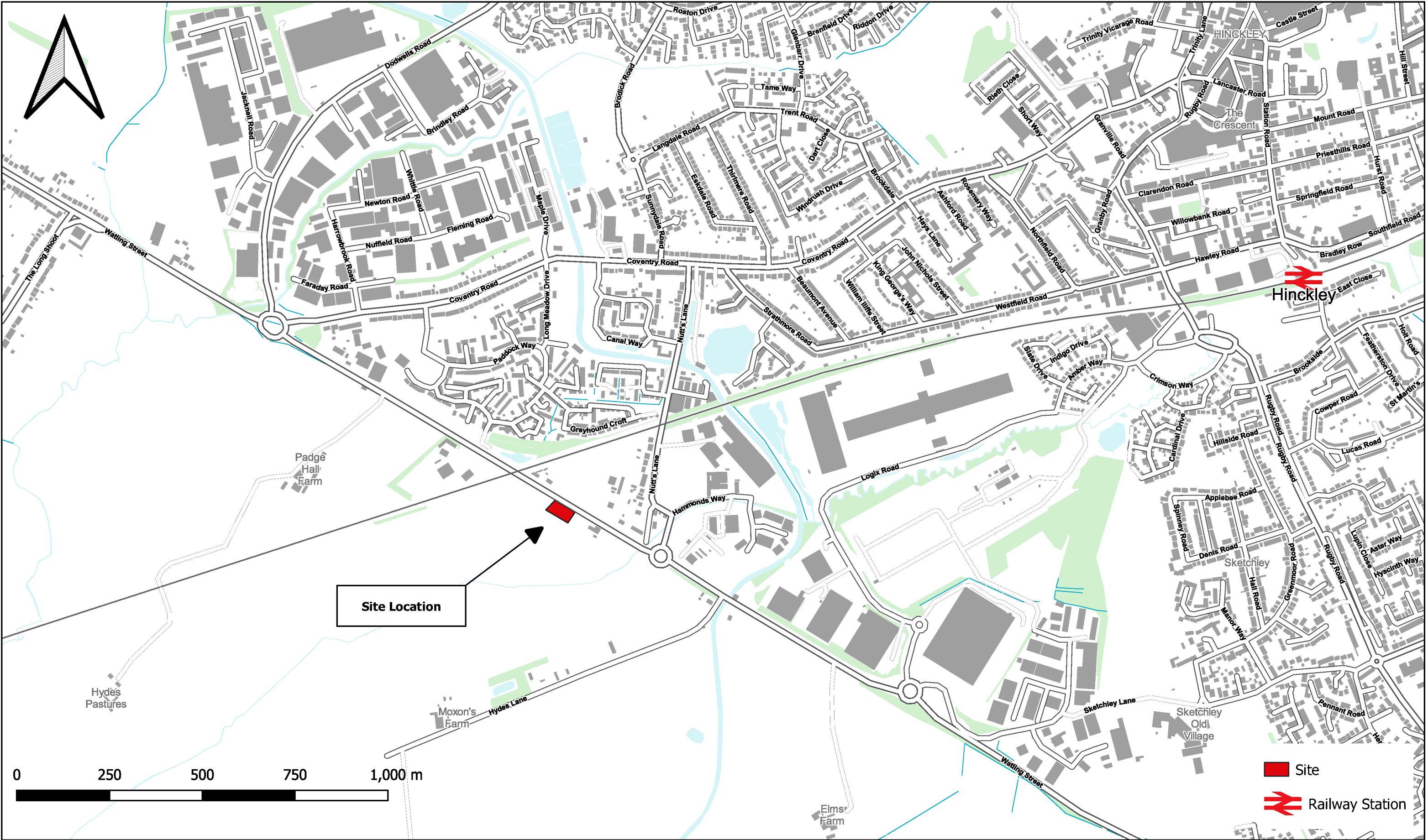


TRANSPORT STATEMENT

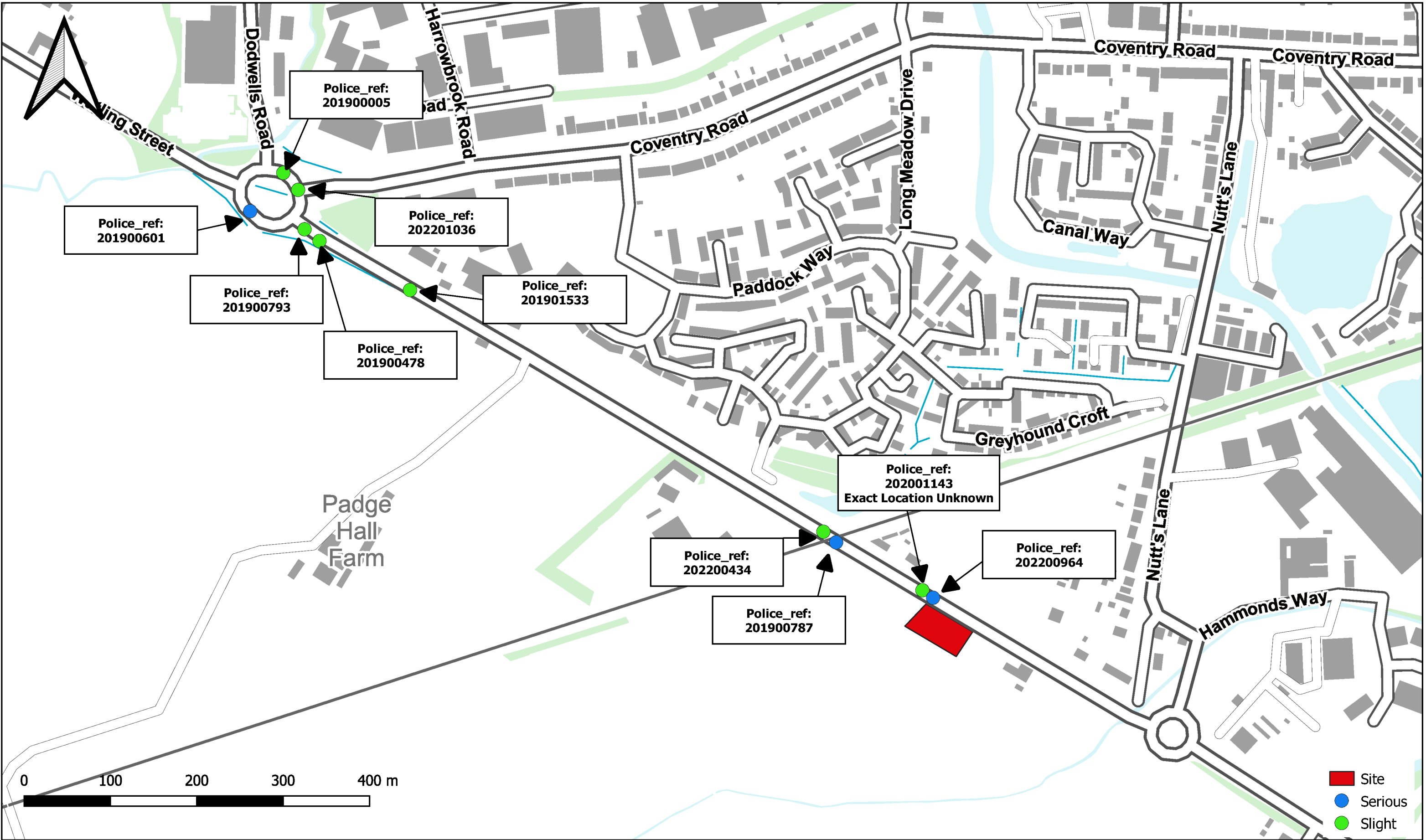
distribution and logistics uses nearby, to which a large proportion of the CNG site HGV trips are expected to be linked.

6.1.8 Based on the above, it is considered that the proposals could be accommodated without detriment to the operation of the local highway network. As such, the development proposals would not result in a 'severe' impact and are considered to be acceptable and in accordance with both national and local policy.

FIGURES

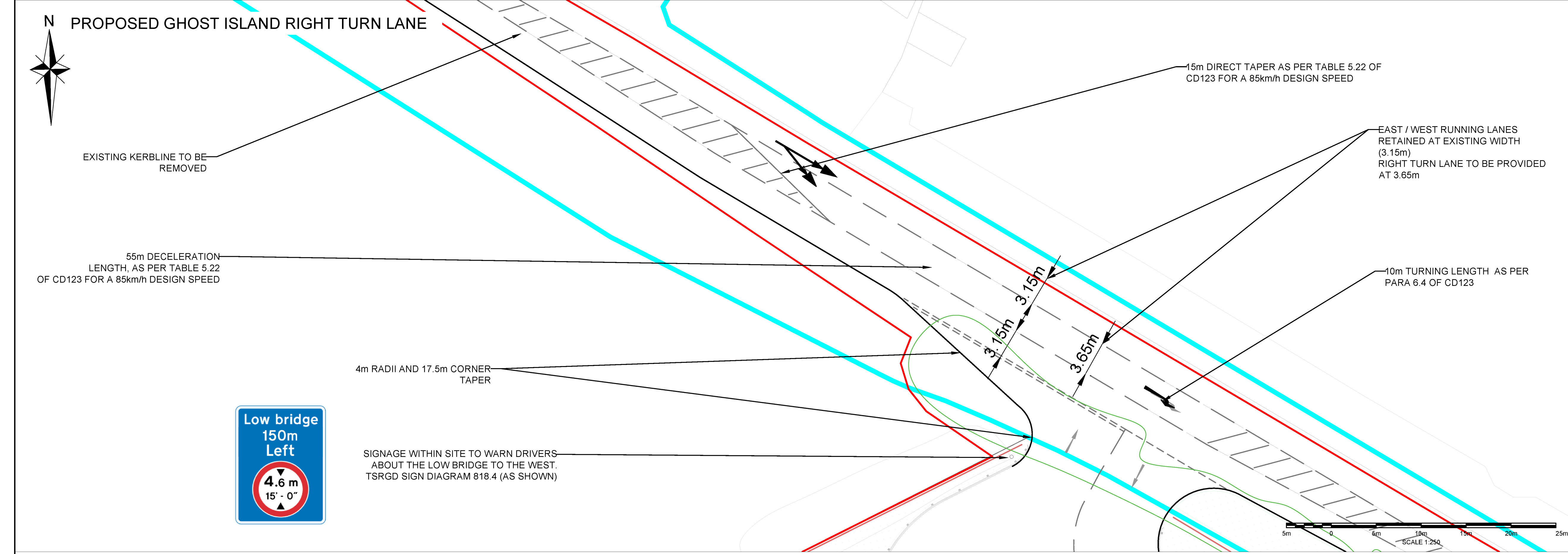


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 18-21 Morley Street London SE1 7QZ Telephone: 0207 620 2444 Fax: 0207 620 1168 E: info@odysseyconsult.co.uk Q: www.odysseyconsult.co.uk ODYSSEY		CNG WATLING STREET, HINCKLEY		NTS	January 23	MN	
		Drawing Title		Drawn	Checked	Approved	
		SITE LOCATION PLAN	CNG FUELS LIMITED	MN	TN	MJB	
				Job No	Figure No		Rev
				22-240	22-240-FIG1		

