

Access and Transport Technical Note

Project name	Tritax Park Cambridge		
Design note title	Access and Transport Technical Note		
Document reference	31188-HYD-XX-XX-RP-TP-1001-P04		
Author	Paul Skipper BSc (Hons) GradCIHT		
Checked by	Chris Rushton BA (Hons) CMILT		
Revision	P04		
Date	6 March 2025	Approved	✓

1. Introduction

1.1 Overview

- 1.1.1 Hydrock, now Stantec (referred to as Hydrock throughout this report) have been instructed by Tritax Big Box Developments to undertake an initial feasibility review and provide transportation technical assistance in regards to Tritax Park Cambridge. The development site falls within the jurisdiction of Cambridgeshire County Council [CCC] and South Cambridgeshire District Council [SCDC].
- 1.1.2 The site is located off the B1050, north of the A14 and the village of Bar Hill and west of Cambridge.
- 1.1.3 This Technical Note [TN] will provide a desktop feasibility review of sustainable travel and access options to the site.

1.2 Background

- 1.2.1 The site is located approximately 14.9km west of Cambridge and 1.4km north of Bar Hill village. The existing site is predominantly open grassland and can be accessed from the B1050, which connects to the A14 via Bar Hill Junction. Travelling north on the B1050 from the site will lead to the village of Longstanton (circa 2.5km) and the new town of Northstowe (circa 4km).
- 1.2.2 **Figure 1.1** below illustrates the site location in its local context.

Figure 1.1: Site Location



Source: Google Maps ©

2. Local Highway Network

2.1 General

- 2.1.1 The existing site is located approximately 14.9km west of Cambridge and 1.4km north of Bar Hill village. The existing site is predominantly open grassland and is bounded by open grassland to the north and west. The B1050 bounds the site to the east and the A1307 and A14 bounds the site to the south. The site can be accessed from the B1050, which connects to the A14 via Bar Hill Junction. Travelling north on the B1050 from the site will lead to the village of Longstanton (circa 2.5km) and the new town of Northstowe (circa 4km).
- 2.1.2 The B1050 Hatton's Road is a dual carriageway to the east of the site governed by a 40mph speed limit as it travels north from Bar Hill Junction, which transitions to national speed limit as it approaches the roundabout and continues northbound. Southbound, the speed limit is 70 as it joins with the A14. The highway is approximately 7-metres-wide and widens to 11-metres-wide at the roundabout junction to the north and when approaching the B1050 / A1307 junction to accommodate for a third lane.
- 2.1.3 The local highway network is illustrated within **Figure 2.1** below.

Figure 2.1: Local Highway Network

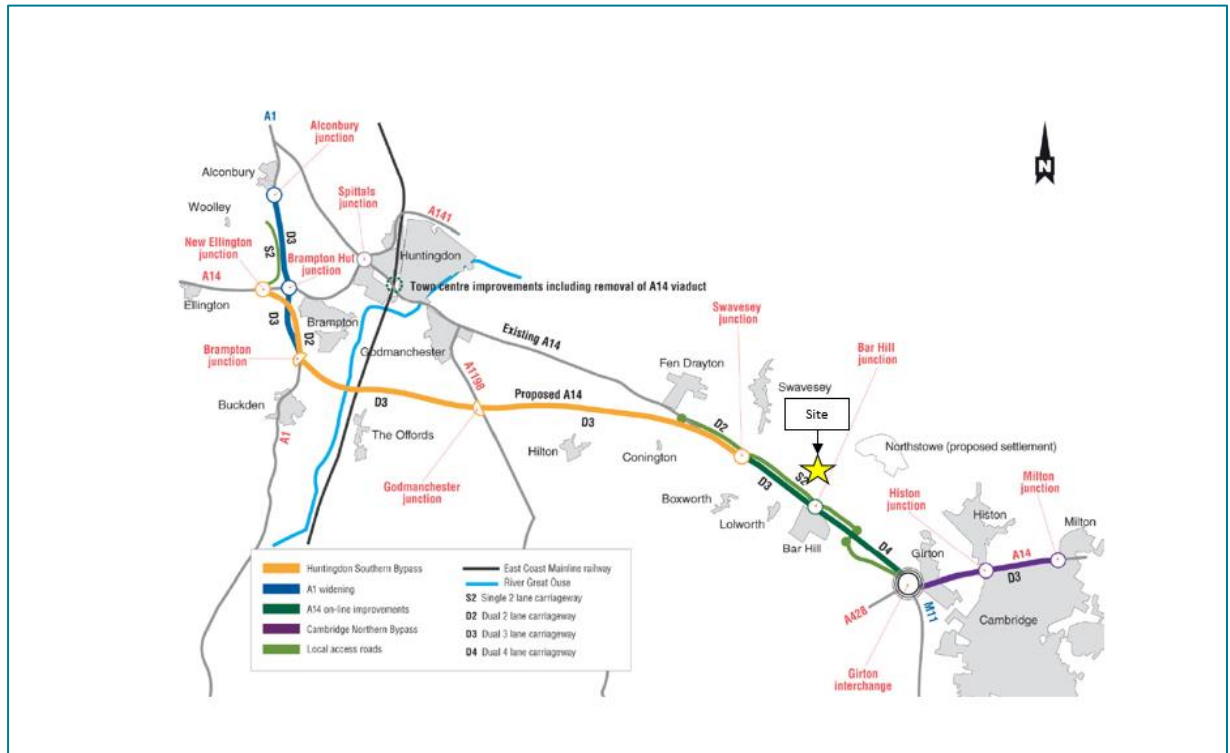


Source: OpenStreetMap ©

2.2 A14 Improvement - National Highways

- 2.2.1 the A14 was improved as part of the Cambridge to Huntingdon improvement scheme which included "...a major new bypass to the south of Huntingdon and upgrades to 21 miles of the A14. Work officially started in November 2016 and the new road opened to traffic on Tuesday 5 May 2020.". As part of the scheme, the junction at Swavesey, Bar Hill and Girton were improved to make sure they were compatible with new developments such as the aforementioned Northstowe. The improvements at Bar Hill involved the widening of the existing A14 over approximately five and a half miles to provide three lanes in each direction between Swavesey and Bar Hill, and four lanes in each direction between Bar Hill and Girton.
- 2.2.2 **Figure 2.2** below illustrates the A14 improvements. The full image can be seen in **Appendix A**.

