CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Project	BESS – Rothienorman
Report Title	Construction Traffic Management Plan
Date	25/04/2025
Prepared by	Momentum Transport Consultancy
Prepared for	Blackford Renewables Ltd

1. Introduction

1.1 This Construction Traffic Management Plan (CTMP) has been prepared by Momentum Transport Consultancy 'Momentum' on behalf of Blackford Renewables Ltd to support the pre-application process for the development of a 500MW (1,000MWh) Battery Energy Storage System (BESS) at Rothienorman, Aberdeenshire, Scotland. Figure 1.1 shows the site plan.

1.2 This CTMP is based on the CTMP that was prepared for the development of a 50MW (100 MWh) BESS at Rothienorman (planning application reference APP/2023/0718), which was consulted on and has similar conditions. This CTMP seeks to achieve the following objectives:

- Minimise the impact of the construction traffic on Rothienorman local highway network especially during peak hours.
- Establish how construction materials can be delivered, and waste removed, in a safe and efficient manner.
- Assist in easing construction congestion on the local and wider highway network.
- Improve the safety and reliability of deliveries to the site.

1.3 This CTMP sets out the anticipated impacts of the development in line with the national, regional and local policy. The remainder of the note is therefore set out as follows:

- Section 2 presents the policy review.
- Section 3 sets out anticipated traffic forecasts for the development.
- Section 4 provides details of site access.
- Section 5 highlights measures to minimise impact and mitigate construction traffic.
- Section 6 presents CTMP implementation and monitoring.
- Section 7 forms the conclusions.

Figure 1.1: Site Plan

NORIKER POWER

Company: Noriker Power	Revision	Version	Change Description	Drafted By	Checked By	Date
Project Title: Blackford Energy Park	15	01	> Expanded Reservoir > Addition of vegetation > Addition of buffer tanks > Southern entrance to BESS re-routed	JJ	JW	25/03/2025
Drawing Title: Site layout		02	> Addition of Deer Fence	JJ	JW	28/03/2025
		03	> Modification of redline boundary at western edge	JJ	JW	09/04/2025

Transmission type: External
Intended Paper size: A2
Scale: 1:4000

2. Policy Review

NATIONAL POLICY

National Planning Framework 4 – (2024) – Scottish Government

2.1 The NPPF 4 spatial strategy reflects a wide range of proposals for development in rural areas, supported by national developments that recognise the potential and need to expand key sectors including renewable energy, sustainable transport and green infrastructure.

2.2 Policy 11 of the NPF requires project design and mitigation to demonstrate how the impacts on road traffic and on adjacent trunk roads, including during construction, are addressed.

2.3 Policy 13 ensures that in assessing the transport impacts of development, the area's needs and characteristics are taken into account.

National Transport Strategy 2 (2020) – Transport Scotland

2.4 The National Transport Strategy aims at taking climate action to **"***enable greener, cleaner choices: over the next 20 years, Scotland will see a continued transformation in transport where sustainable travel options are people's first choice if they need to travel*" (p.7).

LOCAL POLICY

Aberdeenshire Local Development Plan (2023)

2.5 Section 14 presents that any new private access onto a public road must be designed to the satisfaction of Aberdeenshire Council's Road and Transportation Service and, in the case of a trunk road, Transport Scotland. Developers should be aware of the Aberdeenshire Standards for Road Construction Consent and Adoption, and the need for Roads Construction Consent in most instances. A Transport Assessment (or for smaller proposals a Transport Statement) may be asked for, to demonstrate that the development (and any proposed mitigation measures) will not have significant transport impacts on existing transport infrastructure and services (RD1.8)

Aberdeen City and Shire Local Transport Strategy (2012)

2.6 Aberdeen City and Shire's vision is to have a transport network that is safe for all users. The Council has an obligation to ensure that road casualty reduction is a main priority and the Local Transport Strategy (LTS) will support the delivery of the Joint Road Safety Plan.

2.7 The aims of the LTS are to:

- Reduce Non-Sustainable Journeys
- Increase Active Travel
- Make Travel More Effective
- Improve Health
- Reduce Carbon Emissions from Transport

3. Construction Works

CONSTRUCTION PROGRAMME

3.1 The construction period could be expected to last up to 18 months between the periods of Q1 2028 until Q3 2029.

3.2 Exact details on the construction programme will be delivered once a contractor has been appointed.

CONSTRUCTION WORKERS

3.3 Based on observations at existing BESS sites and the scale of the proposed development, no more than 150 workers are anticipated to be present on site during the peak of construction activities.

3.4 Please note that this number is indicative and the exact number of expected construction workers on site during the peak periods would need to be confirmed once a contractor has been appointed.

WORKING HOURS

3.5 Construction works would be undertaken from 08:00 to 18:00 Monday to Friday, and 09:00-13:00 Saturday. No construction would be undertaken on Sundays nor on Bank Holidays.

3.6 Staff will work 10-hour shifts, arriving on site between 8am and 9am in the morning and leaving site between 7pm and 8pm in the evening on weekdays.

CONSTRUCTION TRAFFIC FORECAST

3.7 In the absence of an appointed contractor at this stage, construction delivery traffic has been forecast using a scaled approach from another BESS site in Stairfoot. The Stairfoot site is smaller (40MWh instead of 1,000MWh planned for the proposed site) and therefore the deliveries have been uplifted proportionally as shown in Table 3.1.

Table 3.1 Traffic Forecast

Activity	Vehicle type / size	Stairfoot site (40MWh)	Rothienorman site (1,000MWh)
Delivery of inverters	Articulated lorry	4 deliveries	100 deliveries
Delivery of transformers	Articulated lorry	4 deliveries	100 deliveries
Installation Inverters/Transformers	Crane	3 movements	75 movements
Delivery of Battery racks and PV	Articulated lorry	20 deliveries	500 deliveries
Installation of Battery racks	Crane	2 movements	50 movements
Delivery of MV substation	Articulated lorry	2 deliveries	50 deliveries
Installation of MV substation	Crane	2 movements	50 movements
Delivery of concrete	Concrete truck	6 deliveries	150 deliveries
Concrete pumping	Concrete pump	6 movements	150 movements
Aggregate movements	Lorry	5 movements	125 movements

3.8 On average it is expected that over the 18-months construction period this will create 3 - 4 HGV movements per day and the delivery of three abnormal loads for the supergrid transformers would also be expected. However this would need to be further validated by the appointed contractor.

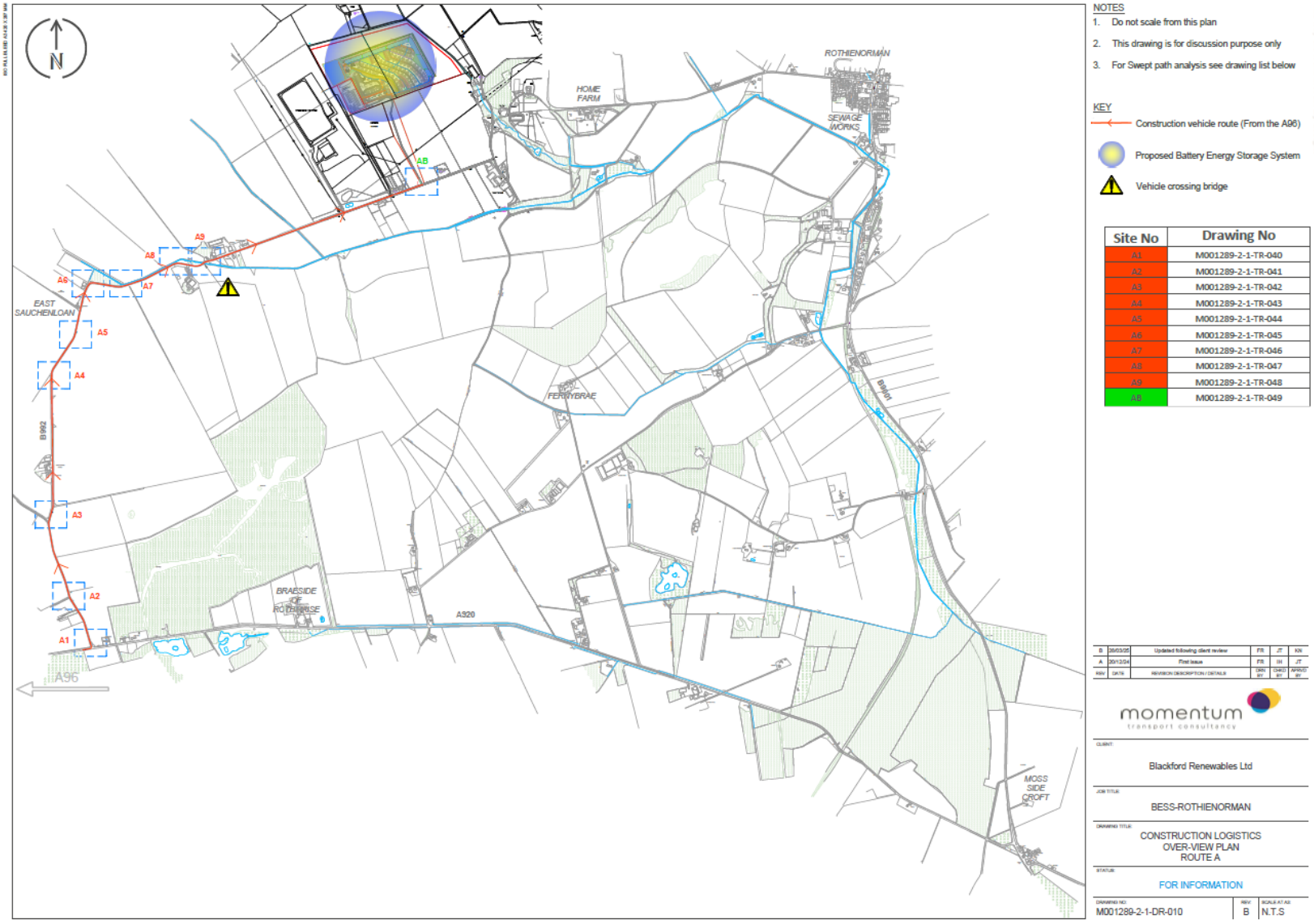
TRAFFIC ROUTES

3.9 As shown in Figure 3.1 (also provided in Appendix A), construction deliveries and construction-related traffic will be routed to the site via the A96 to the west, and onward via the A920 and the B992. This is in line with the existing construction vehicle routing for the nearby BESS site located further west of the proposed development, and also for the existing 50MW (100MWh) BESS site.