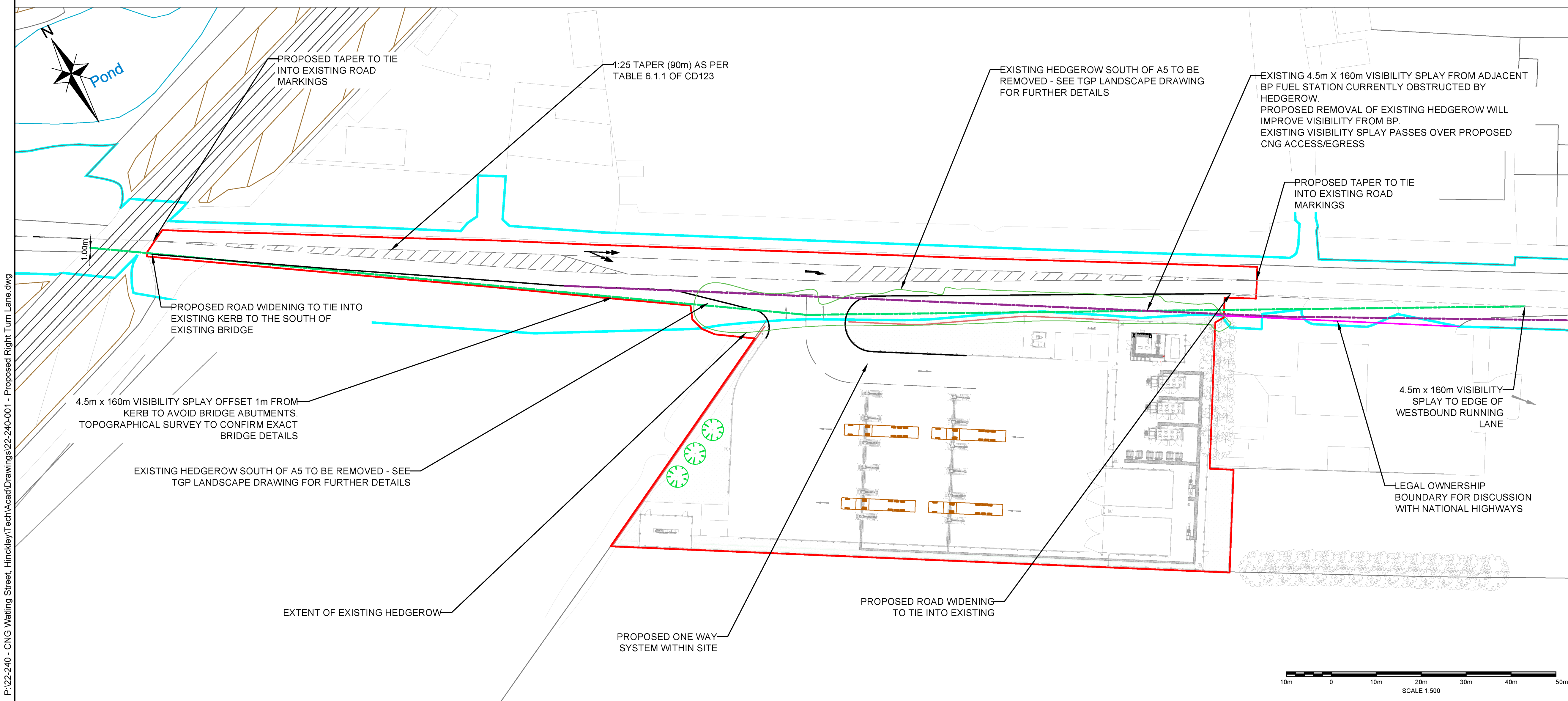


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	Drawing Title COLLISION MAP		Drawn MN	Checked TN	Approved MJB	
			Job No 22-240	Figure No 22-240-FIG2	Rev	

DRAWINGS



- NOTES**
- ALL DESIGN REQUIREMENTS WITHIN THIS DRAWING HAVE BEEN DRAWN IN ACCORDANCE TO CD123 OF THE DESIGN MANUAL FOR ROADS AND BRIDGES
 - THE LEGAL OWNERSHIP BOUNDARY SHOWN ON THIS PLAN IS FOR REFERENCE ONLY. EXACT LOCATION DETAILS WILL BE FINALISED SHOULD THIS BE USED
- KEY**
- RED LINE BOUNDARY
 - 4.5m x 160m VISIBILITY SPLAY FOR CNG SITE CALCULATED ACCORDING TO DMRB GUIDANCE FOR A 50MPH ROAD
 - 4.5m x 160m VISIBILITY SPLAY FOR BP FUEL STATION CALCULATED ACCORDING TO DMRB GUIDANCE FOR A 50MPH ROAD
 - HIGHWAY BOUNDARY
 - LEGAL OWNERSHIP BOUNDARY



I	MINOR AMMENDMENTS	BEB	TN	MJB	25/05/23
H	MINOR AMMENDMENTS	BEB	TN	MJB	17/05/23
G	REVISED RED LINE BOUNDARY	BEB	TN	MJB	16/05/23
F	REVISED RED LINE BOUNDARY	BEB	TN	MJB	12/05/23
E	REVISED LAYOUT	BEB	TN	MJB	11/05/23
D	REVISED LAYOUT	BEB	TN	MJB	10/05/23
C	REVISED ACCESS DESIGN	BEB	TN	MJB	05/05/23
B	REVISED ACCESS DESIGN	BEB	TN	MJB	28/01/23
A	REVISED LAYOUT	BEB	TN	MJB	04/10/22
Rev	Amendments	Drm	Clk	Appr	Date

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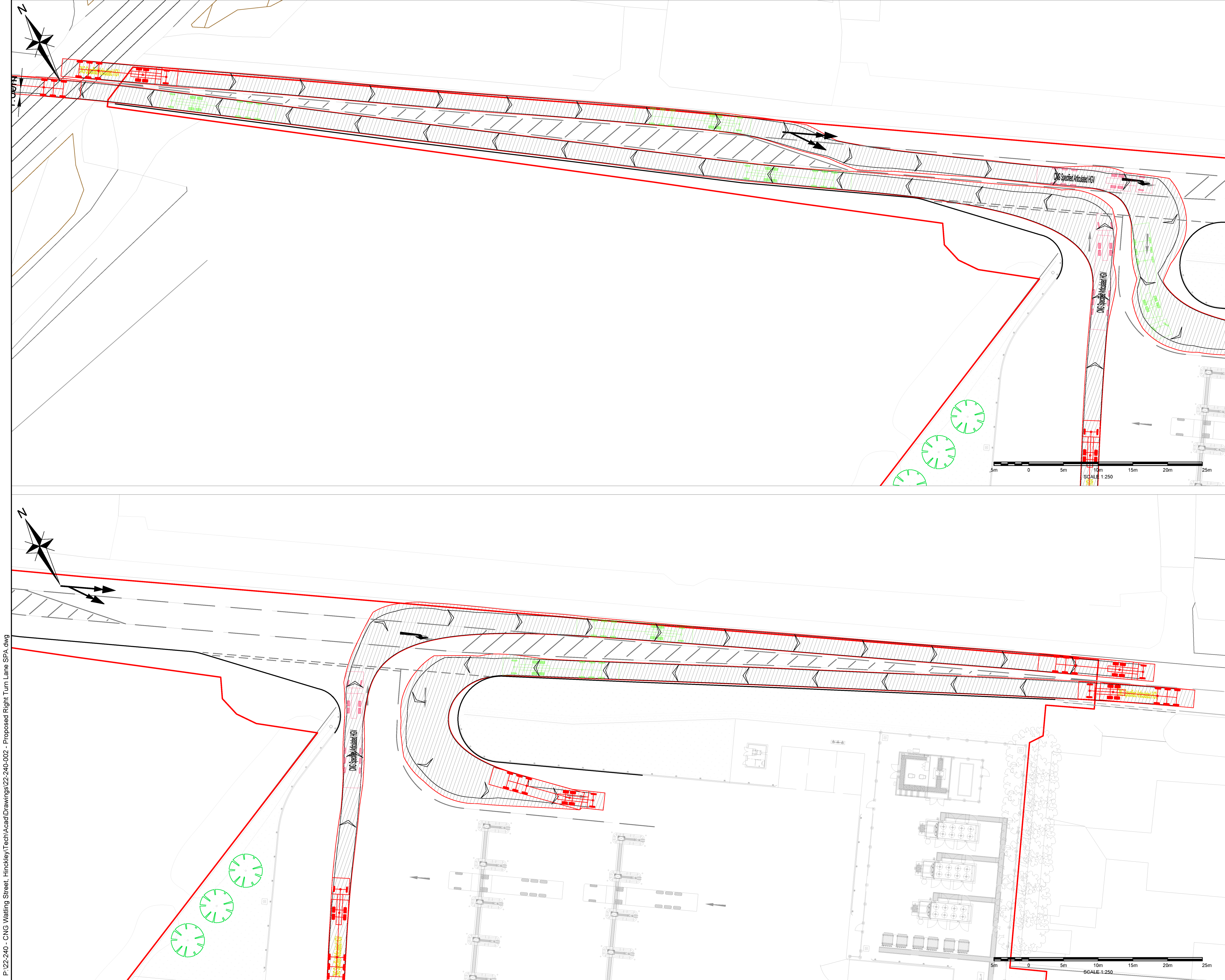
Job Title
CNG HINCKLEY WATLING STREET

