Tween Bridge Solar Farm

7.7 Outline Construction Traffic Management Plan Part 3

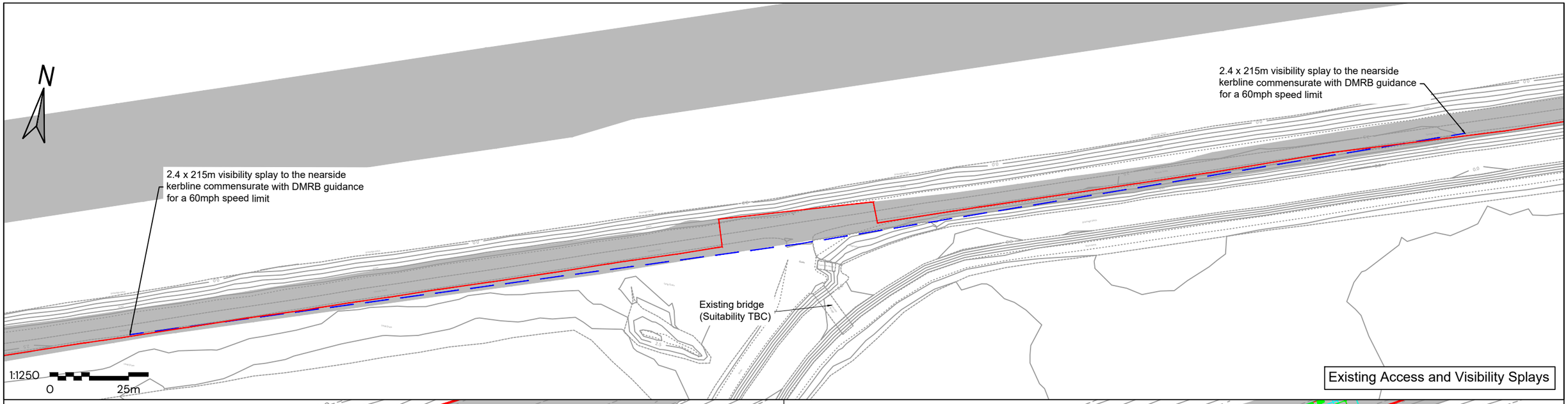
Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

APFP Regulation 5(2)(q)

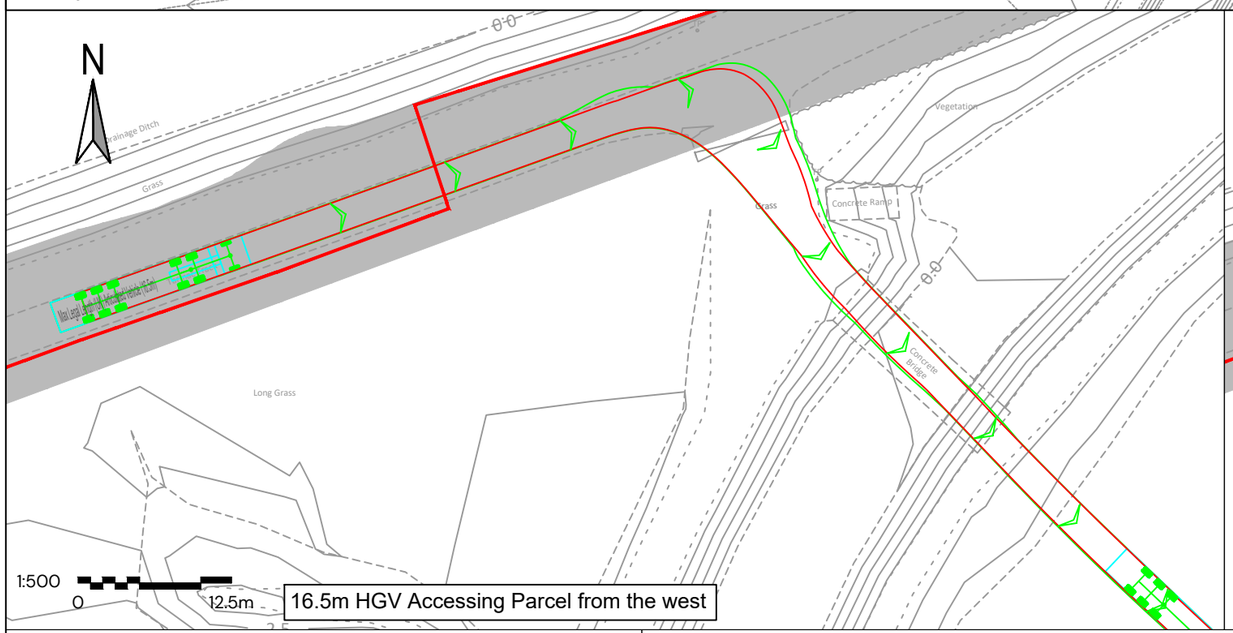
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~~August~~ September 2026

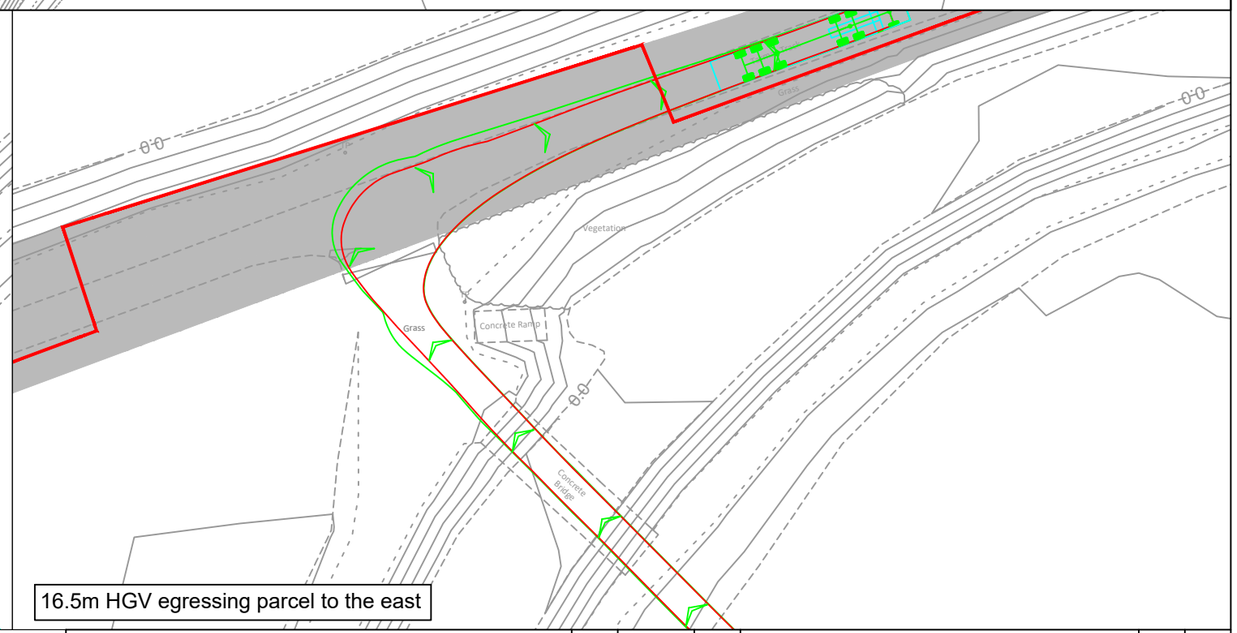
Revision ~~4~~5



Existing Access and Visibility Splays



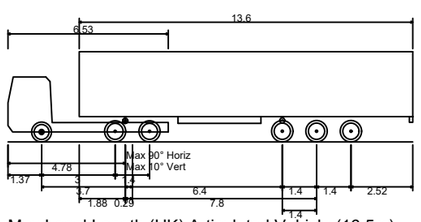
16.5m HGV Accessing Parcel from the west



16.5m HGV egressing parcel to the east

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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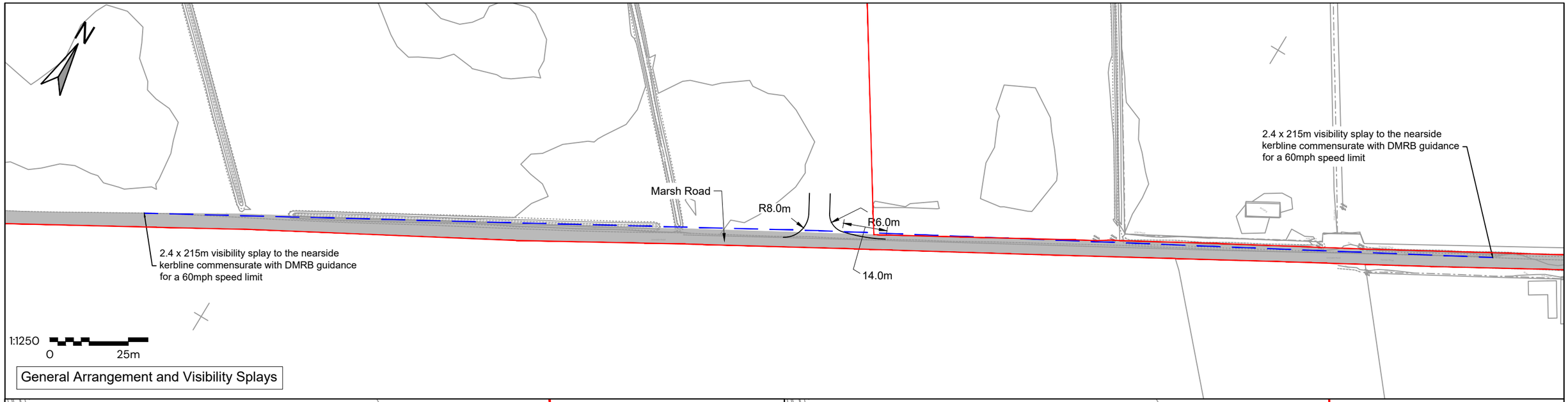
PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION R

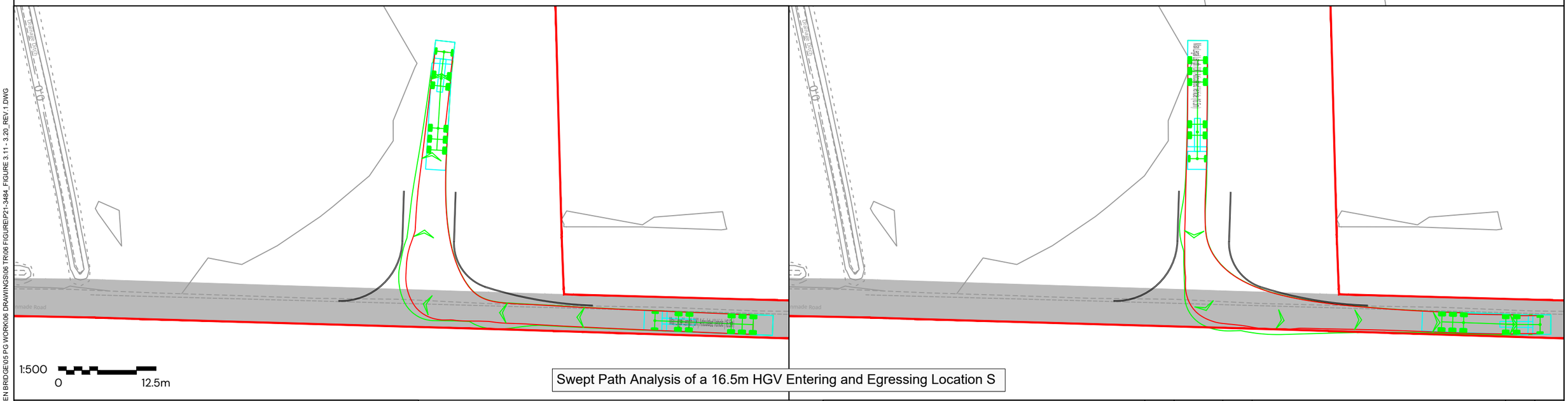
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AS SHOWN	ADWS	KS
DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
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PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.19	1

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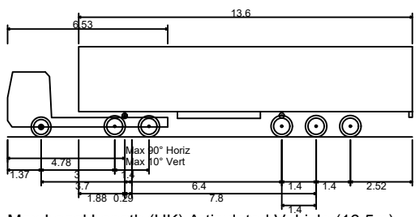
General Arrangement and Visibility Splays



Swept Path Analysis of a 16.5m HGV Entering and Egressing Location S

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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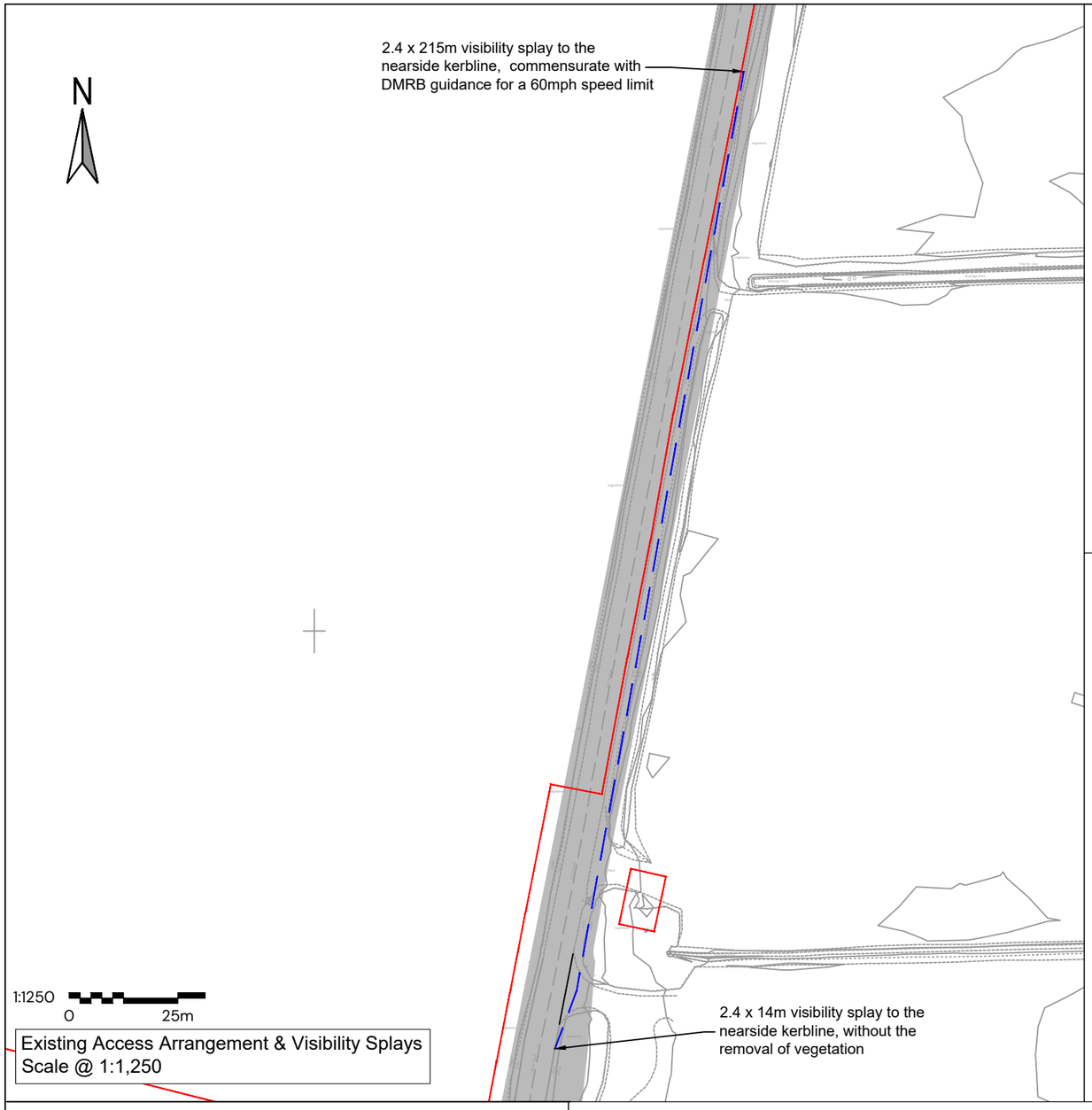
PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION S

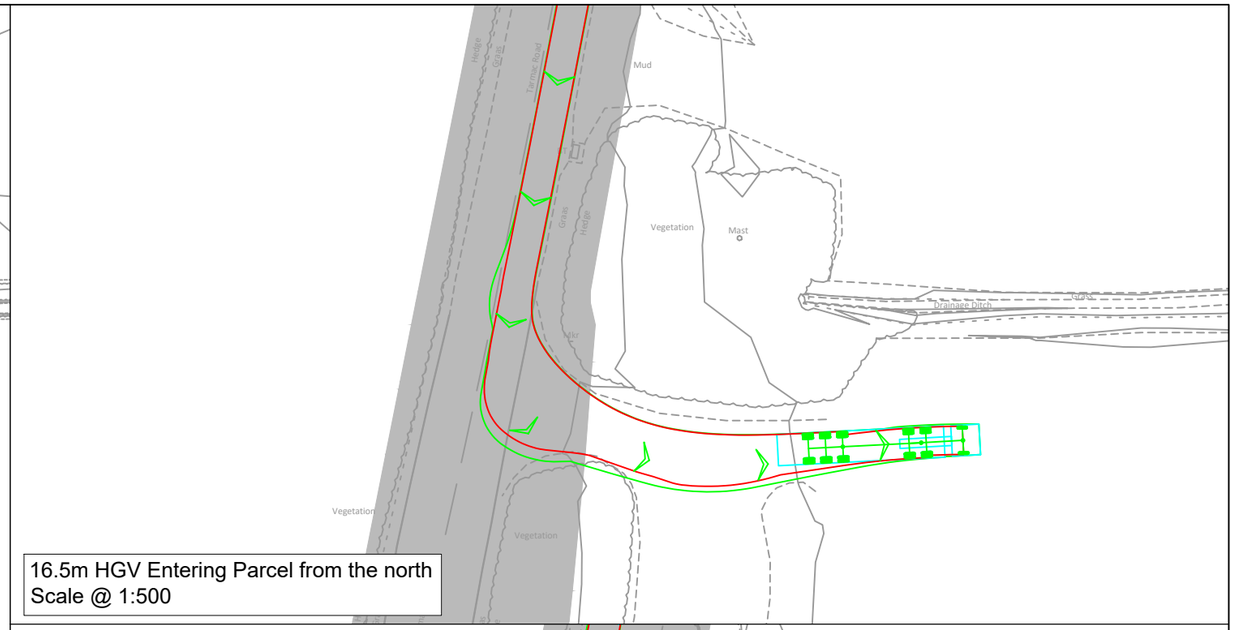
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AS SHOWN	ADWS	
DATE:	**DESIGN-DRAWN:**	**DRAWING-STATUS:**
09/07/2025	JAN	FINAL
PROJECT No:	**DRAWING No:**	**REV:**
P21-3484	FIGURE 3.20	1

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Existing Access Arrangement & Visibility Splays
Scale @ 1:1,250



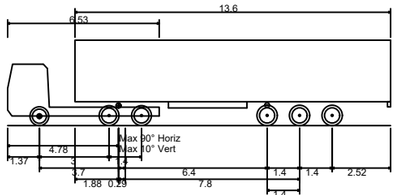
16.5m HGV Entering Parcel from the north
Scale @ 1:500



16.5m HGV Egressing Parcel from the north
Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

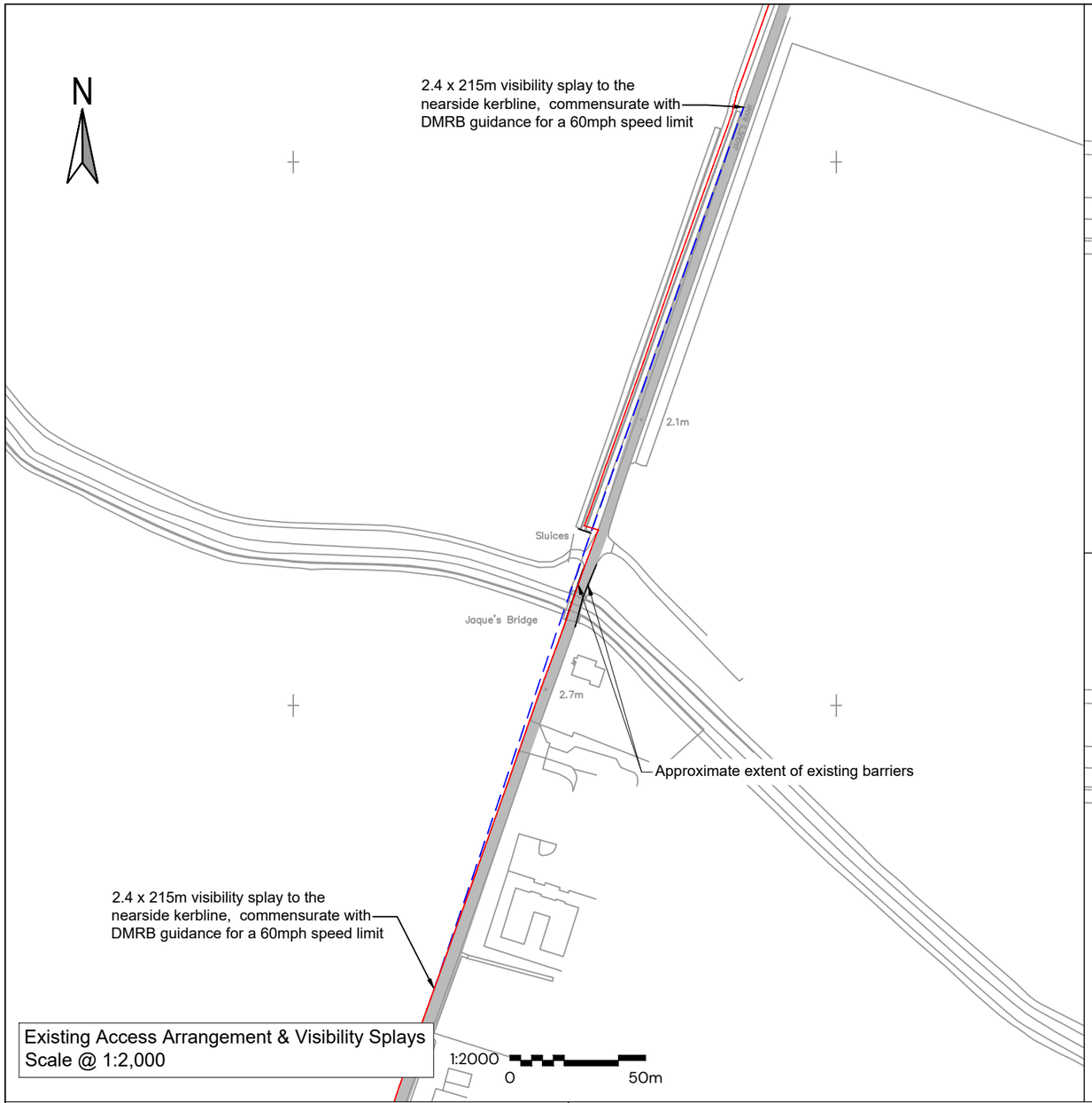
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION X

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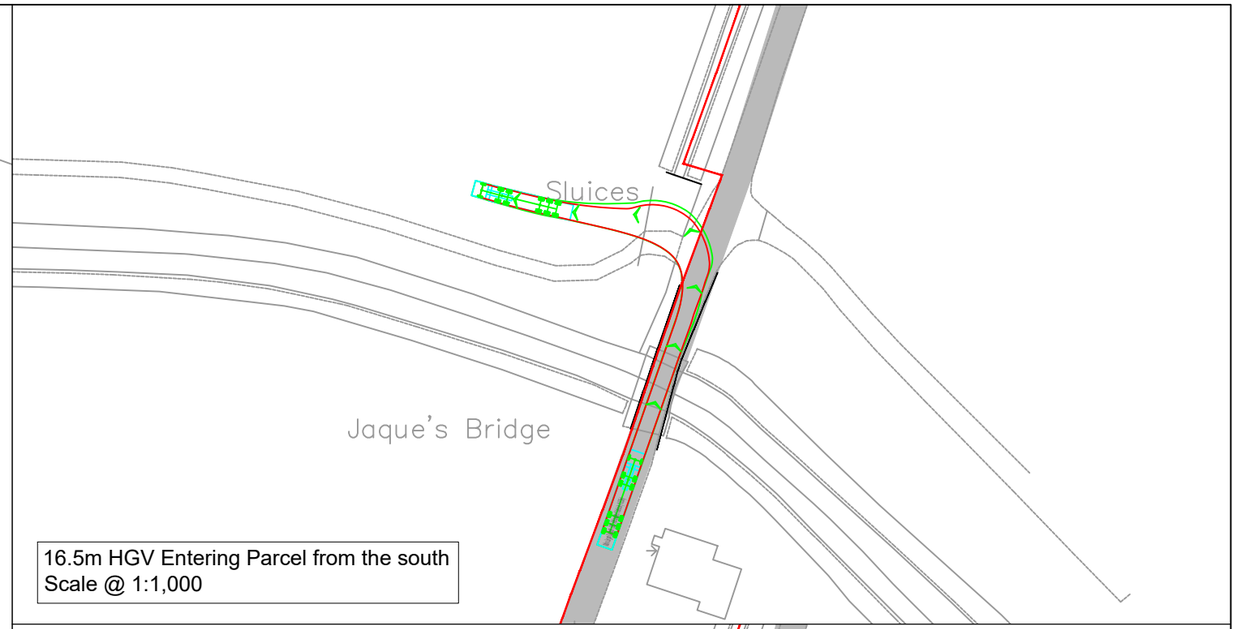
PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.25	1

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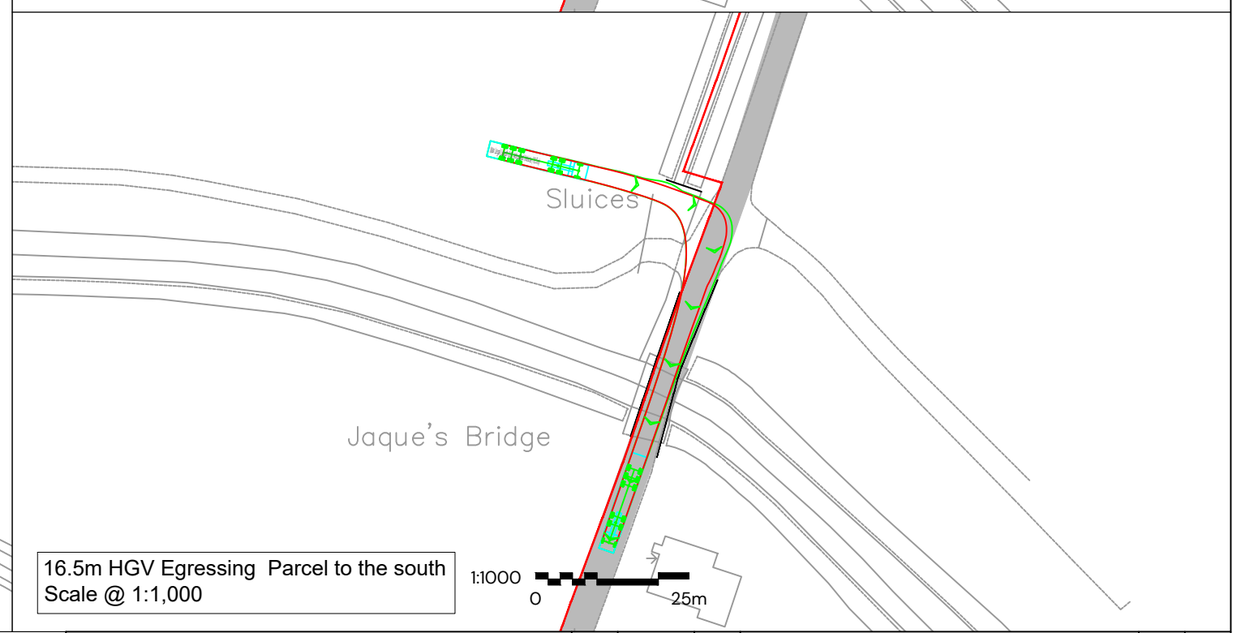
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Existing Access Arrangement & Visibility Splays
Scale @ 1:2,000



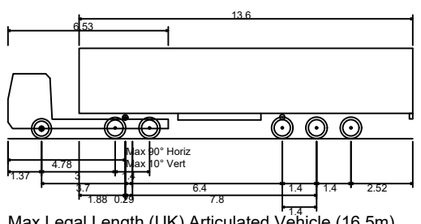
16.5m HGV Entering Parcel from the south
Scale @ 1:1,000



16.5m HGV Egressing Parcel to the south
Scale @ 1:1,000

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

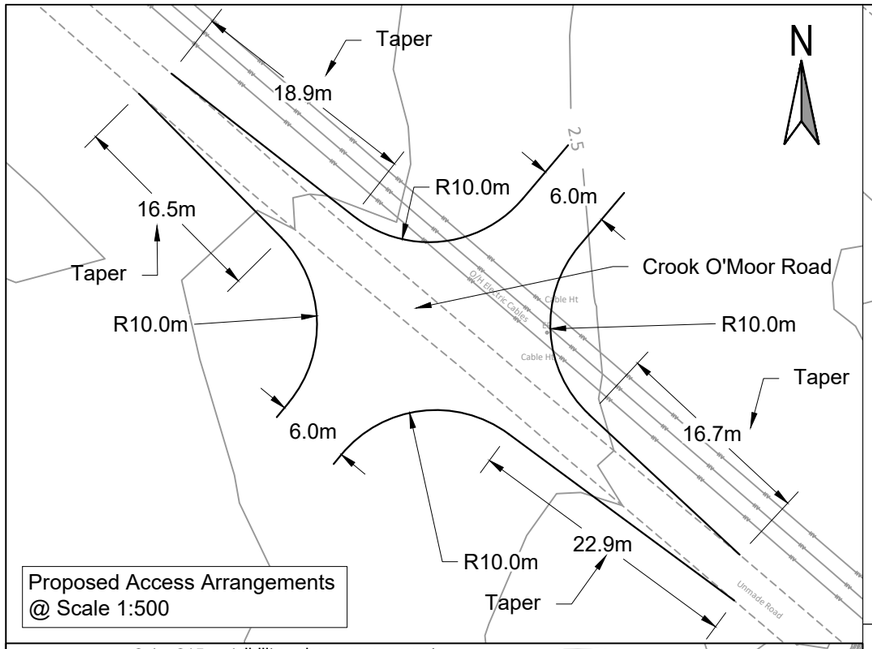
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Y

SCALE @ A3:	CHECKED:	APPROVED:
1:500	ADWS	KS
DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
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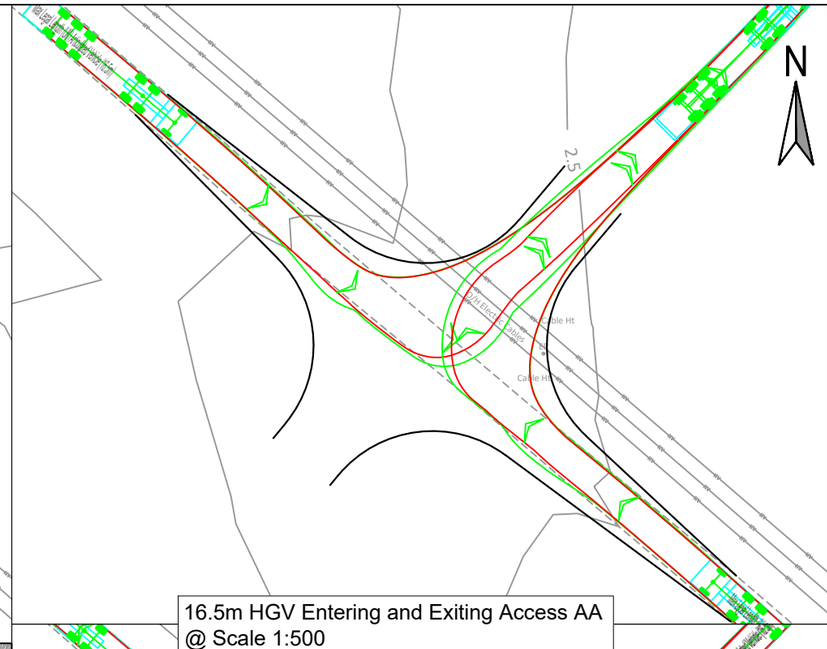
PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.26	1

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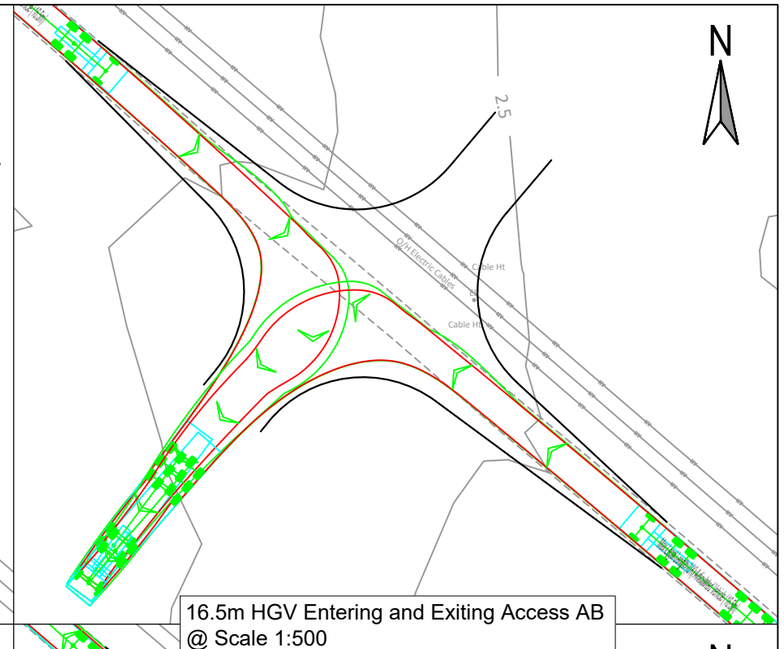
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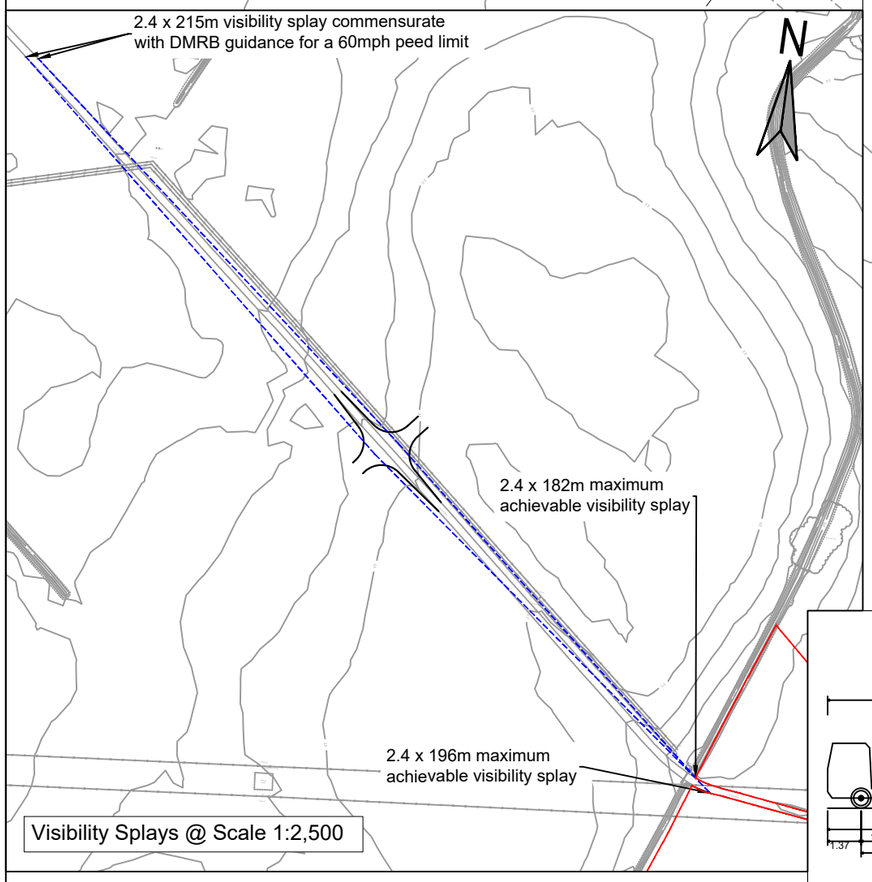
Proposed Access Arrangements
@ Scale 1:500



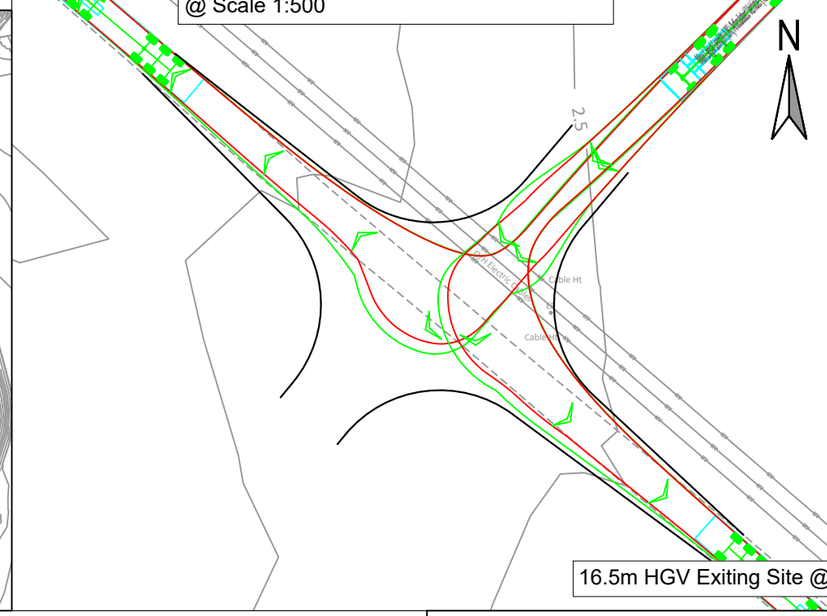
16.5m HGV Entering and Exiting Access AA
@ Scale 1:500



16.5m HGV Entering and Exiting Access AB
@ Scale 1:500



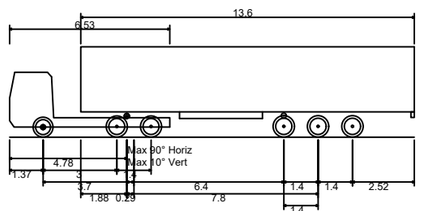
Visibility Splays @ Scale 1:2,500



16.5m HGV Exiting Site @ Scale 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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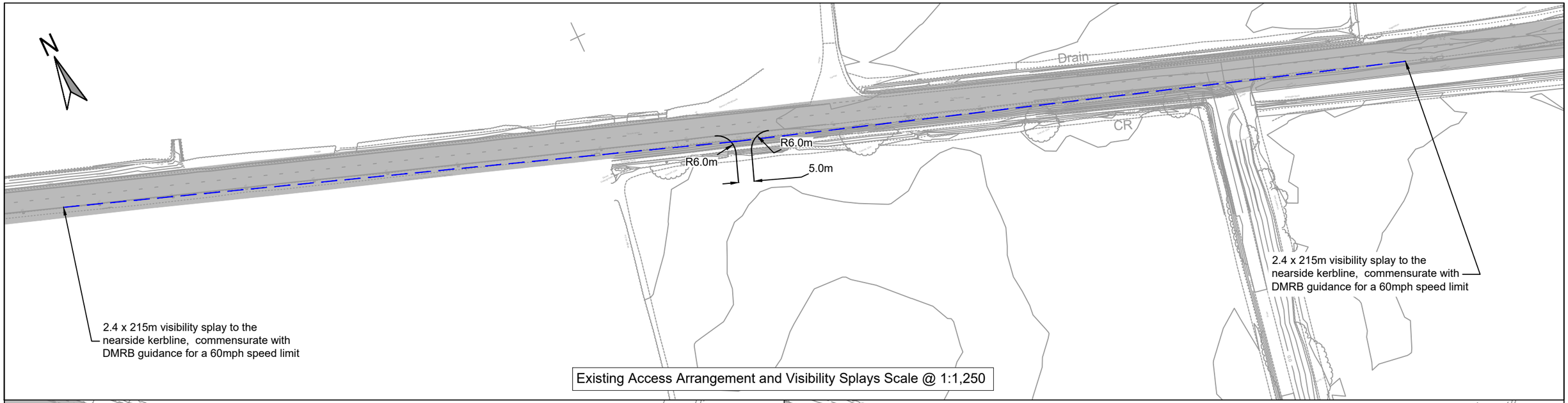
PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AA AND LOCATION AB

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P21-3484	FIGURE 3.28	1

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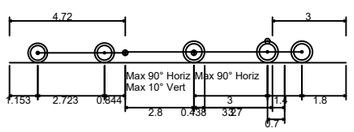
Existing Access Arrangement and Visibility Splays Scale @ 1:1,250



Tractor & Trailer Entering and Exiting Access
Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



Tractor and Trailer	
Overall Length	13.720m
Overall Width	2.500m
Overall Body Height	0.438m
Min Body Ground Clearance	0.398m
Max Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	4.620m

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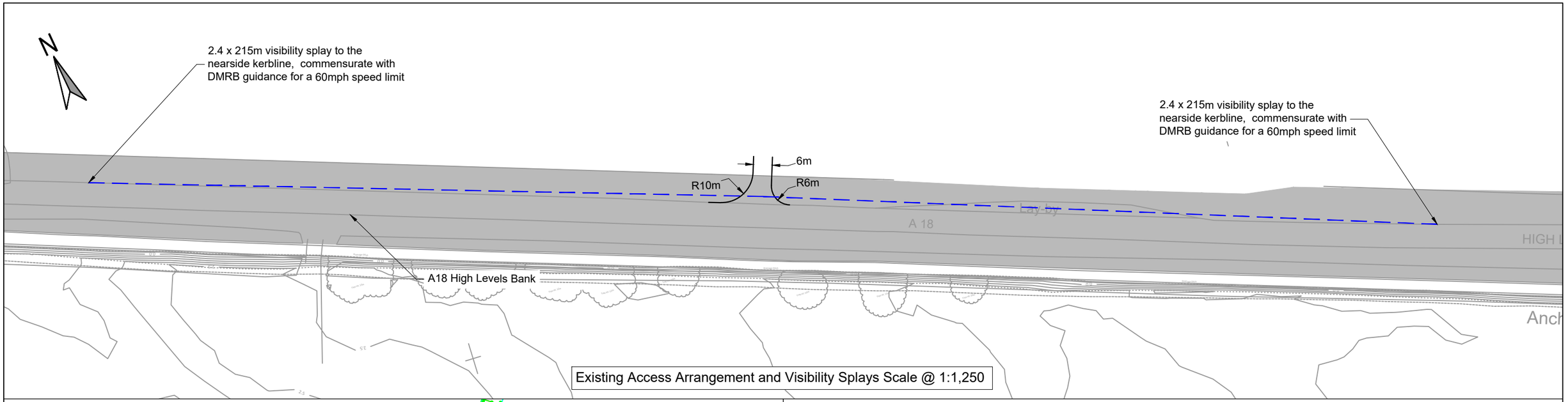
PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AH

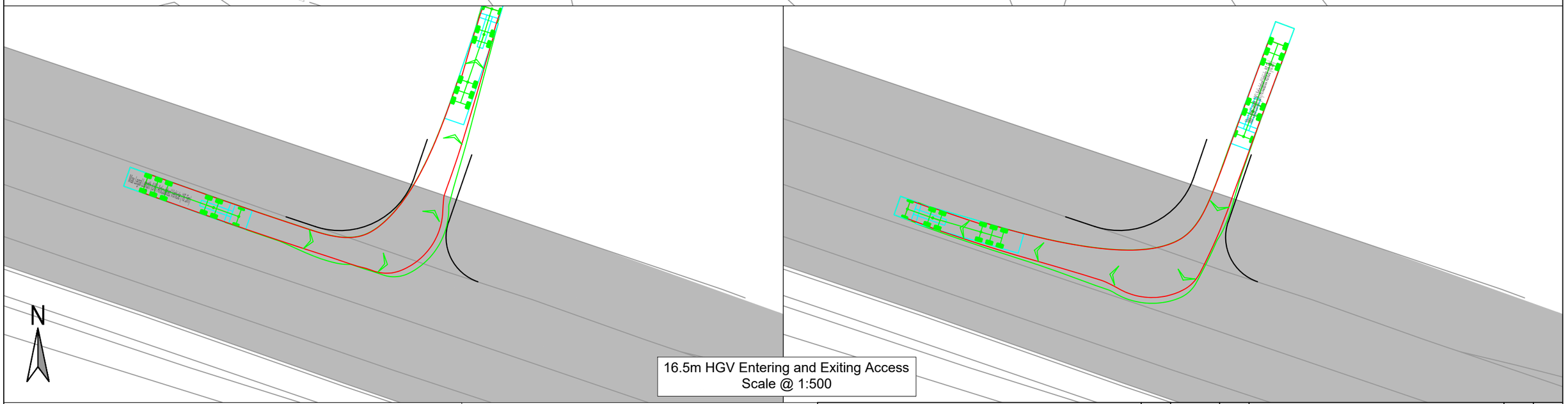
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DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
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P21-3484	FIGURE 3.34	1

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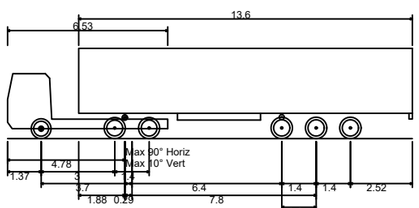
Existing Access Arrangement and Visibility Splays Scale @ 1:1,250



16.5m HGV Entering and Exiting Access
Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD

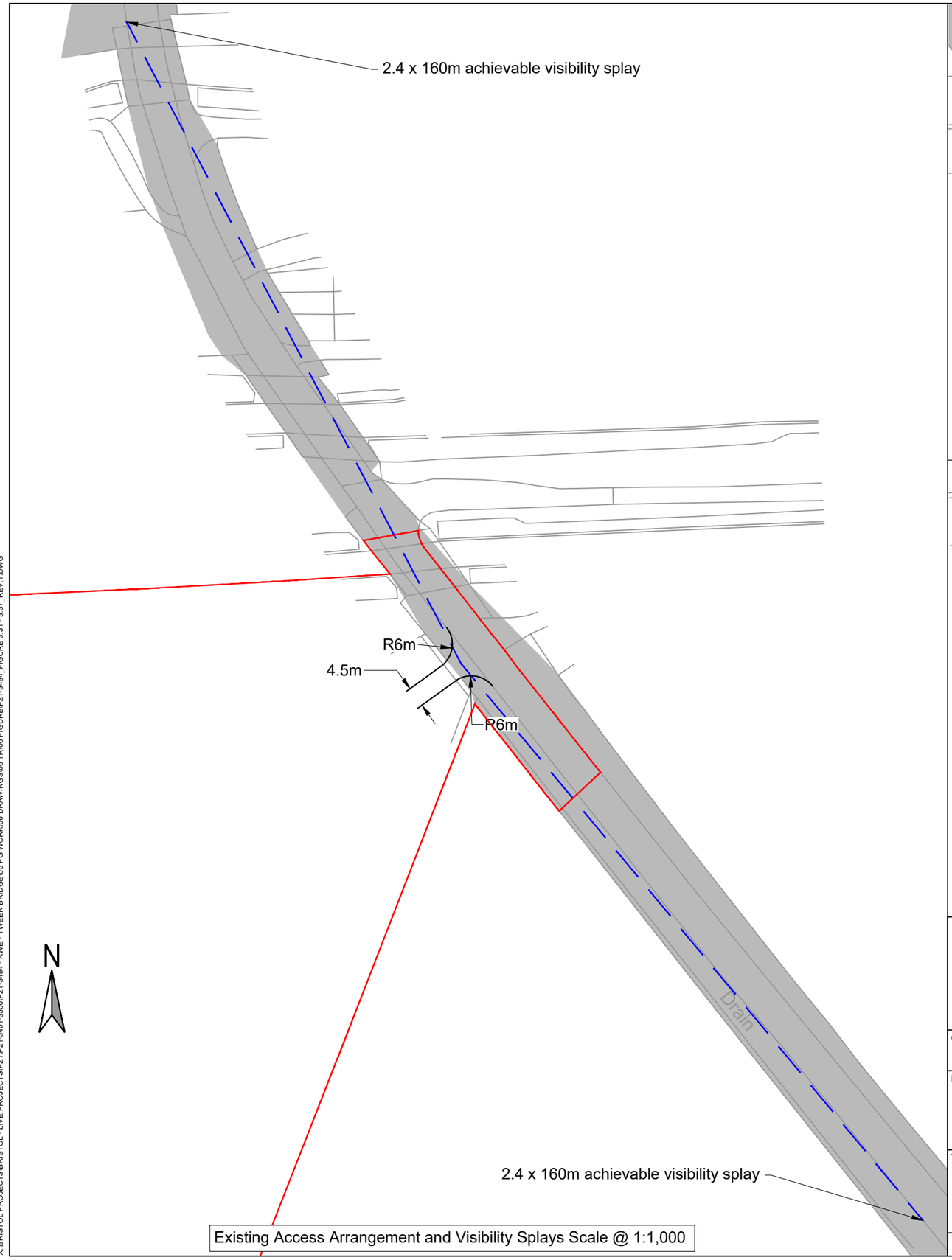
PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Ai

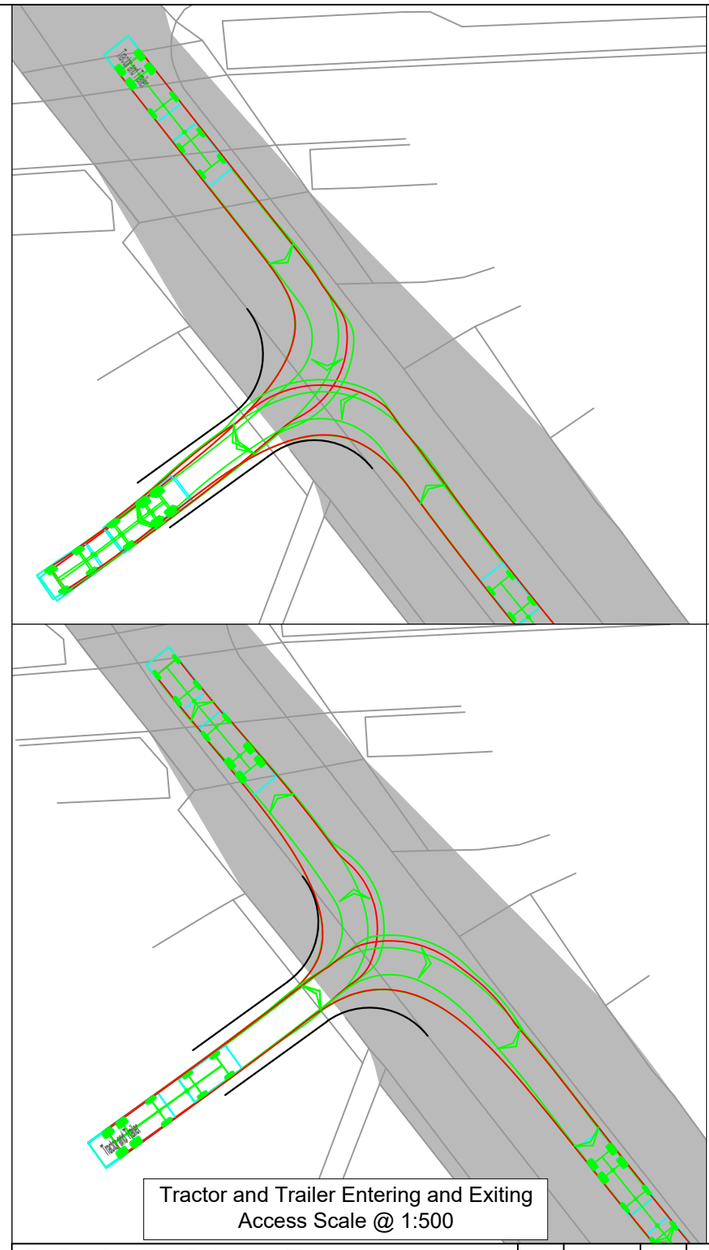
SCALE @ A3:	CHECKED:	APPROVED:
AS SHOWN	KSS	KSS
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P21-3484	FIGURE 3.35	1

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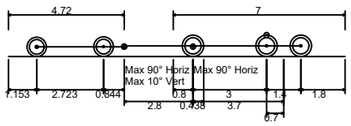
Existing Access Arrangement and Visibility Splays Scale @ 1:1,000



Tractor and Trailer Entering and Exiting Access Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



Tractor and Trailer	
Overall Length	13.720m
Overall Width	2.500m
Overall Body Height	0.438m
Min Body Ground Clearance	0.398m
Max Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	4.620m

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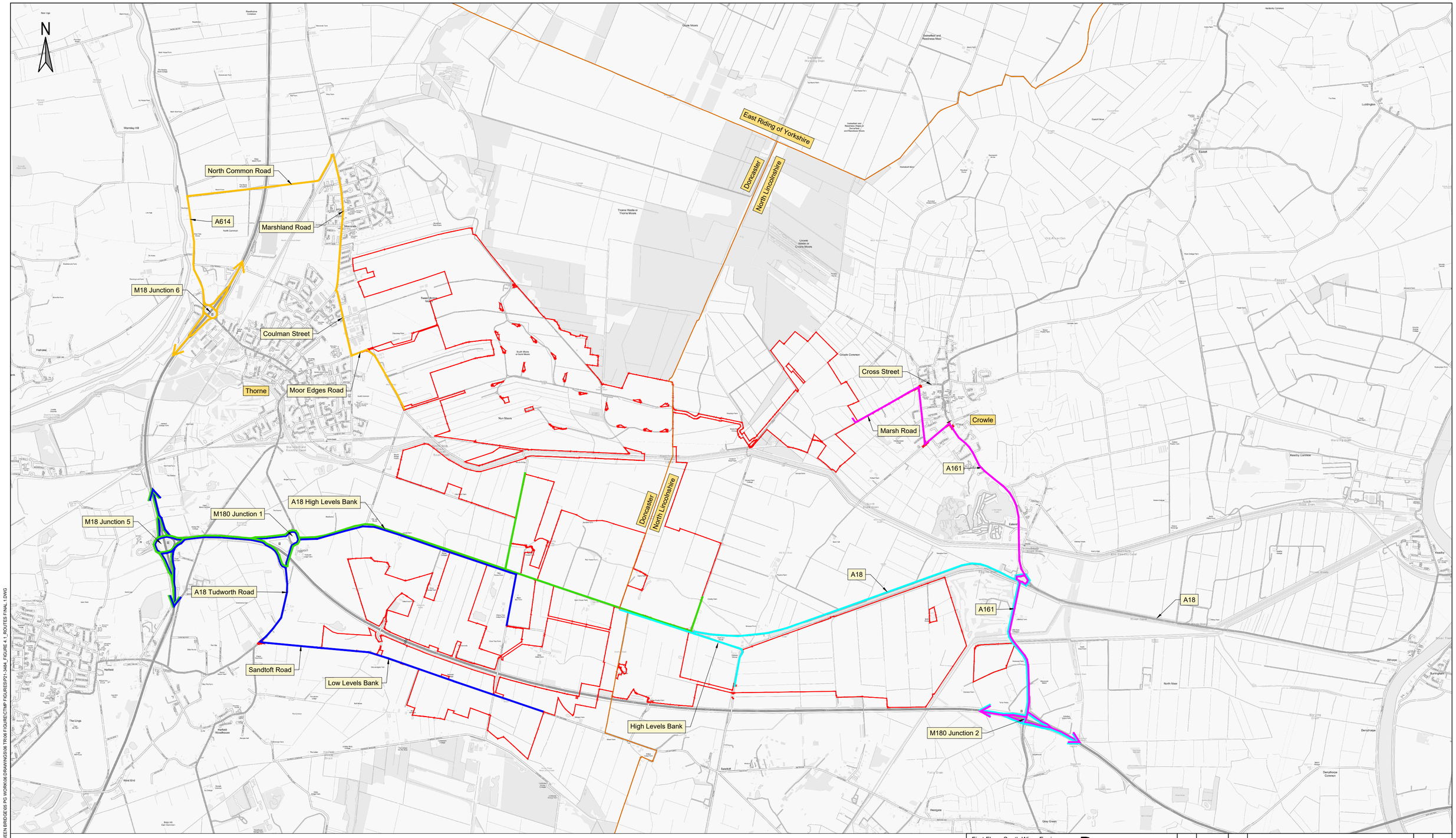
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CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD	SCALE @ A3: AS SHOWN	CHECKED: ADWS	APPROVED: KSS
PROJECT: TWEEN BRIDGE SOLAR FARM	DATE: 09/07/2025	DESIGN-DRAWN: JAN	DRAWING-STATUS: FINAL
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AK	PROJECT No: P21-3484	DRAWING No: FIGURE 3.37	REV: 1

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Key:

- Order Limits
- Local Authority Boundaries
- Construction Route to Land Parcel A
- Construction Route to Land Parcel B
- Construction Route to Land Parcel C
- Construction Route to Land Parcel D
- Construction Route to Land Parcel E

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PROJECT: TWEEN BRIDGE SOLAR FARM	DATE: 19/08/2025	DESIGN-DRAWN: JAN	DRAWING-STATUS: FINAL
TITLE: CONSTRUCTION TRAFFIC ROUTE PLAN TO LAND PARCELS	PROJECT No: P21-3484	DRAWING No: FIGURE 4.1	REV: 1

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Appendix A

Access Points for Tween Bridge Solar Farm within North Lincolnshire Council

Access Location Ref	Accessed from	Signed Speed Limit	Visibility splays	OCTMP Figure Reference
N	A18 High Levels Bank	National Speed Limit (60mph)	2.4 x 215 metres in both directions	3.15
O	A18 High Levels Bank	National Speed Limit (60mph)	2.4 x 215 metres in both directions	3.16
P	High Levels Bank	National Speed Limit (60mph)	2.4 x 51.8 to the west 2.4 x 215 to the east	3.17
Q	South of High Levels Bank	National Speed Limit (60mph)	2.4 x 62.2 to the north 2.4 x 64.1 to the south	3.18
R	East of High Levels Bank	National Speed Limit (60mph)	2.4 x 215 metres in both directions	3.19
S	Marsh Road	National Speed Limit (60mph)	2.4 x 215 metres in both directions	3.20
X	South of High Levels Bank	National Speed Limit (60mph)	2.4 x 14 metres to the south without vegetation removal 2.4 x 215 metres to the north	3.25
Y	Jaque's Bank	National Speed Limit (60mph)	2.4 x 215 metres in both directions	3.26
AA / AB	Crock O'Moor Road	National Speed Limit (60mph)	2.4 x 215 metres to the northwest 2.4 x 182 metres to the southwest	3.28
Ai	High Levels Bank	National Speed Limit (60mph)	2.4 x 215 metres in both directions	3.35
AK	A161	50mph	2.4 x 160 metres in both directions	3.37

Appendix B

RWE

Tween Bridge Solar Farm

7.7 Outline Construction Traffic Management Plan

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

APFP Regulation 5(2)(q)

Document Reference: 7.7

August 2025

Revision 1

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1 Introduction

1.1.1. This **Outline Construction Traffic Management Plan (CTMP) [Document Reference 7.9.7]** has been prepared by Pegasus Group on behalf of RWE Renewables UK Solar and Storage Ltd (the Applicant) in order to address the traffic and transportation issues associated with the construction of a ground mounted solar park with an intended design capacity of over 50MWp (megawatts peak), and a battery energy storage facility.

1.1.2. The Scheme is located within the Yorkshire and Humber regions. The Order Limits extends to approximately 1,831 hectares, centred at approximately 10 kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe. From the largest Land Parcel, Junction 5 of the M18 is approximately 2.5 kilometres to the west and Junction 1 of the M180 is approximately four kilometres to the southwest.

1.1.3. Due to the size of the Scheme and the number of associated Land Parcels, access to the Scheme will be provided in a number of locations.

1.1.4. This Outline CTMP describes the arrangements that are proposed for the period of construction activities at the Scheme and sets out the following:

- Proposed access arrangements;
- Routing for construction traffic;
- Vehicle numbers, size and frequency; and
- Proposed mitigation, including condition surveys.

1.1.5. It will be the responsibility of the appointed contractor(s) to comply with all statutory regulations and guidelines as appropriate, in relation to construction and movement activities.

1.1.6. The Outline CTMP will ultimately become the CTMP post consent. The appointed contractor(s) will be provided with a copy of the CTMP and will comply with it in accordance with the DCO. The CTMP will form part of the information provided as part of the construction personnel's on-site induction processes. The contact details of the contractor(s), including a 24-hour emergency contact number, and those of the highway department at City of Doncaster Council (CDC) and North

Lincolnshire Council (NLC) will be exchanged before commencement of the works within the Order Limits to deliver the Scheme.

2 Scheme Context

2.1. Scheme Location and Description

2.1.1. The Scheme is centred at approximately ten kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe. The Order Limits is split across the administrative boundaries of the City of Doncaster Council (CDC) and North Lincolnshire Council (NLC). The location of the Scheme in its wider geographical context is shown in **Figure 2.1 - Indicative Access Strategy.**

2.1.2. The Order Limits comprises five separate Land Parcels and extends to approximately 1,831 hectares. The Land Parcels comprise of a number of Panel Areas, as summarised below:

- Land Parcel A, comprising of 23 Panel Areas.
- Land Parcel B, comprising of 8 Panel Areas.
- Land Parcel C, comprising of 9 Panel Areas.
- Land Parcel D, comprising of 16 Panel Areas;
- Land Parcel E, comprising of 20 Panel Areas.

2.1.3. The Land Parcels are shown on **ES Figure 1.2 Land Parcel Plan [Document Reference 6.4.1.2]**, with a breakdown of the Land Parcels into Panel Areas within the Order Limits shown on **ES Figure 1.3 Development Parcel Plan [Document Reference 6.4.1.3].**

2.1.4. A Scheme location plan is included at **Figure 2.1 – Indicative Access Strategy** and indicative layouts are included within the wider submission (see**– Indicative Operational Layout Plan (Fixed Solar Panel)/2.2b – Indicative Operational Layout Plan (Fixed and Tracker Solar Panel)** [**Document Reference 6.4.2.2]**) of the ES.

2.1.5. The Order Limits are included at **Appendix A**.

2.1.6. The Stainforth and Keadby Canal and the South Humberside Mainline railway line run in an east to west direction to the south of Land Parcel A.

2.2. Strategic Road Network

2.2.1. It is anticipated that all materials associated with the construction of the Scheme will use the Strategic Road Network (SRN) to access the local highway network, from which the Land Parcels are served. The SRN is managed by National Highways. A summary of the sections of the SRN which are closest to the site is provided below.

M18

2.2.2. The M18 motorway routes between M1 Junction 32 in the northeast to M62 Junction 35 in the southwest. It is located to the west of Thorne, approximately 1.5 kilometres as the crow flies from the closest point of Land Parcel A. M18 Junction 6, the 'Waterside Roundabout', located to the northwest of Thorne, and Junction 5 (which connects to the M180), located to the southwest of Thorne, are the two closest SRN junctions to the Scheme.

M180

2.2.3. The M180 routes west to east between M18 Junction 5 and The Barnetby Interchange to the north of Barnetby Le Wold, approximately 14 kilometres west of Immingham, where it becomes the A180. The M180 Junction 1 (which connects to the A18 and the 'Tudworth Roundabout') and Junction 2 (which connects with the A161 with on/off slips) are located within the vicinity of the Scheme.

2.3. Local Highway Network

2.3.1. A network of local roads connects the different Land Parcels as well as providing links to the wider local and strategic road networks. The road network is shown on Figure 2.1 within **Appendix 12.3 – Baseline Traffic Survey Report [Document Reference 6.3.12.3].**

2.3.2. The roads summarised below form the traffic routes that will be used to deliver materials and personnel to the Scheme during its construction.

A18

2.3.3. The A18 is a single carriageway road which is approximately seven metres wide. It is subject to the National Speed Limit (60mph) and facilitates travel between the towns of Hatfield to the west and Scunthorpe to the east. It provides direct access to farmland along its extent. The section of the A18 within the vicinity of the

Scheme is generally unlit. Streetlighting and footways are generally provided within the vicinity of local settlements.

A161

2.3.4. The A161 is a single carriageway road which is approximately seven metres wide. It connects to the A18 via a gyratory junction to the south of Ealand, and can be used to join the M180 via Junction 2 in the south. The A161 passes through Crowle to the east of the Scheme. It is subject to varying speed limits along its length, with the National Speed Limit south of the A18 and 40mph and 30mph sections through Crowle.

Sandtoft Road

2.3.5. Sandtoft Road is a single carriageway road measuring around five to six metres in width. It is subject to the National Speed Limit and subject to a 7.5 tonne weight restriction, except for access. To the east it becomes Low Levels Bank Road and to the west it connects to the A18 via a priority junction. It provides direct access to farmland along its extent. There are no footways or street lighting provided.

Low Levels Bank

2.3.6. Low Levels Bank consists of a single carriageway measuring approximately five metres in width. It is subject to the National Speed Limit. To the east, it becomes Thorne Road and to the west it becomes Sandtoft Road. It provides direct access to farmland along its extent. There are no footways or street lighting provided.

Coulman Street

2.3.7. Coulman Street is a single carriageway road that measures approximately seven to eight metres in width and is subject to a 30mph speed limit. It connects with King Edward/Marshland Road via a priority junction to the north and connects to Church Balk/Moor Edges Road and Wike Gate Road via a crossroad junction to the south.

2.3.8. A footway on the eastern side of the carriageway extends approximately 230 metres south of the King Edward/Marshland Road junction and a continuous footway route along the western side of the carriageway. Street lighting is provided along its extent. It provides direct access to residential properties and industrial land uses along its extent.

Marshland Road

2.3.9. Marshland Road is a single carriageway urban street that measures approximately 6.5 to seven metres wide. It is subject to a 30mph speed limit. Footways are provided on both sides of the road, and it is lit. It provides direct access to residential properties, retail, leisure and industrial land uses along its extent.

2.3.10. Approximately 1.7 kilometres to the north of its junction with Coulman Street it crosses the Hull and Doncaster Branch Line railway via a level crossing where it becomes Moorends Road.

North Common Road

2.3.11. North Common Road is a single carriageway road that measures approximately six metres wide. It reduces to a single lane over a ditch around 450 metres southwest of its junction with Marshland Road, although visibility along the road is good. It connects to Marshland Road in the east and Selby Road in the west, both via priority junctions.

Moor Edges Road

2.3.12. Moor Edges Road is a single carriageway that measures approximately four metres wide and is subject to the National Speed Limit. To the west it becomes Church Balk, leading in to Thorne, and to the south it becomes High Bridge Road. It provides direct access to farmland and industrial land uses along its extent. There are no footways or street lighting provided.

High Bridge Road

2.3.13. High Bridge Road is a single carriageway road measuring approximately three to four metres in width. It is subject to the National Speed Limit. To the east it becomes Green Bank. To the west it becomes Moor Edges Road. High Bridge Road provides direct access to farmland and industrial land uses along its extent. There are no footways or street lighting provided. Approximately 480 metres to the south of Moor Edges Road, High Bridge Road crosses the South Humberside Main Line railway via a level crossing.

Green Bank

2.3.14. Green Bank is a single carriageway road measuring approximately four metres in width. It is subject to the National Speed Limit. To the north it narrows to three metres as it crosses over the Stainforth and Keadby Canal before connecting to High Bridge Road. To the south it connects onto the A18 via a priority junction.

Where the road crosses the canal there is a 7.5 tonne weight restriction. It provides direct access to farmland along its extent.

Marsh Road

2.3.15. Marsh Road is an unmarked single carriageway that measures approximately four metres wide and currently serves a small number of dwellings and agricultural buildings. No footways are provided, and street lighting is provided at its north eastern extent only, within the vicinity of dwellings within Crowle.

2.3.16. To the southwest it becomes Crook O'Moor Road and to the northeast it forms the minor arm of a priority junction with Cross Street and Windsor Road.

2.3.17. Marsh Road is subject to the national speed limit which reduces to a 30mph speed limit approximately 90 metres southwest of the junction with Cross Street and Windsor Road. There are double yellow lines on both sides of the carriageway at this junction.

Crow Tree Bank

2.3.18. Crow Tree Bank is a single carriageway road measuring approximately six to seven metres wide. It is subject to the National Speed Limit. It connects onto High Levels Bank to the north and High Bridge Road to the south, both via priority junctions. It provides direct access to farmland and industrial land uses along its extent. A short section of footway extends south for approximately 60 metres from the High Levels Bank junction. There is no street lighting provided.

Clay Bank Road

2.3.19. Clay Bank Road is a single carriageway road measuring approximately three to four metres wide. It is subject to the National Speed Limit. It connects to Green Bank to the east and to South End/Double Bridges Road to the west via priority junctions. It provides direct access to farmland along its extent. There are no footways or street lighting provided.

Godnow Road

2.3.20. Godnow Road is a single carriageway residential road in the south of the built environment of Crowle that measures approximately 6.5 metres wide, serve directly from the A161. It has an approximate 20 metre wide bell mouth at its connection to the A161, with an approximate 15 metre taper on the southern side. It has a 30mph speed limit, with footways measuring between one and 1.5 metres provided on both sides of the carriageway street lighting also provided.

Windsor Road

2.3.21. Windsor Road is a single carriageway residential road in the west of the built environment of Crowle that measures approximately five metres wide, accessed from Godnow Road in the south and providing a connection to Marsh Road/Cross Street in the north. Footways measuring approximately one metre wide are provided on both sides of the carriageway, with street lighting also provided.

2.3.22. Approximately 100 metres south of the junction between Marsh Road/Cross Street/Windsor Road is Crowle Primary School. Warning signage indicating the school is nearby and that a reduction of the speed limit to 20mph 'when lights show' is present approximately five metres south of the junction between Marsh Road, Cross Street and Windsor Road.

Informal Lanes / Farm Tracks

2.3.23. Due to the more rural nature of the Order Limits, some of the Panel Areas are accessed by smaller informal lanes and farm tracks including:

- Thorne Waste Drain Road.
- Moor Owners Road; and
- Crook O'Moor Road.

2.3.24. These roads consist of rural lanes within the Order Limits with no kerbs, footways or street lighting. They generally measure around four metres in width.

2.4. Existing Site Accesses

2.4.1. The Scheme currently comprises agricultural land uses. Access to the Order Limits is currently provided via agricultural access points in multiple locations, as shown on **Figure 2.1 – Indicative Access Strategy**.

3 Proposed Scheme Access Arrangements

3.1. Order Limits Access

3.1.1. HGVs will route directly to the parcels from the public highway where large equipment is required to be delivered.

3.1.2. Due to the large-scale nature of the Scheme, there are multiple access points proposed, as shown in **Figure 3.1 – Proposed Access Arrangements Master** of this document and summarised in **Table 3-1.**

Table 3-1: Proposed Points of Access to the Scheme during the Construction Phase

Access Location Ref.	Accessed from	Details	Access into Panel Area	Figure Ref.
A	Moor Edges Road	Existing industrial access	A6	3.2
B	Moor Edges Road	New access	A10	3.3
C*	High Bridge Road	Existing agricultural access	Bird Mitigation area (M3(A)	3.4
D	Green Bank	Existing agricultural access (improvements needed)	C1	3.5
E	Green Bank	Existing agricultural access (improvements needed)	C4	3.6
F	A18 High Levels Bank	New access	D3/D5	3.7
H	Low Levels Bank	Existing agricultural access	D7	3.9
i	Low Levels Bank	Existing agricultural access (improvements needed)	D15	3.10
J	Low Levels Bank	Existing agricultural access (improvements needed)	D14	3.11
K	Low Levels Bank	Existing agricultural access	D16	3.12

M	A18 High Levels Bank	Existing agricultural access (improvements needed)	D4	3.14
O	A18 High Levels Bank	Existing agricultural access	E1	3.16
P	High Levels Bank	Existing agricultural access	E1	3.17
Q	Unnamed Road	Existing agricultural access (improvements needed)	E7	3.18
R	Unnamed Road	Existing agricultural access (improvements needed)	E13	3.19
S	Marsh Road	New access	B5	3.20
W	Low Levels Bank	Existing agricultural access	D12	3.24
Y	Jaque's Bank	Existing agricultural access (improvements needed)	C9	3.26
Z	Crow Tree Bank	Existing agricultural access	D9	3.27
AA	Crook O'Moor Road	New access	B6 & B7	3.28
AB	Crook O'Moor Road	New access	B6 & B7	3.28
AC*	Marsh Road	Internal access between panel areas	B5 & B8	3.29
AD	Internal Crossing	Internal access between panel areas	B5 & B2	3.30
AE*	Internal Crossing	Internal access between panel areas	D7 & D10	3.31

AH*	A18	New access	E2	3.34
AI	A18	New access	C9	3.35
AJ	Green Bank	Existing agricultural access	-	3.36
AK	A161	Existing agricultural access	Bird Mitigation Area (M15(E))	3.37

Note: further to changes as the Scheme has evolved, there is no access L, AF or AG but the lettering has been retained for ease of reference. Locations G, T, U and V are off-site junctions which do not provide direct access to the Scheme and therefore are not included above.

* Access locations denoted by an asterix do not require access by HGVs.

3.1.3. It is considered that suitable visibility splays can be provided for each access location within the extents of the Order Limits and all construction vehicles will enter and exit the Scheme in forward gear, as shown on **Figure 3.2** to **Figure 3.33 (Proposed Access Arrangements – Access A to Access AG)**. Vegetation within the visibility splays will be maintained at a height of no more than 600mm, and any loss of vegetation is set out in the **Outline Landscape Ecological Management Plan (LEMP)** within Volume 7 of this ES **[Document Reference 7.6].**

3.1.4. A description of each access point is summarised below.

3.2. Location A

3.2.1. Access A is an existing access to Causeway Farm which measures approximately eight metres wide and is served via Moor Edges Road. A swept path assessment has been undertaken at **Figure 3.2 - Proposed Access Arrangements - Access A,** which indicates that the existing junction dimensions are of a suitable size to facilitate access by a 16.5m long HGV.

3.2.2. As shown at **Figure 3.2 - Proposed Access Arrangements - Access A,** a visibility splay of 2.4 x 215 metres is shown to be achievable to the nearside kerbline west of the access, commensurate with DMRB guidance **[Ref-1]** for the National Speed Limit (60mph). A visibility splay of 2.4 x 60 metres to the nearside kerbline south of the access is the maximum achievable splay. On site observations suggest that vehicle speeds on Moor Edges Road to the south of the access are much lower

than the signed 60mph speed limit, and this existing access is frequented by large, slow moving agricultural vehicles on a regular basis with no apparent highway safety issue (as set out in **ES Appendix 12.1 - Transport Statement [Document Reference 6.3.12.1]).** Therefore, whilst the southern visibility splay does not accord with the guidance, the visibility splays are considered to be acceptable.

3.3. Location B

3.3.1. Access B proposes the construction of a new access from Moor Edges Road. As shown at **Figure 3.3 - Proposed Access Arrangements - Access B** it will be provided with a six metre wide carriageway and junction radii of 14 metres on the northern side and six metres on the southern side. An 8.2 metre taper will also be provided on the northern side of the access to facilitate the arrival and departure of the largest HGVs. The location of the access is generally open and limited vegetation will need to be removed to accommodate it. A new ditch crossing, and culvert will be required.