Figure 2.2: A14 Improvements Overview



Source: National Highways

2.3 Accident Data

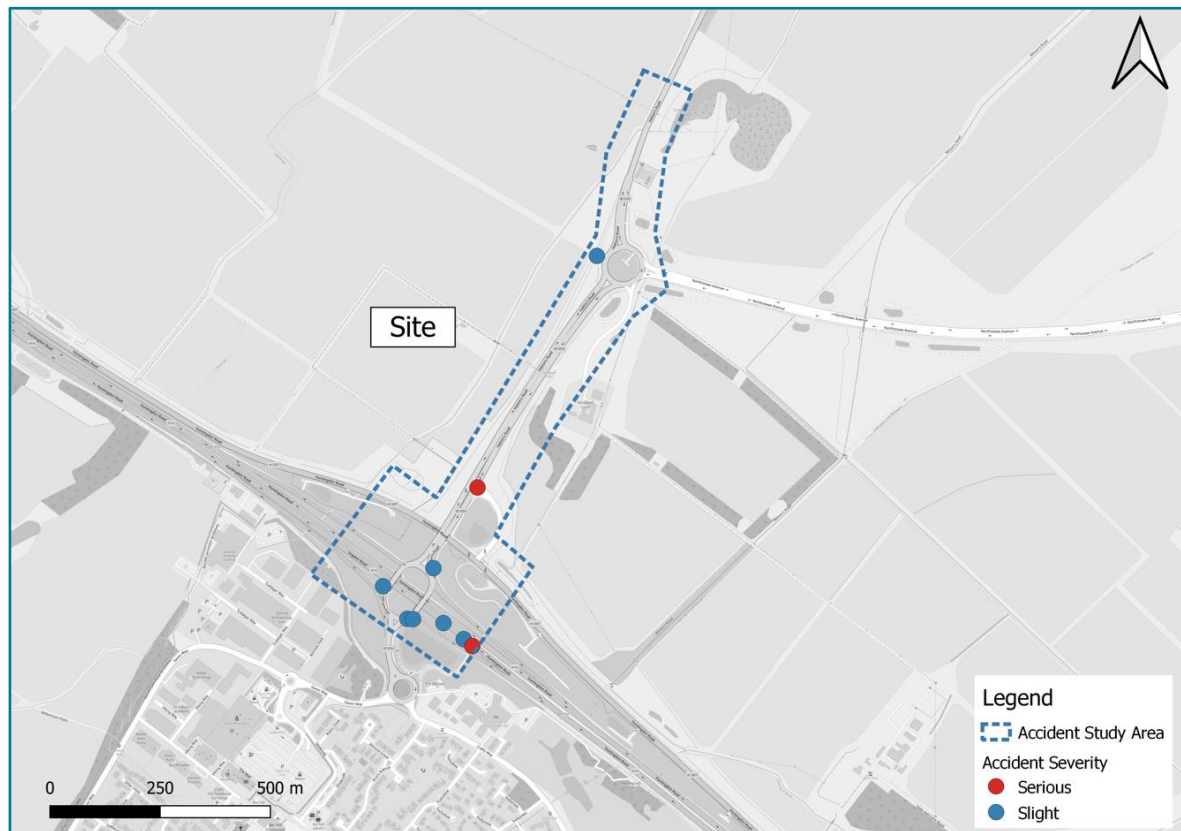
2.3.1 The DfT document "Guidance on Transport Assessment" states that:

- » "Critical locations on the road network with poor accident records should be identified. This is to determine if the proposed development will exacerbate existing problems or, if proposed, whether highway mitigation works or traffic management measures will help to alleviate the problems"

2.3.2 A review of the Personal-Injury Accidents [PIAs] recorded within the surrounding local highway network has been undertaken using the most recently available five-year data (1st January 2019 - 31st June 2024) available from DfT's STATS19 dataset.

2.3.3 Accidents within the study area are outlined in **Table 2.1** for the local highway network. The study area is shown in **Figure 2.3** and covers roads anticipated to be used by vehicles associated with the site.

Figure 2.3: Study Area Accident Record



Source: DfT's STATS19

Table 2.1: Accident Data Summary

Year/Severity	Slight	Serious	Fatal	Total
2019	2	-	-	2
2020	1	-	-	1
2021	1	1	-	2
2022	-	-	-	-
2023	3	1	-	4
2024	-	-	-	-
Total	7	2	-	9

2.3.4 Examination of the PIA data revealed that during the five-year period there have been nine accidents recorded at various points within the study area. Of these seven were classed as slight and two classed as serious. There were no fatal accidents.

2.3.5 The completion of the improved junction works as parts of the A14 improvements, noted above, in 2020 has helped to significantly decrease the number of accidents occurring.

- 2.3.6 Most of the HGV traffic will utilise Bar Hill junction to gain access or egress to and from the A14 and therefore the accident study area was not extended further north or west along the B1050.
- 2.3.7 Whilst the accidents are unfortunate, it is Hydrock's view that the accident frequency and severity does not indicate any specific highway safety issues associated with the road network.

3. Accessibility

3.1 Introduction

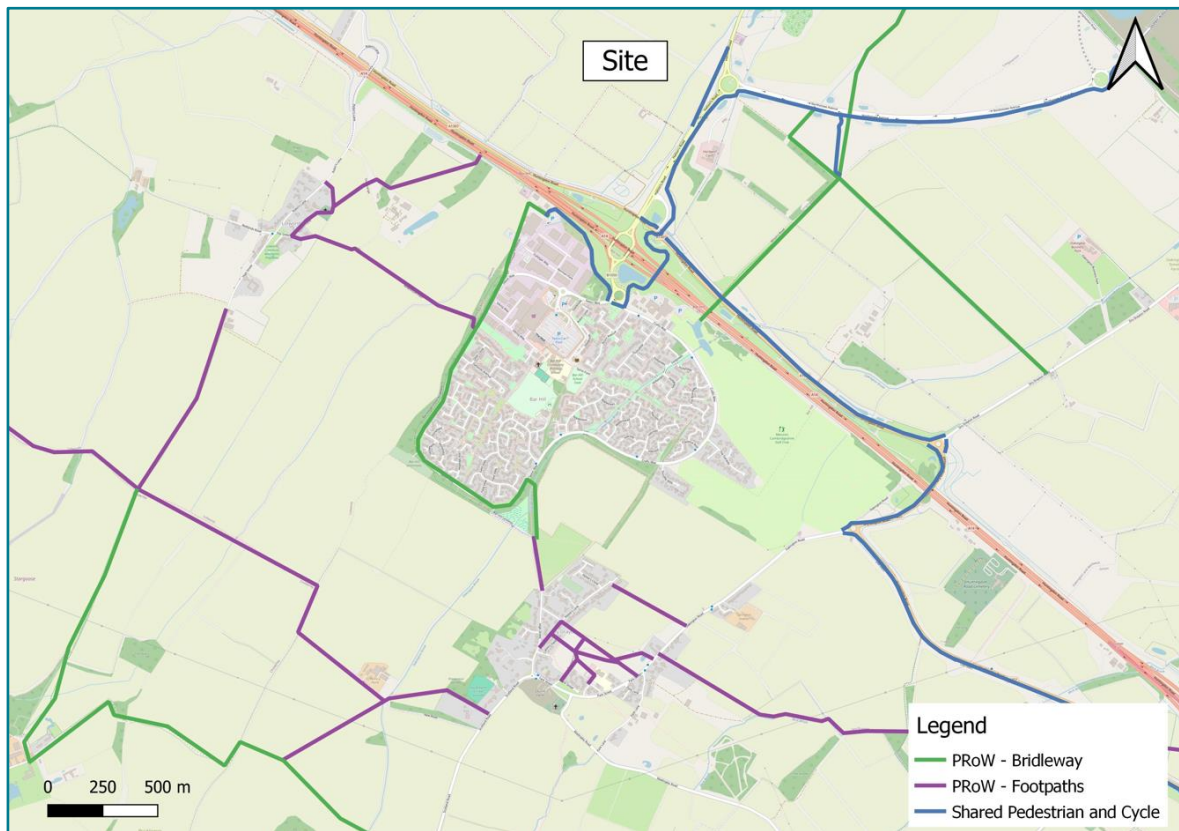
- 3.1.1 This section provides an overview into the existing conditions surrounding the site in terms of accessibility by foot, cycle and public transport.

3.2 Access on Foot

- 3.2.1 Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly those under 2km.
- 3.2.2 There is a shared pedestrian/cycle way present on the eastern side of the B1050 that travels south across the A14 via a dedicated pedestrian footbridge that links into the village of Bar Hill. The shared pedestrian/cycle way also extends northbound along the B1050 and runs east along the Southern Access Road (West) towards Northstowe from the roundabout. There is also a cycle way present on the western side of the B1050 close to the roundabout.