3.10 An assessment of routing options demonstrated that this route from the west presents less constraints compared with other options, and would be best-suited for site traffic. It was also noted that the nearby substation had its construction vehicles routed via the west as well, avoiding Rothienorman village. All site traffic should use the western access route unless needing to access the village itself.

3.11 As per Aberdeenshire Council's recommendation, there would be an advisory 20 mph speed limit on the approach to the site access, notified to drivers and indicated through advisory signage.

Figure 3.1: Construction Routing



NOTES

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3. For Swept path analysis see drawing list below

KEY

- Construction vehicle route (From the A96)
- Proposed Battery Energy Storage System
- Vehicle crossing bridge

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A4	M001289-2-1-TR-043
A5	M001289-2-1-TR-044
A6	M001289-2-1-TR-045
A7	M001289-2-1-TR-046
A8	M001289-2-1-TR-047
A9	M001289-2-1-TR-048
AB	M001289-2-1-TR-049

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APPROD BY
B	20/03/25	Updated following client review	FR	JT	KN
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT: Blackford Renewables Ltd

JOB TITLE: BESS-ROTHIENORMAN

DRAWING TITLE: CONSTRUCTION LOGISTICS OVER-VIEW PLAN ROUTE A

STATUS: FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-DR-010	B	N.T.S

4. Site Access

4.1 Site access and egress for the worst-case vehicles has been tested. In line with the forecast traffic and delivery types set out in Paragraph 3.7, the following vehicles have been tested (full dimensions are available on the relevant drawings):

- An AL24 Girder Set (46.494m overall length)
- A 16.5m length articulated lorry

4.2 The larger vehicles are required for the delivery of the supergrid transformers.

4.3 The topographical survey and client-provided information used for the assessment shows up-to-date conditions for accessing the site. The access into the site is proposed to be widened compared to its current arrangement, and some MOT Type 1 and gravel surfacing installed to allow for the relevant vehicles to access and egress. It is worth noting that the junction will need to be widened from the adjacent 50MW scheme to accommodate the larger construction vehicles.

4.4 Swept path analyses for each vehicle entering and leaving the site have been undertaken, using a topographic survey of the proposed development site. Given the adjacent site application resulted in construction vehicles only approaching from and egressing to the westward direction, the same approach has been applied for this assessment. It is anticipated that construction vehicles will be routed to approach the site from the west only. Swept path analyses are provided in Appendix B.

4.5 The analyses show that the current arrangement is not suitable and needs to be widened to accommodate the larger vehicles. There is a very minor junction visibility overlap with adjacent third party land, which can be discussed with Aberdeenshire Council Roads department ahead of the submission of the planning application if deemed required.

4.6 Further, it should be noted that the scope of this assessment does not include vehicle routing on the A920 where the first bridge after leaving the A96 trunk road would need to be reviewed as it was previously found to not have the capacity for abnormal loads.

Figure 4.1: Proposed Site Access and Egress Arrangements

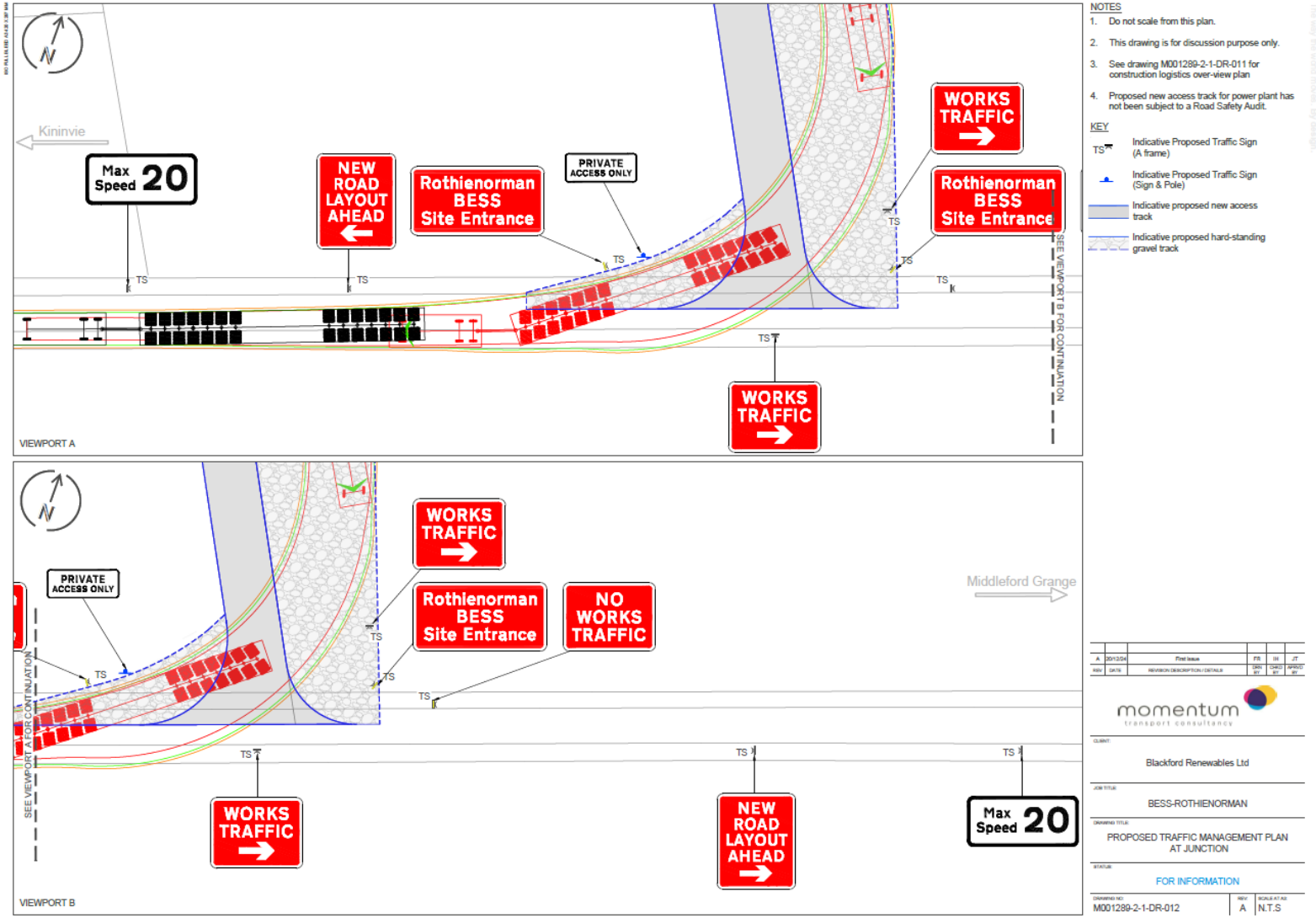
ROAD SIGNAGE

4.7 Signage will be implemented on the primary road adjacent to the private access road leading to the BESS site, to inform other road users that HGVs and other construction vehicles are expected to manoeuvre in and out of the site from this access point. The recommended traffic signs and their proposed location are shown in Figure 4.2 (also provided in Appendix C).

4.8 The signage would be implemented using rigid signposts planted in the ground, and is aimed at ensuring construction-related vehicles are aware of the site access road as they approach the junction.

4.9 Given the low-traffic nature of the public highway network through which the construction traffic is expected to route through, no wider signage strategy or marshals are deemed necessary for the site. This approach was confirmed for the 50MW scheme adjacent to the site with Aberdeenshire Council during the conversation on 13th October 2023.

Figure 4.2: Site Access Signage Strategy



5. Other Mitigation Measures

5.1 This section sets out further measures to minimise the impact of construction traffic on the local highway network. Based on previous feedback from Aberdeenshire Council, no further measures in addition to what was set out in the previsouly-submitted and consented Outline CTMP is deemed necessary given the site location and expected vehicle movements.

DELIVERIES

5.2 An average of 3 - 4 HGV movement per day is expected for the duration of the construction works.

5.3 An estimated 3 abnormal load deliveries will be required, utilising the AL24 Girder Vehicle.

5.4 To minimise the impact of the deliveries on the local highway network, deliveries would be undertaken between 8am and 6pm Monday to Friday and between 9am and 2pm on Saturdays. No deliveries would be undertaken on Sundays nor on Bank Holidays.

STAFF TRAVEL MEASURES

5.5 As noted in section 3.3, no more than 150 construction workers are expected on-site during the peak periods of construction works, although this is to be confirmed.

5.6 Information on office and operational staff travel to the site will be confirmed in the detailed CTMP, once a contractor has been appointed.

6. CTMP implementation and monitoring

6.1 An individual will be made responsible to ensure that measures to minimise construction traffic are put in place and are sufficient. They would also act as Transport Coordination Officer (TCO) as a point of contact between local authorities and other key stakeholders such as local authorities. A phone number for the TCO will be provided on site for the public to call if required. This will be provided upon discharging the CTMP, and once a contractor has been appointed.

6.2 The TCO will be responsible for the ongoing monitoring, promotion and development of the CTMP measures put in place for the duration of the construction works. This will ensure the measures are taken forward and delivered by all site employees.

7. Conclusions

7.1 This CTMP has been prepared by Momentum on behalf of Blackford Renewables Ltd and aimed at minimising the impact of the construction traffic on Rothienorman local highway network, especially during peak hours anticipated as a result of the BESS development at Rothienorman, Aberdeenshire, Scotland.

7.2 An average of 3 - 4 HGVs movement per day, or 1,350 total HGV trips over 18 months, is expected during the peak construction of the BESS which is when the site is expected to be at the busiest throughout the construction period. An estimated 3 abnormal load deliveries will be required, utilising the AL24 Girder Vehicle.

7.3 The assessment of routing options and detailed site access arrangements have shown that the site and its surrounding highway network can overall accommodate the expected volumes and vehicles types anticipated. All construction related vehicle drivers would be informed in advance

that access will be from the west of the site, as it would be the most suitable for large vehicles and would avoid Rothienorman village. It is worth noting that the swept path analysis for the wider construction routing identified numerous clashes present for the larger AL24 Girder vehicle, including with adjacent third party land. These will likely need to be addressed and rectified.

7.4 The current site access will not be used as a result of visibility issues identified as part of the application process. Instead, a new access further east is proposed which is suitable for most manoeuvres within the highway boundary. This access will utilise an existing junction, and will be amended to suit the proposed construction traffic.