3.3.2. A visibility splay of 2.4 x 215 metres to the north is shown to be achievable to the nearside kerbline commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit. A maximum achievable visibility splay to the south of 2.4 x 77.98 metres to the is shown to be achievable to the nearside kerbline. This will be managed during the construction phase via banksmen, as set out further at **Chapter 6** of this document**.**

3.3.3. A swept path assessment for a 16.5m long HGV has been undertaken at **Figure 3.3 - Proposed Access Arrangements - Access B**, which indicates that a vehicle of this size is able to enter and exit the proposed access arrangement.

3.4. Location C

3.4.1. Access C is an existing agricultural access from High Bridge Road. As shown at **Figure 3.4 - Proposed Access Arrangements - Access C** . Visibility splays of 2.4 x 215 metres to the nearside kerbline are shown to be achievable to the west, commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit in this location, and 2.4 x 35.6 metres towards Maud's swing Bridge.

3.4.2. **Figure 3.4 - Proposed Access Arrangements - Access C** also contains a swept path assessment for a 13.7 metre long tractor and trailer confirming that a vehicle of this size is able to enter and exit in a forward gear at the existing access with no improvements required.

3.5. Location D

3.5.1. Access D proposes a new access to be served from the eastern side of Green Bank.

3.5.2. As shown at **Figure 3.5 - Proposed Access Arrangements - Access D** it will be provided with a six metre wide carriageway with a 12 metre junction radius on the southern side and a two metre radius on the northern side of the bell mouth, proposed to prevent construction vehicles entering and exiting the Order Limits to the north. Further mitigation and management is set out in **Chapter 6** of this document.

3.5.3. A visibility splay of 2.4 x 215 metres to the nearside kerbline is shown to be achievable to the south, commensurate with DMRB guidance for the speed limit of the road (national speed limit; 60mph). A maximum 2.4 x 160.5 metre visibility splay to the nearside kerbline to the north is shown to be achievable which would be commensurate with DMRB guidance **[Ref-1]** for vehicle speeds of circa 50mph. However, based on on-site observations it is anticipated that vehicle speeds along Green Bank are lower in reality, given its rural nature.

3.5.4. In order to provide the access point and provide the visibility splays, hedgerow to the north of the access will need to be removed and/or reduced in height.

3.5.5. **Figure 3.5 - Proposed Access Arrangements - Access D** contains a swept path assessment for a 16.5 metre long HGV confirming that a vehicle of this size is able to enter and exit in a forward gear, from the south only.

3.6. Location E

3.6.1. Access E proposes the use of an existing agricultural access from the western side of Green Bank. As shown at **Figure 3.6 Proposed Access Arrangements - Access E,** the access will be upgraded with a six metre wide carriageway, with an eight metre radii on the southern side and a six metre radii on the northern side of the access. An 8.6 metre taper will also be provided on the southern side of the junction to assist the largest HGVs entering and exiting the Order Limits. Visibility splays of 2.4 x 215 metres to the nearside kerbline are shown to be achievable in both directions commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit of the road.

3.6.2. The location of the access is generally open and limited vegetation will need to be removed to accommodate it. An extended ditch crossing and culvert will be required.

3.6.3. **Figure 3.6 - Proposed Access Arrangements - Access E** also contains a swept path assessment for a 16.5 metre long HGV confirming that a vehicle of this size is able to enter and exit in a forward gear.

3.7. Location F

3.7.1. Access F proposes the use of an existing agricultural field gate access to the south of High Levels Bank. As shown at **Figure 3.7 - Proposed Access Arrangements - Access F,** the access is proposed to be formalised with a 10 metre junction radius and 17.4 metre long taper provided on the western side of the access. Visibility splays of 2.4 x 215 metres to the nearside kerbline are shown to be achievable in both directions commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit of the road.

3.7.2. The location of the access is generally open and limited vegetation will need to be removed to accommodate it. An extended ditch crossing and culvert will be required.

3.7.3. **Figure 3.7 - Proposed Access Arrangements - Access F** also contains a swept path assessment for a 16.5 metre long HGV confirming that a vehicle of this size is able to enter and exit in a forward gear to and from the west.

3.8. Location H

3.8.1. Access H will utilise an existing agricultural access consisting of a culvert over a drainage ditch on the northern side of High Levels Bank. A swept path assessment has been undertaken at **Figure 3.9 - Proposed Access Arrangements - Access H**, which indicates that the existing junction dimensions are of a suitable size to facilitate access by a 16.5m long HGV to and from the west, in accordance with the construction traffic routes set out in **Chapter 4** of this document. Further mitigation and management is set out in **Chapter 6** of this document. Therefore, no further upgrades to the access are proposed.

3.8.2. As shown at **Figure 3.9 - Proposed Access Arrangements - Access H** visibility splays of 2.4 x 215 metres are shown to be achievable to the nearside kerbline in both directions commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit of the road.

3.9. Location i

3.9.1. Access i proposes the use of an existing agricultural access consisting of a culvert over a drainage ditch on the southern side of Low Levels Bank. As shown at **Figure**

3.10 - Proposed Access Arrangements - Access i the access is proposed to be upgraded with a six metre wide carriageway, with a 10 metre radii on the western side and a two metre radii on the eastern side of the junction. This is proposed to prevent construction vehicles entering and exiting the Order Limits to the east, in accordance with the construction traffic routes set out in **Chapter 4** of this document. Visibility splays of 2.4 x 215 metres are shown to be achievable to the nearside kerbline in both directions commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit of the road.

3.9.2. The location of the access is generally open and limited vegetation will need to be removed to accommodate it. An extended ditch crossing, and culvert will be required. There is a row of telegraph poles along the carriageway edge. However, in accordance with DMRB these less than 550mm and are considered to be intermittent obstructions to the visibility splays and it is therefore considered appropriate for them to remain in situ.

3.9.3. **Figure 3.10 - Proposed Access Arrangements - Access i** also contains a swept path assessment for a 16.5 metre long HGV confirming that a vehicle of this size is able to enter and exit in a forward gear.

3.10. Location J

3.10.1. Access J proposes the use of an existing agricultural access on the northern side of Low Levels Bank. As shown at **Figure 3.11 - Proposed Access Arrangements - Access J,** the access is proposed to be upgraded with a six metre wide carriageway, with a six metre radii on the western side and a four metre radii on the eastern side of the junction. This is proposed to prevent construction vehicles entering and exiting the Order Limits to the east, in accordance with the construction traffic routes set out in **Chapter 4** of this document. Visibility splays of 2.4 x 215 metres are shown to be achievable to the nearside kerbline in both directions commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit of the road.

3.10.2. The location of the access is generally open and limited vegetation will need to be removed to accommodate it. An extended ditch crossing, and culvert will be required.

3.10.3. **Figure 3.11** - **Proposed Access Arrangements - Access J** also contains a swept path assessment for a 16.5m long HGV confirming that a vehicle of this size is able to enter and exit in a forward gear.

3.11. Location K

3.11.1. Access K is an existing agricultural access consisting of a culvert over a drainage ditch on the southern side of Low Levels Bank, approximately 140 metres east of Access J. A swept path assessment has been undertaken at **Figure 3.12 - Proposed Access Arrangements - Access K** which indicates that the existing junction dimensions are of a suitable size to facilitate access by a 16.5m long HGV. The access is therefore considered to be suitable to accommodate construction vehicles. Temporary traffic measures will be implemented at the access, such as banksmen or temporary signals, in order to control the vehicle flow and speeds of Low Levels Bank when large construction vehicles are entering and egressing the Order Limits. The precise location and details will be agreed with the highway authority in due course.

3.11.2. **Figure 3.12 - Proposed Access Arrangements - Access K** also shows that visibility splays of 2.4 x 215 metres are shown to be achievable to the nearside kerbline in both directions commensurate with DMRB guidance for the national (60mph) speed limit for the road.

3.12. Location M

3.12.1. Access M is an existing agricultural access consisting of a culvert over a drainage ditch on the southern side of the A18 High Levels Bank. A swept path assessment has been undertaken at **Figure 3.14 - Proposed Access Arrangements - Access M**, which indicates that the existing junction will need to be widened with a 14 metre radius and 14.2 metre taper on the western side to facilitate access by a 16.5m long HGV. Construction vehicles will be advised that access will only be available to and from the west, in accordance with the construction traffic routes set out in **Chapter 4** of this document. Temporary traffic measures will be implemented at the access, such as banksmen or temporary signals, in order to control the vehicle flow and speeds of High Levels Bank when large construction vehicles are entering and egressing the Order Limits, and to ensure that vehicles approach and exit in the right direction. The precise location and details will be agreed with the highway authority in due course.

3.12.2. **Figure 3.14- Proposed Access Arrangements - Access M** also shows that visibility splays of 2.4 x 215 metres are shown to be achievable to the nearside kerbline in both directions commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit.

3.13. Location N

3.13.1. Access N is an existing agricultural access which measures approximately 15 metres wide at the connection point of the bell mouth with the northern side of the A18 High Level Bank. A swept path assessment has been undertaken at **Figure 3.15 - Proposed Access Arrangements - Access N**, which indicates that the existing junction dimensions are of a suitable size to facilitate access by 16.5m long HGV. The access is therefore considered to be suitable to accommodate construction vehicles

3.13.2. **Figure 3.15 - Proposed Access Arrangements - Access N** also shows that existing visibility splays of 2.4 x 215 metres achievable to the nearside kerb lines in both directions commensurate with DMRB guidance **[Ref-1]** for the national (60 mph) speed limit of the road. The access is therefore considered to be suitable to accommodate construction vehicles.

3.14. Location O

3.14.1. Access O is an existing agricultural access consisting of a concrete bridge over a drainage ditch on the southern side of the A18 High Levels Bank. A swept path assessment has been undertaken at **Figure 3.16 - Proposed Access Arrangements - Access O**, which indicates that the existing junction dimensions are of a suitable size to facilitate access by a 16.5m long HGV accessing and egressing to and from the west. A survey of the bridge will be carried out as appropriate to confirm the suitability of the bridge to accommodate the anticipated construction vehicle movements. If required, the bridge will be reinforced or replaced to accommodate construction traffic. Temporary traffic measures will be implemented at the access, such as banksmen or temporary signals, in order to control the vehicle flow and speeds of High Levels Bank when large construction vehicles are entering and egressing the Order Limits. The precise location and details will be agreed with the highway authority in due course.

3.14.2. **Figure 3.16** - **Proposed Access Arrangements - Access O** also shows that visibility splays of 2.4 x 215 metres are shown to be achievable to the nearside kerbline in both directions commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit of the road.

3.15. Location P

3.15.1. Access P is an existing agricultural access consisting of a concrete bridge over a drainage ditch served from the southern side of an unnamed road which measures

approximately 125 metres long between High Levels Bank in the east and the A18 in the west. The swept path assessment of a 16.5m long HGV shown in **Figure 3.17 - Proposed Access Arrangements - Access P** indicates that the bridge will be required to be upgraded/widened in order to accommodate large construction vehicles.

3.15.2. **Figure 3.17 - Proposed Access Arrangements - Access P** shows a visibility splay of 2.4 metres x 215 metres to the east is shown to be achievable, extending along High Levels Bank. Although the visibility splay is outside of the red line boundary to the east, it crosses a ditch and is within the adopted highway boundary. On this basis, it is considered to be unlikely that a structure will be built within or over the highway ditch to a height which impedes visibility 0.6 metres above the High Levels Bank or unnamed road ground level. A visibility splay of 2.4 metres x 51.8 metres is also shown to be achievable to the centre of the unnamed road's junction with the A18 from which oncoming traffic will be travelling from.

3.16. Location Q

3.16.1. Access Q is an existing agricultural access which measures approximately 20 metres wide where the bell mouth meets the carriageway on the eastern side of High Levels Bank. The access is proposed to be widened by approximately four metres to the north, in order to avoid an easement to an existing telecoms mast, with a 10 metre junction radii to be provided. As shown at **Figure 3.18 - Proposed Access Arrangements - Access Q**, existing visibility splays of 2.4 metres x 62.2 metres to the north and 2.4 metres x 64.1 metres to the south are shown to be achievable to the nearside kerbline. Temporary traffic measures will be implemented at the access, such as banksmen or temporary signals, in order to control the vehicle flow and speeds of High Levels Bank when large construction vehicles are entering and egressing the Order Limits. The precise location and details will be agreed with the highway authority in due course.

3.16.2. **Figure 3.18 - Proposed Access Arrangements - Access Q** also contains a swept path assessment for a 16.5m long HGV confirming that a vehicle of this size is able to enter and exit in a forward gear.

3.17. Location S

3.17.1. Access S proposes a new access from the northern side of Marsh Road. As identified at **Figure 3.20 - Proposed Access Arrangements - Access S**, the junction will feature a six metre wide carriageway with an eight metre radii on the southern side and a six metre radii with 14 metre taper on the northern side of the

bell mouth. Visibility splays of 2.4 x 215 metres to the nearside kerbline are shown to be achievable in both directions, commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit of the road.

3.17.2. **Figure 3.13 - Proposed Access Arrangements - Access S** also contains a swept path assessment for a 16.5 metre long HGV confirming that a vehicle of this size is able to enter and exit in a forward gear.

3.18. Location W

3.18.1. Access W is an existing agricultural access which measures approximately 17 metres wide at its point of connection with the northern side of Low Levels Bank. A swept path assessment has been undertaken at **Figure 3.24 - Proposed Access Arrangements - Access W**, which indicates that the existing junction dimensions are of a suitable size to facilitate access by a 16.5m long HGV to and from the east, from which construction vehicles are anticipated to be routing to the Order Limits.

3.18.2. **Figure 3.24 - Proposed Access Arrangements - Access W** also confirms that visibility splays of 2.4 metres x 215 metres are shown to be achievable to the nearside kerbline using land within the Order Limits and adopted highway boundary in both directions, commensurate with DMRB guidelines **[Ref-1]** for the national (60mph) speed limit of the road.

3.19. Location X

3.19.1. Access X is an existing agricultural access which measures approximately 16 metres wide where the bell mouth meets the carriageway on the eastern side of High Levels Bank. The access is approximately 30 metres south of Access R. A swept path assessment has been undertaken at **Figure 3.25 - Proposed Access Arrangements - Access X** which indicates that the existing access arrangement can facilitate access by a 16.5m long HGV to and from the north, from which construction vehicles are anticipated to be routing to the Order Limits.

3.19.2. As shown at **Figure 3.25 - Proposed Access Arrangements - Access X**, a visibility splay of 2.4 metres x 215 metres is shown to be achievable to the north, and 2.4 metres x 14 metres is achievable to the south without the removal of vegetation to increase the visibility splay. However, this is an existing situation with no highway safety record (as set out in **ES Appendix 12.1 - Transport Statement [Document Reference 6.3.12.1]).** Temporary traffic measures will be implemented on the unnamed road, such as banksmen or temporary signals, when large construction vehicles are entering and egressing the Order Limits. The precise location and details will be agreed with the highway authority in due course.

3.20. Location Y

3.20.1. Access Y is an existing agricultural access which measures approximately 12 metres wide at its point of connection with the carriageway, located to the west of Jaque's Bank. A swept path assessment has been undertaken at **Figure 3.26 - Proposed Access Arrangements - Access Y** which indicates that the existing junction dimensions are of a suitable size to facilitate access by a 16.5m long HGV without requiring amendments to the adjacent ditches. Therefore, no further upgrades to the access are proposed. Temporary traffic measures will be implemented on Jaque's Bank, such as banksmen or temporary signals, when large construction vehicles are entering and egressing the Order Limits. The precise location and details will be agreed with the highway authority in due course.

3.20.2. **Figure 3.26 - Proposed Access Arrangements - Access Y** also confirms that visibility splays of 2.4 x 215 metres are shown to be achievable to the nearside kerbline in both directions commensurate with the national (60mph) speed limit of the road.

3.21. Location Z

3.21.1. Access Z is an existing agricultural access which measures approximately 11 metres wide at its point of connection with the eastern side of Crow Tree Bank. A swept path assessment has been undertaken at **Figure 3.27 - Proposed Access Arrangements - Access z** which indicates that the existing junction dimensions are of a suitable size to facilitate access by a 16.5m long HGV. Therefore, no further upgrades to the access are proposed.

3.21.2. **Figure 3.27 - Proposed Access Arrangements - Access Z** also confirms that existing visibility splays of 2.4 x 215 metres to the south to the nearside kerbline and 2.4 x 54.93 metres to the north to oncoming vehicles are shown to be achievable without removing vegetation. However, this is an existing situation with no highway safety record (as set out in **ES Appendix 12.1 - Transport Statement [Document Reference 6.3.12.1]).** Temporary traffic measures will be implemented on the unnamed road, such as banksmen or temporary signals, when large construction vehicles are entering and egressing the Order Limits. The precise location and details will be agreed with the highway authority in due course.

3.22. Location AA

3.22.1. Access AA proposes a new access on the northern side of Crook O'Moor Road, as shown at **Figure 3.28 - Proposed Access Arrangements - Access AA.** The access

will be located opposite to Access AB. Access AA will have a six metre wide carriageway with 10 metre junction radii on both sides. An 18.9 metre taper will be provided on the western side and a 16.7m taper on the eastern side within the Order Limits. These tapers will facilitate 16.5m long HGVs entering exiting the access. A swept path assessment of a 16.5m long HGV has been undertaken confirming that this vehicle is able to enter and exit the access from all directions in a forward gear.

3.22.2. **Figure 3.28 - Proposed Access Arrangements - Access AA** also confirms that a visibility splay of 2.4 x 215 metres to the north and 2.4 x 182 metres to the south are shown to be achievable to the nearside kerbline. On site observations suggest that vehicles speeds in this location are much lower than the signed national (60mph) speed limit. However, temporary traffic measures will be implemented at the access, such as banksmen or temporary signals, in order to control the vehicle flow and speeds of Crook O'Moor Road when construction vehicles are entering and egressing the Order Limits. The precise location and details will be agreed with the highway authority in due course.

3.23. Location AB

3.23.1. Access AB proposes a new access on the southern side of Crook O'Moor Road, as shown at **Figure 3.28 - Proposed Access Arrangements - Access AB** which is located opposite Access AA. Access AB will have a six metre wide carriageway with 10 metre junction radii on both sides. A 16.5 metre taper will be provided on the western side and a 22.9m taper will be provided on the eastern side. These tapers will facilitate 16.5m long HGVs entering and exiting the access. A swept path assessment of a 16.5m HGV has also been undertaken confirming that this vehicle is able to enter and exit the access from all directions in a forward gear.

3.23.2. **Figure 3.28 - Proposed Access Arrangements - Access AB** also confirms that a visibility splay of 2.4 x 215 metres to the north and 2.4 x 196 metres to the south are shown to be achievable to the nearside kerbline. On site observations suggest that vehicles speeds in this location are much lower than the signed national (60mph) speed limit. However, temporary traffic measures will be implemented at the access, such as banksmen or temporary signals, in order to control the vehicle flow and speeds of Crook O'Moor Road when large construction vehicles are entering and egressing the Order Limits. The precise location and details will be agreed with the highway authority in due course.

3.24. Location AC

3.24.1. Access AC is an internal crossing over Marsh Road to connect two panel areas within Land Parcel B, as shown at **Figure 3.29 - Proposed Access Arrangements - Access AC.** A swept path assessment for a tractor and trailer has been undertaken confirming that a vehicle of this size is able to perform the required manoeuvre.

3.24.2. Appropriate mitigation will be implemented, anticipated at this stage to consist of banksmen, to control vehicles as they cross Marsh Road.

3.25. Location AD

3.25.1. Access AD is an internal crossing within Land Area B between the panel areas either side of an unnamed road, as shown at **Figure 3.30 - Proposed Access Arrangements - Access AD.** A swept path assessment for a 16.5 metre HGV has been undertaken confirming that a vehicle of this size is able to perform the required manoeuvre.

3.25.2. A potential crossing in the form of a culvert may be required to facilitate crossing between the two panel areas. The details will be agreed with the highway authority in due course.

3.26. Location AE

3.26.1. Access AE is an internal crossing between the panel areas within Land Area D which are separated by a ditch, as shown at **Figure 3.31 - Proposed Access Arrangements - Access AE.** A swept path assessment for a 16.5 metre long HGV has been undertaken confirming that a vehicle of this size is able to perform the required manoeuvre.

3.27. Location AH

3.27.1. Access AH proposes a new access to the south of the A18 as shown at **Figure 3.34 - Proposed Access Arrangements - Access AH.** A swept path assessment for a tractor and trailer has been undertaken confirming that a vehicle of this size is able to turn into and out of the access to and from the east from/to a construction compound that will be located in the adjacent panel area.

3.27.2. **Figure 3.34 - Proposed Access Arrangements - Access AH** also confirms that a visibility splay of 2.4 x 215 metres is shown to be achievable to the nearside kerbline in both directions, commensurate with DMRB for the national (60mph)

speed limit. The access point is therefore considered suitable to accommodate construction traffic associated with the laying of the cable route for the solar farm.

3.28. Location Ai

3.28.1. Access Ai proposes a new access to the south of the A18, around 390 metres west of Jaque's Bank, as shown at **Figure 3.35- Proposed Access Arrangements - Access Ai.** A swept path assessment for a 16.5m long HGV has been undertaken confirming that a vehicle of this size is able to turn into and out of the access to and from the west, in accordance with the construction traffic routes set out in **Chapter 4** of this document.

3.28.2. **Figure 3.35 - Proposed Access Arrangements - Access Ai** also confirms that a visibility splay of 2.4 x 215 metres is shown to be achievable to the nearside kerbline in both directions, commensurate with DMRB guidance **[Ref-1]** for the national (60mph) speed limit.

3.28.3. The location of the access is generally open and limited vegetation will need to be removed to accommodate it. An existing layby on the eastbound carriageway will be temporarily closed, if considered necessary by the highway authority. The precise details will be agreed with the highway authority in due course.

3.29. Location AJ

3.29.1. Access AJ is an existing agricultural access from Green Bank as shown at **Figure 3.36 - Proposed Access Arrangements - Access AJ.** A swept path assessment for a 4x4 vehicle and a trailer has been undertaken confirming that a vehicle of this size is able to perform the required manoeuvre. This access point is required as an access to the cable run to the south of Land Parcel C.

3.30. Location AK

3.30.1. Access AK is an existing agricultural access from the A161 as shown at **Figure 3.37 - Proposed Access Arrangements - Access AK.** This will serve as the access to land area M15(E) for retained agricultural purposes and mitigation. A swept path assessment for a tractor and trailer has been undertaken confirming that a vehicle of this size is able to perform the required manoeuvres.

3.30.2. **Figure 3.33 - Proposed Access Arrangements - Access AG** also confirms that visibility splays of 2.4 x 160 metres can be achieved to the nearside kerbline in both directions, commensurate with the 50mph speed limit in place on the A161 within the vicinity of the access.

3.31. Proposed Operational Access

3.31.1. Once construction has finished, all construction accesses are expected to be retained for operational purposes.

3.31.2. Once operational, it is anticipated that there could be around one visit to the Scheme per month on average associated with equipment maintenance, ground maintenance, security checks etc. This would typically be made by light van or 4x4 type vehicles.

3.31.3. Whilst the contractor's compounds will have been removed, space for parking and turning will remain within the Scheme.

Internal Roads

3.31.4. The extent of the access tracks within the Scheme is shown on the indicative layout included as part of the wider submission.

3.31.5. The Scheme will feature permanent four metre wide access tracks throughout allowing for the movement of construction vehicles. These access tracks will be completed during the initial phase of the construction process.

3.31.6. The access tracks will be made of stone on top of permeable matting to protect and support the ground, enabling it to bear the weight of the plant and HGVs.

3.31.7. Existing ditch crossings will be utilised within the Scheme, where appropriate.

4 Construction Traffic Routing

4.1.1. The majority of components required to construct the Scheme are likely to be shipped in 40ft containers which are typically carried to the site on 16.5m long articulated HGVs. Excluding any abnormal indivisible loads (AILs), this is the largest vehicle which will access the Scheme.

4.1.2. The designated routes for construction traffic accessing the Scheme to the Land Parcels are shown at **Figure 4.1** of this document and summarised below. The designated construction traffic routes will be provided to drivers by the Site Manager(s) in advance of departing for each respective Land Parcel.

4.1.3. These routes will be followed unless otherwise agreed with the relevant highway authority, or in an event outside the Applicant's control which means an alternative route needs to be followed (e.g. an unexpected road closure/diversion).

4.2. Land Parcel A

4.2.1. Accesses A and B serve Land Parcel A. Access C provides access to land required for bird mitigation within Land Parcel A. The arrival route vehicles will take is as follows:

- Exit the M18 motorway at Junction 6 turning north onto Selby Road.
- Turn right onto North Common Road following it along before turning right onto Marshland Road.
- Follow Marshland Road south and then turn left onto Coulman Street.
- Follow Coulman Street south before turning left onto Moor Edges Road
- For Access A, turn left onto the Private Road leading into Causeway Farm and into the Scheme;
- For Access B, continue on Moor Edges Road for 850 metres before turning left in to the Scheme; and
- For Access C, continue onto High Bridge Road before turning left in to the site before reaching Maud's Bridge.

4.3. Land Parcel B

4.3.1. Accesses S, AA, AB and AC serve Land Parcel B. The arrival route vehicles will take is as follows:

- Exit the M180 at Junction 2 onto the A161 and follow it northwards towards Crowle.
- Turn left onto Godnow Road, following the road southwest.
- Turn right onto Windsor Road and continue north to the junction with Marsh Road and Cross street; and
- Turn left onto Marsh Road, continuing west until turning into each access point.

4.3.2. Swept path assessment of junctions along the route the A161 (Godnow Road, Windsor Road and Marsh Road) from are included at **Appendix B**.

4.4. Land Parcel C

4.4.1. Access D, E, Y and Ai serve Land Parcel C. The arrival route vehicles will take to reach these access points is as follows:

- Construction traffic will exit the M180 at Junction 1 onto the Tudworth Roundabout turning east onto the A18; and
- Continue east along the A18 before either accessing the land parcel required directly from the A18 (Access Ai), or one of the minor roads (Green Bank (Access D and E) or Jaque's Bank (Access Y) from the A18.

4.5. Land Parcel D

4.5.1. Land Parcel D is bisected by the M180. The arrival route vehicles routing to parcels to the north of the M180 (Access F, M and Z) will take to reach their destination is as follows:

- Construction traffic will exit the M180 at Junction 1 onto the Tudworth Roundabout turning east onto the A18
- Continue east along the A18 before either accessing the land parcel required directly from the A18 (Access F and M), or Crow Tree Bank (Access Z).

4.5.2. The arrival route vehicles routing to parcels to the south of the M180 using accesses H, i, J, K and W will take to reach their destination are as follows:

- Vehicles will exit the M180 at Junction 1 onto the Tudworth roundabout turning south onto the A18.
- Upon reaching the Sandtoft Road junction turn left following it along as it becomes Low Levels Bank; and
- Continue following Low Levels Bank east into the access points either side of the Low Levels Bank carriageway.

4.5.3. Swept path assessment of the A18 Tudworth Road/ Sandtoft Road junction is included at **Appendix C**.

4.6. Land Parcel E

4.6.1. Accesses P, R, Q, X and Ai serve Land Parcel E. The arrival route vehicles will take is as follows:

- Exit the M180 at Junction 2 onto the A161 following it north: then:
- For Access P, turn left onto the unnamed road that runs parallel to the A18 following it west before routing west on High Levels Bank, from which Access P is served;
- For Access Q, turn left onto the unnamed road that runs parallel to the A18 following it west before routing south on High Levels Bank, from which Access Q is served; and
- For Access R, turn left onto the unnamed road that runs parallel to the A18 following it west, form which Access R is served.
- For Access AK, continue north along the A161 for circa one kilometre, with Access AK on the western side of the road

4.7. Construction Route Mitigation

4.7.1. The arrival and departure of HGVs at the Scheme will be strictly managed by the Site Manager(s). Drivers will adhere to a delivery schedule and will be required to call ahead to ensure that any emerging HGVs can be held within the construction compounds. No HGVs will be permitted to wait on the public highway and background traffic will always be given priority. This will be effected by banksmen and the Site Manager(s).

4.7.2. Advisory signs will be provided along the construction traffic route, with the exact positions to be agreed with CDC and NLC officers in due course. The signs will be compliant with Chapter 8 of the Traffic Signs Manual **[Ref-2],** where applicable, and will be in place for the duration of the construction phase at the site.

4.7.3. Drivers will be informed of the required route to each access point prior to arriving at and / or departing from the Scheme. They will also be advised not to use Sat-Navs to reach the Scheme to avoid using inappropriate roads. A temporary signage scheme to direct drivers to each of the Land Parcels will be put in place from the strategic road network for the duration of the construction works.

4.7.4. There are no signed height restrictions on the routes, and no road closures will be required in order to facilitate access. However, temporary traffic management measures are proposed at each individual access point to assist drivers entering and leaving the Scheme.

4.7.5. Specifically in relation to Land Parcel B and the proposed construction traffic route, Crowle Primary School is located on Windsor Road around 95 metres south of Marsh Road. As such, any construction traffic movements through Crowle (a breakdown of which is provided in **ES Chapter 12 Transport and Access [Document Reference 6.1.12]** as link 19 of the ES) would be strictly managed and would be timed to avoid the peak hours on the highway network and the busiest times of the school day.

5 Vehicle Trip Attraction

5.1. Construction Phase

5.1.1. The construction phase includes the preparation of the land, the temporary access roads, erection of security fencing, assembly and erection of the PV strings, installation of the inverters/transformers/battery units and grid connection, including cable connections between the panel areas and the intermediate substations.

5.1.2. The Applicant has confirmed the following construction periods for each of the Land Parcels for assessment purposes:

- Land Parcel A – 12 months (with peak construction over a four month period).
- Land Parcel B – 9 months (with peak construction over a two month period).
- Land Parcel C – 12 months (with peak construction over a three month period).
- Land Parcel D – 9 months (with peak construction over a three month period).
- Land Parcel E – 12 months (with peak construction over a three month period).

5.1.3. The Applicant has also confirmed for assessment purposes that they are likely to construct only two Land Parcels at any one time. The peak construction period in Transport and Access terms would comprise the construction of Land Parcel C and Land Parcel E simultaneously, as these Land Parcel share sections of the proposed construction traffic route. However, in order to provide a robust assessment it has been assumed that the entire Scheme could come forward at the same time. This ensures that all potentially impacted links are considered and provides a robust assessment of the highway network.

5.1.4. HGV deliveries will be made to construction compounds located across the Land Parcels. The construction compounds will accommodate deliveries by HGVs where

they will decant equipment and materials. Some Land Parcels will require the materials to be transported from other Parcels via smaller vehicles (i.e. tractor and trailer). Where this is required, it has been assumed that a total of three tractor and trailers are required for every HGV delivery.

5.1.5. The construction of the Scheme will require Abnormal Indivisible Loads (AIL) for the transformer and substation deliveries. The deliveries will be planned with an AIL route assessment and will be escorted and managed along the route from the port of entry into the UK and the Order Limits. Any impacts will be minimised, and the arrangements will be secured through an AIL assessment in due course in conjunction with CDC, NLC and the Police.

5.1.6. There will also be a small number of construction movements associated with smaller vehicles such as the collection of skips for waste management, although these will be infrequent, and the transport of construction workers and sub-contractors.

5.1.7. The Applicant has confirmed that a maximum of up to 377 construction workers would be on Land Area C and E at any one time during the peak construction period. This is based on an assumption of 4.94 workers per acre. However, the assessment has been based on the construction of the Scheme occurring simultaneously and therefore a higher number of staff trips has been assessed with up to 880 staff across the entire Scheme.

5.1.8. The Applicant expects that 75% of the construction workers will travel to site via 15 seater minibus, whilst the other 25% will arrive via private vehicle with an average of three workers per car. This equates to 17 minibuses and 41 private cars per day (up to 116 two-way vehicle movements per day at peak times of construction). The majority of staff will travel from Doncaster, North Lincolnshire and East Riding of Yorkshire areas. Further details on the location of where staff will travel from is set out in **ES Chapter 11 Socio Economic [Document Reference 6.2.11].**

5.1.9. As set out above, construction compounds will be provided across the Land Parcels. The number of deliveries will therefore be split between each Land Parcel and their respective compounds. The Applicant has confirmed for assessment purposes that each Land Parcel could be associated with the following daily vehicle movements, based upon the construction periods set out in **paragraph 5.2**:

- Land Parcel A – 90 two-way AADT movements per day (including 42 HGV AADT movements).

- Land Parcel B – 11 two-way AADT movements per day (including six HGV AADT movements).
- Land Parcel C - 42 two-way AADT movements per day (including 20 HGV AADT movements).
- Land Parcel D - 38 two-way AADT movements per day (including 18 HGV AADT movements).
- Land Parcel E - 54 two-way AADT movements per day (including 26 HGV AADT movements).

5.2. Summary

5.2.1. The level of traffic during the temporary construction phase is not considered to be material and it is considered that this will not have a detrimental impact on the safety or operation of the local or strategic highway network.

6 Proposed Mitigation Measures

6.1.1. The appointed contractor(s) will introduce measures to minimise the impact on the local road network resulting from construction activities. These will be managed by the Project Manager and the Site Manager(s).

6.1.2. The Site Manager(s) will assume responsibility for the operation of the Scheme. The details of the Site Manager(s) will be provided to the highway authority at CDC and NLC in advance of any works being carried out.

6.2. Construction Compounds

6.2.1. Construction compounds will be located across the Order Limits within each Land Parcel, as shown in **ES Figure 2.1 – Indicative Construction Layout Plan [Document Reference 6.4.2.1]** available as part of the wider submission. The construction compounds will be on flat ground. They will be surfaced with aggregate/ stone to support weight bearing plant and equipment. The construction compounds will be removed once the construction phase is complete.

6.2.2. All of the construction compounds will be secured by mesh fencing and will include:

- reception area.
- office and welfare units.

- security cabin.
- turning area for delivery vehicles.
- laydown area.
- skip area.
- storage containers.
- parking area; and
- vehicle wheel wash area.

6.2.3. Parking for cars and minibuses will be provided within each of the compounds. Parking will therefore be contained within the Scheme and no unnecessary parking will occur on the local highway network. This will be monitored and managed by the Site Manager(s).

6.2.4. No parking by contractor(s), visitors or delivery vehicles will be permitted on any roads in the vicinity of the Scheme or the access tracks from the public highway leading to the construction compounds during the construction phase. Visitors will be advised of the parking arrangements in advance of travelling to the Scheme. The Site Manager(s) will monitor that parking is taking place in the designated area within the compounds.

6.2.5. The compounds will also include areas for the storage of plant and equipment. The material storage units will be used to contain materials, products, parts, crates, packing materials and waste for the duration of the construction phase.

6.2.6. Staff welfare facilities including toilets, and a canteen will be provided at each compound. An office block will be located at the entrance of the compounds for signing in and out and other administrative activities.

6.2.7. Loading and unloading of construction material and plant will take place within the construction compounds. A fenced and secured storage area will also be provided. The compounds will be large enough for heavy goods vehicles (HGVs) and a tractor and trailer to turn and exit the compound in a forward gear.

6.2.8. The arrival and departure of HGVs at the Scheme will be strictly managed by the Site Manager(s). Drivers will be required to adhere to a delivery schedule and will be required to call ahead to ensure that any emerging HGVs can be held within the

construction compounds. No HGVs will be permitted to wait on the public highway. This will be communicated to drivers via the call-ahead system.

6.2.9. Wheel washing may be required until the internal access tracks are completed. A hose / pressure washer or dry-wheel wash will be provided at the exit of the construction compounds to ensure that vehicle's wheels are clear of mud and debris before exiting on to the local highway network.

6.3. Management of HGVs

6.3.1. A Delivery Management System will be put in place to plan deliveries entering all the site accesses and this will be controlled by the Site Manager(s) and banksmen.

6.3.2. The arrival and departure of HGVs at the site access points will be strictly managed by the Site Manager(s). Drivers and banksmen and will adhere to a delivery schedule and will be required to call ahead to ensure that any emerging HGVs can be held, if necessary, within the construction compound. No HGVs will be permitted to wait on the public highway. This will be communicated by the Site Manager(s) via the call ahead system. Should more than one HGV arrive at the site at the same time, then the construction compounds are large enough to be able to accommodate this.

6.3.3. National Highways have requested that delivery vehicles are limited to outside of the AM and PM peak hours of the Strategic Road Network (SRN) (i.e. avoiding 0800-0900 and 1700-1800 on the SRN).

6.4. Operation and Management of Banksmen

6.4.1. Trained banksmen will be deployed to manage inbound and outbound HGV movements associated with the Scheme.

6.4.2. Banksmen will be sited at all access points that are in use during the construction phase to manage the safe access and egress of all construction traffic.

6.4.3. They will wear high-visibility clothing at all times and will communicate to HGV drivers and colleagues via radio.

6.4.4. Banksmen will also be located within the construction compounds to assist turning manoeuvres by the largest vehicles, where required, and at PRoW crossing routes within the Scheme to ensure that users of the PRoW are given priority at all times.

6.4.5. The contact details of the contractor(s) and those of the highway department at NLC and CDC will be exchanged before commencement of the works at the Scheme.

6.5. Temporary Signage

6.5.1. Temporary warning signage will be placed in strategic locations to warn road users of the ongoing construction.

6.5.2. The signage will be provided in line with The Traffic Signs Manual: Chapter 8 (2020) **[Ref-2]** and is proposed to include (subject to agreement with the Highway Authority):

- Sign Ref: 2708 - Red signage stating 'CAUTION CONSTRUCTION TRAFFIC TURNING' at the access and egress points; and
- Sign Ref: 7305 – 'WORKS TRAFFIC' directional signage from the strategic road network.

6.5.3. During the construction phase, temporary signage in line with Diagram 7301 'WORKS TRAFFIC ONLY' of the Traffic Signs Regulations and General Directions 2016 (TSRGD) will be used to indicate that heavy construction vehicles are turning. Signage will be white text and red background 1050 x 750mm mounted in 'A' frame, as illustrated at **Appendix D.**

6.6. Public Rights of Way

6.6.1. Mitigation and management procedures will be put in place where the PRoWs cross through the Scheme. These measures will include:

- When construction plant and machinery are accessing a relevant Land Parcel, a banksman will be employed to control both movements on the PRoW and HGV traffic. Banksmen will ensure that users of the PRoW always have priority.
- Where possible fencing will be placed along the PRoW routes where they cross the Scheme with gated sections in the vicinity of the internal access tracks. Vehicles will only be permitted to cross the PRoW at designated crossing points. Only smaller vehicles will be required to cross the PRoW at the designated crossing points.
- Signage will be erected at either end of the affected PRoWs in the vicinity of the Scheme boundary advising users of ongoing construction activities. Further signage will be positioned on the approach to either side of each crossing point for both construction traffic and PRoW users.

6.6.2. Temporary diversion of a sections of PRoWs Thorne 19 and CROW 21, which traverse the site, may be required during the construction period in order to separate and keep apart members of the public from the construction vehicles and machinery. If a PRoW needs to be closed temporarily during construction, an alternative path will be provided.

6.6.3. The temporary diversion will cease following construction of the relevant works. Temporary diversion of the footpath would also take place during decommissioning.

6.7. Traffic Management

6.7.1. Where required, suitable traffic management would be implemented to ensure safe operation and to reduce as far as reasonably practicable the impact of the cable route works on the local highway network.

6.7.2. The following traffic management measures could be implemented at the site access points and along the cable route where it affects the adopted highway, depending on the nature of the carriageway within which the works are taking place. The details of traffic management will be agreed with the relevant highway authority in advance of any works taking place in the highway.

Banksmen

6.7.3. Where required, banksmen will be sited at the site access points and at either end of cable run areas to control traffic associated with the Scheme on the highway. Banksmen will communicate between vehicles / site management via CB radio. This will ensure traffic is controlled in a 'one way only' fashion in the vicinity of construction areas.

Stop / Go Boards

6.7.4. On roads along the route where the speed limit does not exceed 60mph (and where adequate visibility and lighting is available), stop/go boards shall be used to manage the flow of traffic past the cable works. Use of Stop/Go boards would be restricted to daylight hours.

6.7.5. Where manually rotated signs are in use and the operatives are not in direct line of sight, then two-way radio communication between operators must be used.

Portable traffic signals

6.7.6. Two way and / or multi-phase traffic signals will be considered where Stop/Go and Give and Take methods cannot be implemented. The details of traffic management will be agreed with the relevant highway authority in advance of any works taking place in the highway.

Road Closure

6.7.7. Whilst this would be avoided, where possible, if it becomes necessary a Temporary Traffic Regulation Order (TTRO) could be applied for by the contractor(s) to close a road or part of a road along the construction route. Whilst this would be avoided, where possible, if it becomes necessary a road or part of a road along the construction route could be closed following the temporary traffic regulation procedure set out in the DCO.

6.7.8. Where required, pedestrian access to properties within the affected road/s will be maintained at all times.

6.7.9. Appropriate traffic control signage will be agreed and provided as part of any of the above traffic management measures, in line with the Traffic Signs Regulations and General Directions (TSRGD) 2016 **[Ref-3]** and Traffic Signs Manual Chapter 8 **[Ref-2].** The exact signage will be designed by a suitably competent contractor.

6.8. Condition Survey

6.8.1. A pre-commencement walk-over Condition Survey on the local highway network will be carried out to assess the baseline condition of the adopted highway before relevant construction activities commence. The extents of the surveys will be determined in consultation with highway officers at NLC and DC in due course.

6.8.2. The survey will incorporate photographic records as appropriate. The survey will be undertaken in the presence of highway officers at NLC and CDC should they wish to be present, as required, and a date for this survey will be determined before relevant construction activities commence.

6.8.3. This would be followed by a further Condition Survey with a further photographic record covering the same extents as previously assessed at the end of the relevant construction activities, in order to identify and agree any remedial works reasonably attributable to construction activities. A date for this survey will be determined in consultation with the highway authority once construction of the Scheme is complete.

7 References

- Ref-1: Design Manual for Roads and Bridges CD109 Highway Link Design (March 2020)
- Ref-2: Department for Transport Traffic Signs Manual Chapter 8: Traffic Safety Measures and Signs for Road Works and Temporary Situations (2009)
- Ref-3: The Traffic Signs Regulations and General Directions (TSRGD) 2016.

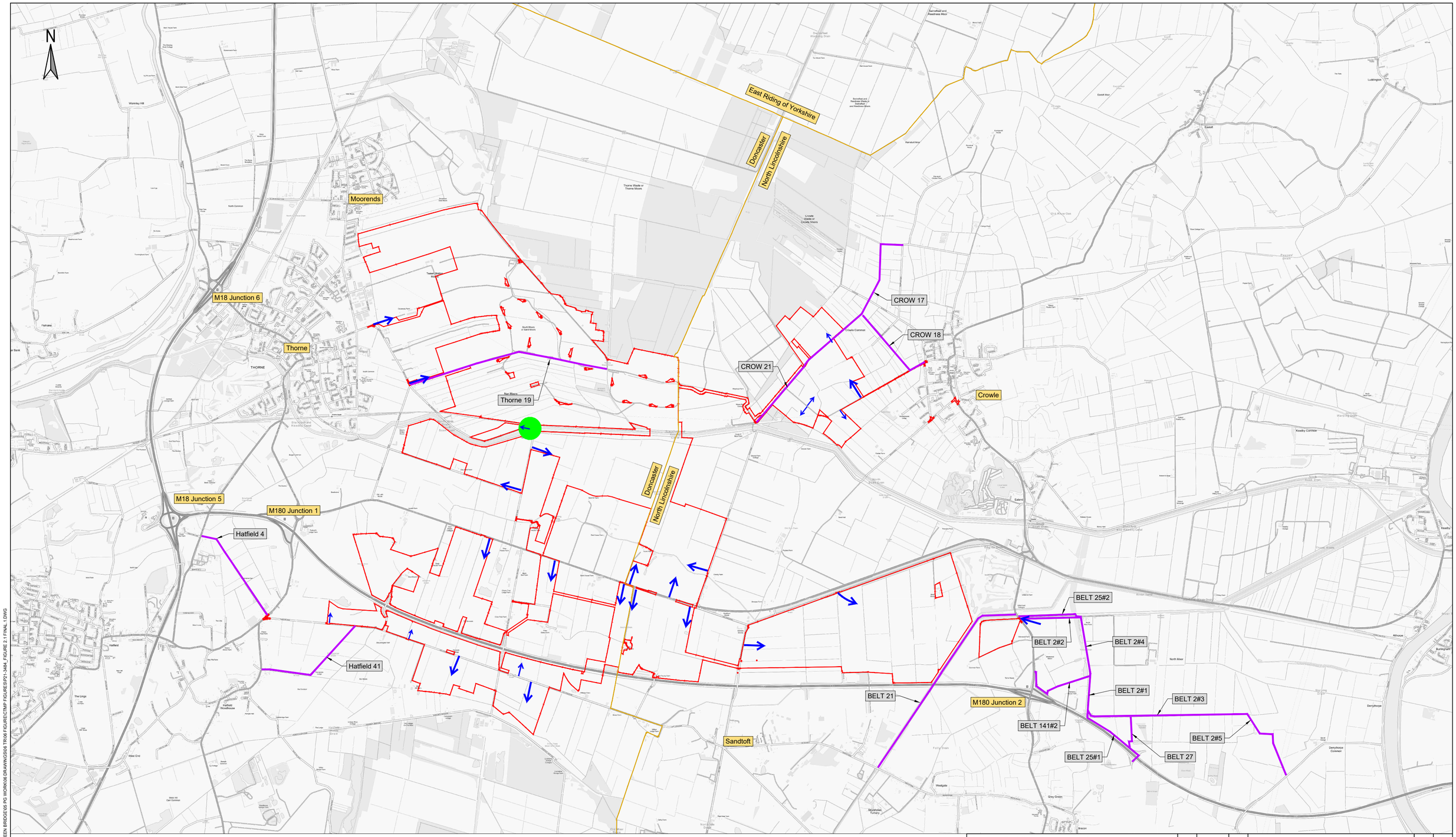
8 Glossary

Table 9-1: Glossary for Transport and Access

Terminology	Definition
AADT	Annual Average Daily Traffic -
AIL	Abnormal Indivisible Load
CDC	City of Doncaster Council
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
DMRB	Design Manual for Roads and Bridges
ES	Environmental Statement
HGV	Heavy Goods Vehicle
LEMP	Landscape Ecological Management Plan
Mph	Miles per hour
MWp	Megawatts peak
NLC	North Lincolnshire Council

PRoW	Public Right of Way
SRN	Strategic Road Network

Figure 2.1 Indicative Access Strategy



Key:

- Order Limits
- Weak Bridge (7.5 tonne)
- Public Right of Way
- Approximate Access Locations
- Local Authority Boundaries

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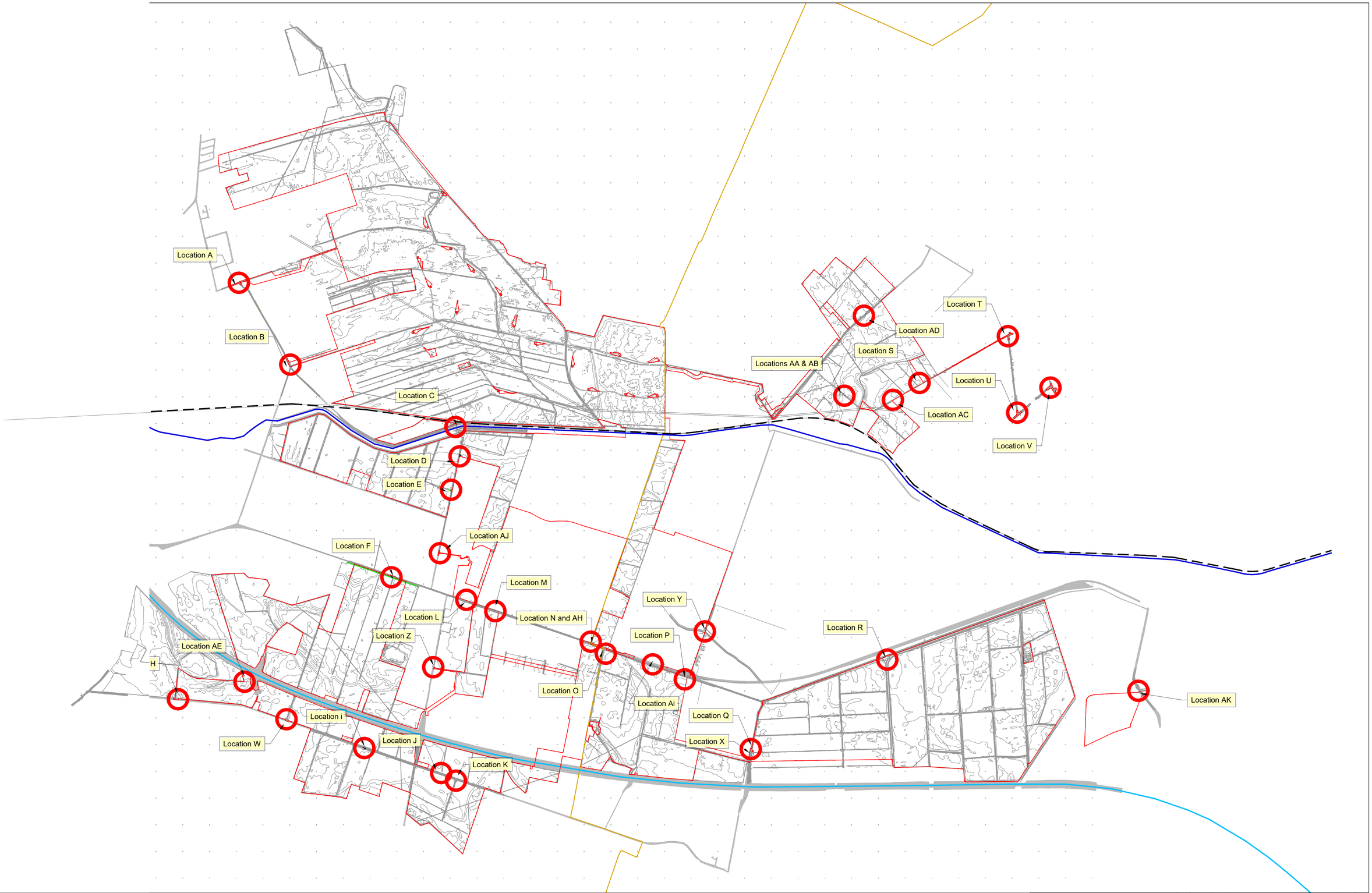
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P21-3484	FIGURE 2.1	1

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Figure 3.1 Proposed Access Arrangements Master



Key:

- Order Limits
- Approximate Extent of Adopted Highway
- Stainforth and Keadby Canal
- Railway Track
- Local Authority Boundary
- Motorway

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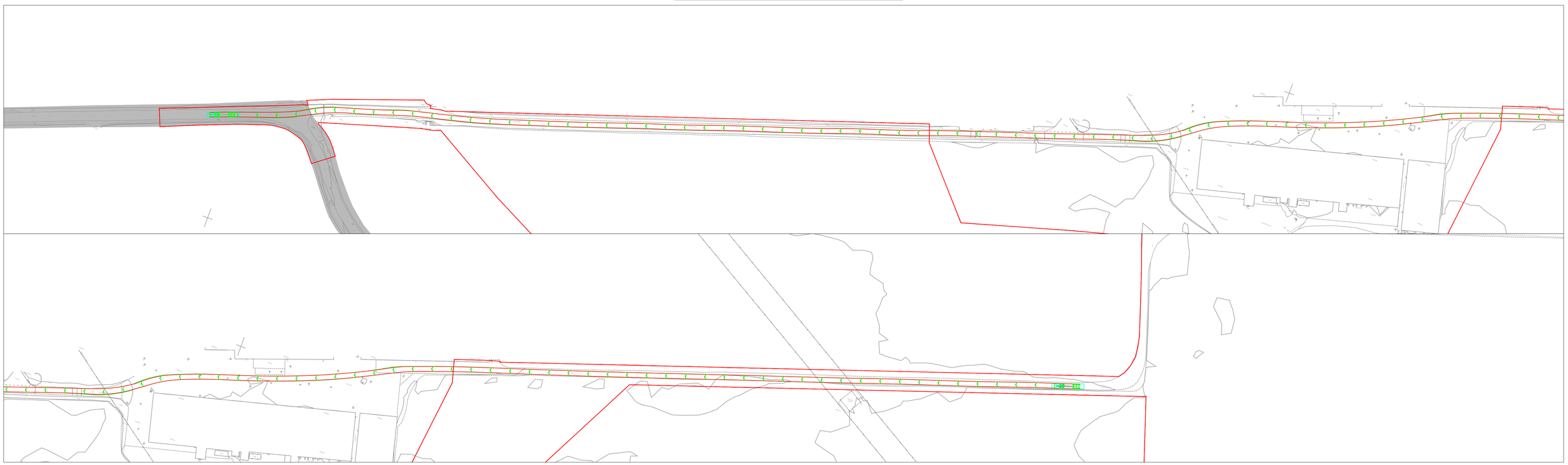
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Figure 3.2 Proposed Access Arrangements – Access A

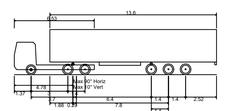


Swept Path Analysis of a 16.5m Articulated Vehicle Entering Access A



Swept Path Analysis of a 16.5m Articulated Vehicle Egressing Location A

1:1000
0 25m



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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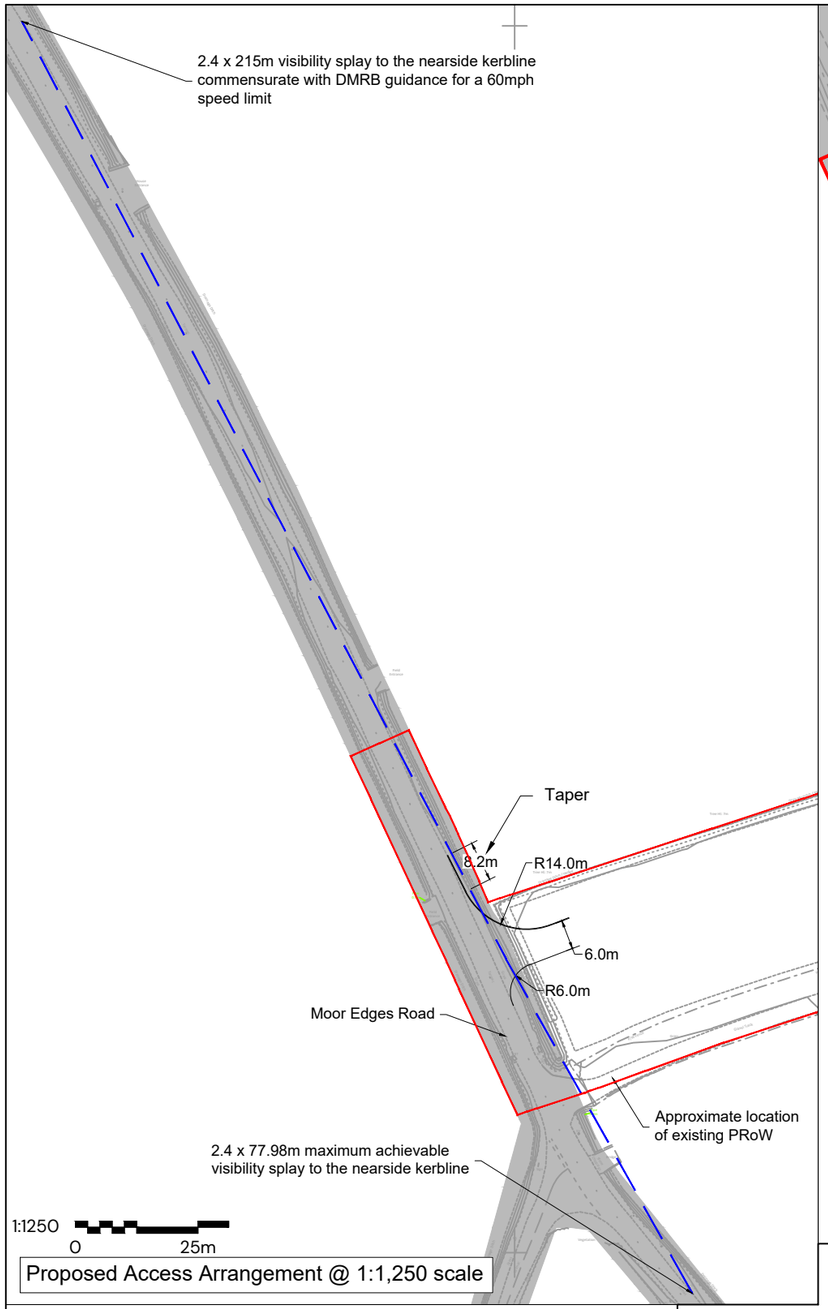
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TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION A

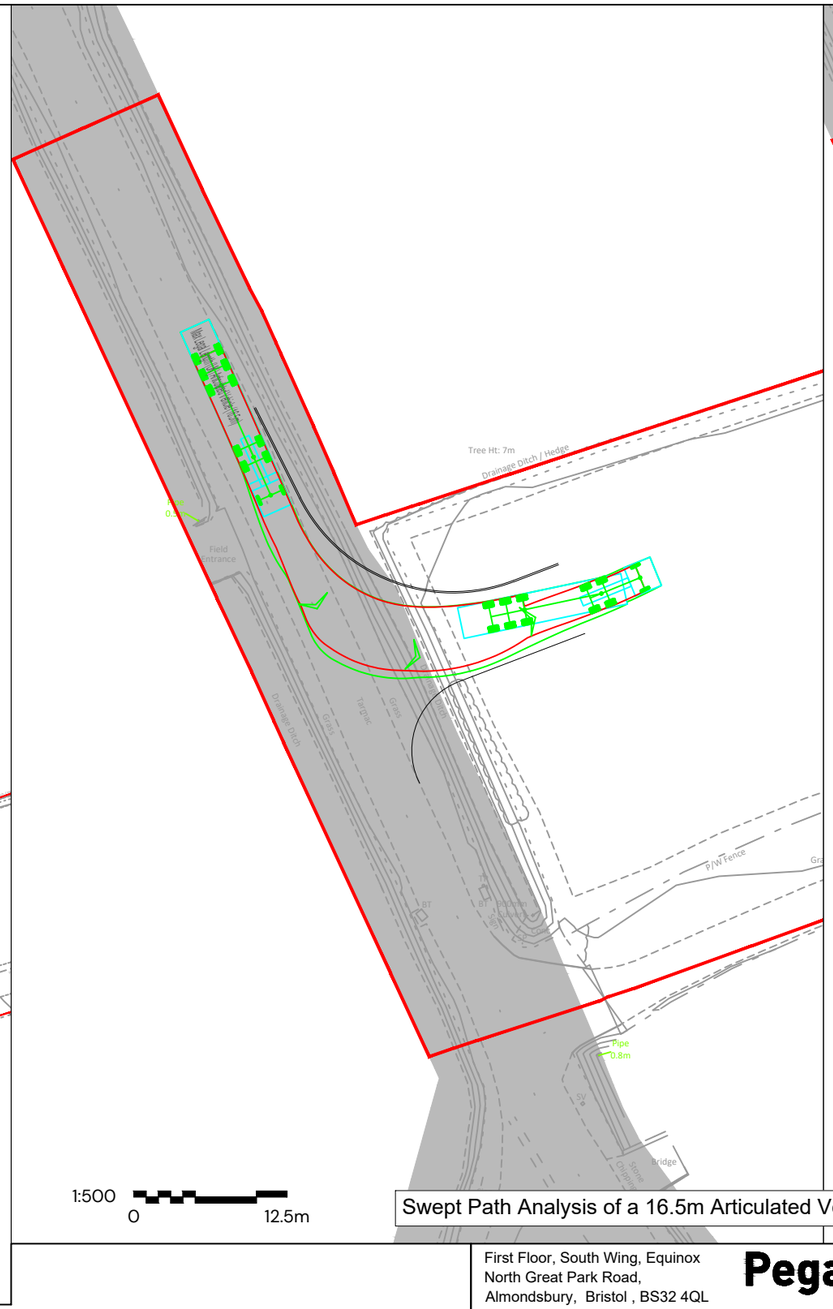
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Figure 3.3 Proposed Access Arrangements – Access B



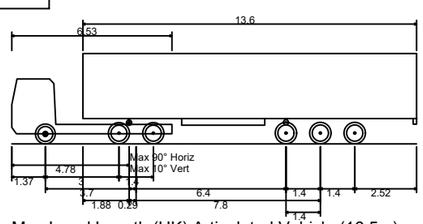
Proposed Access Arrangement @ 1:1,250 scale



Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location B @ 1:500 scale



N



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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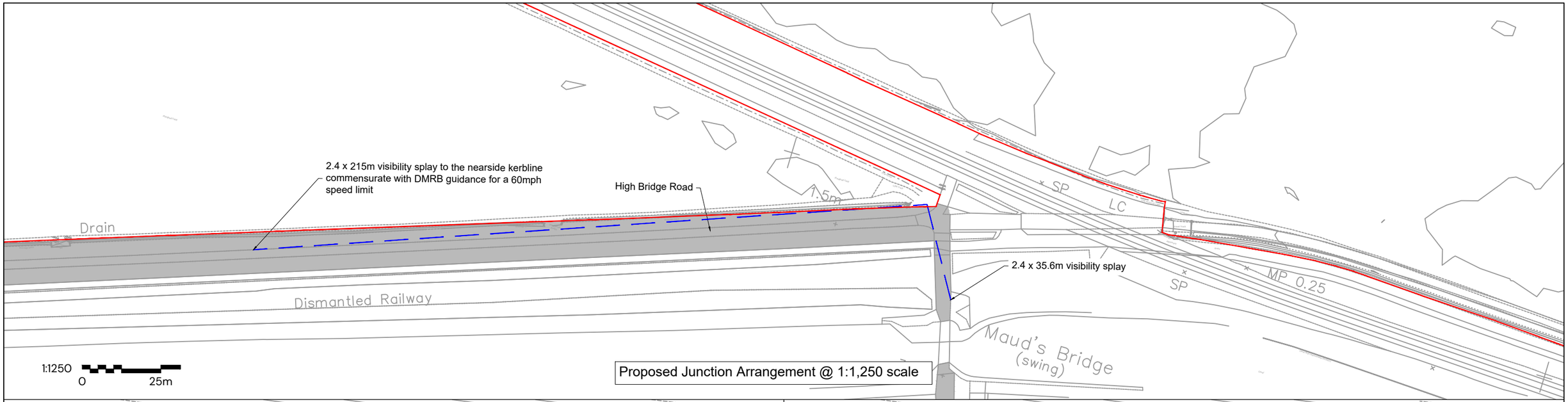
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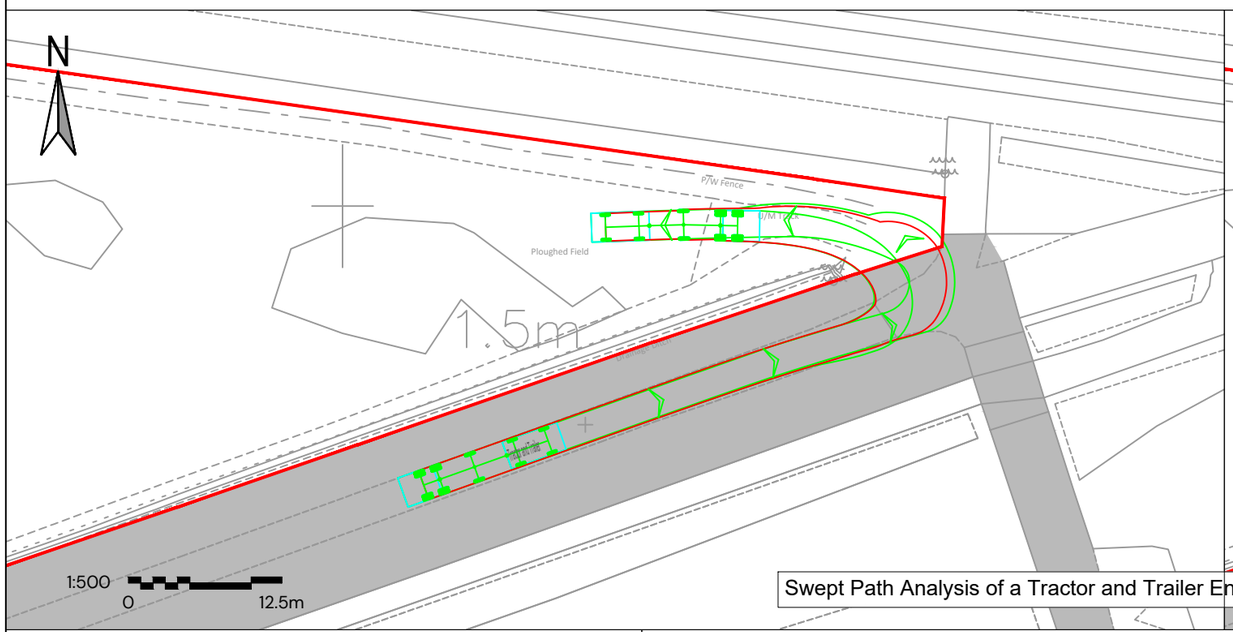
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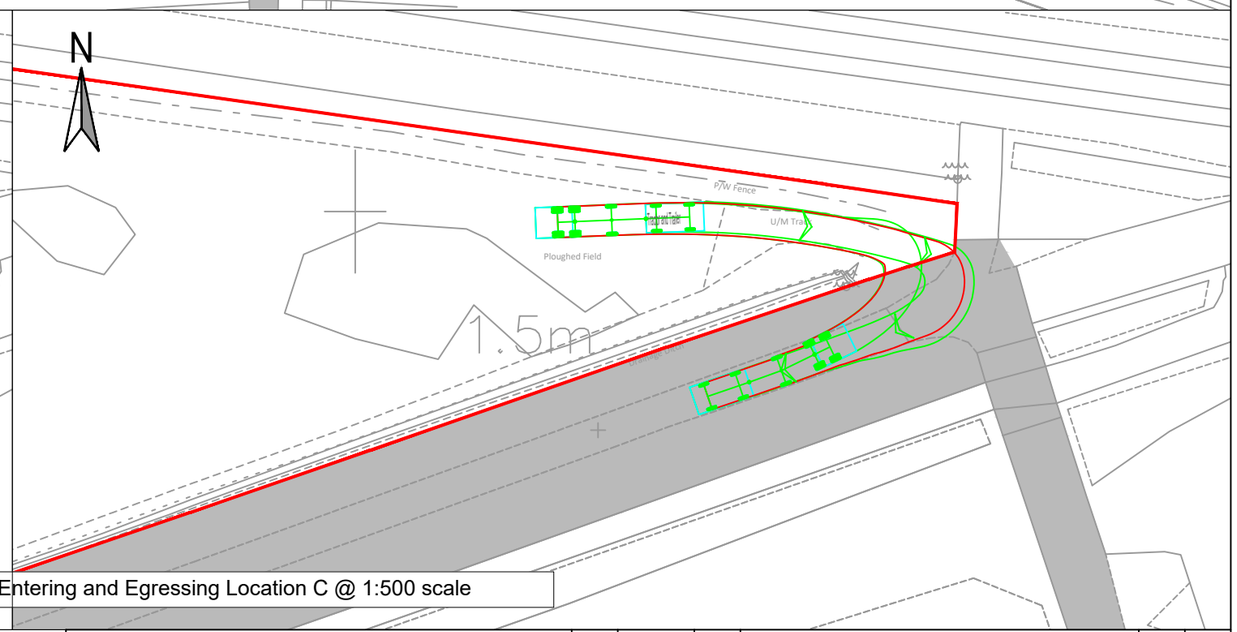
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Figure 3.4 Proposed Access Arrangements – Access C

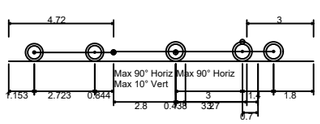


Proposed Junction Arrangement @ 1:1,250 scale





Swept Path Analysis of a Tractor and Trailer Entering and Egressing Location C @ 1:500 scale



Tractor and Trailer	
Overall Length	13.720m
Overall Width	2.500m
Overall Body Height	0.438m
Min Body Ground Clearance	0.398m
Max Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	4.620m

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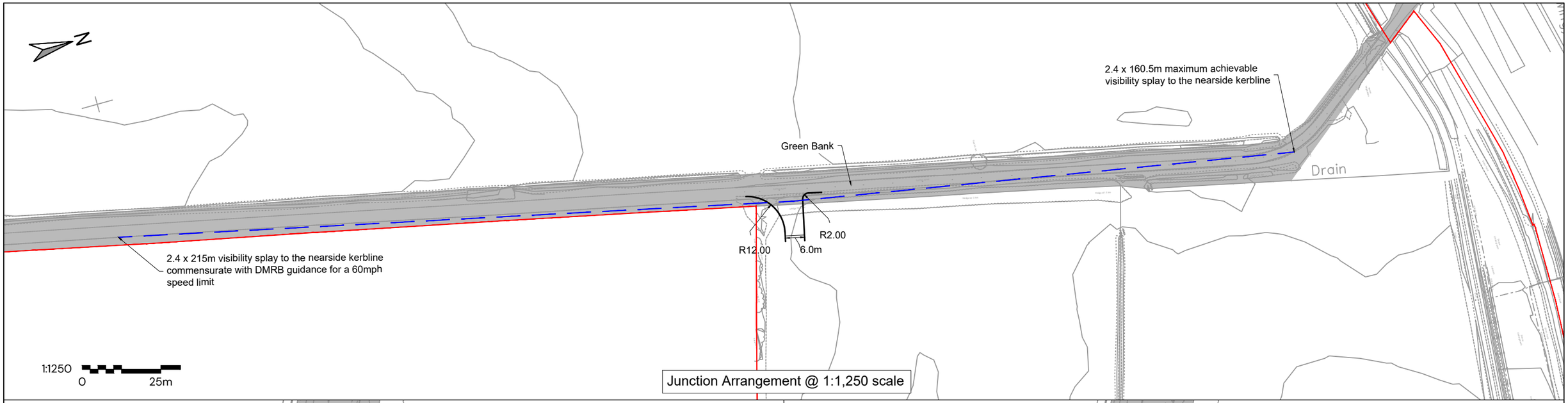
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TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION C	PROJECT No: P21-3484	DRAWING No: FIGURE 3.4	REV: 1

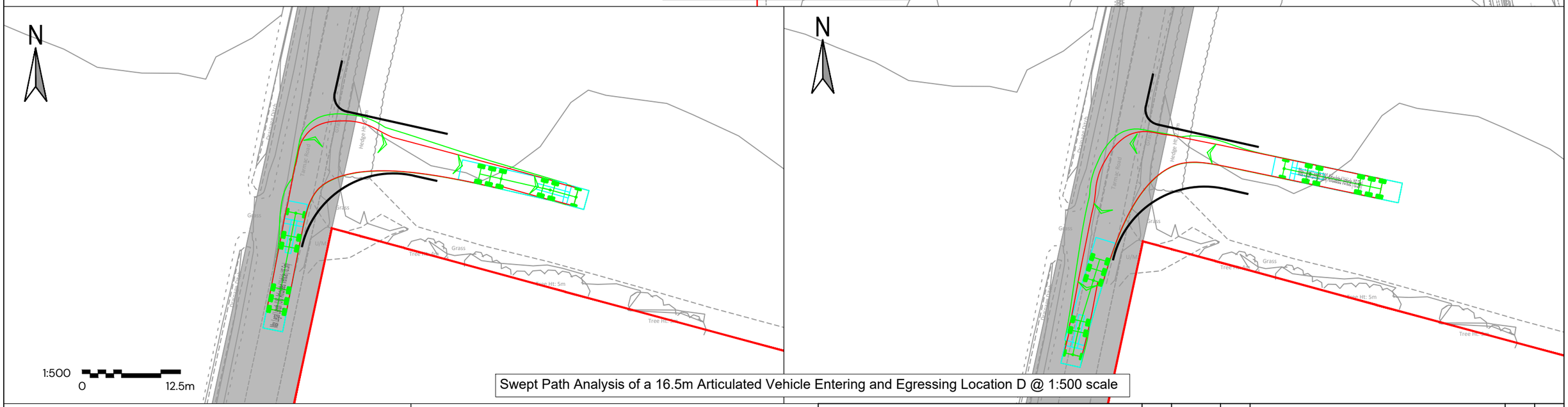
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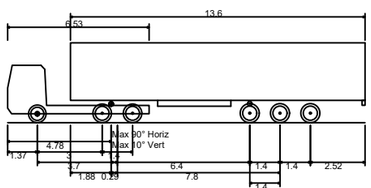
Figure 3.5 Proposed Access Arrangements – Access D



Junction Arrangement @ 1:1,250 scale



Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location D @ 1:500 scale



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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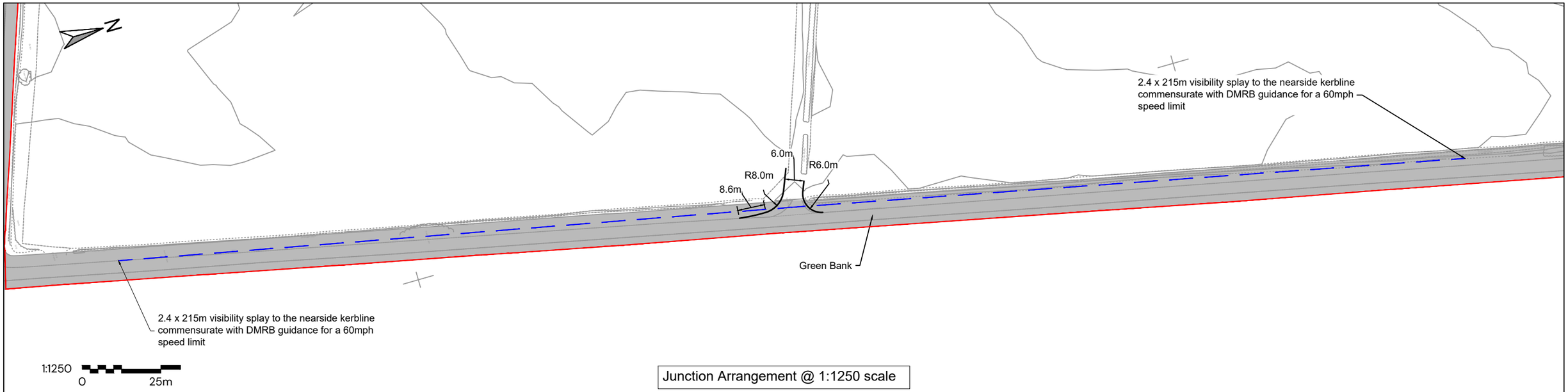
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION D