Public Rights of Way (PRoW)

- 3.2.3 PRoWs are accessible by the shared pedestrian/cycleway located on the eastern side of the B1050 that aids pedestrian movements across the A14 via a dedicated pedestrian footbridge. There are a large number of footways within the village of Bar Hill, south of the site. These offer convenient and safe footways for those travelling by foot to access the amenities located within Bar Hill. **Figure 3.1** below illustrates the shared footway, footbridge, and some of the PRoWs within the north of Bar Hill.
- 3.2.4 The existing PRoW network shown in **Figure 3.1** shows that the surrounding site is linked to the existing shared footway on the B1050 heading south towards Bar Hill and north towards Northstowe. A detail version of the drawing can be seen in **Appendix B**.

Figure 3.1: Overview of PRow and Cycle Lanes

Source: OpenStreetMap ©

3.2.5 There are a number of local amenities within a 2km walk of the development site, which has been taken from B1050 / A1307 junction. A detailed list of these amenities is as follows:

- » Cornflour Dental Clinic - Circa 450m from the site;
- » Saxon Park - Circa 700m from the site;
- » The Fox Public House - Circa 800m from the site;
- » National Express coach station (Tesco Extra) - Circa 850m from the site;
- » Tesco Extra supermarket - Circa 950m from the site;
- » Costa Coffee - Circa 950m from the site;
- » Churchill's Fish & Chips Bar Hill - Circa 1km from the site;
- » Bar Hill Library and Post Office - Circa 1.1km from the site;
- » ATM - Circa 1.1km from the site;

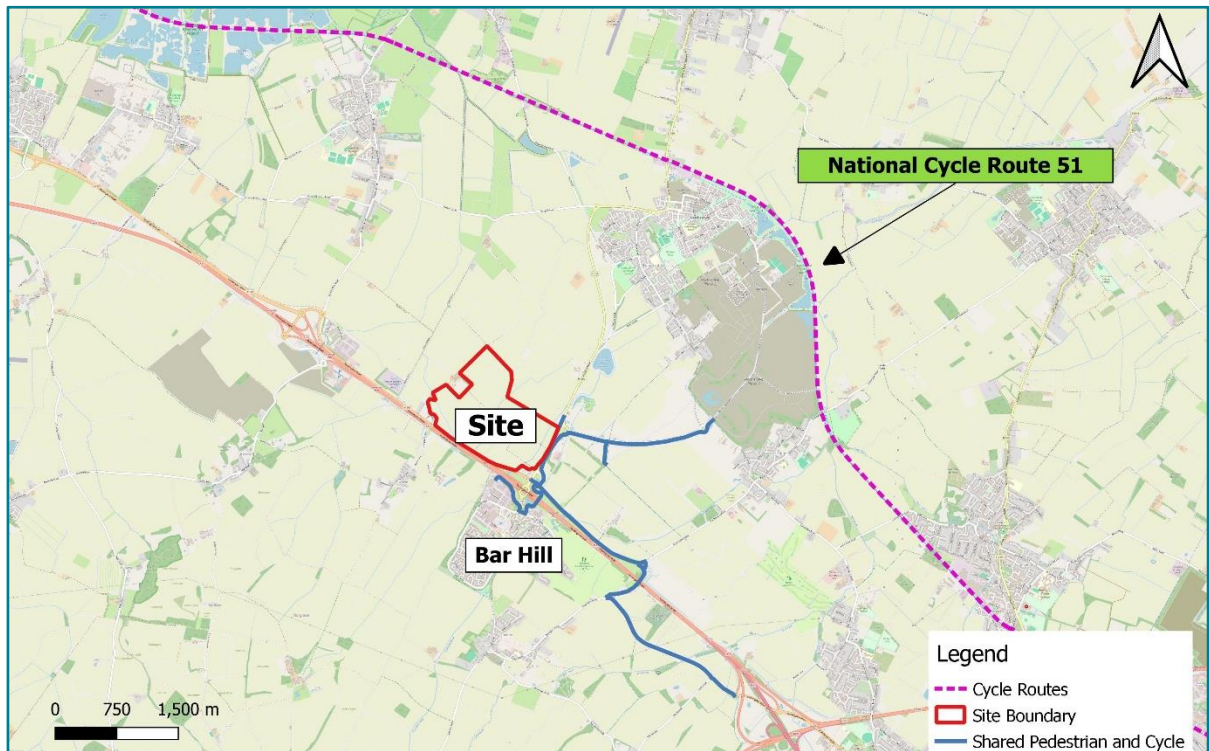
3.3 Access by Bicycle

- 3.3.1 It is widely recognised that cycling can act as a substitute for short car journeys, particularly those up to 5km in length.
- 3.3.2 The general topography surrounding the proposed development site is reasonably flat which should assist in encouraging residents and visitors of the proposed development to travel by cycle. There are dedicated shared footways present that help to encourage cycling along the B1050.

3.3.3 **Figure 3.2** below shows that there is a range of cycle routes surrounding the site, including the local facilities shown in **Figure 3.1**. The site benefits from the availability of a National Cycle Route within 5km. National Cycle Route 51 can be seen running north of the development site. A brief summary of NCN Route 51 can be seen below:

- » National Route 51 passes through Oxfordshire, Buckinghamshire, Bedfordshire, Cambridgeshire, Suffolk and Essex. The section between Harwich and Colchester forms part of the North Sea Cycle Route, also known as EuroVelo 12.

Figure 3.2: Local Cycle Network

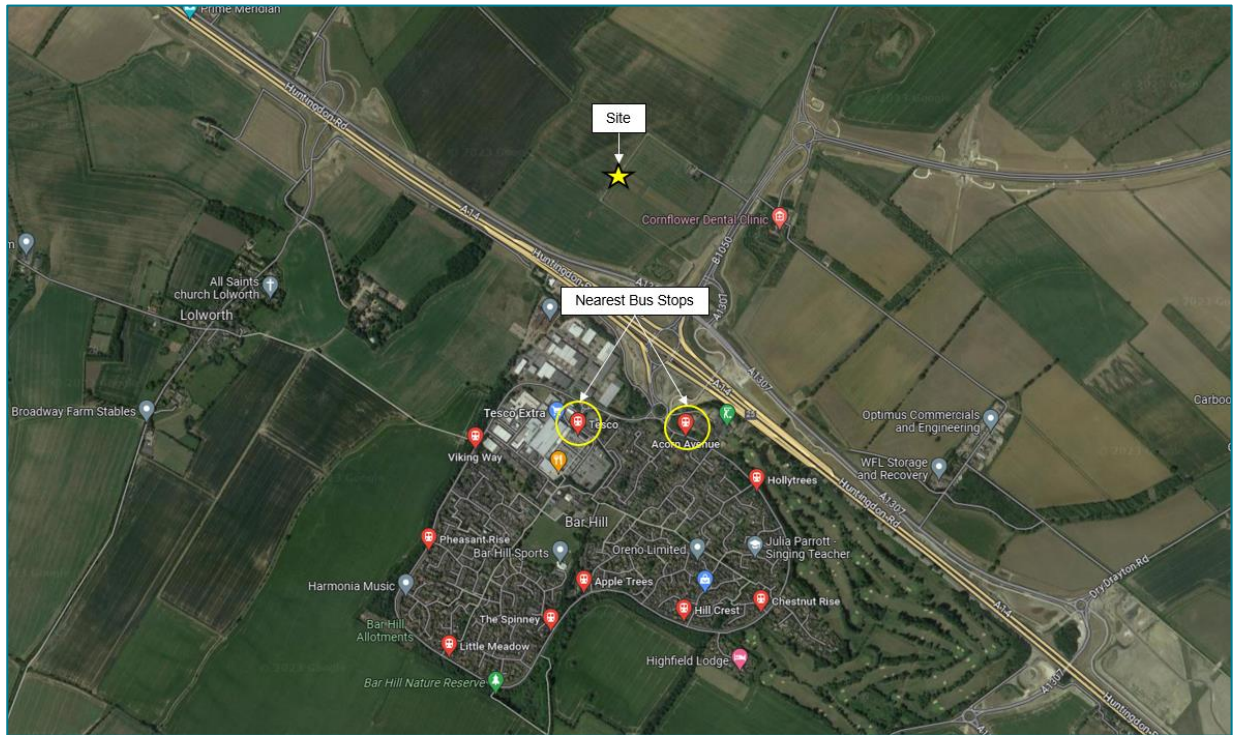


Source: OpenStreetMap ©

3.3.4 The availability of the National Cycle Route, Regional Cycle Route and local cycle infrastructure helps to extend the accessibility of the development site to the neighbouring areas such as Bar Hill, Northstowe, Longstanton and Cambridge. It provides opportunities to travel further afield using linked trips.