Drawing Title
PROPOSED SITE ACCESS AND RIGHT TURN LANE ON WATLING STREET

Client
CNG FUELS LTD

Scale AS SHOWN	Date OCT '22	Designed BEB
Drawn BEB	Checked TN	Approved MJB
Job No 22-240	Drawing No 22-240-001	Rev I

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NOTES

KEY

RED LINE BOUNDARY

SWEPT PATH ANALYSIS IS BASED ON THE FOLLOWING VEHICLE

CNG Specified Articulated HGV

Overall Length	16.730m
Overall Width	2.550m
Overall Body Height	3.620m
Min Body Ground Clearance	0.285m
Max Track Width	2.400m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

F	MINOR AMMENDMENTS	BEB	TN	MJB	25/05/23
E	REVISED RED LINE BOUNDARY	BEB	TN	MJB	17/05/23
D	REVISED LAYOUT	BEB	TN	MJB	10/05/23
C	REVISED ACCESS DESIGN	BEB	TN	MJB	05/05/23
B	REVISED ACCESS DESIGN	BEB	TN	MJB	28/01/23
A	REVISED LAYOUT	BEB	TN	MJB	04/10/22
Rev	Amendments	Drm	Chk	Appr	Date

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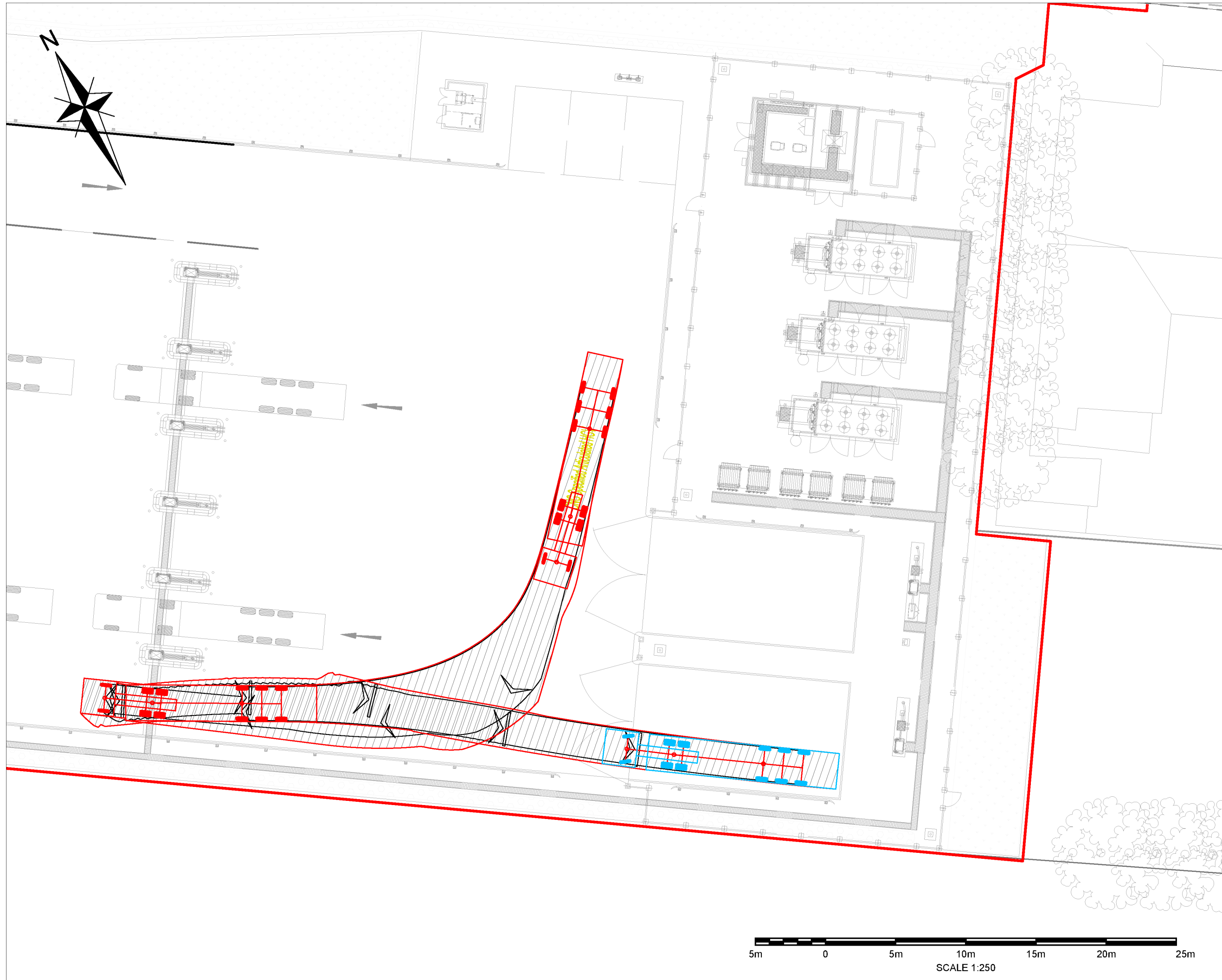
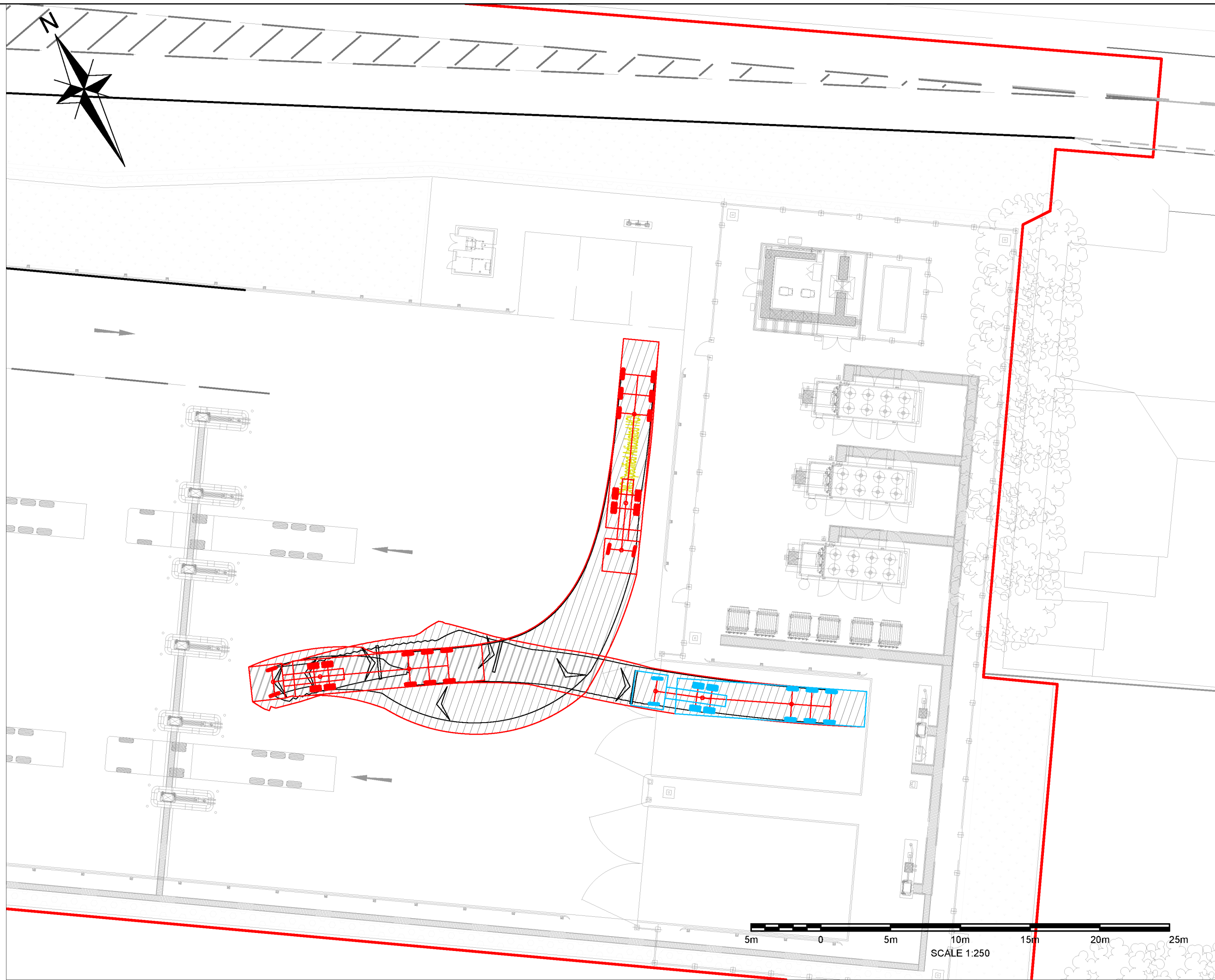
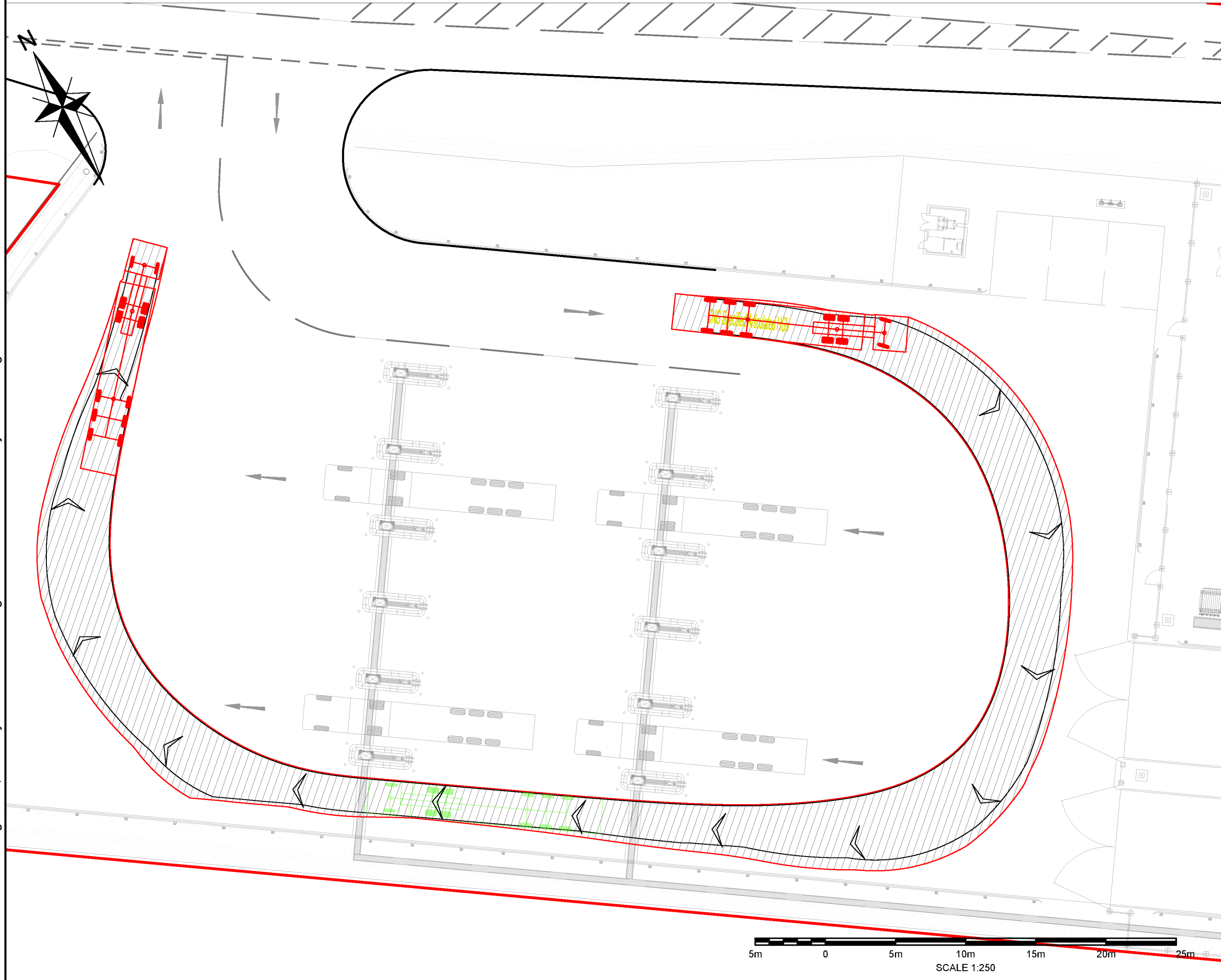
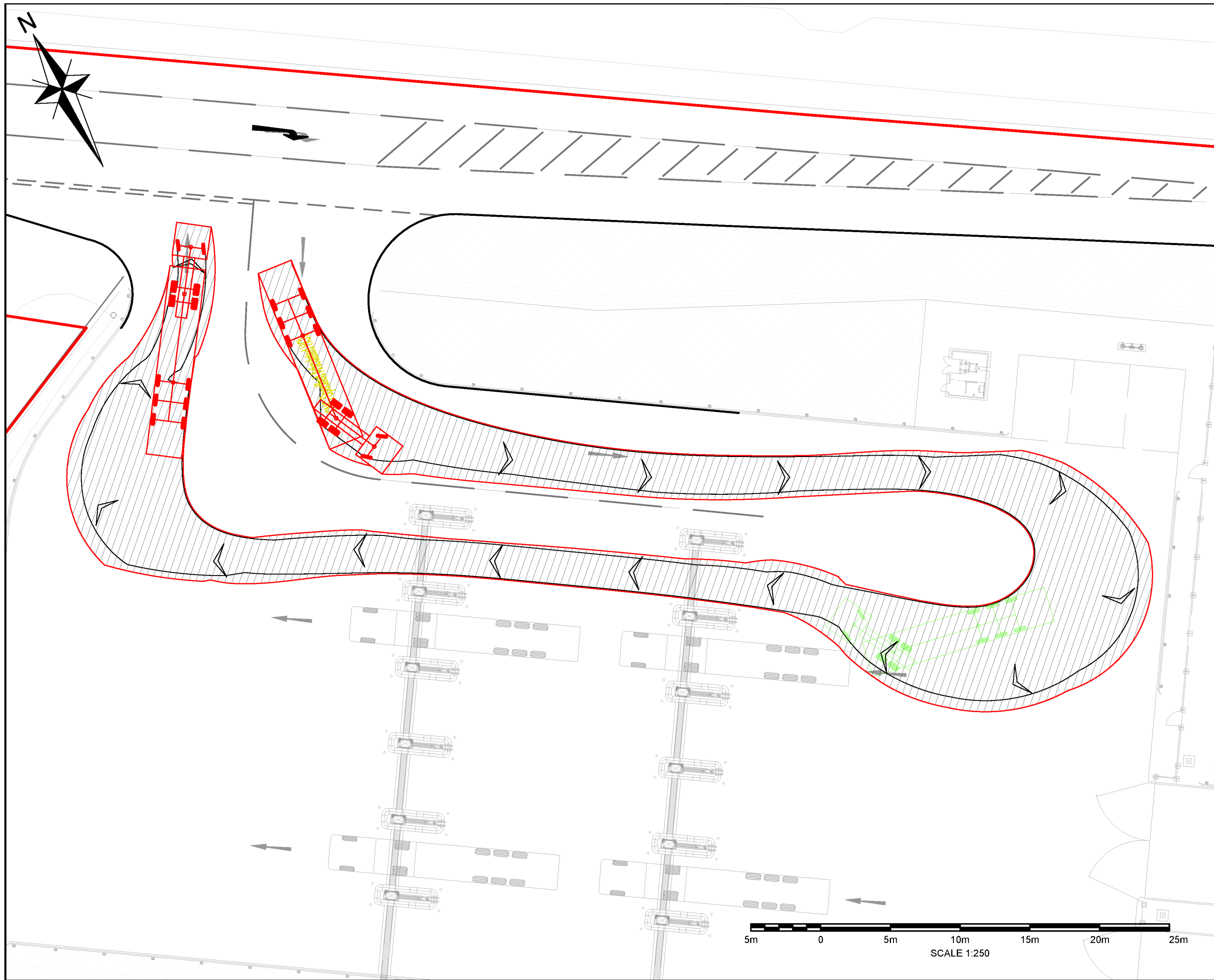
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Job Title
CNG HINCKLEY WATLING STREET