7.5 The CTMP has set out different measures to minimise the impact of construction traffic on the local highway network such as road signage and advisory speed limits, restricting delivery times, and the implementation of measures to support construction workers travelling to site. These measures would need to be discussed once a contractor is appointed and delivered in the detailed CTMP.

7.6 The CTMP will be monitored by a Transport Coordination Officer who would act as appoint of contact between local authorities and other key stakeholders and will ensure the proposed measures are taken forward and delivered by all site employees to minimise the impact of the site on the local highway network. Key phone contact details will be provided on site.

APPENDIX A – CONSTRUCTION ROUTING

NOTES

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OVER-VIEW PLAN
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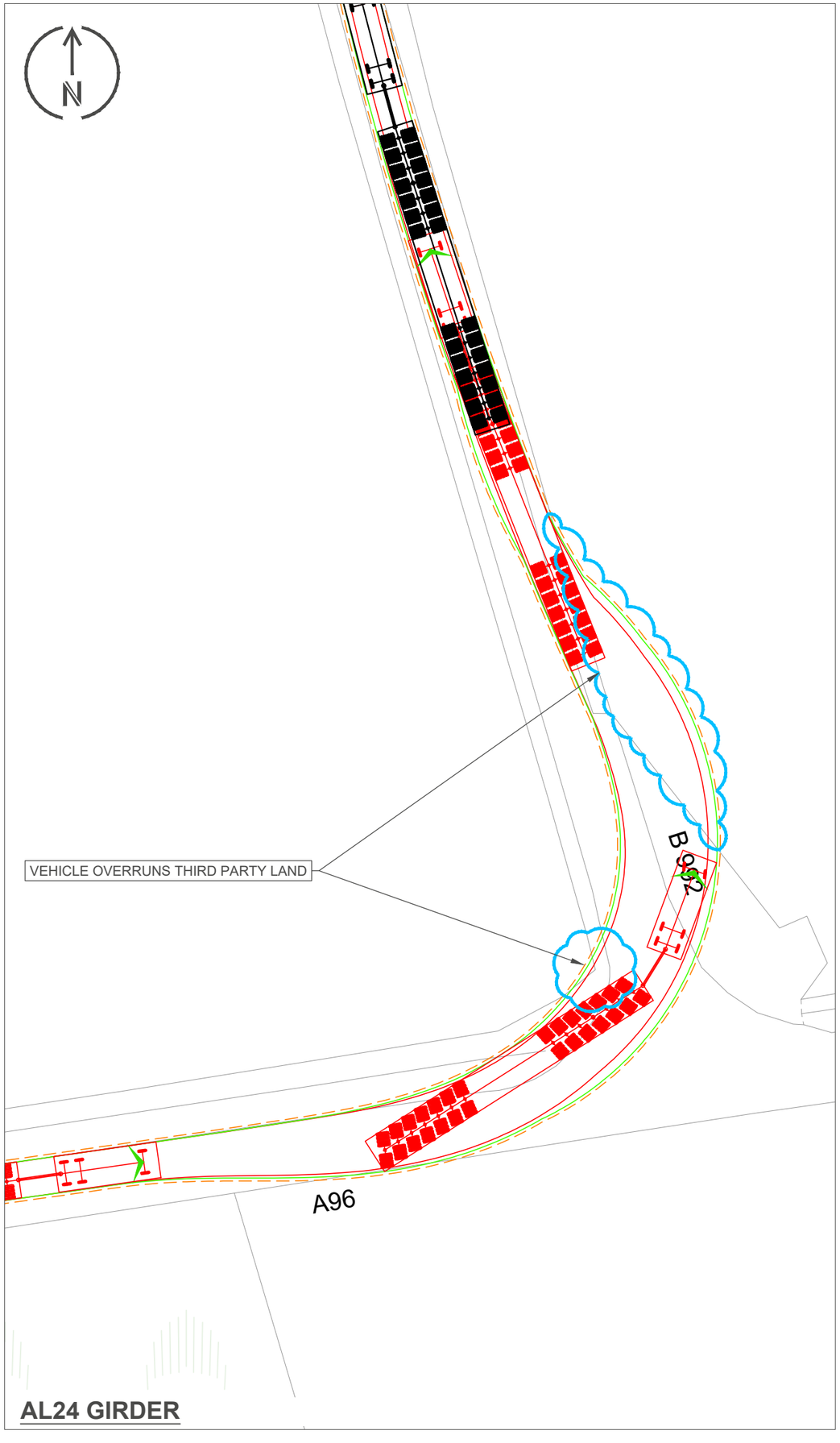
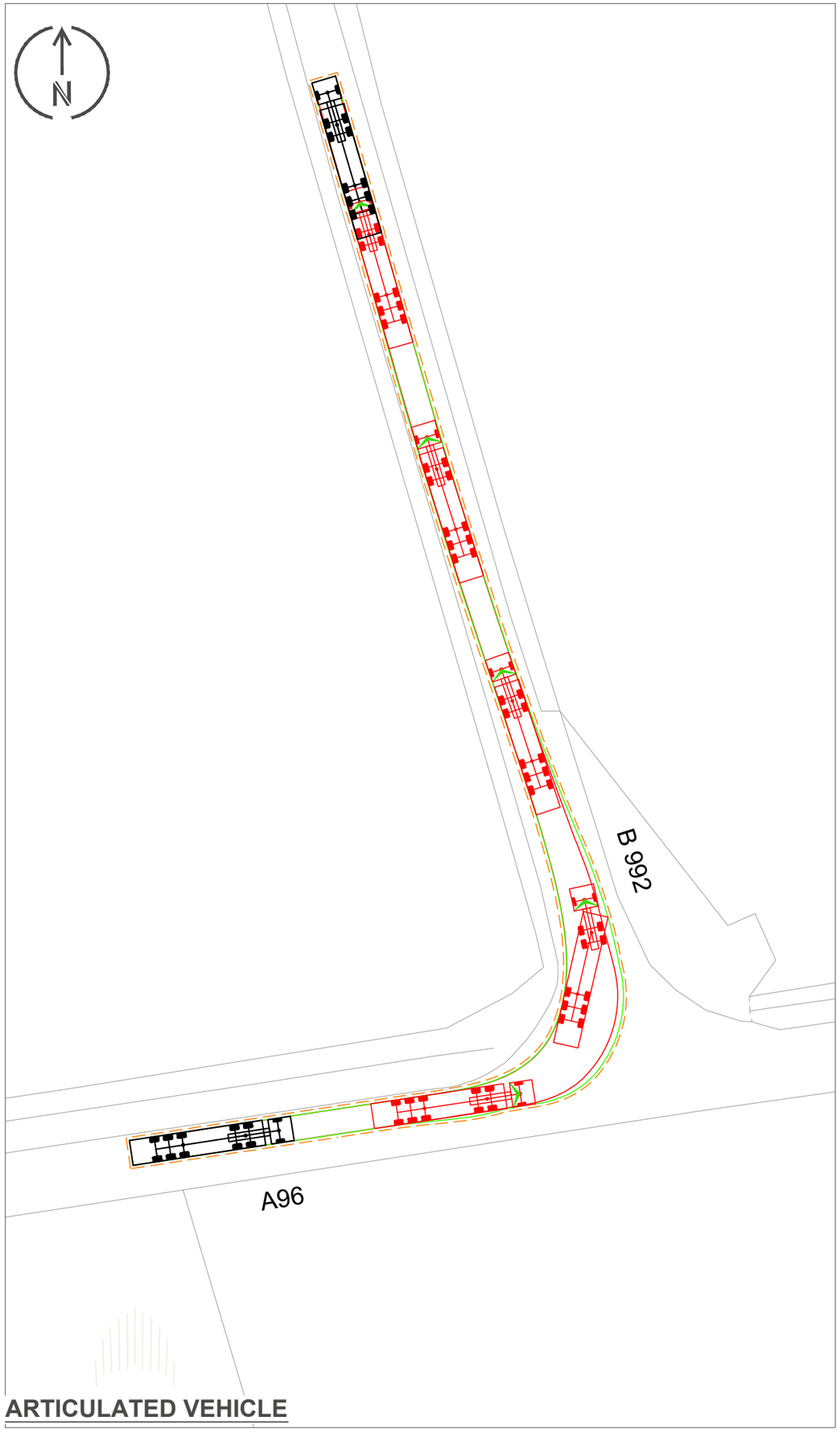
APPENDIX B – SITE ACCESS SWEPT PATH ANALYSIS



AL24 GIRDER



ARTICULATED VEHICLE

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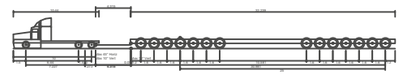
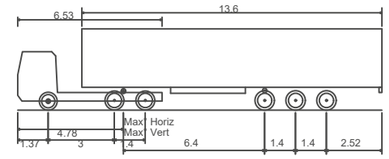


AL24 Girder

Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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
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Kerb to Kerb Turning Radius	6.530m

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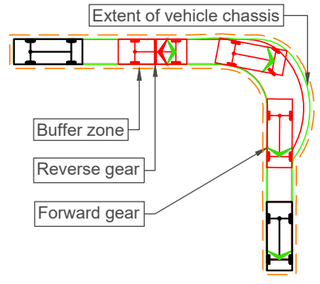

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CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

DRAWING TITLE:

CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 1 OF 9

STATUS:

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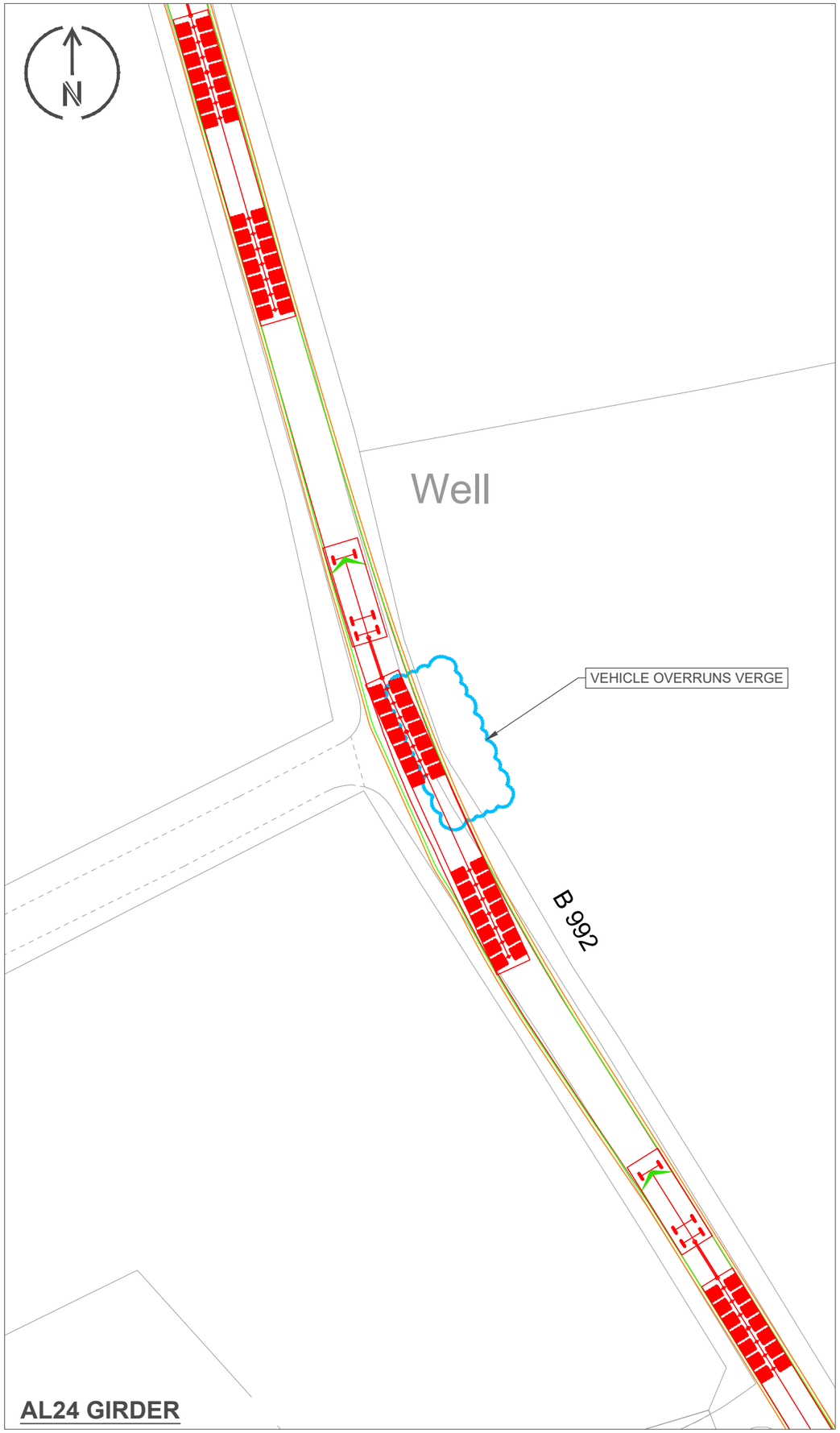

AL24 GIRDER

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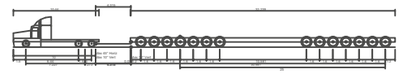

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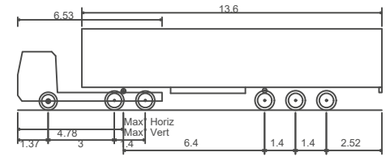

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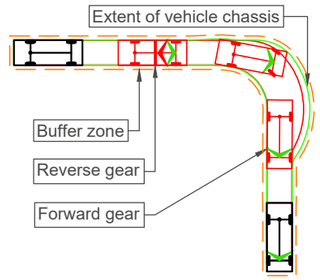

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DRAWING TITLE:
CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 2 OF 9

STATUS:
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DRAWING NO:	REV:	SCALE AT A3:
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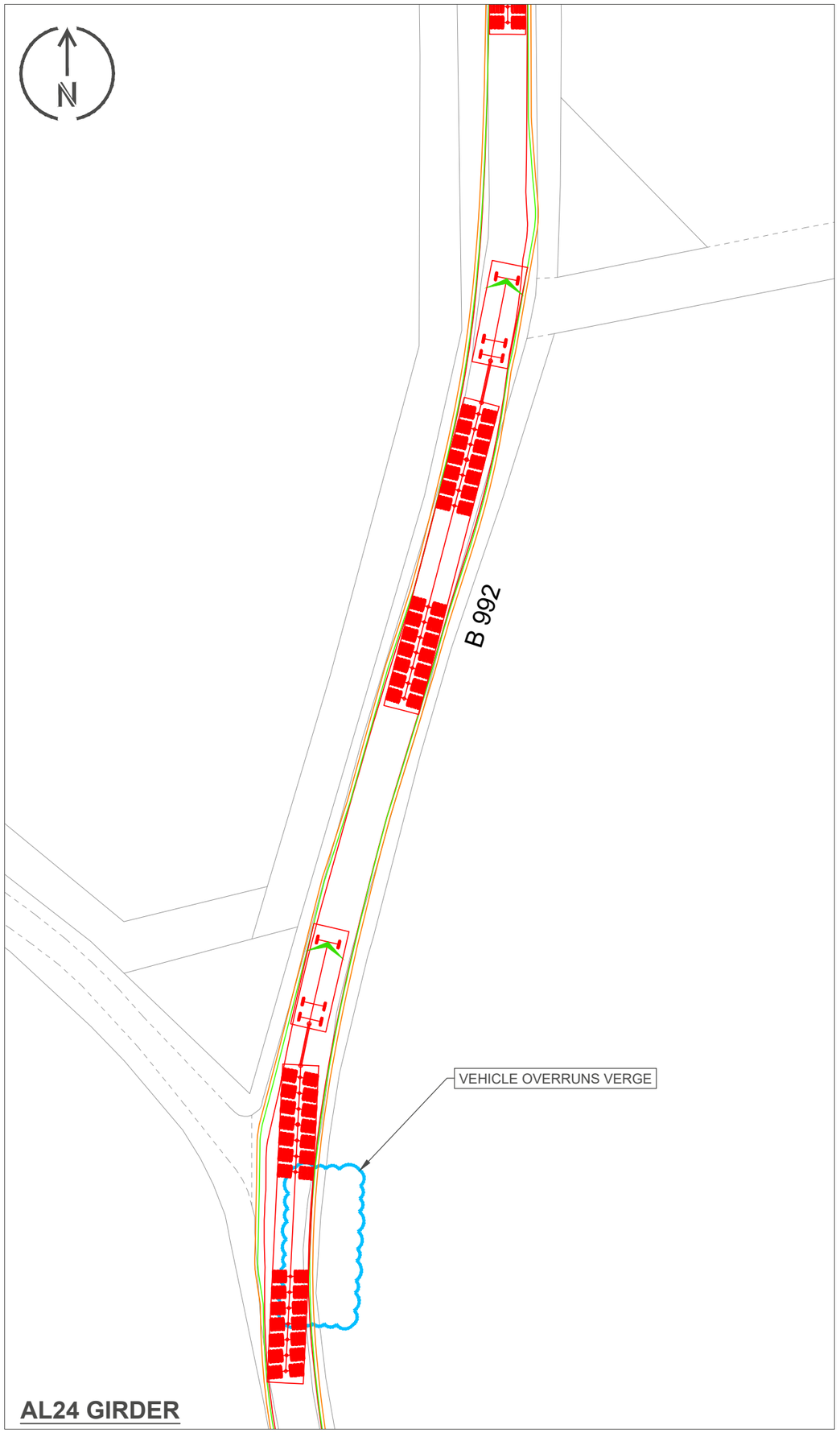

AL24 GIRDER

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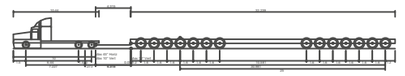

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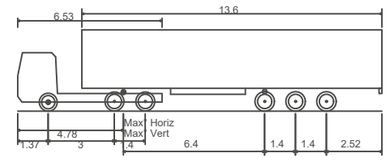

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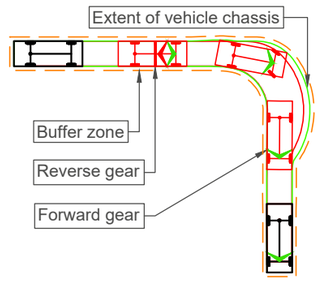

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CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 3 OF 9

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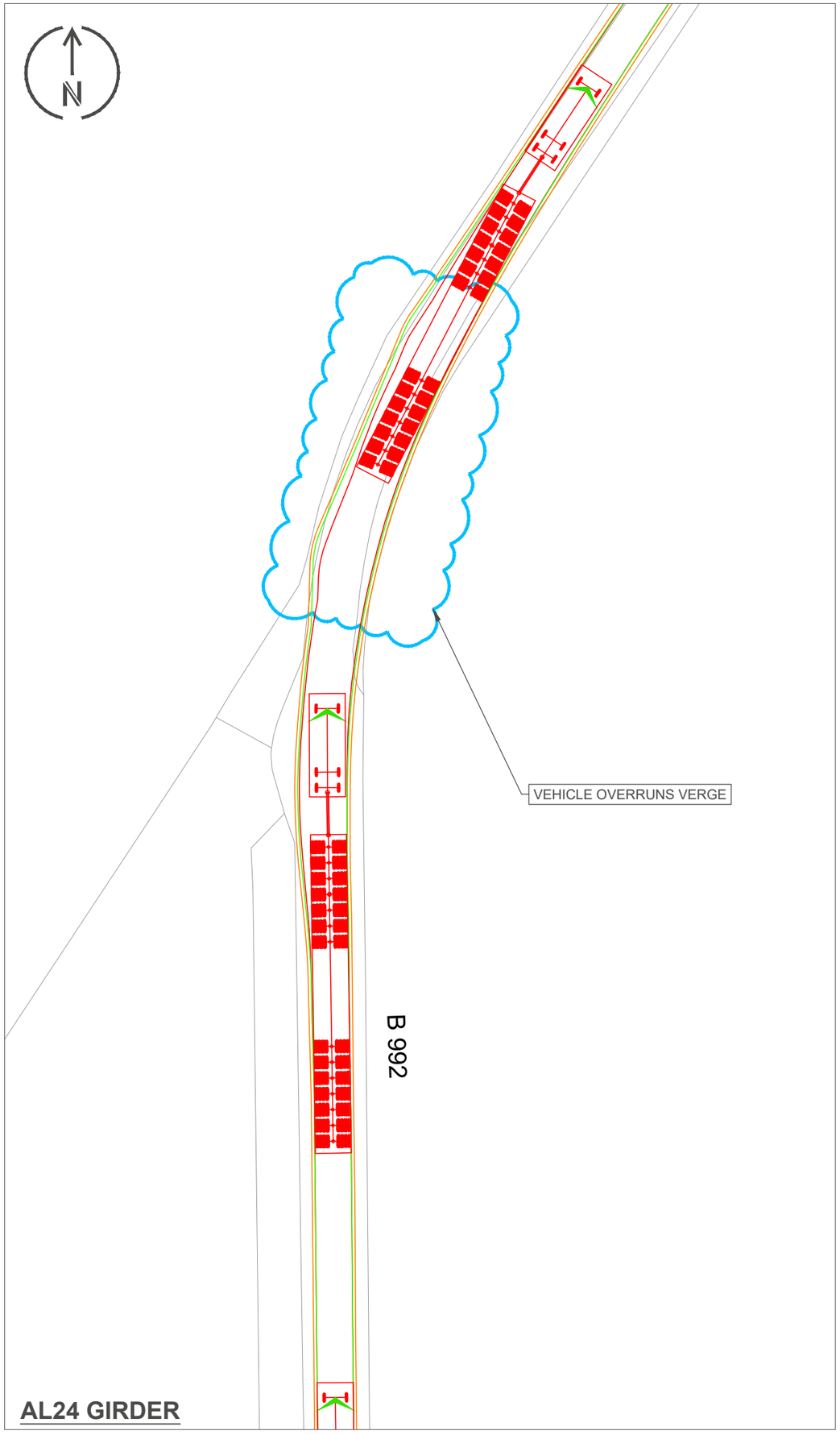