3.4 Access by Public Transport

3.4.1 This section explores the existing public transport opportunities available around the existing site. **Figure 3.3** below presents the nearest bus stops to the site.

Figure 3.3: Existing Public Transport Network

Source: Google Maps ©

- 3.4.2 The closest bus stops are located within Bar Hill with the Acorn Avenue stop being approximately 700m to the south east and the Tesco stop being approximately 900m to the south west of the site respectively. The Acorn Avenue stop is served by the No.5 bus operated by Stagecoachbus. The service runs frequently with a bus departing the stop every half hour towards Longstanton and Cambridge. The closest bus stops are located within Bar Hill with the Acorn Avenue stop being approximately 700m to the south east and the Tesco stop being approximately 900m to the south west of the site respectively. The Acorn Avenue stop is served by the No.5 bus operated by Stagecoachbus. The service runs frequently with a bus departing the stop every half hour towards Longstanton and Cambridge. The No.5 travels in as part of a circular route, serving Bar Hill before departing to either Longstanton or Cambridge first before looping back to Bar Hill. The first service departs from the Tesco stop at 05:05am and the last service to departs from the same stop at 23:57pm. Between the two destinations, the No.5 bus offers 60 services a day from Bar Hill.
- 3.4.3 From the Tesco stop, 2 more services can be accessed. The No. 5A and 8. The 5A is operated by Stagecoach and travels from Bar Hill to St Ives, with the first service departing at 07:45am and the last at 19:40pm. The No. 8 service travels from Bar Hill to Papworth and Cambridge, with the first service departing at 07:45am and the last at 17:05.
- 3.4.4 These buses are conducive for potential employees of the proposed site, serving morning and evening peak hours. The availability of the bus offers an attractive mode of transport and a viable alternative to single occupancy car journeys.

3.5 Summary

- 3.5.1 In summary the site is located in an accessible area of Cambridge, to make use of the existing public transport links within the village of Bar Hill. With the bus stops and coach stop available within a 1km by foot, this would allow for further travel to Cambridge and Longstanton, among other destinations. The frequency of bus services makes for an integrated and accessible public transport network.

4. Proposed Development and Access Arrangement

4.1 Access Arrangement Overview

- 4.1.1 Hydrock have reviewed a number of potential access options for the proposed development site. This following section summarises the two preferred options and considers visibility splays, geometry, Swept Path Analysis, and overall suitability of each access point.
- 4.1.2 Each access point was drawn up using OS mapping which does not show the new proposals along the B1050, as per application Ref: S/2011/14/OL, which may lead to some discrepancies in measurements. Therefore, all drawings are to be seen as indicative, with further refinement required following the undertaking of topographical surveys.
- 4.1.3 An overview location plan of the 2 potential access options for the proposed site is provided at **Appendix C**.

4.2 Option 1 - Access from B1050 North of B1050/A1307 Junction

- 4.2.1 Option 1 is the proposed two-way left in/left out access north of the B1050/A1307 junction and south of the roundabout, this is an existing access junction.
- 4.2.2 There is an existing access present, however it appears to lead to an existing agricultural track access. There is a central reservation that extends from the B1050/A1307 junction northbound towards the roundabout.
- 4.2.3 **Figure 4.1** below presents a satellite view of the existing conditions adjacent to Option 1.

Figure 4.1: Existing Conditions for Option 1



Source: Google Earth ©

Constraints

- 4.2.4 There are no pedestrian facilities present along the western side of the B1050 in proximity to Option 1.

Benefits

- 4.2.5 The benefits for Option 1 are that the B1050 has been recently improved as part of Phase 2 of the Northstowe town development to the north the road has also been reduced to a 40mph speed limit. There is also already an existing access present and therefore it may only need to be improved to accommodate a new access.
- 4.2.6 There is a shared pedestrian/cycleway present on the eastern side of the highway which travels north to the roundabout junction and south towards the B1050 / A1307 junction.

Visibility Splays

- 4.2.7 A visibility assessment of the proposed vehicular access/egress arrangement has been undertaken.
- 4.2.8 A drawing detailing the visibility is shown in **Appendix C**, and illustrates that the proposed access can accommodate a 103m visibility splay with a setback 'x' distance of 2.4m in both directions. This is considered compliant with Design Manual for Roads and Bridges [DMRB] standards for design speeds of 40mph, which is the speed limit along the B1050 in proximity to the proposed access.

Swept Path Analysis

- 4.2.9 A swept path analysis exercise was carried out to ensure that a 16.5m max HGV can access and egress using the proposed access road from the B1050. Due to the nature of the site and this report, there have been no internal road network developed. Therefore, the swept path analysis has been undertaken for the access / egress arrangement via the B1050 for the proposed access. This has been presented in **Appendix C**.
- 4.2.10 Servicing vehicles to and from the site will also use the same access and egress.

4.3 Option 2 - Access from B1050 / A1307 as part of a 4-arm Signalised Junction

- 4.3.1 This option proposes a new access arm to be created to join the western side of the existing B1050 / A1307 signalised junction to create a new 4-arm junction. The proposed access option is shown in **Appendix C**.
- 4.3.2 This proposed option is located approximately 200m north of the Bar Hill Junction. The junction is a signalised junction and there is no pedestrian crossing. There is an approximately 1-metre-wide gap between the kerb and the highway white line.
- 4.3.3 **Figure 4.2** below presents the existing conditions surrounding Option 2.

Figure 4.2: Existing Conditions for Option 2



Source: Google Earth ©

Constraints

- 4.3.4 Currently, there are no pedestrian crossing facilities within proximity of the junction and the new access road may have to consider adding a pedestrian crossing point to tie in with the signalised junction.

Benefits

- 4.3.5 The main benefits with Option 1 will be the close proximity and ease of access from the B1050. The relatively wide junction also allows for the potential of a 3-lanes access. The existing left lane on the B1050 will be converted to a left and ahead lane allowing vehicles a direct left turn into the site access. There will be 2 egress lanes from the site access, with 1 (middle lane) offering a direct left turn onto the B1050 towards the Bar Hill Junction and A14, and the other offering a right and ahead movements. The full arrangement can be seen in **Appendix C**.

Visibility Splays

- 4.3.6 A visibility assessment of the proposed vehicular access/egress arrangement has been undertaken.
- 4.3.7 A drawing detailing the visibility is shown in **Appendix C**, and illustrates that the proposed access can accommodate a 103m visibility splay with a setback 'x' distance of 2.4m in both directions. This is considered compliant with Design Manual for Roads and Bridges [DMRB] standards for design speeds of 40mph, which is the speed limit along the B1050.