Drawing Title
SWEPT PATH ANALYSIS OF 16.73m HGV
USING PROPOSED RIGHT TURN LANE

Client
CNG FUELS LTD

Scale 1:250 @ A1	Date OCT' 22	Designed BEB
Drawn BEB	Checked TN	Approved MJB
Job No 22-240	Drawing No 22-240-002	Rev F



NOTES

KEY

— RED LINE BOUNDARY

SWEPT PATH ANALYSIS IS BASED ON THE FOLLOWING VEHICLE

CNG Specified Articulated HGV

Overall Length	16.730m
Overall Width	2.550m
Overall Body Height	3.620m
Min Body Ground Clearance	0.295m
Max Track Width	2.400m
Look to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

E	MINOR AMMENDMENTS	BEB	TN	MJB	25/05/23
D	REVISED RED LINE BOUNDARY	BEB	TN	MJB	17/05/23
C	REVISED LAYOUT	BEB	TN	MJB	10/05/23
B	REVISED ACCESS DESIGN	BEB	TN	MJB	05/05/23
A	REVISED ACCESS DESIGN	BEB	TN	MJB	28/01/23
Rev	Amendments	Drm	Clk	Appr	Date

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Job Title

CNG HINCKLEY WATLING STREET

Drawing Title

SWEPT PATH ANALYSIS OF 16.73m HGV
USING INTERNAL LAYOUT

Client

CNG FUELS LTD

Scale	Date	Designed
1:250 @ A1	OCT' 22	BEB
Drawn	Checked	Approved
BEB	TN	MJB
Job No	Drawing No	Rev
22-240	22-240-003	E

APPENDIX A

Transport Pre-Application Scoping Note

Project Name : CNG Fuelling Facility, Watling Street, Hinckley

Job No : 22-240

Note Title : Transport Pre-Application Scoping Note

Author : MN

Checked : TN

Approved : RJH

Date : October 2022

Revision : A

1.0 INTRODUCTION

1.1.1 This Pre-Application Scoping Note has been prepared in respect of a forthcoming planning application proposing the construction of a bio-gas vehicle fuelling facility. The facility would comprise of fuel pumps and a plant compound on land located adjacent to the A5 Watling Street, just northwest of the BP fuel station, near the Watling Street / Hammonds Way roundabout. The site is located to the southwest of Hinckley in Leicestershire. Accordingly, Leicestershire County Council (LCC) are the Local Highway Authority, with Hinckley and Bosworth Borough Council being the Local Planning Authority. The A5 is however part of the strategic road network managed by National Highways (NH).

1.1.2 The Applicant (CNG Fuels Ltd, referred to as 'CNG') already operates several environmentally friendly, bio-gas heavy goods vehicles (HGVs) refuelling stations in a network across the UK. The proposed facility would primarily serve vehicles associated with the nearby existing distribution units located nearby. The majority of CNG's clients are distribution and logistics firms.

1.1.3 Vehicles that utilise the bio-compressed natural gas fuel source see a 90% reduction in carbon dioxide emissions, up to a 75% reduction in nitrogen oxide emissions, and a circa 50% reduction in noise pollution, compared to traditional diesel-based power generation. Therefore, swapping existing vehicles to this new more environmentally friendly fuel source is a positive step in reducing emissions from the distribution and logistics sector.



1.1.4 Odyssey's suggested scope for the transport elements of the planning application will be made to National Highways as the highway authority for the A5 and to LCC too as the LHA. The preliminary site layout plan is included within **Appendix A**.

2.0 GENERAL SITE DESCRIPTION AND DEVELOPMENT OVERVIEW

2.1 General

2.1.1 The site is situated to the southwest of the A5 Watling Street approximately 2.5 kilometres (km) south west of Hinckley town centre. The site is located adjacent to an existing BP petrol filling station, and is located on greenfield land, with agricultural land to the south. Beyond the A5 to the east and north west lies industrial and distribution uses.

2.2 Highway Network Summary

2.2.1 The A5 Watling Street provides access along the south western edge of Hinckley as well as connections south east towards Junction 1 of the M69, and northwest to Junction 10 of the M42. The A5 is a designated trunk road, and is therefore managed by NH.