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P21-3484	FIGURE 3.5	1

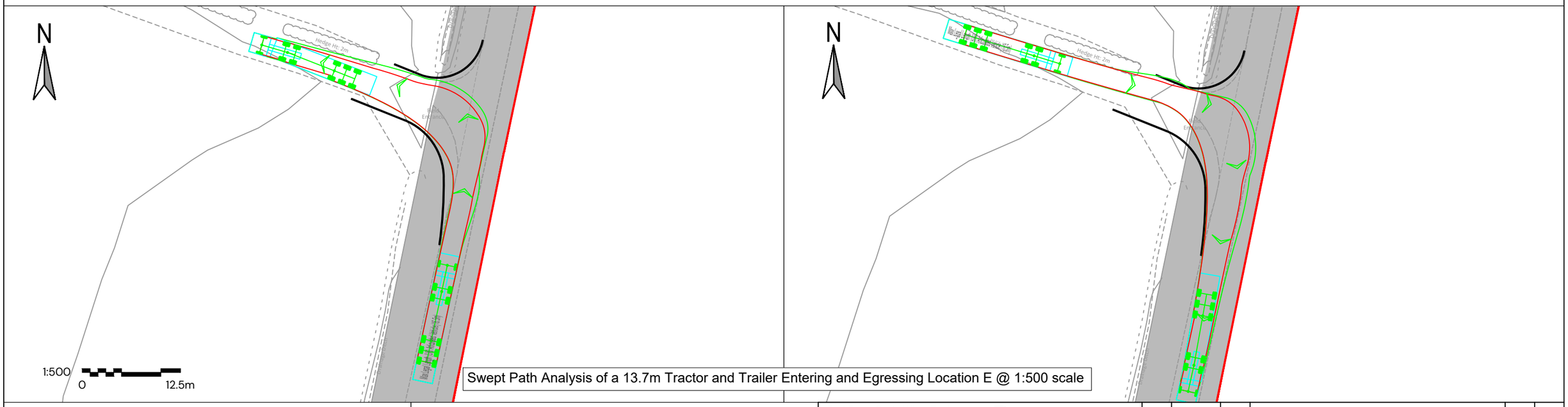
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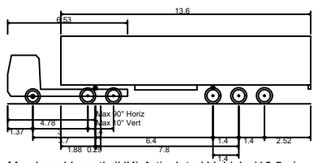
Figure 3.6 Proposed Access Arrangements – Access E



Junction Arrangement @ 1:1250 scale



Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location E @ 1:500 scale



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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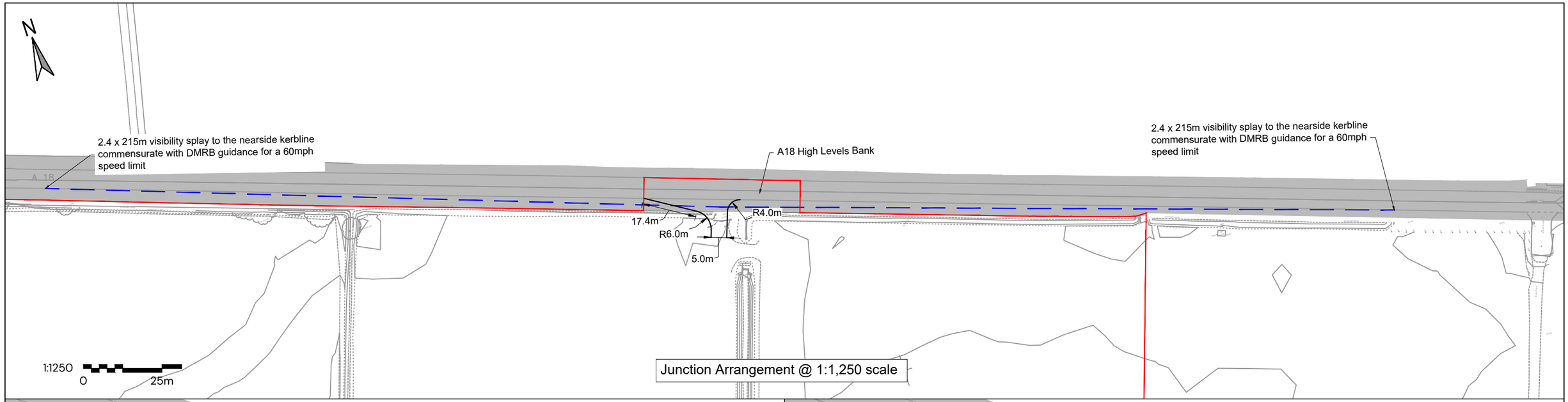
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PROJECT: TWEEN BRIDGE SOLAR FARM	DATE: 09/07/2025	DESIGN-DRAWN: JAN
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION E	PROJECT No: P21-3484	DRAWING No: FIGURE 3.6

APPROVED: KS
DRAWING-STATUS: FINAL
REV: 1

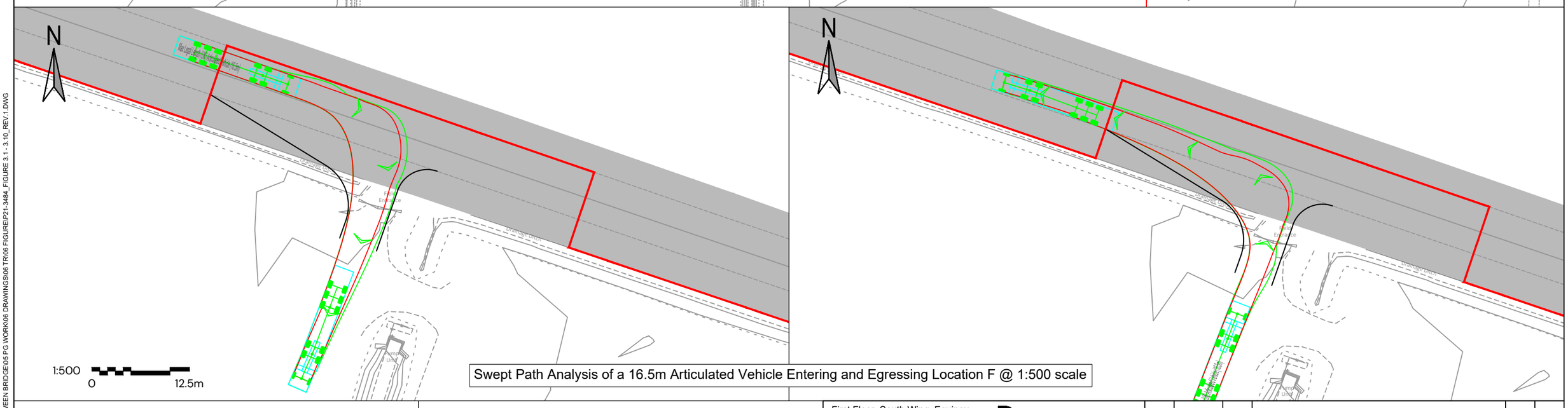
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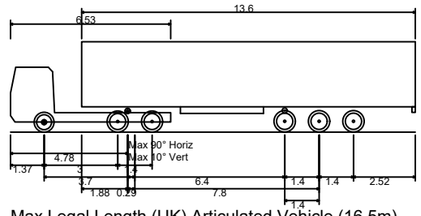
Figure 3.7 Proposed Access Arrangements – Access F



Junction Arrangement @ 1:1,250 scale



Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location F @ 1:500 scale



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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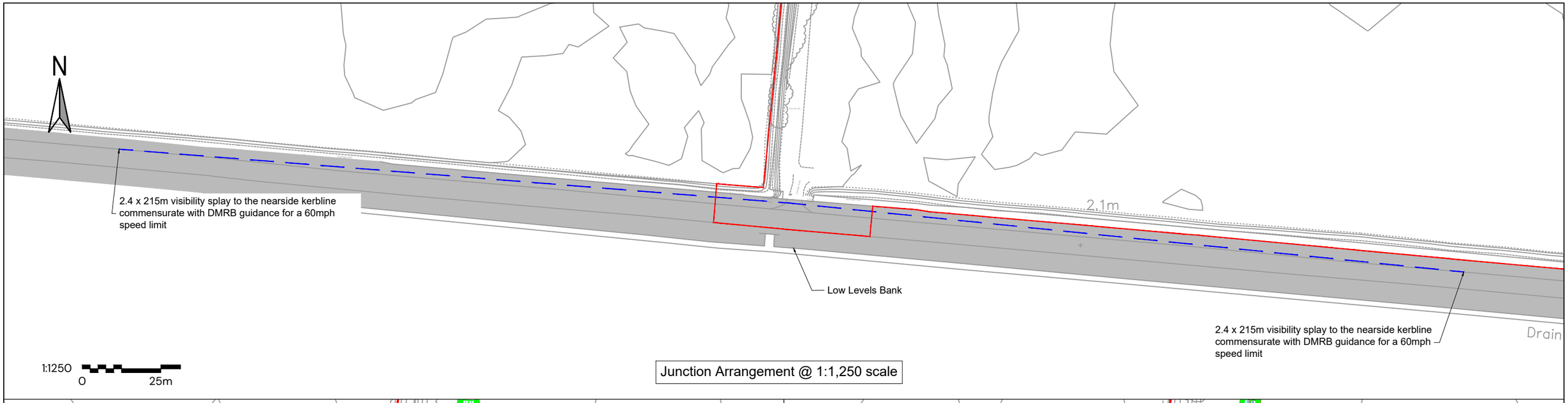
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P21-3484	FIGURE 3.7	1

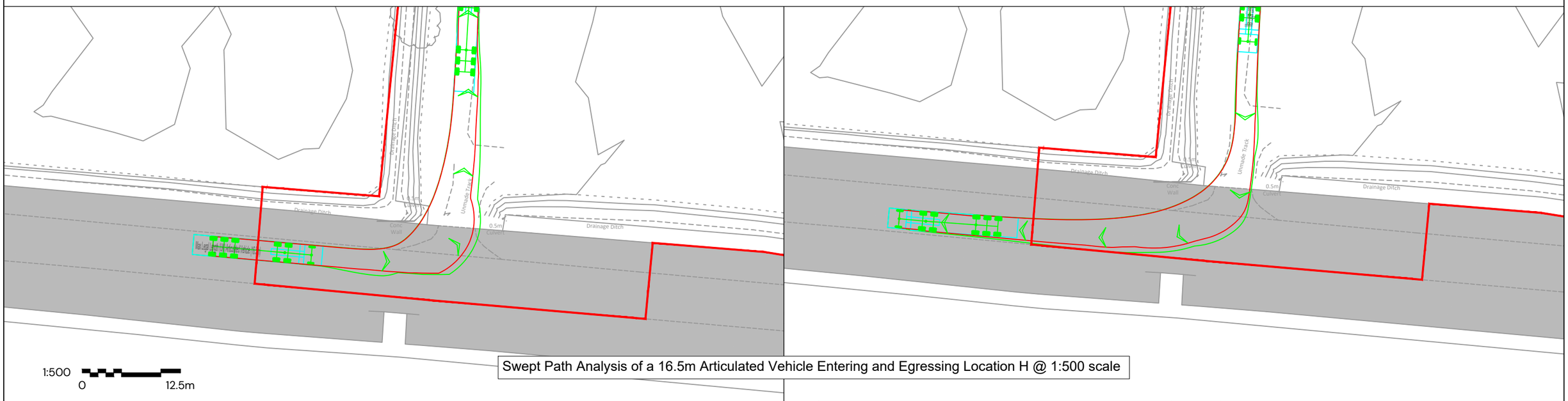
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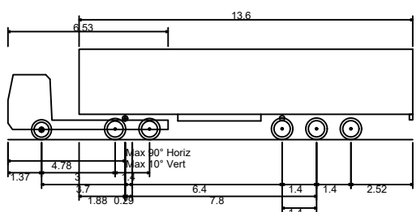
Figure 3.9 Proposed Access Arrangements – Access H



Junction Arrangement @ 1:1,250 scale



Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location H @ 1:500 scale



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION H

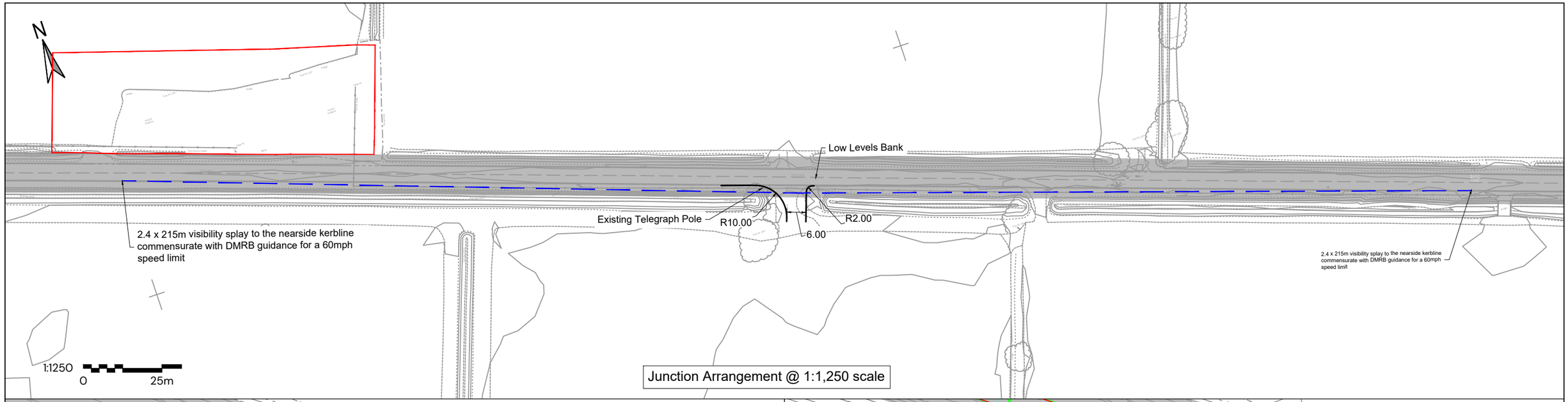
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PROJECT No:	DRAWING No:	REV:
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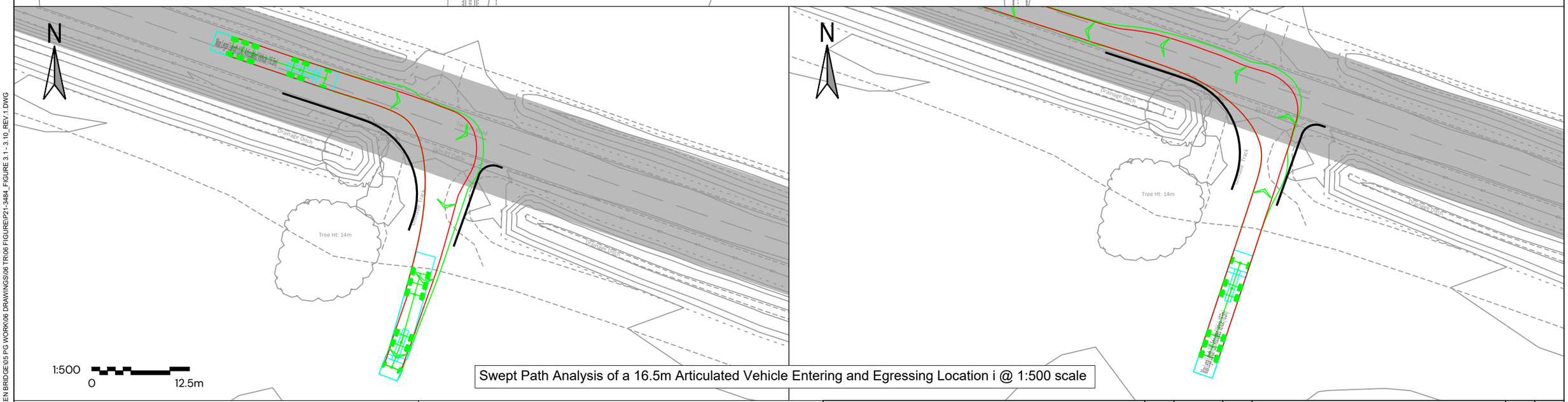
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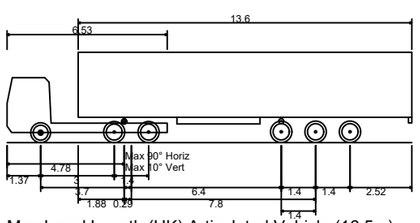
Figure 3.10 Proposed Access Arrangements – Access i



Junction Arrangement @ 1:1,250 scale



Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location i @ 1:500 scale



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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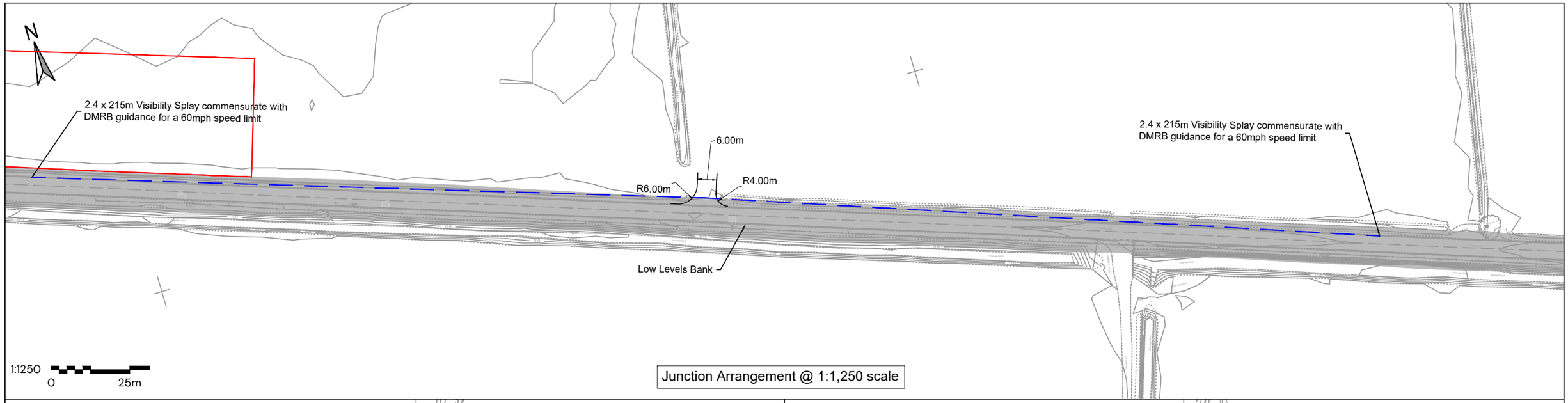
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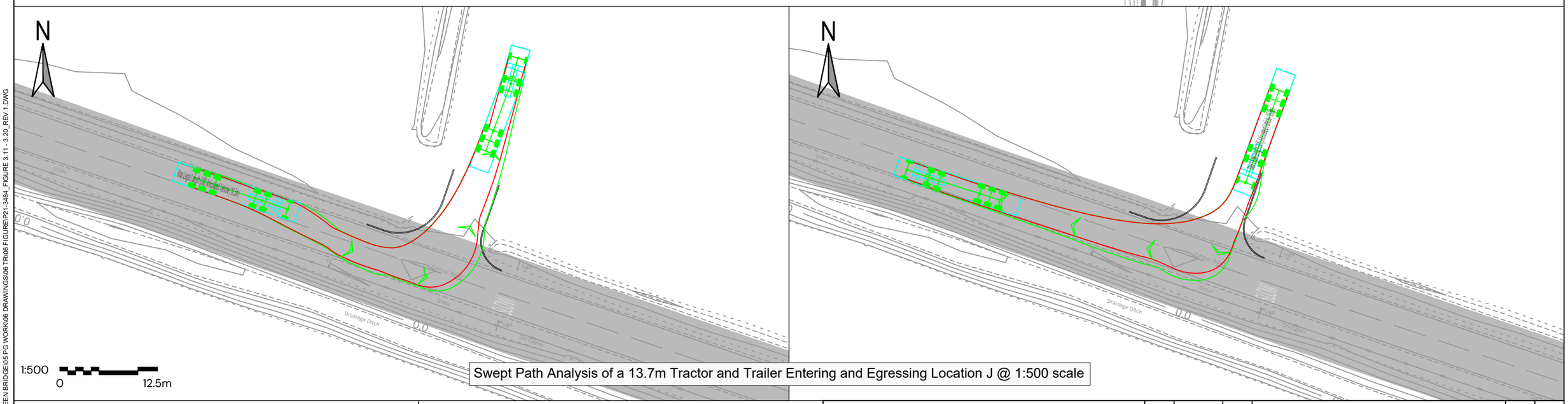
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Figure 3.11 Proposed Access Arrangements – Access J



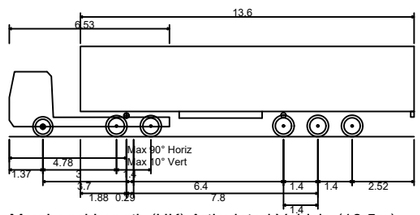
Junction Arrangement @ 1:1,250 scale



Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location J @ 1:500 scale

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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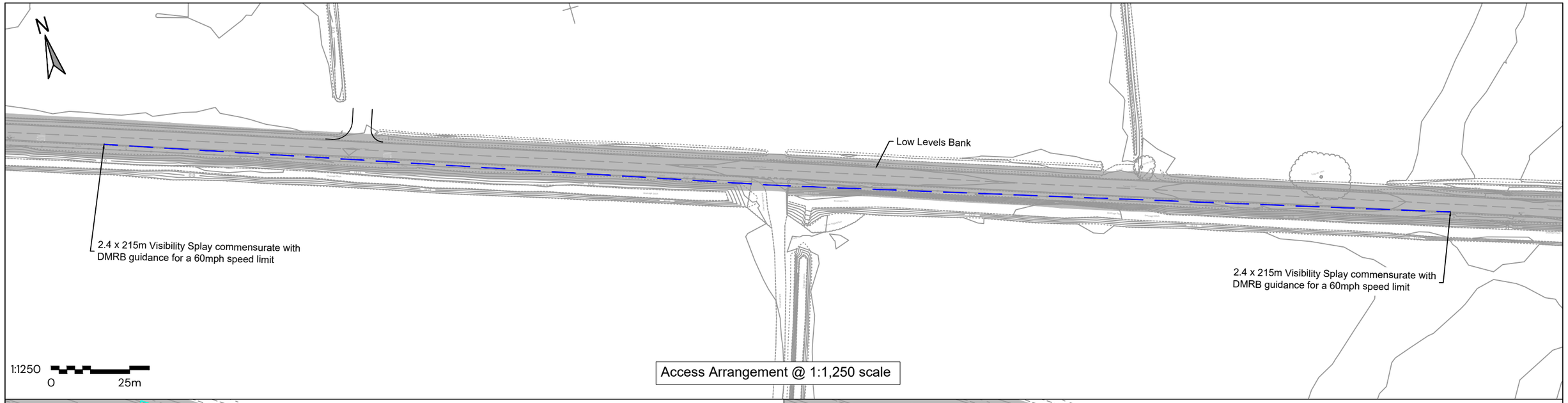
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION J

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P21-3484	FIGURE 3.11	1

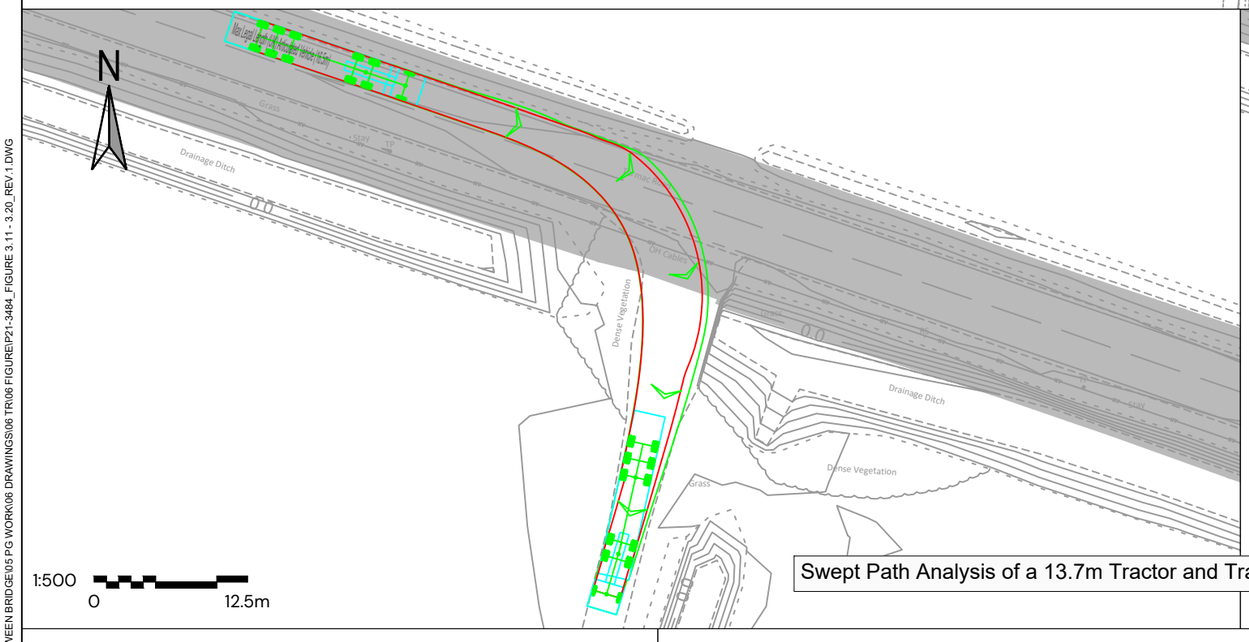
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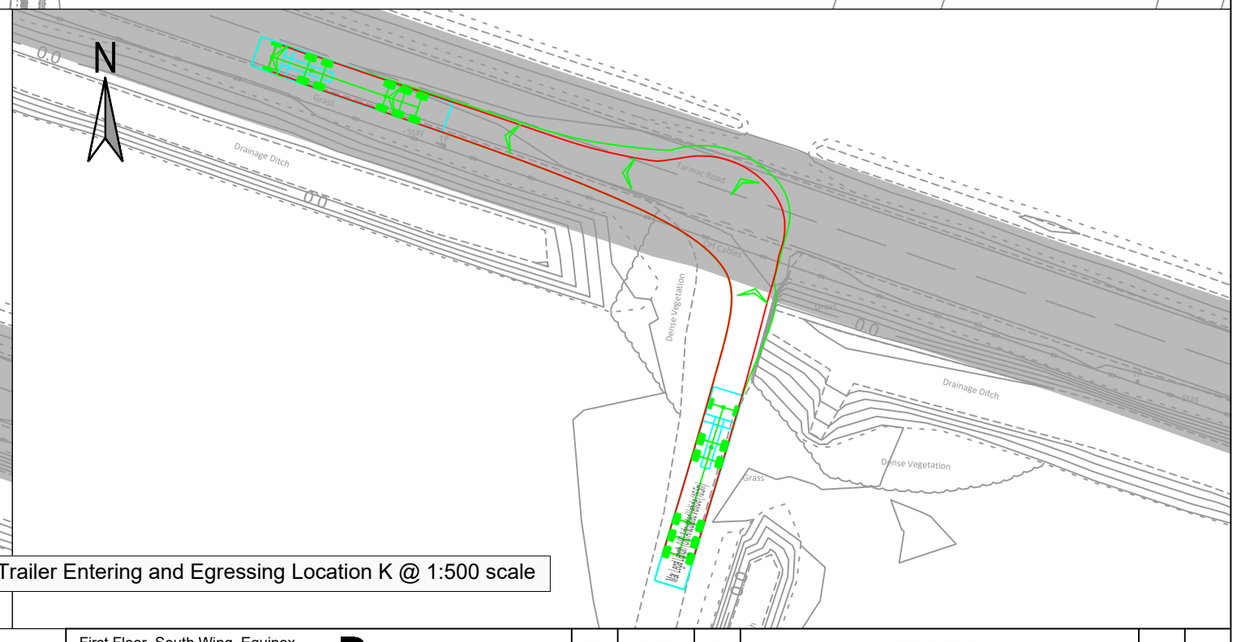
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Figure 3.12 Proposed Access Arrangements – Access K



Access Arrangement @ 1:1,250 scale



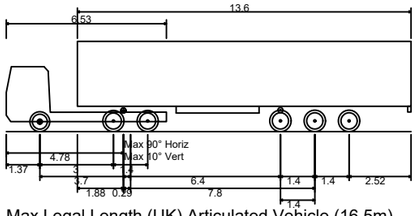


Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location K @ 1:500 scale

Key:

Visibility Splay

Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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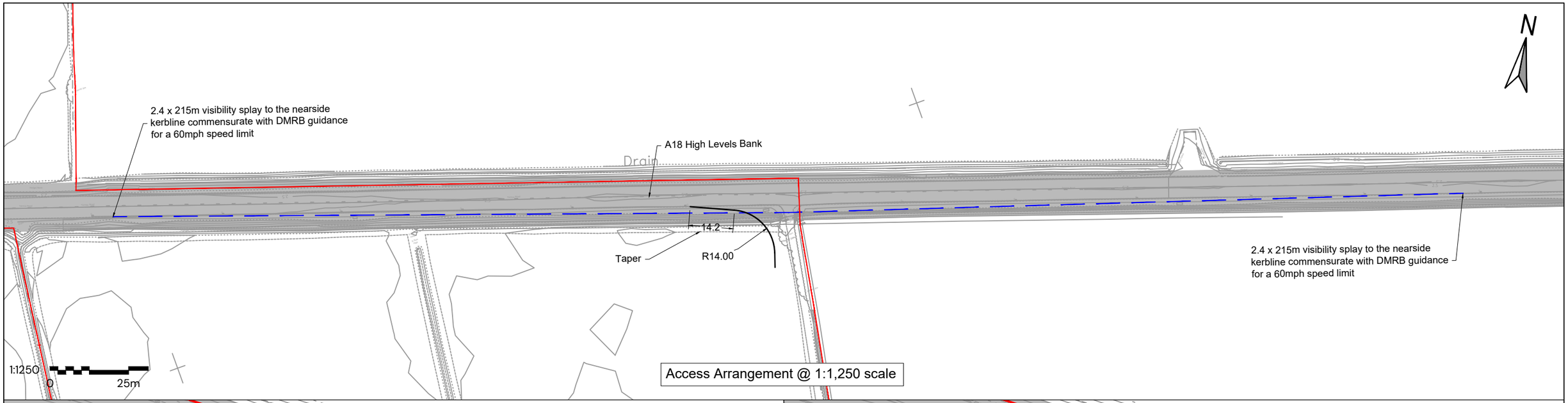
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P21-3484	FIGURE 3.12	1

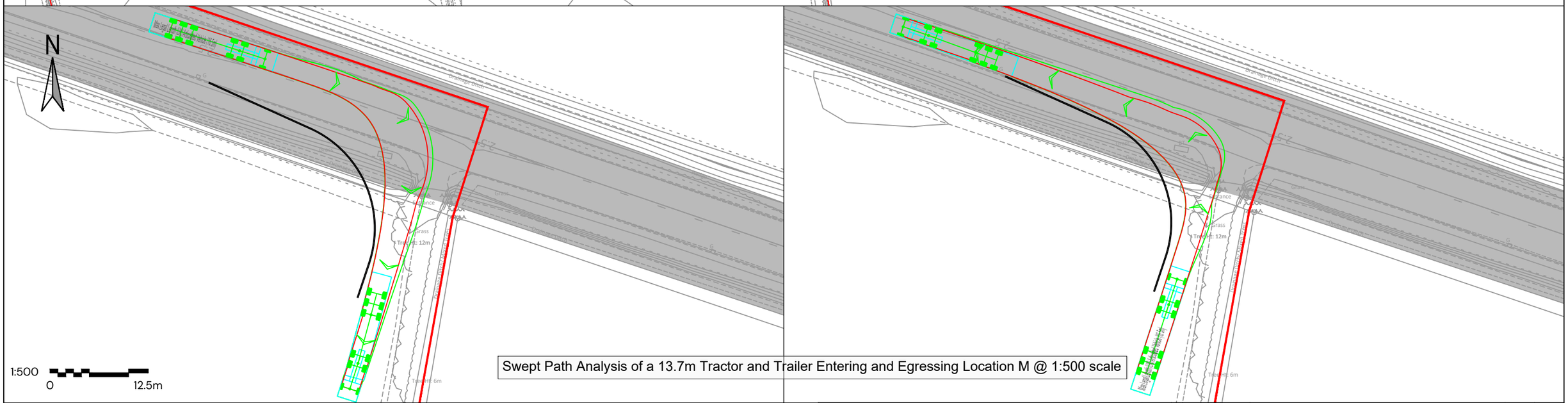
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Figure 3.14 Proposed Access Arrangements – Access M



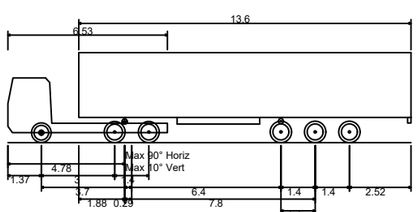
Access Arrangement @ 1:1,250 scale



Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location M @ 1:500 scale

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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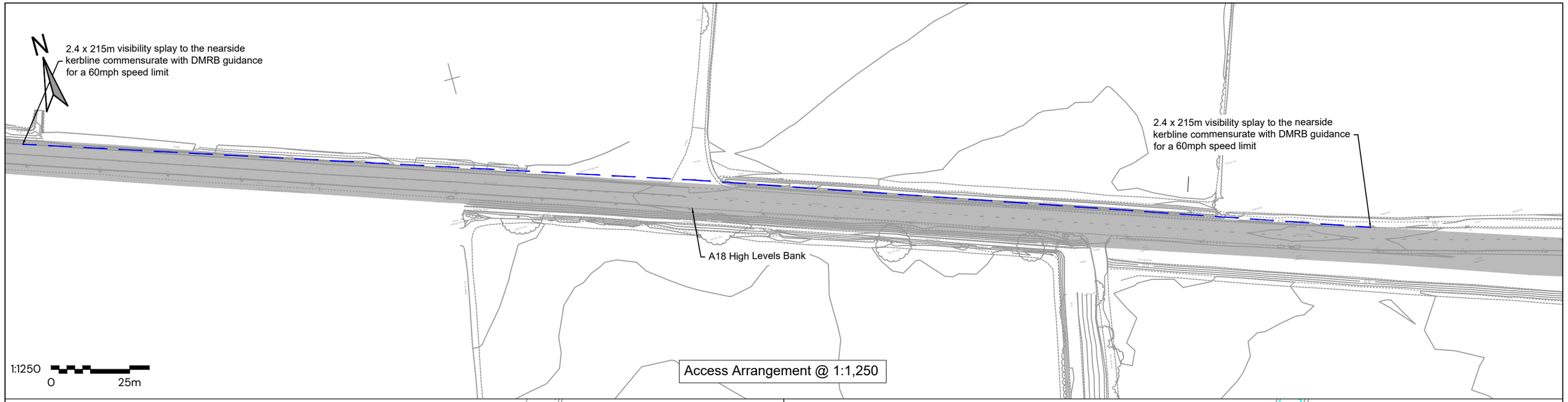
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PROJECT: TWEEN BRIDGE SOLAR FARM	DATE: 09/07/2025	DESIGN-DRAWN: JAN	DRAWING-STATUS: FINAL
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION M	PROJECT No: P21-3484	DRAWING No: FIGURE 3.14	REV: 1

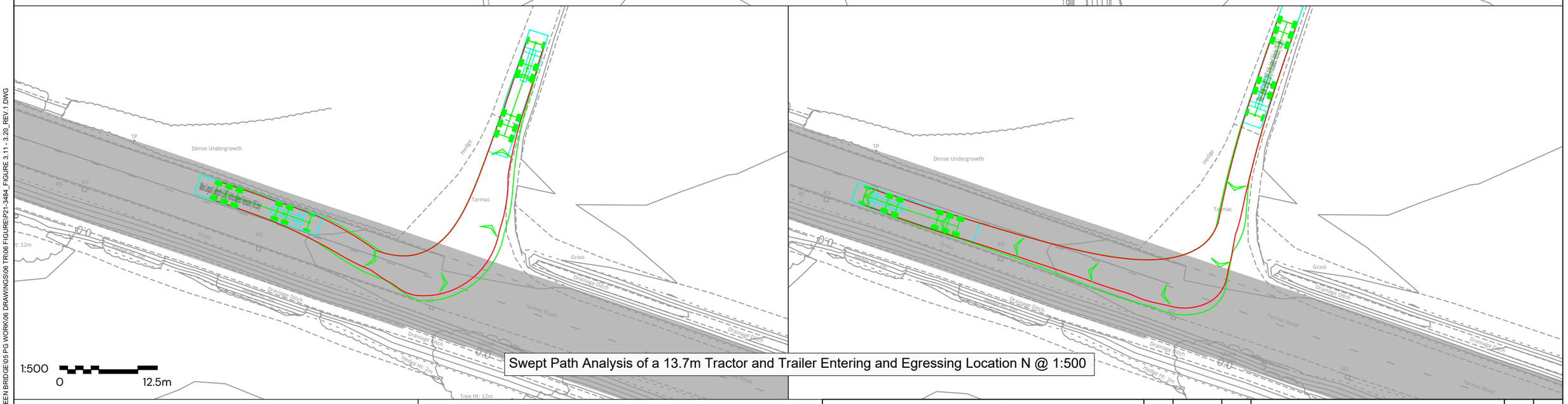
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Figure 3.15 Proposed Access Arrangements – Access N



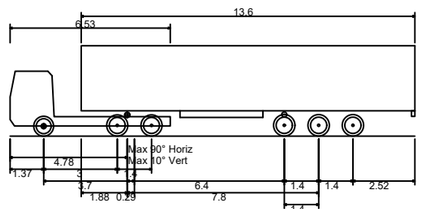
Access Arrangement @ 1:1,250



Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location N @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

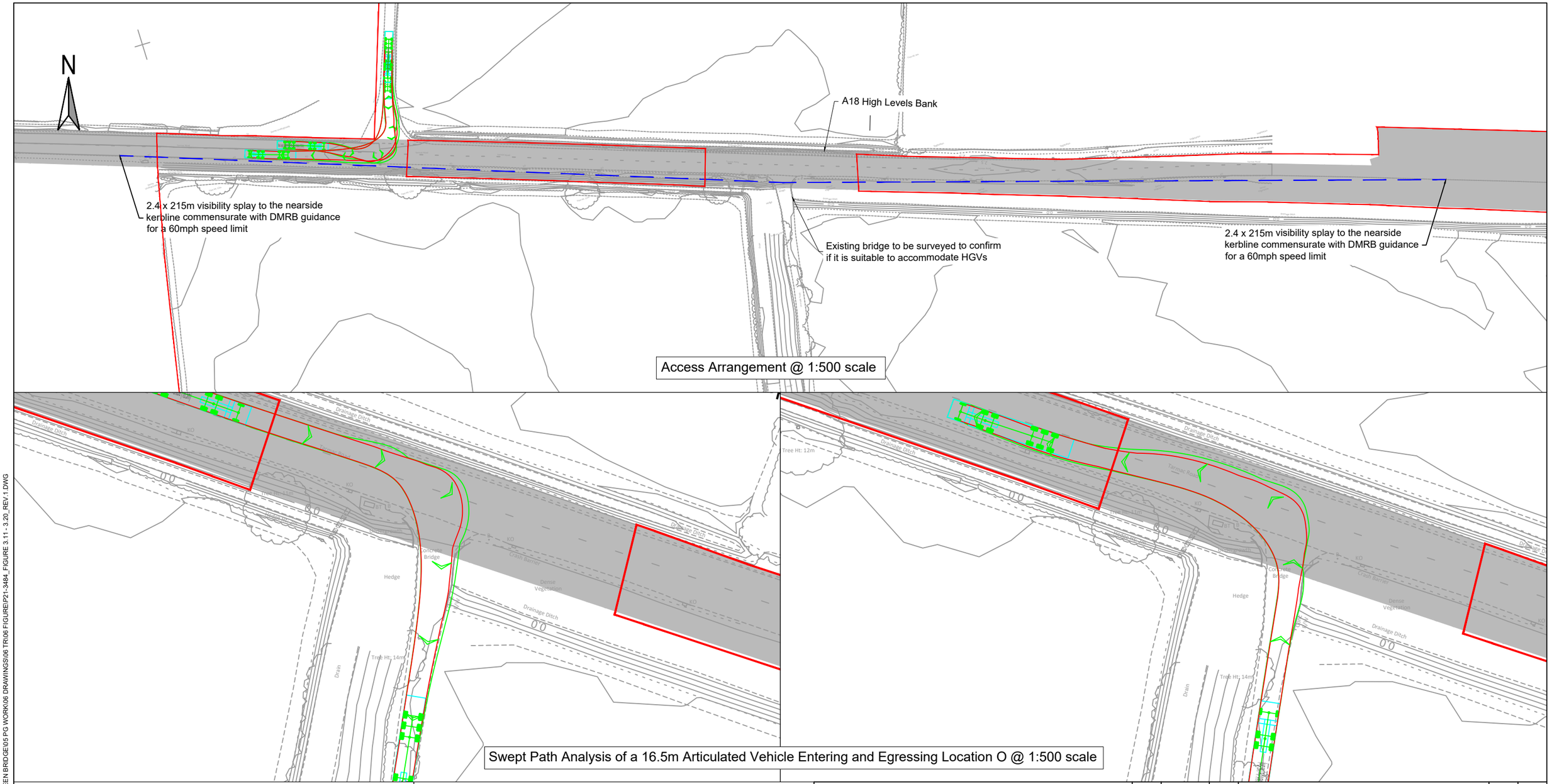
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION N

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P21-3484	FIGURE 3.15	1

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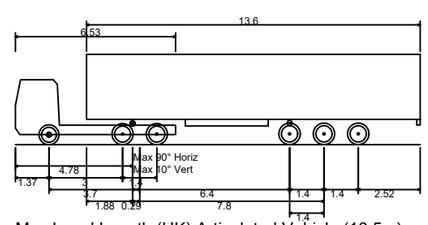
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Figure 3.16 Proposed Access Arrangements – Access O



Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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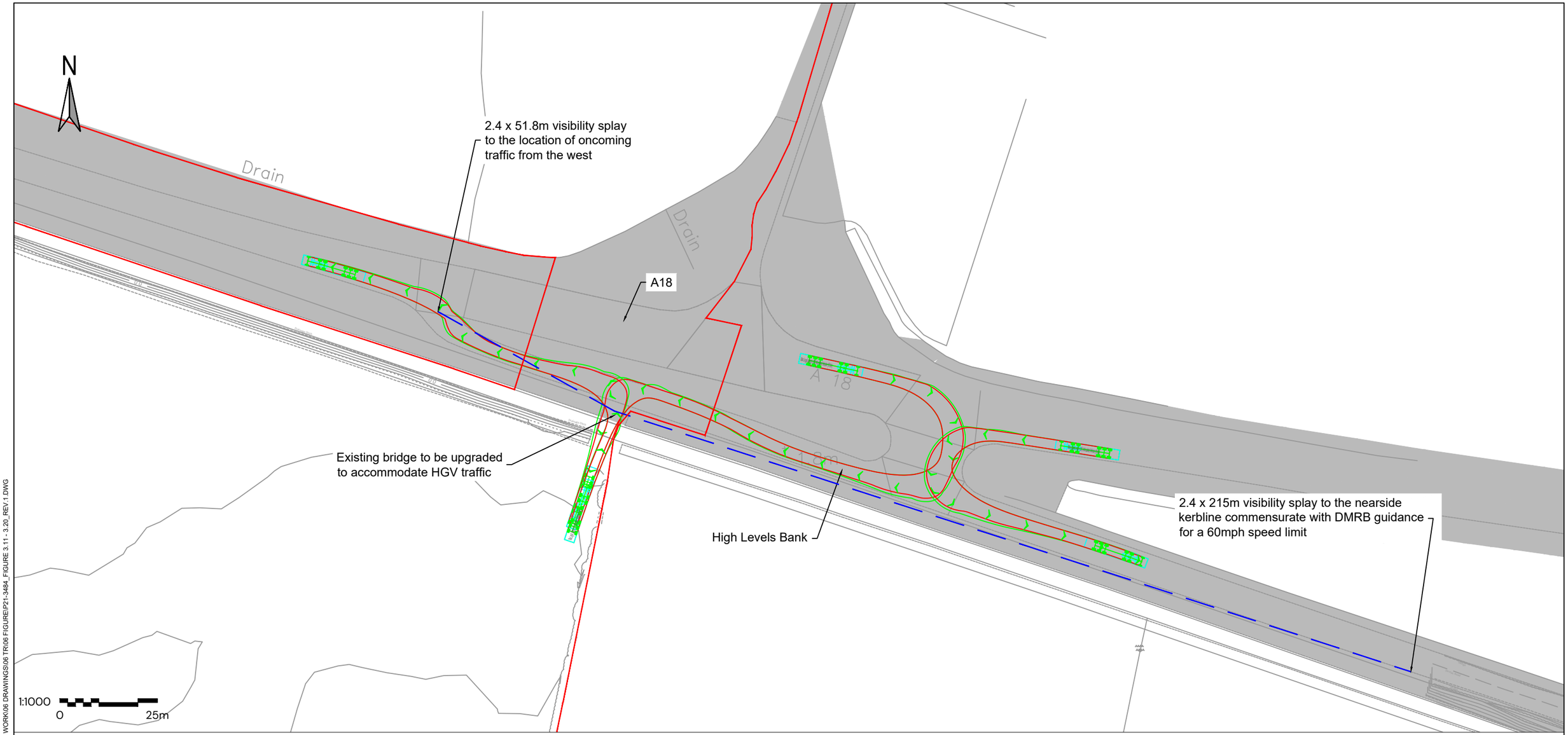
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION O

SCALE @ A3:	CHECKED:	APPROVED:
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P21-3484	FIGURE 3.16	1

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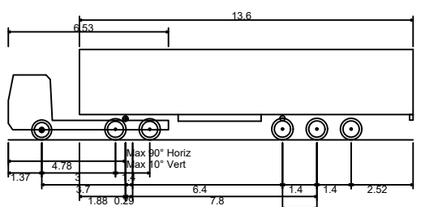
Figure 3.17 Proposed Access Arrangements – Access P



Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location P

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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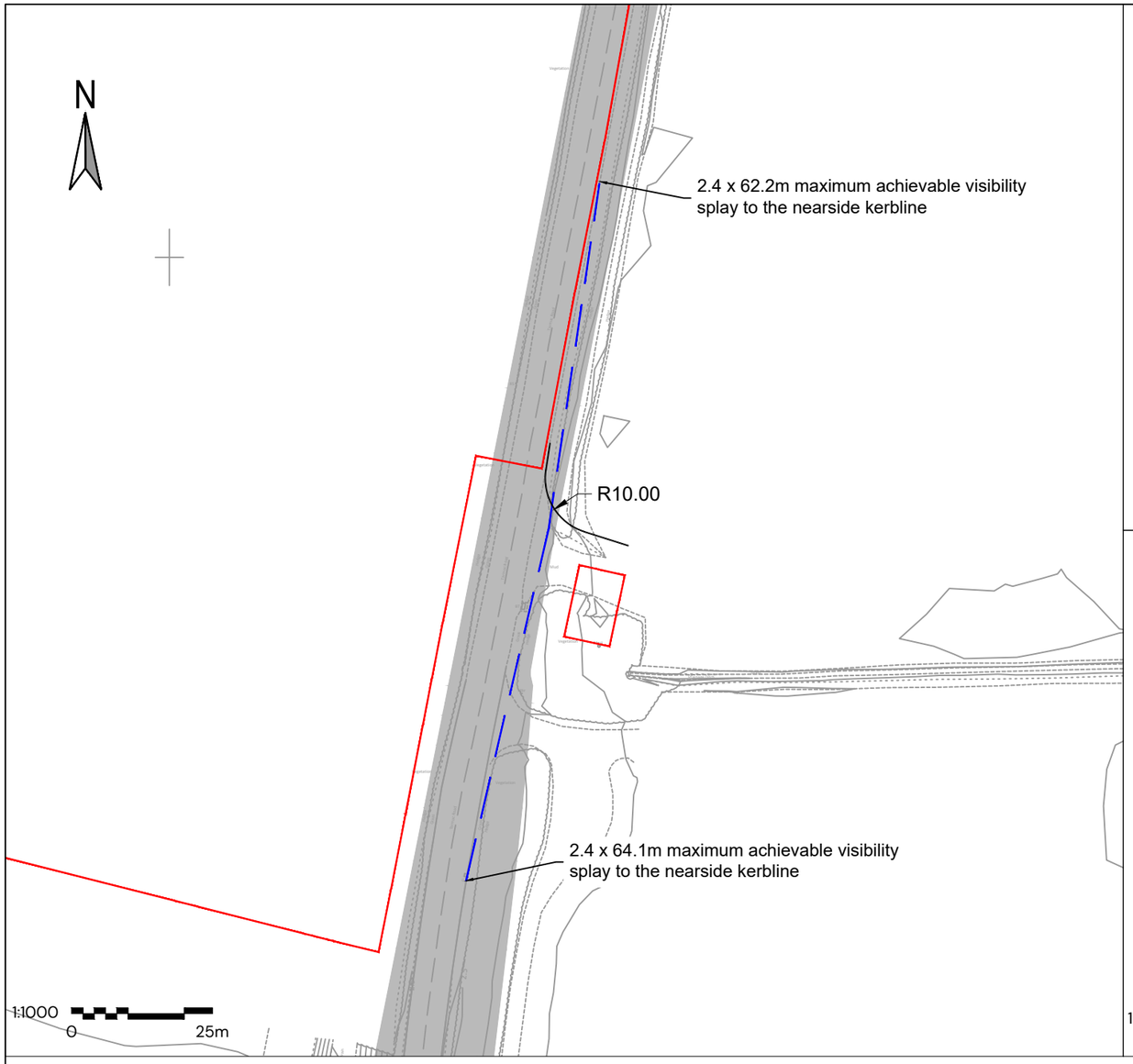
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P21-3484	FIGURE 3.17	1

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Figure 3.18 Proposed Access Arrangements – Access Q



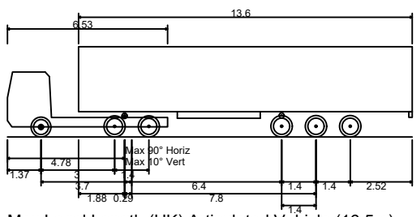
General Arrangement - Location Q
Scale @ 1:1,000



Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location Q
Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Q

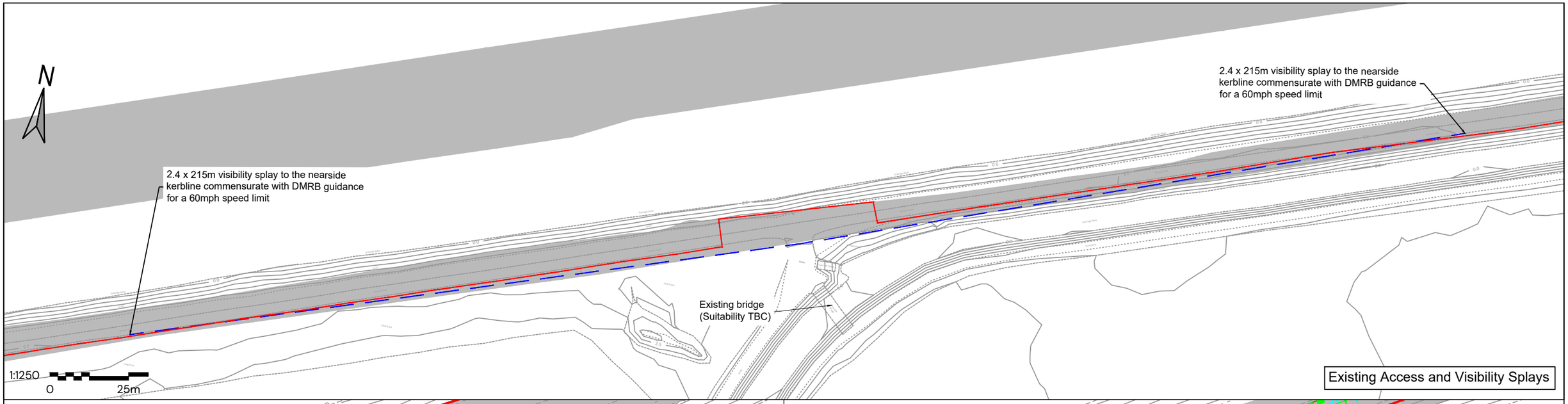
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P21-3484	FIGURE 3.18	1

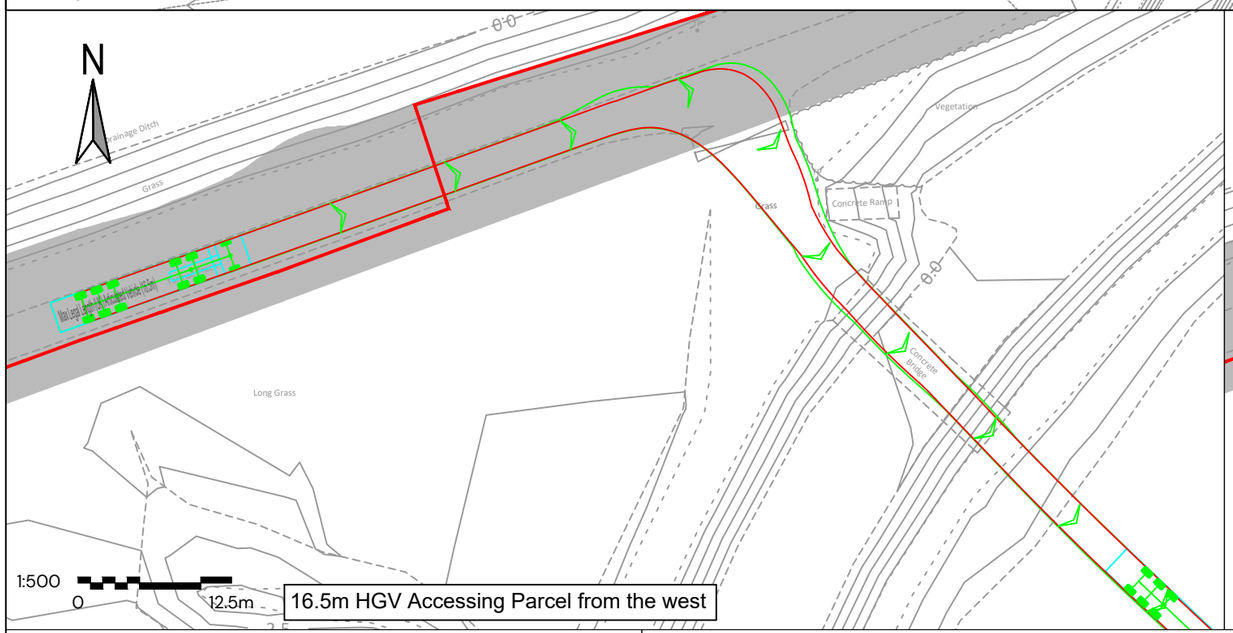
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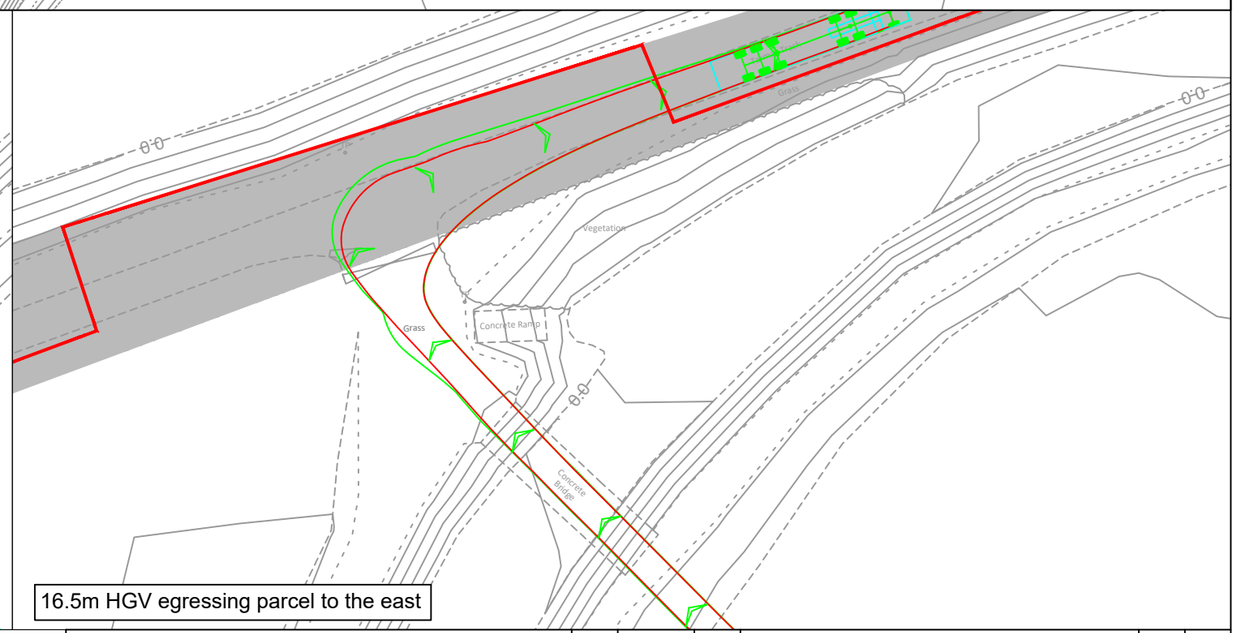
Figure 3.19 Proposed Access Arrangements – Access R



Existing Access and Visibility Splays



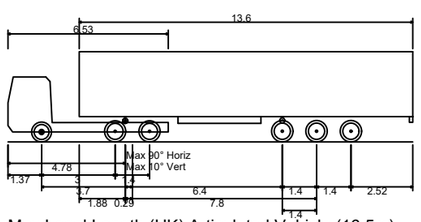
16.5m HGV Accessing Parcel from the west



16.5m HGV egressing parcel to the east

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION R

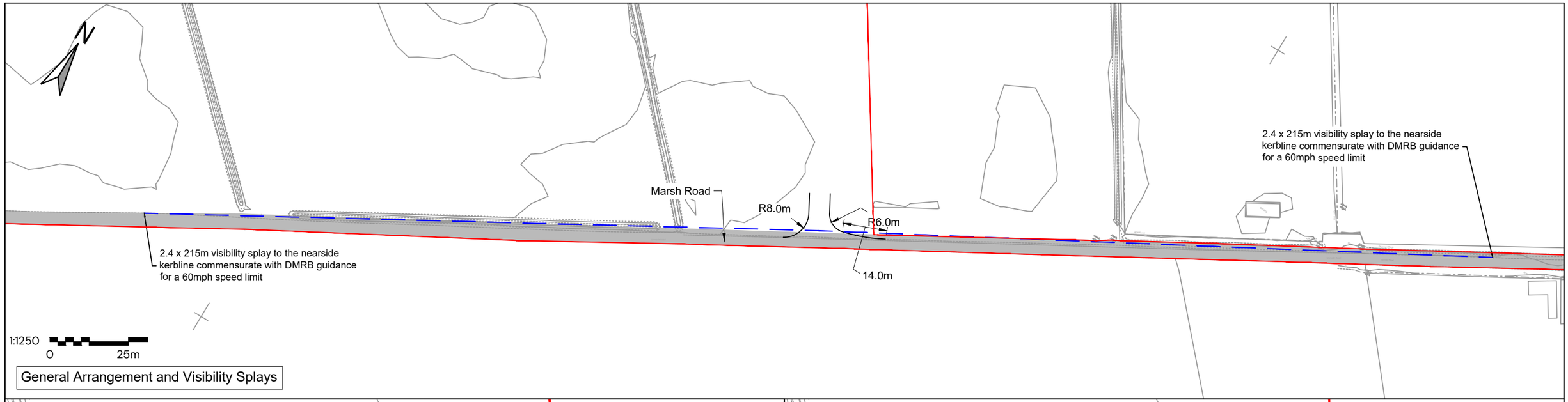
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P21-3484	FIGURE 3.19	1

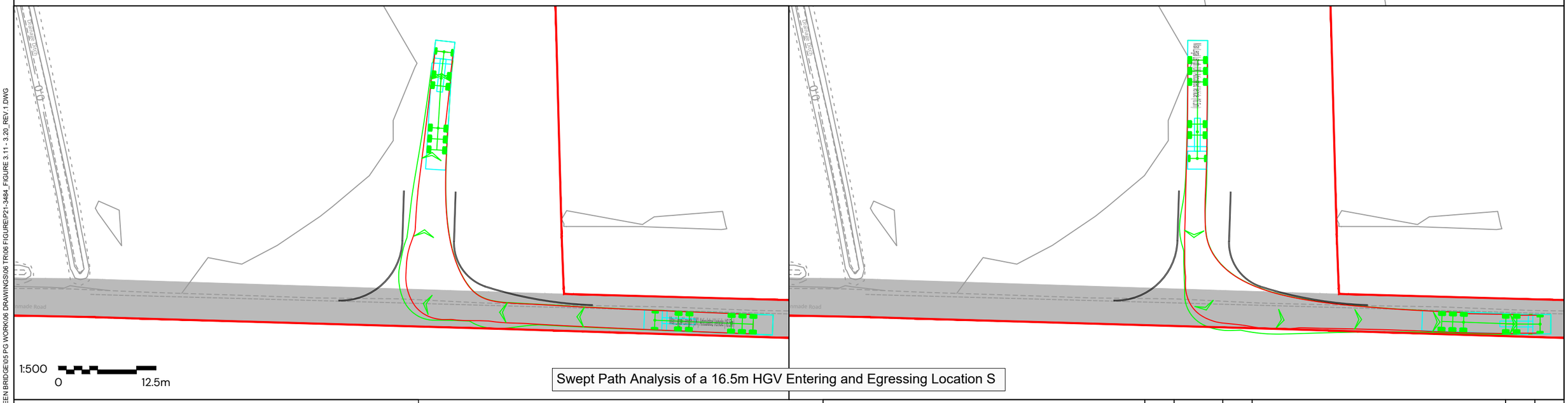
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Figure 3.20 Proposed Access Arrangements – Access S



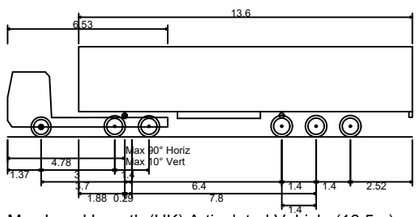
General Arrangement and Visibility Splays



Swept Path Analysis of a 16.5m HGV Entering and Egressing Location S

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

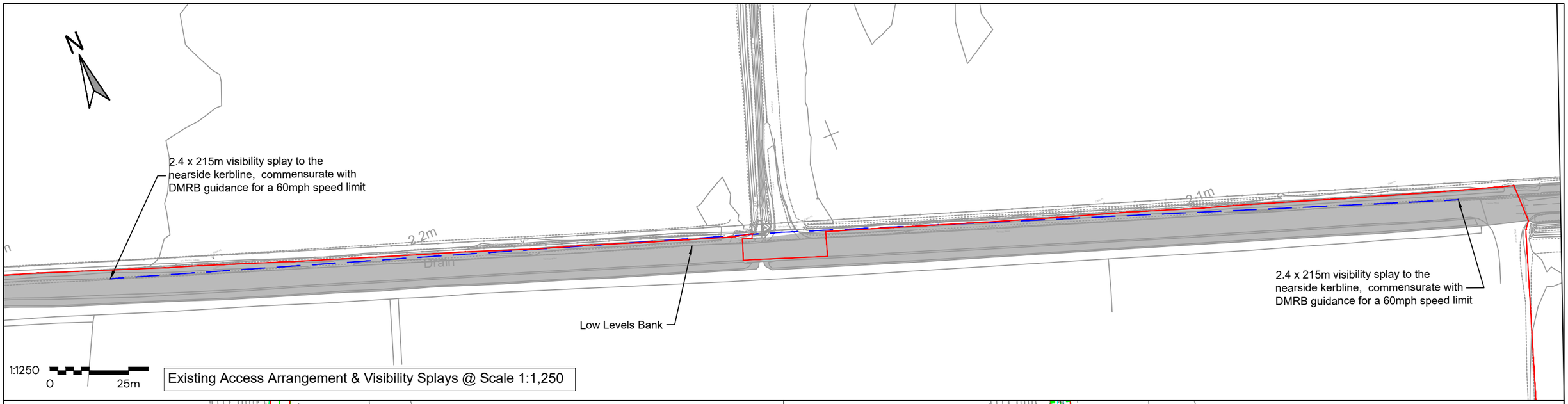
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION S

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P21-3484	FIGURE 3.20	1

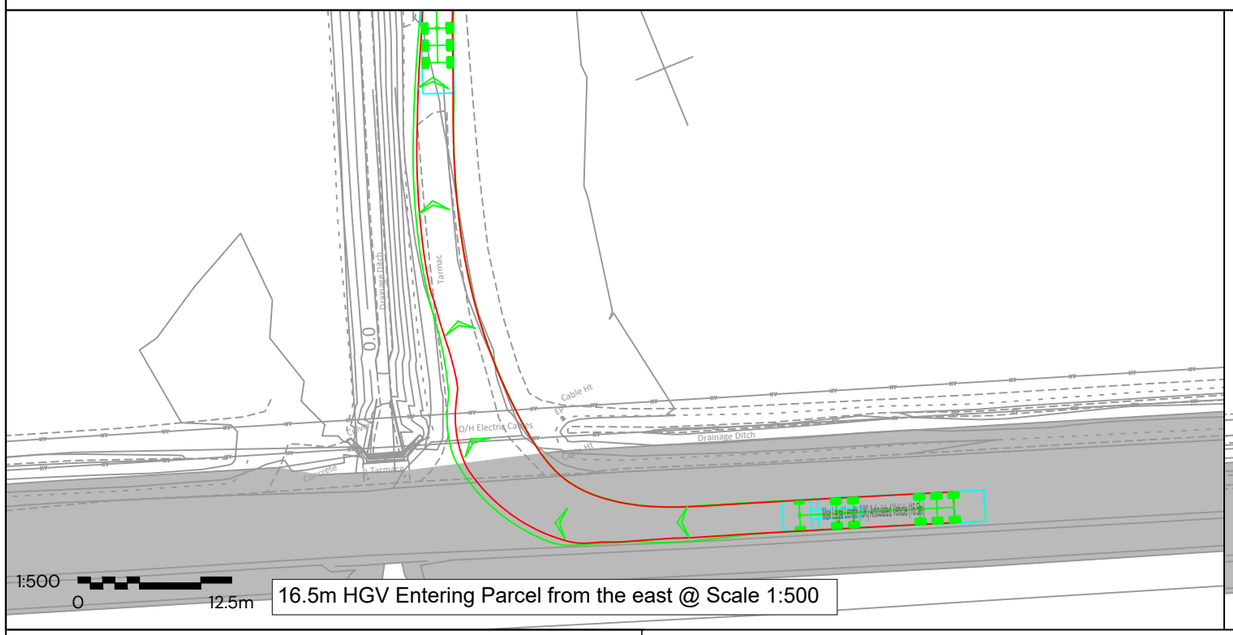
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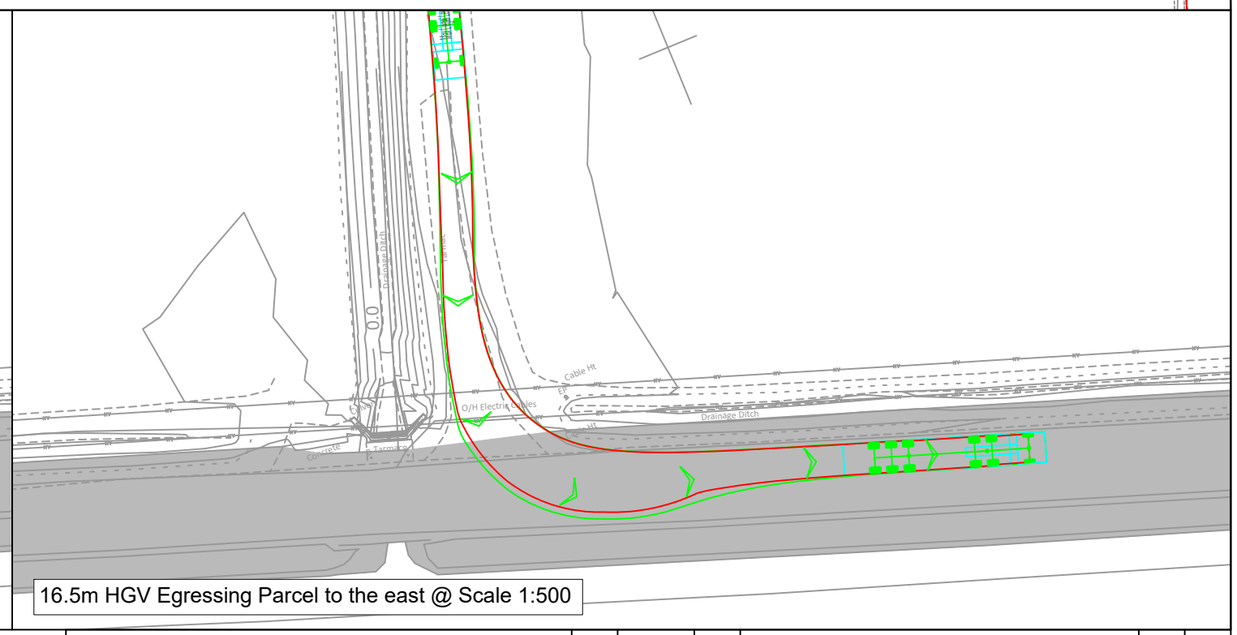
Figure 3.24 Proposed Access Arrangements – Access W



Existing Access Arrangement & Visibility Splays @ Scale 1:1,250



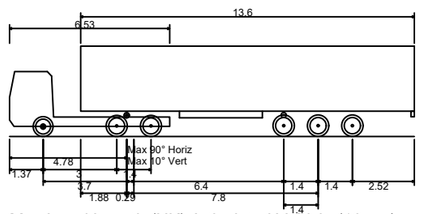
16.5m HGV Entering Parcel from the east @ Scale 1:500



16.5m HGV Egressing Parcel to the east @ Scale 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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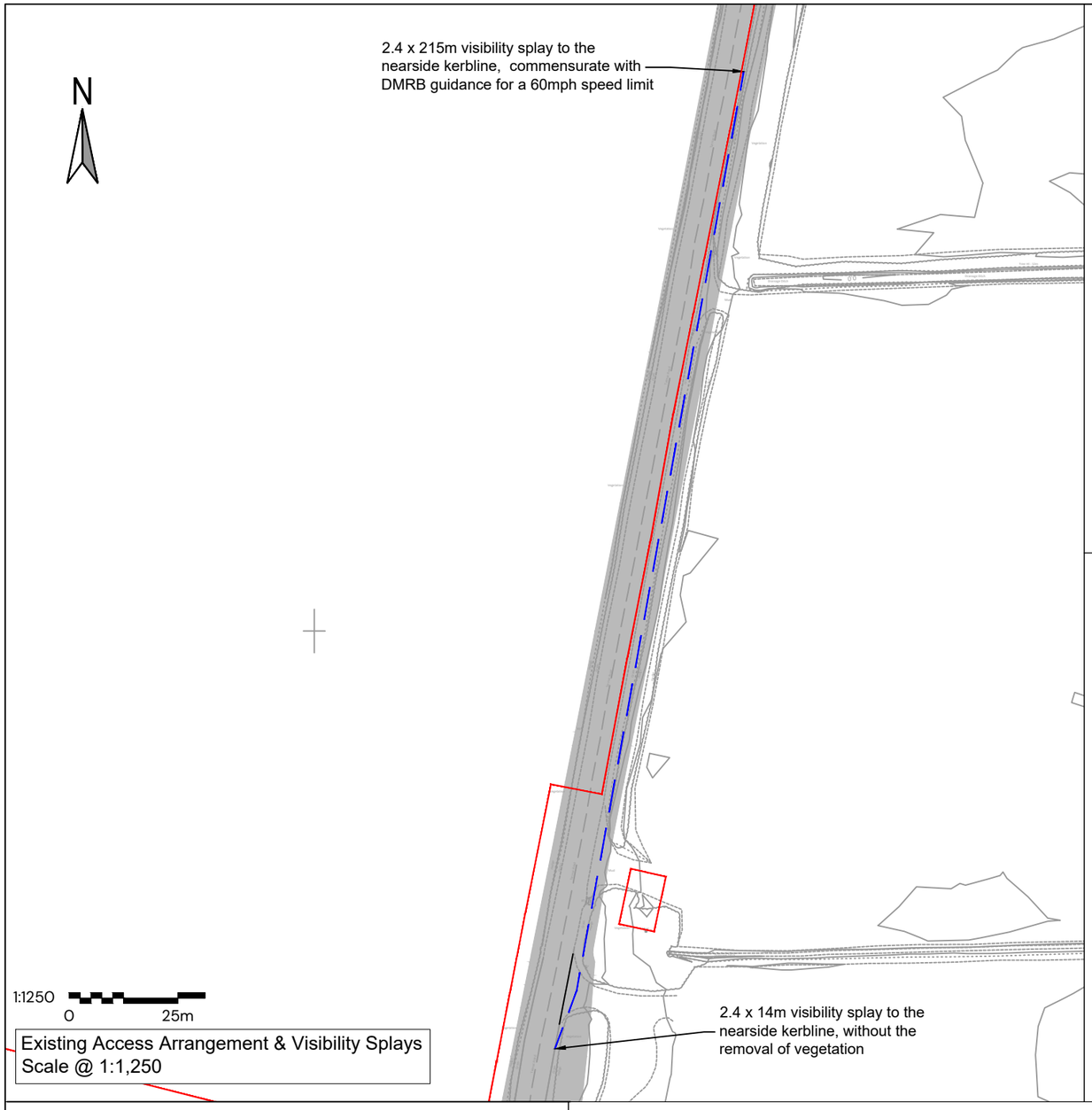
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P21-3484	FIGURE 3.24	1

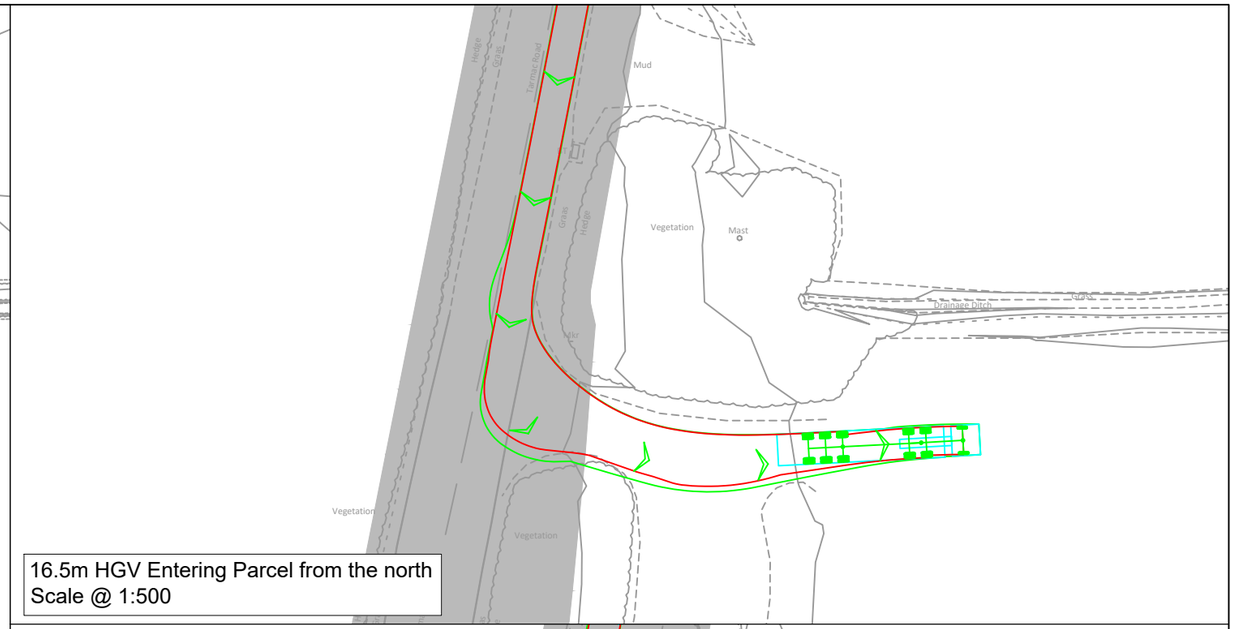
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Figure 3.25 Proposed Access Arrangements – Access X