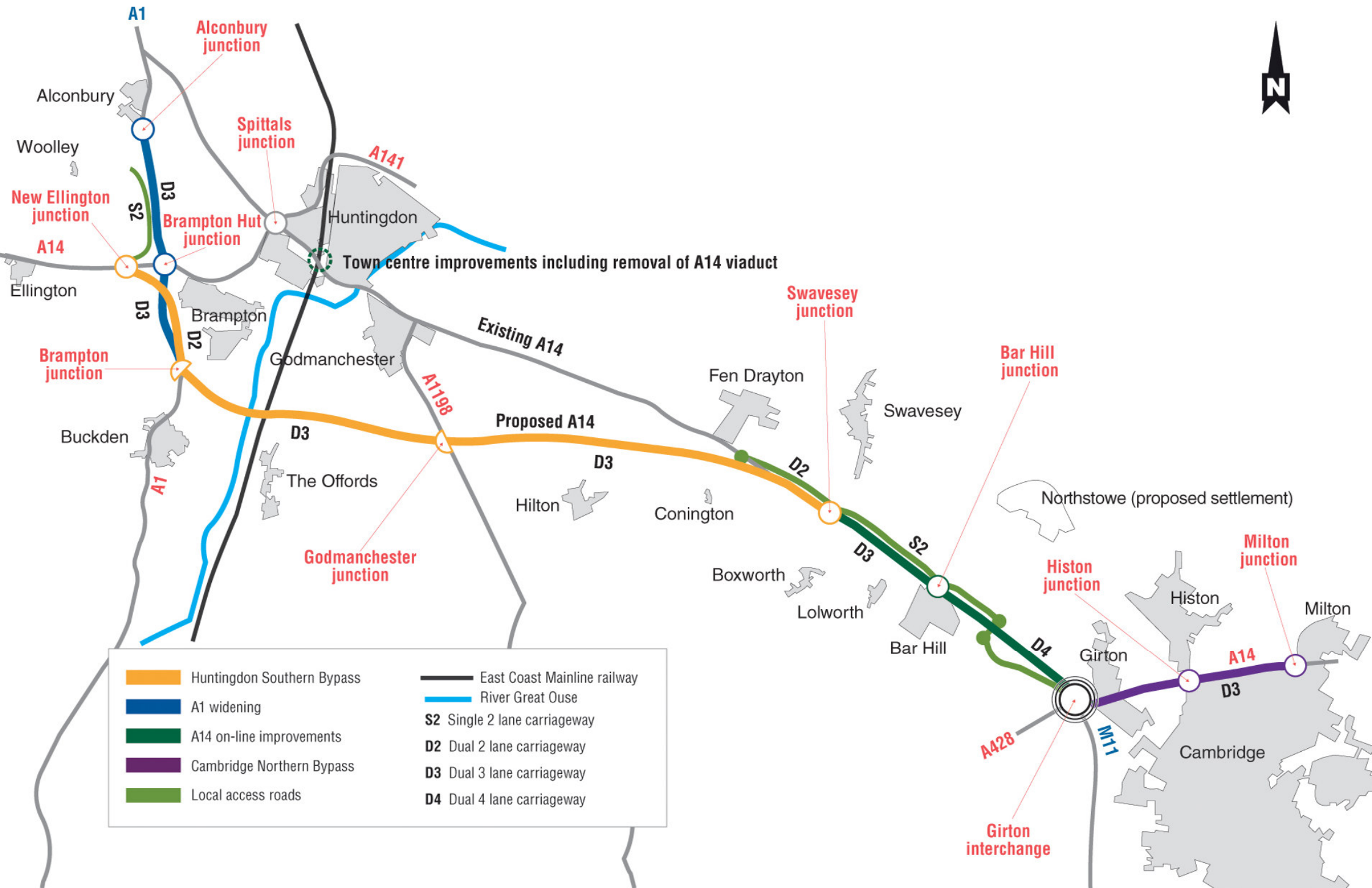
Swept Path Analysis

- 4.3.8 A Swept Path Analysis exercise was carried out to ensure that a 16.5m max HGV can access and egress using the proposed access road from the B1050. Due to the nature of the site and this report, there have been no internal road network developed. Therefore, the swept path analysis has been undertaken for the access / egress arrangement via the B1050 for the proposed access. This has been presented in **Appendix C**.
- 4.3.9 Servicing vehicles to and from the site will also use the same access and egress.

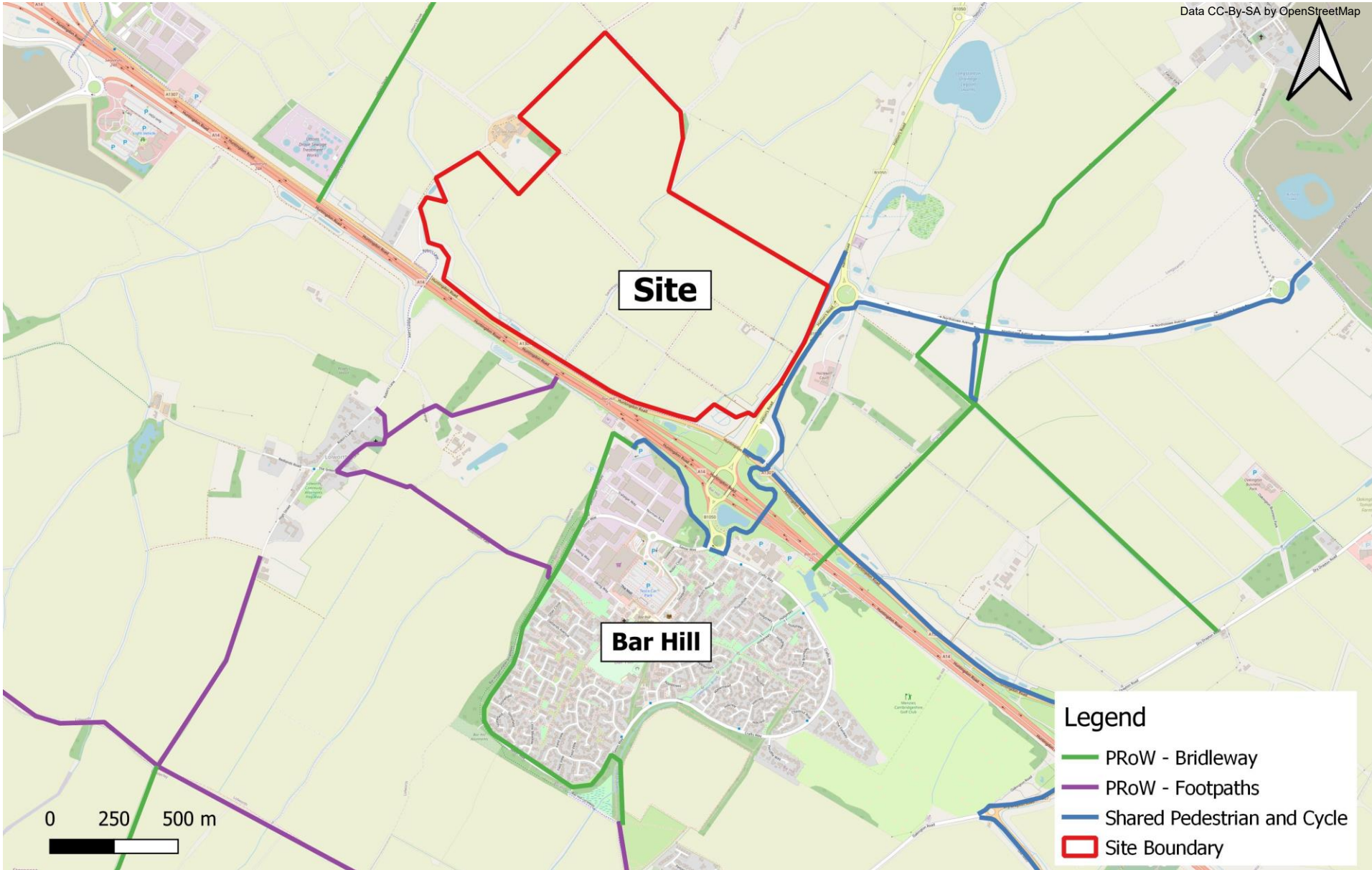
4.4 Conclusion

- 4.4.1 It is considered that a safe and compliant access can be delivered to the site, and engagement will be undertaken with Cambridgeshire County Council to refine the design and confirm the proposed vehicular access strategy.