2.2.2 It is noted that a railway bridge passes over the A5 approximately 160m to the northwest of the site, with a height restriction of 4.6m. It is noted however that existing HGV fleets already use the A5 and pass under this bridge which can accommodate typical HGV heights of under 4.5m.

2.2.3 The M69 is a major strategic route providing connections between the M6 at Coventry and the M1 at Leicester. The M42 is a major strategic route connecting the M5 (from south of Birmingham) to the A42, in the East Midlands, leading towards Nottingham.

2.3 Development

2.3.1 It is proposed that the site would include 12 dispensing pumps providing bio-gas vehicle fuel. The site layout would include five parking spaces, three to the east and two to the west of the site, all of which would be used on an ad-hoc basis by occasional maintenance vehicles. Additionally four HGV maintenance bays would also be located on-site. This would be dependent on the requirement to visit the site for repairs and / or servicing. It is not anticipated that a permanent staff presence would be necessary at the site.

2.3.2 The proposed site location is considered to be appropriate for this type of land use given the existing industrial and distribution uses located within close proximity.



3.0 ACCESS AND EGRESS ARRANGEMENTS

3.1.1 At present there is not an access to the site onto the A5, however the site is accessible via an existing agricultural access to the north west on the A5, providing internal access through wider field. Therefore, it is proposed that a new access would be provided via a ghost island right turn lane priority junction, the location of which is presented in **Photo 3.1** below.

Photograph 3.1: Proposed Location of Site Access on Watling Street (Site to the Left, Facing Northwest)



3.1.2 It is proposed that south-eastbound vehicles would access the site via a ghost-island right-turn lane arrangement. This ghost island element would allow through traffic to be unimpeded by vehicles associated with the CNG facility.

3.1.3 **Drawing 22-240-001** shows the right turn lane arrangement, and also indicates that the proposed changes would be possible within National Highways managed land. The drawing also shows swept path analysis of a CNG articulated vehicle using the junction successfully.

3.1.4 The geometry of the access junction has been designed in compliance with the guidance set out in the DMRB, CD123, except that the deceleration length, and taper length of the junction would be based on the “one step below” guidance, as permitted in Table 4.5 ‘Departures from Standards’, CD109 (DMRB). On this basis the taper length would be based on a ratio of 1:20, or 70m long, and the deceleration length of the right turn lane would be 40m in length. In addition to



this, an extra 17m of queuing length would be provided to accommodate a waiting HGV, and the proprietary 10m turning length within the right turn lane would also be provided.

3.1.5 The proposed junction would provide 3.5m wide lanes in either direction along the A5 as well as a right turning lane also 3.5m wide. The CNG site layout plan is attached at **Appendix A** whilst swept path analysis, showing that these widths are appropriate, are shown on **Drawing 22-240-002**.

3.1.6 No gates or barriers would be required at the access / egress as each dispenser pump would be operated with a fob system linked to the CNG head office, therefore there is no likelihood of a build-up of vehicles waiting to enter the site. Swept path analysis of HGVs manoeuvring within the site itself are shown on **Drawing 22-240-003**.

3.1.7 The site would be unmanned, except for occasional maintenance, but with all necessary CCTV and lighting as is common with existing operational CNG sites.

3.1.8 Similar to other comparable CNG sites, the vehicle trips associated with the proposed development are anticipated to be spread across the day, with the majority being linked or minor diverted trips. As such the proposed development is not expected to add materially to the existing peak period traffic on the surrounding highway network.

3.1.9 It is considered, given the proposed access / egress arrangement, the proximity to the principal road network (A5), the expectation of a high proportion of linked vehicle trips and the 24/7 nature of the proposals, that the proposed development would not have a material impact on the local highway network, including during the peak periods.

4.0 TRIP GENERATION ASSESSMENT

4.1.1 It is proposed that a 'first principles' trip assessment is undertaken to derive the potential trips arising from the proposed CNG refuelling facility. This is due to the specific nature of the site, which does not fall within the standard land uses in the proprietary TRICS trip rate database.

4.1.2 It is therefore, proposed that the daily and peak period trips are considered based on the level of trips from an existing operational CNG refuelling facility located in Warrington, which has similar characteristics as to the proposed site. The CNG Warrington site also provides a total of 12 dispensing pumps and is similarly located close to existing logistics and distribution uses.

4.1.3 It is proposed that a seven-day period of trip arrival data would be considered in the assessment, and given the number of pumps is the same, this is considered to be an appropriate comparison for the proposed 12 pumps at the site.



4.1.4 The associated plant space is proposed to be used on an ad-hoc basis for maintenance, with no permanent staff. The plant space is therefore unlikely to generate regular or significant vehicle trips. Vehicle movements associated with the maintenance of the site would therefore be judged to be of negligible impact, as a consequence of this low frequency of use.

4.1.5 Odyssey requests confirmation from the Highway Authorities that the comparison of trips derived from the Warrington site would offer a satisfactory assessment methodology of the potential traffic impact of the proposed site. It is considered this user-specific methodology would provide the most accurate and robust assessment of the potential trip attraction for the scheme.

4.1.6 As discussed above, it is expected that the proposed trips to the site would be existing HGVs that are already on the highway network, using the A5 and visiting the adjacent industrial / distribution uses, which would comprise a minor diversion as part of an existing logistics / distribution related trip. In this regard the height restrictions of the nearby railway bridge would not pose a problem as HGVs using this site would already be using the highway network and be aware of the restrictions.

5.0 CONTENT OF FORTHCOMING TRANSPORT STATEMENT

5.1.1 It is proposed that a Transport Statement (TS) is prepared to support the forthcoming planning application. This statement would include the following sections in analysing the transport aspects of the proposed scheme.

- Introduction
 - Including relevant planning/site history.
- Transport Planning Policy
 - National and local transport planning policy would be reviewed and discussed.
- Existing Conditions
 - Details of the location of the site, the existing and surrounding uses, and the current highway network within the vicinity of the site would be described.
 - A brief description of the sustainable location of the site would be included, i.e. the site is located adjacent to HGV users.
 - A review of Road Traffic Collision (RTC) data would also be included.



- Development Proposals
 - Description of the site layout, vehicle manoeuvrability within the site, and proposed access junction arrangements.
- Vehicular Trip Estimation
 - An estimation of the trip generation profile based on a comparison of existing movements at the existing Warrington CNG site. This would be a ‘first principles’ assessment, which would derive the expected trips based on the number of pumps.
 - An assessment of the proposed trip generation already travelling on the local highway network would also be included, if possible.
- Summary and Conclusion

6.0 CONCLUSION

6.1.1 Odyssey welcome comments from the Highway Authorities regarding the transport scoping information contained within this note and would be available to discuss its contents in further detail, if necessary.

APPENDIX B

National Highways Pre-Application Feedback



Our ref:
Your ref:

Tim Norman
Odyssey
18-21 Morley Street
London

Martin Seldon
Assistant Spatial Planner
Floor 9
The Cube
199 Wharfside Street
Birmingham B1 1RN

Direct Line: 0300 470 3345
15 December 2022

Dear Tim

Land South of A5 Watling Street Hinckley Leicestershire LE10 3ED

Thank you for your e-mail of 24 November 2022 regarding a request for highways pre application advice for a proposed bio-CNG refuelling depot, at the above location.

National Highways' role is to operate, maintain and improve England's motorways and major A roads, known as the Strategic Road Network (SRN); this includes the A5. This section of the A5 already has a notable amount of HGV movements and is largely congested. Having reviewed the submitted Transport Pre-Application Scoping Note, we have identified a number of potential issues that could affect the SRN as set out below:

The proposed access strategy for the development would be through the formation of a new priority junction to the A5 and includes a ghost island right-turn facility. Under DfT Circular 02/2013 *The strategic road network and the delivery of sustainable development*, developers will be required to ensure that their proposals comply in all respects with design standards. These are detailed in the Design Standards for Roads and Bridges (DMRB):

- CD 123 is the appropriate design standard to consider in respect of the design of junctions. The note referring to CD 109 in respect of a relaxation for the design of the deceleration lane would appear to be erroneous.
- the required visibility splay, noting the speed limit for this section of the SRN is 50mph, is 4.5m x 160m as opposed to 4.5m x 120m as stated in the Scoping Note.
- the currently shown visibility splay to the right when exiting the site includes accesses to the service station which are not permitted as stated in DMRB

- in the absence of a topographical survey showing the position of the adjacent hedges it appears that the position of the highway boundary assumed by the developer, as indicated by a blue line, is incorrect as it appears to be sited a significant distance into the adjacent landowner's field
- in accordance with highway law, unless documentary evidence proves otherwise, the highway boundary is defined as the centreline of the ditch between the highway and the adjacent land Any hedges are in the ownership and the responsibility of the adjacent landowner to maintain
- the visibility splay to the left on exiting the site is therefore likely to encompass a hedge over which the Applicant has no control
- based on the submitted information, it does not appear that a DMRB compliant junction could be delivered at this location in land within the Applicant's control
- where the designer is unable to achieve compliance with the requirements of the DMRB they would need apply for a Departure from Standard (DfS). This would need to be supported by a full justification of the need for a DfS is needed and why it should be granted
- in addition, the submitted vehicle tracking shows the potential for stop/start/reversing manoeuvres and the potential for vehicle-to-vehicle conflicts
- information should also be provided regarding the proposed drainage strategy for the site. As set out in Circular 02/2013 no water runoff that may arise due to any change of use will be accepted into the highway drainage systems. In addition, there shall be no new connections into those systems from third part development and drainage systems
- any application for planning approval would need to be supported by appropriate traffic assessment details

We would be happy to continue to discuss the proposals.

Yours sincerely



Martin Seldon
OD Midlands Spatial Planning Team
Email: martin.seldon@nationalhighways.co.uk

APPENDIX C

Leicestershire County Council Pre-Application Feedback

PRE-APPLICATION DETAILS:

District Reference Number:

Highway Reference Number: 2022/11093/04/P/HEN

Location: Land adjacent to the BP Fuel Station, A5 Watling Street, near Hinckley.

Proposal:

Enquiry. Pre-application scoping for the proposed construction of a bio-gas vehicle refuelling facility and associated works.

GENERAL DETAILS

Planning Case Officer:

Applicant: Tim Norman Odyssey

Parish:

Road Classification: Class A

Please note that the contents of this report including any attachments are offered as my officer opinion and will not prejudice any future decision the Highway Authority may make in relation to this matter.