AL24 GIRDER

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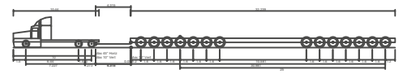

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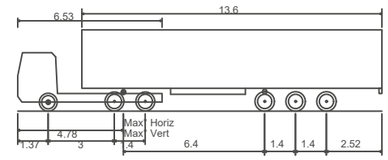
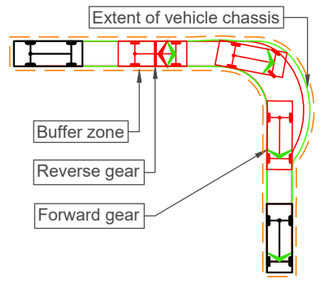


Max Legal Length (UK) Articulated Vehicle (16.5m)

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

KEY



REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum
transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

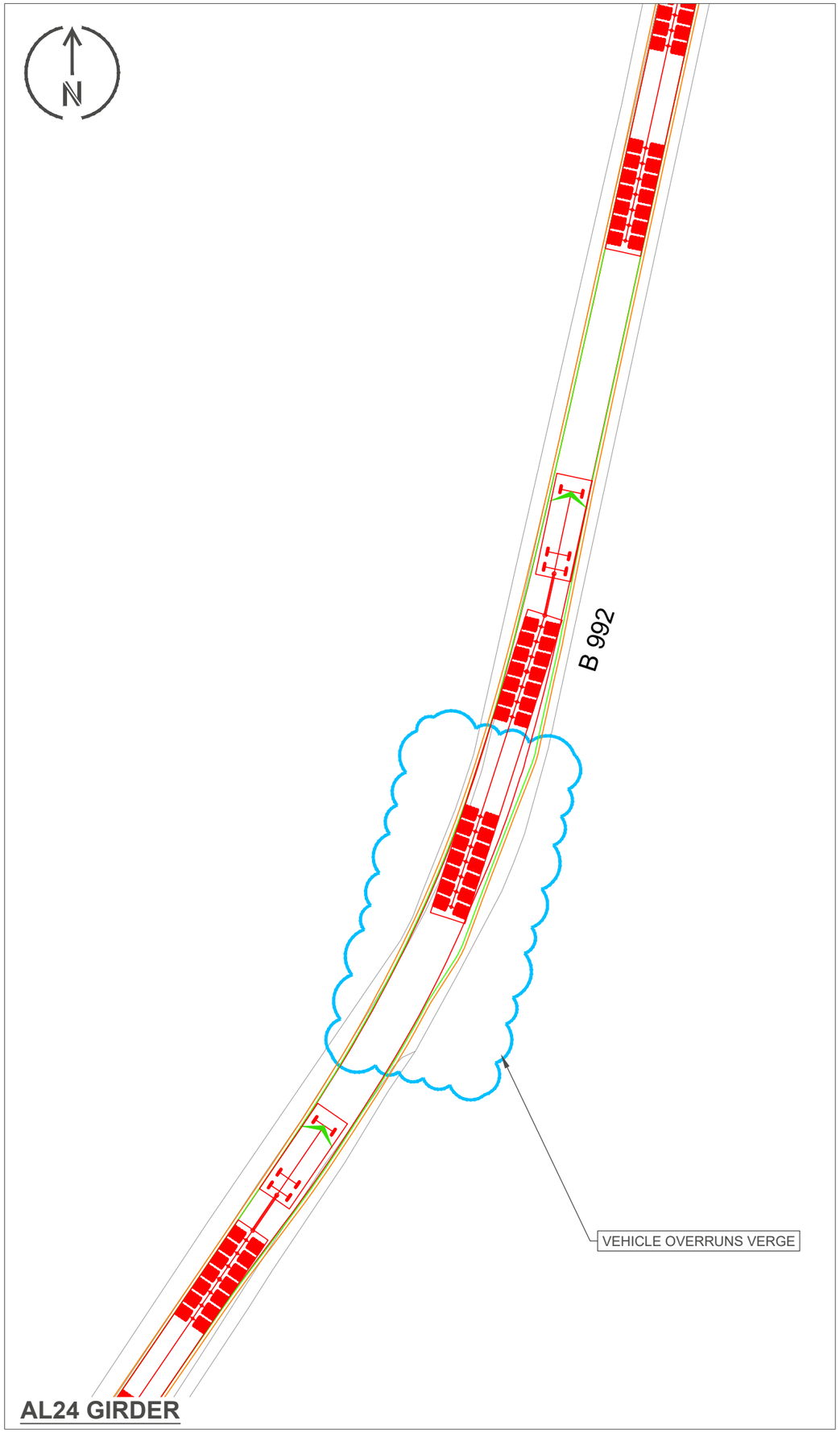
DRAWING TITLE:

CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 4 OF 9

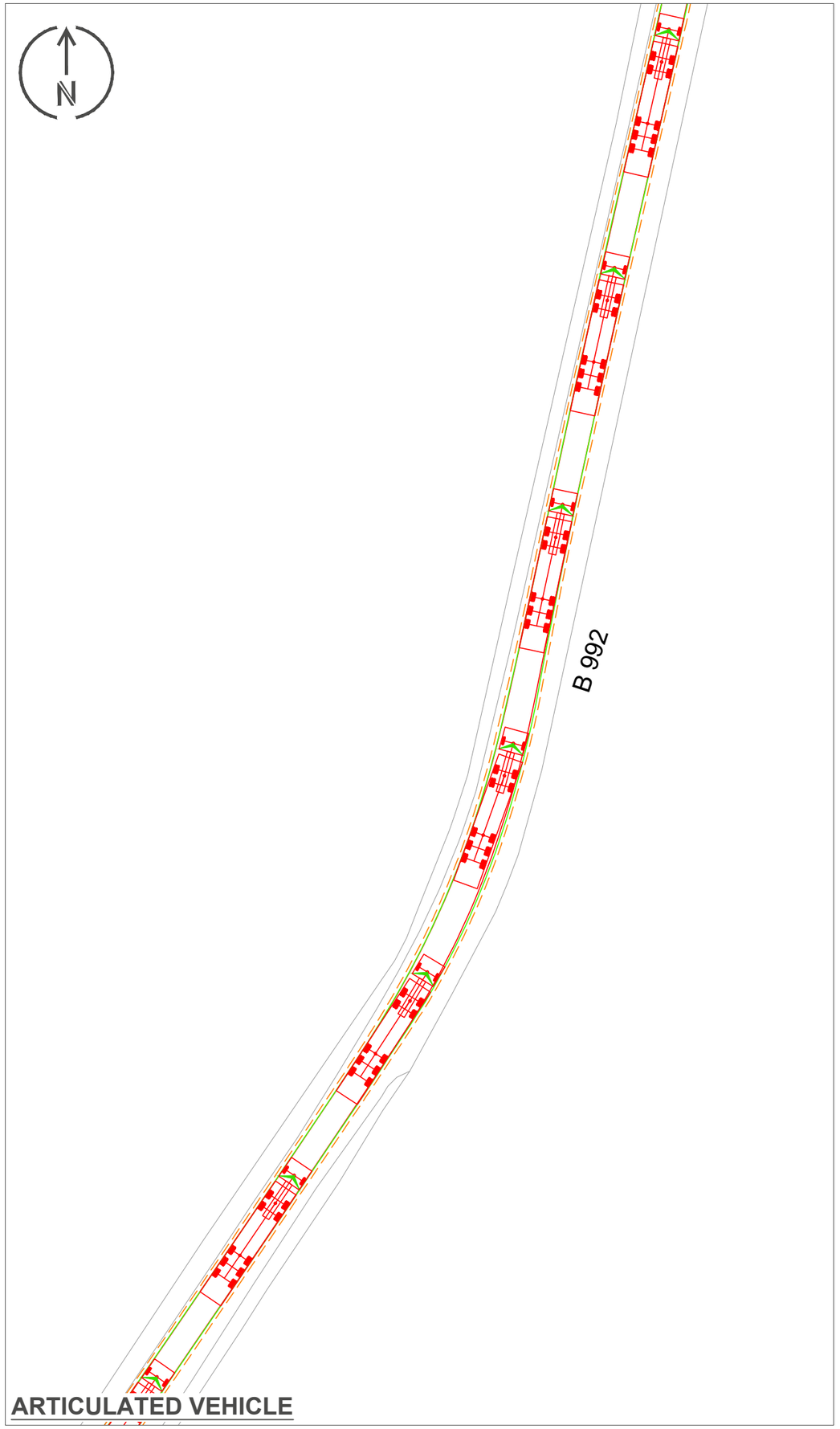
STATUS:

FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-043	A	1:500



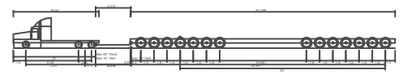
AL24 GIRDER



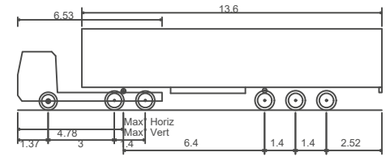
ARTICULATED VEHICLE

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. For Over-view plan see drawing M001289-2-1-DR-010
4. Swept path analysis is based on the following vehicle traveling at 10mph, unless stated otherwise:

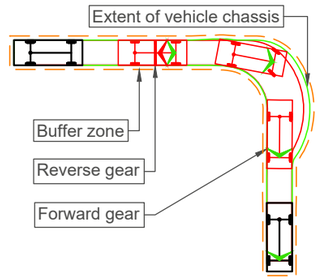


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

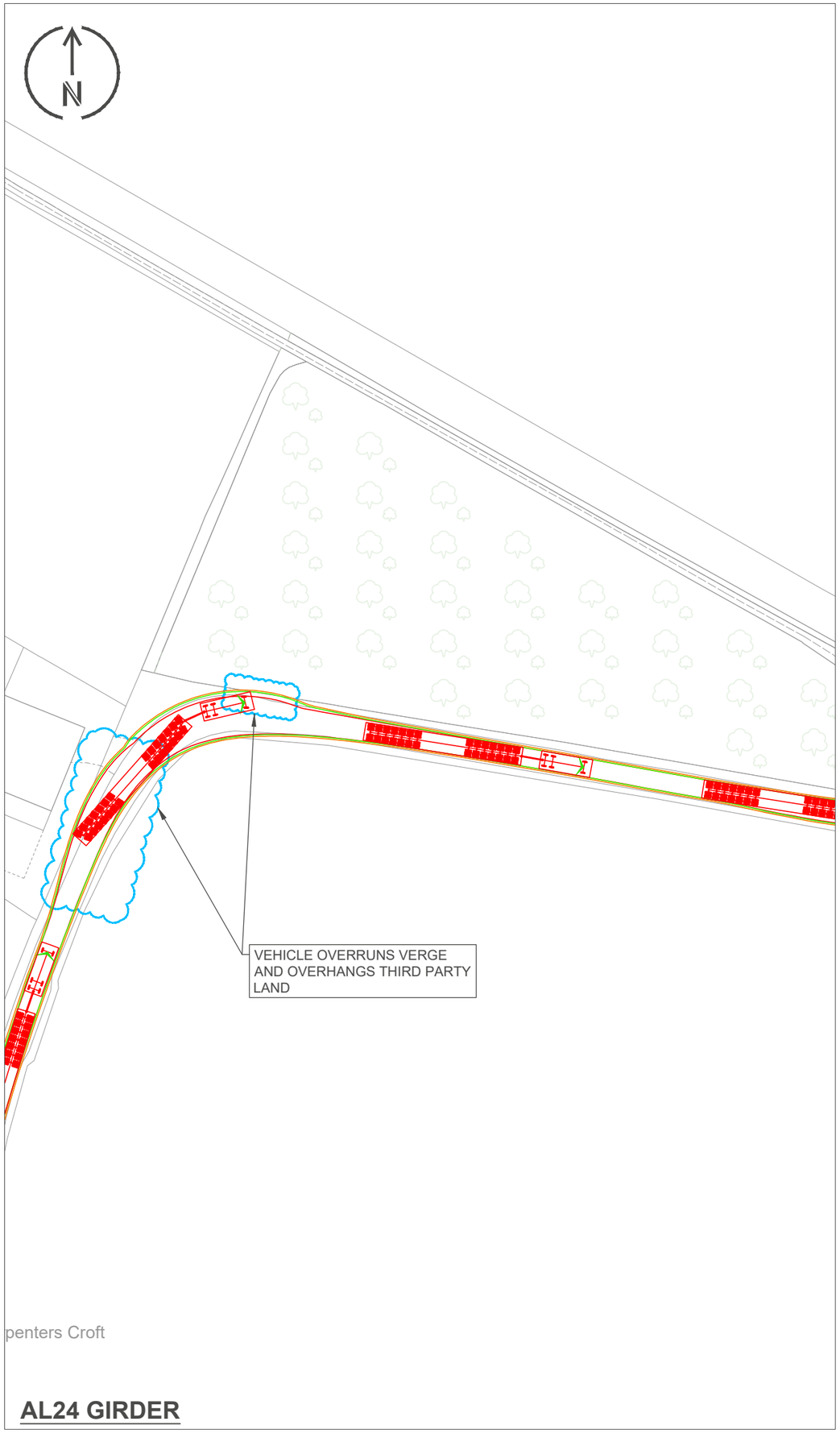
DRAWING TITLE:

CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 5 OF 9

STATUS:

FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-044	A	1:500



penters Croft

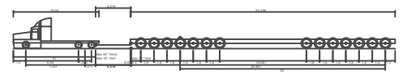
AL24 GIRDER

penters Croft

ARTICULATED VEHICLE

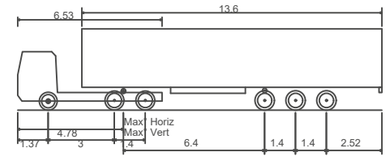
NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. For Over-view plan see drawing M001289-2-1-DR-010
4. Swept path analysis is based on the following vehicle traveling at 10mph, unless stated otherwise:



AL24 Girder

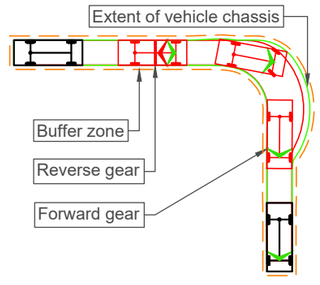
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

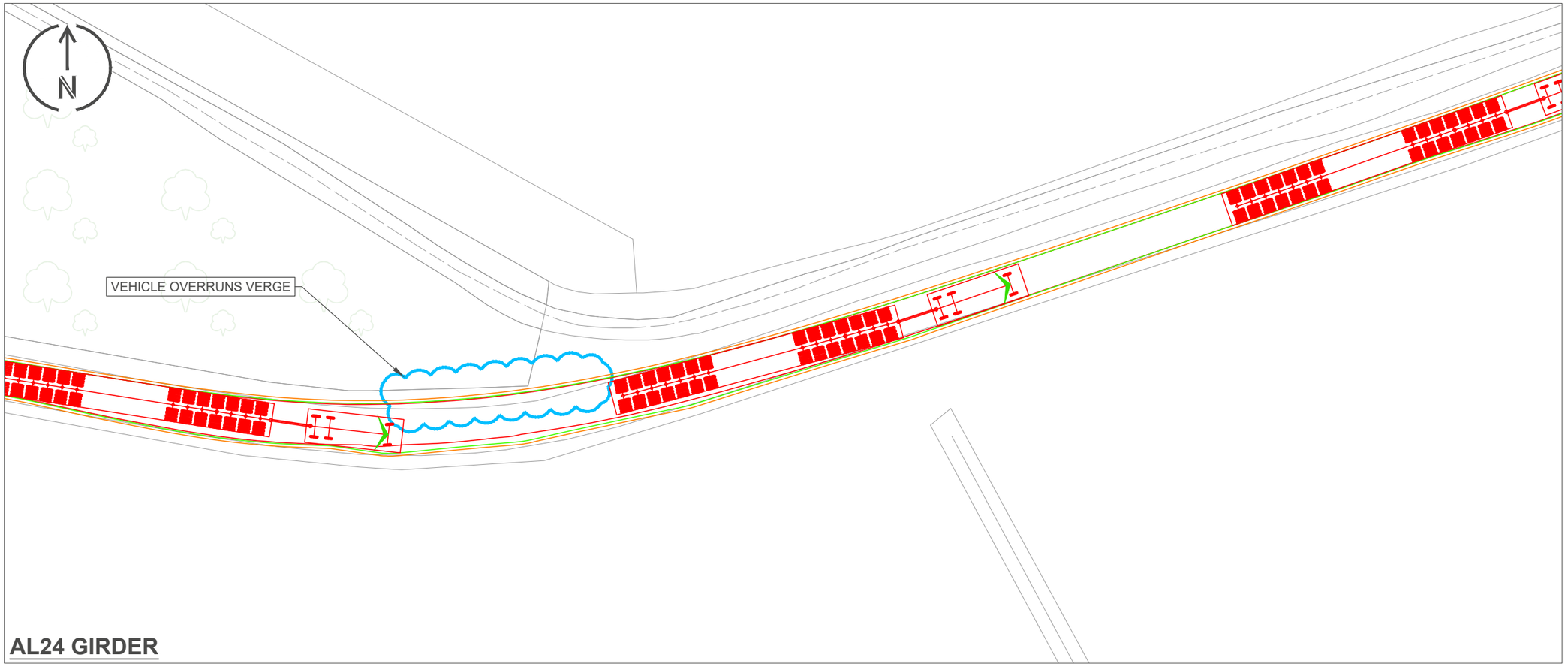
DRAWING TITLE:

CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 6 OF 9

STATUS:

FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-045	A	1:500

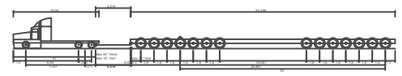


AL24 GIRDER

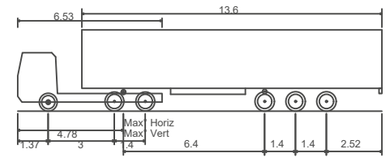
ARTICULATED VEHICLE

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. For Over-view plan see drawing M001289-2-1-DR-010
4. Swept path analysis is based on the following vehicle traveling at 10mph, unless stated otherwise:

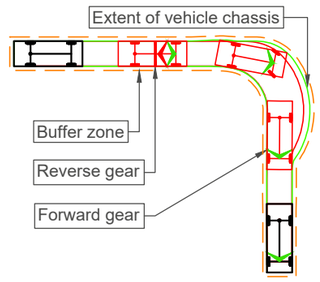


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum
transport consultancy

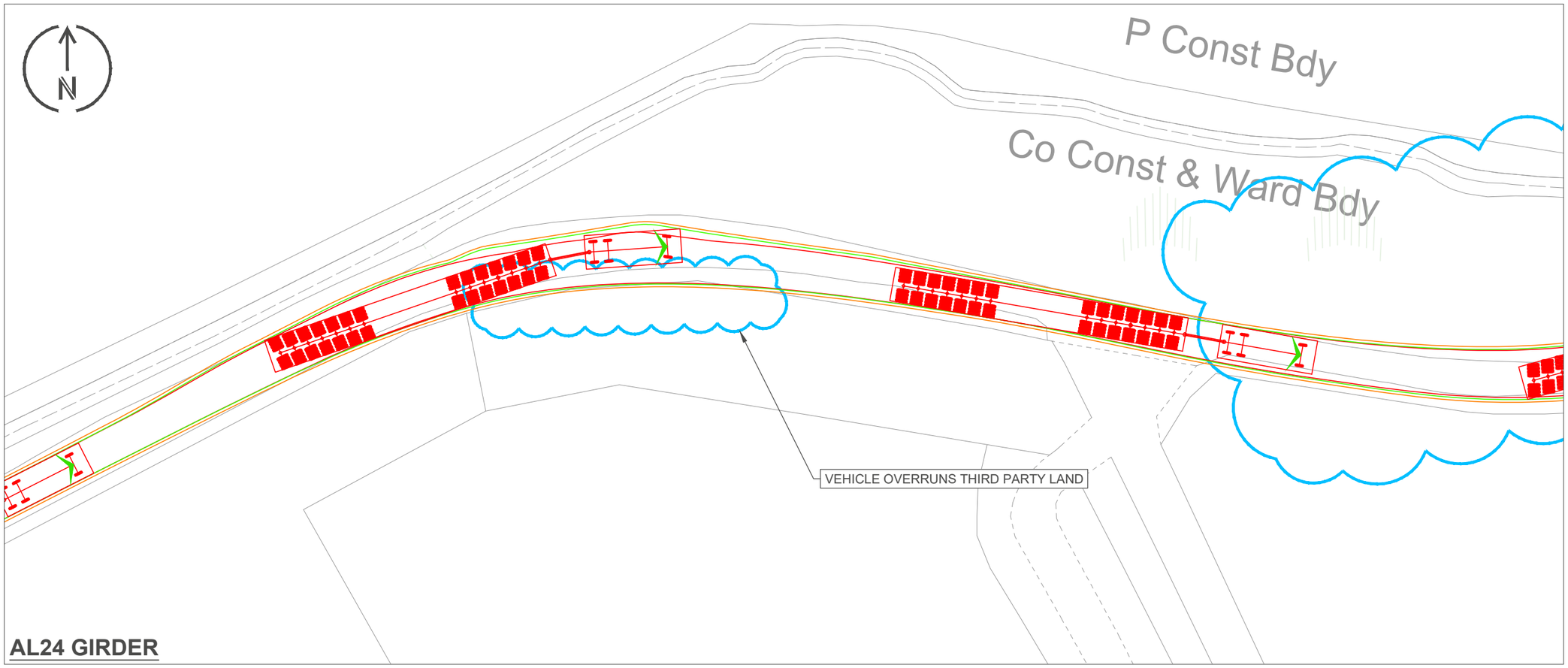
CLIENT:
Blackford Renewables Ltd

JOB TITLE:
BESS-ROTHIENORMAN

DRAWING TITLE:
CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 7 OF 9

STATUS:
FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-046	A	1:500

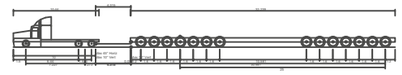


AL24 GIRDER

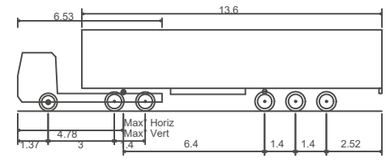
ARTICULATED VEHICLE

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. For Over-view plan see drawing M001289-2-1-DR-010
4. Swept path analysis is based on the following vehicle traveling at 10mph, unless stated otherwise:

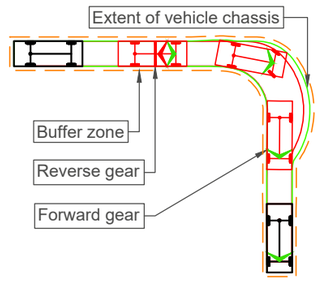


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

DRAWING TITLE:

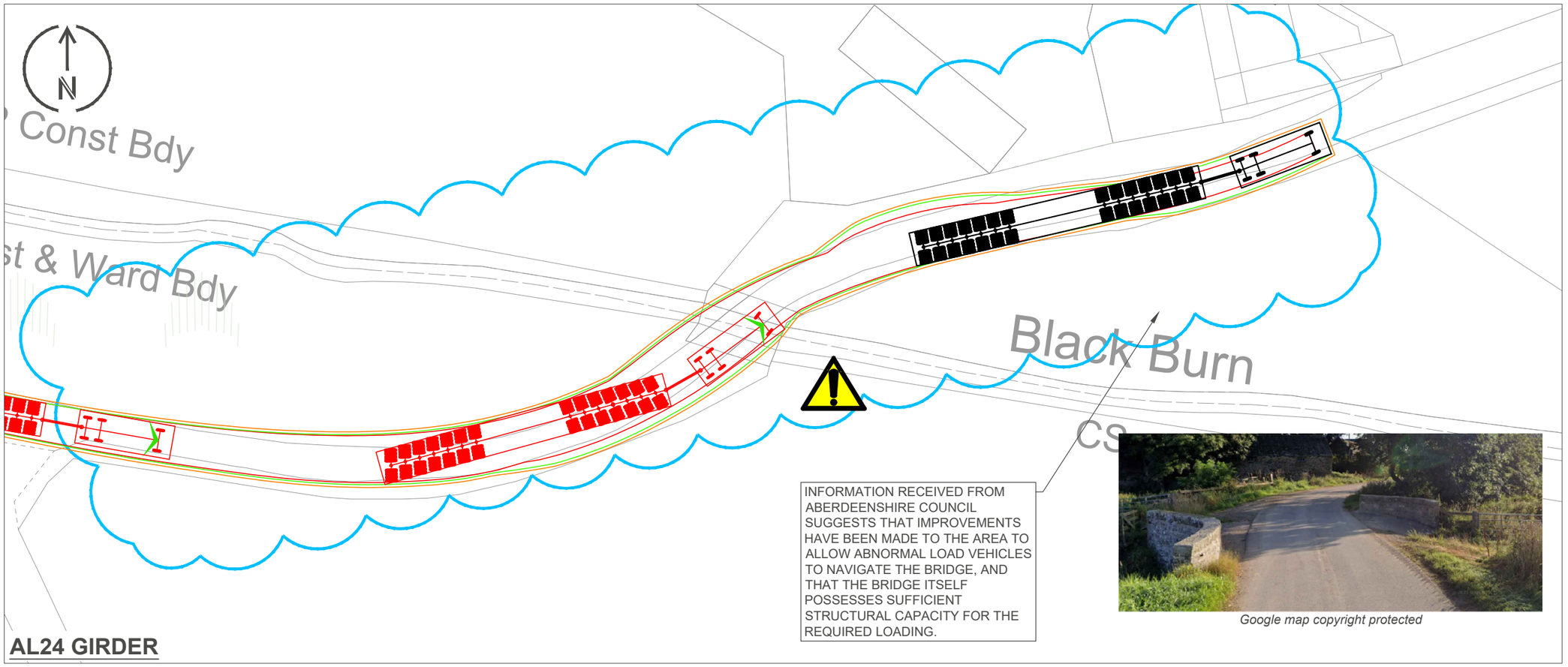
CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 8 OF 9

STATUS:

FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-047	A	1:500

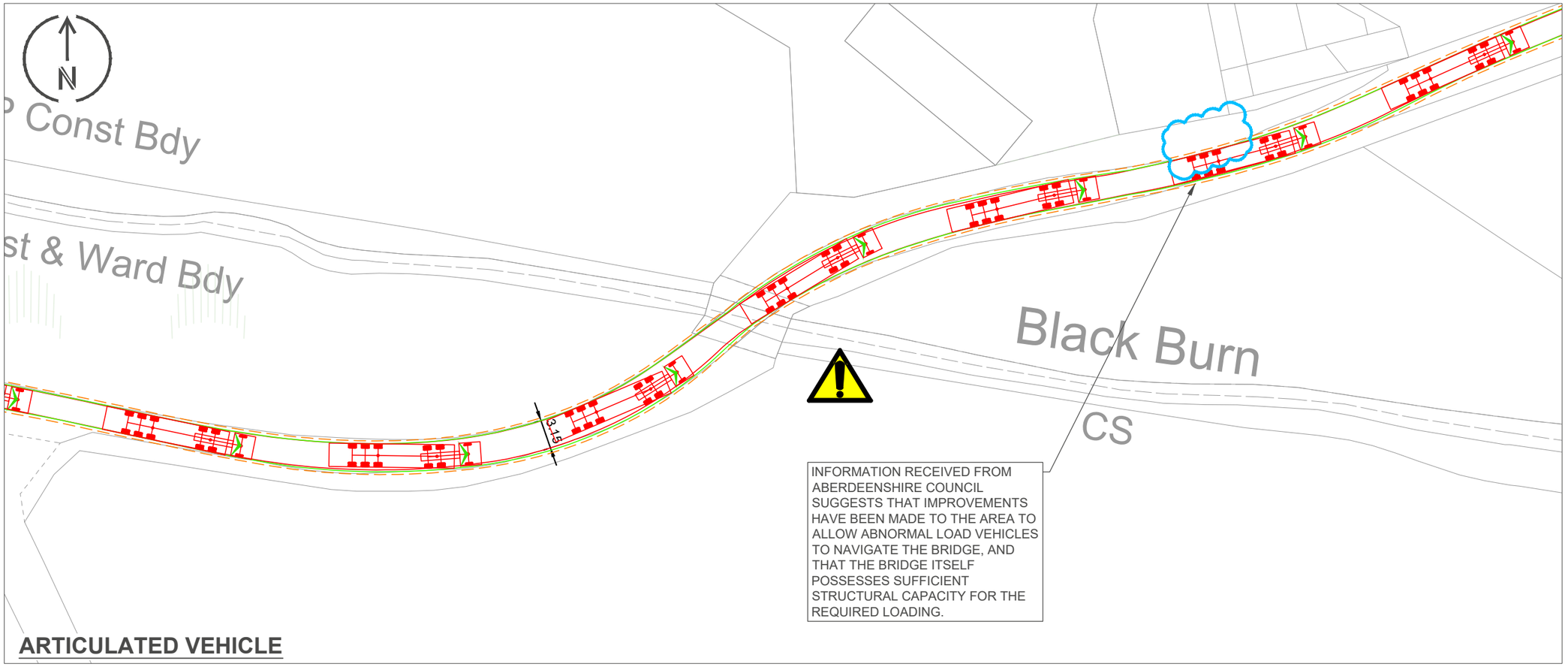
ISO FULL BLEED A3 420 X 297 MM



INFORMATION RECEIVED FROM ABERDEENSHIRE COUNCIL SUGGESTS THAT IMPROVEMENTS HAVE BEEN MADE TO THE AREA TO ALLOW ABNORMAL LOAD VEHICLES TO NAVIGATE THE BRIDGE, AND THAT THE BRIDGE ITSELF POSSESSES SUFFICIENT STRUCTURAL CAPACITY FOR THE REQUIRED LOADING.