Appendix A A14 Improvements



Appendix B Accessibility



Legend

- PRoW - Bridleway
- PRoW - Footpaths
- Shared Pedestrian and Cycle
- Site Boundary



Project Title
Tritax Park Cambridge

Drawing Title
Accessibility: Walking and PRoW

Job Number	31188	By	PS
Date	06/03/2025	Checked	CR
Scale	NTS	Status	-

Rev	Description	Date	By
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Drawing No.
APPENDIX B
Figure
1



National Cycle Route 51

Site

Bar Hill

Legend

- Cycle Routes
- Site Boundary
- Shared Pedestrian and Cycle

0 750 1,500 m



Project Title
Tritax Park Cambridge

Drawing Title
Accessibility: Cycle Routes

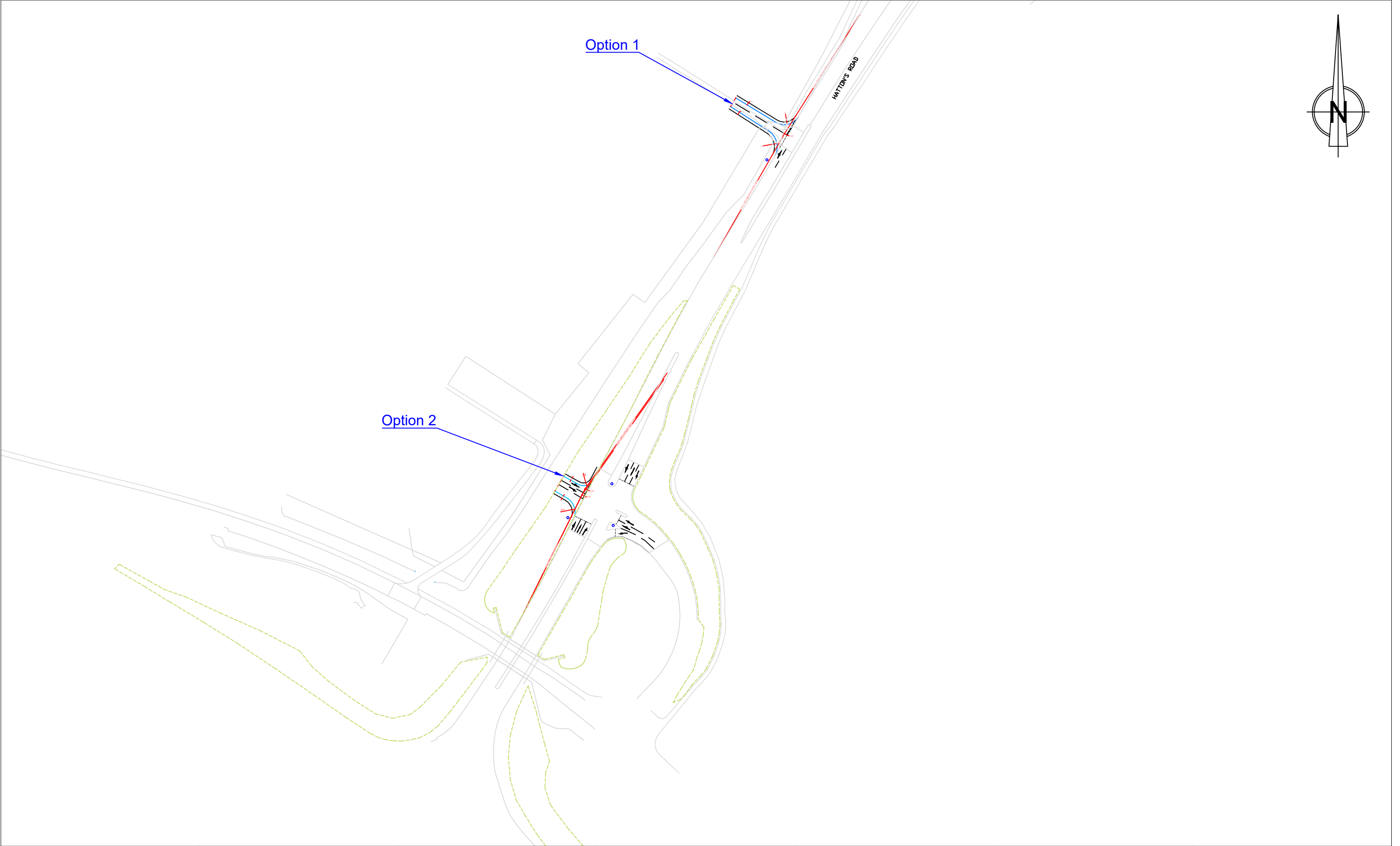
Job Number
31188
Date
06/03/2025
Scale
NTS

By
PS
Checked
CR
Status
-

Rev	Description	Date	By
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Drawing No.
APPENDIX B
Figure
2

Appendix C Site Access Arrangements and Swept Path Analysis



KEY PLAN

VEHICLE BODY IN FORWARD GEAR

VEHICLE BODY IN REVERSE GEAR

VEHICLE CHASSIS IN FORWARD GEAR

VEHICLE CHASSIS IN REVERSE GEAR

DIMENSIONS / ANNOTATION

PROPOSED SIGNAGE LOCATION

REVISIONS (CONTINUED)

REVISIONS						
P03	FIRST ISSUE					
	PS	06.03.25	CR	06.03.25	CR	06.03.25
P02	FIRST ISSUE					
	PS	24.02.25	CR	24.02.25	CR	24.02.25
P01	FIRST ISSUE					
	HT	31.08.23	CR	31.08.23	CR	31.08.23
REV	REVNOTES					
	DRAWNBY	DATE-D	CHKBY	DATE-C	APPBY	DATE-A

Hydrock

CLIENT

TRITAX BIG BOX DEVELOPMENTS

PROJECT

TRITAX PARK CAMBRIDGE

TITLE

ACCESS FEASIBILITY REVIEW - PROPOSED ACCESS LOCATION OVERVIEW

HYDROCK PROJECT NO.

31188-TMBI

SCALE @ A3

NTS

STATUS DESCRIPTION

SUITABLE FOR REVIEW & COMMENT

DRAWING NO.