The following comments are based on a desktop exercise; no site visit is undertaken for pre-application advice.

Background

This pre-application advice request is for the proposed construction of a bio-gas vehicle refuelling facility and associated works at Land adjacent to the BP Fuel Station, A5 Watling Street, near Hinckley. The proposed land use class(es) would not appear to have been identified.

Leicestershire County Council, in its role as the Local Highway Authority (LHA) have been invited to make comments on this proposal. The LHA response to this pre-application enquiry is based on a desktop review of the details available in the submitted report titled 'Transport Pre-Application Scoping Note'.

Site Access

The site is proposed to be accessed from A5 Watling Street which is part of the Strategic Road Network (SRN) and is therefore under National Highways (NH) jurisdiction as Highway Authority. The LHA would therefore advise the applicant to engage with National Highways at the earliest opportunity if not already.

The submitted Transport Scoping Note states that *'a new access would be provided via a ghost island right turn lane priority junction'*. The LHA notes that the site proposed site location is immediately east of the rail bridge over the A5, a bridge previously labelled "the most bashed bridge in Britain" in the media owing to the high number of bridge strikes in this location - circa once a fortnight. Such instances causes significant disruption with significant congestion and diversion onto the county road network impacting local residents, businesses and routes.

The LHA notes that no reference is made to nearby planning applications along the A5 corridor. The LHA advises that nearby planning application 21/01191/HYB may need to be considered as a sensitivity test pending its determination.

Furthermore, whilst respecting access to the A5 is a matter for NH consideration, the LHA would also make reference to Section IN5 of the interim Leicestershire Highway Design Guide (LHDG, available at <https://resources.leicestershire.gov.uk/lhdg>), in that the LHA will normally apply restrictions on new accesses for vehicles and the increased use of existing accesses on roads with a speed limit above 40 mph (that is 50mph, 60mph or 70mph) or where measured vehicle speeds are in excess of 40mph.

Review of the submitted access and layout as indicated on the drawings and appended to the Transport Scoping Note presents a number of concerns given the access arrangement shown and constrained nature of the internal layout. This is identified further in the tracking drawings which appear to show difficult and awkward manoeuvres with limited space available and limited stacking capacity. This arrangement has the potential to create blocking of the access which would negatively impact the operation of the adjacent A5 carriageway.

It is also unknown how many right turning HGV's into the site the proposed ghost island right turn could support prior to a blocking back effect being established causing disruption to the network. It is unknown at this stage if the vehicular visibility splays required by DMRB CD 123 would be achievable, alongside concern as to how this would be achievable noting the nearby Petrol Filling Station vehicle site access to the east. A departure from standards is identified for the proposed deceleration length and taper length of the junction (in paragraph 3.1.4.) which raises concern around the deliverability of the proposed junction. Traffic surveys would also be required to understand the AADT of the A5 (alongside a robust provision of anticipated trip generation as discussed below) in order to assist establishing the required junction type.

Proximity of a new development that by its very nature attracts HGVs located next to the most bashed bridge in Britain undoubtedly presents cause for concern and whilst it is noted that many customers may well be pass-by trips it is also likely that others will reroute to access the site. Many of which may be high sided and therefore presents risk over an increase in bridge strikes. We would welcome further details of available existing locations for bio fuel stations for both CNG and competitors to further understand the wider catchment for demand that could exist. This will also help identify the likely wider draw to the site of trips noting the existing significant congestion along the A5 and potential for exacerbating this with diverted trips through this route and relevant junctions.

The LHA also note reference being made to other sites of CNG filling stations in the UK. It would be useful to understand and be provided with further details of these such that their access arrangements and operation can be considered. The site referenced in Warrington would appear to operate not directly onto the Strategic Road Network (SRN) and is afforded a separate access and egress with far greater stacking space for occasions of higher demand which is not the case with the provided details for this proposal.

Trip Generation/Offsite Implications

The submitted Transport Scoping Note proposes the use of first principles trip assessment is undertaken to derive the potential trips arising from the proposed CNG refuelling facility.

The LHA would also welcome further details on the site operation such as delivery and maintenance requirements of the filling station, including regularity, dwell time and parking requirements. Review of the CNG website has also identified that HGVs can be expected to be refuelled in 20 minutes and therefore further details and clarification around this should be provided in addition to further identification on anticipated demand. The note references 'existing CNG customers' however it is unclear what comprises this customer base nor the likelihood for future expansion which would need to be considered to safeguard future capacity requirement and demand. The LHA also note the site is to be unmanned and therefore further information is required to identify how this would operate in practice and how issues and problems are managed when they occur. A robust management strategy is required especially due to the proximity to the A5 and the LHA would welcome further details in relation to this to provide the necessary assurances that no adverse impact could occur. It is also possible that such an unmanned provision on a key part of the logistics golden triangle may become attractive to HGVs taking breaks rather than accessing the site to refuel. Alternatively may be utilised to permit U-turning traffic avoiding the rail bridge and whilst clearly not uses intended by the development proposed, are considerations nonetheless that require careful thought when considering the potential development impact.

The requirement for off site impact assessment would also be determined following establishing the areas of further assessment and information requested as part of this response.

Internal Layout

In terms on-site parking, the submitted Transport Scoping Note that *'It is proposed that the site would include 12 dispensing pumps providing bio-gas vehicle fuel. The site layout would include five parking spaces, three to the east and two to the west of the site, all of which would be used on an ad-hoc basis by occasional maintenance vehicles. Additionally four HGV maintenance bays would also be located on-site'*. The LHA would require sufficient parking to serve the anticipated trip generation (noting the above comments). Parking spaces should be designed in accordance with standards within Part 3 of the interim LHDG.

Trailer bays also appear to be required to enable the required tracking and manoeuvring space on site and therefore if this is acceptable. How could such manoeuvres be undertaken if a trailer bay was already occupied for example.

Other matters

For all 'Junctions' or 'Linsig' modelling, the following information will be required:

- Models should be validated against observed conditions;
- Scale plans of junction geometries used for model input should be provided for review;
- Details of any signal specifications used;
- Full model outputs in PDF format; and
- Actual model files.

For any site access or other proposals on the highway, the following will be required:

- A Stage 1 Road Safety Audit and satisfactory Designer's Response;
- Scale design drawings in both AutoCAD and PDF format;
- Details of design methodology (E.g. explanation of standards applied, choice of junction type);
- Recorded free-flow design speeds will need to be demonstrated to define the SSD/visibility
- splay requirements;
- Pedestrian crossing assessments if appropriate;

Closing

As such, the LHA has concerns around the deliverability of a safe and suitable access at the proposed development in addition to the highway impact that could occur. From the details provided it is likely the LHA may seek to resist the development proposal as currently presented should a formal application be made. Notwithstanding this, and in good faith, the LHA has provided comments on the scope of assessment provided.

Date Received
24 November 2022

Case Officer
Perry Miller

Reviewer
HH

Date issued
12 December 2022

APPENDIX D

Collision Data

Details of Personal Injury Accidents for Period - 01/12/2017 to 30/11/2022 (60) months

Selection: Notes:
Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties
			Veh No	Type	Manv	Dir	Class
Road No.	Date						Sex / Age / Sev
2nd Road No.	Time						
Grid Ref.	D/L						
	R.S.C						
	Weather						
	Speed						
	Account of Accident						
Causation Factor:							

201900005 Monday A47 DODWELLS ROAD HINCKLEY
07/01/2019 JW WATLING STREET
R1: A 47 1735hrs
R2: A 5 Darkness: street lights present a
E 439,968 Dry
N 293,126 Fine without high winds
30 mph

Veh 1 Car Turning left N to SE
Veh 2 Goods < 3.5t Turning left N to SE
Veh 3 Car Going ahead NWto SE
Veh 4 Car Going ahead NWto SE

V1 & V2 TRAV S DODWELLS RD GO THROUGH GREEN TRAFFIC SIGNAL INTENDING TO TURN L TRAV SE WATLING ST AT R/BOUT.
V3 & V4 TRAV SE WATLING ST GO THROUGH RED TRAFFIC SIGNAL TRAV AHEAD AT R/BOUT. V1 BRAKES TO AVOID COLLS V3 &
V4 & V2 COLLS REAR V1. V3 & V4 N
ON STOP.

201901533 Sunday S5 WATLING STREET HINCKLEY
17/03/2019 OUTSIDE PAYNES FORD GARAGE.
R1: A 5 2010hrs
Darkness: street lighting unkno
E 440,115 Dry
N 292,985 Fine without high winds
60 mph

Veh 1 Car Going ahead SE to NW
Veh 2 Car Going ahead SE to NW

STATS 19 FORM NOT RECEIVED.

201900478 Friday A5 DODWELL ISLAND HINCKLEY.
31/05/2019
R1: A 5 1615hrs
R2: B 4666 Daylight:street lights present
E 439,992 Dry
N 293,046 Fine without high winds
40 mph

Veh 1 Car Starting SE to NW
Veh 2 Car Going ahead SE to NW

Causation Factor: Participant: Confidence:

1st: Following too close Vehicle 2 Very Likely
2nd: Failed to look properly Vehicle 2 Very Likely
3rd: Failed to judge other persons path or speed Vehicle 2

V1 TRAV NW A5 WAITING AT RED TRAFF SIG. TRAFF SIG TURNS GREEN & V1 MOVES OFF TRAV AHEAD AT R/BOUT. V2 TRAV NW
A5 COLLS REAR V1.

Details of Personal Injury Accidents for Period - 01/12/2017 to 30/11/2022 (60) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties
			Veh No	Type	Manv	Dir / Class	
Road No.	Date						
2nd Road No.	Time						
Grid Ref.	D/L						
	R.S.C						
	Weather						
	Speed						
	Account of Accident						
Causation Factor:							

201900601 Friday A5 HINCKLEY AT DODWELLS Veh 1 Goods > 7.5t Going ahead SE to NW
05/07/2019 ROUNDABOUT.
R1: A 5 1116hrs
R2: A 47 Daylight:street lights present
E 439,930 Dry
N 293,075 Fine without high winds
50 mph

Causation Factor:	Participant:	Confidence:
1st: Road layout (eg bend, hill etc.)	Vehicle 1	Possible
2nd: Travelling too fast for conditions	Vehicle 1	Possible
3rd: Poor turn or manoeuvre	Vehicle 1	Possible
4th: Loss of control	Vehicle 1	Possible
5th: Dazzling sun	Vehicle 1	Possible

V1 (ARTIC) TRAV NW ENTERS ROUNDABOUT LOSES CONTROL & OVERTURNS.