Existing Access Arrangement & Visibility Splays
Scale @ 1:1,250



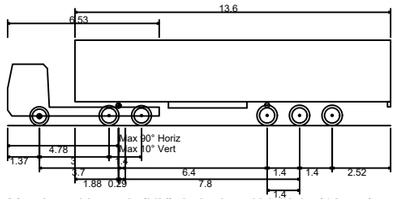
16.5m HGV Entering Parcel from the north
Scale @ 1:500



16.5m HGV Egressing Parcel from the north
Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION X

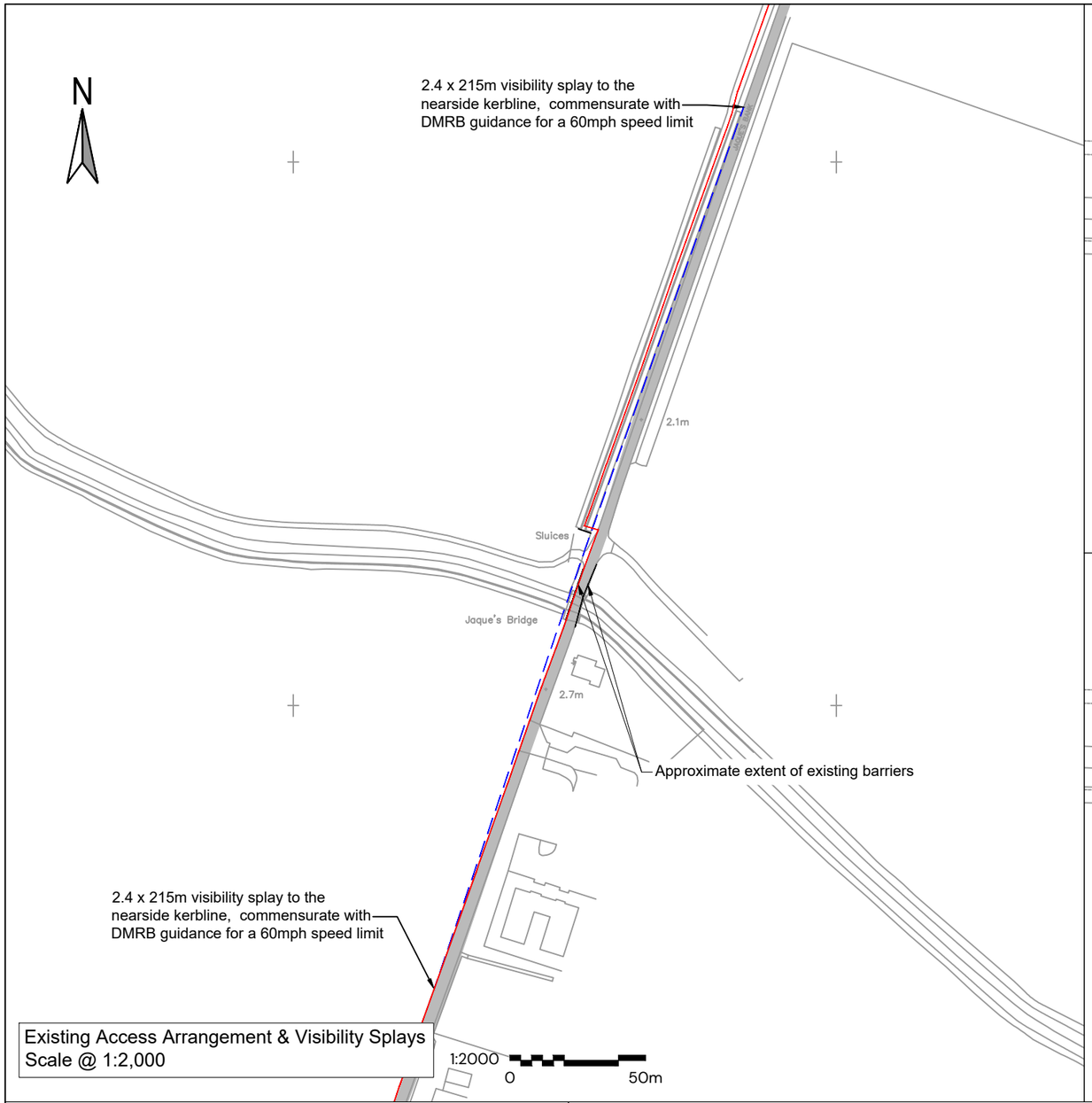
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09/07/2025	LT	FINAL

PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.25	1

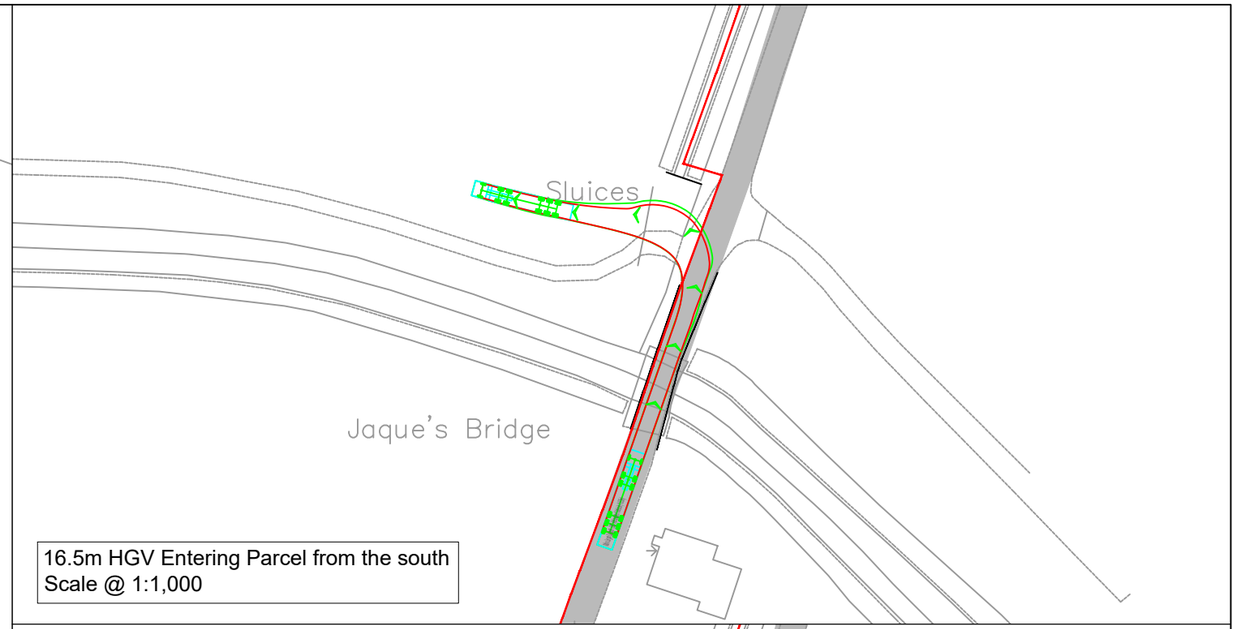
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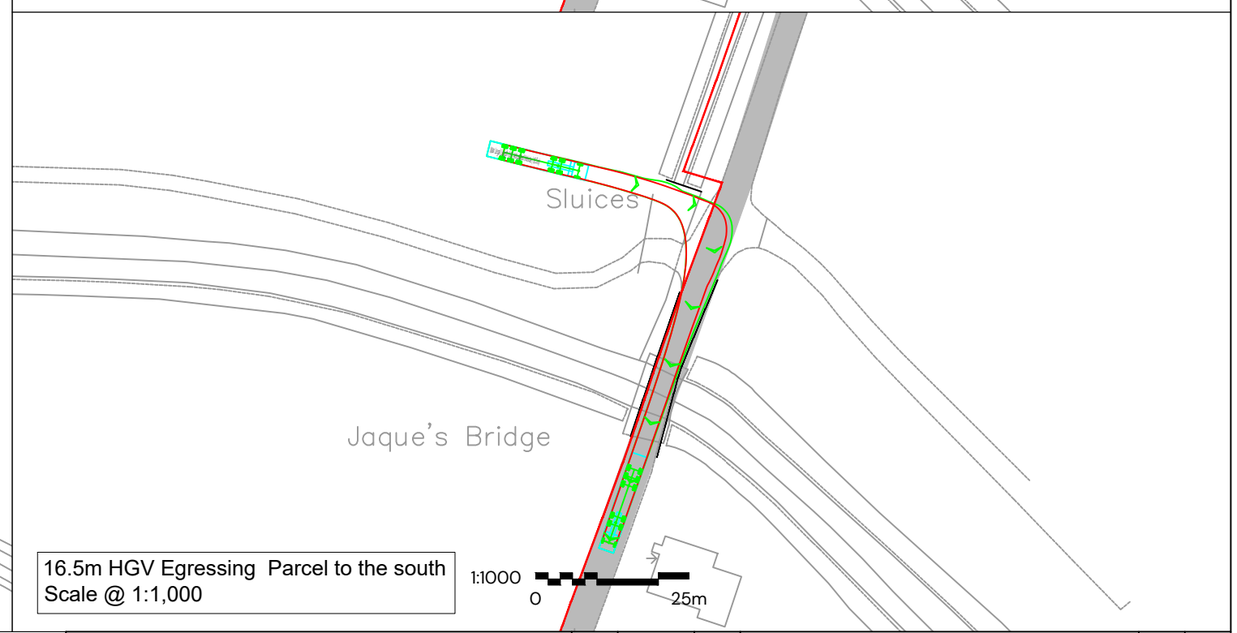
Figure 3.26 Proposed Access Arrangements – Access Y



Existing Access Arrangement & Visibility Splays
Scale @ 1:2,000



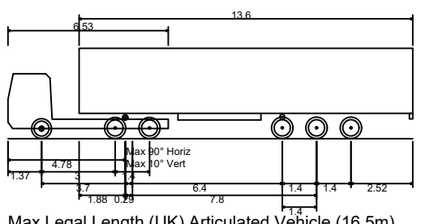
16.5m HGV Entering Parcel from the south
Scale @ 1:1,000



16.5m HGV Egressing Parcel to the south
Scale @ 1:1,000

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Y

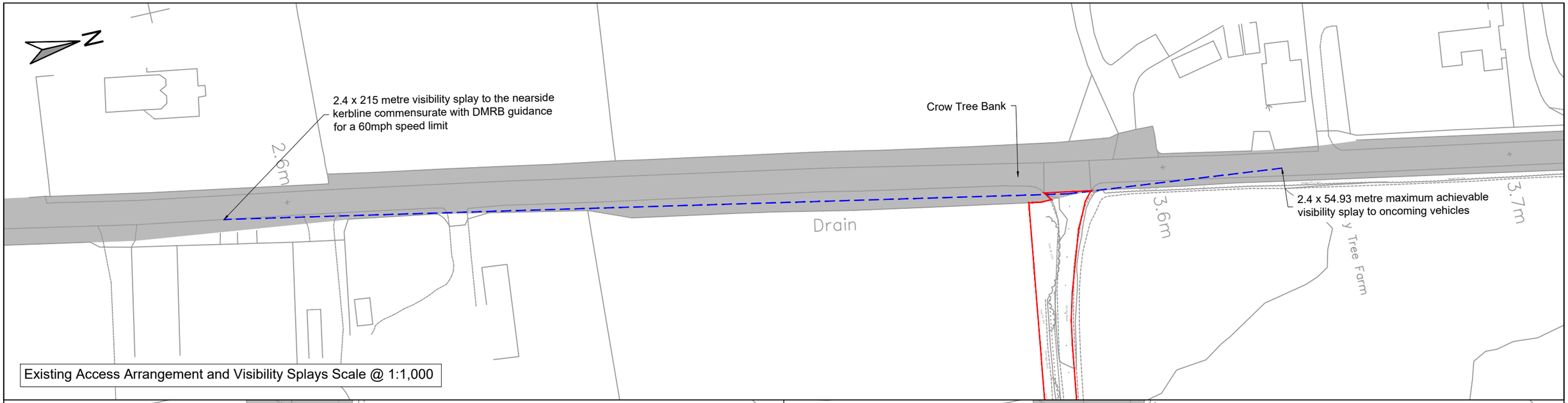
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1:500	ADWS	KS
DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
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PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.26	1

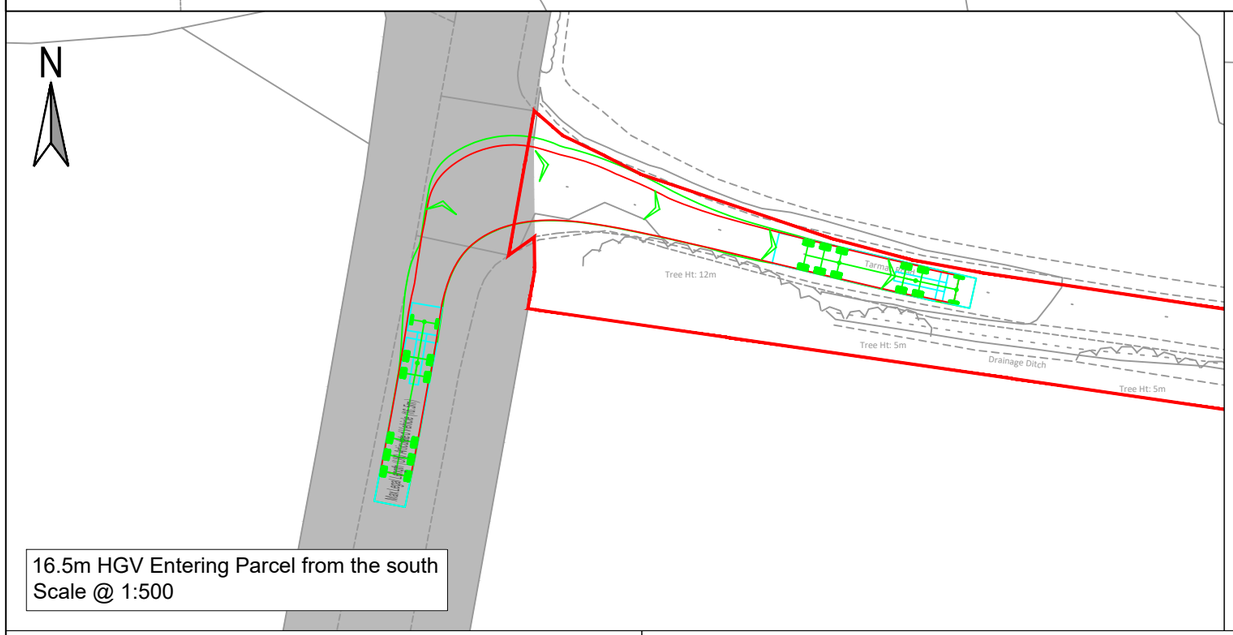
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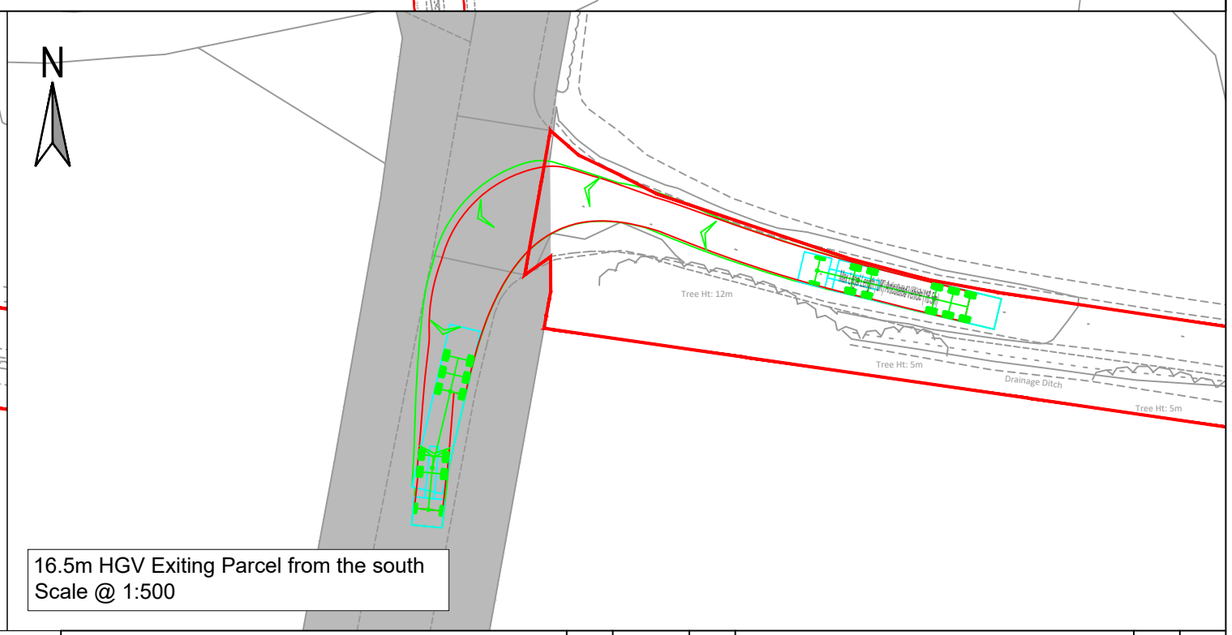
Figure 3.27 Proposed Access Arrangements – Access Z



Existing Access Arrangement and Visibility Splays Scale @ 1:1,000



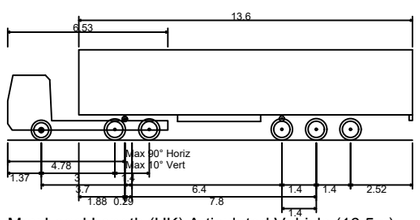
16.5m HGV Entering Parcel from the south
Scale @ 1:500



16.5m HGV Exiting Parcel from the south
Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Z

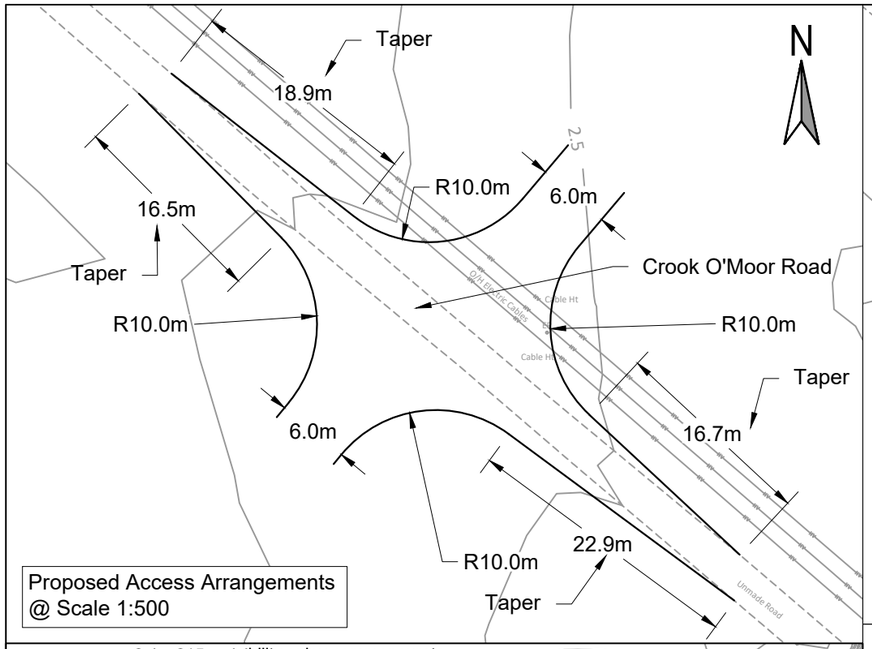
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AS SHOWN	ADWS	KS
DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
09/07/2025	LT	FINAL

PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.27	1

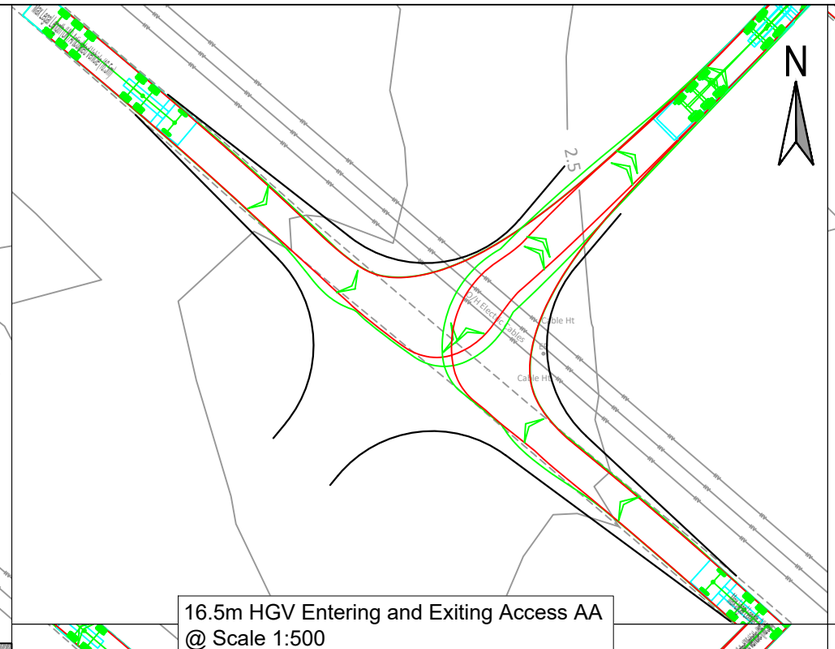
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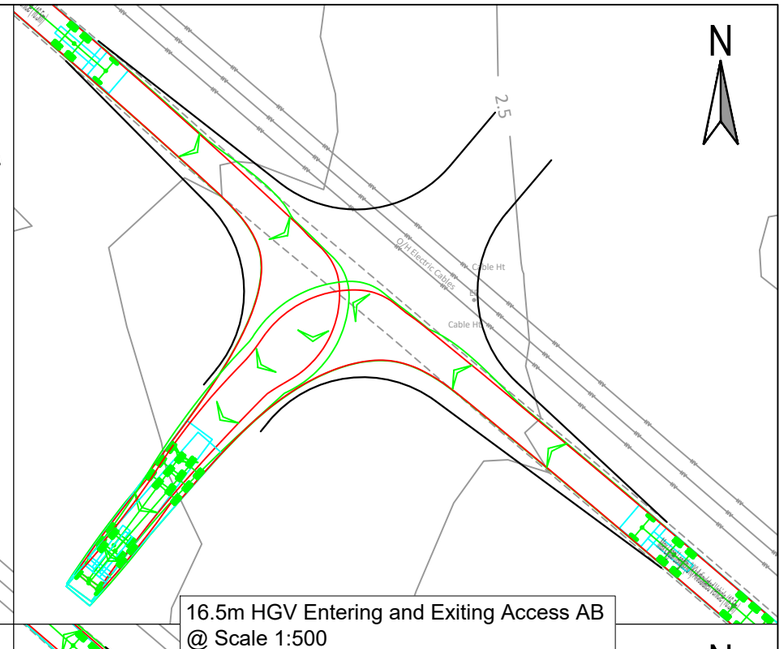
Figure 3.28 Proposed Access Arrangements – Access AA and AB



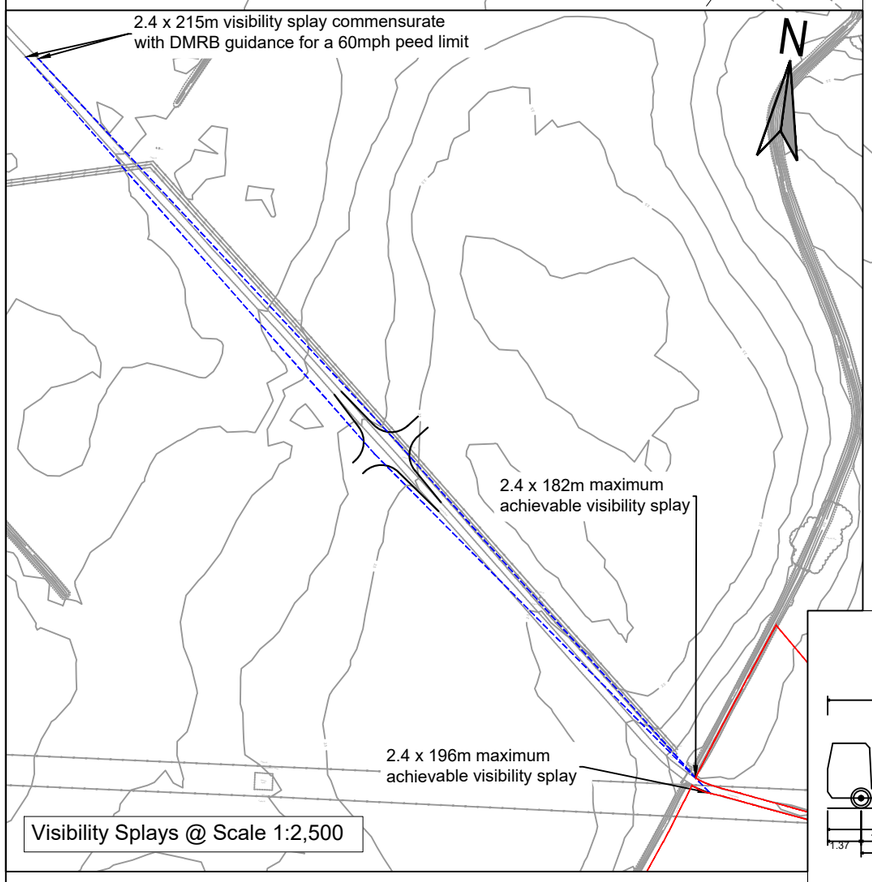
Proposed Access Arrangements
@ Scale 1:500



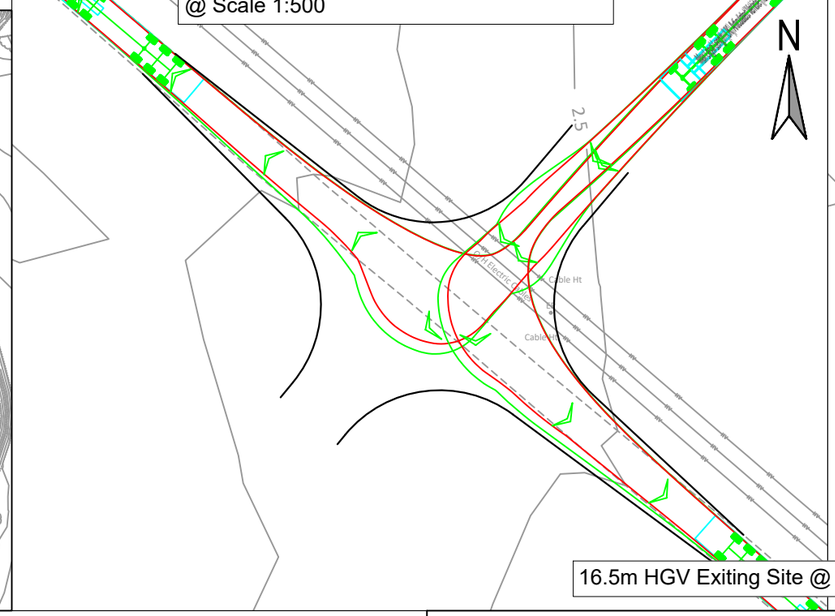
16.5m HGV Entering and Exiting Access AA
@ Scale 1:500



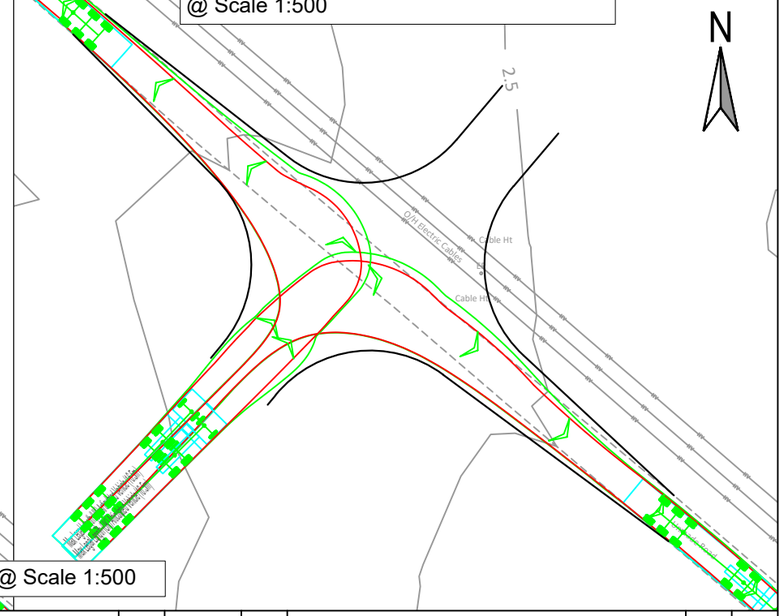
16.5m HGV Entering and Exiting Access AB
@ Scale 1:500



Visibility Splays @ Scale 1:2,500

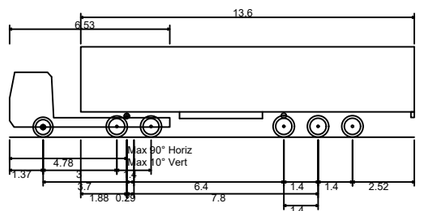


16.5m HGV Exiting Site @ Scale 1:500



Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AA AND LOCATION AB

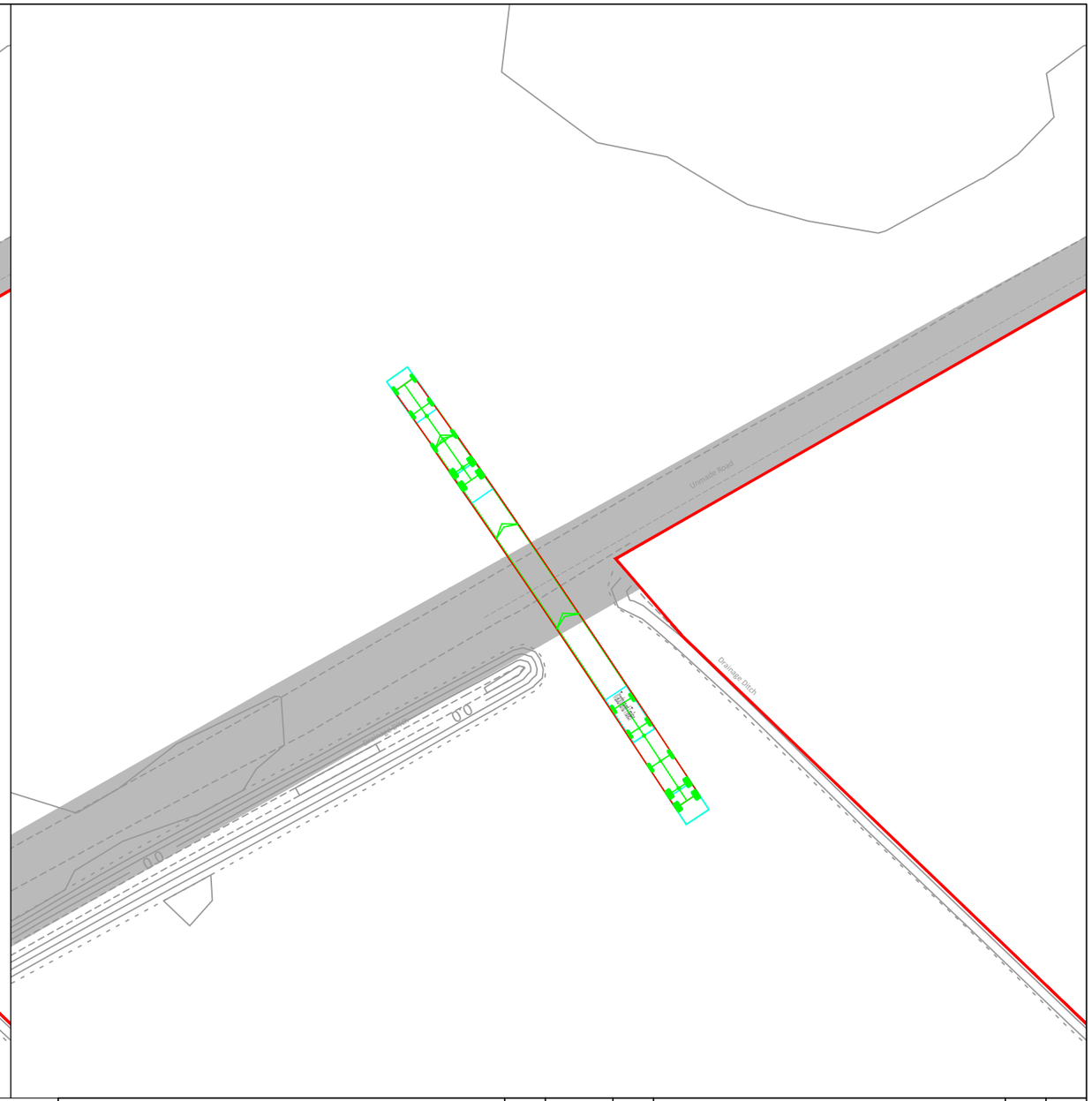
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P21-3484	FIGURE 3.28	1

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Figure 3.29 Proposed Access Arrangements – Access AC



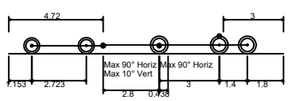


N

Key:

Order Limits

Approximate Extent of Adopted Highway



Tractor and Trailer	
Overall Length	13.720m
Overall Width	2.500m
Overall Body Height	0.438m
Min Body Ground Clearance	0.398m
Max Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	4.620m

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PROJECT: TWEEN BRIDGE SOLAR FARM

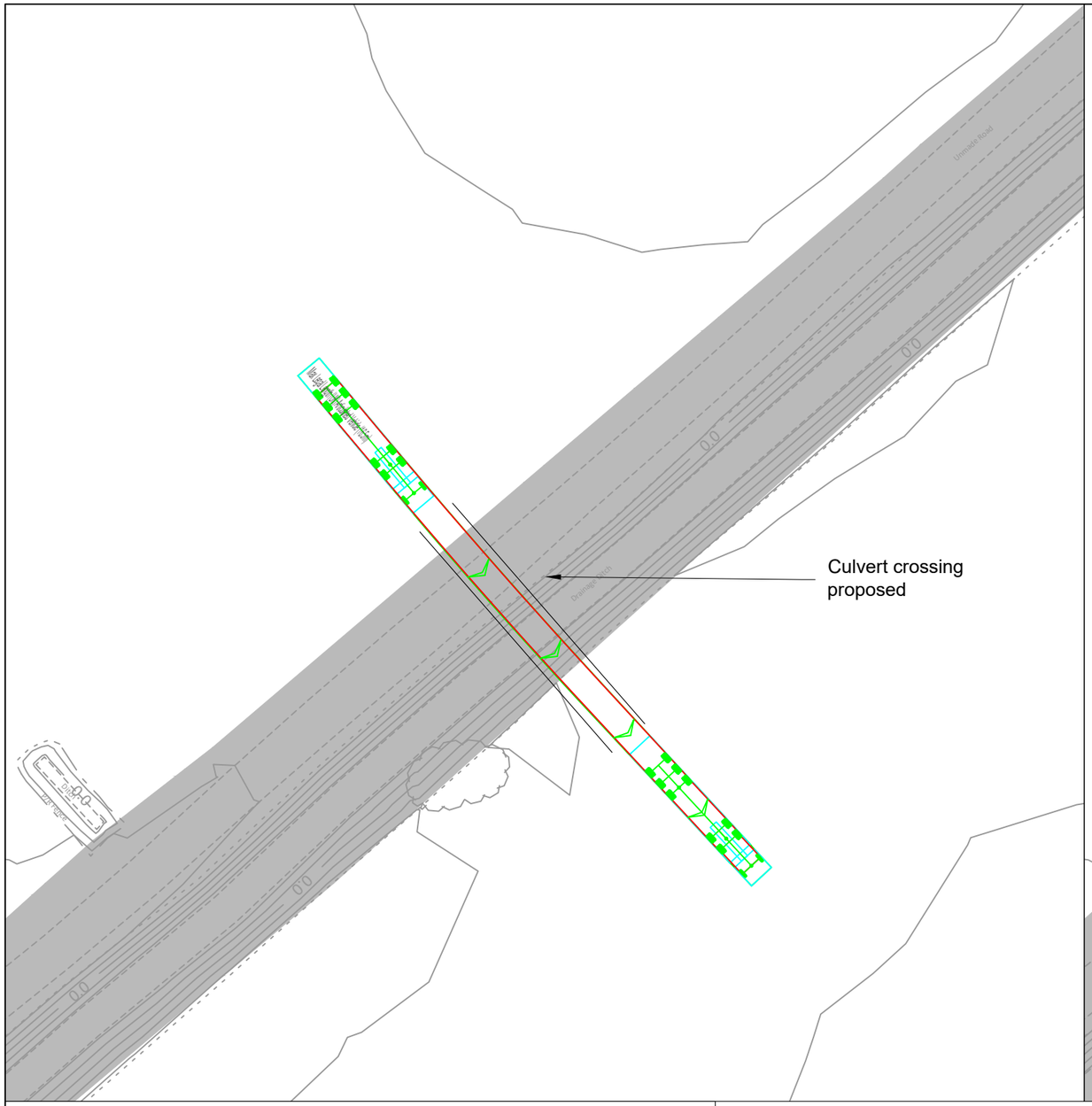
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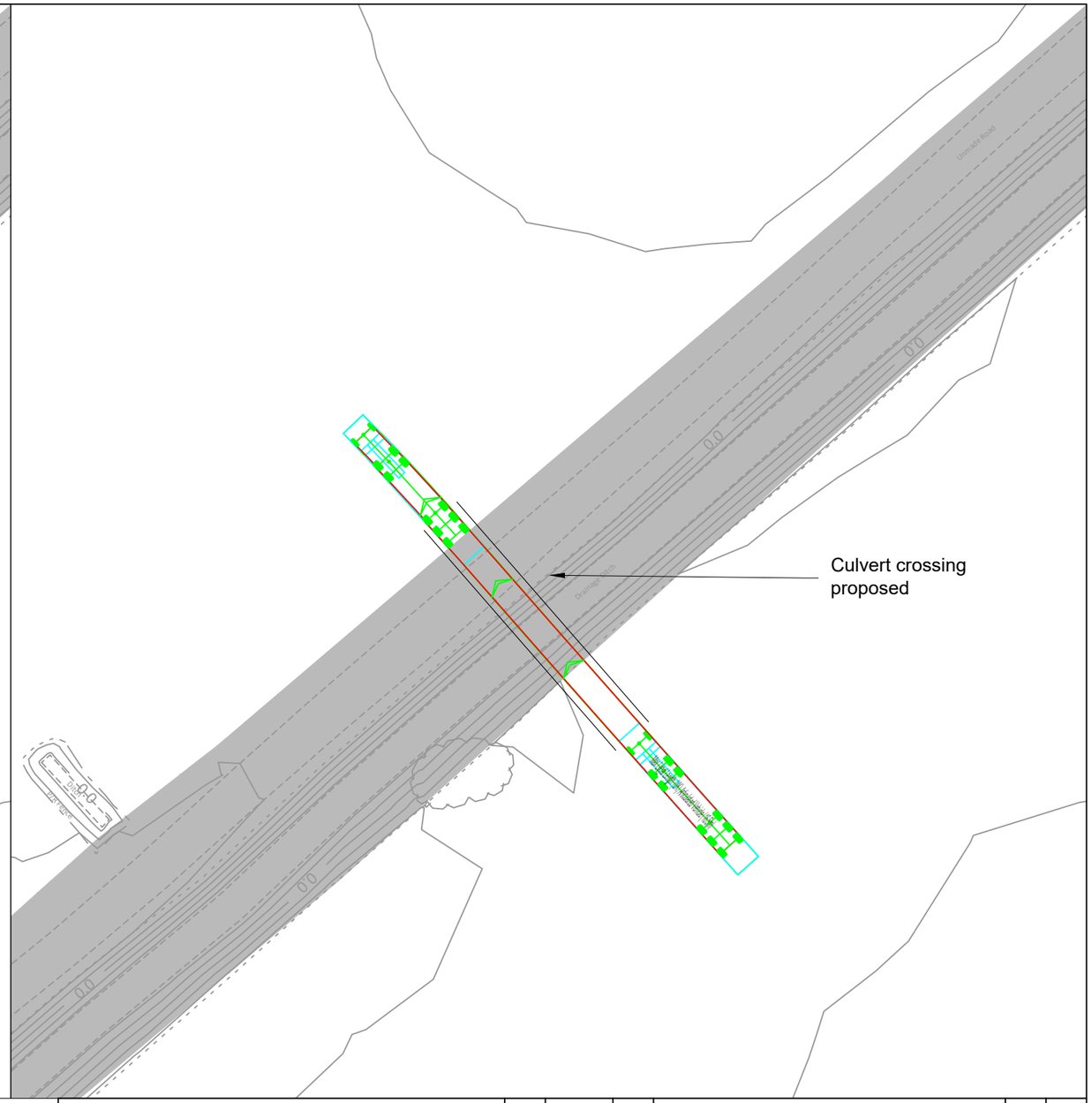
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P21-3484	FIGURE 3.29	1

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Figure 3.30 Proposed Access Arrangements – Access AD

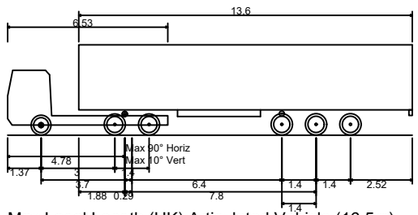




N

Key:

Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

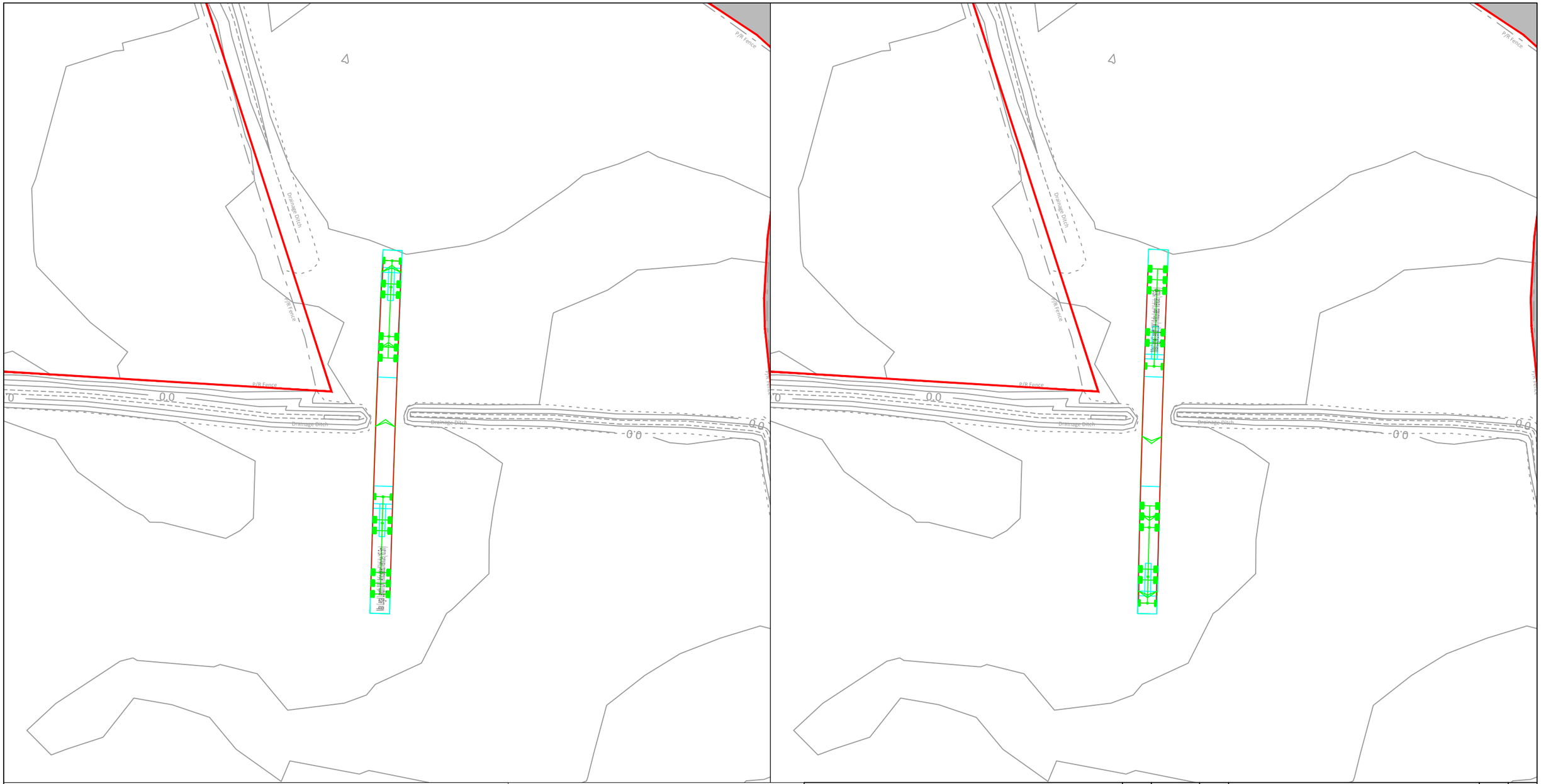
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AD

SCALE @ A3:	CHECKED:	APPROVED:
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DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
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P21-3484	FIGURE 3.30	1

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Figure 3.31 Proposed Access Arrangements – Access AE



N

Key:

Order Limits

Approximate Extent of Adopted Highway

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PROJECT: TWEEN BRIDGE SOLAR FARM

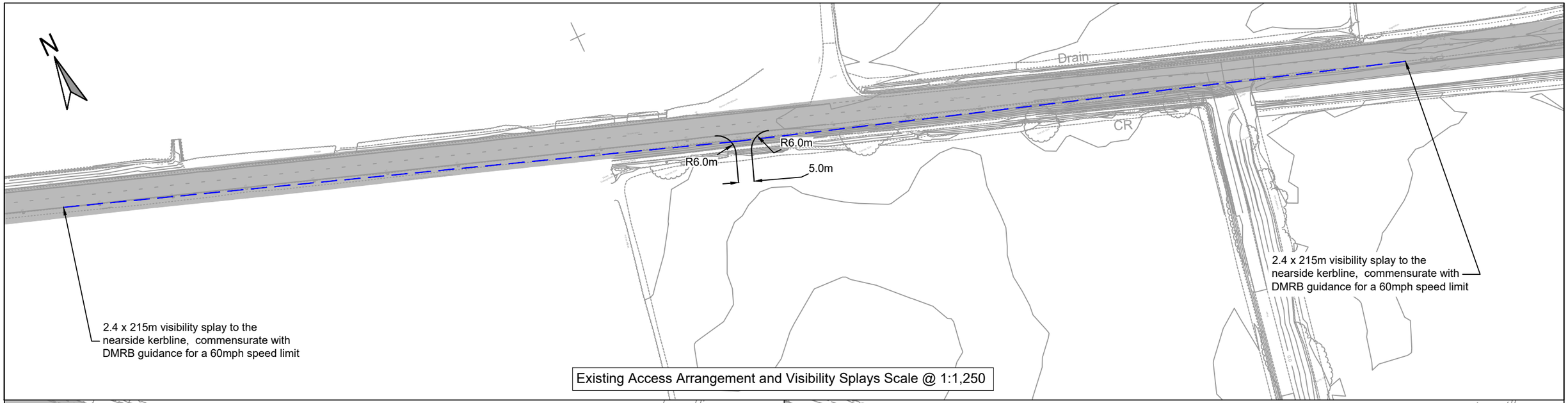
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SCALE @ A3:	CHECKED:	APPROVED:
1:500	ADWS	
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P21-3484	FIGURE 3.31	1

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Figure 3.34 Proposed Access Arrangements – Access AH



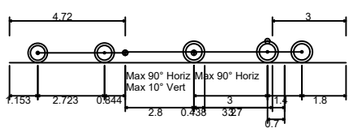
Existing Access Arrangement and Visibility Splays Scale @ 1:1,250



Tractor & Trailer Entering and Exiting Access
Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



Tractor and Trailer	
Overall Length	13.720m
Overall Width	2.500m
Overall Body Height	0.438m
Min Body Ground Clearance	0.398m
Max Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	4.620m

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PROJECT: TWEEN BRIDGE SOLAR FARM

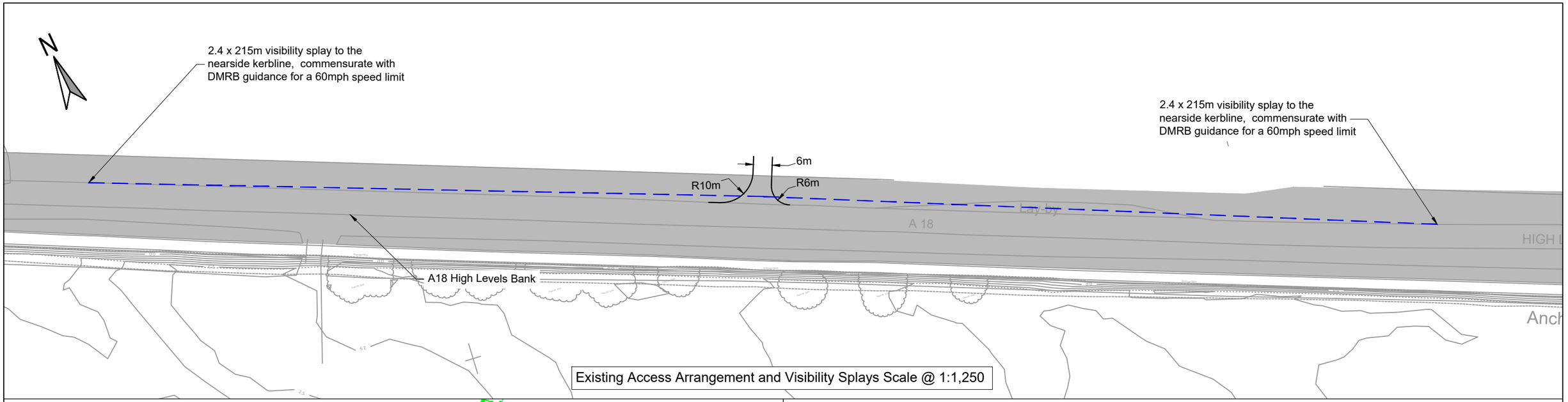
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AH

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DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
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P21-3484	FIGURE 3.34	1

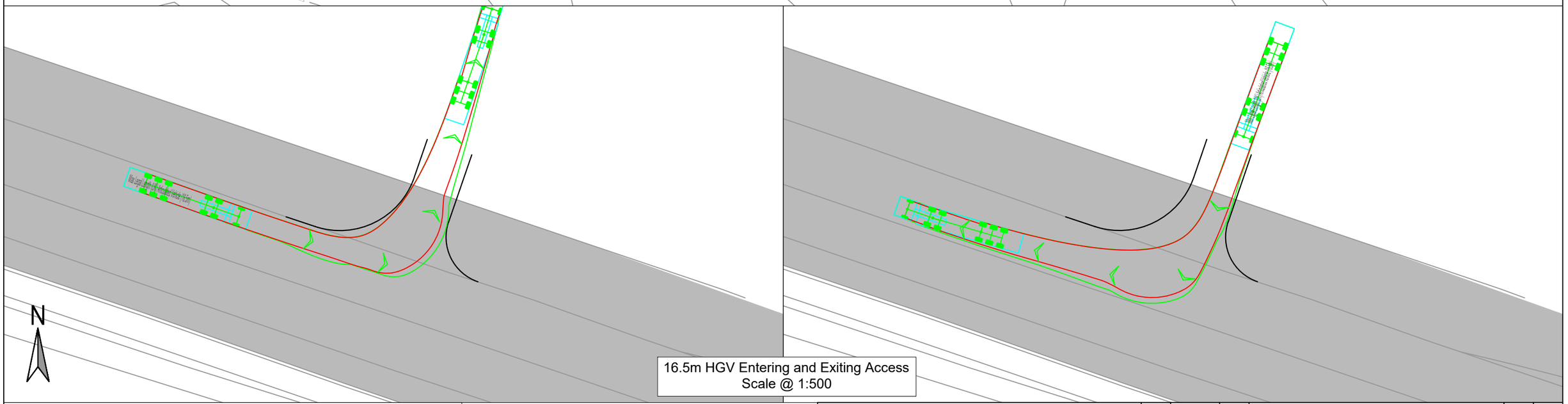
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Figure 3.35 Proposed Access Arrangements – Access Ai



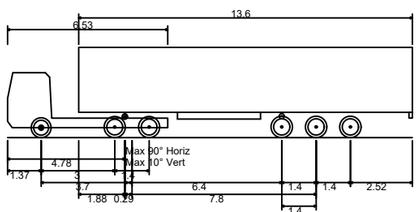
Existing Access Arrangement and Visibility Splays Scale @ 1:1,250



16.5m HGV Entering and Exiting Access
Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Ai

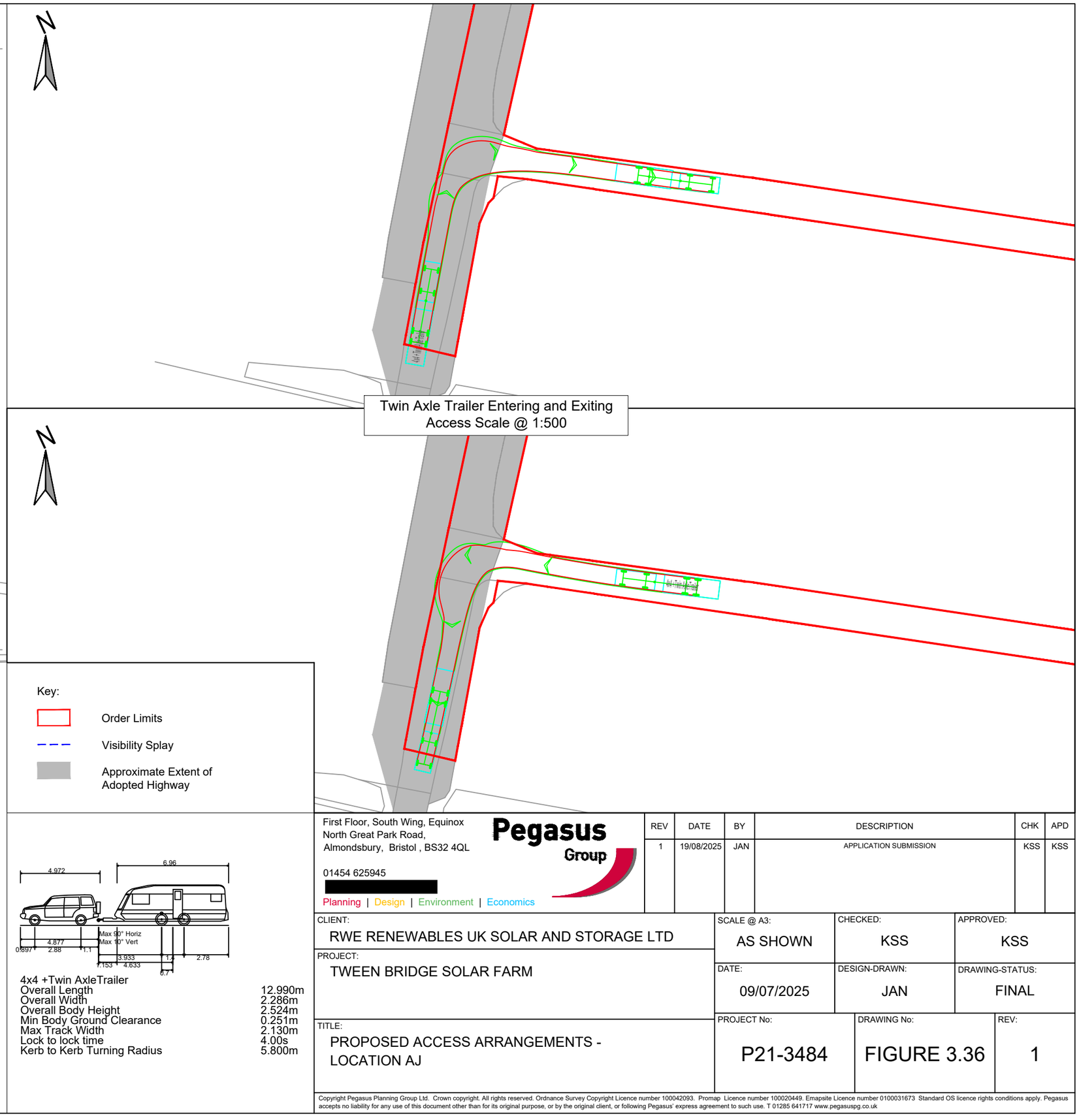
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P21-3484	FIGURE 3.35	1

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Figure 3.36 Proposed Access Arrangements – Access AJ





Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway

4x4 +Twin AxleTrailer	
Overall Length	12.990m
Overall Width	2.286m
Overall Body Height	2.524m
Min Body Ground Clearance	0.251m
Max Track Width	2.130m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.800m

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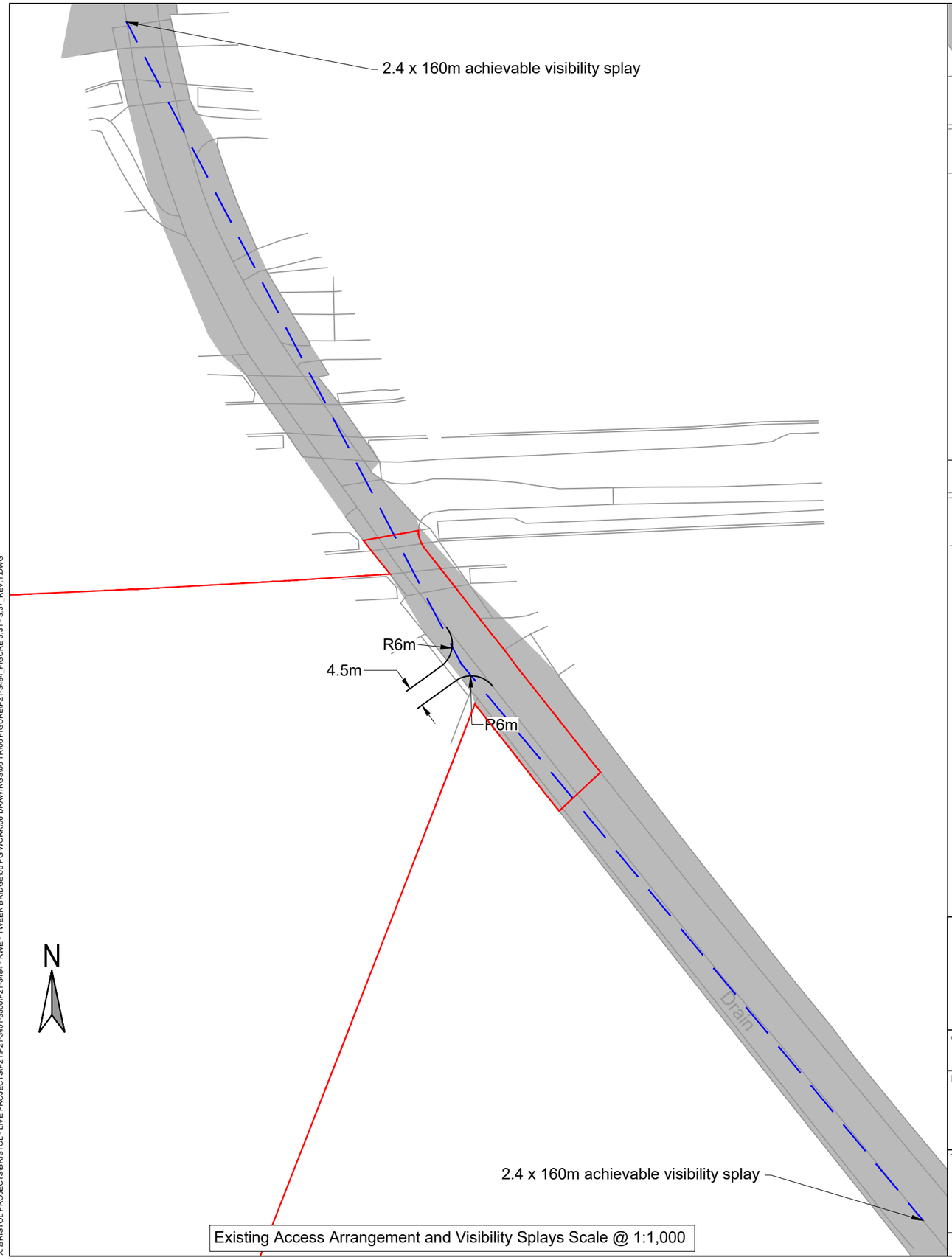
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SCALE @ A3:	CHECKED:	APPROVED:
AS SHOWN	KSS	KSS
DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
09/07/2025	JAN	FINAL
PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.36	1

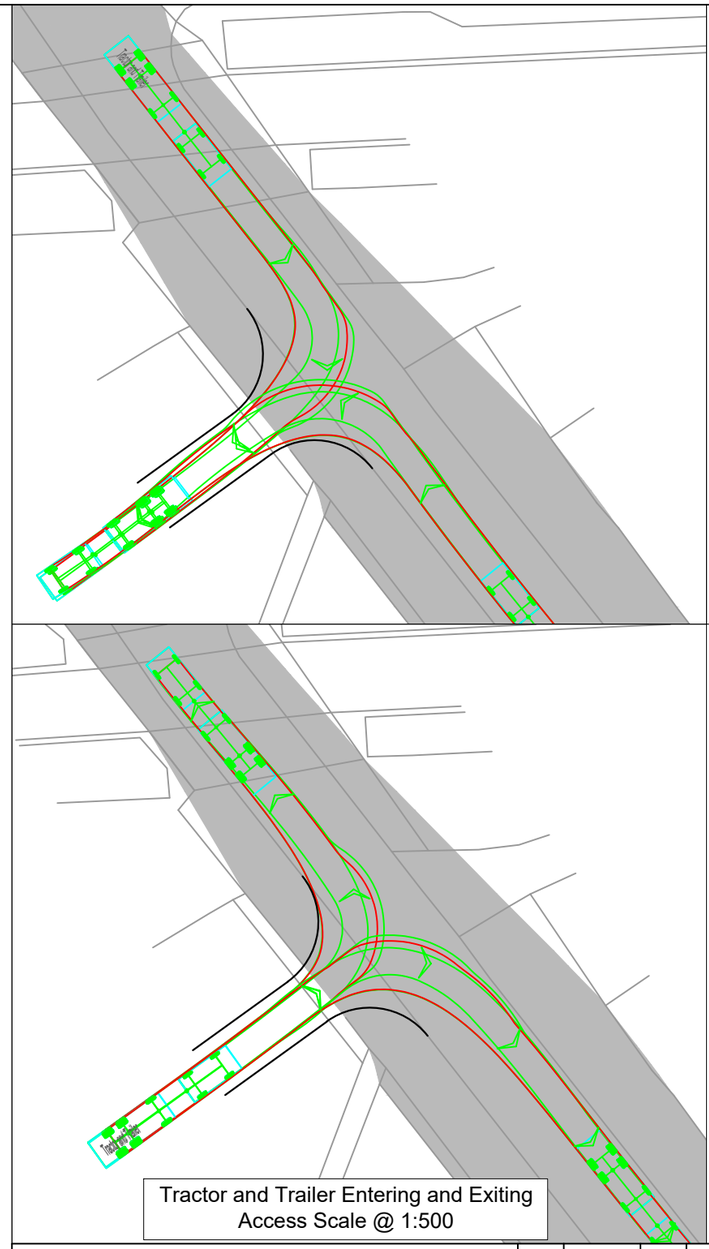
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Figure 3.37 Proposed Access Arrangements – Access AK



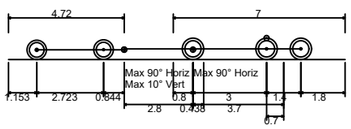
Existing Access Arrangement and Visibility Splays Scale @ 1:1,000



Tractor and Trailer Entering and Exiting Access Scale @ 1:500

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



Tractor and Trailer	
Overall Length	13.720m
Overall Width	2.500m
Overall Body Height	0.438m
Min Body Ground Clearance	0.398m
Max Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	4.620m

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PROJECT: TWEEN BRIDGE SOLAR FARM	DATE: 09/07/2025	DESIGN-DRAWN: JAN	DRAWING-STATUS: FINAL
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AK	PROJECT No: P21-3484	DRAWING No: FIGURE 3.37	REV: 1

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Figure 4.1 Construction Traffic Route Plan to Land Areas

N

East Riding of Yorkshire

Doncaster

North Lincolnshire

North Common Road

A614

Marshland Road

M18 Junction 6

Coulman Street

Thorne

Moor Edges Road

Cross Street

Marsh Road

Crowle

A161

A18 High Levels Bank

M180 Junction 1

M18 Junction 5

A18 Tudworth Road

Sandtoft Road

Low Levels Bank

High Levels Bank

A18

A161

A18

M180 Junction 2

Key:

- Order Limits
- Local Authority Boundaries
- Construction Route to Land Parcel A
- Construction Route to Land Parcel B
- Construction Route to Land Parcel C
- Construction Route to Land Parcel D
- Construction Route to Land Parcel E

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PROJECT: TWEEN BRIDGE SOLAR FARM	DATE: 19/08/2025	DESIGN-DRAWN: JAN	DRAWING-STATUS: FINAL
TITLE: CONSTRUCTION TRAFFIC ROUTE PLAN TO LAND PARCELS	PROJECT No: P21-3484	DRAWING No: FIGURE 4.1	REV: 1

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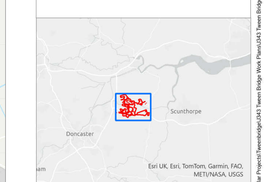
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Appendix A – Order Limits

Tween Bridge Solar Farm

LEGEND

OrderLimits_Rev_AJ



Site Location Plan - Rev AJ

0 155 310 620 Metres

Coordinate System: British National Grid Projection: Transverse Mercator Datum: OSGB 1936		© Crown copyright and database rights 2025. Ordnance Survey AC0000808122
Scale: 1:10,000	Paper Size: A0	DCO Application

RWE

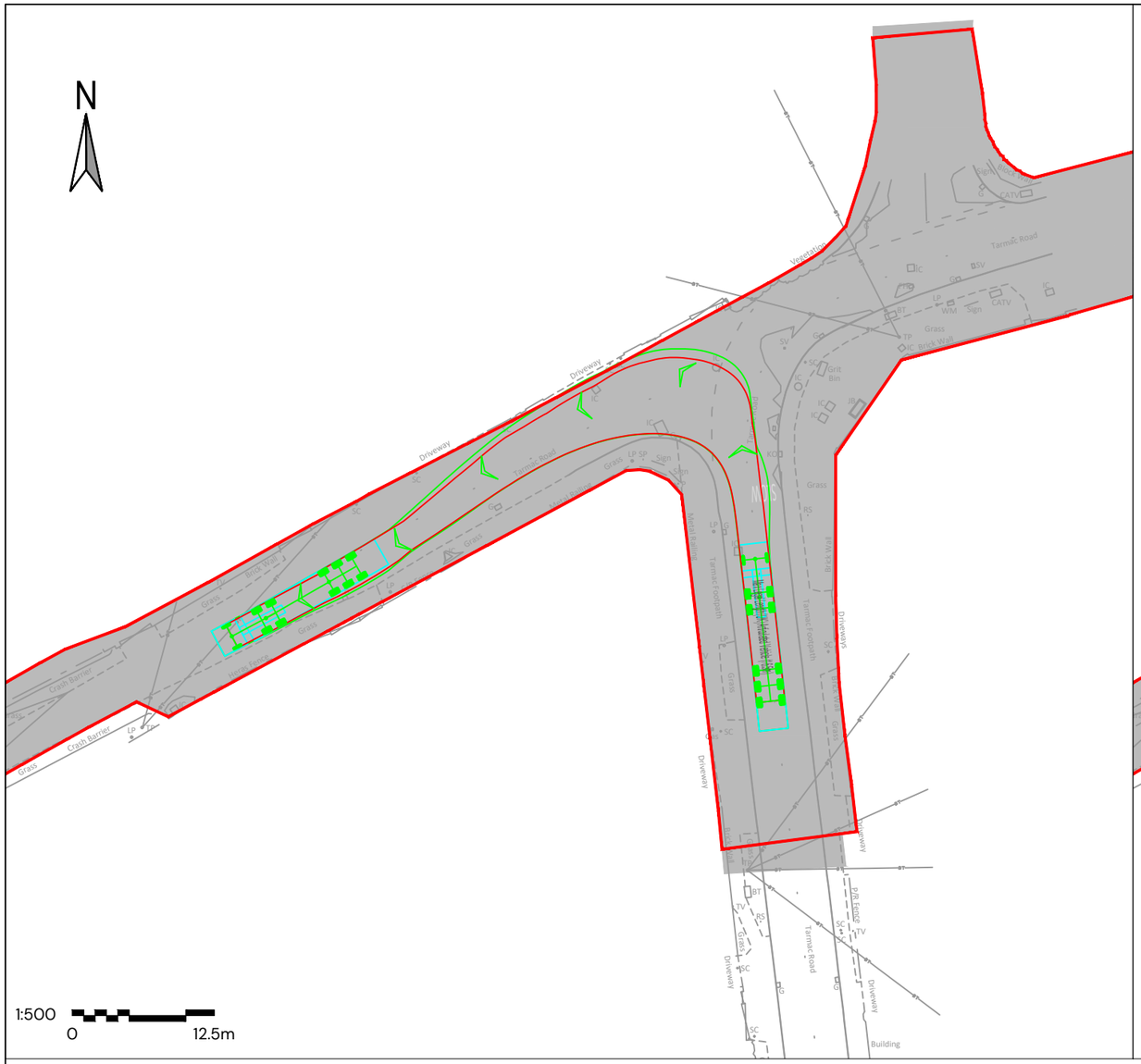
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Drawn: EH	Checked: AD	Approved: MB	Date: 20/08/2025

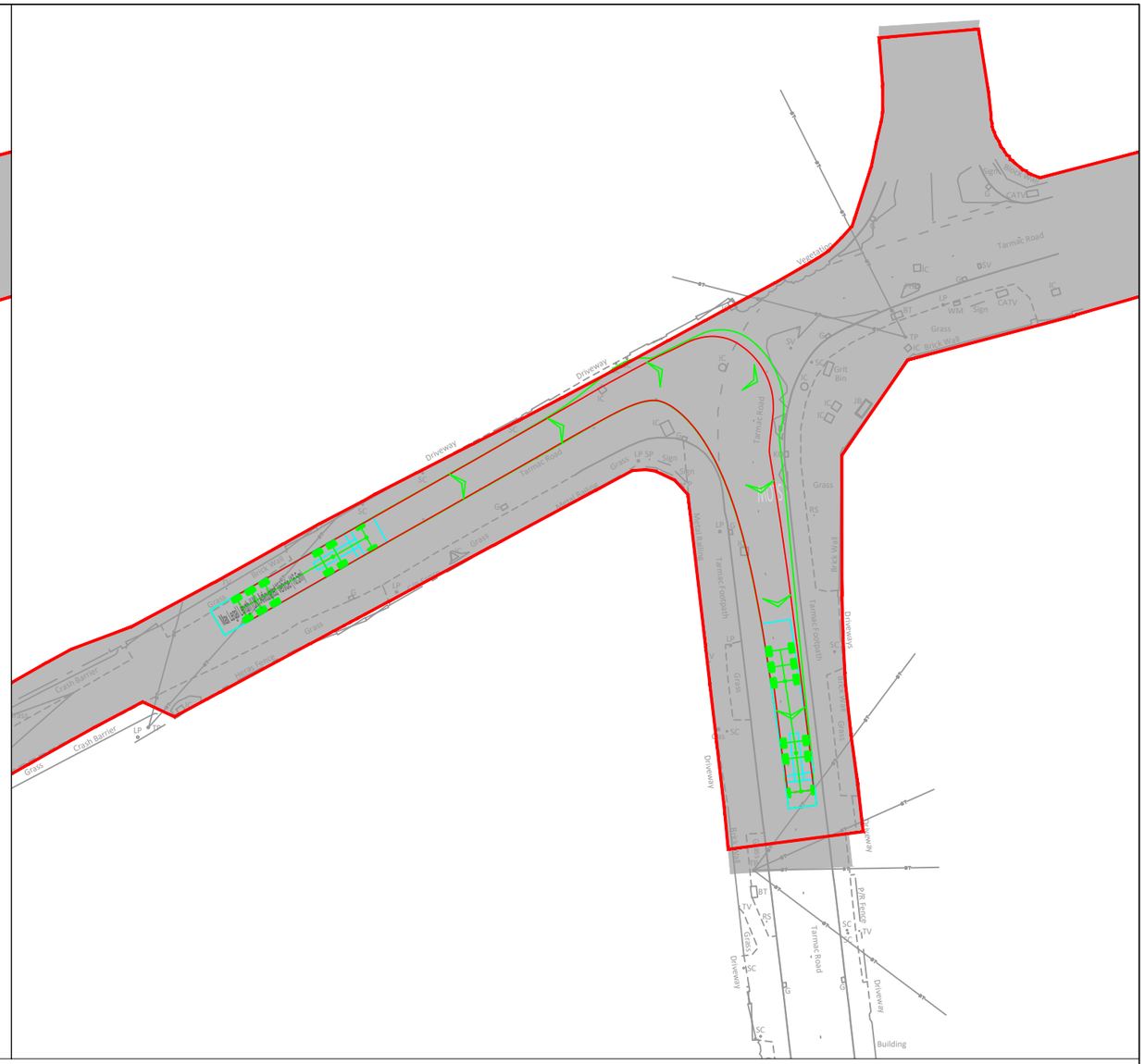
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0 320 640 1,280 Metres

Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS

Appendix B – Swept Path Assessments (Godnow Road, Windsor Road and Marsh Road)

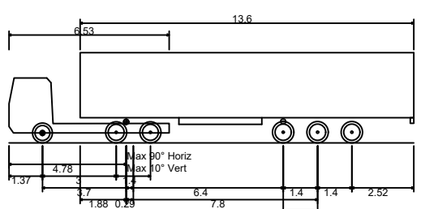




Swept Path Analysis of a 16.5m Articulated Vehicle Navigating Location T

Key:

- Order Limits
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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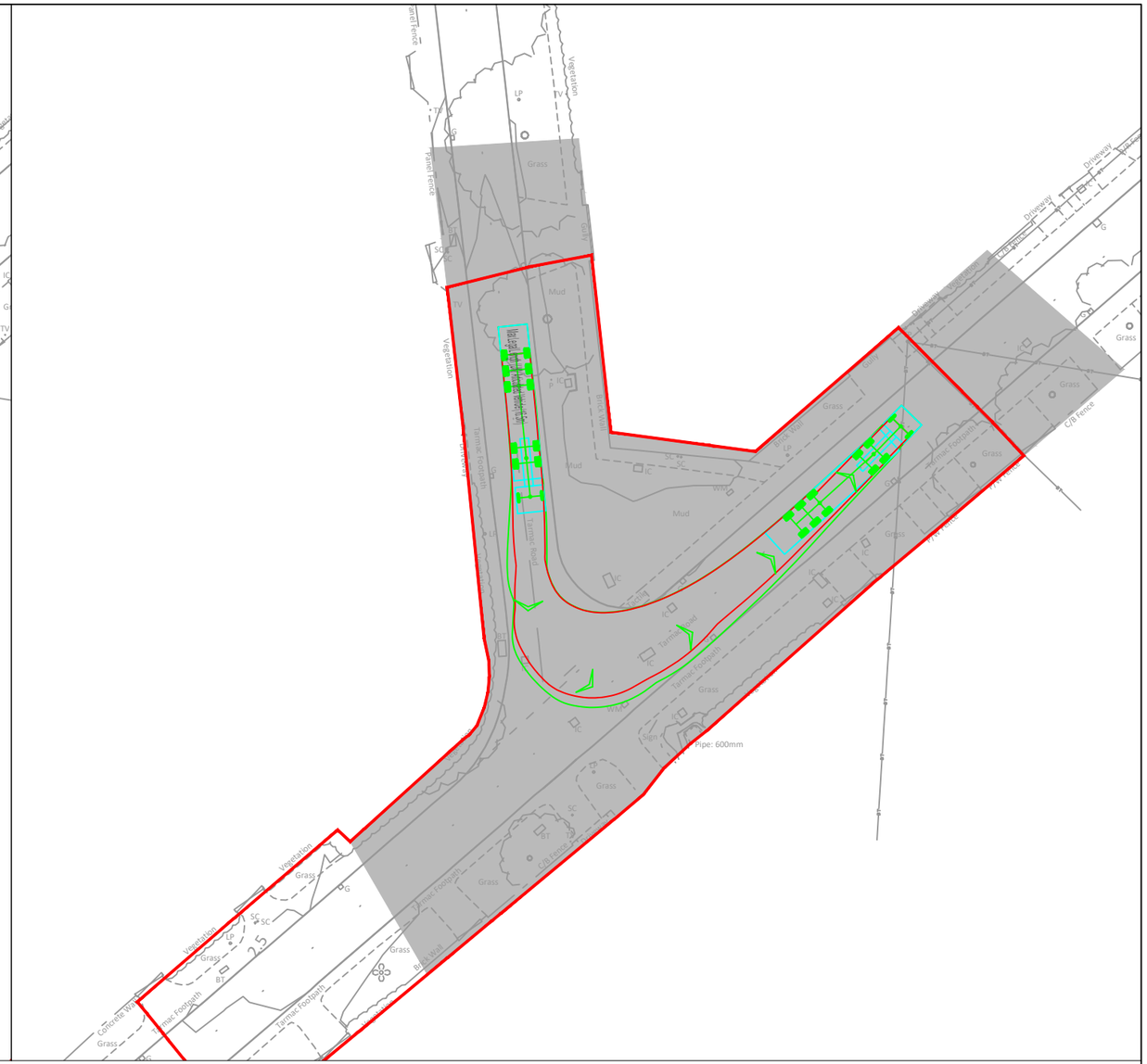
TITLE: LOCATION T - MARSH ROAD / WINDSOR ROAD JUNCITON

SCALE @ A3:	CHECKED:	APPROVED:
1:500	ADWS	KS
DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
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P21-3484	FIGURE 3.21	1

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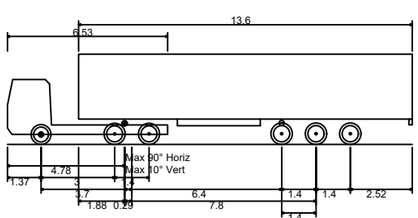




Swept Path Analysis of a 16.5m Articulated Vehicle Navigating Location U

Key:

- Order Limits
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: LOCATION U - WINDSOR ROAD / GODNOW ROAD JUNCTION

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PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.22	1

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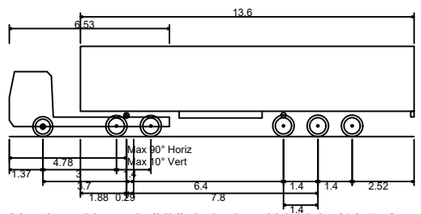


Swept Path Analysis of a 16.5m Articulated Vehicle Navigating Location V

Key:

Order Limits

Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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PROJECT: TWEEN BRIDGE SOLAR FARM

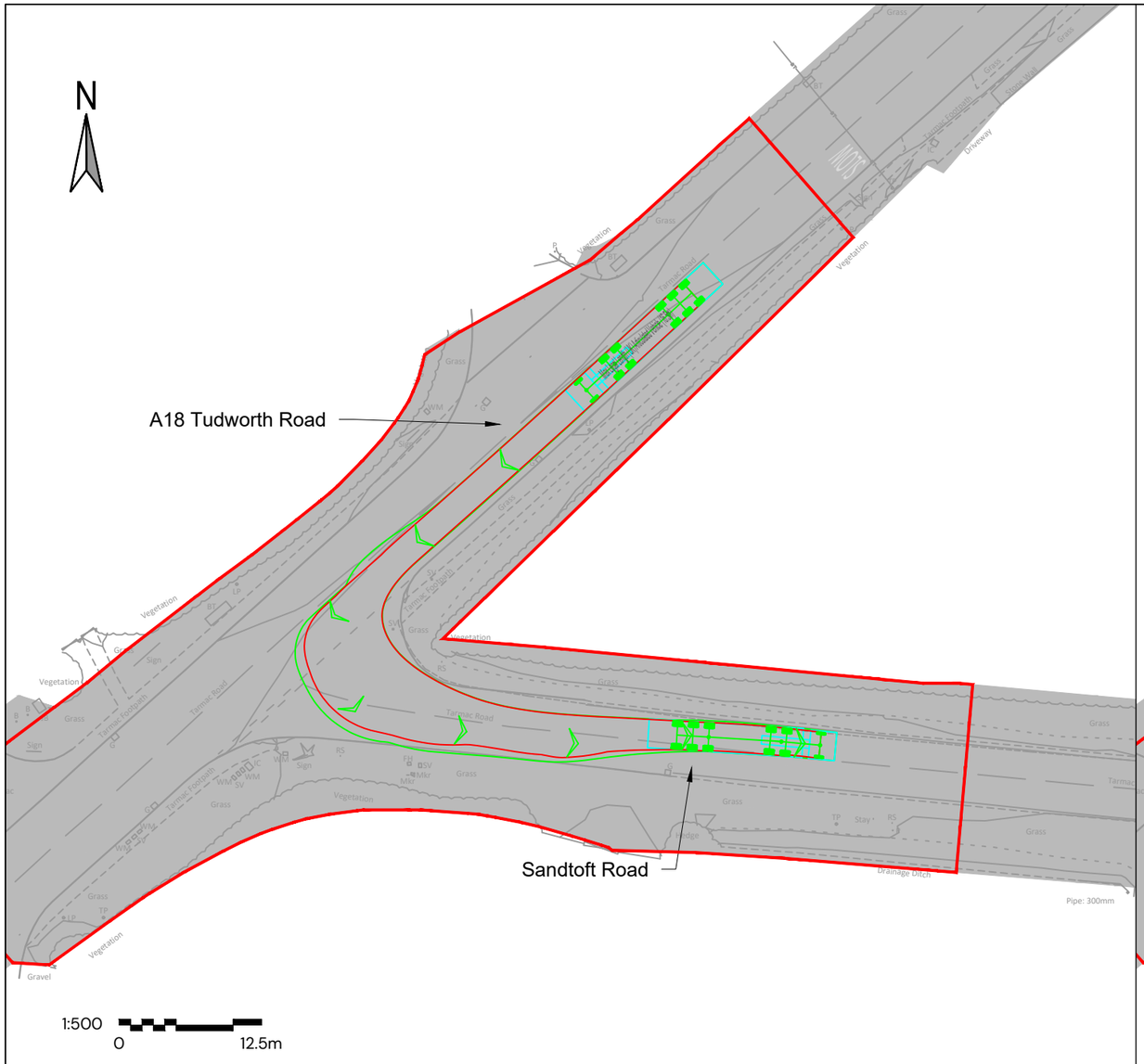
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DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
09/07/2025	LT	FINAL
PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.23	1

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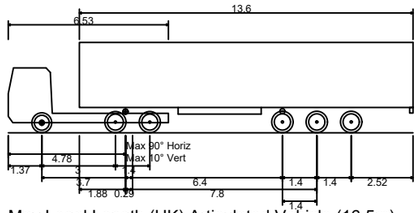
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Appendix C – Swept Path Assessments (A189 Tudworth Road / Sandtoft Road)





Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location G



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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TITLE: LOCATION G - A18, TUDWORTH ROAD / SANDTOFT ROAD JUNCTION

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DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
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P21-3484	FIGURE 3.8	1

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Appendix D – Temporary Signage



1. Temporary Construction Traffic signage (Diagram 7301 'WORKS TRAFFIC' in the TSRGD)

Appendix C

Tween Bridge ATC 19, Marsh Road



Direction: Southwestbound

Hour Beginning	Tue 06/06/2023	Wed 07/06/2023	Thu 08/06/2023	Fri 09/06/2023	Sat 10/06/2023	Sun 11/06/2023	Mon 12/06/2023	5-Day Ave.	7-Day Ave.
00:00	0	0	0	0	0	0	0	0	0
01:00	0	0	1	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0
05:00	1	0	0	1	1	1	1	1	1
06:00	0	2	1	1	2	0	0	1	1
07:00	2	7	1	3	0	0	4	3	2
08:00	10	9	5	7	4	1	2	7	5
09:00	6	2	12	7	3	5	9	7	6
10:00	4	7	5	3	5	2	3	4	4
11:00	5	3	2	6	2	3	5	4	4
12:00	5	6	5	5	4	1	0	4	4
13:00	7	7	7	3	5	5	6	6	6
14:00	2	3	6	4	2	6	9	5	5
15:00	2	4	2	5	4	6	2	3	4
16:00	5	5	3	4	0	1	3	4	3
17:00	7	4	5	10	5	2	1	5	5
18:00	5	4	5	4	6	5	3	4	5
19:00	0	2	6	2	3	2	2	2	2
20:00	0	0	1	1	4	0	0	0	1
21:00	0	1	0	1	1	0	2	1	1
22:00	0	1	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0
Total									
12H(7-19)	60	61	58	61	40	37	47	57	52
16H(6-22)	60	66	66	66	50	39	51	62	57
18H(6-24)	60	67	66	66	50	39	51	62	57
24H(0-24)	61	67	67	67	51	40	52	63	58
AM Peak	08:00	08:00	09:00	08:00	10:00	09:00	09:00	09:00	09:00
	10	9	12	7	5	5	9	7	6
PM Peak	13:00	13:00	13:00	17:00	18:00	14:00	14:00	13:00	13:00
	7	7	7	10	6	6	9	6	6

Paul Castle Associates

Direction: Northeastbound

Hour Beginning	Tue 06/06/2023	Wed 07/06/2023	Thu 08/06/2023	Fri 09/06/2023	Sat 10/06/2023	Sun 11/06/2023	Mon 12/06/2023	5-Day Ave.	7-Day Ave.
00:00	0	0	0	0	0	0	0	0	0
01:00	0	0	1	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	1	0	0
05:00	0	0	0	0	0	0	0	0	0
06:00	0	0	0	1	1	1	1	0	1
07:00	2	2	1	5	3	1	1	2	2
08:00	6	9	4	4	3	1	2	5	4
09:00	5	3	8	4	2	3	2	4	4
10:00	6	7	6	5	3	4	11	7	6
11:00	3	1	3	7	3	2	3	3	3
12:00	6	8	6	4	4	1	1	5	4
13:00	7	7	5	4	5	4	6	6	5
14:00	2	5	4	7	3	5	9	5	5
15:00	3	2	4	5	3	4	0	3	3
16:00	4	6	1	4	2	1	2	3	3
17:00	6	3	4	5	3	4	1	4	4
18:00	7	5	7	2	3	0	2	5	4
19:00	2	4	5	4	3	4	0	3	3
20:00	3	0	1	0	5	1	3	1	2
21:00	0	0	0	1	5	0	3	1	1
22:00	0	1	0	0	1	1	0	0	0
23:00	0	0	0	0	0	0	0	0	0
Total									
12H(7-19)	57	58	53	56	37	30	40	53	47
16H(6-22)	62	62	59	62	51	36	47	58	54
18H(6-24)	62	63	59	62	52	37	47	59	55
24H(0-24)	62	63	60	62	52	37	48	59	55
AM Peak	08:00	08:00	09:00	11:00	07:00	10:00	10:00	10:00	10:00
	6	9	8	7	3	4	11	7	6
PM Peak	13:00	12:00	18:00	14:00	13:00	14:00	14:00	13:00	13:00
	7	8	7	7	5	5	9	6	5

Paul Castle Associates

Direction: Total Flow

Hour Beginning	Tue 06/06/2023	Wed 07/06/2023	Thu 08/06/2023	Fri 09/06/2023	Sat 10/06/2023	Sun 11/06/2023	Mon 12/06/2023	5-Day Ave.	7-Day Ave.
00:00	0	0	0	0	0	0	0	0	0
01:00	0	0	2	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	1	0	0
05:00	1	0	0	1	1	1	1	1	1
06:00	0	2	1	2	3	1	1	1	1
07:00	4	9	2	8	3	1	5	6	5
08:00	16	18	9	11	7	2	4	12	10
09:00	11	5	20	11	5	8	11	12	10
10:00	10	14	11	8	8	6	14	11	10
11:00	8	4	5	13	5	5	8	8	7
12:00	11	14	11	9	8	2	1	9	8
13:00	14	14	12	7	10	9	12	12	11
14:00	4	8	10	11	5	11	18	10	10
15:00	5	6	6	10	7	10	2	6	7
16:00	9	11	4	8	2	2	5	7	6
17:00	13	7	9	15	8	6	2	9	9
18:00	12	9	12	6	9	5	5	9	8
19:00	2	6	11	6	6	6	2	5	6
20:00	3	0	2	1	9	1	3	2	3
21:00	0	1	0	2	6	0	5	2	2
22:00	0	2	0	0	1	1	0	0	1
23:00	0	0	0	0	0	0	0	0	0
Total									
12H(7-19)	117	119	111	117	77	67	87	110	99
16H(6-22)	122	128	125	128	101	75	98	120	111
18H(6-24)	122	130	125	128	102	76	98	121	112
24H(0-24)	123	130	127	129	103	77	100	122	113
AM Peak	08:00	08:00	09:00	11:00	10:00	09:00	10:00	08:00	09:00
	16	18	20	13	8	8	14	12	10
PM Peak	13:00	12:00	13:00	17:00	13:00	14:00	14:00	13:00	13:00
	14	14	12	15	10	11	18	12	11

Paul Castle Associates

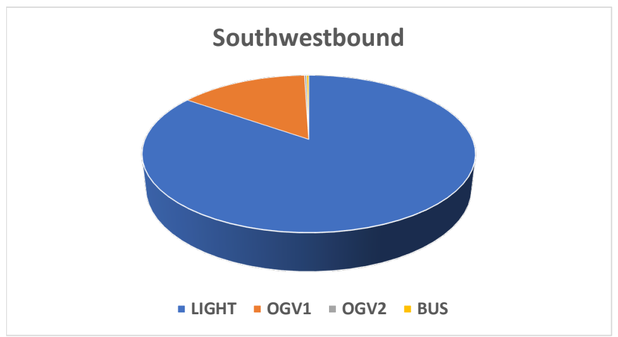
Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

	Total Volume	LIGHT	OGV1	OGV2	BUS
Tue 6 Jun 2023	61	48	13	0	0
Wed 7 Jun 2023	67	53	13	0	1
Thu 8 Jun 2023	67	59	8	0	0
Fri 9 Jun 2023	67	61	6	0	0
Sat 10 Jun 2023	51	44	7	0	0
Sun 11 Jun 2023	40	35	4	1	0
Mon 12 Jun 2023	52	43	9	0	0
5 Day Ave.	63	53	10	0	0
7 Day Ave.	58	49	9	0	0

	Total Volume	LIGHT	OGV1	OGV2	BUS
Tue 6 Jun 2023	100.0%	78.7%	21.3%	0.0%	0.0%
Wed 7 Jun 2023	100.0%	79.1%	19.4%	0.0%	1.5%
Thu 8 Jun 2023	100.0%	88.1%	11.9%	0.0%	0.0%
Fri 9 Jun 2023	100.0%	91.0%	9.0%	0.0%	0.0%
Sat 10 Jun 2023	100.0%	86.3%	13.7%	0.0%	0.0%
Sun 11 Jun 2023	100.0%	87.5%	10.0%	2.5%	0.0%
Mon 12 Jun 2023	100.0%	82.7%	17.3%	0.0%	0.0%
5 Day Ave.	100.0%	84.1%	15.6%	0.0%	0.3%
7 Day Ave.	100.0%	84.7%	14.8%	0.2%	0.2%

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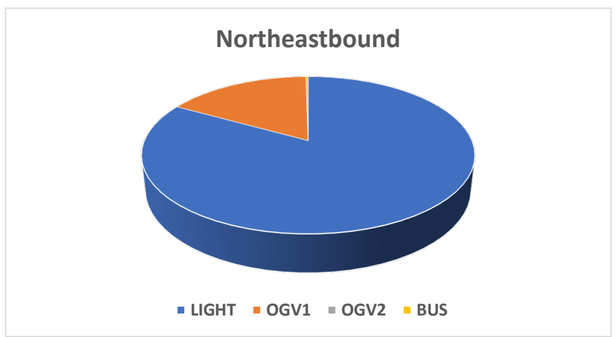


Direction: Northeastbound

	Total Volume	LIGHT	OGV1	OGV2	BUS
Tue 6 Jun 2023	62	49	13	0	0
Wed 7 Jun 2023	63	48	14	0	1
Thu 8 Jun 2023	60	52	8	0	0
Fri 9 Jun 2023	62	54	8	0	0
Sat 10 Jun 2023	52	44	8	0	0
Sun 11 Jun 2023	37	33	4	0	0
Mon 12 Jun 2023	48	39	9	0	0
5 Day Ave.	59	48	10	0	0
7 Day Ave.	55	46	9	0	0

	Total Volume	LIGHT	OGV1	OGV2	BUS
Tue 6 Jun 2023	100.0%	79.0%	21.0%	0.0%	0.0%
Wed 7 Jun 2023	100.0%	76.2%	22.2%	0.0%	1.6%
Thu 8 Jun 2023	100.0%	86.7%	13.3%	0.0%	0.0%
Fri 9 Jun 2023	100.0%	87.1%	12.9%	0.0%	0.0%
Sat 10 Jun 2023	100.0%	84.6%	15.4%	0.0%	0.0%
Sun 11 Jun 2023	100.0%	89.2%	10.8%	0.0%	0.0%
Mon 12 Jun 2023	100.0%	81.3%	18.8%	0.0%	0.0%
5 Day Ave.	100.0%	82.0%	17.6%	0.0%	0.3%
7 Day Ave.	100.0%	83.1%	16.7%	0.0%	0.3%

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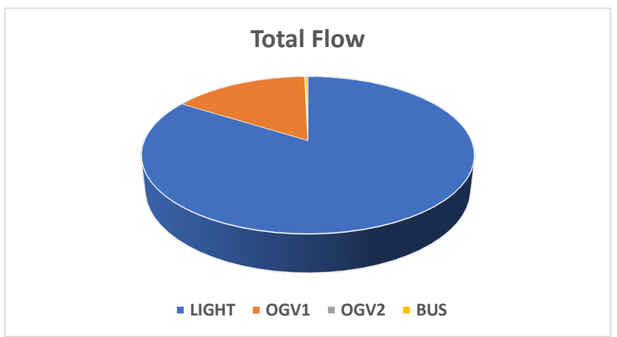


Direction: Total Flow

	Total Volume	LIGHT	OGV1	OGV2	BUS
Tue 6 Jun 2023	123	97	26	0	0
Wed 7 Jun 2023	130	101	27	0	2
Thu 8 Jun 2023	127	111	16	0	0
Fri 9 Jun 2023	129	115	14	0	0
Sat 10 Jun 2023	103	88	15	0	0
Sun 11 Jun 2023	77	68	8	1	0
Mon 12 Jun 2023	100	82	18	0	0
5 Day Ave.	122	101	20	0	0
7 Day Ave.	113	95	18	0	0

	Total Volume	LIGHT	OGV1	OGV2	BUS
Tue 6 Jun 2023	100.0%	78.9%	21.1%	0.0%	0.0%
Wed 7 Jun 2023	100.0%	77.7%	20.8%	0.0%	1.5%
Thu 8 Jun 2023	100.0%	87.4%	12.6%	0.0%	0.0%
Fri 9 Jun 2023	100.0%	89.1%	10.9%	0.0%	0.0%
Sat 10 Jun 2023	100.0%	85.4%	14.6%	0.0%	0.0%
Sun 11 Jun 2023	100.0%	88.3%	10.4%	1.3%	0.0%
Mon 12 Jun 2023	100.0%	82.0%	18.0%	0.0%	0.0%
5 Day Ave.	100.0%	83.1%	16.6%	0.0%	0.3%
7 Day Ave.	100.0%	83.9%	15.7%	0.1%	0.3%

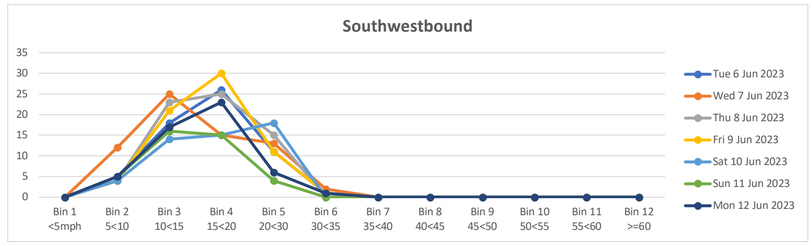
Paul Castle Associates



Tween Bridge ATC 19, Marsh Road

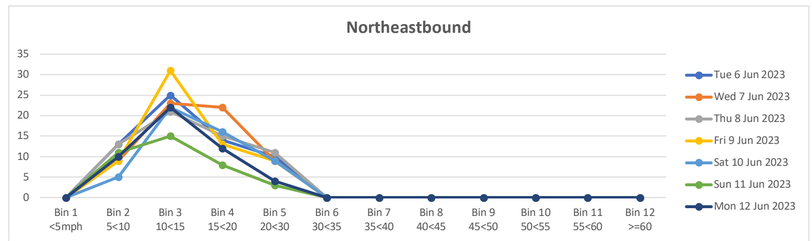
Direction: Southwestbound

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	61	22.4	16.8	5.4	0	5	18	26	11	1	0	0	0	0	0	0
Wed 7 Jun 2023	67	22.5	15.7	6.5	0	12	25	15	13	2	0	0	0	0	0	0
Thu 8 Jun 2023	67	22.3	16.9	5.2	0	4	23	25	15	0	0	0	0	0	0	0
Fri 9 Jun 2023	67	22.1	16.8	5.1	0	4	21	30	11	1	0	0	0	0	0	0
Sat 10 Jun 2023	51	24.1	18.0	5.9	0	4	14	15	18	0	0	0	0	0	0	0
Sun 11 Jun 2023	40	19.9	15.0	4.7	0	5	16	15	4	0	0	0	0	0	0	0
Mon 12 Jun 2023	52	21.4	16.1	5.2	0	5	17	23	6	1	0	0	0	0	0	0
5 Day Ave.	63	22.1	16.5	5.5	0	6	21	24	11	1	0	0	0	0	0	0
7 Day Ave.	58	22.1	16.5	5.4	0	6	19	21	11	1	0	0	0	0	0	0



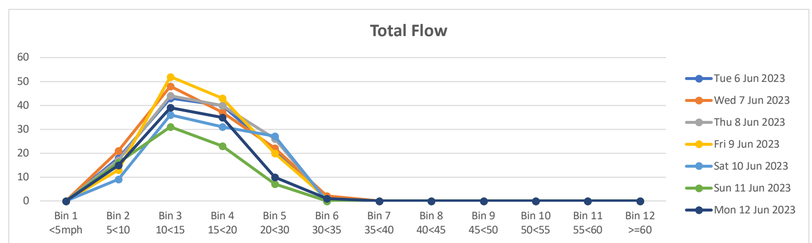
Direction: Northeastbound

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	62	20.5	14.6	5.7	0	13	25	14	10	0	0	0	0	0	0	0
Wed 7 Jun 2023	63	20.7	15.3	5.2	0	9	23	22	9	0	0	0	0	0	0	0
Thu 8 Jun 2023	60	21.1	15.0	5.9	0	13	21	15	11	0	0	0	0	0	0	0
Fri 9 Jun 2023	62	20.1	14.6	5.2	0	9	31	13	9	0	0	0	0	0	0	0
Sat 10 Jun 2023	52	21.1	15.7	5.2	0	5	22	16	9	0	0	0	0	0	0	0
Sun 11 Jun 2023	37	18.4	13.1	5.1	0	11	15	8	3	0	0	0	0	0	0	0
Mon 12 Jun 2023	48	18.8	13.8	4.8	0	10	22	12	4	0	0	0	0	0	0	0
5 Day Ave.	59	20.2	14.7	5.4	0	11	24	15	9	0	0	0	0	0	0	0
7 Day Ave.	55	20.1	14.6	5.3	0	10	23	14	8	0	0	0	0	0	0	0



Direction: Total Flow

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	123	21.5	15.7	5.6	0	18	43	40	21	1	0	0	0	0	0	0
Wed 7 Jun 2023	130	21.7	15.5	5.9	0	21	48	37	22	2	0	0	0	0	0	0
Thu 8 Jun 2023	127	21.8	16.0	5.6	0	17	44	40	26	0	0	0	0	0	0	0
Fri 9 Jun 2023	129	21.2	15.8	5.3	0	13	52	43	20	1	0	0	0	0	0	0
Sat 10 Jun 2023	103	22.7	16.8	5.7	0	9	36	31	27	0	0	0	0	0	0	0
Sun 11 Jun 2023	77	19.2	14.1	5.0	0	16	31	23	7	0	0	0	0	0	0	0
Mon 12 Jun 2023	100	20.3	15.0	5.1	0	15	39	35	10	1	0	0	0	0	0	0
5 Day Ave.	122	21.3	15.6	5.5	0	17	45	39	20	1	0	0	0	0	0	0
7 Day Ave.	113	21.2	15.5	5.5	0	16	42	36	19	1	0	0	0	0	0	0



Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	9	22.8	16.9	5.7	0	1	2	4	2	0	0	0	0	0	0	0
Wed 7 Jun 2023	10	20.7	13.5	7.0	0	2	7	0	0	1	0	0	0	0	0	0
Thu 8 Jun 2023	7	23.5	18.2	5.1	0	0	2	3	2	0	0	0	0	0	0	0
Fri 9 Jun 2023	9	27.4	20.0	7.2	0	0	3	2	3	1	0	0	0	0	0	0
Sat 10 Jun 2023	7	25.7	18.6	6.9	0	1	1	2	3	0	0	0	0	0	0	0
Sun 11 Jun 2023	5	21.9	15.0	6.6	0	1	2	1	1	0	0	0	0	0	0	0
Mon 12 Jun 2023	8	22.2	15.6	6.4	0	1	4	1	2	0	0	0	0	0	0	0
5 Day Ave.	9	23.4	16.9	6.3	0	1	4	2	2	0	0	0	0	0	0	0
7 Day Ave.	8	23.5	16.8	6.4	0	1	3	2	2	0	0	0	0	0	0	0

Paul Castle Associates

Direction: Northeastbound

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	9	17.1	13.1	3.9	0	2	4	3	0	0	0	0	0	0	0	0
Wed 7 Jun 2023	8	22.7	16.3	6.3	0	1	3	2	2	0	0	0	0	0	0	0
Thu 8 Jun 2023	9	24.0	18.3	5.4	0	0	3	3	3	0	0	0	0	0	0	0
Fri 9 Jun 2023	12	20.9	14.6	6.1	0	3	4	3	2	0	0	0	0	0	0	0
Sat 10 Jun 2023	6	24.3	19.2	4.9	0	0	1	3	2	0	0	0	0	0	0	0
Sun 11 Jun 2023	6	20.7	13.8	6.7	0	2	2	1	1	0	0	0	0	0	0	0
Mon 12 Jun 2023	14	18.6	13.0	5.4	0	5	4	4	1	0	0	0	0	0	0	0
5 Day Ave.	10	20.7	15.1	5.4	0	2	4	3	2	0	0	0	0	0	0	0
7 Day Ave.	9	21.2	15.5	5.5	0	2	3	3	2	0	0	0	0	0	0	0

Paul Castle Associates

Direction: Total Flow

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	18	20.3	15.0	5.1	0	3	6	7	2	0	0	0	0	0	0	0
Wed 7 Jun 2023	18	21.6	14.7	6.6	0	3	10	2	2	1	0	0	0	0	0	0
Thu 8 Jun 2023	16	23.6	18.3	5.1	0	0	5	6	5	0	0	0	0	0	0	0
Fri 9 Jun 2023	21	24.1	16.9	7.0	0	3	7	5	5	1	0	0	0	0	0	0
Sat 10 Jun 2023	13	24.9	18.8	5.8	0	1	2	5	5	0	0	0	0	0	0	0
Sun 11 Jun 2023	11	20.9	14.3	6.3	0	3	4	2	2	0	0	0	0	0	0	0
Mon 12 Jun 2023	22	19.9	14.0	5.8	0	6	8	5	3	0	0	0	0	0	0	0
5 Day Ave.	19	21.9	15.8	5.9	0	3	7	5	3	0	0	0	0	0	0	0
7 Day Ave.	17	22.2	16.0	6.0	0	3	6	5	3	0	0	0	0	0	0	0

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	4	23.4	15.6	7.5	0	1	1	1	1	0	0	0	0	0	0	0
Wed 7 Jun 2023	7	25.1	18.6	6.3	0	0	3	1	3	0	0	0	0	0	0	0
Thu 8 Jun 2023	8	24.0	16.6	7.2	0	1	4	0	3	0	0	0	0	0	0	0
Fri 9 Jun 2023	9	16.8	14.2	2.5	0	0	6	3	0	0	0	0	0	0	0	0
Sat 10 Jun 2023	6	24.2	18.3	5.6	0	0	2	2	2	0	0	0	0	0	0	0
Sun 11 Jun 2023	12	19.5	14.4	4.9	0	2	5	4	1	0	0	0	0	0	0	0
Mon 12 Jun 2023	11	18.6	16.1	2.3	0	0	3	8	0	0	0	0	0	0	0	0
5 Day Ave.	8	21.6	16.2	5.2	0	0	3	3	1	0	0	0	0	0	0	0
7 Day Ave.	8	21.6	16.3	5.2	0	1	3	3	1	0	0	0	0	0	0	0

Paul Castle Associates

Direction: Northeastbound

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	5	16.2	12.5	3.5	0	1	3	1	0	0	0	0	0	0	0	0
Wed 7 Jun 2023	7	21.5	15.7	5.5	0	1	2	3	1	0	0	0	0	0	0	0
Thu 8 Jun 2023	8	19.9	13.4	6.3	0	3	2	2	1	0	0	0	0	0	0	0
Fri 9 Jun 2023	12	18.9	13.5	5.2	0	3	5	3	1	0	0	0	0	0	0	0
Sat 10 Jun 2023	6	24.2	18.3	5.6	0	0	2	2	2	0	0	0	0	0	0	0
Sun 11 Jun 2023	9	20.7	15.6	5.0	0	1	3	4	1	0	0	0	0	0	0	0
Mon 12 Jun 2023	9	16.8	14.2	2.5	0	0	6	3	0	0	0	0	0	0	0	0
5 Day Ave.	8	18.6	13.9	4.6	0	2	4	2	1	0	0	0	0	0	0	0
7 Day Ave.	8	19.7	14.7	4.8	0	1	3	3	1	0	0	0	0	0	0	0

Paul Castle Associates

Direction: Total Flow

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
Tue 6 Jun 2023	9	19.6	13.9	5.5	0	2	4	2	1	0	0	0	0	0	0	0
Wed 7 Jun 2023	14	23.2	17.1	5.9	0	1	5	4	4	0	0	0	0	0	0	0
Thu 8 Jun 2023	16	22.0	15.0	6.7	0	4	6	2	4	0	0	0	0	0	0	0
Fri 9 Jun 2023	21	18.1	13.8	4.2	0	3	11	6	1	0	0	0	0	0	0	0
Sat 10 Jun 2023	12	23.9	18.3	5.4	0	0	4	4	4	0	0	0	0	0	0	0
Sun 11 Jun 2023	21	19.9	14.9	4.8	0	3	8	8	2	0	0	0	0	0	0	0
Mon 12 Jun 2023	20	17.9	15.3	2.6	0	0	9	11	0	0	0	0	0	0	0	0
5 Day Ave.	16	20.1	15.0	5.0	0	2	7	5	2	0	0	0	0	0	0	0
7 Day Ave.	16	20.6	15.5	5.0	0	2	7	5	2	0	0	0	0	0	0	0

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

06/06/2023

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	0	0	0	0	0
07:00	2	2	0	0	0
08:00	10	7	3	0	0
09:00	6	5	1	0	0
10:00	4	3	1	0	0
11:00	5	4	1	0	0
12:00	5	3	2	0	0
13:00	7	5	2	0	0
14:00	2	2	0	0	0
15:00	2	1	1	0	0
16:00	5	5	0	0	0
17:00	7	6	1	0	0
18:00	5	4	1	0	0
19:00	0	0	0	0	0
20:00	0	0	0	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total 12H(7-19)	60	47	13	0	0
16H(6-22)	60	47	13	0	0
18H(6-24)	60	47	13	0	0
24H(0-24)	61	48	13	0	0
AM Peak	08:00	08:00	08:00	00:00	00:00
	10	7	3	0	0
PM Peak	13:00	17:00	12:00	12:00	12:00
	7	6	2	0	0

Paul Castle Associates

Direction: Northeastbound

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	0	0	0	0	0
07:00	2	2	0	0	0
08:00	6	3	3	0	0
09:00	5	5	0	0	0
10:00	6	5	1	0	0
11:00	3	2	1	0	0
12:00	6	4	2	0	0
13:00	7	5	2	0	0
14:00	2	1	1	0	0
15:00	3	2	1	0	0
16:00	4	3	1	0	0
17:00	6	6	0	0	0
18:00	7	6	1	0	0
19:00	2	2	0	0	0
20:00	3	3	0	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total 12H(7-19)	57	44	13	0	0
16H(6-22)	62	49	13	0	0
18H(6-24)	62	49	13	0	0
24H(0-24)	62	49	13	0	0
AM Peak	08:00	09:00	08:00	00:00	00:00
	6	5	3	0	0
PM Peak	13:00	17:00	12:00	12:00	12:00
	7	6	2	0	0

Paul Castle Associates

Direction: Total Flow

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	0	0	0	0	0
07:00	4	4	0	0	0
08:00	16	10	6	0	0
09:00	11	10	1	0	0
10:00	10	8	2	0	0
11:00	8	6	2	0	0
12:00	11	7	4	0	0
13:00	14	10	4	0	0
14:00	4	3	1	0	0
15:00	5	3	2	0	0
16:00	9	8	1	0	0
17:00	13	12	1	0	0
18:00	12	10	2	0	0
19:00	2	2	0	0	0
20:00	3	3	0	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total 12H(7-19)	117	91	26	0	0
16H(6-22)	122	96	26	0	0
18H(6-24)	122	96	26	0	0
24H(0-24)	123	97	26	0	0
AM Peak	08:00	08:00	08:00	00:00	00:00
	16	10	6	0	0
PM Peak	13:00	17:00	12:00	12:00	12:00
	14	12	4	0	0

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

07/06/2023

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	2	2	0	0	0
07:00	7	5	2	0	0
08:00	9	6	3	0	0
09:00	2	2	0	0	0
10:00	7	6	1	0	0
11:00	3	3	0	0	0
12:00	6	5	1	0	0
13:00	7	5	1	0	1
14:00	3	3	0	0	0
15:00	4	3	1	0	0
16:00	5	4	1	0	0
17:00	4	3	1	0	0
18:00	4	4	0	0	0
19:00	2	1	1	0	0
20:00	0	0	0	0	0
21:00	1	0	1	0	0
22:00	1	1	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	61	49	11	0	1
16H(6-22)	66	52	13	0	1
18H(6-24)	67	53	13	0	1
24H(0-24)	67	53	13	0	1
AM Peak	08:00	08:00	08:00	00:00	00:00
	9	6	3	0	0
PM Peak	13:00	12:00	12:00	12:00	13:00
	7	5	1	0	1

Paul Castle Associates

Direction: Northeastbound

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	0	0	0	0	0
07:00	2	1	1	0	0
08:00	9	6	3	0	0
09:00	3	3	0	0	0
10:00	7	6	1	0	0
11:00	1	1	0	0	0
12:00	8	7	1	0	0
13:00	7	5	1	0	1
14:00	5	4	1	0	0
15:00	2	1	1	0	0
16:00	6	4	2	0	0
17:00	3	2	1	0	0
18:00	5	3	2	0	0
19:00	4	4	0	0	0
20:00	0	0	0	0	0
21:00	0	0	0	0	0
22:00	1	1	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	58	43	14	0	1
16H(6-22)	62	47	14	0	1
18H(6-24)	63	48	14	0	1
24H(0-24)	63	48	14	0	1
AM Peak	08:00	08:00	08:00	00:00	00:00
	9	6	3	0	0
PM Peak	12:00	12:00	16:00	12:00	13:00
	8	7	2	0	1

Paul Castle Associates

Direction: Total Flow

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	2	2	0	0	0
07:00	9	6	3	0	0
08:00	18	12	6	0	0
09:00	5	5	0	0	0
10:00	14	12	2	0	0
11:00	4	4	0	0	0
12:00	14	12	2	0	0
13:00	14	10	2	0	2
14:00	8	7	1	0	0
15:00	6	4	2	0	0
16:00	11	8	3	0	0
17:00	7	5	2	0	0
18:00	9	7	2	0	0
19:00	6	5	1	0	0
20:00	0	0	0	0	0
21:00	1	0	1	0	0
22:00	2	2	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	119	92	25	0	2
16H(6-22)	128	99	27	0	2
18H(6-24)	130	101	27	0	2
24H(0-24)	130	101	27	0	2
AM Peak	08:00	08:00	08:00	00:00	00:00
	18	12	6	0	0
PM Peak	12:00	12:00	16:00	12:00	13:00
	14	12	3	0	2

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

08/06/2023

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	1	1	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	1	1	0	0	0
07:00	1	1	0	0	0
08:00	5	5	0	0	0
09:00	12	11	1	0	0
10:00	5	4	1	0	0
11:00	2	2	0	0	0
12:00	5	4	1	0	0
13:00	7	7	0	0	0
14:00	6	6	0	0	0
15:00	2	2	0	0	0
16:00	3	2	1	0	0
17:00	5	4	1	0	0
18:00	5	4	1	0	0
19:00	6	5	1	0	0
20:00	1	0	1	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	58	52	6	0	0
16H(6-22)	66	58	8	0	0
18H(6-24)	66	58	8	0	0
24H(0-24)	67	59	8	0	0
AM Peak	09:00	09:00	09:00	00:00	00:00
	12	11	1	0	0
PM Peak	13:00	13:00	12:00	12:00	12:00
	7	7	1	0	0

Paul Castle Associates

Direction: Northeastbound

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	1	1	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	0	0	0	0	0
07:00	1	1	0	0	0
08:00	4	3	1	0	0
09:00	8	7	1	0	0
10:00	6	6	0	0	0
11:00	3	2	1	0	0
12:00	6	5	1	0	0
13:00	5	5	0	0	0
14:00	4	4	0	0	0
15:00	4	4	0	0	0
16:00	1	1	0	0	0
17:00	4	2	2	0	0
18:00	7	6	1	0	0
19:00	5	4	1	0	0
20:00	1	1	0	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	53	46	7	0	0
16H(6-22)	59	51	8	0	0
18H(6-24)	59	51	8	0	0
24H(0-24)	60	52	8	0	0
AM Peak	09:00	09:00	08:00	00:00	00:00
	8	7	1	0	0
PM Peak	18:00	18:00	17:00	12:00	12:00
	7	6	2	0	0

Paul Castle Associates

Direction: Total Flow

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	2	2	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	1	1	0	0	0
07:00	2	2	0	0	0
08:00	9	8	1	0	0
09:00	20	18	2	0	0
10:00	11	10	1	0	0
11:00	5	4	1	0	0
12:00	11	9	2	0	0
13:00	12	12	0	0	0
14:00	10	10	0	0	0
15:00	6	6	0	0	0
16:00	4	3	1	0	0
17:00	9	6	3	0	0
18:00	12	10	2	0	0
19:00	11	9	2	0	0
20:00	2	1	1	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	111	98	13	0	0
16H(6-22)	125	109	16	0	0
18H(6-24)	125	109	16	0	0
24H(0-24)	127	111	16	0	0
AM Peak	09:00	09:00	09:00	00:00	00:00
	20	18	2	0	0
PM Peak	13:00	13:00	17:00	12:00	12:00
	12	12	3	0	0

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

09/06/2023

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	1	1	0	0	0
07:00	3	3	0	0	0
08:00	7	7	0	0	0
09:00	7	6	1	0	0
10:00	3	3	0	0	0
11:00	6	6	0	0	0
12:00	5	5	0	0	0
13:00	3	1	2	0	0
14:00	4	4	0	0	0
15:00	5	5	0	0	0
16:00	4	3	1	0	0
17:00	10	9	1	0	0
18:00	4	3	1	0	0
19:00	2	2	0	0	0
20:00	1	1	0	0	0
21:00	1	1	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	61	55	6	0	0
16H(6-22)	66	60	6	0	0
18H(6-24)	66	60	6	0	0
24H(0-24)	67	61	6	0	0
AM Peak	08:00	08:00	09:00	00:00	00:00
	7	7	1	0	0
PM Peak	17:00	17:00	13:00	12:00	12:00
	10	9	2	0	0

Paul Castle Associates

Direction: Northeastbound

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	1	1	0	0	0
07:00	5	4	1	0	0
08:00	4	4	0	0	0
09:00	4	4	0	0	0
10:00	5	3	2	0	0
11:00	7	7	0	0	0
12:00	4	4	0	0	0
13:00	4	3	1	0	0
14:00	7	6	1	0	0
15:00	5	4	1	0	0
16:00	4	3	1	0	0
17:00	5	5	0	0	0
18:00	2	2	0	0	0
19:00	4	3	1	0	0
20:00	0	0	0	0	0
21:00	1	1	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	56	49	7	0	0
16H(6-22)	62	54	8	0	0
18H(6-24)	62	54	8	0	0
24H(0-24)	62	54	8	0	0
AM Peak	11:00	11:00	10:00	00:00	00:00
	7	7	2	0	0
PM Peak	14:00	14:00	13:00	12:00	12:00
	7	6	1	0	0

Paul Castle Associates

Direction: Total Flow

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	2	2	0	0	0
07:00	8	7	1	0	0
08:00	11	11	0	0	0
09:00	11	10	1	0	0
10:00	8	6	2	0	0
11:00	13	13	0	0	0
12:00	9	9	0	0	0
13:00	7	4	3	0	0
14:00	11	10	1	0	0
15:00	10	9	1	0	0
16:00	8	6	2	0	0
17:00	15	14	1	0	0
18:00	6	5	1	0	0
19:00	6	5	1	0	0
20:00	1	1	0	0	0
21:00	2	2	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	117	104	13	0	0
16H(6-22)	128	114	14	0	0
18H(6-24)	128	114	14	0	0
24H(0-24)	129	115	14	0	0
AM Peak	11:00	11:00	10:00	00:00	00:00
	13	13	2	0	0
PM Peak	17:00	17:00	13:00	12:00	12:00
	15	14	3	0	0

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

10/06/2023

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	2	2	0	0	0
07:00	0	0	0	0	0
08:00	4	4	0	0	0
09:00	3	2	1	0	0
10:00	5	4	1	0	0
11:00	2	1	1	0	0
12:00	4	4	0	0	0
13:00	5	4	1	0	0
14:00	2	2	0	0	0
15:00	4	4	0	0	0
16:00	0	0	0	0	0
17:00	5	3	2	0	0
18:00	6	6	0	0	0
19:00	3	2	1	0	0
20:00	4	4	0	0	0
21:00	1	1	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	40	34	6	0	0
16H(6-22)	50	43	7	0	0
18H(6-24)	50	43	7	0	0
24H(0-24)	51	44	7	0	0
AM Peak	10:00	08:00	09:00	00:00	00:00
	5	4	1	0	0
PM Peak	18:00	18:00	17:00	12:00	12:00
	6	6	2	0	0

Paul Castle Associates

Direction: Northeastbound

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	1	1	0	0	0
07:00	3	2	1	0	0
08:00	3	2	1	0	0
09:00	2	2	0	0	0
10:00	3	2	1	0	0
11:00	3	2	1	0	0
12:00	4	4	0	0	0
13:00	5	5	0	0	0
14:00	3	3	0	0	0
15:00	3	2	1	0	0
16:00	2	2	0	0	0
17:00	3	2	1	0	0
18:00	3	2	1	0	0
19:00	3	3	0	0	0
20:00	5	4	1	0	0
21:00	5	5	0	0	0
22:00	1	1	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	37	30	7	0	0
16H(6-22)	51	43	8	0	0
18H(6-24)	52	44	8	0	0
24H(0-24)	52	44	8	0	0
AM Peak	07:00	07:00	07:00	00:00	00:00
	3	2	1	0	0
PM Peak	13:00	13:00	15:00	12:00	12:00
	5	5	1	0	0

Paul Castle Associates

Direction: Total Flow

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	3	3	0	0	0
07:00	3	2	1	0	0
08:00	7	6	1	0	0
09:00	5	4	1	0	0
10:00	8	6	2	0	0
11:00	5	3	2	0	0
12:00	8	8	0	0	0
13:00	10	9	1	0	0
14:00	5	5	0	0	0
15:00	7	6	1	0	0
16:00	2	2	0	0	0
17:00	8	5	3	0	0
18:00	9	8	1	0	0
19:00	6	5	1	0	0
20:00	9	8	1	0	0
21:00	6	6	0	0	0
22:00	1	1	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	77	64	13	0	0
16H(6-22)	101	86	15	0	0
18H(6-24)	102	87	15	0	0
24H(0-24)	103	88	15	0	0
AM Peak	10:00	08:00	10:00	00:00	00:00
	8	6	2	0	0
PM Peak	13:00	13:00	17:00	12:00	12:00
	10	9	3	0	0

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound 11/06/2023

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	0	0	0	0	0
07:00	0	0	0	0	0
08:00	1	1	0	0	0
09:00	5	3	2	0	0
10:00	2	1	0	1	0
11:00	3	3	0	0	0
12:00	1	1	0	0	0
13:00	5	5	0	0	0
14:00	6	5	1	0	0
15:00	6	6	0	0	0
16:00	1	1	0	0	0
17:00	2	2	0	0	0
18:00	5	5	0	0	0
19:00	2	1	1	0	0
20:00	0	0	0	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	37	33	3	1	0
16H(6-22)	39	34	4	1	0
18H(6-24)	39	34	4	1	0
24H(0-24)	40	35	4	1	0
AM Peak	09:00	09:00	09:00	10:00	00:00
	5	3	2	1	0
PM Peak	14:00	15:00	14:00	12:00	12:00
	6	6	1	0	0

Paul Castle Associates

Direction: Northeastbound

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	1	1	0	0	0
07:00	1	1	0	0	0
08:00	1	1	0	0	0
09:00	3	2	1	0	0
10:00	4	3	1	0	0
11:00	2	2	0	0	0
12:00	1	1	0	0	0
13:00	4	4	0	0	0
14:00	5	5	0	0	0
15:00	4	3	1	0	0
16:00	1	1	0	0	0
17:00	4	4	0	0	0
18:00	0	0	0	0	0
19:00	4	3	1	0	0
20:00	1	1	0	0	0
21:00	0	0	0	0	0
22:00	1	1	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	30	27	3	0	0
16H(6-22)	36	32	4	0	0
18H(6-24)	37	33	4	0	0
24H(0-24)	37	33	4	0	0
AM Peak	10:00	10:00	09:00	00:00	00:00
	4	3	1	0	0
PM Peak	14:00	14:00	15:00	12:00	12:00
	5	5	1	0	0

Paul Castle Associates

Direction: Total Flow

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	1	1	0	0	0
07:00	1	1	0	0	0
08:00	2	2	0	0	0
09:00	8	5	3	0	0
10:00	6	4	1	1	0
11:00	5	5	0	0	0
12:00	2	2	0	0	0
13:00	9	9	0	0	0
14:00	11	10	1	0	0
15:00	10	9	1	0	0
16:00	2	2	0	0	0
17:00	6	6	0	0	0
18:00	5	5	0	0	0
19:00	6	4	2	0	0
20:00	1	1	0	0	0
21:00	0	0	0	0	0
22:00	1	1	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	67	60	6	1	0
16H(6-22)	75	66	8	1	0
18H(6-24)	76	67	8	1	0
24H(0-24)	77	68	8	1	0
AM Peak	09:00	09:00	09:00	10:00	00:00
	8	5	3	1	0
PM Peak	14:00	14:00	19:00	12:00	12:00
	11	10	2	0	0

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

12/06/2023

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	1	1	0	0	0
06:00	0	0	0	0	0
07:00	4	4	0	0	0
08:00	2	2	0	0	0
09:00	9	8	1	0	0
10:00	3	3	0	0	0
11:00	5	4	1	0	0
12:00	0	0	0	0	0
13:00	6	5	1	0	0
14:00	9	6	3	0	0
15:00	2	1	1	0	0
16:00	3	1	2	0	0
17:00	1	1	0	0	0
18:00	3	3	0	0	0
19:00	2	2	0	0	0
20:00	0	0	0	0	0
21:00	2	2	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	47	38	9	0	0
16H(6-22)	51	42	9	0	0
18H(6-24)	51	42	9	0	0
24H(0-24)	52	43	9	0	0
AM Peak	09:00	09:00	09:00	00:00	00:00
	9	8	1	0	0
PM Peak	14:00	14:00	14:00	12:00	12:00
	9	6	3	0	0

Paul Castle Associates

Direction: Northeastbound

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	1	0	1	0	0
05:00	0	0	0	0	0
06:00	1	1	0	0	0
07:00	1	1	0	0	0
08:00	2	1	1	0	0
09:00	2	2	0	0	0
10:00	11	11	0	0	0
11:00	3	2	1	0	0
12:00	1	1	0	0	0
13:00	6	5	1	0	0
14:00	9	5	4	0	0
15:00	0	0	0	0	0
16:00	2	1	1	0	0
17:00	1	1	0	0	0
18:00	2	2	0	0	0
19:00	0	0	0	0	0
20:00	3	3	0	0	0
21:00	3	3	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	40	32	8	0	0
16H(6-22)	47	39	8	0	0
18H(6-24)	47	39	8	0	0
24H(0-24)	48	39	9	0	0
AM Peak	10:00	10:00	04:00	00:00	00:00
	11	11	1	0	0
PM Peak	14:00	13:00	14:00	12:00	12:00
	9	5	4	0	0

Paul Castle Associates

Direction: Total Flow

Hour Beginning	Total Volume	LIGHT	OGV1	OGV2	BUS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	1	0	1	0	0
05:00	1	1	0	0	0
06:00	1	1	0	0	0
07:00	5	5	0	0	0
08:00	4	3	1	0	0
09:00	11	10	1	0	0
10:00	14	14	0	0	0
11:00	8	6	2	0	0
12:00	1	1	0	0	0
13:00	12	10	2	0	0
14:00	18	11	7	0	0
15:00	2	1	1	0	0
16:00	5	2	3	0	0
17:00	2	2	0	0	0
18:00	5	5	0	0	0
19:00	2	2	0	0	0
20:00	3	3	0	0	0
21:00	5	5	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
Total					
12H(7-19)	87	70	17	0	0
16H(6-22)	98	81	17	0	0
18H(6-24)	98	81	17	0	0
24H(0-24)	100	82	18	0	0
AM Peak	10:00	10:00	11:00	00:00	00:00
	14	14	2	0	0
PM Peak	14:00	14:00	14:00	12:00	12:00
	18	11	7	0	0

Paul Castle Associates

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

06/06/2023

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
07:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
08:00	10	17.7	15.0	2.6	0	0	5	5	0	0	0	0	0	0	0	0
09:00	6	26.2	17.5	8.4	0	1	1	3	0	1	0	0	0	0	0	0
10:00	4	18.0	15.0	2.9	0	0	2	2	0	0	0	0	0	0	0	0
11:00	5	26.0	18.5	7.2	0	1	0	2	2	0	0	0	0	0	0	0
12:00	5	25.1	19.5	5.4	0	0	1	2	2	0	0	0	0	0	0	0
13:00	7	25.2	20.0	5.0	0	0	1	3	3	0	0	0	0	0	0	0
14:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
15:00	2	29.1	16.3	12.4	0	1	0	0	1	0	0	0	0	0	0	0
16:00	5	22.3	17.0	5.1	0	0	2	2	1	0	0	0	0	0	0	0
17:00	7	21.5	15.7	5.5	0	1	2	3	1	0	0	0	0	0	0	0
18:00	5	22.8	16.0	6.5	0	1	1	2	1	0	0	0	0	0	0	0
19:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
20:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total 2H(10-12)	9	22.8	16.9	5.7	0	1	2	4	2	0	0	0	0	0	0	0
2H(14-16)	4	23.4	15.6	7.5	0	1	1	1	1	0	0	0	0	0	0	0
12H(7-19)	60	22.5	16.9	5.4	0	5	17	26	11	1	0	0	0	0	0	0
24H(0-24)	61	22.4	16.8	5.4	0	5	18	26	11	1	0	0	0	0	0	0
AM Peak	08:00	09:00	11:00	09:00	00:00	09:00	08:00	08:00	11:00	09:00	00:00	00:00	00:00	00:00	00:00	00:00
	10	**26.2**	**18.5**	**8.4**	**0**	**1**	**5**	**5**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	13:00	15:00	13:00	15:00	12:00	15:00	16:00	13:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	7	**29.1**	**20.0**	**12.4**	**0**	**1**	**2**	**3**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Northeastbound

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
07:00	2	7.5	7.5	0.0	0	2	0	0	0	0	0	0	0	0	0	0
08:00	6	21.4	16.3	4.9	0	0	3	2	1	0	0	0	0	0	0	0
09:00	5	22.6	18.0	4.5	0	0	1	3	1	0	0	0	0	0	0	0
10:00	6	18.4	14.2	4.1	0	1	2	3	0	0	0	0	0	0	0	0
11:00	3	13.8	10.8	2.9	0	1	2	0	0	0	0	0	0	0	0	0
12:00	6	20.8	14.6	6.0	0	1	3	1	1	0	0	0	0	0	0	0
13:00	7	18.6	12.1	6.2	0	3	3	0	1	0	0	0	0	0	0	0
14:00	2	12.5	12.5	0.0	0	0	2	0	0	0	0	0	0	0	0	0
15:00	3	17.7	12.5	5.0	0	1	1	1	0	0	0	0	0	0	0	0
16:00	4	23.0	16.9	5.9	0	0	2	1	1	0	0	0	0	0	0	0
17:00	6	21.4	13.8	7.4	0	3	0	2	1	0	0	0	0	0	0	0
18:00	7	23.1	16.1	6.7	0	1	3	1	2	0	0	0	0	0	0	0
19:00	2	12.5	12.5	0.0	0	0	2	0	0	0	0	0	0	0	0	0
20:00	3	28.3	20.8	7.2	0	0	1	0	2	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total 2H(10-12)	9	17.1	13.1	3.9	0	2	4	3	0	0	0	0	0	0	0	0
2H(14-16)	5	16.2	12.5	3.5	0	1	3	1	0	0	0	0	0	0	0	0
12H(7-19)	57	20.1	14.3	5.6	0	13	22	14	8	0	0	0	0	0	0	0
24H(0-24)	62	20.5	14.6	5.7	0	13	25	14	10	0	0	0	0	0	0	0
AM Peak	08:00	09:00	09:00	08:00	00:00	07:00	08:00	09:00	08:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	6	**22.6**	**18.0**	**4.9**	**0**	**2**	**3**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	13:00	20:00	20:00	17:00	12:00	13:00	12:00	17:00	18:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	7	**28.3**	**20.8**	**7.4**	**0**	**3**	**3**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Total Flow

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
07:00	4	16.2	11.3	4.8	0	2	1	1	0	0	0	0	0	0	0	0
08:00	16	19.2	15.5	3.6	0	0	8	7	1	0	0	0	0	0	0	0
09:00	11	24.5	17.7	6.6	0	1	2	6	1	1	0	0	0	0	0	0
10:00	10	18.1	14.5	3.5	0	1	4	5	0	0	0	0	0	0	0	0
11:00	8	22.8	15.6	6.9	0	2	2	2	2	0	0	0	0	0	0	0
12:00	11	23.1	16.8	6.0	0	1	4	3	3	0	0	0	0	0	0	0
13:00	14	23.1	16.1	6.8	0	3	4	3	4	0	0	0	0	0	0	0
14:00	4	16.3	13.8	2.5	0	0	3	1	0	0	0	0	0	0	0	0
15:00	5	21.7	14.0	7.4	0	2	1	1	1	0	0	0	0	0	0	0
16:00	9	22.3	16.9	5.1	0	0	4	3	2	0	0	0	0	0	0	0
17:00	13	21.3	14.8	6.2	0	4	2	5	2	0	0	0	0	0	0	0
18:00	12	22.6	16.0	6.3	0	2	4	3	3	0	0	0	0	0	0	0
19:00	2	12.5	12.5	0.0	0	0	2	0	0	0	0	0	0	0	0	0
20:00	3	28.3	20.8	7.2	0	0	1	0	2	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	18	20.3	15.0	5.1	0	3	6	7	2	0	0	0	0	0	0	0
2H(14-16)	9	19.6	13.9	5.5	0	2	4	2	1	0	0	0	0	0	0	0
12H(7-19)	117	21.5	15.6	5.6	0	18	39	40	19	1	0	0	0	0	0	0
24H(0-24)	123	21.5	15.7	5.6	0	18	43	40	21	1	0	0	0	0	0	0
AM Peak	08:00	09:00	09:00	11:00	00:00	07:00	08:00	08:00	11:00	09:00	00:00	00:00	00:00	00:00	00:00	00:00
	16	**24.5**	**17.7**	**6.9**	**0**	**2**	**8**	**7**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	13:00	20:00	20:00	15:00	12:00	17:00	12:00	17:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	14	**28.3**	**20.8**	**7.4**	**0**	**4**	**4**	**5**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

07/06/2023

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
07:00	7	21.5	15.7	5.5	0	1	2	3	1	0	0	0	0	0	0	0
08:00	9	27.3	19.4	7.6	0	0	4	1	3	1	0	0	0	0	0	0
09:00	2	12.5	12.5	0.0	0	0	2	0	0	0	0	0	0	0	0	0
10:00	7	23.0	14.6	8.1	0	1	5	0	0	1	0	0	0	0	0	0
11:00	3	13.8	10.8	2.9	0	1	2	0	0	0	0	0	0	0	0	0
12:00	6	20.3	12.9	7.1	0	3	1	1	1	0	0	0	0	0	0	0
13:00	7	20.8	15.0	5.6	0	1	3	2	1	0	0	0	0	0	0	0
14:00	3	28.3	20.8	7.2	0	0	1	0	2	0	0	0	0	0	0	0
15:00	4	23.0	16.9	5.9	0	0	2	1	1	0	0	0	0	0	0	0
16:00	5	21.7	14.0	7.4	0	2	1	1	1	0	0	0	0	0	0	0
17:00	4	23.5	18.1	5.2	0	0	1	2	1	0	0	0	0	0	0	0
18:00	4	15.2	10.0	5.0	0	3	0	1	0	0	0	0	0	0	0	0
19:00	2	26.7	21.3	5.3	0	0	0	1	1	0	0	0	0	0	0	0
20:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
21:00	1	-	25.0	-	0	0	0	0	1	0	0	0	0	0	0	0
22:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	10	20.7	13.5	7.0	0	2	7	0	0	1	0	0	0	0	0	0
2H(14-16)	7	25.1	18.6	6.3	0	0	3	1	3	0	0	0	0	0	0	0
12H(7-19)	61	22.2	15.4	6.6	0	12	24	12	11	2	0	0	0	0	0	0
24H(0-24)	67	22.5	15.7	6.5	0	12	25	15	13	2	0	0	0	0	0	0
AM Peak	08:00	08:00	08:00	10:00	00:00	07:00	10:00	07:00	08:00	08:00	00:00	00:00	00:00	00:00	00:00	00:00
	9	**27.3**	**19.4**	**8.1**	**0**	**1**	**5**	**3**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	13:00	14:00	21:00	16:00	12:00	12:00	13:00	13:00	14:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	7	**28.3**	**25.0**	**7.4**	**0**	**3**	**3**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Northeastbound

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
07:00	2	19.8	12.5	7.1	0	1	0	1	0	0	0	0	0	0	0	0
08:00	9	22.7	18.1	4.5	0	0	2	5	2	0	0	0	0	0	0	0
09:00	3	17.2	14.2	2.9	0	0	2	1	0	0	0	0	0	0	0	0
10:00	7	23.6	16.8	6.6	0	1	2	2	2	0	0	0	0	0	0	0
11:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
12:00	8	21.4	15.3	5.9	0	2	1	4	1	0	0	0	0	0	0	0
13:00	7	15.5	12.5	2.9	0	1	5	1	0	0	0	0	0	0	0	0
14:00	5	21.9	15.0	6.6	0	1	2	1	1	0	0	0	0	0	0	0
15:00	2	17.5	17.5	0.0	0	0	0	2	0	0	0	0	0	0	0	0
16:00	6	24.6	17.5	6.9	0	1	1	2	2	0	0	0	0	0	0	0
17:00	3	24.9	18.3	6.3	0	0	1	1	1	0	0	0	0	0	0	0
18:00	5	16.2	12.5	3.5	0	1	3	1	0	0	0	0	0	0	0	0
19:00	4	16.7	12.5	4.1	0	1	2	1	0	0	0	0	0	0	0	0
20:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	8	22.7	16.3	6.3	0	1	3	2	2	0	0	0	0	0	0	0
2H(14-16)	7	21.5	15.7	5.5	0	1	2	3	1	0	0	0	0	0	0	0
12H(7-19)	58	21.0	15.6	5.3	0	8	20	21	9	0	0	0	0	0	0	0
24H(0-24)	63	20.7	15.3	5.2	0	9	23	22	9	0	0	0	0	0	0	0
AM Peak	08:00	10:00	08:00	07:00	00:00	07:00	08:00	08:00	08:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	9	**23.6**	**18.1**	**7.1**	**0**	**1**	**2**	**5**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	12:00	17:00	17:00	16:00	12:00	12:00	13:00	12:00	16:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	8	**24.9**	**18.3**	**6.9**	**0**	**2**	**5**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Total Flow

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
07:00	9	20.8	15.0	5.6	0	2	2	4	1	0	0	0	0	0	0	0
08:00	18	25.0	18.8	6.1	0	0	6	6	5	1	0	0	0	0	0	0
09:00	5	15.8	13.5	2.2	0	0	4	1	0	0	0	0	0	0	0	0
10:00	14	23.1	15.7	7.2	0	2	7	2	2	1	0	0	0	0	0	0
11:00	4	13.8	11.3	2.5	0	1	3	0	0	0	0	0	0	0	0	0
12:00	14	20.8	14.3	6.3	0	5	2	5	2	0	0	0	0	0	0	0
13:00	14	18.4	13.8	4.5	0	2	8	3	1	0	0	0	0	0	0	0
14:00	8	24.4	17.2	7.0	0	1	3	1	3	0	0	0	0	0	0	0
15:00	6	21.8	17.1	4.6	0	0	2	3	1	0	0	0	0	0	0	0
16:00	11	23.2	15.9	7.0	0	3	2	3	3	0	0	0	0	0	0	0
17:00	7	23.5	18.2	5.1	0	0	2	3	2	0	0	0	0	0	0	0
18:00	9	15.7	11.4	4.2	0	4	3	2	0	0	0	0	0	0	0	0
19:00	6	21.6	15.4	6.0	0	1	2	2	1	0	0	0	0	0	0	0
20:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
21:00	1	-	25.0	-	0	0	0	0	1	0	0	0	0	0	0	0
22:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total 2H(10-12)	18	21.6	14.7	6.6	0	3	10	2	2	1	0	0	0	0	0	0
2H(14-16)	14	23.2	17.1	5.9	0	1	5	4	4	0	0	0	0	0	0	0
12H(7-19)	119	21.7	15.5	6.0	0	20	44	33	20	2	0	0	0	0	0	0
24H(0-24)	130	21.7	15.5	5.9	0	21	48	37	22	2	0	0	0	0	0	0
AM Peak	08:00	08:00	08:00	10:00	00:00	07:00	10:00	08:00	08:00	08:00	00:00	00:00	00:00	00:00	00:00	00:00
	18	**25.0**	**18.8**	**7.2**	**0**	**2**	**7**	**6**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	12:00	14:00	21:00	16:00	12:00	12:00	13:00	12:00	14:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	14	**24.4**	**25.0**	**7.0**	**0**	**5**	**8**	**5**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

08/06/2023

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
07:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
08:00	5	22.6	18.0	4.5	0	0	1	3	1	0	0	0	0	0	0	0
09:00	12	22.8	16.9	5.8	0	1	4	4	3	0	0	0	0	0	0	0
10:00	5	25.0	18.5	6.3	0	0	2	1	2	0	0	0	0	0	0	0
11:00	2	17.5	17.5	0.0	0	0	0	2	0	0	0	0	0	0	0	0
12:00	5	18.8	16.5	2.2	0	0	1	4	0	0	0	0	0	0	0	0
13:00	7	23.5	18.2	5.1	0	0	2	3	2	0	0	0	0	0	0	0
14:00	6	23.5	15.8	7.4	0	1	3	0	2	0	0	0	0	0	0	0
15:00	2	27.9	18.8	8.8	0	0	1	0	1	0	0	0	0	0	0	0
16:00	3	24.5	20.0	4.3	0	0	0	2	1	0	0	0	0	0	0	0
17:00	5	17.3	14.5	2.7	0	0	3	2	0	0	0	0	0	0	0	0
18:00	5	21.7	16.0	5.5	0	0	3	1	1	0	0	0	0	0	0	0
19:00	6	20.8	14.6	6.0	0	1	3	1	1	0	0	0	0	0	0	0
20:00	1	-	25.0	-	0	0	0	0	1	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total 2H(10-12)	7	23.5	18.2	5.1	0	0	2	3	2	0	0	0	0	0	0	0
2H(14-16)	8	24.0	16.6	7.2	0	1	4	0	3	0	0	0	0	0	0	0
12H(7-19)	58	22.3	16.9	5.2	0	3	20	22	13	0	0	0	0	0	0	0
24H(0-24)	67	22.3	16.9	5.2	0	4	23	25	15	0	0	0	0	0	0	0
AM Peak	09:00	10:00	10:00	10:00	00:00	07:00	09:00	09:00	09:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	12	**25.0**	**18.5**	**6.3**	**0**	**1**	**4**	**4**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	13:00	15:00	20:00	15:00	12:00	14:00	14:00	12:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	7	**27.9**	**25.0**	**8.8**	**0**	**1**	**3**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Northeastbound

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
07:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
08:00	4	22.1	14.4	7.5	0	1	2	0	1	0	0	0	0	0	0	0
09:00	8	22.0	15.9	5.8	0	2	0	5	1	0	0	0	0	0	0	0
10:00	6	24.2	18.3	5.6	0	0	2	2	2	0	0	0	0	0	0	0
11:00	3	24.9	18.3	6.3	0	0	1	1	1	0	0	0	0	0	0	0
12:00	6	15.6	11.7	3.8	0	2	3	1	0	0	0	0	0	0	0	0
13:00	5	27.1	20.0	6.8	0	0	2	0	3	0	0	0	0	0	0	0
14:00	4	23.4	15.6	7.5	0	1	1	1	1	0	0	0	0	0	0	0
15:00	4	16.2	11.3	4.8	0	2	1	1	0	0	0	0	0	0	0	0
16:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
17:00	4	18.7	13.8	4.8	0	1	1	2	0	0	0	0	0	0	0	0
18:00	7	15.5	12.5	2.9	0	1	5	1	0	0	0	0	0	0	0	0
19:00	5	24.8	16.5	8.0	0	1	2	0	2	0	0	0	0	0	0	0
20:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total 2H(10-12)	9	24.0	18.3	5.4	0	0	3	3	3	0	0	0	0	0	0	0
2H(14-16)	8	19.9	13.4	6.3	0	3	2	2	1	0	0	0	0	0	0	0
12H(7-19)	53	21.0	15.1	5.7	0	10	19	15	9	0	0	0	0	0	0	0
24H(0-24)	60	21.1	15.0	5.9	0	13	21	15	11	0	0	0	0	0	0	0
AM Peak	09:00	11:00	10:00	08:00	00:00	09:00	08:00	09:00	10:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	8	**24.9**	**18.3**	**7.5**	**0**	**2**	**2**	**5**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	18:00	13:00	13:00	19:00	12:00	12:00	18:00	17:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	7	**27.1**	**20.0**	**8.0**	**0**	**2**	**5**	**2**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Total Flow

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	2	19.8	12.5	7.1	0	1	0	1	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
07:00	2	13.7	10.0	3.5	0	1	1	0	0	0	0	0	0	0	0	0
08:00	9	22.5	16.4	5.9	0	1	3	3	2	0	0	0	0	0	0	0
09:00	20	22.3	16.5	5.6	0	3	4	9	4	0	0	0	0	0	0	0
10:00	11	24.2	18.4	5.6	0	0	4	3	4	0	0	0	0	0	0	0
11:00	5	22.6	18.0	4.5	0	0	1	3	1	0	0	0	0	0	0	0
12:00	11	17.9	13.9	3.9	0	2	4	5	0	0	0	0	0	0	0	0
13:00	12	24.9	19.0	5.7	0	0	4	3	5	0	0	0	0	0	0	0
14:00	10	23.0	15.8	7.0	0	2	4	1	3	0	0	0	0	0	0	0
15:00	6	20.7	13.8	6.7	0	2	2	1	1	0	0	0	0	0	0	0
16:00	4	23.3	19.4	3.8	0	0	0	3	1	0	0	0	0	0	0	0
17:00	9	17.8	14.2	3.5	0	1	4	4	0	0	0	0	0	0	0	0
18:00	12	18.4	14.0	4.3	0	1	8	2	1	0	0	0	0	0	0	0
19:00	11	22.4	15.5	6.7	0	2	5	1	3	0	0	0	0	0	0	0
20:00	2	29.1	16.3	12.4	0	1	0	0	1	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	16	23.6	18.3	5.1	0	0	5	6	5	0	0	0	0	0	0	0
2H(14-16)	16	22.0	15.0	6.7	0	4	6	2	4	0	0	0	0	0	0	0
12H(7-19)	111	21.7	16.1	5.5	0	13	39	37	22	0	0	0	0	0	0	0
24H(0-24)	127	21.8	16.0	5.6	0	17	44	40	26	0	0	0	0	0	0	0
AM Peak	09:00	10:00	10:00	01:00	00:00	09:00	09:00	09:00	09:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	20	**24.2**	**18.4**	**7.1**	**0**	**3**	**4**	**9**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	13:00	20:00	16:00	20:00	12:00	12:00	18:00	12:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	12	**29.1**	**19.4**	**12.4**	**0**	**2**	**8**	**5**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

09/06/2023

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
07:00	3	17.5	17.5	0.0	0	0	0	3	0	0	0	0	0	0	0	0
08:00	7	22.0	16.4	5.4	0	1	1	4	1	0	0	0	0	0	0	0
09:00	7	24.0	17.5	6.3	0	1	1	3	2	0	0	0	0	0	0	0
10:00	3	28.3	20.8	7.2	0	0	1	0	2	0	0	0	0	0	0	0
11:00	6	27.7	19.6	7.8	0	0	2	2	1	1	0	0	0	0	0	0
12:00	5	22.6	18.0	4.5	0	0	1	3	1	0	0	0	0	0	0	0
13:00	3	27.0	22.5	4.3	0	0	0	1	2	0	0	0	0	0	0	0
14:00	4	12.5	12.5	0.0	0	0	4	0	0	0	0	0	0	0	0	0
15:00	5	18.3	15.5	2.7	0	0	2	3	0	0	0	0	0	0	0	0
16:00	4	23.0	16.9	5.9	0	0	2	1	1	0	0	0	0	0	0	0
17:00	10	18.9	14.5	4.2	0	2	2	6	0	0	0	0	0	0	0	0
18:00	4	18.0	15.0	2.9	0	0	2	2	0	0	0	0	0	0	0	0
19:00	2	12.5	12.5	0.0	0	0	2	0	0	0	0	0	0	0	0	0
20:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
21:00	1	-	25.0	-	0	0	0	0	1	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	9	27.4	20.0	7.2	0	0	3	2	3	1	0	0	0	0	0	0
2H(14-16)	9	16.8	14.2	2.5	0	0	6	3	0	0	0	0	0	0	0	0
12H(7-19)	61	22.2	16.8	5.2	0	4	18	28	10	1	0	0	0	0	0	0
24H(0-24)	67	22.1	16.8	5.1	0	4	21	30	11	1	0	0	0	0	0	0
AM Peak	08:00	10:00	10:00	11:00	00:00	08:00	11:00	08:00	09:00	11:00	00:00	00:00	00:00	00:00	00:00	00:00
	7	**28.3**	**20.8**	**7.8**	**0**	**1**	**2**	**4**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	17:00	13:00	21:00	16:00	12:00	17:00	14:00	17:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	10	**27.0**	**25.0**	**5.9**	**0**	**2**	**4**	**6**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Northeastbound

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
07:00	5	20.8	15.0	5.6	0	0	4	0	1	0	0	0	0	0	0	0
08:00	4	16.3	13.8	2.5	0	0	3	1	0	0	0	0	0	0	0	0
09:00	4	18.0	15.0	2.9	0	0	2	2	0	0	0	0	0	0	0	0
10:00	5	24.7	15.5	8.9	0	2	1	0	2	0	0	0	0	0	0	0
11:00	7	17.8	13.9	3.8	0	1	3	3	0	0	0	0	0	0	0	0
12:00	4	16.3	13.8	2.5	0	0	3	1	0	0	0	0	0	0	0	0
13:00	4	26.7	17.5	8.9	0	1	1	0	2	0	0	0	0	0	0	0
14:00	7	20.0	14.3	5.5	0	1	4	1	1	0	0	0	0	0	0	0
15:00	5	17.7	12.5	5.0	0	2	1	2	0	0	0	0	0	0	0	0
16:00	4	23.5	18.1	5.2	0	0	1	2	1	0	0	0	0	0	0	0
17:00	5	25.5	17.5	7.7	0	1	1	1	2	0	0	0	0	0	0	0
18:00	2	12.5	12.5	0.0	0	0	2	0	0	0	0	0	0	0	0	0
19:00	4	13.8	11.3	2.5	0	1	3	0	0	0	0	0	0	0	0	0
20:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
21:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	12	20.9	14.6	6.1	0	3	4	3	2	0	0	0	0	0	0	0
2H(14-16)	12	18.9	13.5	5.2	0	3	5	3	1	0	0	0	0	0	0	0
12H(7-19)	56	20.5	15.0	5.4	0	8	26	13	9	0	0	0	0	0	0	0
24H(0-24)	62	20.1	14.6	5.2	0	9	31	13	9	0	0	0	0	0	0	0
AM Peak	11:00	10:00	10:00	10:00	00:00	10:00	07:00	11:00	10:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	7	**24.7**	**15.5**	**8.9**	**0**	**2**	**4**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	14:00	13:00	16:00	13:00	12:00	15:00	14:00	15:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	7	**26.7**	**18.1**	**8.9**	**0**	**2**	**4**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Total Flow