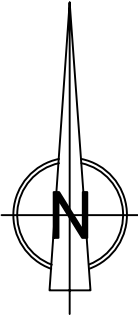
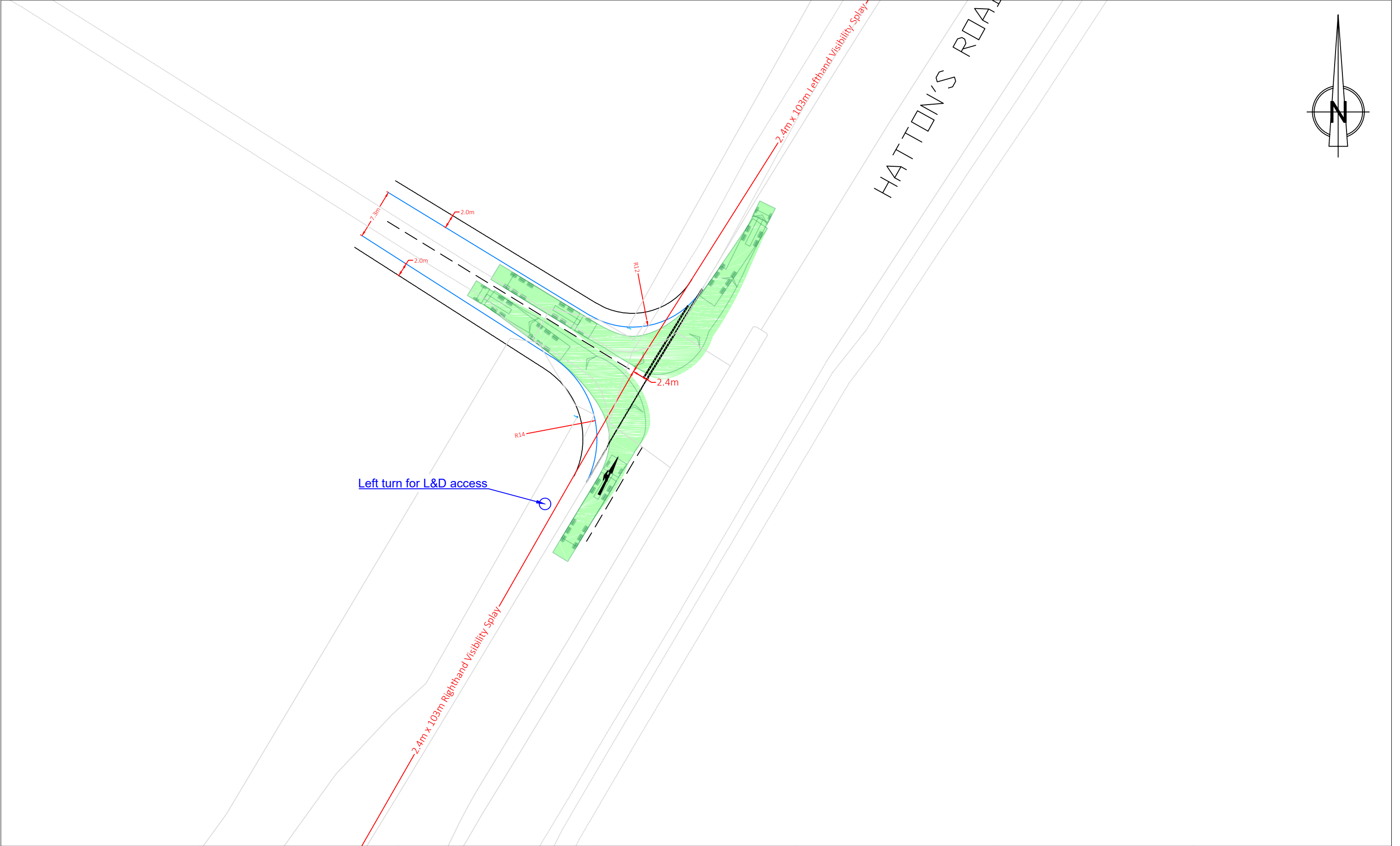
31188-HYD-XX-XX-DR-TP-0009-P03

STATUS

S3

REVISION

P03



KEY PLAN

VEHICLE BODY IN FORWARD GEAR

VEHICLE BODY IN REVERSE GEAR

VEHICLE CHASSIS IN FORWARD GEAR

VEHICLE CHASSIS IN REVERSE GEAR

DIMENSIONS / ANNOTATION

PROPOSED SIGNAGE LOCATION

5.079



Large Car (2006)

Overall Length1.872m

Overall Width1.525m

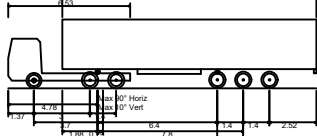
Overall Body Height0.310m

Min Body Ground Clearance1.831m

Max Track Width4.00s

Lock to lock time5.900m

16.5



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length16.500m

Overall Width2.520m

Overall Body Height3.881m

Min Body Ground Clearance0.411m

Max Track Width2.500m

Lock to lock time6.00s

Kerb to Kerb Turning Radius6.530m

REVISIONS (CONTINUED)

REVISIONS

P03	FIRST ISSUE						
	PS	06.03.25	CR	06.03.25	CR	06.03.25	
P02	FIRST ISSUE						
	PS	24.02.25	CR	24.02.25	CR	24.02.25	
P01	FIRST ISSUE						
	HT	21.08.23	CR	21.08.23	CR	21.08.23	
REV	REVNOTES						
	DRAWNBY	DATE-D	CHKBY	DATE-C	APPLY	DATE-A	



CLIENT

TRITAX BIG BOX DEVELOPMENTS

PROJECT

TRITAX PARK CAMBRIDGE

TITLE

ACCESS FEASIBILITY REVIEW - OPTION 1

HYDROCK PROJECT NO.

31188-TMBI

SCALE @ A3

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STATUS DESCRIPTION

SUITABLE FOR REVIEW & COMMENT

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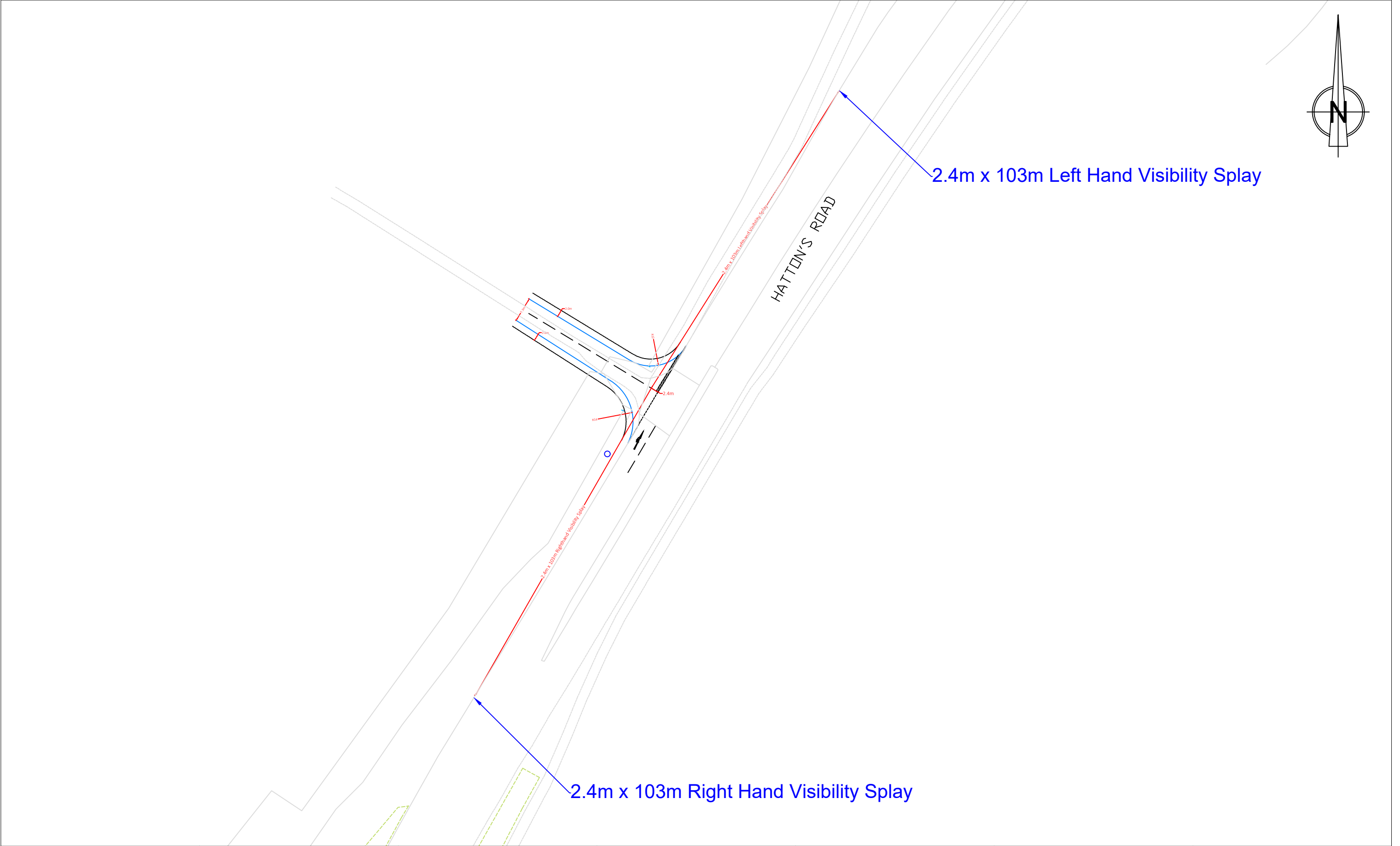
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STATUS