201900793 Tuesday A5 WATLING STREET HINCKLEY SE Veh 1 Car Stopping SE to NW
16/07/2019 OF COVENTRY ROAD Veh 2 Car Stopping SE to NW
R1: A 5 0831hrs ROUNDABOUT. Veh 3 Taxi Going ahead SE to NW
Daylight:street lights present
E 440,013 Dry
N 293,041 Fine without high winds
50 mph

Causation Factor:	Participant:	Confidence:
1st: Following too close	Vehicle 3	Possible
2nd: Failed to judge other persons path or speed	Vehicle 3	Possible

V1, V2 & V3 TRAV NW WATLING ST APPROACHING ROUNDABOUT. V1 & V2 SLOW DOWN TO STOP. V3 UNABLE TO STOP & COLLS REAR V2. V2 COLLS REAR V1.

201900787 Tuesday A5 WATLING STREET HINCKLEY Veh 1 Goods > 7.5t Going ahead NWto SE
10/09/2019 RAILWAY BRIDGE 140 METRES
R1: A 5 0040hrs SOUTH EAST OF VEOLIA
Darkness: no street lighting
E 440,612 Dry
N 292,693 Fine without high winds
50 mph

Causation Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 001	Very Likely
2nd: Careless/Reckless/In a hurry	Vehicle 001	Very Likely

VEHICLE 1 (ARTIC LORRY) TRAVELLING SOUTH EAST ON A5 WATLING STREET DRIVES UNDER RAILWAY BRIDGE AND BECOMES WEDGED DUE TO LORRY HEIGHT EXCEEDING BRIDGE LIMIT

Details of Personal Injury Accidents for Period - 01/12/2017 to 30/11/2022 (60) months

Selection: Notes:
Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties
			Veh No	Type	Manv	Dir	Class
Road No.	Date						Sex / Age / Sev
2nd Road No.	Time						
Grid Ref.	D/L						
	R.S.C						
	Weather						
	Speed						
	Account of Accident						
Causation Factor:							

202001143 Thursday A5 HINCKLEY EXACT LOCATION & DIRECTIONS UNKNOWN. Veh 1 Car Going ahead NW^{to} SE
23/07/2020
R1: A 5 2300hrs Veh 2 Car Going ahead NW^{to} SE
Darkness: street lighting unkno Veh 3 Car Going ahead NW^{to} SE
E 440,720 Dry Veh 4 Car Going ahead NW^{to} SE
N 292,630 Fine without high winds Veh 5 Goods Unknown Going ahead NW^{to} SE
50 mph

REPORT NOT RECEIVED.

202200434 Friday A5 HINCKLEY AT RAILWAY BRIDGE WNS/3. Veh 1 Goods > 7.5t Going ahead NW^{to} SE
27/05/2022
R1: A 5 2300hrs
Darkness: no street lighting
E 440,605 Dry
N 292,695 Fine without high winds
50 mph

Causation Factor: Participant: Confidence:
1st: Careless/Reckless/In a hurry Vehicle 1 Possible
2nd: Failed to look properly Vehicle 1 Very Likely
V1 (HGV) TRAV SE ON A5 COLLS WITH BRIDGE ROOF. DRIVER FOLLOWING DIVERSION DUE TO ROAD CLOSURE.

202200964 Sunday A5 HINCKLEY APPROX 150M SE RAILWAY BRIDGE. Veh 1 M/C > 500 cc Going ahead SE to NW
06/11/2022 Veh 2 Car Going ahead NW^{to} SE
R1: A 5 1015hrs
Daylight:street lights present
E 440,735 Wet/Damp
N 292,620 Other
50 mph

Causation Factor: Participant: Confidence:
1st: Swerved Vehicle 1 Very Likely
2nd: Slippery road (due to weather) Vehicle 1 Very Likely
V1 (M/CYCLE) TRAV NW BRAKES DUE TO TRAFFIC AHEAD & SWERVES ACROSS C/WAY INTO PATH V2 TRAV SE

Details of Personal Injury Accidents for Period - 01/12/2017 to 30/11/2022 (60) months

Selection: Notes:
Selected using Manual Selection

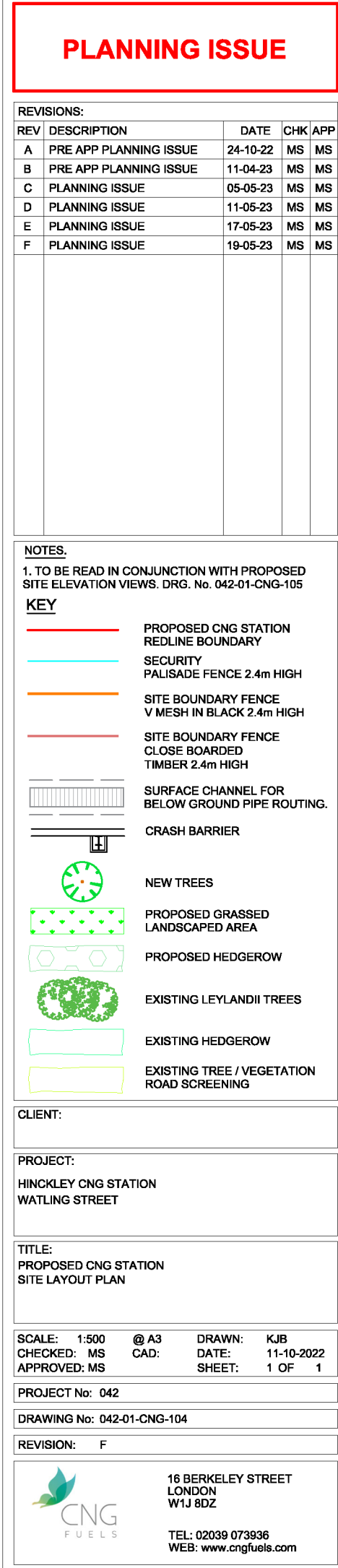
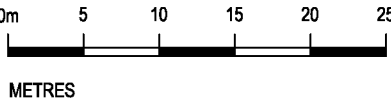
			Vehicles				Casualties	
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class				Sex / Age / Sev	
	Date							
Road No.	Time							
2nd Road No.								
Grid Ref.	D/L							
	R.S.C							
	Weather							
	Speed							
	Account of Accident							
Causation Factor:								

202201036	Tuesday	A5 HINCKLEY ON DODWELLS	Veh 1	Goods > 7.5t	Change lane to right	W	to	S
	29/11/2022	ROUNDABOUT.	Veh 2	M/C < 125 cc	Going ahead	W	to	E
R1: A 5	0804hrs							
R2: A 47	Daylight:street lights present							
E 439,985	Wet/Damp							
N 293,110	Fine without high winds							
	40 mph							

Causation Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Poor turn or manoeuvre	Vehicle 1	Very Likely
V1 (HGV) TRAV E INDICATING TO TURN L ONTON COVENTRY ROAD DOES NOT TURN & COLLS V2 (M/CYCLE) TRAV E ON OS V1.		

APPENDIX E

CNG Site Layout Plan



PLANNING ISSUE

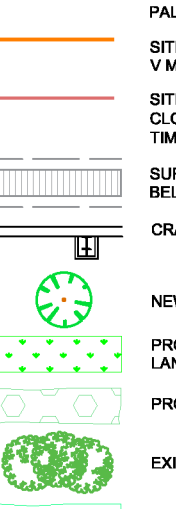
REVISIONS:

REV	DESCRIPTION	DATE	CHK	APP
A	PRE APP PLANNING ISSUE	24-10-22	MS	MS
B	PRE APP PLANNING ISSUE	11-04-23	MS	MS
C	PLANNING ISSUE	05-05-23	MS	MS
D	PLANNING ISSUE	11-05-23	MS	MS
E	PLANNING ISSUE	17-05-23	MS	MS
F	PLANNING ISSUE	19-05-23	MS	MS

NOTES.

1. TO BE READ IN CONJUNCTION WITH PROPOSED
SITE ELEVATION VIEWS. DRG. No. 042-01-CNG-105

KEY



 PROPOSED CNG STATION
REDLINE BOUNDARY
 SECURITY
PALISADE FENCE 2.4m HIGH
 SITE BOUNDARY FENCE
V MESH IN BLACK 2.4m HIGH
 SITE BOUNDARY FENCE
CLOSE BOARDED
TIMBER 2.4m HIGH
 SURFACE CHANNEL FOR
BELOW GROUND PIPE ROUTING.
 CRASH BARRIER
 NEW TREES
 PROPOSED GRASSED
LANDSCAPED AREA
 PROPOSED HEDGEROW
 EXISTING LEYLANDII TREES
 EXISTING HEDGEROW
 EXISTING TREE / VEGETATION
ROAD CROSSING

CLIENT:

PROJECT:

HINCKLEY CNG STATION
WATLING STREET

TITLE:

PROPOSED CNG STATION SITE LAYOUT PLAN

SCALE: 1:500	@ A3	DRAWN: KJB
CHECKED: MS	CAD:	DATE: 11-10-2022
APPROVED: MS		SHEET: 1 OF 1

PROJECT No: 042

DRAWING No: 042-01-CNG-104

REVISION: F



16 BERKELEY STREET
LONDON
W1J 8DZ

TEL: 02039 073936
WEB: www.cngfuels.com

APPENDIX F

CNG Warrington Arrival Data

Estimated Trips

Watling Street, Hinckley

		21/03/2022	22/03/2022	23/03/2022	24/03/2022	25/03/2022	26/03/2022	27/03/2022		
Time start	Time end	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Trips per Weekday	Average per Full Week
0000	0100	8.00	16.00	18.00	13.00	18.00	6.00	9.00	15	13
0100	0200	4.00	11.00	8.00	18.00	14.00	9.00	1.00	11	9
0200	0300	4.00	6.00	10.00	11.00	8.00	10.00	3.00	8	7
0300	0400	6.00	11.00	4.00	6.00	9.00	6.00	7.00	7	7
0400	0500	8.00	7.00	11.00	5.00	8.00	8.00	3.00	8	7
0500	0600	5.00	5.00	11.00	12.00	14.00	5.00	2.00	9	8
0600	0700	4.00	3.00	7.00	10.00	7.00	10.00	3.00	6	6
0700	0800	3.00	8.00	9.00	7.00	10.00	4.00	5.00	7	7
0800	0900	6.00	9.00	8.00	10.00	11.00	11.00	2.00	9	8
0900	1000	10.00	11.00	12.00	6.00	9.00	4.00	2.00	10	8
1000	1100	11.00	11.00	8.00	10.00	10.00	6.00	4.00	10	9
1100	1200	5.00	6.00	8.00	7.00	11.00	2.00	2.00	7	6
1200	1300	4.00	5.00	8.00	10.00	7.00	9.00	7.00	7	7
1300	1400	8.00	13.00	9.00	8.00	4.00	5.00	3.00	8	7
1400	1500	8.00	2.00	9.00	5.00	6.00	3.00	4.00	6	5
1500	1600	9.00	16.00	14.00	20.00	9.00	5.00	6.00	14	11
1600	1700	14.00	10.00	11.00	7.00	12.00	2.00	2.00	11	8
1700	1800	11.00	10.00	14.00	10.00	8.00	4.00	7.00	11	9
1800	1900	13.00	21.00	14.00	16.00	9.00	8.00	2.00	15	12
1900	2000	14.00	11.00	12.00	13.00	11.00	7.00	5.00	12	10
2000	2100	12.00	17.00	12.00	13.00	22.00	5.00	8.00	15	13
2100	2200	10.00	12.00	10.00	19.00	14.00	4.00	3.00	13	10
2200	2300	9.00	15.00	15.00	15.00	8.00	3.00	7.00	12	10
2300	2400	14.00	14.00	10.00	16.00	17.00	3.00	7.00	14	12
		200	250	252	267	256	139	104		

APPENDIX G

ATC Data from Hybrid Planning Application at Pledge Hall Farm (HBBC ref: 21/01191/HYB)

Northbound



	Northbound						
Time	Mon 25-Jun	Tue 26-Jun	Wed 27-Jun	Thu #N/A	Fri 29-Jun	Sat 30-Jun	Sun 24-Jun
00:00	34	39	40	-	-	68	34
00:15	21	33	36	-	-	62	42
00:30	17	32	43	-	-	61	21
00:45	25	22	31	-	-	61	29
01:00	26	26	30	-	-	44	35
01:15	18	19	29	-	-	66	20
01:30	12	34	22	-	-	54	15
01:45	12	17	21	-	-	43	21
02:00	17	29	22	-	-	54	12
02:15	21	19	17	-	-	43	23
02:30	27	24	30	-	23	43	18
02:45	35	27	29	-	35	52	17
03:00	21	24	33	-	46	50	23
03:15	25	33	43	-	36	35	22
03:30	24	36	41	-	35	45	16
03:45	18	42	36	-	26	47	14
04:00	20	49	34	-	42	43	11
04:15	27	27	33	-	29	25	22
04:30	33	33	33	-	32	23	15
04:45	32	40	42	-	49	39	21
05:00	41	58	41	-	56	41	24
05:15	72	71	88	-	72	44	30
05:30	72	97	92	-	82	63	33
05:45	79	78	72	-	92	57	26
06:00	61	83	82	-	60	41	26
06:15	98	110	120	-	143	58	23
06:30	158	142	127	-	177	59	26
06:45	176	139	146	-	159	71	44
07:00	212	117	116	-	189	57	31
07:15	216	119	138	-	227	66	28
07:30	232	112	118	-	213	56	43
07:45	216	117	124	-	206	81	54
08:00	209	115	94	-	227	69	50
08:15	210	113	108	-	198	99	50
08:30	200	116	108	-	191	82	49
08:45	172	120	124	-	181	95	69
09:00	195	99	125	-	188	116	61
09:15	175	105	117	-	171	112	87
09:30	147	97	107	-	172	151	122

09:45	139	109	108	-	164	139	135
10:00	147	141	115	-	163	121	137
10:15	164	122	117	-	174	153	96
10:30	157	172	121	-	169	139	137
10:45	139	132	124	-	190	141	131
11:00	154	116	126	-	180	131	117
11:15	153	132	113	-	191	179	156
11:30	158	97	122	-	177	162	134
11:45	151	104	127	-	195	160	128
12:00	154	118	121	-	230	145	165
12:15	158	125	114	-	183	171	144
12:30	212	142	98	-	180	149	177
12:45	186	128	123	-	208	152	137
13:00	166	159	111	-	213	162	140
13:15	205	134	128	-	198	148	138
13:30	181	129	-	-	192	152	119
13:45	189	122	-	-	191	140	112
14:00	223	120	-	-	197	152	117
14:15	200	111	-	-	208	150	104
14:30	212	89	-	-	209	158	103
14:45	196	107	-	-	199	157	87
15:00	211	98	-	-	245	145	117
15:15	196	108	-	-	220	145	145
15:30	233	128	-	-	182	144	123
15:45	164	121	-	-	199	159	138
16:00	135	130	-	-	174	139	119
16:15	139	185	-	-	191	121	135
16:30	115	98	-	-	174	136	143
16:45	119	114	-	-	158	139	145
17:00	120	111	-	-	222	126	137
17:15	102	100	-	-	187	143	127
17:30	117	105	-	-	212	121	123
17:45	130	106	-	-	168	124	120
18:00	112	104	-	-	165	115	145
18:15	93	115	-	-	150	122	125
18:30	118	118	-	-	142	114	85
18:45	139	141	-	-	142	101	99
19:00	131	131	-	-	143	102	90
19:15	87	116	-	-	166	87	90
19:30	105	89	-	-	102	90	77
19:45	95	101	-	-	88	97	90
20:00	56	84	-	-	120	102	85
20:15	82	88	-	-	115	68	86
20:30	65	81	-	-	73	46	72
20:45	77	72	-	-	81	81	72
21:00	63	77	-	-	78	47	52
21:15	61	71	-	-	81	65	52
21:30	59	75	-	-	86	61	55
21:45	49	70	-	-	77	51	43
22:00	49	62	-	-	64	43	37

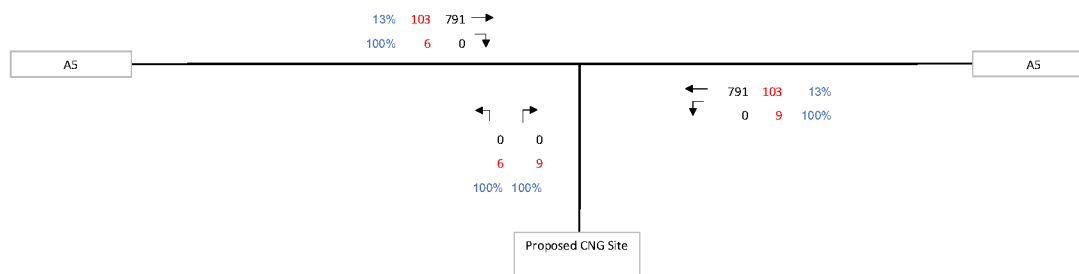
22:15	55	66	-	-	81	53	54
22:30	36	68	-	-	74	51	50
22:45	36	61	-	-	67	59	42
23:00	36	46	-	-	68	48	36
23:15	36	41	-	-	81	47	32
23:30	27	51	-	-	66	36	23
23:45	23	39	-	-	70	34	28
07-19	8071	5721	-	-	9105	6239	5384
06-22	9494	7250	-	-	10854	7365	6367
06-00	9792	7684	-	-	11425	7736	6669
00-00	10521	8593	-	-	-	8899	7213

APPENDIX H

Traffic Flow Diagram



Key
XX Total Vehicles
XX Total HGV
XX HGV Percentage



Notes

CNG Fuels Ltd

Appendix H

Job Title:

CNG Watling Street, Hinkley

Job No:

22-240

Drawing Title:

Flow Diagram

Date:

11/05/2023



APPENDIX I

PICADY Assessment Transcript

Junctions 9						
PICADY 9 - Priority Intersection Module						
Version: 9.5.1.7462 © Copyright TRL Limited, 2019						
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk						
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution						

Filename: Site Access.j9

Path: P:\22-240 - CNG Watling Street, Hinckley\Trans\Picady

Report generation date: 12/05/2023 14:37:13

«2023, AM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

AM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
2023						
Stream B-AC	0.2	37.06	0.15	E	0.70	-1 %
Stream C-AB	0.0	14.41	0.03	B		[Stream B-AC]

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	12/05/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ODYSSEY-CE\msheridan
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.70	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.30		✓	3.65	250.0	✓	5.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	5.00	26	96

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	640	0.115	0.291	0.183	0.415
B-C	821	0.124	0.314	-	-
C-B	832	0.318	0.318	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	800	100.000
B		ONE HOUR	✓	15	100.000
C		ONE HOUR	✓	797	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	9	791
	B	9	0	6
	C	791	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	100	13
	B	100	0	100
	C	13	100	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.15	37.06	0.2	E	14	21
C-AB	0.03	14.41	0.0	B	6	8
C-A					726	1089
AB					8	12
A-C					726	1089

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	196	0.058	11	0.0	0.1	19.493	C
C-AB	5	1	307	0.015	4	0.0	0.0	11.904	B
C-A	596	149			596				
AB	7	2			7				
A-C	596	149			596				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	162	0.083	13	0.1	0.1	24.149	C
C-AB	5	1	286	0.019	5	0.0	0.0	12.842	B
C-A	711	178			711				
A-B	8	2			8				
A-C	711	178			711				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	114	0.145	16	0.1	0.2	36.847	E
C-AB	7	2	256	0.026	7	0.0	0.0	14.406	B
C-A	871	218			871				
A-B	10	2			10				
A-C	871	218			871				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	114	0.145	17	0.2	0.2	37.059	E
C-AB	7	2	256	0.026	7	0.0	0.0	14.408	B
C-A	871	218			871				
A-B	10	2			10				
A-C	871	218			871				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	162	0.083	14	0.2	0.1	24.263	C
C-AB	5	1	286	0.019	5	0.0	0.0	12.847	B
C-A	711	178			711				
A-B	8	2			8				
A-C	711	178			711				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	195	0.058	11	0.1	0.1	19.570	C
C-AB	5	1	307	0.015	5	0.0	0.0	11.907	B
C-A	596	149			596				
A-B	7	2			7				
A-C	596	149			596				