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
07:00	8	20.5	15.9	4.4	0	0	4	3	1	0	0	0	0	0	0	0
08:00	11	20.2	15.5	4.6	0	1	4	5	1	0	0	0	0	0	0	0
09:00	11	22.1	16.6	5.3	0	1	3	5	2	0	0	0	0	0	0	0
10:00	8	26.0	17.5	8.2	0	2	2	0	4	0	0	0	0	0	0	0
11:00	13	23.2	16.5	6.4	0	1	5	5	1	1	0	0	0	0	0	0
12:00	9	20.4	16.1	4.2	0	0	4	4	1	0	0	0	0	0	0	0
13:00	7	27.2	19.6	7.3	0	1	1	1	4	0	0	0	0	0	0	0
14:00	11	18.2	13.6	4.4	0	1	8	1	1	0	0	0	0	0	0	0
15:00	10	18.3	14.0	4.1	0	2	3	5	0	0	0	0	0	0	0	0
16:00	8	22.9	17.5	5.2	0	0	3	3	2	0	0	0	0	0	0	0
17:00	15	21.2	15.5	5.5	0	3	3	7	2	0	0	0	0	0	0	0
18:00	6	16.8	14.2	2.6	0	0	4	2	0	0	0	0	0	0	0	0
19:00	6	13.8	11.7	2.0	0	1	5	0	0	0	0	0	0	0	0	0
20:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
21:00	2	27.9	18.8	8.8	0	0	1	0	1	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	21	24.1	16.9	7.0	0	3	7	5	5	1	0	0	0	0	0	0
2H(14-16)	21	18.1	13.8	4.2	0	3	11	6	1	0	0	0	0	0	0	0
12H(7-19)	117	21.5	15.9	5.3	0	12	44	41	19	1	0	0	0	0	0	0
24H(0-24)	129	21.2	15.8	5.3	0	13	52	43	20	1	0	0	0	0	0	0
AM Peak	11:00	10:00	10:00	10:00	00:00	10:00	11:00	08:00	10:00	11:00	00:00	00:00	00:00	00:00	00:00	00:00
	13	**26.0**	**17.5**	**8.2**	**0**	**2**	**5**	**5**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	17:00	21:00	13:00	21:00	12:00	17:00	14:00	17:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	15	**27.9**	**19.6**	**8.8**	**0**	**3**	**8**	**7**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

10/06/2023

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	2	27.9	18.8	8.8	0	0	1	0	1	0	0	0	0	0	0	0
07:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
08:00	4	25.7	21.3	4.3	0	0	0	2	2	0	0	0	0	0	0	0
09:00	3	24.9	18.3	6.3	0	0	1	1	1	0	0	0	0	0	0	0
10:00	5	25.1	19.5	5.4	0	0	1	2	2	0	0	0	0	0	0	0
11:00	2	29.1	16.3	12.4	0	1	0	0	1	0	0	0	0	0	0	0
12:00	4	23.0	16.9	5.9	0	0	2	1	1	0	0	0	0	0	0	0
13:00	5	24.8	20.5	4.1	0	0	0	3	2	0	0	0	0	0	0	0
14:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
15:00	4	26.3	20.0	6.1	0	0	1	1	2	0	0	0	0	0	0	0
16:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
17:00	5	25.0	18.5	6.3	0	0	2	1	2	0	0	0	0	0	0	0
18:00	6	20.7	13.8	6.7	0	2	2	1	1	0	0	0	0	0	0	0
19:00	3	27.0	22.5	4.3	0	0	0	1	2	0	0	0	0	0	0	0
20:00	4	22.1	14.4	7.5	0	1	2	0	1	0	0	0	0	0	0	0
21:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	7	25.7	18.6	6.9	0	1	1	2	3	0	0	0	0	0	0	0
2H(14-16)	6	24.2	18.3	5.6	0	0	2	2	2	0	0	0	0	0	0	0
12H(7-19)	40	24.2	18.1	5.8	0	3	10	13	14	0	0	0	0	0	0	0
24H(0-24)	51	24.1	18.0	5.9	0	4	14	15	18	0	0	0	0	0	0	0
AM Peak	10:00	11:00	08:00	11:00	00:00	11:00	05:00	08:00	08:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	5	**29.1**	**21.3**	**12.4**	**0**	**1**	**1**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	18:00	19:00	19:00	20:00	12:00	18:00	12:00	13:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	6	**27.0**	**22.5**	**7.5**	**0**	**2**	**2**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Northeastbound

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
07:00	3	24.9	18.3	6.3	0	0	1	1	1	0	0	0	0	0	0	0
08:00	3	17.2	14.2	2.9	0	0	2	1	0	0	0	0	0	0	0	0
09:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
10:00	3	24.5	20.0	4.3	0	0	0	2	1	0	0	0	0	0	0	0
11:00	3	24.9	18.3	6.3	0	0	1	1	1	0	0	0	0	0	0	0
12:00	4	23.4	15.6	7.5	0	1	1	1	1	0	0	0	0	0	0	0
13:00	5	13.8	11.5	2.2	0	1	4	0	0	0	0	0	0	0	0	0
14:00	3	24.5	20.0	4.3	0	0	0	2	1	0	0	0	0	0	0	0
15:00	3	24.1	16.7	7.2	0	0	2	0	1	0	0	0	0	0	0	0
16:00	2	26.7	21.3	5.3	0	0	0	1	1	0	0	0	0	0	0	0
17:00	3	24.3	15.0	9.0	0	1	1	0	1	0	0	0	0	0	0	0
18:00	3	17.7	12.5	5.0	0	1	1	1	0	0	0	0	0	0	0	0
19:00	3	24.9	18.3	6.3	0	0	1	1	1	0	0	0	0	0	0	0
20:00	5	17.3	14.5	2.7	0	0	3	2	0	0	0	0	0	0	0	0
21:00	5	17.3	14.5	2.7	0	0	3	2	0	0	0	0	0	0	0	0
22:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	6	24.3	19.2	4.9	0	0	1	3	2	0	0	0	0	0	0	0
2H(14-16)	6	24.2	18.3	5.6	0	0	2	2	2	0	0	0	0	0	0	0
12H(7-19)	37	22.0	16.1	5.6	0	4	14	11	8	0	0	0	0	0	0	0
24H(0-24)	52	21.1	15.7	5.2	0	5	22	16	9	0	0	0	0	0	0	0
AM Peak	07:00	07:00	10:00	07:00	00:00	00:00	08:00	10:00	07:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	3	**24.9**	**20.0**	**6.3**	**0**	**0**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	13:00	16:00	16:00	17:00	12:00	12:00	13:00	14:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	5	**26.7**	**21.3**	**9.0**	**0**	**1**	**4**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Total Flow

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	3	24.1	16.7	7.2	0	0	2	0	1	0	0	0	0	0	0	0
07:00	3	24.9	18.3	6.3	0	0	1	1	1	0	0	0	0	0	0	0
08:00	7	23.5	18.2	5.1	0	0	2	3	2	0	0	0	0	0	0	0
09:00	5	22.3	17.0	5.1	0	0	2	2	1	0	0	0	0	0	0	0
10:00	8	24.6	19.7	4.7	0	0	1	4	3	0	0	0	0	0	0	0
11:00	5	25.5	17.5	7.7	0	1	1	1	2	0	0	0	0	0	0	0
12:00	8	22.7	16.3	6.3	0	1	3	2	2	0	0	0	0	0	0	0
13:00	10	21.9	16.0	5.7	0	1	4	3	2	0	0	0	0	0	0	0
14:00	5	22.6	18.0	4.5	0	0	1	3	1	0	0	0	0	0	0	0
15:00	7	25.1	18.6	6.3	0	0	3	1	3	0	0	0	0	0	0	0
16:00	2	26.7	21.3	5.3	0	0	0	1	1	0	0	0	0	0	0	0
17:00	8	24.4	17.2	7.0	0	1	3	1	3	0	0	0	0	0	0	0
18:00	9	19.4	13.3	5.9	0	3	3	2	1	0	0	0	0	0	0	0
19:00	6	26.0	20.4	5.3	0	0	1	2	3	0	0	0	0	0	0	0
20:00	9	19.6	14.4	5.0	0	1	5	2	1	0	0	0	0	0	0	0
21:00	6	17.8	15.0	2.7	0	0	3	3	0	0	0	0	0	0	0	0
22:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	13	24.9	18.8	5.8	0	1	2	5	5	0	0	0	0	0	0	0
2H(14-16)	12	23.9	18.3	5.4	0	0	4	4	4	0	0	0	0	0	0	0
12H(7-19)	77	23.2	17.2	5.8	0	7	24	24	22	0	0	0	0	0	0	0
24H(0-24)	103	22.7	16.8	5.7	0	9	36	31	27	0	0	0	0	0	0	0
AM Peak	10:00	11:00	10:00	11:00	00:00	11:00	06:00	10:00	10:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	8	**25.5**	**19.7**	**7.7**	**0**	**1**	**2**	**4**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	13:00	16:00	16:00	17:00	12:00	18:00	20:00	13:00	15:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	10	**26.7**	**21.3**	**7.0**	**0**	**3**	**5**	**3**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

11/06/2023

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
09:00	5	21.9	15.0	6.6	0	1	2	1	1	0	0	0	0	0	0	0
10:00	2	29.1	16.3	12.4	0	1	0	0	1	0	0	0	0	0	0	0
11:00	3	17.2	14.2	2.9	0	0	2	1	0	0	0	0	0	0	0	0
12:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
13:00	5	22.3	17.0	5.1	0	0	2	2	1	0	0	0	0	0	0	0
14:00	6	18.4	14.2	4.1	0	1	2	3	0	0	0	0	0	0	0	0
15:00	6	20.8	14.6	6.0	0	1	3	1	1	0	0	0	0	0	0	0
16:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
17:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
18:00	5	17.8	13.5	4.2	0	1	2	2	0	0	0	0	0	0	0	0
19:00	2	17.5	17.5	0.0	0	0	0	2	0	0	0	0	0	0	0	0
20:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total 2H(10-12)	5	21.9	15.0	6.6	0	1	2	1	1	0	0	0	0	0	0	0
2H(14-16)	12	19.5	14.4	4.9	0	2	5	4	1	0	0	0	0	0	0	0
12H(7-19)	37	20.0	14.9	4.9	0	5	15	13	4	0	0	0	0	0	0	0
24H(0-24)	40	19.9	15.0	4.7	0	5	16	15	4	0	0	0	0	0	0	0
AM Peak	09:00	10:00	10:00	10:00	00:00	09:00	09:00	09:00	09:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	5	**29.1**	**16.3**	**12.4**	**0**	**1**	**2**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	14:00	13:00	12:00	15:00	12:00	14:00	15:00	14:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	6	**22.3**	**17.5**	**6.0**	**0**	**1**	**3**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Northeastbound

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
07:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
08:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
09:00	3	12.5	12.5	0.0	0	0	3	0	0	0	0	0	0	0	0	0
10:00	4	23.2	14.4	8.5	0	2	0	1	1	0	0	0	0	0	0	0
11:00	2	12.5	12.5	0.0	0	0	2	0	0	0	0	0	0	0	0	0
12:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
13:00	4	23.4	15.6	7.5	0	1	1	1	1	0	0	0	0	0	0	0
14:00	5	22.8	16.0	6.5	0	1	1	2	1	0	0	0	0	0	0	0
15:00	4	18.0	15.0	2.9	0	0	2	2	0	0	0	0	0	0	0	0
16:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
17:00	4	16.7	12.5	4.1	0	1	2	1	0	0	0	0	0	0	0	0
18:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
19:00	4	13.8	11.3	2.5	0	1	3	0	0	0	0	0	0	0	0	0
20:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total 2H(10-12)	6	20.7	13.8	6.7	0	2	2	1	1	0	0	0	0	0	0	0
2H(14-16)	9	20.7	15.6	5.0	0	1	3	4	1	0	0	0	0	0	0	0
12H(7-19)	30	19.1	13.6	5.3	0	8	12	7	3	0	0	0	0	0	0	0
24H(0-24)	37	18.4	13.1	5.1	0	11	15	8	3	0	0	0	0	0	0	0
AM Peak	10:00	10:00	10:00	10:00	00:00	10:00	09:00	10:00	10:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	4	**23.2**	**14.4**	**8.5**	**0**	**2**	**3**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	14:00	13:00	22:00	13:00	12:00	12:00	19:00	14:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	5	**23.4**	**17.5**	**7.5**	**0**	**1**	**3**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Total Flow

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
07:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
08:00	2	13.7	10.0	3.5	0	1	1	0	0	0	0	0	0	0	0	0
09:00	8	19.4	14.1	5.2	0	1	5	1	1	0	0	0	0	0	0	0
10:00	6	24.0	15.0	8.7	0	3	0	1	2	0	0	0	0	0	0	0
11:00	5	15.8	13.5	2.2	0	0	4	1	0	0	0	0	0	0	0	0
12:00	2	19.8	12.5	7.1	0	1	0	1	0	0	0	0	0	0	0	0
13:00	9	22.5	16.4	5.9	0	1	3	3	2	0	0	0	0	0	0	0
14:00	11	20.3	15.0	5.1	0	2	3	5	1	0	0	0	0	0	0	0
15:00	10	19.7	14.8	4.8	0	1	5	3	1	0	0	0	0	0	0	0
16:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
17:00	6	17.2	13.3	3.8	0	1	3	2	0	0	0	0	0	0	0	0
18:00	5	17.8	13.5	4.2	0	1	2	2	0	0	0	0	0	0	0	0
19:00	6	17.2	13.3	3.8	0	1	3	2	0	0	0	0	0	0	0	0
20:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
21:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
22:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total 2H(10-12)	11	20.9	14.3	6.3	0	3	4	2	2	0	0	0	0	0	0	0
2H(14-16)	21	19.9	14.9	4.8	0	3	8	8	2	0	0	0	0	0	0	0
12H(7-19)	67	19.6	14.3	5.1	0	13	27	20	7	0	0	0	0	0	0	0
24H(0-24)	77	19.2	14.1	5.0	0	16	31	23	7	0	0	0	0	0	0	0
AM Peak	09:00	10:00	10:00	10:00	00:00	10:00	09:00	09:00	10:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	8	**24.0**	**15.0**	**8.7**	**0**	**3**	**5**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	14:00	13:00	22:00	12:00	12:00	14:00	15:00	14:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	11	**22.5**	**17.5**	**7.1**	**0**	**2**	**5**	**5**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Tween Bridge ATC 19, Marsh Road

Direction: Southwestbound

12/06/2023

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
07:00	4	20.2	15.0	5.0	0	1	0	3	0	0	0	0	0	0	0	0
08:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
09:00	9	20.7	15.6	5.0	0	1	3	4	1	0	0	0	0	0	0	0
10:00	3	13.8	10.8	2.9	0	1	2	0	0	0	0	0	0	0	0	0
11:00	5	25.0	18.5	6.3	0	0	2	1	2	0	0	0	0	0	0	0
12:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
13:00	6	27.7	19.6	7.8	0	0	2	2	1	1	0	0	0	0	0	0
14:00	9	18.4	15.8	2.5	0	0	3	6	0	0	0	0	0	0	0	0
15:00	2	17.5	17.5	0.0	0	0	0	2	0	0	0	0	0	0	0	0
16:00	3	24.5	20.0	4.3	0	0	0	2	1	0	0	0	0	0	0	0
17:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
18:00	3	13.8	10.8	2.9	0	1	2	0	0	0	0	0	0	0	0	0
19:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
20:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
21:00	2	26.7	21.3	5.3	0	0	0	1	1	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	8	22.2	15.6	6.4	0	1	4	1	2	0	0	0	0	0	0	0
2H(14-16)	11	18.6	16.1	2.3	0	0	3	8	0	0	0	0	0	0	0	0
12H(7-19)	47	21.4	16.0	5.3	0	5	15	21	5	1	0	0	0	0	0	0
24H(0-24)	52	21.4	16.1	5.2	0	5	17	23	6	1	0	0	0	0	0	0
AM Peak	09:00	11:00	11:00	11:00	00:00	07:00	09:00	09:00	11:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	9	**25.0**	**18.5**	**6.3**	**0**	**1**	**3**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	14:00	13:00	21:00	13:00	12:00	17:00	14:00	14:00	13:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00
	9	**27.7**	**21.3**	**7.8**	**0**	**1**	**3**	**6**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**

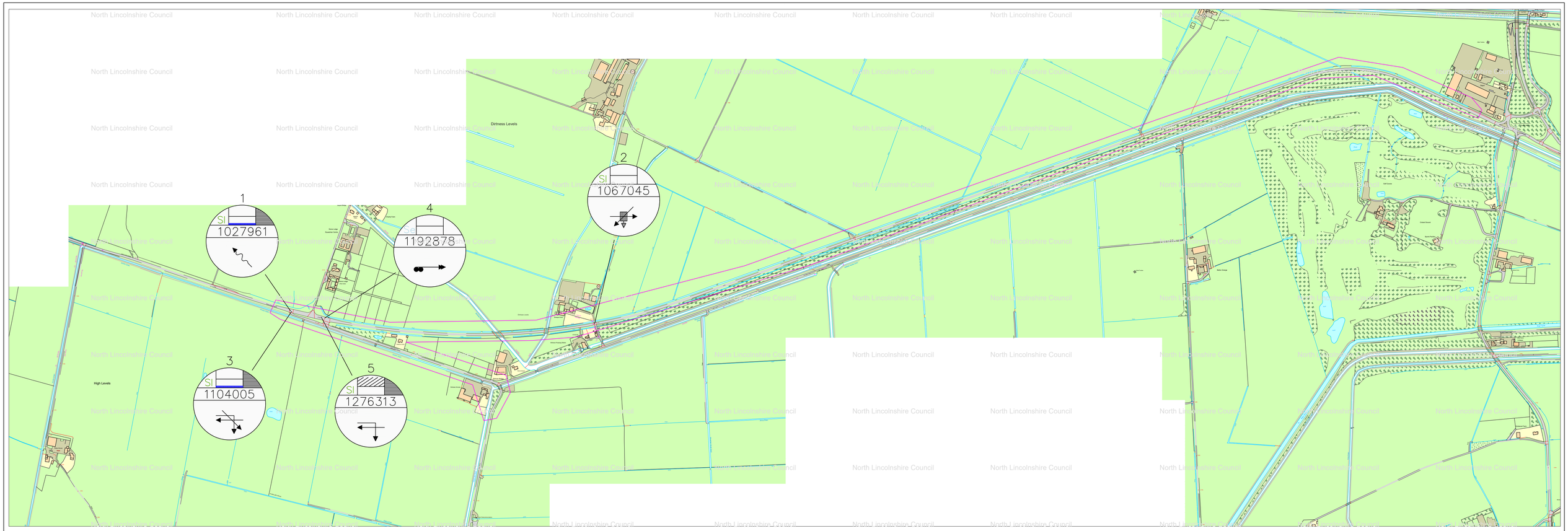
Direction: Northeastbound

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	1	-	25.0	-	0	0	0	0	1	0	0	0	0	0	0	0
05:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
07:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
08:00	2	27.9	18.8	8.8	0	0	1	0	1	0	0	0	0	0	0	0
09:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
10:00	11	16.9	12.0	4.7	0	5	2	4	0	0	0	0	0	0	0	0
11:00	3	24.1	16.7	7.2	0	0	2	0	1	0	0	0	0	0	0	0
12:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
13:00	6	21.6	15.4	6.0	0	1	2	2	1	0	0	0	0	0	0	0
14:00	9	16.8	14.2	2.5	0	0	6	3	0	0	0	0	0	0	0	0
15:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
16:00	2	12.5	12.5	0.0	0	0	2	0	0	0	0	0	0	0	0	0
17:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
18:00	2	13.7	10.0	3.5	0	1	1	0	0	0	0	0	0	0	0	0
19:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
20:00	3	12.2	9.2	2.9	0	2	1	0	0	0	0	0	0	0	0	0
21:00	3	17.2	14.2	2.9	0	0	2	1	0	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	14	18.6	13.0	5.4	0	5	4	4	1	0	0	0	0	0	0	0
2H(14-16)	9	16.8	14.2	2.5	0	0	6	3	0	0	0	0	0	0	0	0
12H(7-19)	40	18.7	13.9	4.6	0	7	19	11	3	0	0	0	0	0	0	0
24H(0-24)	48	18.8	13.8	4.8	0	10	22	12	4	0	0	0	0	0	0	0
AM Peak	10:00	08:00	04:00	08:00	00:00	10:00	10:00	10:00	04:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	11	**27.9**	**25.0**	**8.8**	**0**	**5**	**2**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	14:00	13:00	12:00	13:00	12:00	20:00	14:00	14:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
	9	**21.6**	**17.5**	**6.0**	**0**	**2**	**6**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Direction: Total Flow

Hour Beginning	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <5mph	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<30	Bin 6 30<35	Bin 7 35<40	Bin 8 40<45	Bin 9 45<50	Bin 10 50<55	Bin 11 55<60	Bin 12 >=60
00:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
04:00	1	-	25.0	-	0	0	0	0	1	0	0	0	0	0	0	0
05:00	1	-	12.5	-	0	0	1	0	0	0	0	0	0	0	0	0
06:00	1	-	7.5	-	0	1	0	0	0	0	0	0	0	0	0	0
07:00	5	19.1	14.5	4.5	0	1	1	3	0	0	0	0	0	0	0	0
08:00	4	23.0	16.9	5.9	0	0	2	1	1	0	0	0	0	0	0	0
09:00	11	20.2	15.5	4.6	0	1	4	5	1	0	0	0	0	0	0	0
10:00	14	16.3	11.8	4.3	0	6	4	4	0	0	0	0	0	0	0	0
11:00	8	24.2	17.8	6.2	0	0	4	1	3	0	0	0	0	0	0	0
12:00	1	-	17.5	-	0	0	0	1	0	0	0	0	0	0	0	0
13:00	12	24.7	17.5	7.0	0	1	4	4	2	1	0	0	0	0	0	0
14:00	18	17.7	15.0	2.6	0	0	9	9	0	0	0	0	0	0	0	0
15:00	2	17.5	17.5	0.0	0	0	0	2	0	0	0	0	0	0	0	0
16:00	5	22.3	17.0	5.1	0	0	2	2	1	0	0	0	0	0	0	0
17:00	2	13.7	10.0	3.5	0	1	1	0	0	0	0	0	0	0	0	0
18:00	5	13.3	10.5	2.7	0	2	3	0	0	0	0	0	0	0	0	0
19:00	2	18.7	15.0	3.5	0	0	1	1	0	0	0	0	0	0	0	0
20:00	3	12.2	9.2	2.9	0	2	1	0	0	0	0	0	0	0	0	0
21:00	5	22.3	17.0	5.1	0	0	2	2	1	0	0	0	0	0	0	0
22:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Total																
2H(10-12)	22	19.9	14.0	5.8	0	6	8	5	3	0	0	0	0	0	0	0
2H(14-16)	20	17.9	15.3	2.6	0	0	9	11	0	0	0	0	0	0	0	0
12H(7-19)	87	20.3	15.0	5.1	0	12	34	32	8	1	0	0	0	0	0	0
24H(0-24)	100	20.3	15.0	5.1	0	15	39	35	10	1	0	0	0	0	0	0
AM Peak	10:00	11:00	04:00	11:00	00:00	10:00	09:00	09:00	11:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	14	**24.2**	**25.0**	**6.2**	**0**	**6**	**4**	**5**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak	14:00	13:00	12:00	13:00	12:00	18:00	14:00	14:00	13:00	13:00	12:00	12:00	12:00	12:00	12:00	12:00
	18	**24.7**	**17.5**	**7.0**	**0**	**2**	**9**	**9**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**

Appendix D



	1	2	3	4	5
Reference Number	1027 961	1067 045	1104 005	1192 878	1276 313
Date / Day	Su 14	Fr 16	Fr 29	Mo 13	Tu 14
Month	Mar	Jul	Oct	Jun	Feb
Year	2021	2021	2021	2022	2023
Time	0001	1755	2039	1727	1900
Severity	SI	SI	SI	Se	SI
Dark / Lit					
Weather Conditions					
Road Surface					
Special Conditions					
Carriageway Hazards					
Vehicle Manoeuvres					
Vehicle 1 5 e	??	26	33	30	83
Vehicle 2 6 t		71	21	52	35
Vehicle 3 7 c		36	64		
Vehicle 4 8					
Casualty /age	??	26 36	33 18 20 18 21	30	83 39
Failed to Give-Way					
Signal Ignored					
Loss of Control					
Hit Object IN C'way					
Hit Object OFF C'way					
Vehicle Left C'way	0		0		
Breath Test					
Contributory Factors 1/2	V1 * 503	V2 * 405 V2 * 406	V1 ** 602 V1 ** 406	V1 * 406	V1 ** 602 V1 ** 405
3/4		V1 * 409			V1 ** 707
5/6					
* possible, ** very likely					
School No./Ref.					
User fields: 1					
2					
3					
4					

REV	DETAILS	APPROVED BY	DATE APPROVED

North Lincolnshire Council

Director Communities
Lesley Potts

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NORTH LINCOLNSHIRE COUNCIL 2018 0100023560

Drawing Title: 5 Year Injury related Collisions A18 area (23/05/2020 - 22/05/2025)

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Reference Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	9695 74	9662 94	9682 79	9823 61	1001 316	1014 594	1021 774	1023 042	1032 036	1033 389	1059 973	1079 593	1113 999	1096 525	1109 822	1177 497	1159 783	1175 687	1245 707	1176 814
Date / Day	Th16	Tu21	Tu28	Fr18	We25	Th14	Tu16	Mo22	We17	We07	Sa26	Sa21	We06	Fr08	Su14	We05	Fr11	We23	Tu05	Fr13
Month	Jul	Jul	Jul	Sep	Nov	Jan	Feb	Feb	Mar	Apr	Jun	Aug	Oct	Oct	Nov	Jan	Mar	Mar	Apr	May
Year	2020	2020	2020	2020	2020	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2022	2022	2022	2022	2022
Time	1330	2338	1321	1047	0639	1339	0401	0815	2022	0945	0906	1602	1630	1252	1525	1229	2045	1555	1000	0739
Severity	Sl	Fa	Se	Sl	Sl	Sl	Sl	Sl	Sl	Se	Sl	Se	Sl	Sl	Sl	Sl	Sl	Sl	Sl	Sl
Dark / Lit																				
Weather Conditions																				
Road Surface																				
Special Conditions																				
Carriageway Hazards																				
Vehicle Manoeuvres																				
Vehicle 1	77	39	13	35	61	29	31	60	28	50	25	28	21	47	37	60	19	69	40	33
Vehicle 2	37		47	31	35			77	50	29			77	73	42	17	77			
Vehicle 3			77	80																
Vehicle 4																				
Casualty /age	37	22 39	13 31 47 30 77	35 65 80	35	29	31	72	50	29	25	28	21	47 23 73	42 14 38	17 ??	20 19	16	70	33
Failed to Give-Way																				
Signal Ignored																				
Loss of Control																				
Hit Object IN C'way																				
Hit Object OFF C'way		N	O				O				N	N	O				N			N
Vehicle Left C'way																				
Breath Test																				
Contributory Factors 1/2	V1 * 405	V1 ** 602	V1 ** 602	V1 ** 405	V1 ** 602	V1 ** 707	V1 ** 503	V2 ** 602	V1 ** 602	V2 ** 406	V1 ** 102	V1 * 601		V1 ** 405	V1 * 406	V1 * 405	V2 * 405	V1 * 509	C1 * 806	V1 ** 502
3/4	V1 * 406				V1 ** 305	V1 * 307		V2 ** 406	V1 * 406			V1 ** 602				V1 * 308	V2 * 406			V1 ** 505
5/6								V2 ** 302				V1 ** 306								
* possible, ** very likely								V2 ** 405				V1 ** 501								
School No./Ref.												V1 ** 502								
User fields: 1																				
2																				
3																				
4																				

Reference Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
	1194 775	1204 871	1210 162	1220 608	1236 454	1236 169	1296 598	1290 674	1299 938	1350 746	1396 754	1415 252	1422 007	1474 082	1531 405	1549 569	1550 010	1554 336	1575 726
Date / Day	Mo04	Tu02	We17	Su18	Tu27	Su30	Mo13	Sa25	Su23	Sa09	Fr05	Su25	Fr15	Tu30	Mo16	Su02	Mo03	Fr14	Tu08
Month	Jul	Aug	Aug	Sep	Sep	Oct	Mar	Mar	Apr	Sep	Jan	Feb	Mar	Jul	Dec	Feb	Feb	Feb	Apr
Year	2022	2022	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	2024	2025	2025	2025	2025
Time	0749	0630	2250	0955	1840	2303	0755	1240	0901	1230	1924	1100	2120	2025	1710	1948	2026	1155	1600
Severity	Sl	Se	Se	Se	Sl	Fa	Sl	Sl	Sl	Sl	Sl	Sl	Sl	Sl	Sl	Sl	Sl	Sl	Sl
Dark / Lit																			
Weather Conditions																			
Road Surface																			
Special Conditions																			
Carriageway Hazards																			
Vehicle Manoeuvres																			
Vehicle 1	70	45	39	62	63	39	52	59	76	53	27	80	28	33	36	20	64	28	38
Vehicle 2	36	34	??		31		32	52		19	62	73	??	44	60	38	16	44	??
Vehicle 3		58																	
Vehicle 4																			
Casualty /age	70 36	45 13 15	39	62	63	39	52	59 43 52	76	19	27 55	80 73 74	28	44	60	20 38 32	16	44	38 12 38 6
Failed to Give-Way																			
Signal Ignored																			
Loss of Control																			
Hit Object IN C'way																			
Hit Object OFF C'way																			
Vehicle Left C'way	N	O	O	O		S			O										
Breath Test																			
Contributory Factors 1/2	V1 * 602	V1 ** 406	V2 ** 999	V1 * 102	V2 * 403	V1 * 602	V2 * 406	V1 ** 405	V1 ** 503	V1 ** 706	V2 * 302	V1 ** 405		V1 ** 602	V1 * 602	V1 * 405	V1 * 405	V2 * 406	
3/4			V1 ** 406	V1 * 410	V2 * 406	V1 * 307				V1 * 405	V2 ** 406						V2 * 507	V2 * 405	
5/6					V1 * 406	V1 * 401											V2 * 605		
* possible, ** very likely																			
School No./Ref.																			
User fields: 1																			
2																			
3																			
4																			

REV	DETAILS	APPROVED BY	DATE APPROVED

North Lincolnshire Council

Director Communities
Lesley Potts

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NORTH LINCOLNSHIRE COUNCIL 2018 0100023560

Drawing Title: 5 Year Injury related Collisions A161 area (23/05/2020 - 22/05/2025)

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North Lincolnshire Council

CROWLE

7 Lake Country Park

North Moor

REV	DETAILS	APPROVED BY	DATE APPROVED

North Lincolnshire Council

Director Communities
Lesley Potts

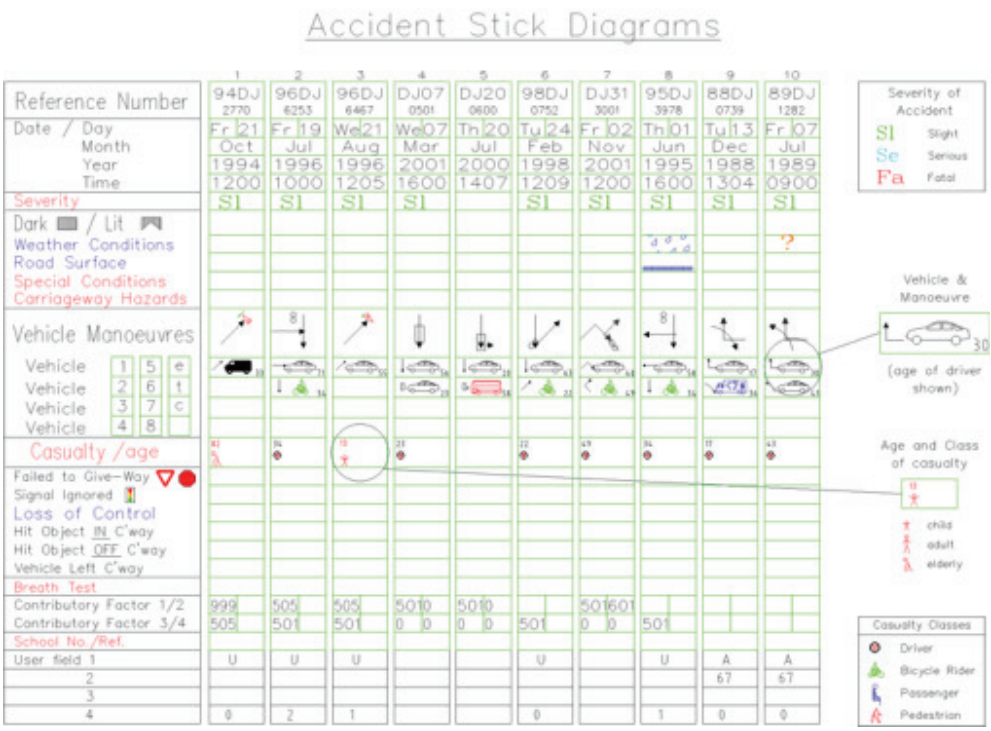
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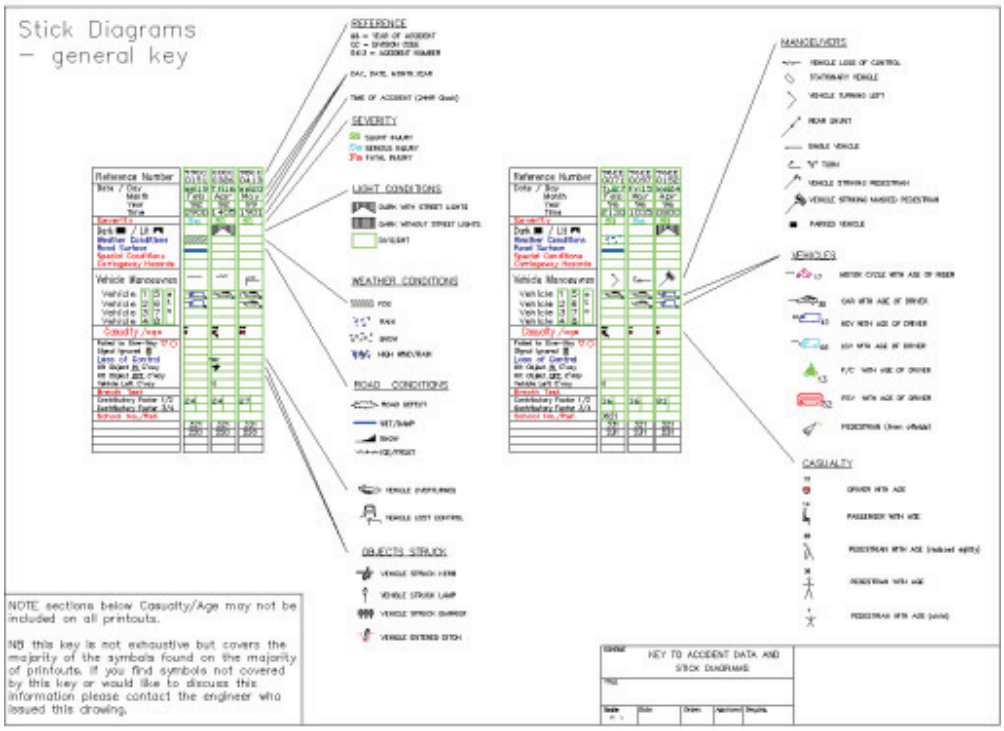
NORTH LINCOLNSHIRE COUNCIL 2018 0100023560

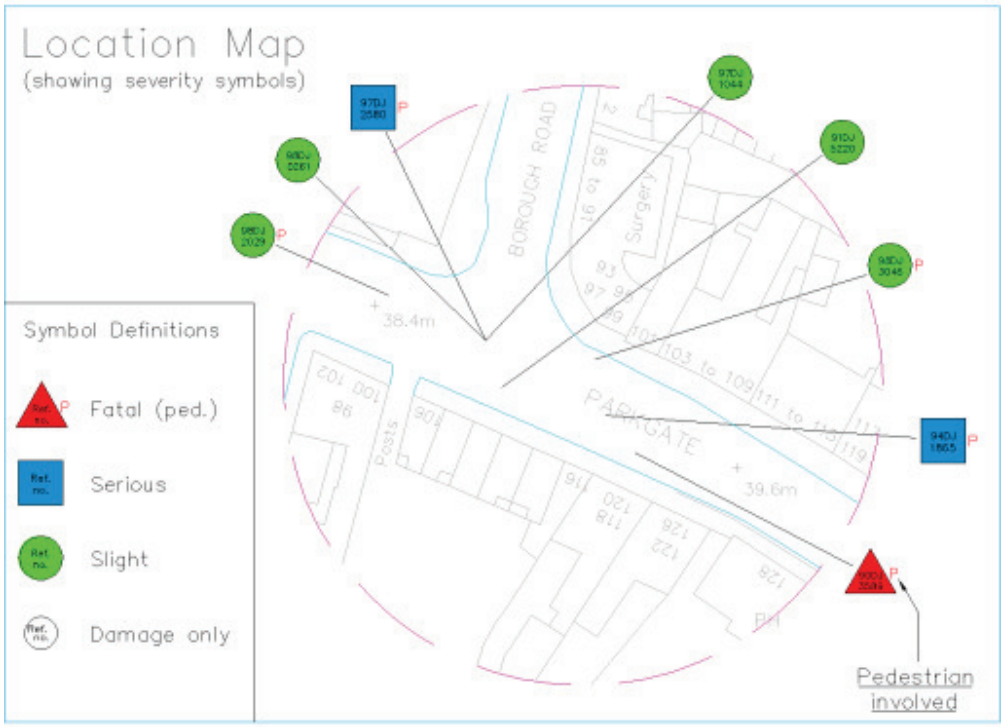
Drawing Title: 5 Year Injury related Collisions A161 area (23/05/2020 - 22/05/2025)

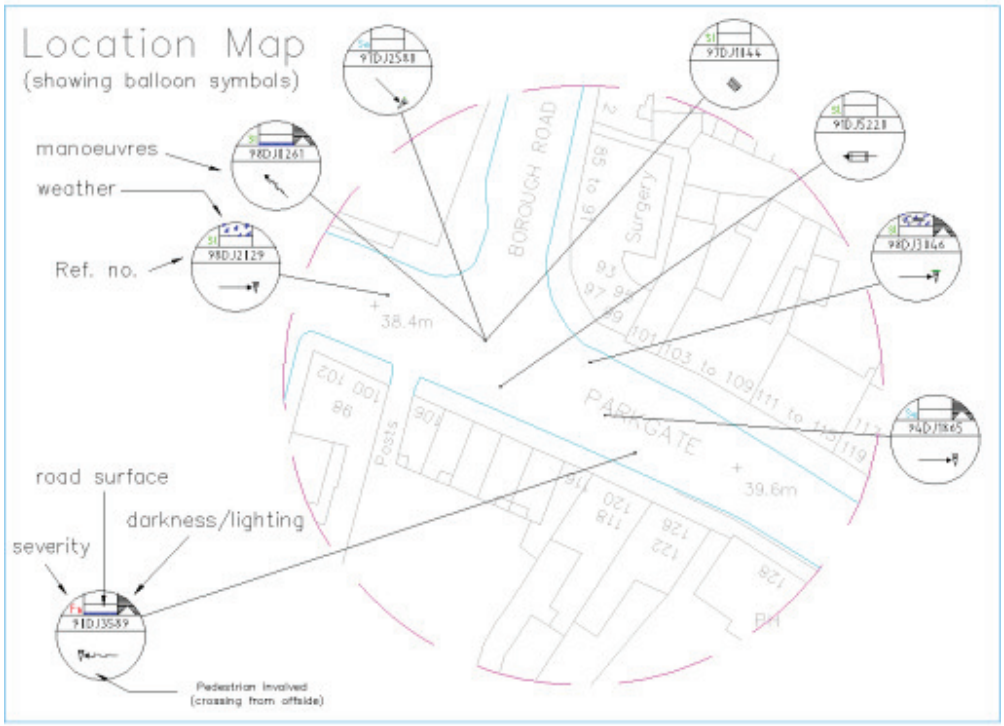
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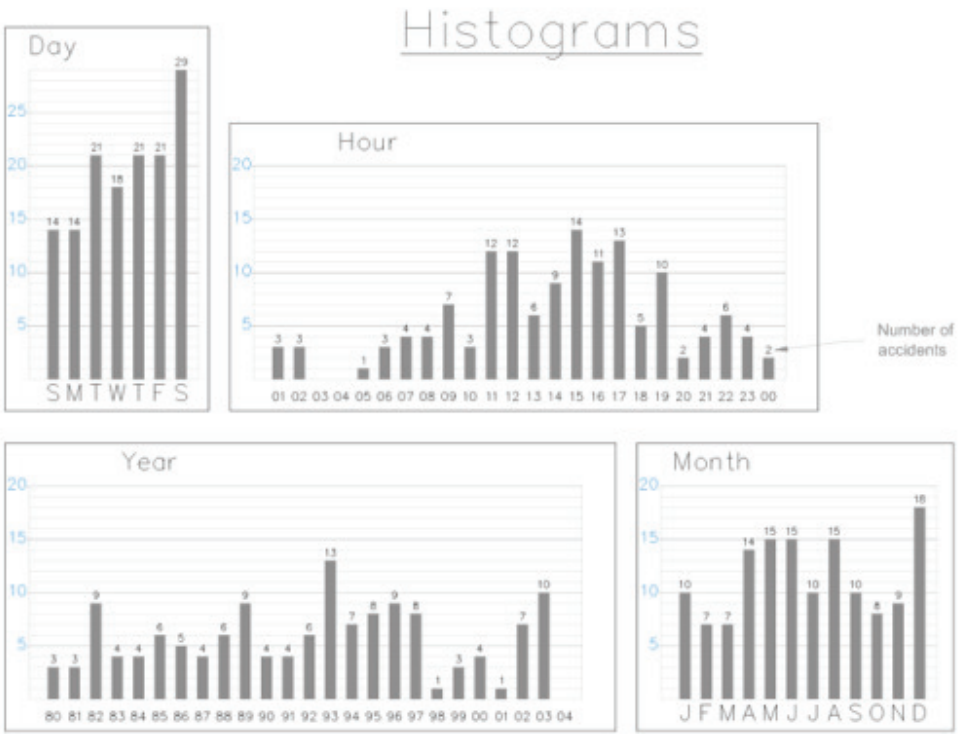
Appendix B – Help Slides




Stick Diagrams
– general key
REFERENCE
SEVERITY
LIGHT CONDITIONS
WEATHER CONDITIONS
ROAD CONDITIONS
OBJECTS STRUCK
MANOEUVRES
VEHICLES
CASUALTY
NOTE sections below Casualty/Age may not be included on all printouts.
NB this key is not exhaustive but covers the majority of the symbols found on the majority of printouts. If you find symbols not covered by this key or would like to discuss this information please contact the engineer who issued this drawing.
KEY TO ACCIDENT DATA AND STICK DIAGRAMS

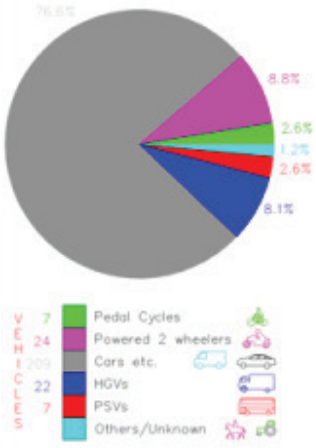

Location Map
(showing severity symbols)
Symbol Definitions
Fatal (ped.)
Serious
Slight
Damage only
BOROUGH ROAD
Surgery
PARKGATE
38.4m
39.6m
Pedestrian involved


Location Map
(showing balloon symbols)
manoeuvres
weather
Ref. no.
road surface
darkness/lighting
severity
Pedestrian Involved
(crossing from offside)
BOROUGH ROAD
Surgery
PARKGATE
38.4m
39.6m
PH
Posts

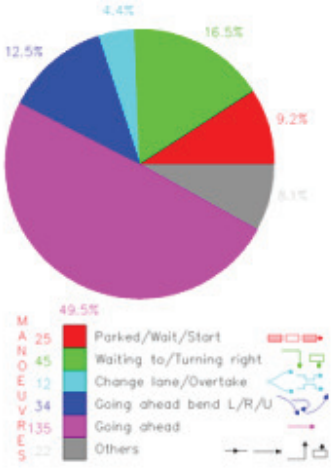

Histograms
Day
S M T W T F S
Hour
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 00
Number of accidents
Year
80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04
Month
J F M A M J J A S O N D

Pie Charts 1

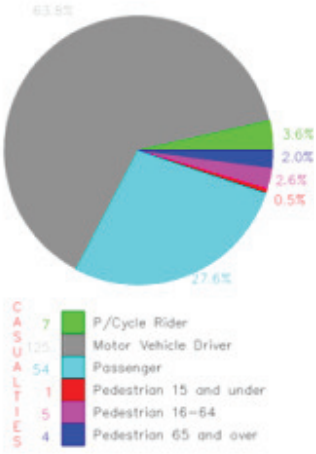
Vehicles



Manoeuvres

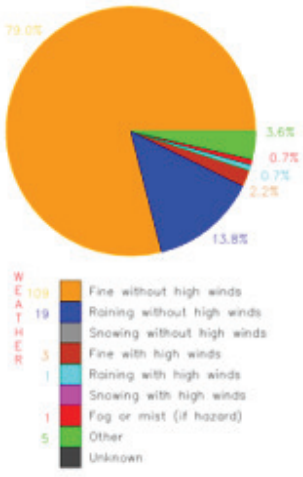


Casualties

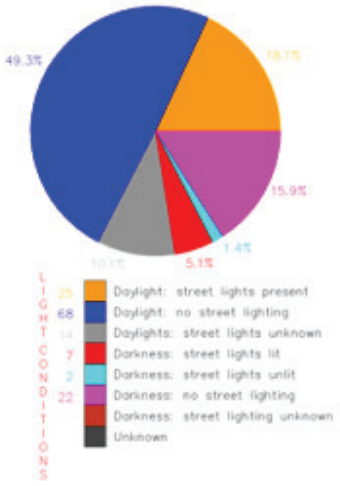


Pie Charts 2

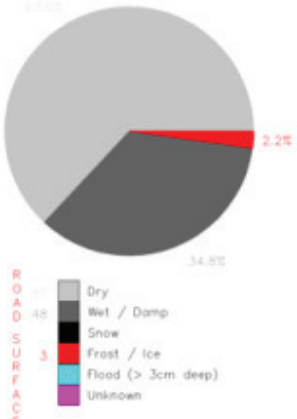
Weather

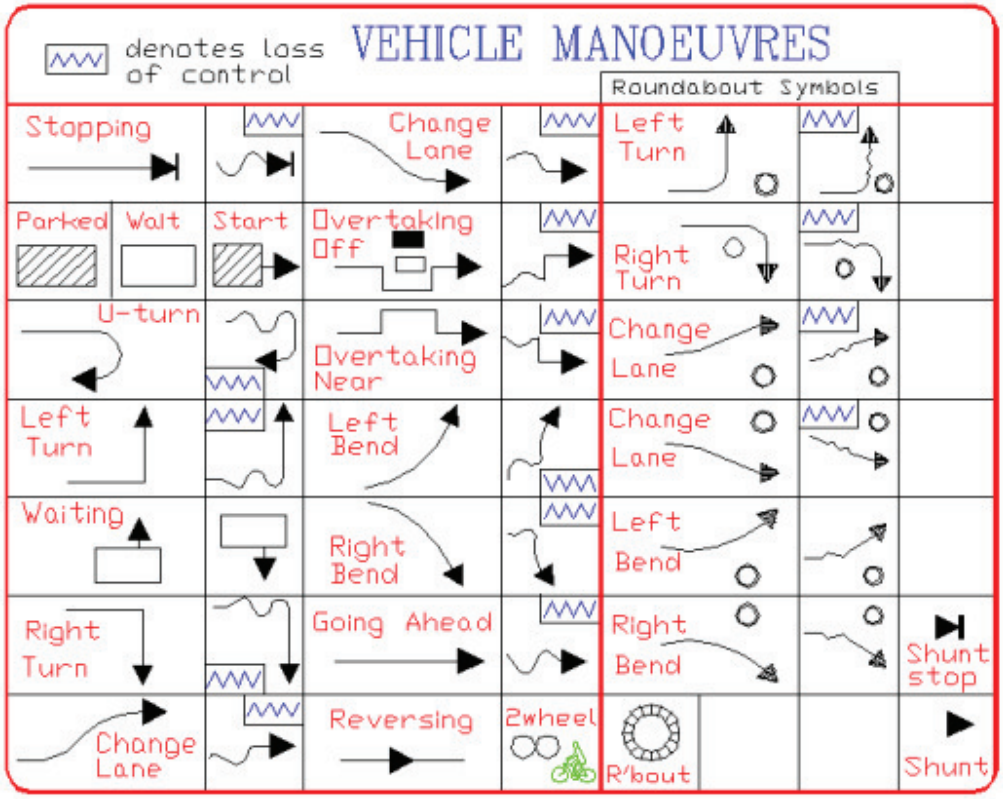


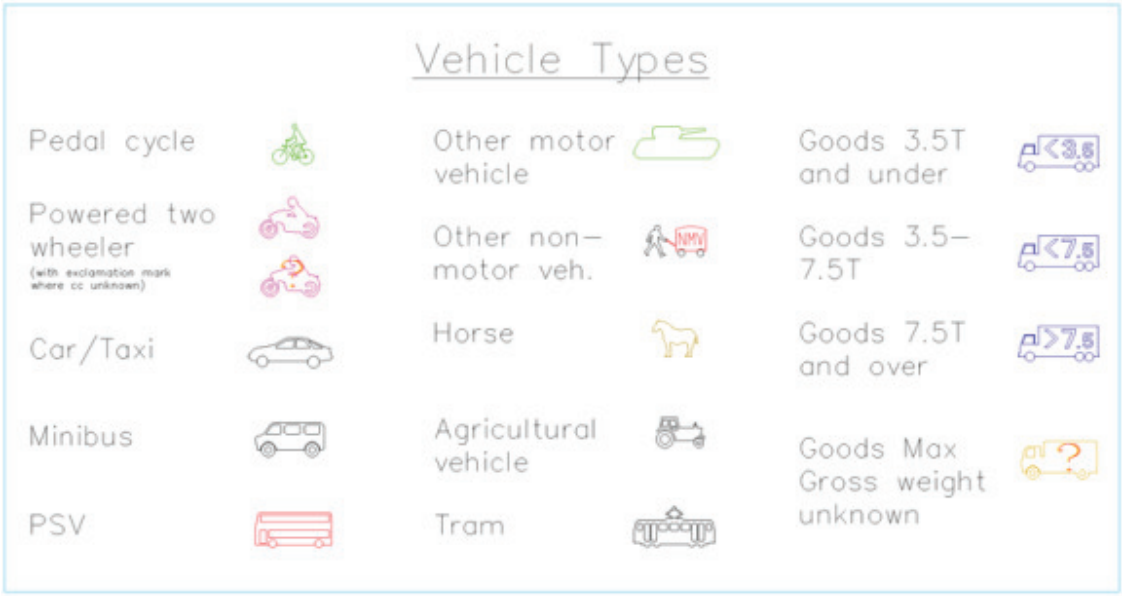
Light Conditions

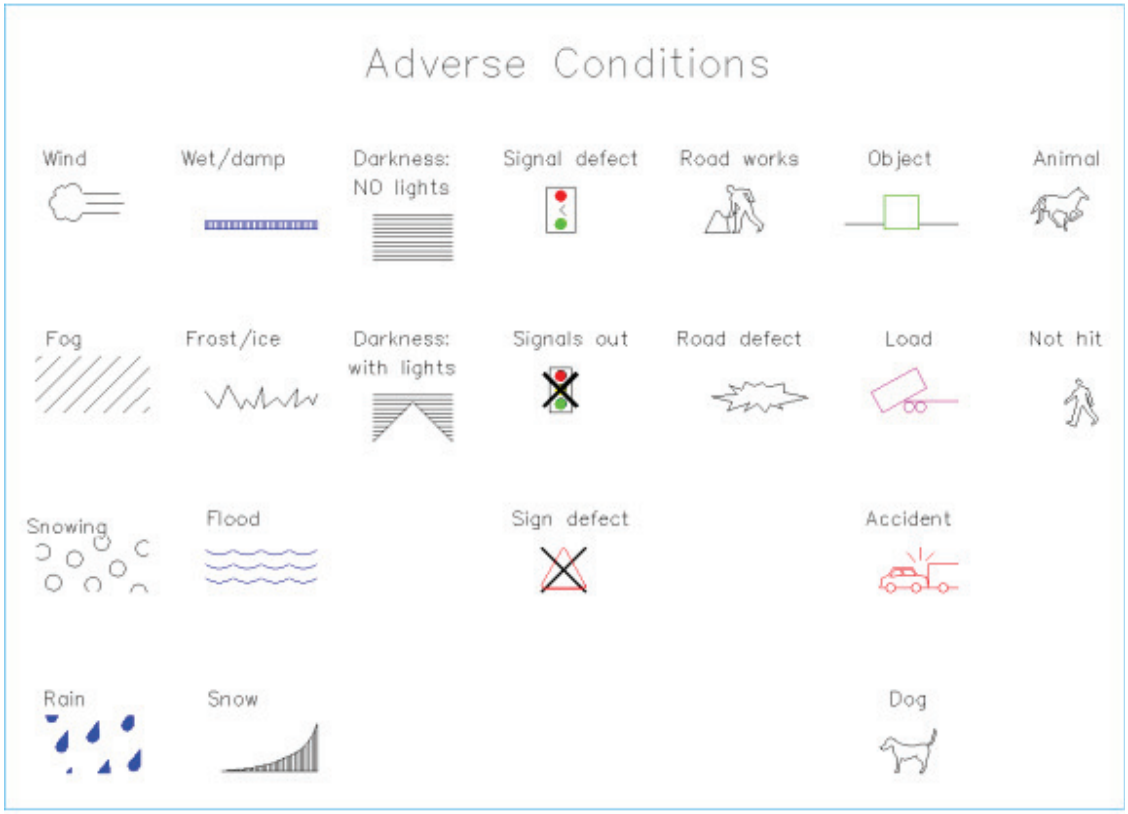


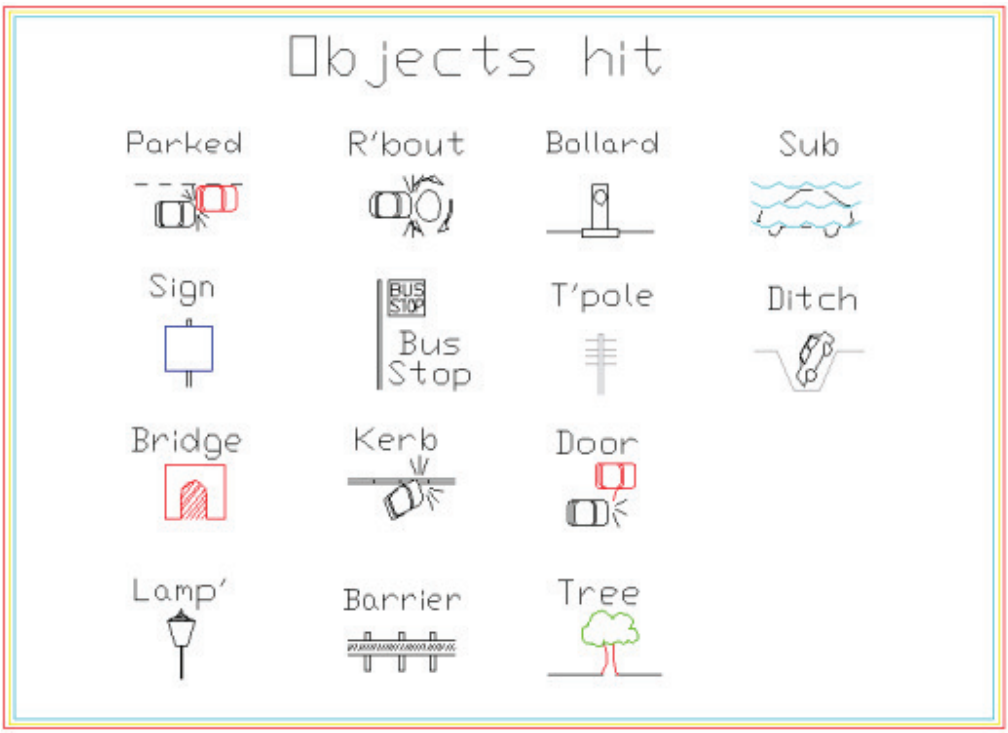
Road Conditions

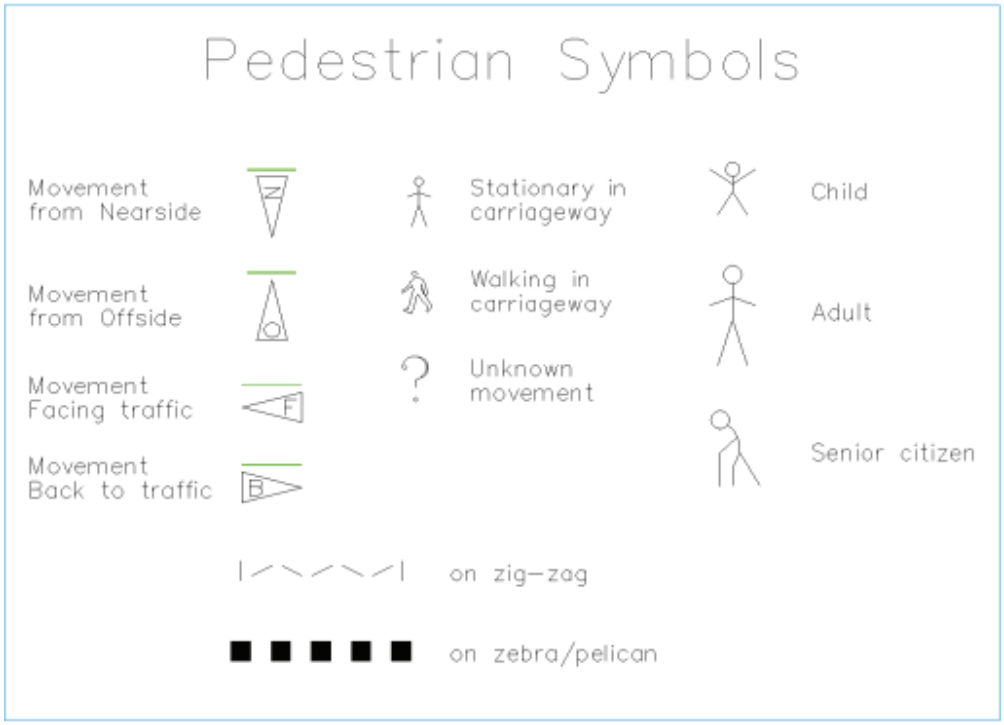



denotes loss of control
VEHICLE MANOEUVRES
Roundabout Symbols
Stopping
Change Lane
Left Turn
Parked
Wait
Start
Overtaking Off
Right Turn
U-turn
Overtaking Near
Change Lane
Left Turn
Left Bend
Change Lane
Waiting
Right Bend
Left Bend
Right Turn
Going Ahead
Right Bend
Shunt stop
Change Lane
Reversing
2wheel
R'bout
Shunt


Vehicle Types
Pedal cycle
Powered two wheeler
(with exclamation mark where cc unknown)
Car/Taxi
Minibus
PSV
Other motor vehicle
Other non-motor veh.
Horse
Agricultural vehicle
Tram
Goods 3.5T and under
Goods 3.5-7.5T
Goods 7.5T and over
Goods Max Gross weight unknown


Adverse Conditions
Wind
Wet/damp
Darkness: NO lights
Signal defect
Road works
Object
Animal
Fog
Frost/ice
Darkness: with lights
Signals out
Road defect
Load
Not hit
Snowing
Flood
Sign defect
Accident
Rain
Snow
Dog


Objects hit
Parked
R'bout
Bollard
Sub
Sign
BUS STOP
Bus Stop
T'pole
Ditch
Bridge
Kerb
Door
Lamp'
Barrier
Tree


Pedestrian Symbols
Movement from Nearside
Movement from Offside
Movement Facing traffic
Movement Back to traffic
Stationary in carriageway
Walking in carriageway
Unknown movement
Child
Adult
Senior citizen
on zig-zag
on zebra/pelican

Appendix D – Road Safety Audit Reports

safer roads for everyone

Tween Bridge Solar Farm, Thorne, Doncaster

Section 278 Highway Works

Road Safety Audit Stage 1

on behalf of City of Doncaster Council

TMS Client – Pegasus Group
for RWE Renewables UK Solar & Storage Ltd

TMS Reference No: 19925
Date: 15th May 2026
Revision: 1

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Coventry, CV3 2TX

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THE CHARTERED INSTITUTION OF HIGHWAYS & TRANSPORTATION

INSTITUTE OF HIGHWAY ENGINEERS

Citation ISO Certification
Quality management ISO 9001: 2015 REGISTERED
Certificate No:79362021

1. Project Details

Report Title:	Tween Bridge Solar Farm, Thorne, Doncaster Section 278 Highway Works Road Safety Audit Stage 1
Author	[redacted]
Document Ref No:	TMS Report Ref No: 19925
Revision	1
Prepared by:	TMS Consultancy
On behalf of:	City of Doncaster Council (Overseeing Organisation)
TMS Client	Pegasus Group for RWE Renewables UK Solar and Storage Ltd

Document Control Sheet

Issue No	Revision	Audit Team	Completion Date	TMS Issue Date
1	0	DN/RM	13/05/2026	13/05/2026
2	1	DN/RM	15/05/2026	15/05/2026

2. Introduction

2.1 This report describes a Stage 1 Road Safety Audit carried out on the Section 278 Highway Works associated with a Solar Farm development at Tween Bridge, Thorne, Doncaster.

2.2 The audit team members are as follows:

Audit Team Leader

[redacted] – MSc, BSc (Hons), MCIHT, MSoRSA
National Highways Approved RSA Certificate of Competency
Principal Engineer, TMS Consultancy

Audit Team Member

[redacted] – CertEd, ACFS, FCIHT, FSoRSA, MITAI
National Highways Approved RSA Certificate of Competency
Road Safety Engineer, TMS Consultancy

2.3 The audit comprised an examination of the documents listed in **Appendix A**. The Road Safety Audit was undertaken in accordance with the Audit Brief supplied by Alex Snartt of Pegasus Group.

2.4 The site was visited by the Audit Team on Tuesday 12th May 2026 between 11am and 1.30pm. The weather was cloudy and dry. Traffic flows were low. No pedestrian or cycle flows were observed.

2.5 The terms of reference of the Road Safety Audit are as described in GG 119 Revision 2. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

2.6 All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise collision occurrence.

2.7 A scheme drawing is included in **Appendix B**, where the locations of specific problems are referenced. A location plan of the scheme is also included in this Appendix.

2.8 Scheme Description

The scheme consists of various site accesses associated with a ground mounted solar farm development (Tween Bridge Solar Farm).

The scheme is located between the settlements of Thorne and Crowle, centred at approximately 10 kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe. The Order Limits (scheme boundary) is split across the administrative boundaries of the City of Doncaster Council (CDC) and North Lincolnshire Council (NLC). The scheme is generally surrounded by open land with agricultural land uses.

The accesses are a combination of existing accesses to be retained in present form, existing accesses to be improved and new accesses.

Internal of the site, access tracks will be surfaced with loose gravel. For those access points which are currently unsurfaced, it is proposed that the extent of the access point which falls within the extent of adopted highway shall be laid with temporary matting. This shall protect the verge and also collect any loose material from the site as vehicles exit on to the adjacent highway.

This Stage 1 Road Safety Audit covers the accesses located within the administrative boundary of **City of Doncaster Council**.

The accesses related to this element of the scheme are listed below:

- Location A Moor Edges Road (existing industrial access)
- Location B Moor Edges Road (new access)
- Location C High Bridge Road (existing agricultural access)
- Location D Green Bank Road (improved existing access)
- Location E Green Bank (improved existing access)
- Location F A18 High Levels Bank (new access)
- Location H Low Levels Bank (existing agricultural access)
- Location I Low Levels Bank (improved existing access)
- Location J Low Levels Bank (existing agricultural access)
- Location K Low Levels Bank (existing agricultural access)
- Location M A18 High Levels Bank (improved existing access)
- Location W Low Levels Bank (existing agricultural access)
- Location Z Crow Tree Bank (existing agricultural access)
- Location AJ Green Bank (existing agricultural access)

2.9 Road Safety Audit Response Report

Following the completion of the road safety audit, the design team should prepare a road safety audit response report in collaboration with the Overseeing Organisation.

The response report should incorporate the following:

- **Decision Log** spreadsheet, where each Problem and Recommendation in the Safety Audit report is reiterated.
- In the Decision Log, a response should be provided by the Design Team and Overseeing Organisation for each problem raised in the RSA report, together with an agreed action.

Further information is provided in **GG 119 Sections 4.11 to 4.19** and **Appendix F** (where a road safety audit response report template is available).

The response report should be produced and finalised within *one month* of the issue of the RSA report. A copy of the response report should be issued to the Audit Team for their information.

3. Items resulting from the Stage 1 Audit Road Safety Audit

3.1 PROBLEM

Location: Location B (Moor Edges Road)

Summary: Lack of protection from ditch may result in vehicles leaving the carriageway and overturning into drainage ditch

The proposed access B will cross an existing drainage ditch that runs parallel along the east side of Moor Edges Road. A lack of protection from them the ditch for vehicles making turning manoeuvres into / from the access may result in vehicles leaving the carriageway and descending / overturning into the ditch.

RECOMMENDATION

At detailed design stage the drainage ditch should be piped and culverted and sufficient edge clearance provided between the carriageway and the culvert headwalls.

3.2 PROBLEM

Location: Location F (A18 High Levels Bank)

Summary: Levels difference between site and existing carriageway may increase the risk of pull-out type vehicle collisions

At Location F on A18 High levels Bank there is a significant levels difference between the existing carriageway and the land to the south which will become the site access road. Due to the uphill gradient, large and high sided vehicles may have difficulty egressing from the access onto A18 High levels Bank, which may increase the risk of pull-out type vehicle collisions.

RECOMMENDATION

A level dwell area should be provided on the immediate approach to the access.

3.3 PROBLEM

Location: General – carriageway

Summary: Poor carriageway surface may lead to skid and loss of control type vehicle collisions

Throughout the wider extents of the scheme the existing carriageway surface at some locations is already in a poor state of repair, with evidence of potholes, loose material, surface cracking etc. The intensified usage of the accesses by large vehicles may lead to increased degradation of the carriageway and thus increase the risk of skid and loss of control type vehicle collisions.

RECOMMENDATION

Where required, works to resurface, repair or strengthen the existing carriageway should be carried.

3.4 PROBLEM

Location: General – signage

Summary: Inappropriate routes by large vehicles may lead to vehicle collisions on the wider network

Some routes around the site are inappropriate for usage by large vehicles (for example due to narrow widths and weight restrictions). If construction traffic uses these routes there may be an increased risk of vehicle collisions.

RECOMMENDATION

At detailed design stage, as well as the Traffic Management Plan and driver training, route signage may be required.

4. Audit Team Statement

We certify that the terms of reference of the road safety audit are as described in GG 119 Revision 2.

Audit Team Leader

[redacted] – MSc, BSc (Hons), MCIHT, MSoRSA National Highways Approved RSA Certificate of Competency Principal Engineer, TMS Consultancy

Signed	[redacted]
Date	15th May 2026

Audit Team Member

[redacted] – CertEd, ACFS, FCIHT, FSoRSA, MITAI National Highways Approved RSA Certificate of Competency Road Safety Engineer, TMS Consultancy

Signed	[redacted]
Date	15th May 2026

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Coventry, CV3 2TX

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✉ info@tmsconsultancy.co.uk
www.tmsconsultancy.co.uk

Appendix A

Documents Examined:

- Drawing No. P21-3484_Figure 3.11 - 3.14.pdf
- Drawing No. P21-3484_Figure 3.24, 3.27.pdf
- Drawing No. P21-3484_Figure 3.36.pdf
- Drawing No. Figure 4.1_Routes Final.2.pdf
- Drawing No. P21-3484_Figure 2.1_ATC Locations Final AUG25.pdf
- Drawing No. P21-3484_Figure 3.1-3.7, 3.9, 3.10.pdf

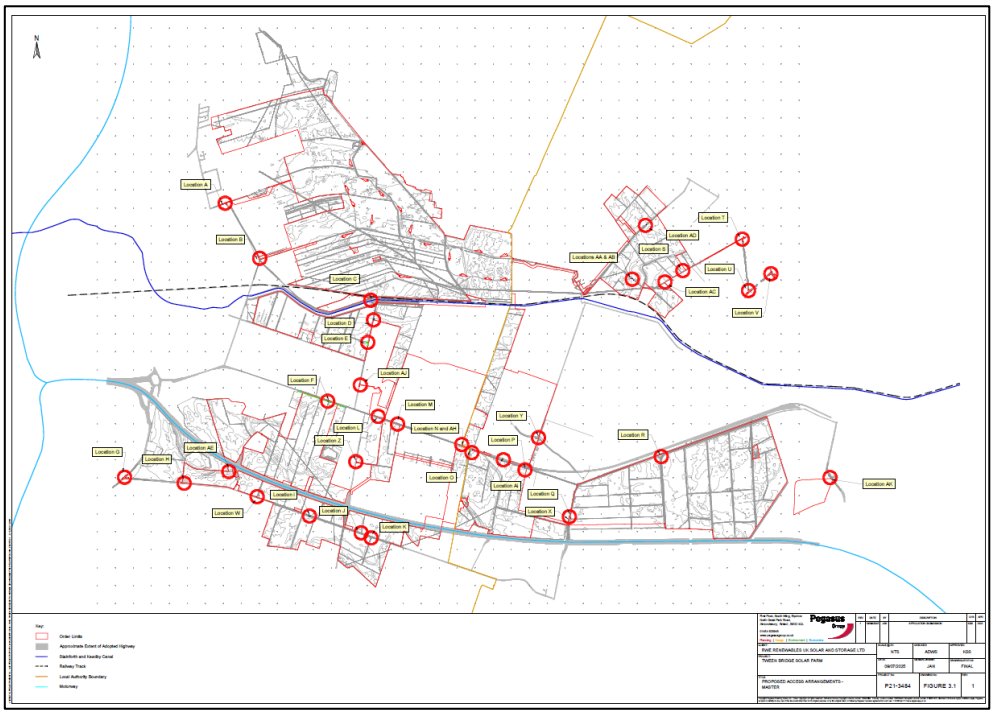
Other Information Provided:

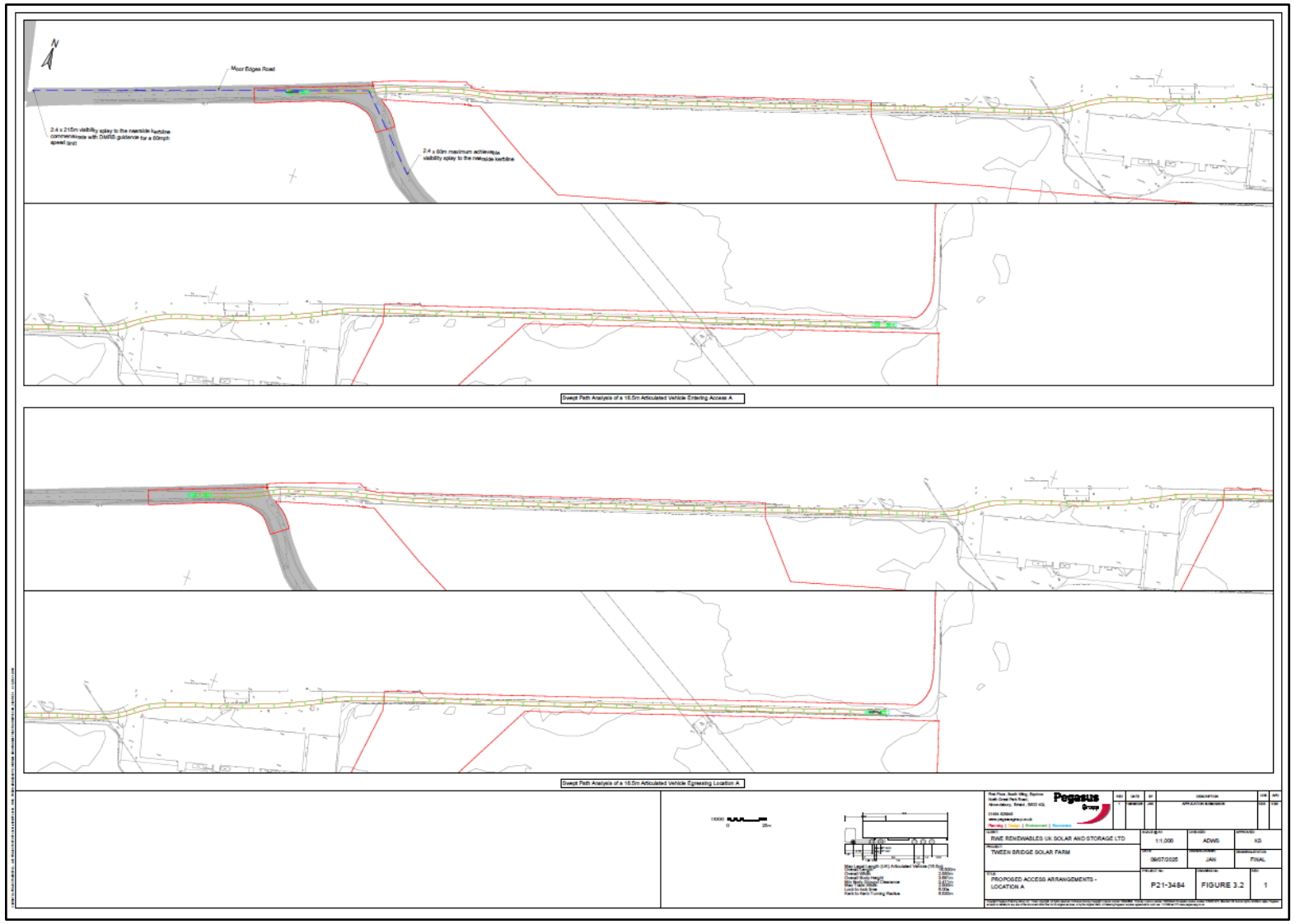
- Road Safety Audit Brief
- Traffic Management Plan
- ATC Data
- Collision Data
- Access Table

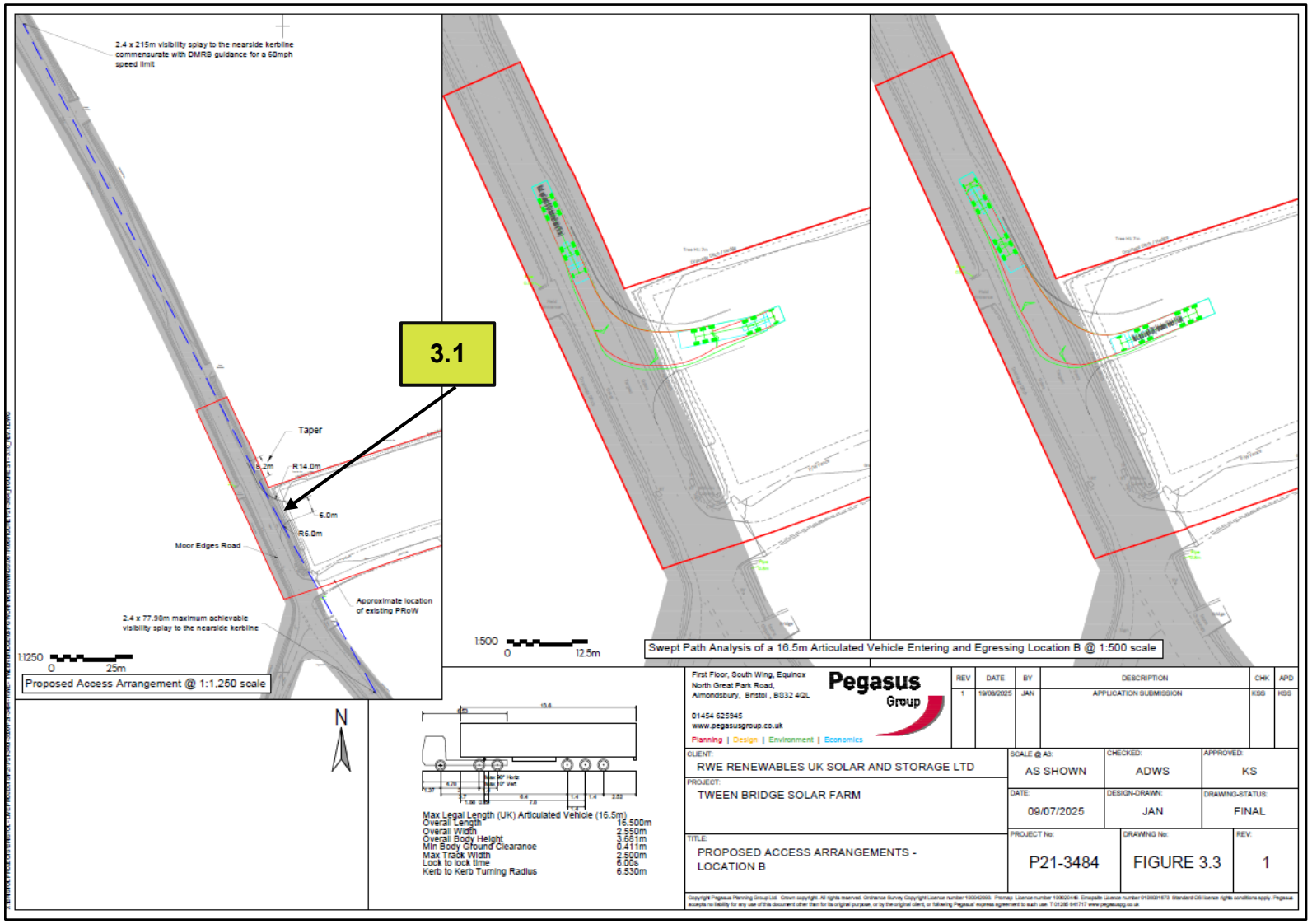
Appendix B

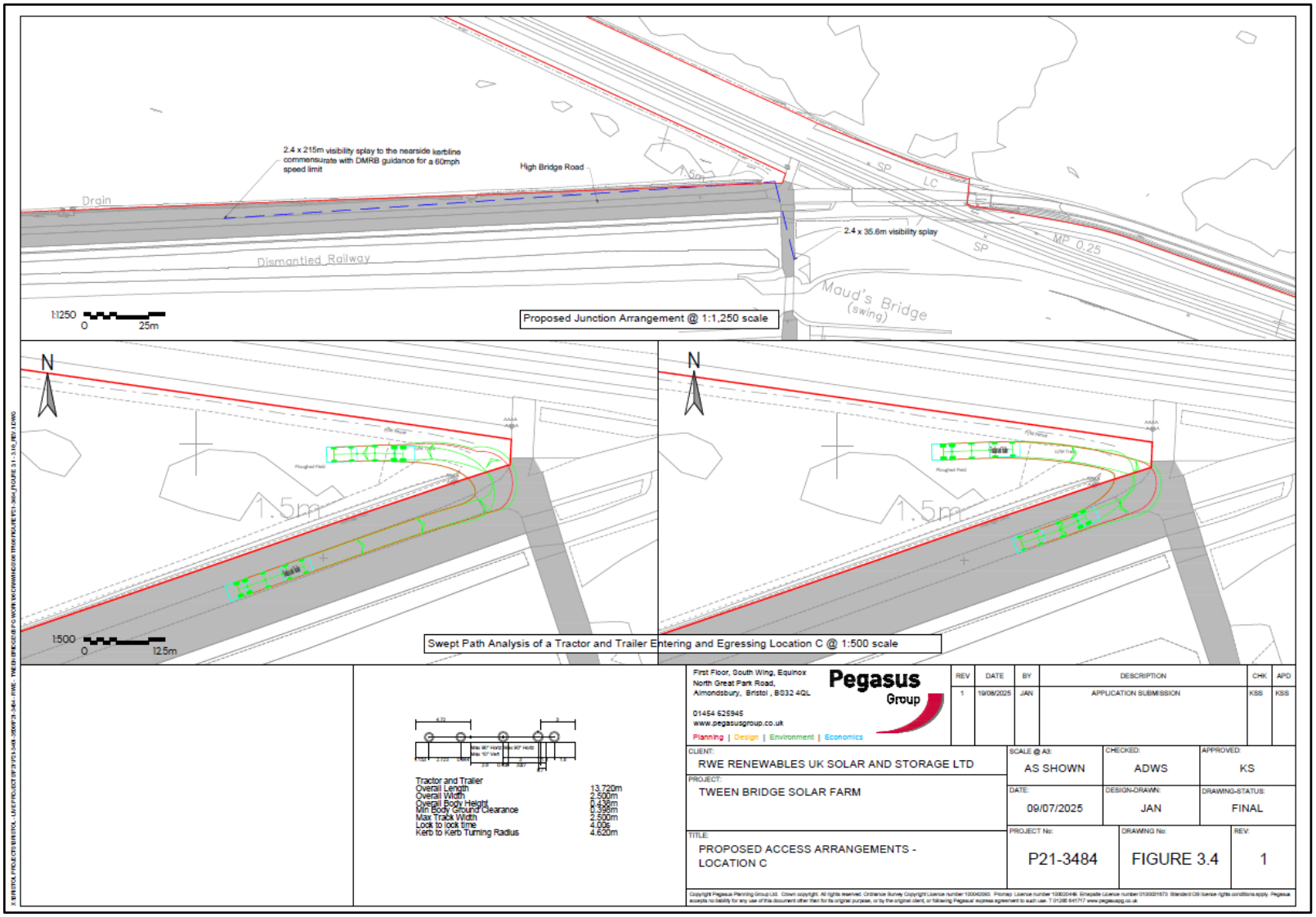
Please refer to the following page for a plan illustrating the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).