S3

REVISION

P03



KEY PLAN

VEHICLE BODY IN FORWARD GEAR

VEHICLE BODY IN REVERSE GEAR

VEHICLE CHASSIS IN FORWARD GEAR

VEHICLE CHASSIS IN REVERSE GEAR

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NOTES

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2) THE CONTENT OF THIS DRAWING WILL REQUIRE FURTHER WORK SUCH AS A ROAD SAFETY AUDIT AND DETAILED DESIGN
3) THIS DRAWING IS BASED ON 3RD PARTY SURVEY INFORMATION

VISIBILITY SPLAYS DRAWN BASED ON SSD FOR 70MPH DESIGN SPEED ACCORDING TO DMRB STANDARDS.

REVISIONS (CONTINUED)

REV	REVNOTES	DATE-D	CHKBY	DATE-C	APPBY	DATE-A
P03	FIRST ISSUE	PS	06.03.25	CR	06.03.25	06.03.25
P02	FIRST ISSUE	PS	24.02.25	CR	24.02.25	24.02.25
P01	FIRST ISSUE	HT	21.08.23	CR	21.08.23	21.08.23

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CLIENT

TRITAX BIG BOX DEVELOPMENTS

PROJECT

TRITAX PARK CAMBRIDGE

TITLE

ACCESS FEASIBILITY REVIEW - OPTION 2 - VISIBILITY SPLAY

HYDROCK PROJECT NO.

31188-TMBI

SCALE @ A3

1:1000

STATUS DESCRIPTION

SUITABLE FOR REVIEW & COMMENT

DRAWING NO.

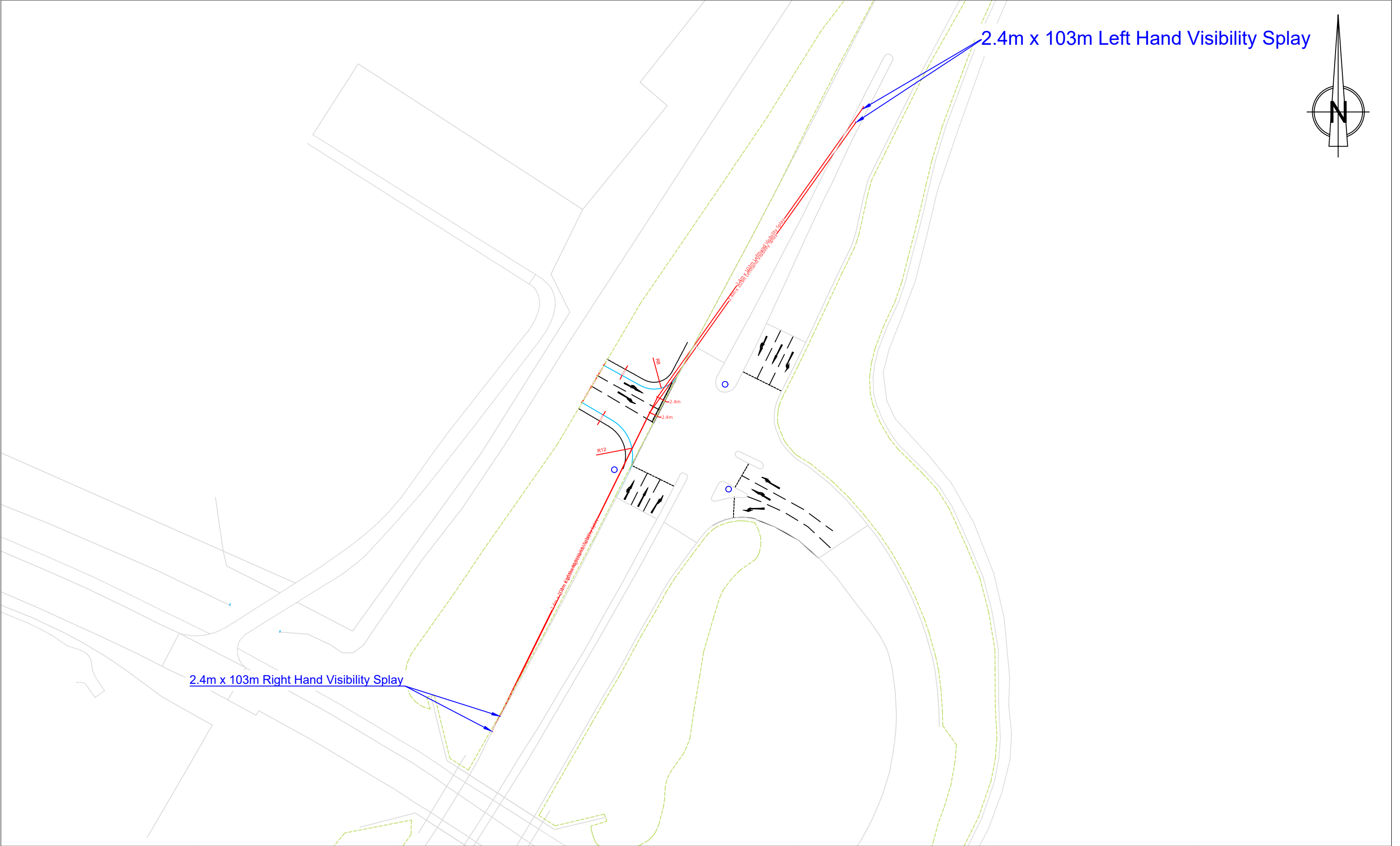
31188-HYD-XX-XX-DR-TP-0006-P03

STATUS

S3

REVISION

P03



KEY PLAN

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VEHICLE BODY IN REVERSE GEAR

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VISIBILITY SPLAYS DRAWN BASED ON SSD FOR 40MPH DESIGN SPEED ACCORDING TO DMRB STANDARDS.

REVISIONS (CONTINUED)

REV	REVNOTES	DATE-D	CHKBY	DATE-C	APPBY	DATE-A	
P03	FIRST ISSUE	PS	06.03.25	CR	06.03.25	CR	06.03.25
P02	FIRST ISSUE	PS	24.02.25	CR	24.02.25	CR	24.02.25
P01	FIRST ISSUE	HT	21.08.23	CR	21.08.23	CR	21.08.23

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TRITAX BIG BOX DEVELOPMENTS

PROJECT

TRITAX PARK CAMBRIDGE

TITLE

ACCESS FEASIBILITY REVIEW - OPTION 1 - VISIBILITY SPLAY

HYDROCK PROJECT NO.

31188-TMBI

SCALE @ A3

1:1000

STATUS DESCRIPTION

SUITABLE FOR REVIEW & COMMENT

DRAWING NO.

31188-HYD-XX-XX-DR-TP-0005-P03

STATUS

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REVISION

P03