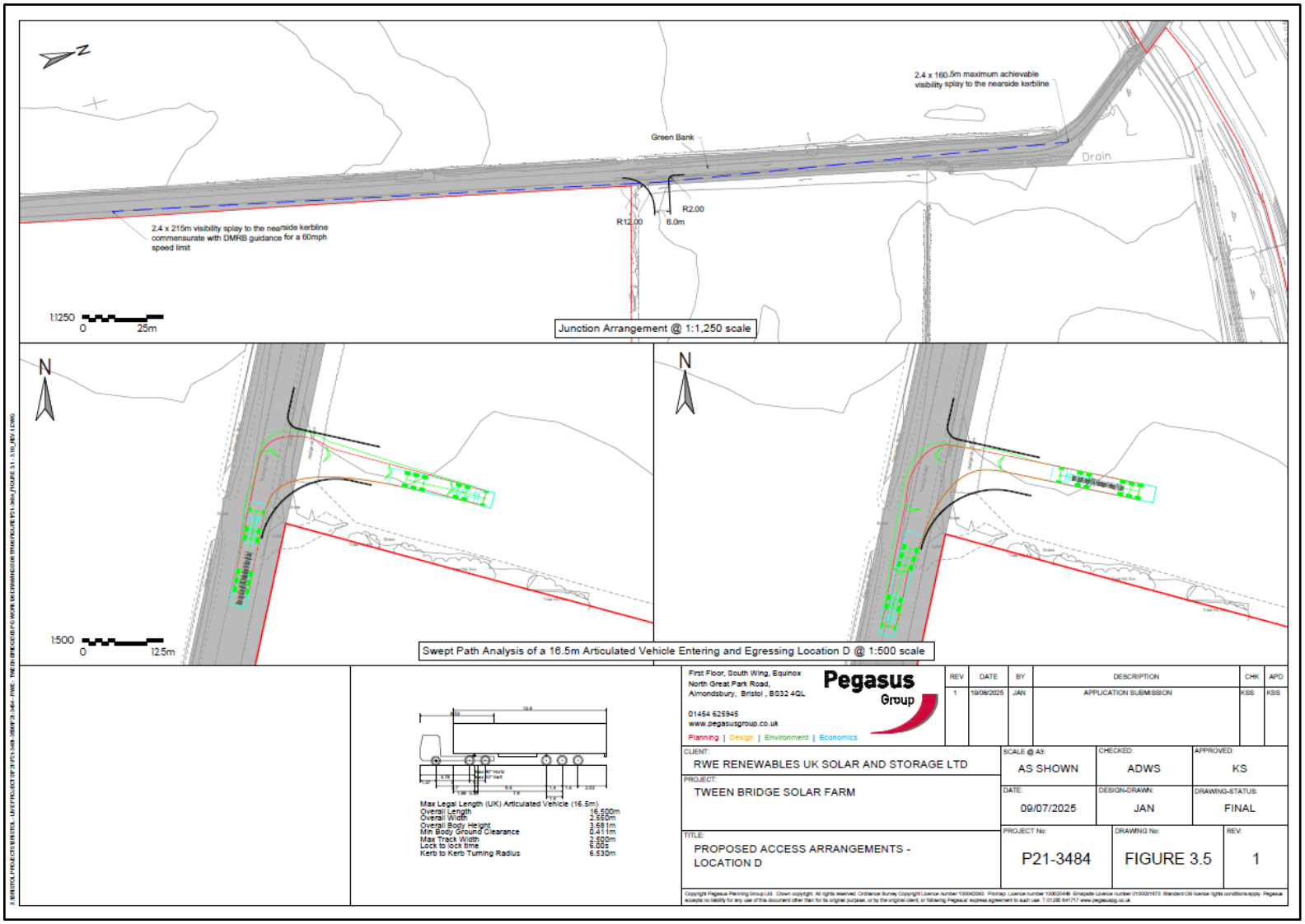
The location of the scheme is shown below:

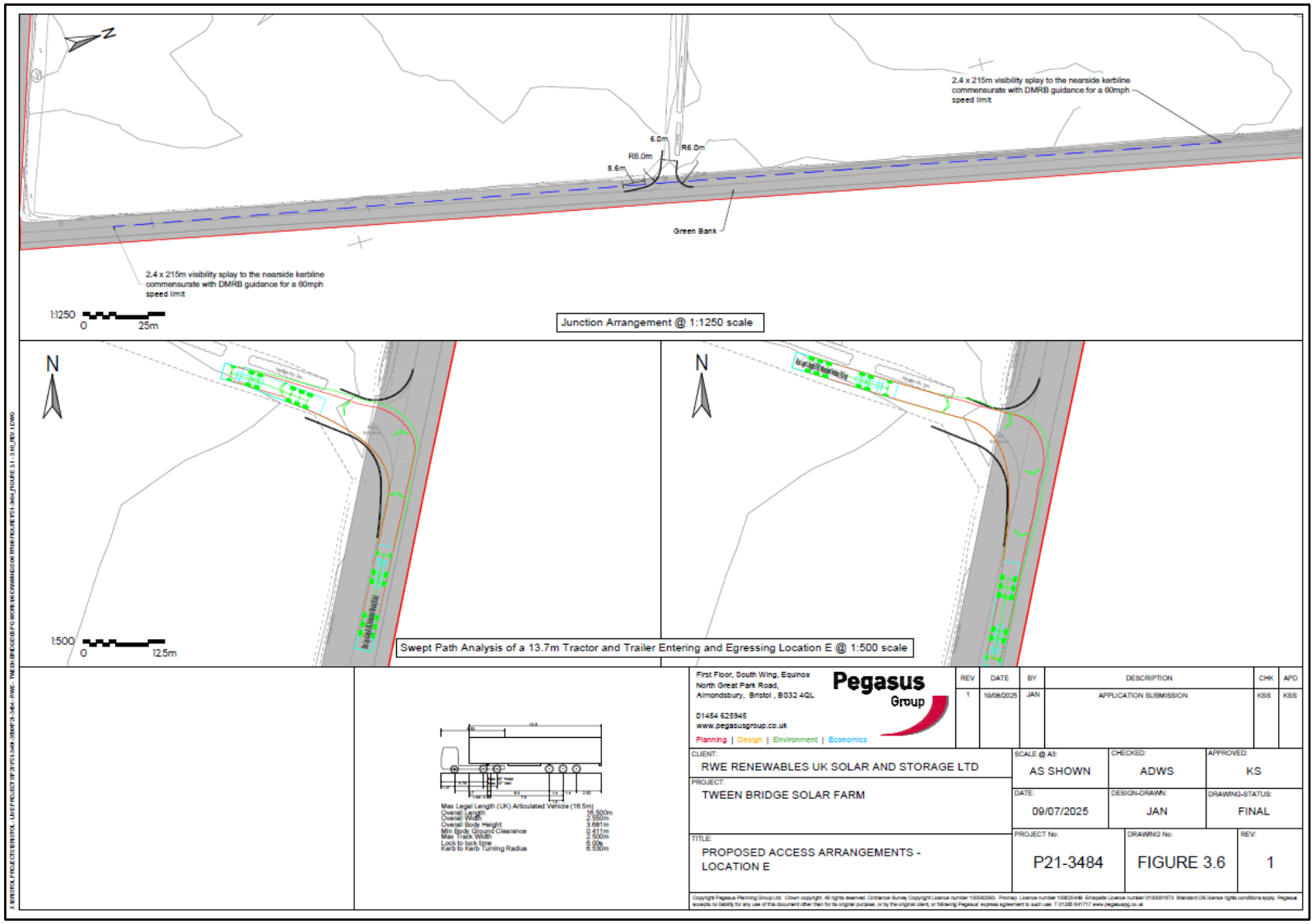


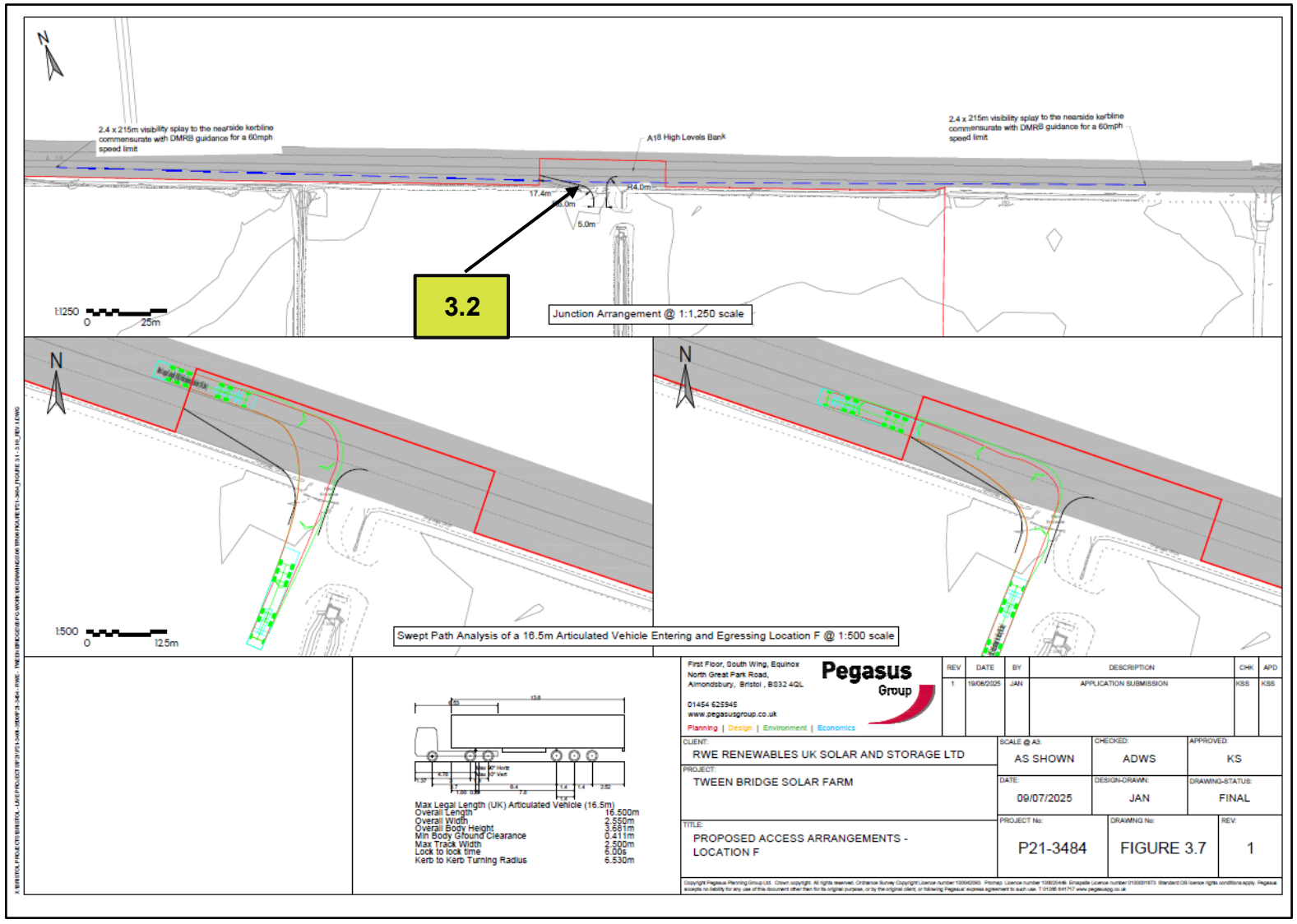

Moor Edges Road
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
2.4 x 60m maximum achievable visibility splay to the nearside kerbline
Swept Path Analysis of a 16.5m Articulated Vehicle Entering Access A
Swept Path Analysis of a 16.5m Articulated Vehicle Egressing Location A
Pegasus Group
RWE RENEWABLES UK SOLAR AND STORAGE LTD
TWEEN BRIDGE SOLAR FARM
PROPOSED ACCESS ARRANGEMENTS - LOCATION A
1:1,000
ADWS
KS
09/07/2025
JAN
FINAL
P21-3484
FIGURE 3.2
1

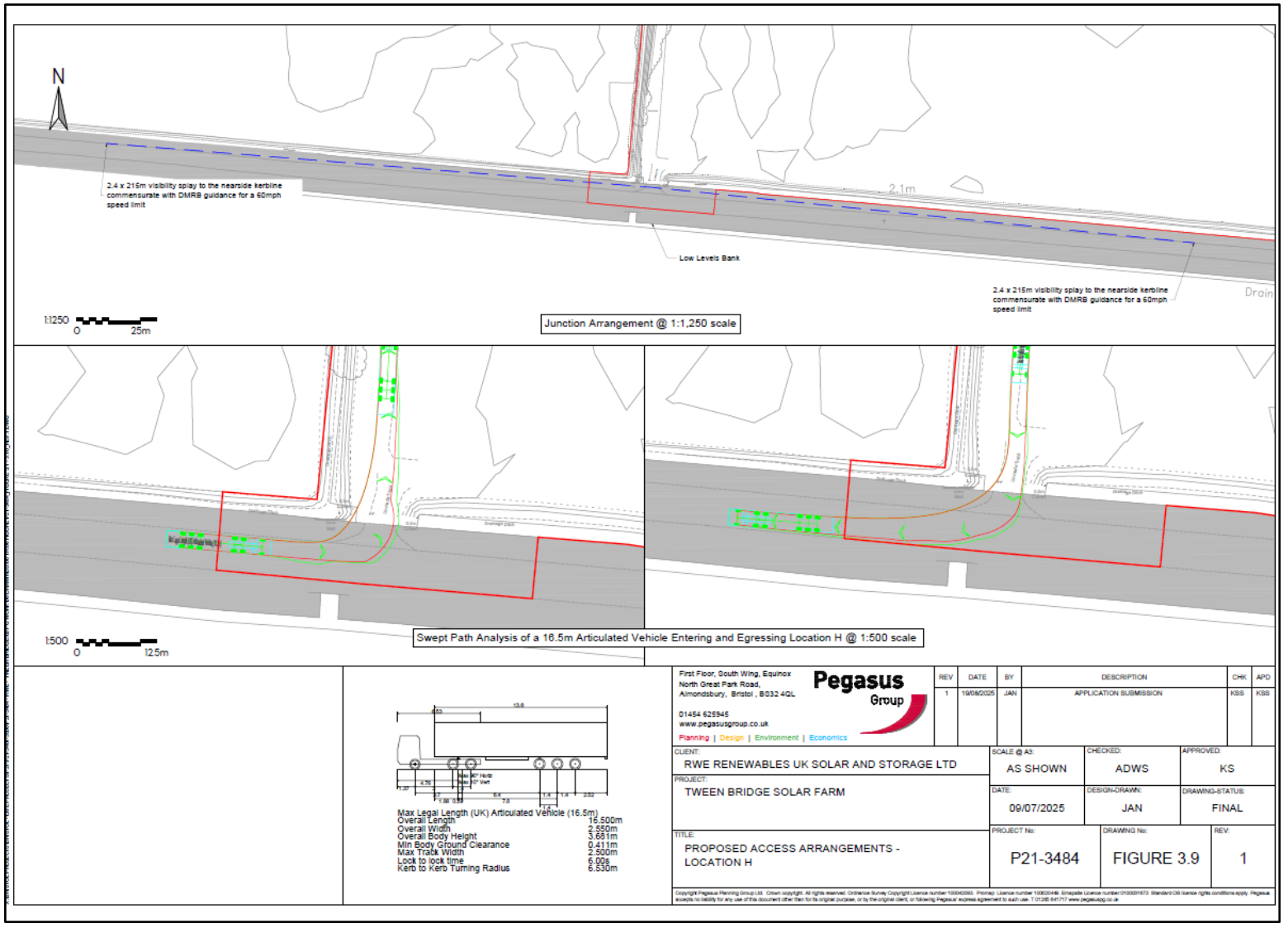

2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
3.1
Taper
6.2m
R14.0m
6.0m
R6.0m
Moor Edges Road
Approximate location of existing PRoW
2.4 x 77.98m maximum achievable visibility splay to the nearside kerbline
1:1250
0
25m
Proposed Access Arrangement @ 1:1,250 scale
1:500
0
12.5m
Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location B @ 1:500 scale
N
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox North Great Park Road, Almondsbury, Bristol , BS32 4QL
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Planning | Design | Environment | Economics
Pegasus Group
REV DATE BY DESCRIPTION CHK APD
1 19/09/2025 JAN APPLICATION SUBMISSION KSS KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
PROJECT: TWEEN BRIDGE SOLAR FARM
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION B
PROJECT No: P21-3484
DRAWING No: FIGURE 3.3
REV: 1

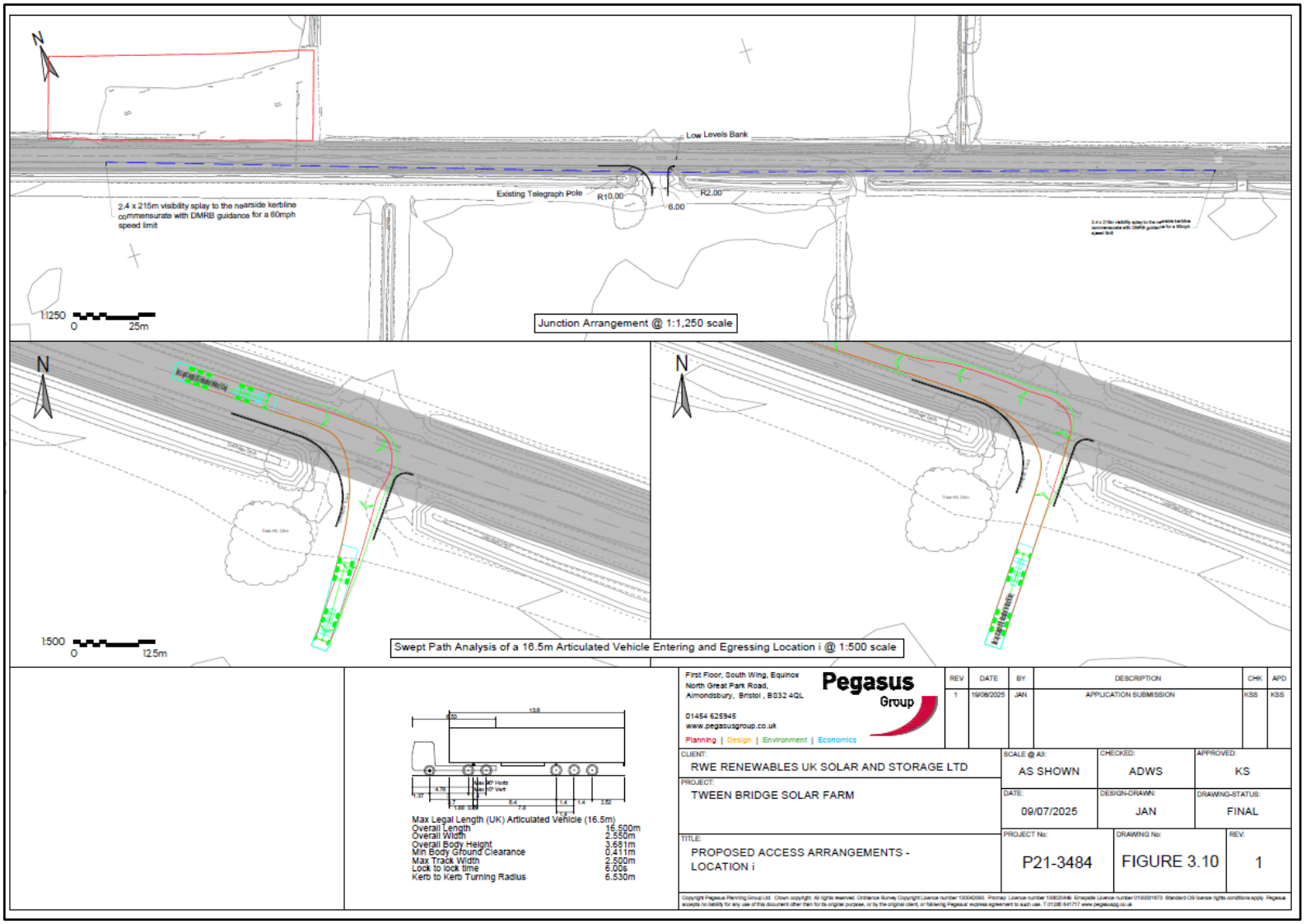

2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
High Bridge Road
Drain
Dismantled Railway
2.4 x 35.6m visibility splay
SP
LC
MP 0.25
Maud's Bridge (swing)
1:1250
0
25m
Proposed Junction Arrangement @ 1:1,250 scale
N
1.5m
1:500
0
12.5m
Swept Path Analysis of a Tractor and Trailer Entering and Egressing Location C @ 1:500 scale
Tractor and Trailer
Overall Length 13.720m
Overall Width 2.500m
Overall Body Height 3.438m
Min Body Ground Clearance 0.398m
Max Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 4.620m
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DATE
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DESCRIPTION
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19/09/2025
JAN
APPLICATION SUBMISSION
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KSS
CLIENT:
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SCALE @ A3:
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APPROVED:
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PROJECT:
TWEEN BRIDGE SOLAR FARM
DATE:
09/07/2025
DESIGN-DRAWN:
JAN
DRAWING-STATUS:
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TITLE:
PROPOSED ACCESS ARRANGEMENTS - LOCATION C
PROJECT No:
P21-3484
DRAWING No:
FIGURE 3.4
REV:
1

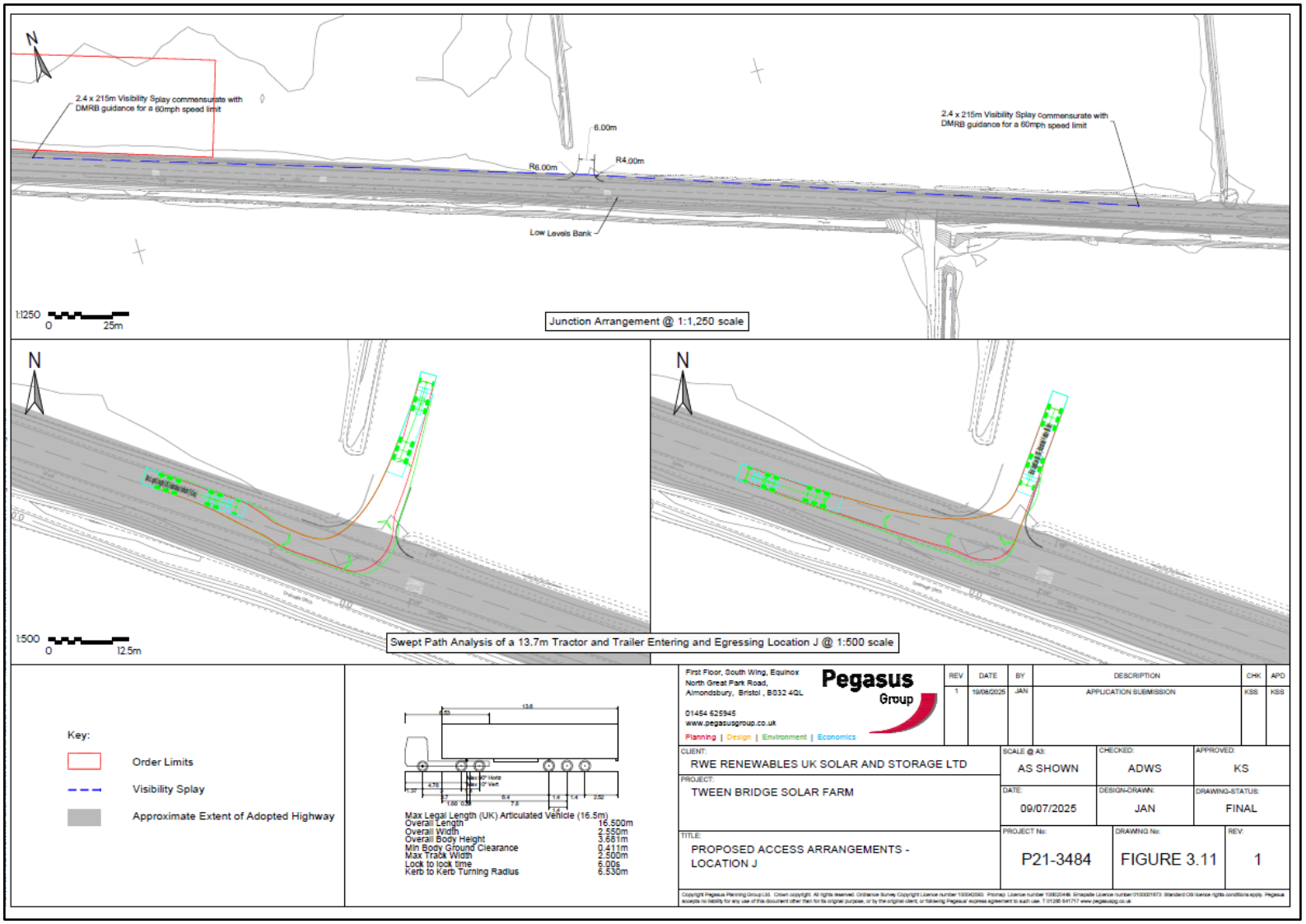

2.4 x 160.5m maximum achievable visibility splay to the nearside kerbline
Green Bank
Drain
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
R12.00
R2.00
6.0m
1:1250
0
25m
Junction Arrangement @ 1:1,250 scale
N
1:500
0
12.5m
Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location D @ 1:500 scale
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.661m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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Pegasus Group
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1 | 19/09/2025 | JAN | APPLICATION SUBMISSION | KSS | KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION D
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.5
REV: 1

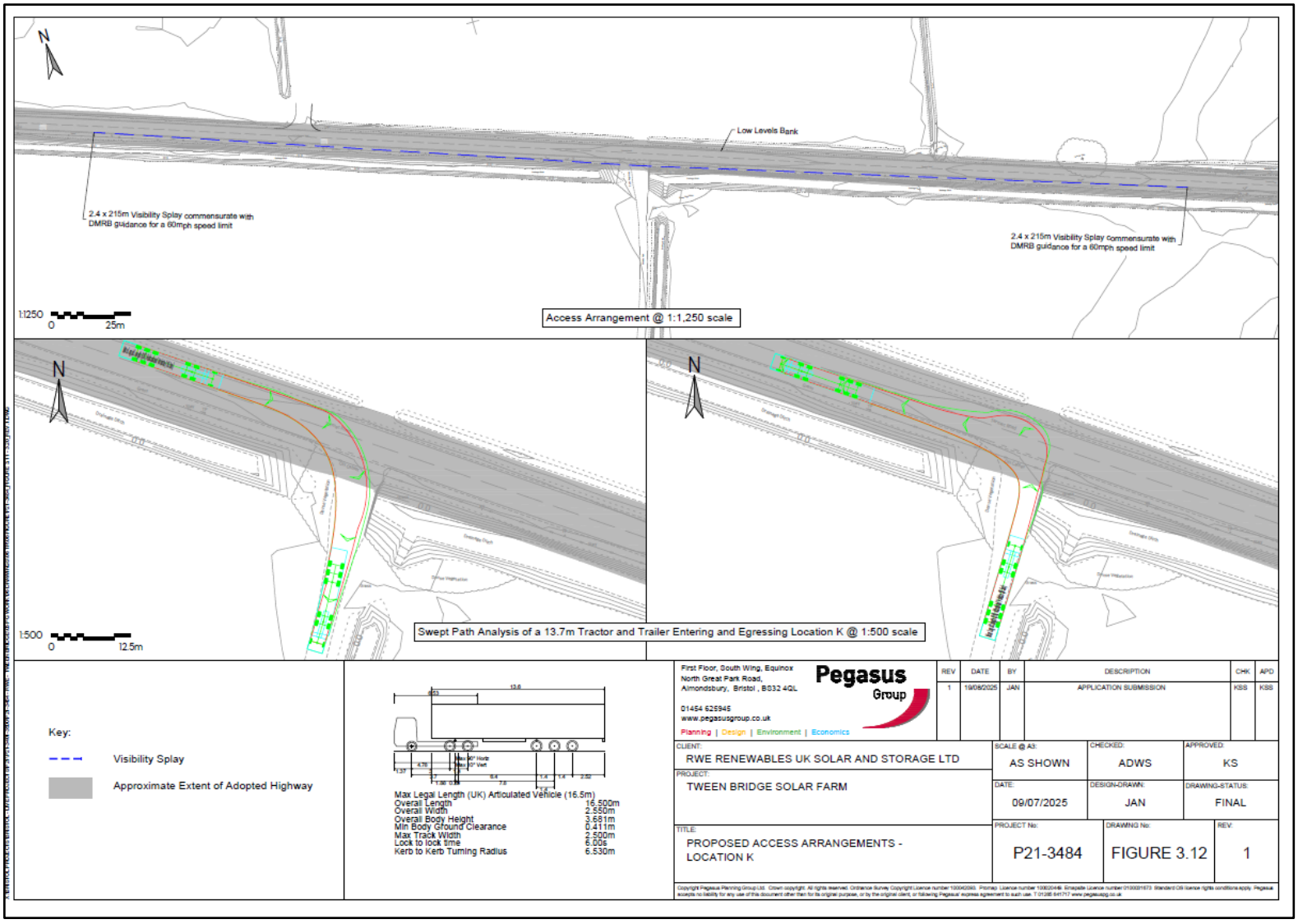

2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
6.0m
R6.0m
R8.0m
8.6m
Green Bank
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
1:1250
0
25m
Junction Arrangement @ 1:1250 scale
N
N
1:500
0
12.5m
Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location E @ 1:500 scale
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.661m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 6.530m
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Almondsbury, Bristol , BS32 4QL
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REV 1
DATE 19/08/2025
BY JAN
DESCRIPTION APPLICATION SUBMISSION
CHK KSS
APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION E
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.6
REV: 1

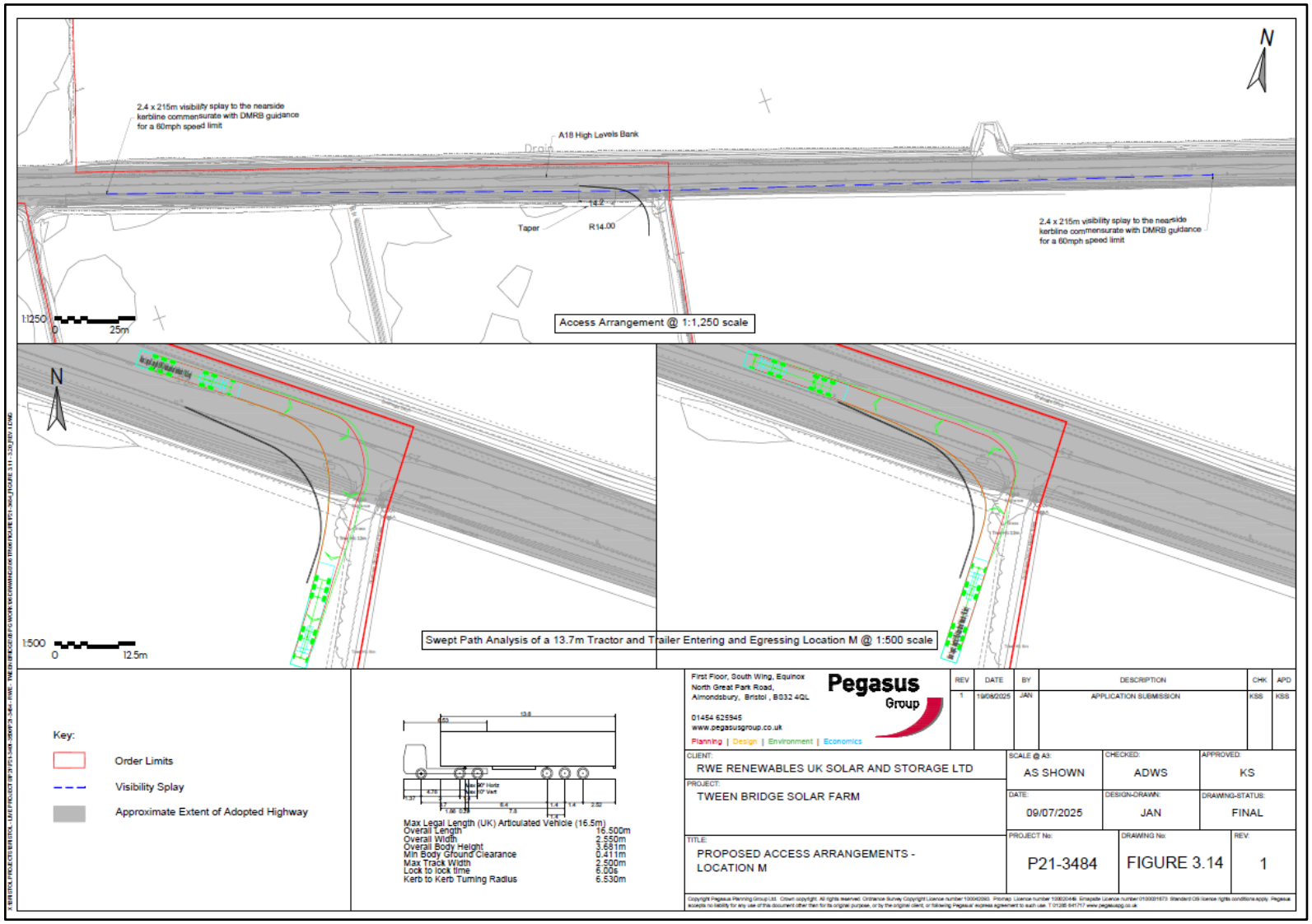

2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
A18 High Levels Bank
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
17.4m
R4.0m
5.0m
3.2
Junction Arrangement @ 1:1,250 scale
1:1250
0
25m
N
N
1:500
0
12.5m
Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location F @ 1:500 scale
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.661m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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Pegasus Group
REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION F
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.7
REV: 1

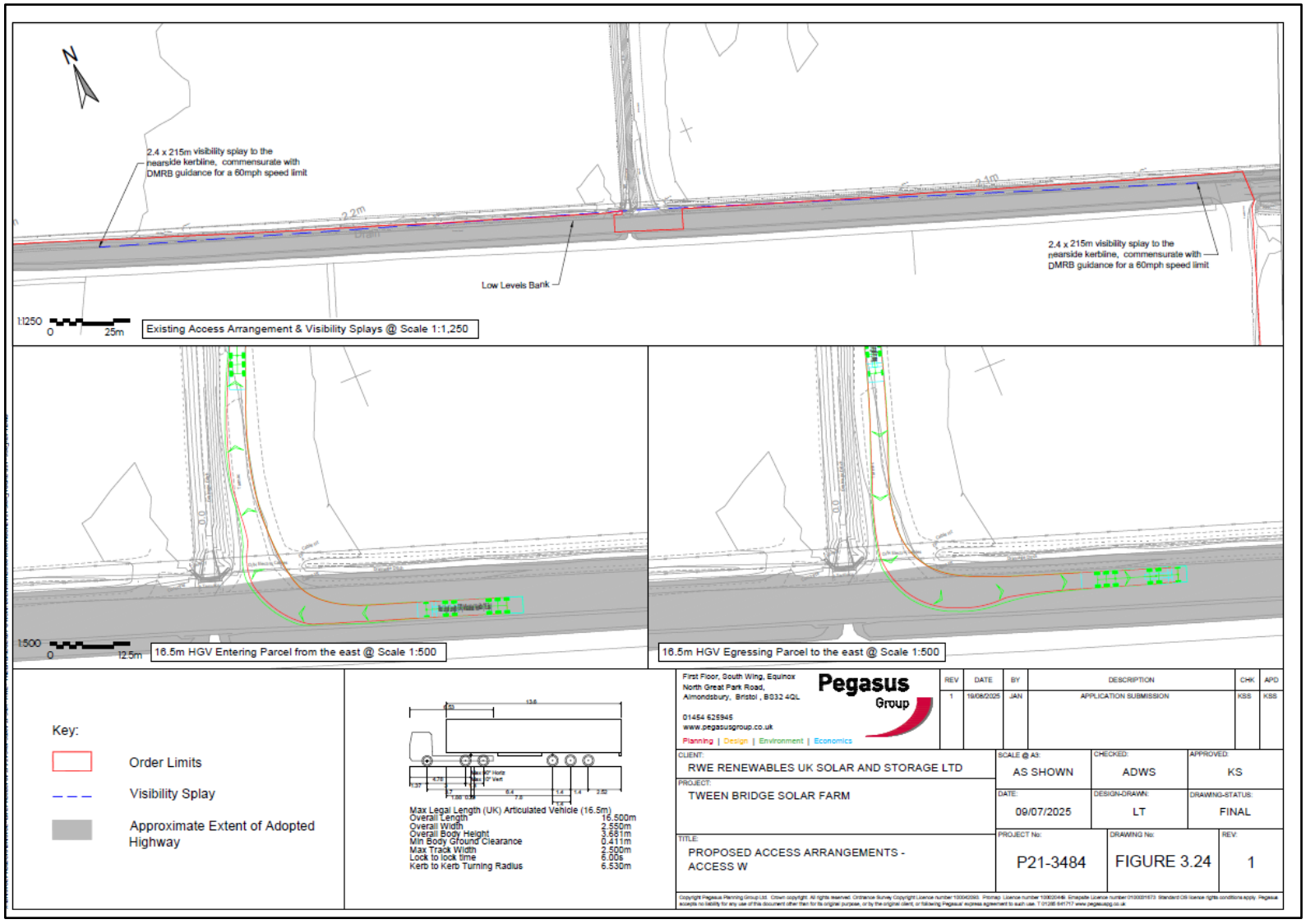

N
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
2.1m
Low Levels Bank
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
Drain
1:1250
0
25m
Junction Arrangement @ 1:1,250 scale
1:500
0
12.5m
Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location H @ 1:500 scale
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Trakk Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION H
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.9
REV: 1

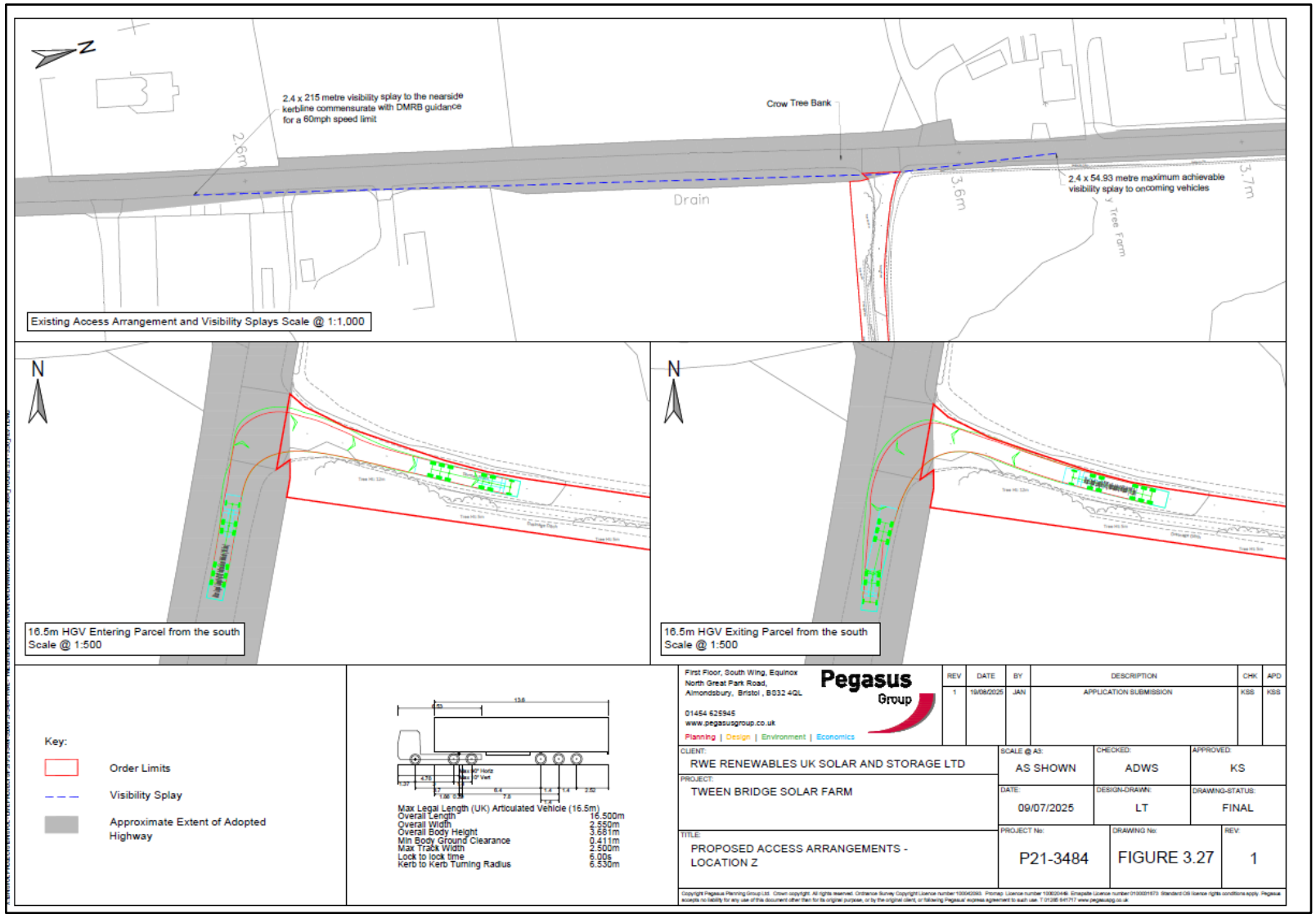

N
Low Levels Bank
Existing Telegraph Pole
R10.00
R2.00
6.00
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
1:1250
0
25m
Junction Arrangement @ 1:1,250 scale
N
N
1:500
0
12.5m
Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location i @ 1:500 scale
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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DATE
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DESCRIPTION
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19/09/2025
JAN
APPLICATION SUBMISSION
KSS
KSS
CLIENT:
RWE RENEWABLES UK SOLAR AND STORAGE LTD
SCALE @ A3:
AS SHOWN
CHECKED:
ADWS
APPROVED:
KS
PROJECT:
TWEEN BRIDGE SOLAR FARM
DATE:
09/07/2025
DESIGN-DRAWN:
JAN
DRAWING-STATUS:
FINAL
TITLE:
PROPOSED ACCESS ARRANGEMENTS - LOCATION i
PROJECT No:
P21-3484
DRAWING No:
FIGURE 3.10
REV:
1

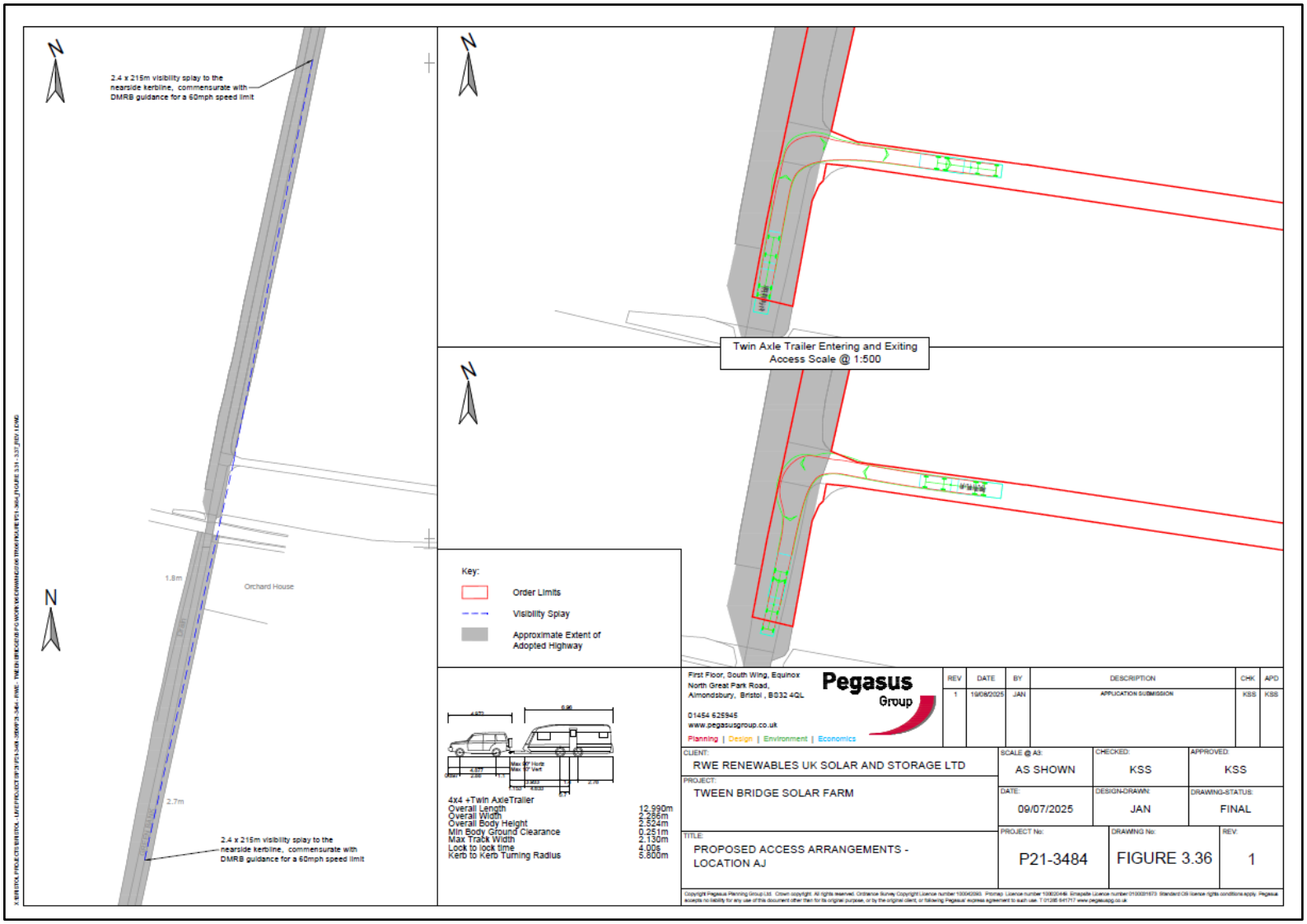

N
2.4 x 215m Visibility Splay commensurate with DMRB guidance for a 60mph speed limit
6.00m
R6.00m
R4.00m
2.4 x 215m Visibility Splay commensurate with DMRB guidance for a 60mph speed limit
Low Levels Bank
1:1250
0
25m
Junction Arrangement @ 1:1,250 scale
N
N
1:500
0
12.5m
Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location J @ 1:500 scale
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION J
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.11
REV: 1


N
Low Levels Bank
2.4 x 215m Visibility Splay commensurate with DMRB guidance for a 60mph speed limit
2.4 x 215m Visibility Splay commensurate with DMRB guidance for a 60mph speed limit
1:1250
0
25m
Access Arrangement @ 1:1,250 scale
N
N
1:500
0
12.5m
Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location K @ 1:500 scale
Key:
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION K
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.12
REV: 1


2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
A18 High Levels Bank
Drain
Taper
R14.00
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
N
1:1250
0
25m
Access Arrangement @ 1:1,250 scale
N
1:500
0
12.5m
Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location M @ 1:500 scale
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION M
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.14
REV: 1


2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
Low Levels Bank
2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
1:1250
0
25m
Existing Access Arrangement & Visibility Splays @ Scale 1:1,250
1:500
0
12.5m
16.5m HGV Entering Parcel from the east @ Scale 1:500
16.5m HGV Egressing Parcel to the east @ Scale 1:500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.661m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - ACCESS W
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: LT
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.24
REV: 1


2.4 x 215 metre visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
Crow Tree Bank
2.4 x 54.93 metre maximum achievable visibility splay to oncoming vehicles
Drain
2.6m
3.6m
3.7m
Existing Access Arrangement and Visibility Splays Scale @ 1:1,000
N
16.5m HGV Entering Parcel from the south
Scale @ 1:500
N
16.5m HGV Exiting Parcel from the south
Scale @ 1:500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Z
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: LT
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.27
REV: 1


2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
Orchard House
1.8m
2.7m
2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
Twin Axle Trailer Entering and Exiting Access Scale @ 1:500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
4x4 +Twin AxleTrailer
Overall Length 12.990m
Overall Width 2.356m
Overall Body Height 2.524m
Min Body Ground Clearance 0.251m
Max Track Width 2.130m
Lock to lock time 4.05s
Kerb to Kerb Turning Radius 5.800m
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REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AJ
SCALE @ A3: AS SHOWN
CHECKED: KSS
APPROVED: KSS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.36
REV: 1

safer roads for everyone

Tween Bridge Solar Farm, Thorne, Doncaster

Section 278 Highway Works

Road Safety Audit Stage 1

on behalf of North Lincolnshire Council

TMS Client – Pegasus Group
for RWE Renewables UK Solar & Storage Ltd

TMS Reference No: 19926
Date: 15th May 2026
Revision: 1

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Binley Business Park, Harry Weston Road,
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INSTITUTE OF HIGHWAY ENGINEERS

Citation ISO Certification
Quality management ISO 9001: 2015 REGISTERED
Certificate No:79362021

1. Project Details

Report Title:	Tween Bridge Solar Farm, Thorne, Doncaster Section 278 Highway Works Road Safety Audit Stage 1
Author	[redacted]
Document Ref No:	TMS Report Ref No: 19926
Revision	1
Prepared by:	TMS Consultancy
On behalf of:	North Lincolnshire Council (Overseeing Organisation)
TMS Client	Pegasus Group for RWE Renewables UK Solar and Storage Ltd

Document Control Sheet

Issue No	Revision	Audit Team	Completion Date	TMS Issue Date
1	0	DN / RM	13/05/2026	13/05/2026
2	1	DN / RM	15/05/2026	15/05/2026

2. Introduction

2.1 This report describes a Stage 1 Road Safety Audit carried out on the Section 278 highway works associated with a Solar Farm development at Tween Bridge, Thorne, Doncaster.

2.2 The audit team members are as follows:

Audit Team Leader

[redacted] – MSc, BSc (Hons), MCIHT, MSoRSA
National Highways Approved RSA Certificate of Competency
Principal Engineer, TMS Consultancy

Audit Team Member

[redacted] – CertEd, ACFS, FCIHT, FSoRSA, MITAI
National Highways Approved RSA Certificate of Competency
Road Safety Engineer, TMS Consultancy

2.3 The audit comprised an examination of the documents listed in **Appendix A**. The Road Safety Audit was undertaken in accordance with the Audit Brief supplied by Alex Snartt of Pegasus Group.

2.4 The site was visited by the Audit Team on Tuesday 12th May 2026 between 11am and 1.30pm. The weather was cloudy and dry. Traffic flows were low. No pedestrian or cycle flows were observed.

2.5 The terms of reference of the Road Safety Audit are as described in GG 119 Revision 2. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

2.6 All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise collision occurrence.

2.7 A scheme drawing is included in **Appendix B**, where the locations of specific problems are referenced. A location plan of the scheme is also included in this Appendix.

2.8 Scheme Description

The scheme consists of various site accesses associated with a ground mounted solar farm development (Tween Bridge Solar Farm).

The scheme is located between the settlements of Thorne and Crowle, centred at approximately 10 kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe. The Order Limits (scheme boundary) is split across the administrative boundaries of the City of Doncaster Council (CDC) and North Lincolnshire Council (NLC). The Scheme is generally surrounded by open land with agricultural land uses.

The accesses are a combination of existing accesses to be retained in present form, existing accesses to be improved and new accesses.

Internal of the site, access tracks will be surfaced with loose gravel. For those access points which are currently unsurfaced, it is proposed that the extent of the access point which falls within the extent of adopted highway shall be laid with temporary matting. This shall protect the verge and also collect any loose material from the site as vehicles exit on to the adjacent highway.

This Stage 1 Road Safety Audit covers the accesses located within the administrative boundary of **North Lincolnshire Council (NLC).** The accesses related to this element of the scheme are listed below:

- Location N A18 High Levels Bank (existing agricultural access)
- Location O A18 High Levels Bank (existing agricultural access)
- Location P High Levels Bank (existing agricultural access)
- Location Q South of High Levels Bank (existing agricultural access)
- Location R East of High Levels Bank (existing agricultural access)
- Location S Marsh Road (existing access)
- Location X South of High Levels Bank (existing agricultural access)
- Location Y Jaque's Bank (existing agricultural access)
- Location AA/AB Crock O'Moor Road (existing agricultural access)
- Location AH A18 High Levels Bank (new access)
- Location AI High Levels Bank (existing agricultural access)
- Location AK A161 (existing agricultural access)

Internal of the site, access tracks will be surfaced with loose gravel. For those access points which are currently unsurfaced, it is proposed that the extent of the access point which falls within the extent of adopted highway shall be laid with temporary matting. This shall protect the verge and also collect any loose material from the site as vehicles exit on to the adjacent highway.

2.9 Road Safety Audit Response Report

Following the completion of the road safety audit, the design team should prepare a road safety audit response report in collaboration with the Overseeing Organisation.

The response report should incorporate the following:

- **Decision Log** spreadsheet, where each Problem and Recommendation in the Safety Audit report is reiterated.
- In the Decision Log, a response should be provided by the Design Team and Overseeing Organisation for each problem raised in the RSA report, together with an agreed action.

Further information is provided in **GG 119 Sections 4.11 to 4.19** and **Appendix F** (where a road safety audit response report template is available).

The response report should be produced and finalised within *one month* of the issue of the RSA report. A copy of the response report should be issued to the Audit Team for their information.

3. Items resulting from the Stage 1 Audit Road Safety Audit

3.1 PROBLEM

Location: Location AH

Summary: Lack of protection from ditch may result in vehicles leaving the carriageway and overturning into drainage ditch

The proposed access AH will cross an existing drainage ditch that runs parallel along the east side of Moor Edges Road. A lack of protection from them the ditch for vehicles making turning manoeuvres into / from the access may result in vehicles leaving the carriageway and descending / overturning into the ditch.

RECOMMENDATION

At detailed design stage the drainage ditch should be piped and culverted and sufficient edge clearance provided between the carriageway and the culvert headwalls.

3.2 PROBLEM

Location: General – carriageway

Summary: Poor carriageway surface may lead to skid and loss of control type vehicle collisions

Throughout the wider extents of the scheme the existing carriageway surface at some locations is already in a poor state of repair, with evidence of potholes, loose material, surface cracking etc. The intensified usage of the accesses by large vehicles may lead to increased degradation of the carriageway and thus increase the risk of skid and loss of control type vehicle collisions.

RECOMMENDATION

Where required, works to resurface, repair or strengthen the existing carriageway should be carried.

3.3 PROBLEM

Location: General – signage

Summary: Inappropriate routes by large vehicles may lead to vehicle collisions on the wider network

Some routes around the site are inappropriate for usage by large vehicles (for example due to narrow widths and weight restrictions). In the event that construction traffic uses these routes there may be an increased risk of vehicle collisions.

RECOMMENDATION

At detailed design stage, as well as the Traffic Management Plan and driver training, route signage may be required.

4. Audit Team Statement

We certify that the terms of reference of the road safety audit are as described in GG 119 Revision 2.

Audit Team Leader

[redacted] – MSc, BSc (Hons), MCIHT, MSoRSA National Highways Approved RSA Certificate of Competency Principal Engineer, TMS Consultancy

Signed	[redacted]
Date	15th May 2026

Audit Team Member

[redacted] – CertEd, ACFS, FCIHT, FSoRSA, MITAI National Highways Approved RSA Certificate of Competency Road Safety Engineer, TMS Consultancy

Signed	[redacted]
Date	15th May 2026

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Coventry, CV3 2TX

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Appendix A

Documents Examined:

- Drawing No. P21-3484_Figure 2.1_ATC Locations Final AUG25.pdf
- Drawing No. P21-3484_Figure 3.15 - 3.20.pdf
- Drawing No. P21-3484_Figure 3.25, 3.26, 3.28.pdf
- Drawing No. P21-3484_Figure 3.34, 3.35, 3.37.pdf
- Drawing No. Figure 3.1.pdf
- Drawing No. Figure 4.1_Routes Final.2.pdf
- Drawing No. P21-3484_Access Overview.pdf

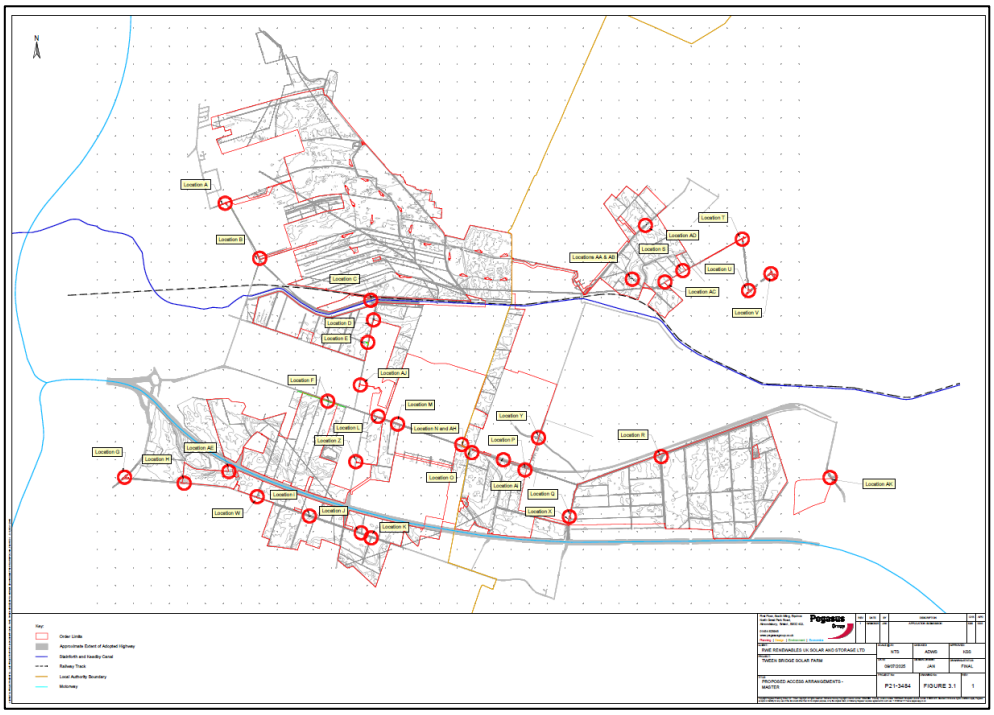
Other Information Provided:

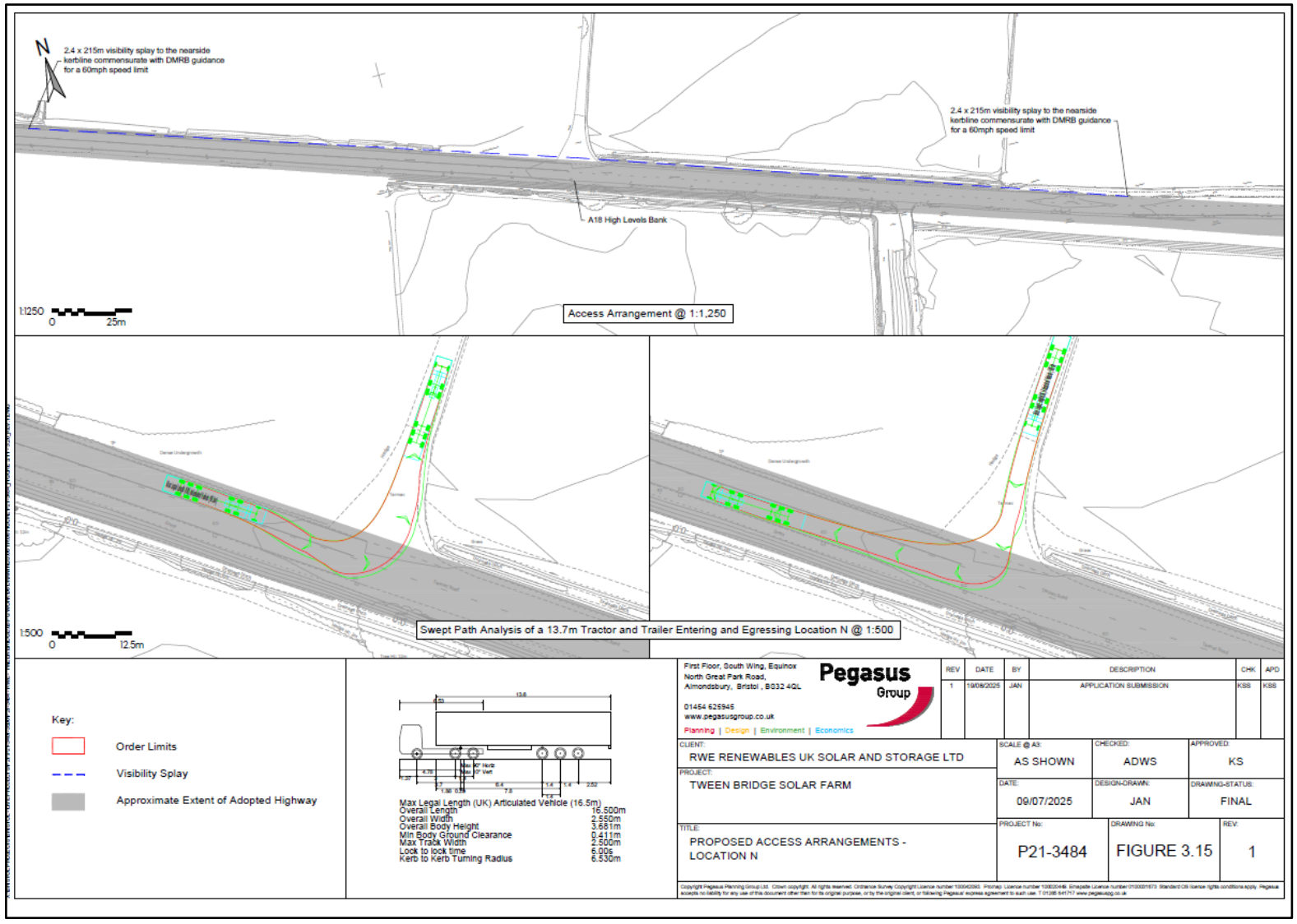
- Road Safety Audit Brief
- Traffic Management Plan
- ATC Data
- Collision Data
- Access Table

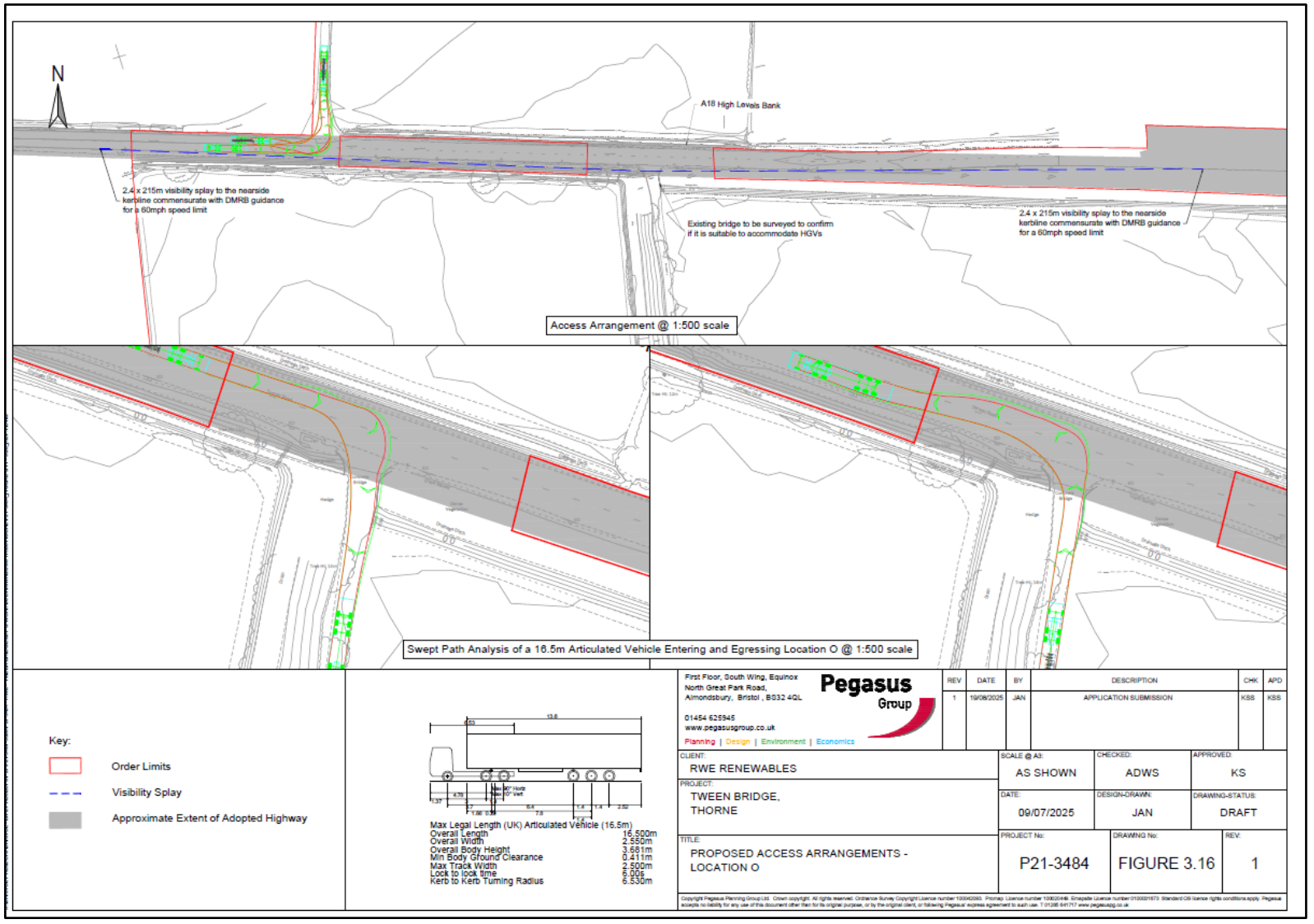
Appendix B

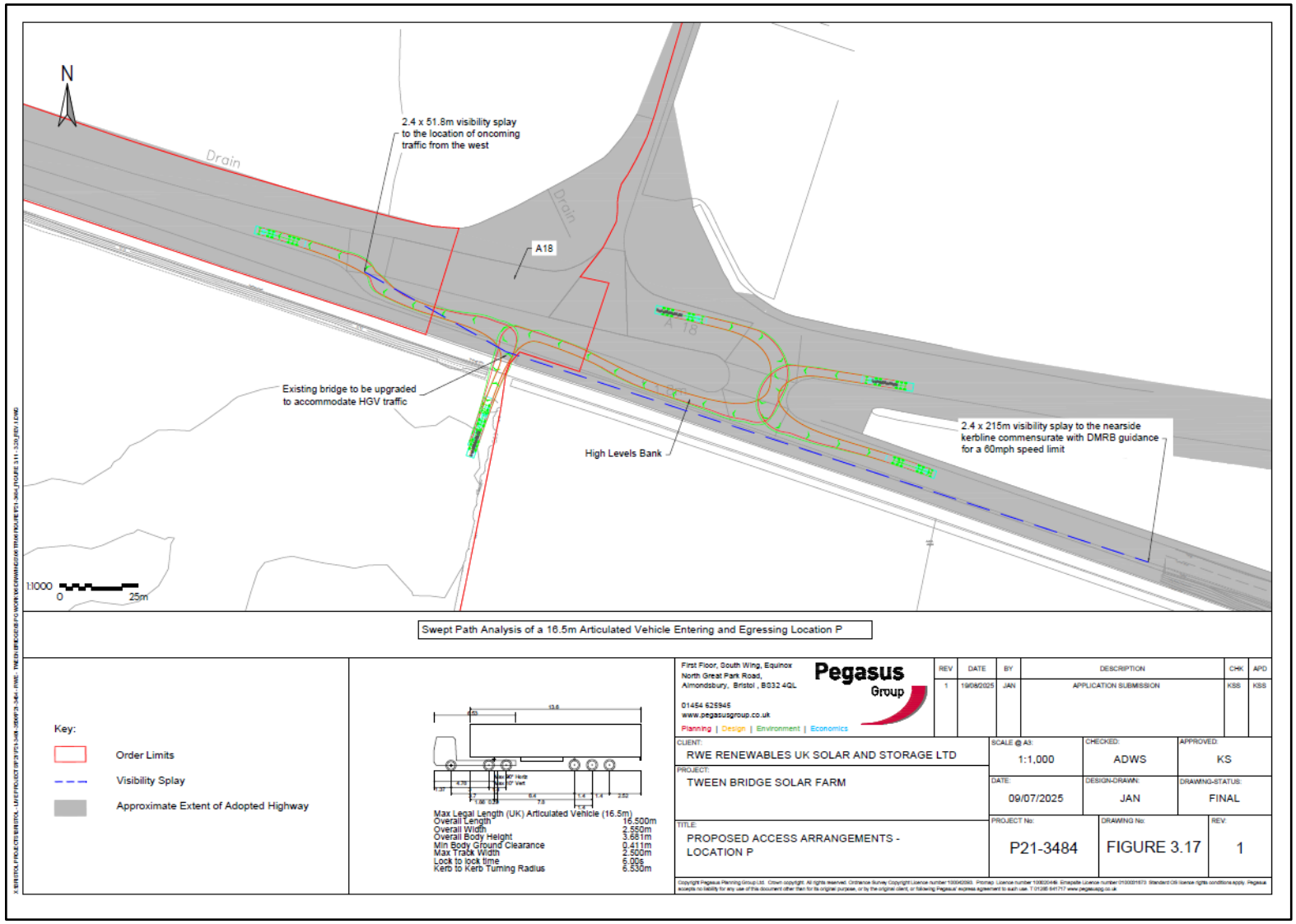
Please refer to the following page for a plan illustrating the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).

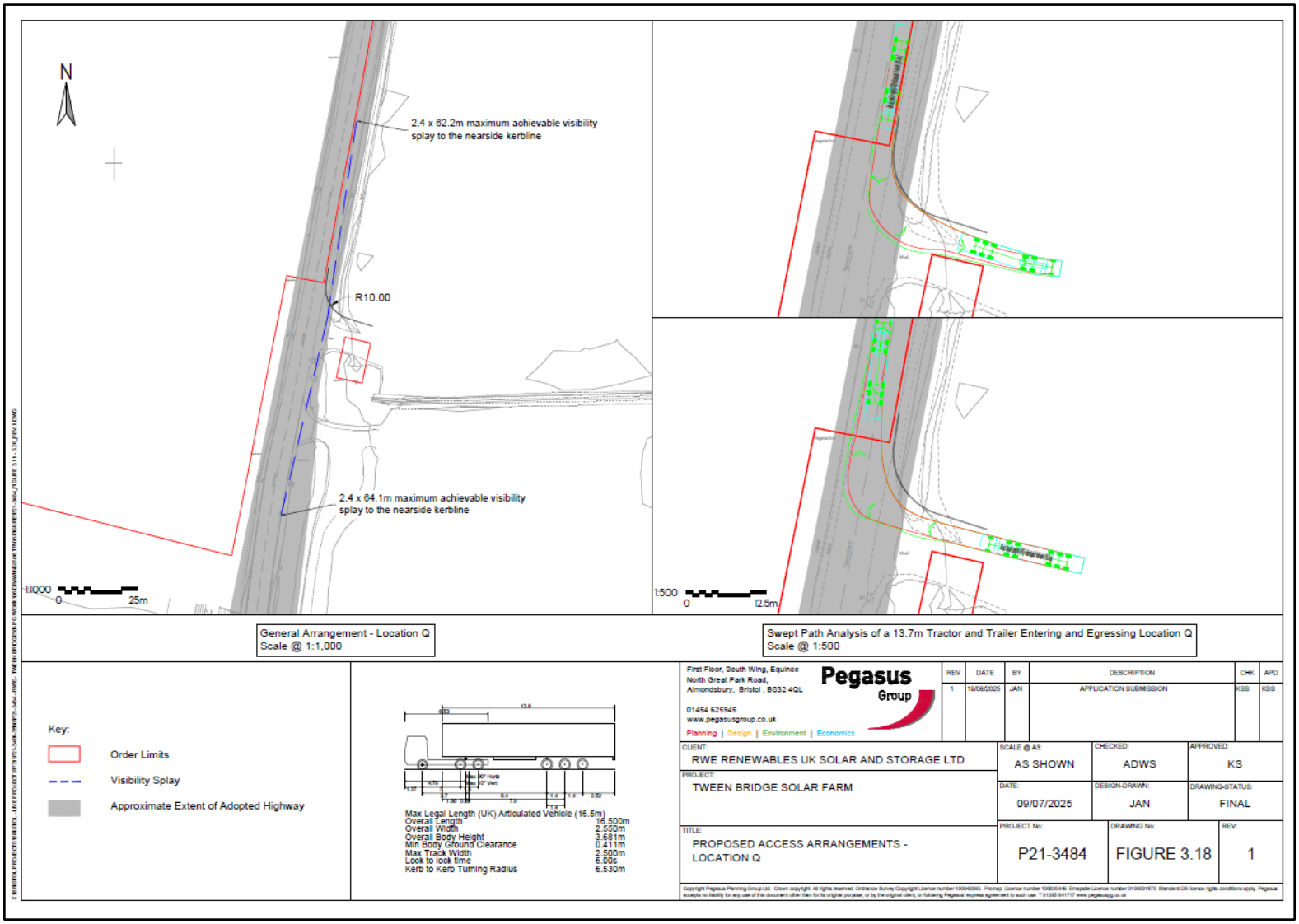
The location of the scheme is shown below:

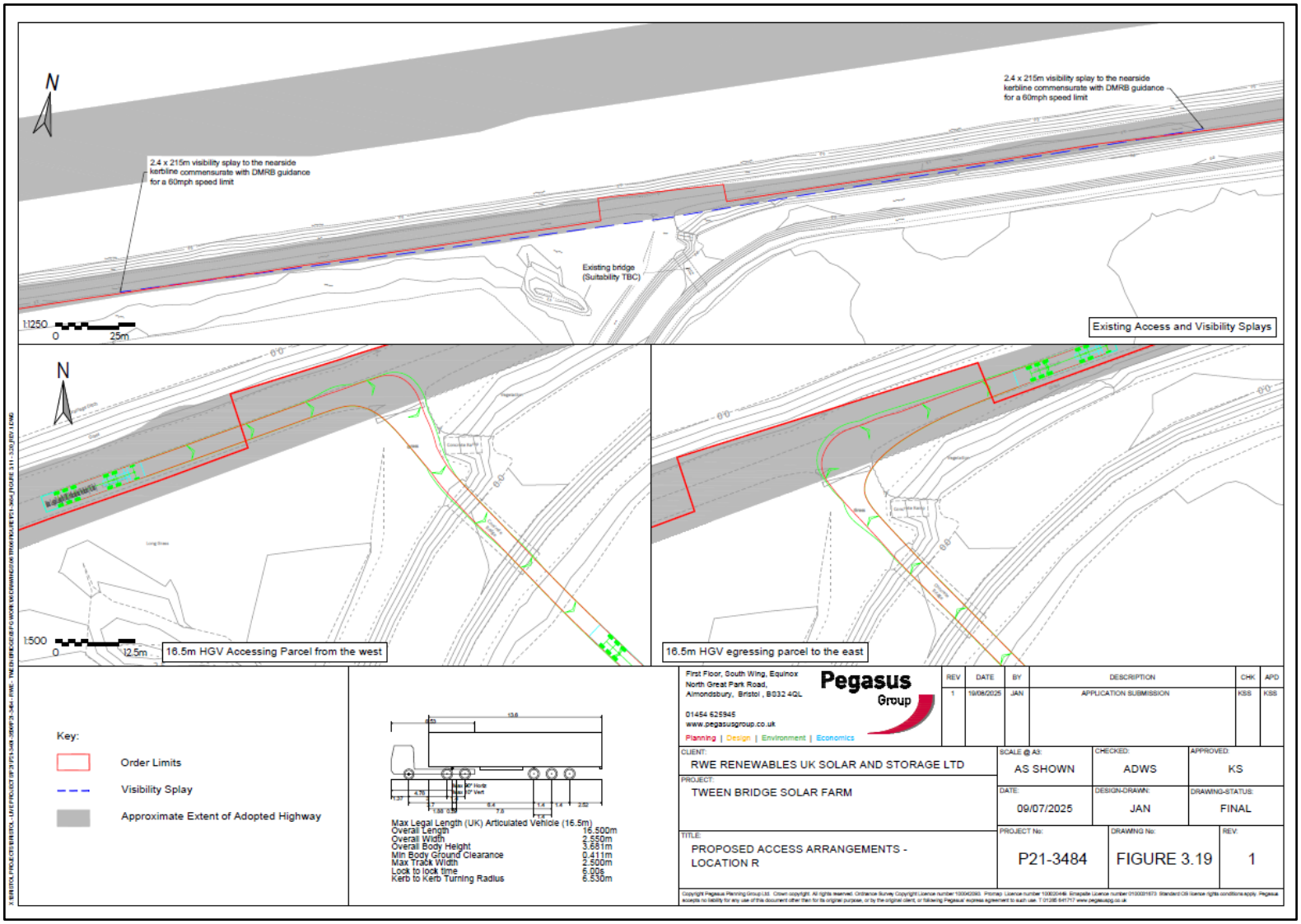


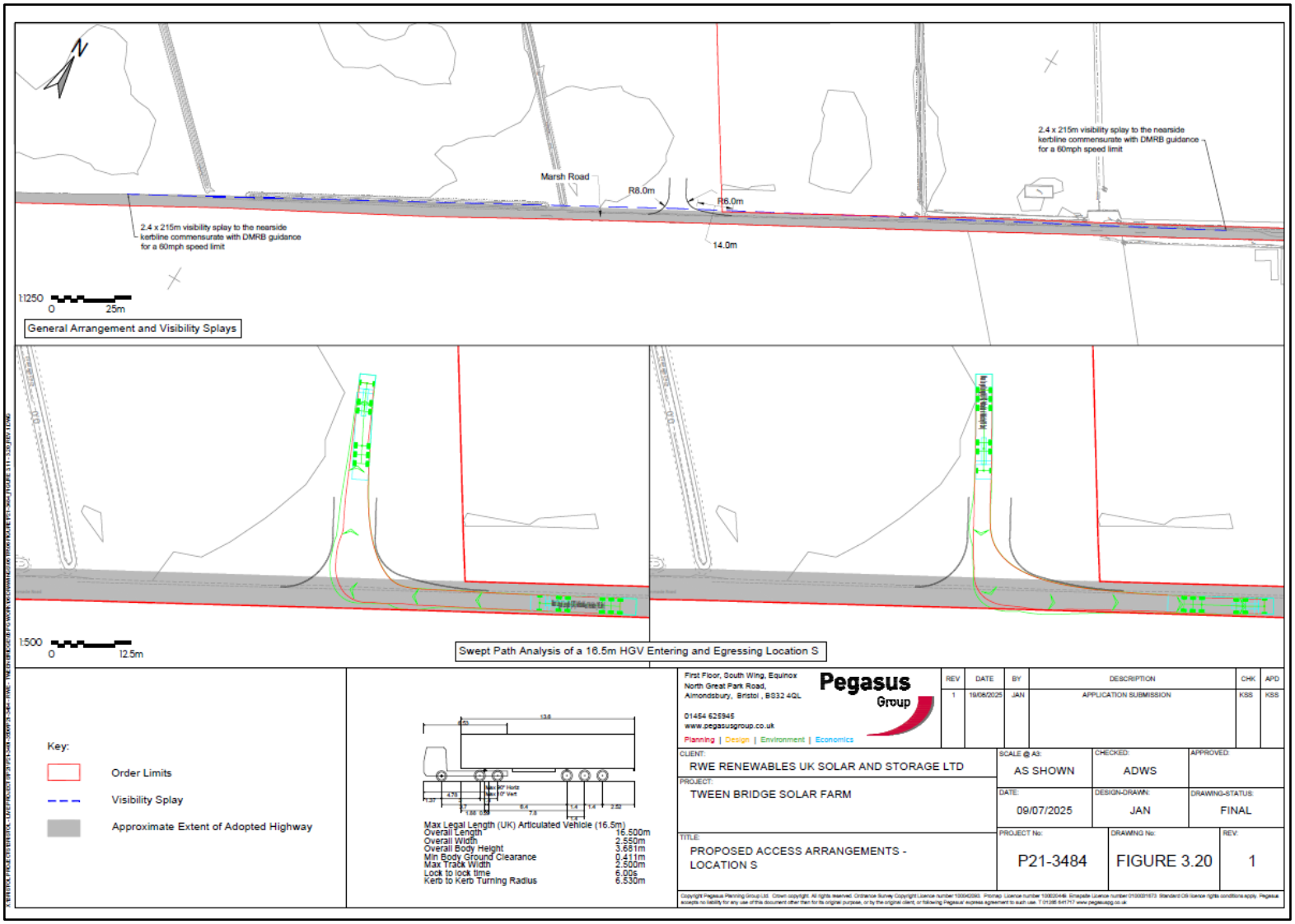

N
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
A18 High Levels Bank
1:1250
0
25m
Access Arrangement @ 1:1,250
1:500
0
12.5m
Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location N @ 1:500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
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REV 1 DATE 19/09/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION N
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.15
REV: 1

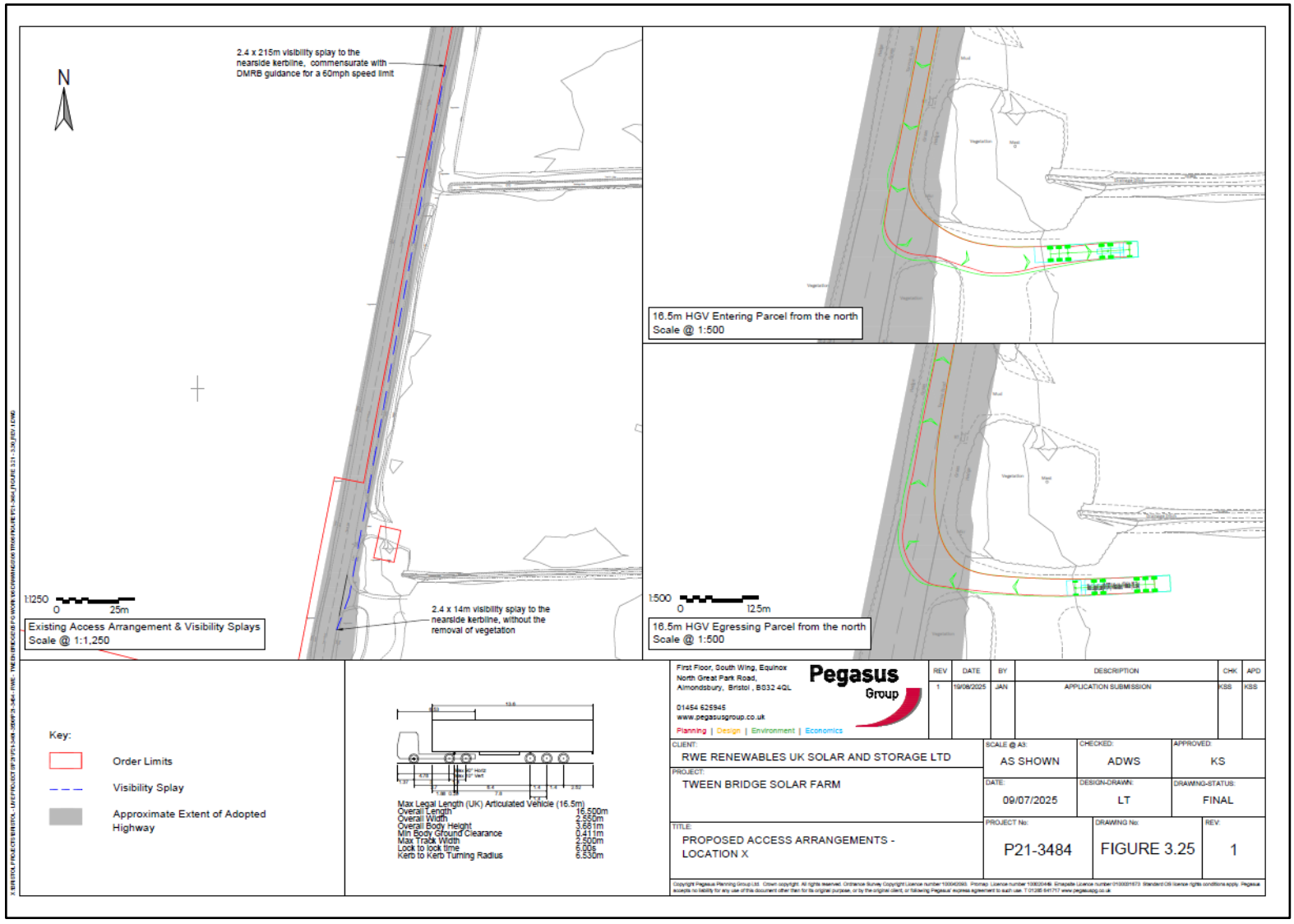

N
A18 High Levels Bank
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
Existing bridge to be surveyed to confirm if it is suitable to accommodate HGVs
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
Access Arrangement @ 1:500 scale
Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location O @ 1:500 scale
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.661m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox North Great Park Road, Almondsbury, Bristol , BS32 4QL
01454 625945
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Planning | Design | Environment | Economics
Pegasus Group
REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES
PROJECT: TWEEN BRIDGE, THORNE
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION O
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: DRAFT
PROJECT No: P21-3484
DRAWING No: FIGURE 3.16
REV: 1

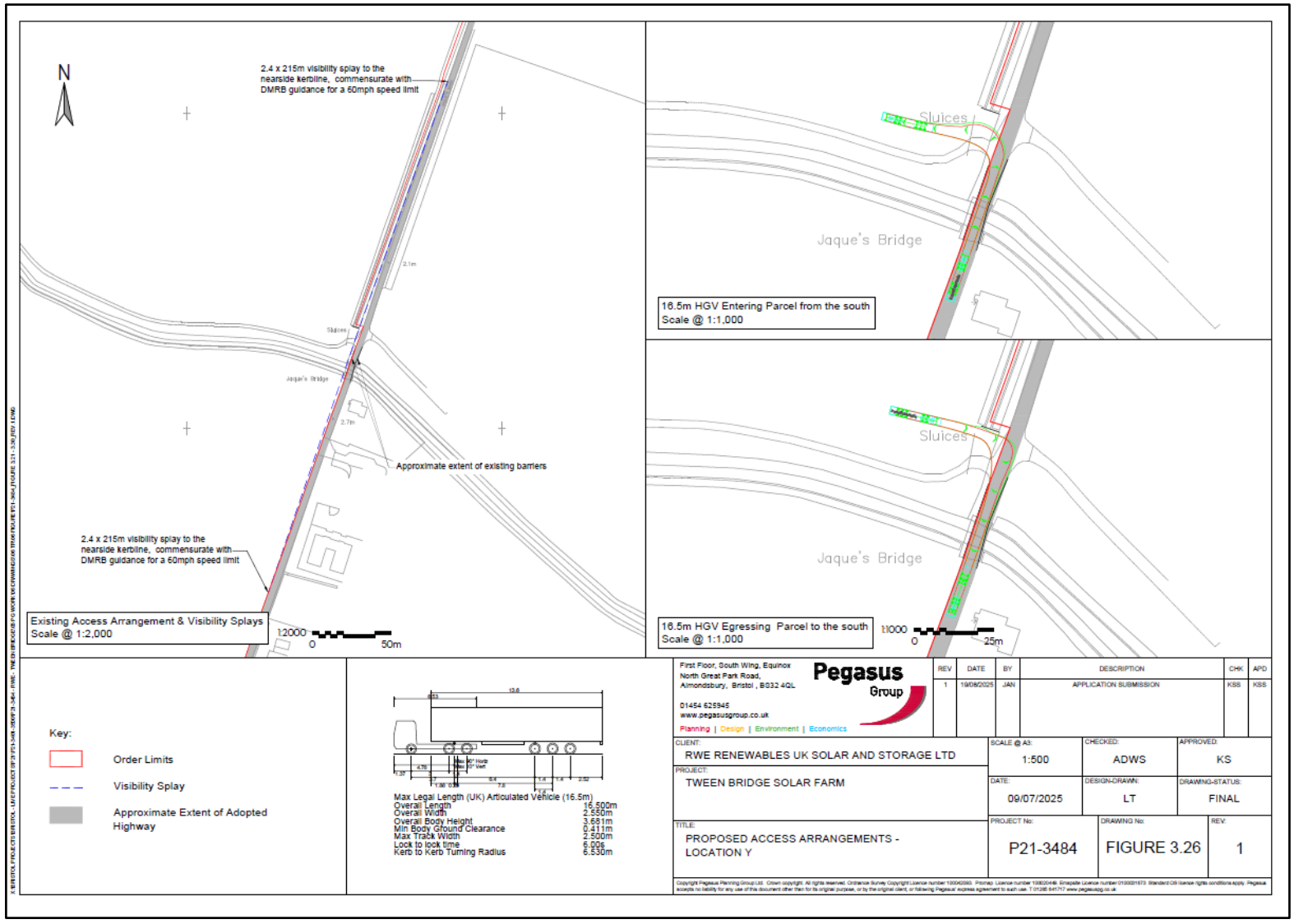

N
2.4 x 51.8m visibility splay to the location of oncoming traffic from the west
Drain
Drain
A18
Existing bridge to be upgraded to accommodate HGV traffic
High Levels Bank
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
1:1000
0
25m
Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location P
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox North Great Park Road, Almondsbury, Bristol , BS32 4QL
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www.pegasusgroup.co.uk
Planning | Design | Environment | Economics
Pegasus Group
REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION P
SCALE @ A3: 1:1,000
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.17
REV: 1

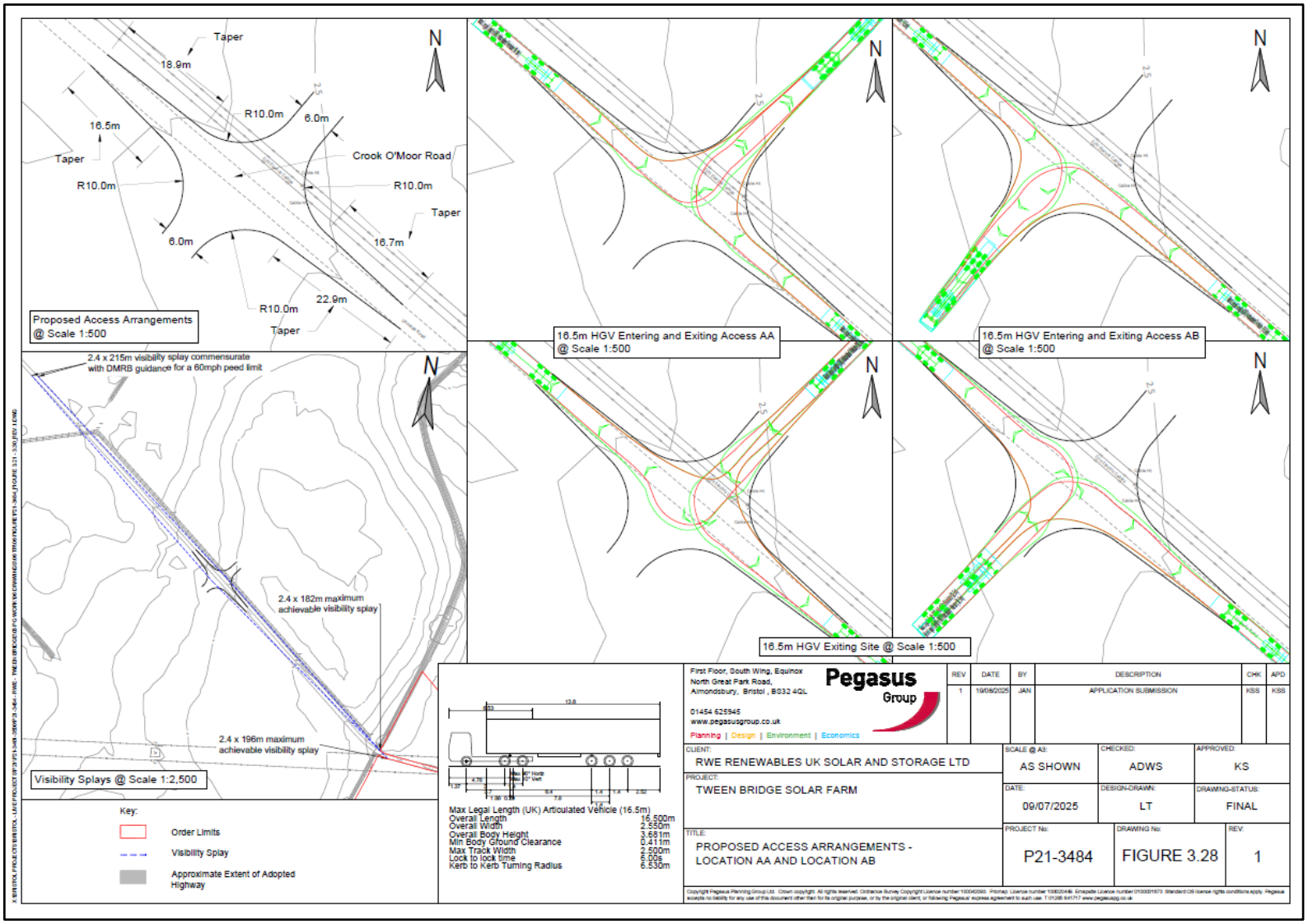

N
2.4 x 62.2m maximum achievable visibility splay to the nearside kerbline
R10.00
2.4 x 64.1m maximum achievable visibility splay to the nearside kerbline
1:1000
0
25m
1:500
0
12.5m
General Arrangement - Location Q
Scale @ 1:1,000
Swept Path Analysis of a 13.7m Tractor and Trailer Entering and Egressing Location Q
Scale @ 1:500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox
North Great Park Road,
Almondsbury, Bristol , BS32 4QL
01454 625945
www.pegasusgroup.co.uk
Planning | Design | Environment | Economics
Pegasus Group
REV DATE BY DESCRIPTION CHK APD
1 19/08/2025 JAN APPLICATION SUBMISSION KSS KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
PROJECT: TWEEN BRIDGE SOLAR FARM
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Q
PROJECT No: P21-3484
DRAWING No: FIGURE 3.18
REV: 1

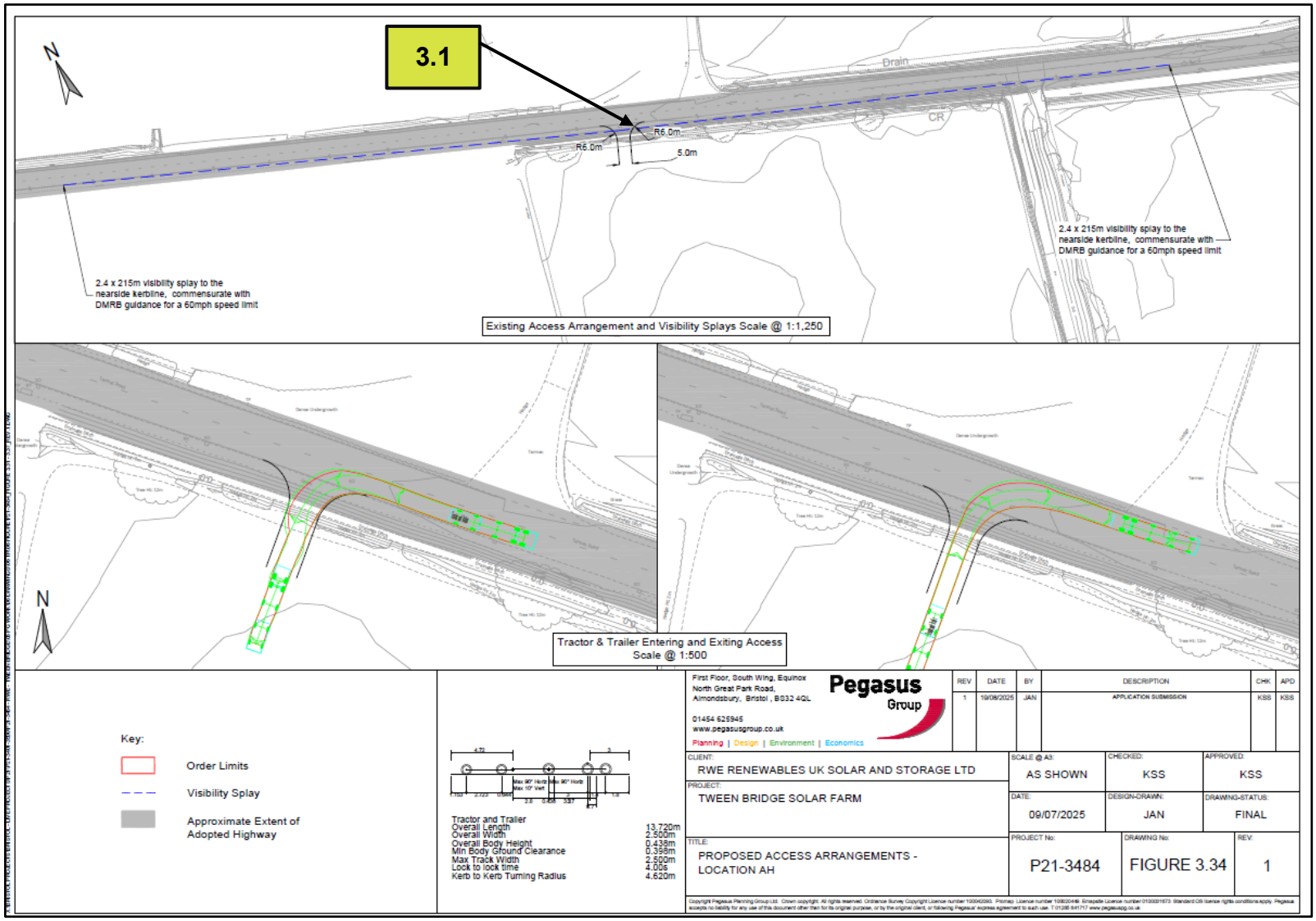

N
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
Existing bridge (Suitability TBC)
1:1250
0
25m
Existing Access and Visibility Splays
N
1:500
0
12.5m
16.5m HGV Accessing Parcel from the west
16.5m HGV egressing parcel to the east
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox
North Great Park Road,
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Planning | Design | Environment | Economics
Pegasus Group
REV | DATE | BY | DESCRIPTION | CHK | APD
1 | 19/08/2025 | JAN | APPLICATION SUBMISSION | KSS | KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION R
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.19
REV: 1

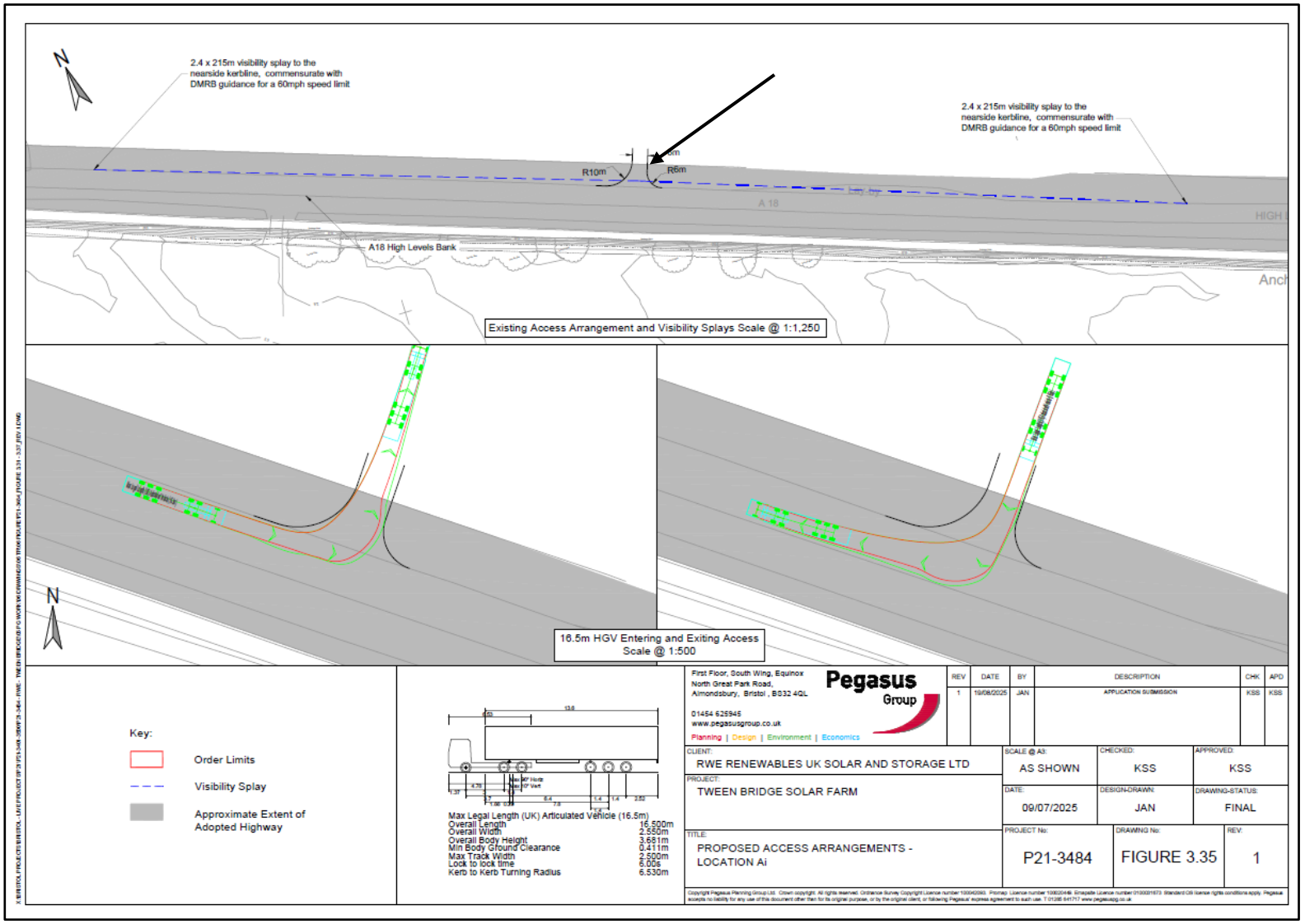

Marsh Road
R8.0m
R8.0m
14.0m
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
2.4 x 215m visibility splay to the nearside kerbline commensurate with DMRB guidance for a 60mph speed limit
1:1250
0
25m
General Arrangement and Visibility Splays
1:500
0
12.5m
Swept Path Analysis of a 16.5m HGV Entering and Egressing Location S
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.006
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox North Great Park Road, Almondsbury, Bristol , BS32 4QL
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Planning | Design | Environment | Economics
Pegasus Group
REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION S
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED:
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.20
REV: 1

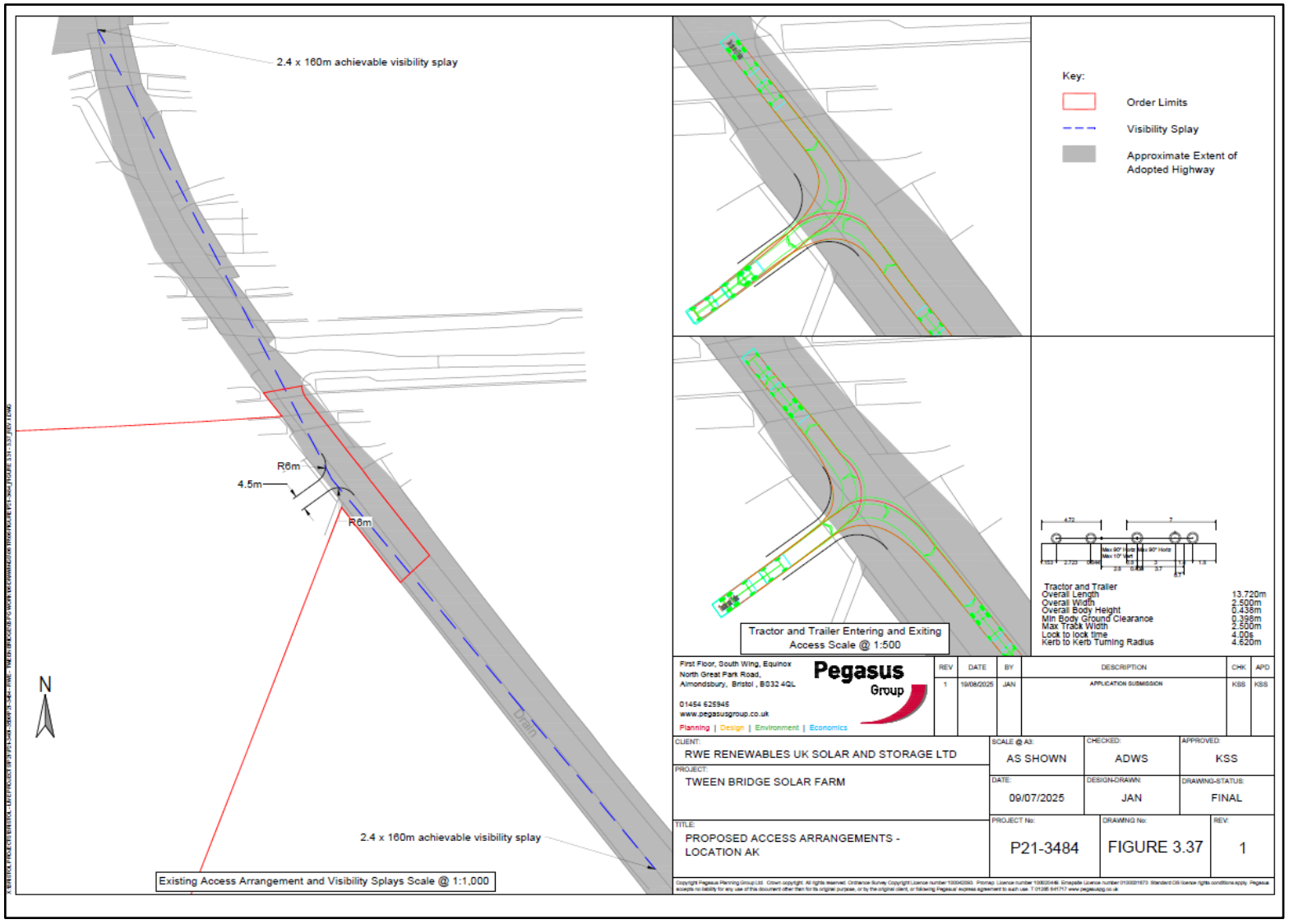

2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
N
1:250
0
25m
Existing Access Arrangement & Visibility Splays
Scale @ 1:1,250
2.4 x 14m visibility splay to the nearside kerbline, without the removal of vegetation
16.5m HGV Entering Parcel from the north
Scale @ 1:500
1:500
0
12.5m
16.5m HGV Egressing Parcel from the north
Scale @ 1:500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.661m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.500m
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Planning | Design | Environment | Economics
Pegasus Group
REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION X
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: LT
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.25
REV: 1


N
2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
Sluices
Jaque's Bridge
Approximate extent of existing barriers
2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
Existing Access Arrangement & Visibility Splays
Scale @ 1:2,000
1:2000
0
50m
16.5m HGV Entering Parcel from the south
Scale @ 1:1,000
16.5m HGV Egressing Parcel to the south
Scale @ 1:1,000
1:1000
0
25m
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.006
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox North Great Park Road, Almondsbury, Bristol , BS32 4QL
01454 625945
www.pegasusgroup.co.uk
Planning | Design | Environment | Economics
Pegasus Group
REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Y
SCALE @ A3: 1:500
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: LT
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.26
REV: 1


Taper
18.9m
R10.0m
6.0m
16.5m
Taper
Crook O'Moor Road
R10.0m
R10.0m
Taper
6.0m
16.7m
22.9m
R10.0m
Taper
Proposed Access Arrangements
@ Scale 1:500
16.5m HGV Entering and Exiting Access AA
@ Scale 1:500
16.5m HGV Entering and Exiting Access AB
@ Scale 1:500
16.5m HGV Exiting Site @ Scale 1:500
2.4 x 215m visibility splay commensurate
with DMRB guidance for a 60mph peed limit
2.4 x 182m maximum
achievable visibility splay
2.4 x 196m maximum
achievable visibility splay
Visibility Splays @ Scale 1:2,500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted
Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox
North Great Park Road,
Almondsbury, Bristol , BS32 4QL
01454 625945
www.pegasusgroup.co.uk
Planning | Design | Environment | Economics
Pegasus Group
REV DATE BY DESCRIPTION CHK APD
1 19/06/2025 JAN APPLICATION SUBMISSION KSS KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AA AND LOCATION AB
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KS
DATE: 09/07/2025
DESIGN-DRAWN: LT
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.28
REV: 1


3.1
N
Drain
CR
R6.0m
R6.0m
5.0m
2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
Existing Access Arrangement and Visibility Splays Scale @ 1:1,250
N
Tractor & Trailer Entering and Exiting Access Scale @ 1:500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Tractor and Trailer
Overall Length 13.720m
Overall Width 2.500m
Overall Body Height 0.435m
Min Body Ground Clearance 0.398m
Max Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 4.620m
First Floor, South Wing, Equinox North Great Park Road, Almondsbury, Bristol , BS32 4QL
01454 625945
www.pegasusgroup.co.uk
Planning | Design | Environment | Economics
Pegasus Group
REV DATE BY DESCRIPTION CHK APD
1 19/08/2025 JAN APPLICATION SUBMISSION KSS KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AH
SCALE @ A3: AS SHOWN
CHECKED: KSS
APPROVED: KSS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.34
REV: 1


2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
2.4 x 215m visibility splay to the nearside kerbline, commensurate with DMRB guidance for a 60mph speed limit
R10m
R6m
A18 High Levels Bank
A 18
Existing Access Arrangement and Visibility Splays Scale @ 1:1,250
16.5m HGV Entering and Exiting Access
Scale @ 1:500
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.661m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m
First Floor, South Wing, Equinox North Great Park Road, Almondsbury, Bristol , BS32 4QL
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Planning | Design | Environment | Economics
Pegasus Group
REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION Ai
SCALE @ A3: AS SHOWN
CHECKED: KSS
APPROVED: KSS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.35
REV: 1


2.4 x 160m achievable visibility splay
R6m
4.5m
R6m
Drain
N
2.4 x 160m achievable visibility splay
Existing Access Arrangement and Visibility Splays Scale @ 1:1,000
Key:
Order Limits
Visibility Splay
Approximate Extent of Adopted Highway
Tractor and Trailer Entering and Exiting Access Scale @ 1:500
Tractor and Trailer
Overall Length 13.720m
Overall Width 2.500m
Overall Body Height 0.438m
Min Body Ground Clearance 0.398m
Max Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 4.620m
First Floor, South Wing, Equinox
North Great Park Road,
Almondsbury, Bristol , BS32 4QL
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Planning | Design | Environment | Economics
Pegasus Group
REV 1 DATE 19/08/2025 BY JAN DESCRIPTION APPLICATION SUBMISSION CHK KSS APD KSS
CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD
PROJECT: TWEEN BRIDGE SOLAR FARM
TITLE: PROPOSED ACCESS ARRANGEMENTS - LOCATION AK
SCALE @ A3: AS SHOWN
CHECKED: ADWS
APPROVED: KSS
DATE: 09/07/2025
DESIGN-DRAWN: JAN
DRAWING-STATUS: FINAL
PROJECT No: P21-3484
DRAWING No: FIGURE 3.37
REV: 1

Appendix E – Road Safety Audit Designer's Responses

GG 119 - ROAD SAFETY AUDIT RESPONSE

Project/Report Title:	Tween Bridge Solar Farm, Thorne, Doncaster - Designer's Response
Audit Stage:	Stage 1
Date:	14/05/2026
Document Reference:	P21-3484_TR11
Document Revision:	-
Prepared by (Design Organisation):	Pegasus Group
On behalf of (Overseeing Organisation):	City of Doncaster Council
Scheme Summary:	The site consists of various site accesses associated with a ground mounted solar farm development (Tween Bridge Solar Farm). The scheme is located between the settlements of Thorne and Crowle, centred at approximately 10 kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe.
Audit Report Reference	Stage 1 Road Safety Audit Section 278 highway works associated with a Solar Farm development at Tween Bridge, Thorne, Doncaster.
Details of Personnel: **Overseeing Organisation**	City of Doncaster Council
Road Safety Audit Team	[redacted]
Design Organisation	[redacted]

RSA Problem		RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
Audit Ref	**Problem**				
3.1	The proposed access B will cross an existing drainage ditch that runs parallel along the east side of Moor Edges Road. A lack of protection from them the ditch for vehicles making turning manoeuvres into / from the access may result in vehicles leaving the carriageway and descending / overturning into the ditch.	At detailed design stage the drainage ditch should be piped and culverted and sufficient edge clearance provided between the carriageway and the culvert headwalls.	Agreed. This will be addressed at detailed design stage.		
3.2	At Location F on A18 High levels Bank there is a significant levels difference between the existing carriageway and the land to the south which will become the site access road. Due to the uphill gradient, large and high sided vehicles may have difficulty egressing from the access onto A18 High levels Bank, which may increase the risk of pull-out type vehicle collisions.	A level dwell area should be provided on the immediate approach to the access	Agreed. This will be addressed at detailed design stage.		
3.3	Throughout the wider extents of the scheme the existing carriageway surface at some locations is already in a poor state of repair, with evidence of potholes, loose material, surface cracking etc. The intensified usage of the accesses by large vehicles may lead to increased degradation of the carriageway and thus increase the risk of skid and loss of control type vehicle collisions.	Where required, works to resurface, repair or strengthen the existing carriageway should be carried.	Agreed. It is the responsibility of the local highway authority to maintain adopted highway extents. However, A pre-commencement highway condition survey of the existing carriageway surfaces at the scheme will be carried out to assess the baseline conditions. This would be followed by a further Condition Survey covering the same extents as previously assessed at the end of the relevant construction activities, in order to identify and agree any remedial works reasonably attributable to construction activities.		
3.4	Some routes around the site are inappropriate for usage by large vehicles (for example due to narrow widths and weight restrictions). If construction traffic uses these routes there may be an increased risk of vehicle collisions.	At detailed design stage, as well as the Traffic Management Plan and driver training, route signage may be required.	Agreed. This is set out in the Outline Construction Traffic Management Plan.		

DESIGN ORGANISATION AND OVERSEEING ORGANISATION STATEMENTS	**On behalf of the design organisation I certify that:** **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.**		**On behalf of the Overseeing Organisation I certify that:** **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and** **2) the agreed RSA actions will be progressed.**	
	Name:	[redacted]	Name:	
	Signed		Signed	
	Position:	Senior Director - Transport	Position:	
	Organisation:	Pegasus Group	Organisation:	
	Date:	14/05/2026	Date:	

GG 119 - ROAD SAFETY AUDIT RESPONSE

Project/Report Title:	Tween Bridge Solar Farm, Thorne, Doncaster - Designer's Response
Audit Stage:	Stage 1
Date:	14/05/2026
Document Reference:	P21-3484_TR12
Document Revision:	-
Prepared by (Design Organisation):	Pegasus Group
On behalf of (Overseeing Organisation):	North Lincolnshire Council
Scheme Summary:	The site consists of various site accesses associated with a ground mounted solar farm development (Tween Bridge Solar Farm). The scheme is located between the settlements of Thorne and Crowle, centred at approximately 10 kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe.
Audit Report Reference	Stage 1 Road Safety Audit Section 278 highway works associated with a Solar Farm development at Tween Bridge, Thorne, Doncaster.
Details of Personnel: **Overseeing Organisation**	North Lincolnshire Council
Road Safety Audit Team	[redacted]
Design Organisation	[redacted]

RSA Problem		RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
Audit Ref	**Problem**				
3.1	The proposed access AH will cross an existing drainage ditch that runs parallel along the east side of Moor Edges Road. A lack of protection from them the ditch for vehicles making turning manoeuvres into / from the access may result in vehicles leaving the carriageway and descending / overturning into the ditch.	At detailed design stage the drainage ditch should be piped and culverted and sufficient edge clearance provided between the carriageway and the culvert headwalls.	Agreed. This will be addressed at detailed design stage.		
3.2	Throughout the wider extents of the scheme the existing carriageway surface at some locations is already in a poor state of repair, with evidence of potholes, loose material, surface cracking etc. The intensified usage of the accesses by large vehicles may lead to increased degradation of the carriageway and thus increase the risk of skid and loss of control type vehicle collisions.	Where required, works to resurface, repair or strengthen the existing carriageway should be carried.	Agreed. It is the responsibility of the local highway authority to maintain adopted highway extents. However, A pre-commencement highway condition survey of the existing carriageway surfaces at the scheme will be carried out to assess the baseline conditions. This would be followed by a further Condition Survey covering the same extents as previously assessed at the end of the relevant construction activities, in order to identify and agree any remedial works reasonably attributable to construction activities.		
3.3	Some routes around the site are inappropriate for usage by large vehicles (for example due to narrow widths and weight restrictions). If construction traffic uses these routes there may be an increased risk of vehicle collisions.	At detailed design stage, as well as the Traffic Management Plan and driver training, route signage may be required.	Agreed. This is set out in the Outline Construction Traffic Management Plan.		

DESIGN ORGANISATION AND OVERSEEING ORGANISATION STATEMENTS	**On behalf of the design organisation I certify that:** **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.**		**On behalf of the Overseeing Organisation I certify that:** **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and** **2) the agreed RSA actions will be progressed.**	
	Name:	[redacted]	Name:	
	Signed		Signed	
	Position:	Senior Director - Transport	Position:	
	Organisation:	Pegasus Group	Organisation:	
	Date:	14/05/2026	Date:	

Appendix F – Swept Path Assessments (Godnow Road, Windsor Road and Marsh Road)

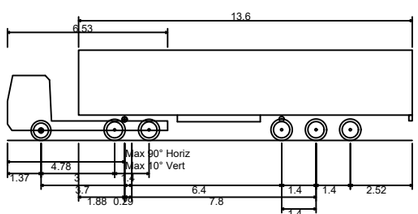


Swept Path Analysis of a 16.5m Articulated Vehicle Navigating Location U

Key:

- Order Limits
- Approximate Extent of Adopted Highway

What3Words reference: beside.reworked.intend



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

First Floor, South Wing, Equinox
North Great Park Road,
Almondsbury, Bristol , BS32 4QL

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REV	DATE	BY	DESCRIPTION	CHK	APD
1	19/08/2025	JAN	APPLICATION SUBMISSION	KSS	KSS
2	18/05/2026	JAN	DEADLINE 2	KSS	KSS
3	24/06/2026	JAN	DEADLINE 3	KSS	KSS

CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD

PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: LOCATION U - WINDSOR ROAD / GODNOW ROAD JUNCTION

SCALE @ A3:	CHECKED:	APPROVED:
1:500	ADWS	KS
DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
09/07/2025	LT	FINAL
PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.22	3

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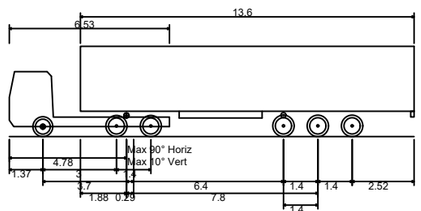


Swept Path Analysis of a 16.5m Articulated Vehicle Navigating Location V

Key:

- Order Limits
- Approximate Extent of Adopted Highway

What3Words reference: reckons.multiply.guru



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

First Floor, South Wing, Equinox
North Great Park Road,
Almondsbury, Bristol , BS32 4QL

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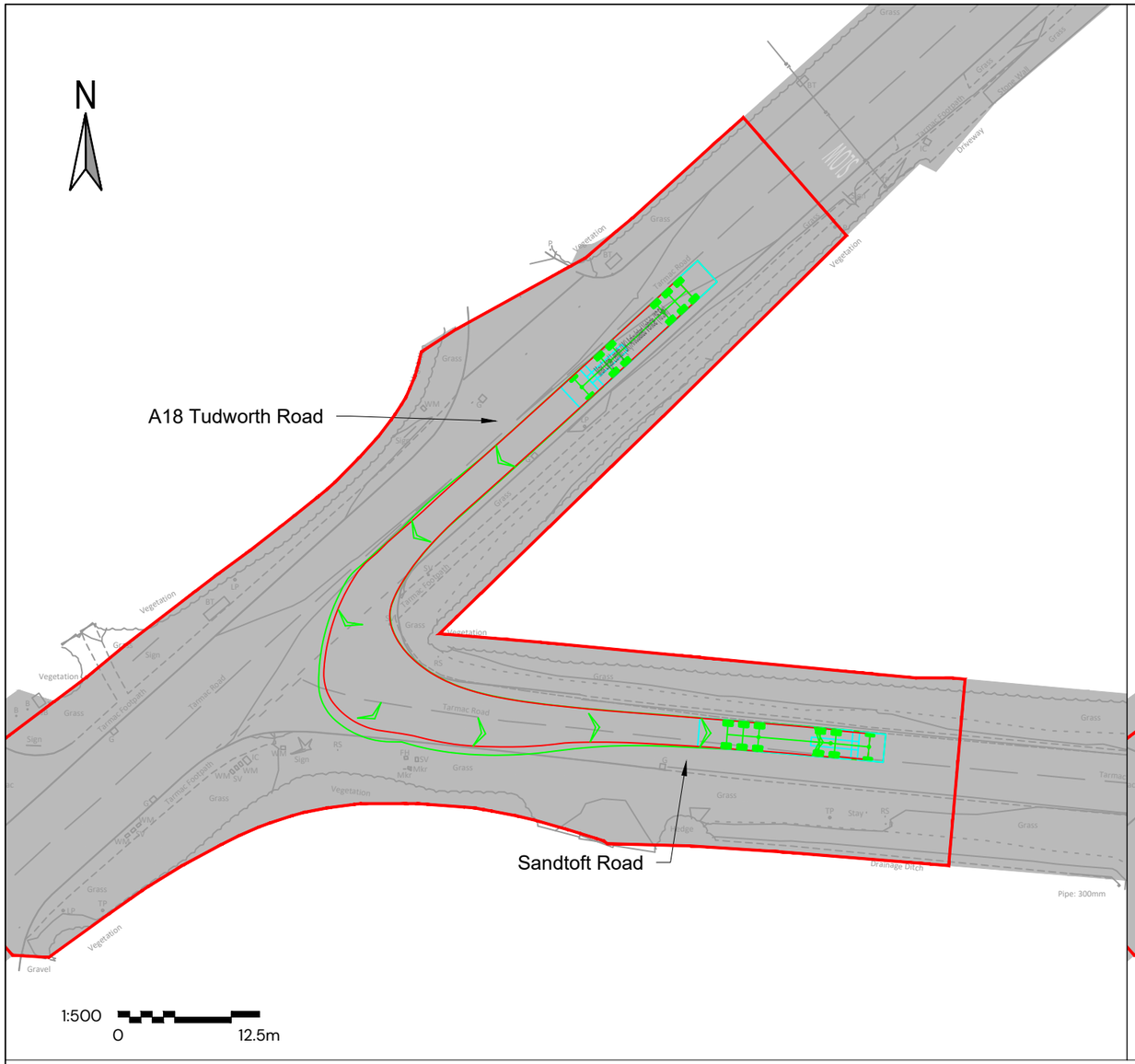
REV	DATE	BY	DESCRIPTION	CHK	APD
1	19/08/2025	JAN	APPLICATION SUBMISSION	KSS	KSS
2	18/05/2026	JAN	DEADLINE 2	KSS	KSS
3	24/06/2026	JAN	DEADLINE 3	KSS	KSS

CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD	SCALE @ A3: 1:500	CHECKED: ADWS	APPROVED: KS
PROJECT: TWEEN BRIDGE SOLAR FARM	DATE: 09/07/2025	DESIGN-DRAWN: LT	DRAWING-STATUS: FINAL
TITLE: LOCATION V - GODNOW ROAD / A161 JUNCTION	PROJECT No: P21-3484	DRAWING No: FIGURE 3.23	REV: 3

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Appendix G – Swept Path Assessments (A189 Tudworth Road / Sandtoft Road)



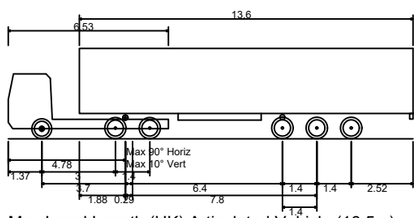


Swept Path Analysis of a 16.5m Articulated Vehicle Entering and Egressing Location G

Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway

What3Words reference: reconnect.surnames.stews



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

First Floor, South Wing, Equinox
North Great Park Road,
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REV	DATE	BY	DESCRIPTION	CHK	APD
1	19/08/2025	JAN	APPLICATION SUBMISSION	KSS	KSS
2	18/05/2026	JAN	DEADLINE 2	KSS	KSS
3	24/06/2026	JAN	DEADLINE 3	KSS	KSS

CLIENT: RWE RENEWABLES UK SOLAR AND STORAGE LTD

PROJECT: TWEEN BRIDGE SOLAR FARM

TITLE: LOCATION G - A18, TUDWORTH ROAD / SANDTOFT ROAD JUNCTION

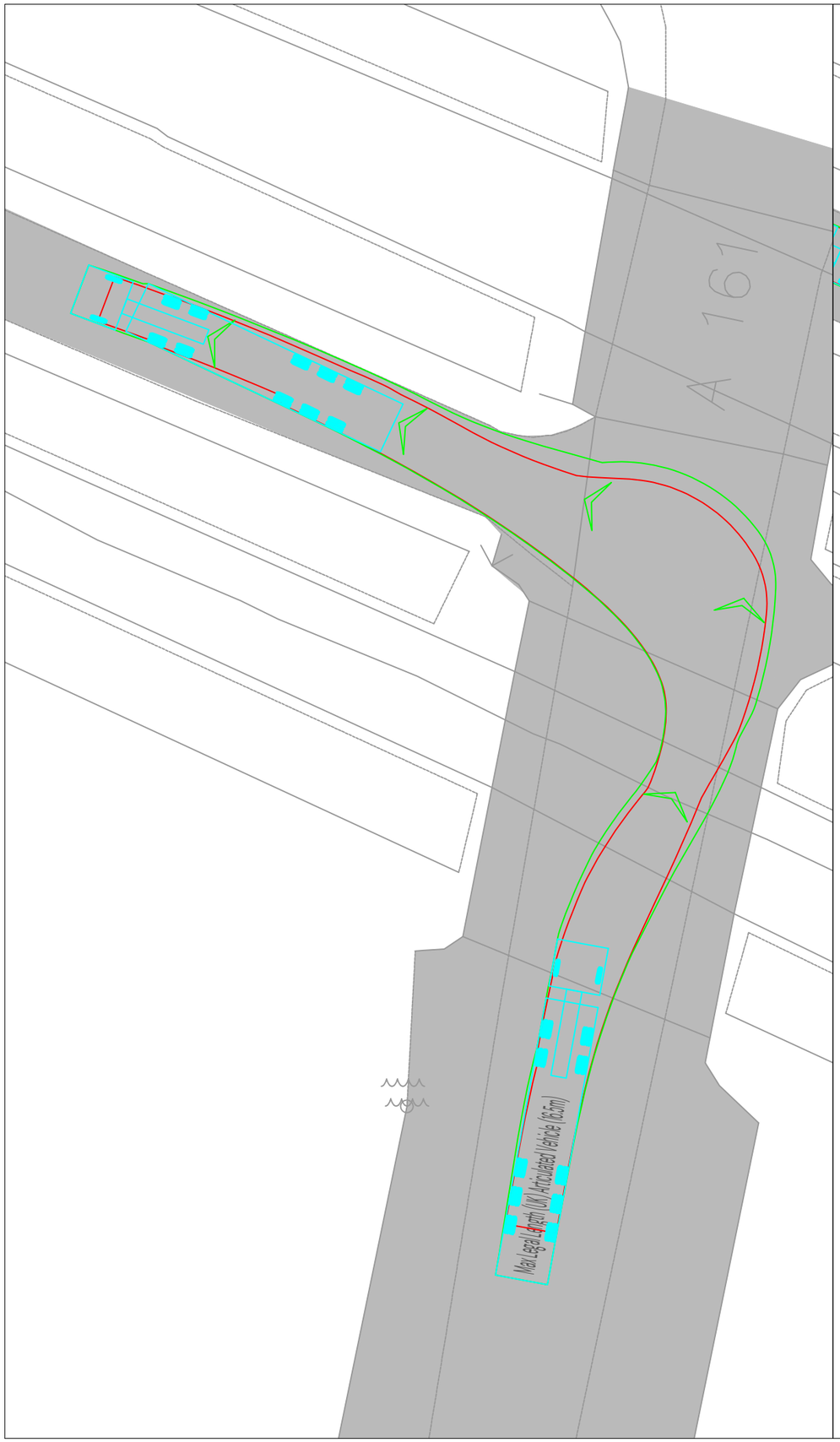
SCALE @ A3:	CHECKED:	APPROVED:
1:500	ADWS	KS
DATE:	DESIGN-DRAWN:	DRAWING-STATUS:
09/07/2025	JAN	FINAL
PROJECT No:	DRAWING No:	REV:
P21-3484	FIGURE 3.8	3

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Appendix H – Swept Path Assessment (Unnamed Road / A161)

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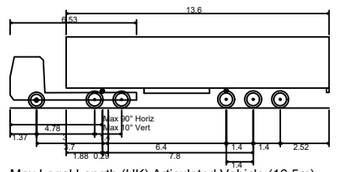
N

1:250
0 5m

Key:

Approximate Adopted Highway Boundary

Notes;
1. Vehicle tracked at default forward speed of 5mph.



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YYYY			

SWEPT PATH ASSESSMENT OF A 16.5M HGV AT A161 JUNCTION

TWEEN BIRDGE SOLAR FARM

CLIENT:
RWE RENEWABLES UK SOLAR AND STORAGE LTD

DATE:	SCALE:	DRAWING STATUS	REVISION
13/05/2026	1:250 @ A3	INDICATIVE	-

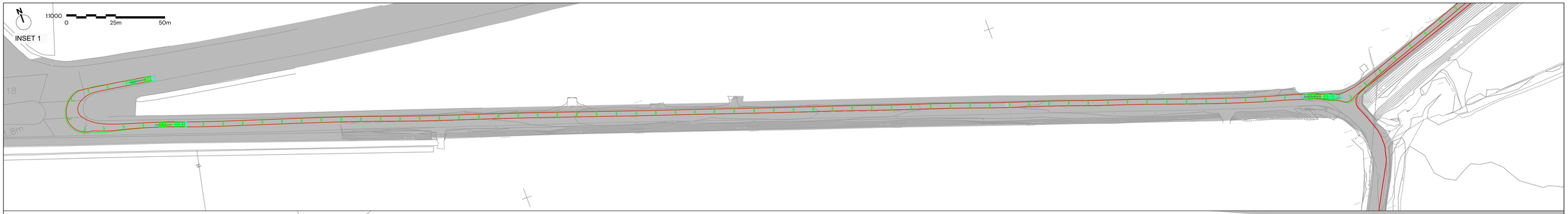
DRAWING NUMBER:
P21-3484_SK23

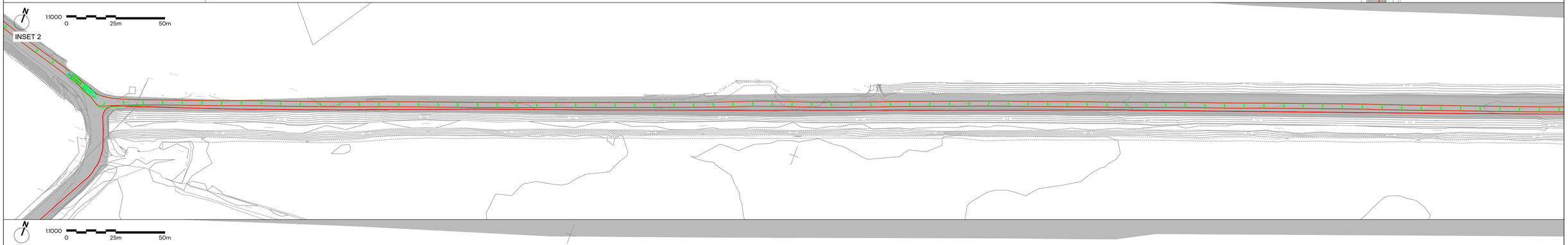
DRAWN BY:	APPROVED BY:	OFFICE:
LT/AS	KSS	BRS

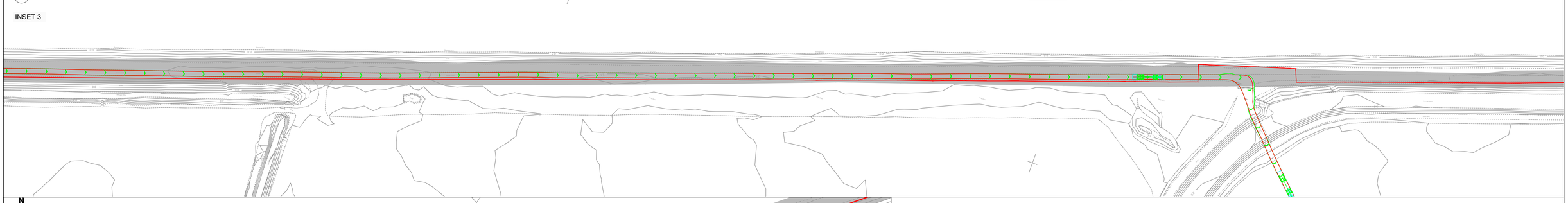
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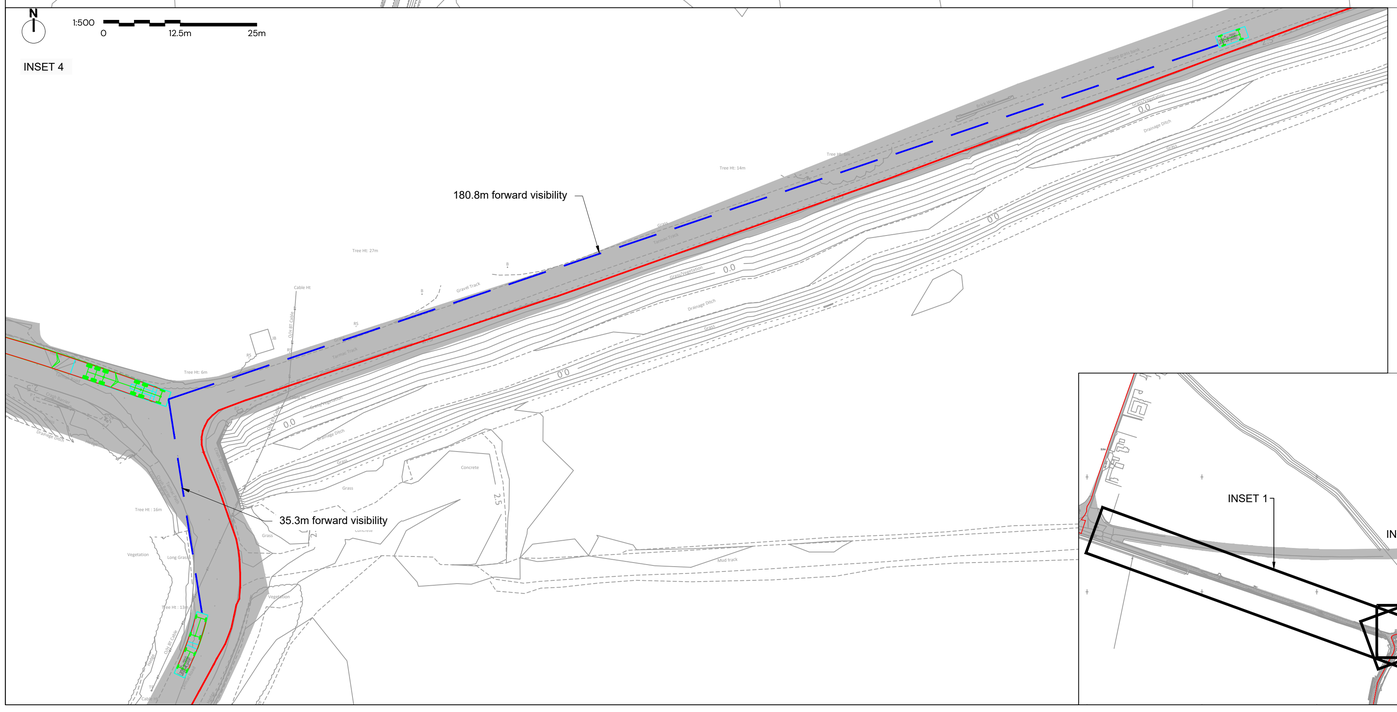
Appendix i – Swept Path Assessment (A18 / High Levels Bank (Idles Bank)

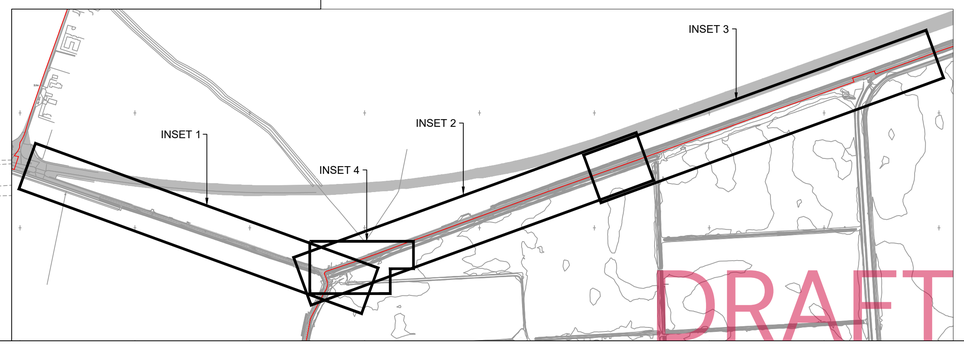
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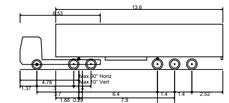






Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

SWEPT PATH ANALYSIS OF A 16.5M ARICULATED VEHICLE TRAVELLING FROM A18 TO ACCESS LOCATION R - INBOUND

TWEEN BRIDGE SOLAR FARM

CLIENT:
RWE RENEWABLES LTD

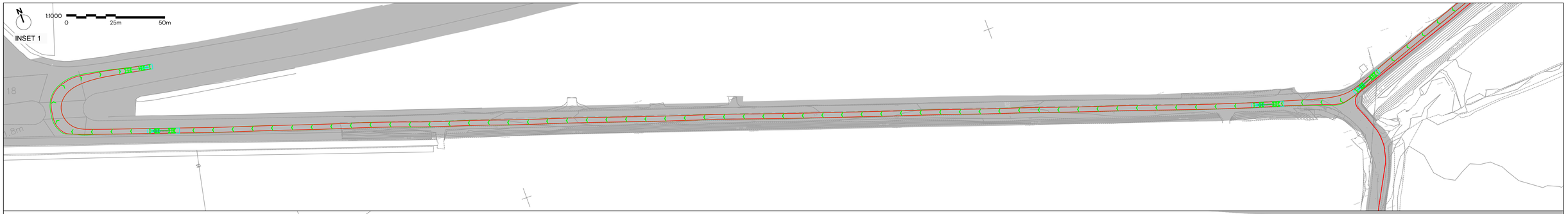
DATE:	SCALE:	DRAWING STATUS	REVISION
25/06/2026	AS SHOWN@A1	DRAFT	----

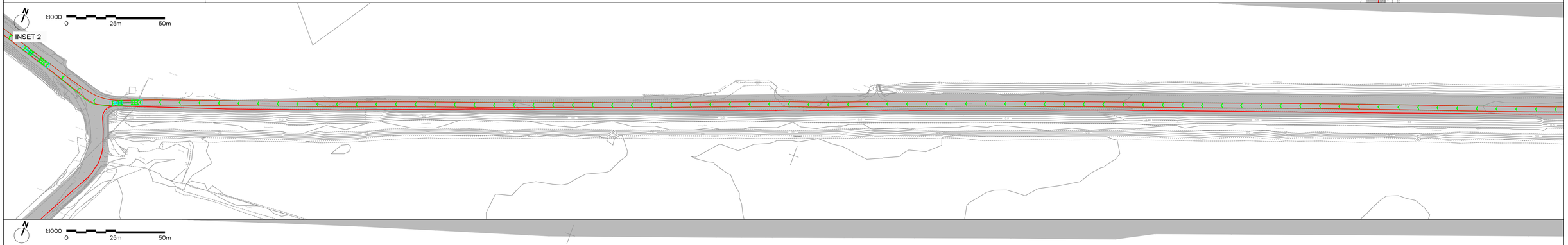
DRAWING NUMBER:
P21-3484_SK26-1

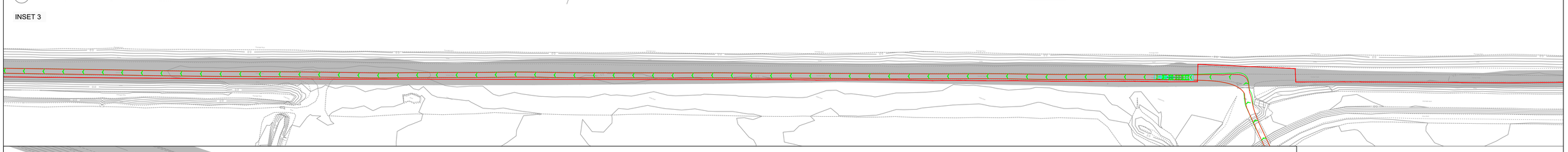
DRAWN BY:	APPROVED BY:	OFFICE:
JAN	KSS	BRS

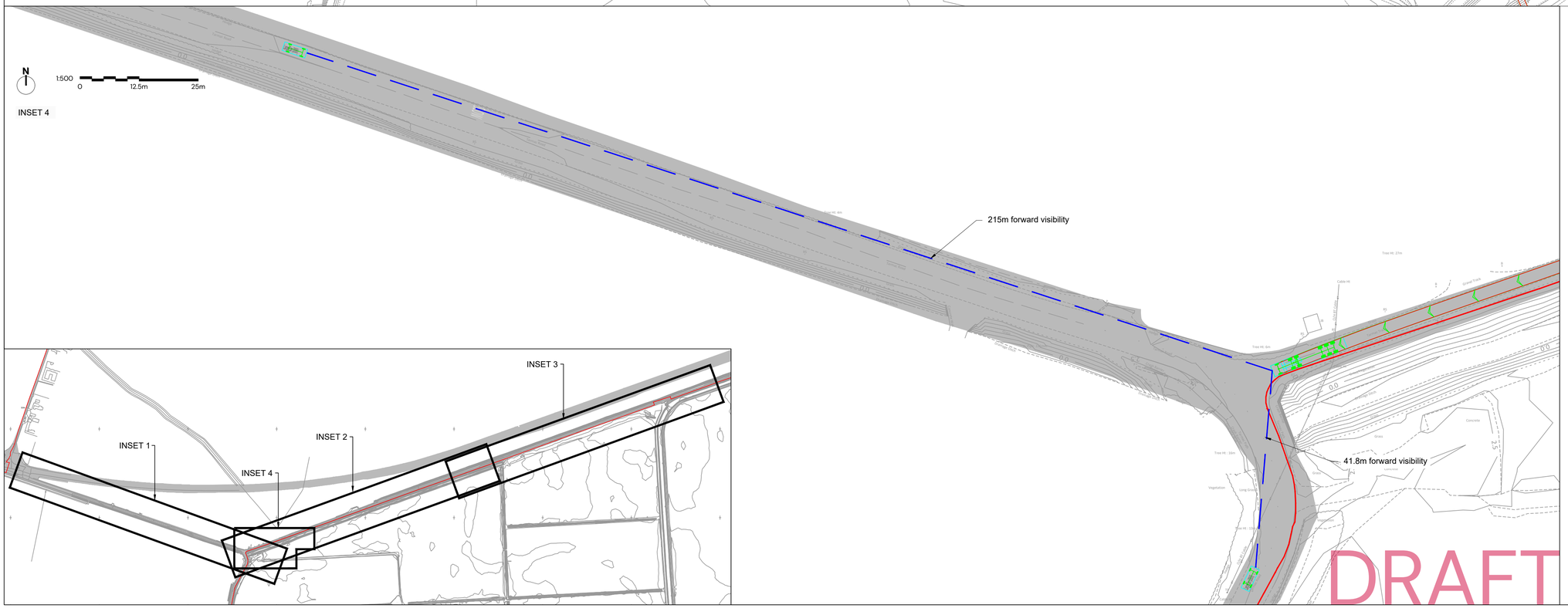
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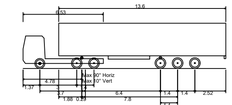






Key:

- Order Limits
- Visibility Splay
- Approximate Extent of Adopted Highway



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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

SWEPT PATH ANALYSIS OF A 16.5M ARICULATED VEHICLE TRAVELLING FROM ACCESS LOCATION R TO A18 - OUTBOUND

TWEEN BRIDGE SOLAR FARM

CLIENT:
RWE RENEWABLES LTD

DATE:	SCALE:	DRAWING STATUS	REVISION
25/06/2026	AS SHOWN@A1	DRAFT	----

DRAWING NUMBER:
P21-3484_SK26-2

DRAWN BY:	APPROVED BY:	OFFICE:
JAN	KSS	BRS

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Appendix J – Temporary Signage



1. Temporary Construction Traffic signage (Diagram 7301 'WORKS TRAFFIC' in the TSRGD)