Google map copyright protected

AL24 GIRDER

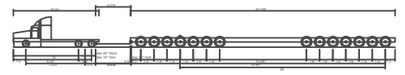


INFORMATION RECEIVED FROM ABERDEENSHIRE COUNCIL SUGGESTS THAT IMPROVEMENTS HAVE BEEN MADE TO THE AREA TO ALLOW ABNORMAL LOAD VEHICLES TO NAVIGATE THE BRIDGE, AND THAT THE BRIDGE ITSELF POSSESSES SUFFICIENT STRUCTURAL CAPACITY FOR THE REQUIRED LOADING.

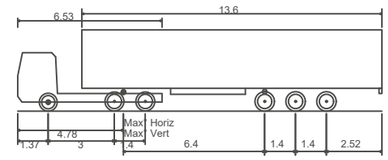
ARTICULATED VEHICLE

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. For Over-view plan see drawing M001289-2-1-DR-010
4. Swept path analysis is based on the following vehicle traveling at 10mph, unless stated otherwise:

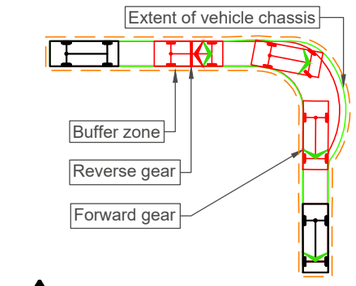


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



Vehicle crossing bridge

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
B	31/01/25	Minor Updates	FR	IH	JT
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

DRAWING TITLE:

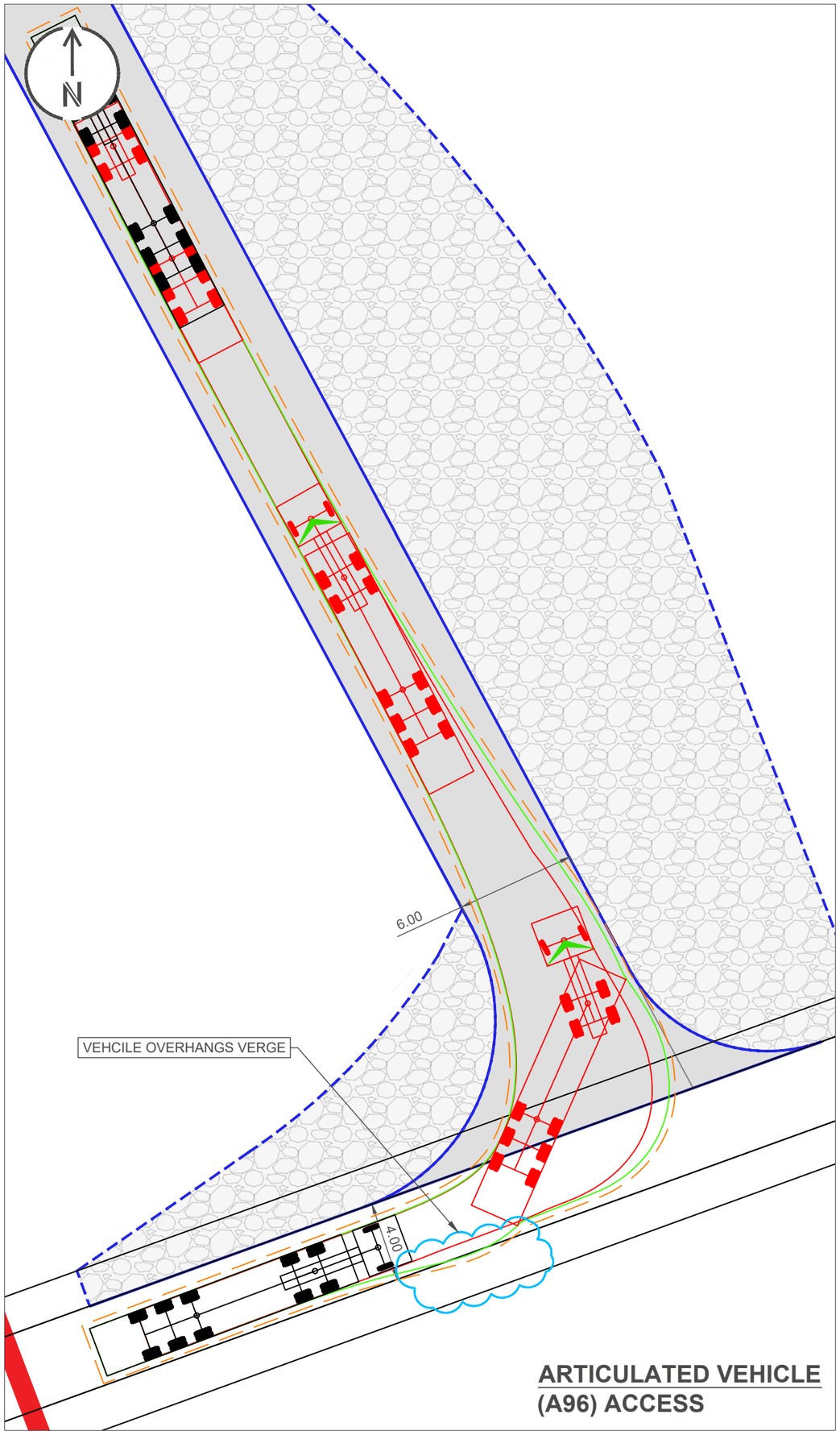
CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS - ROUTE A
SHEET 9 OF 9

STATUS:

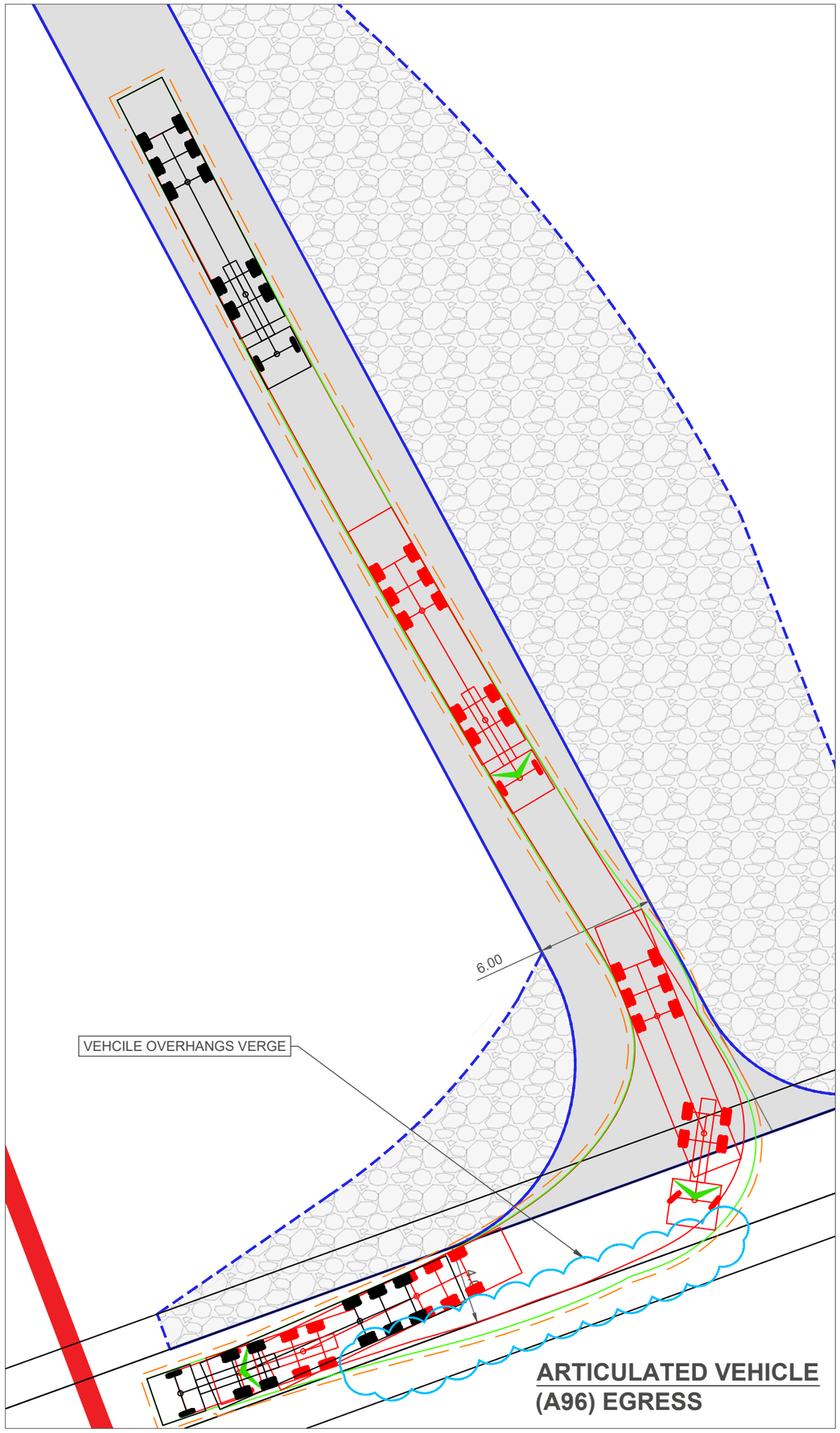
FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-048	B	1:500

The way the world moves. By design.



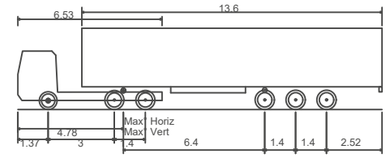
ARTICULATED VEHICLE (A96) ACCESS



ARTICULATED VEHICLE (A96) EGRESS

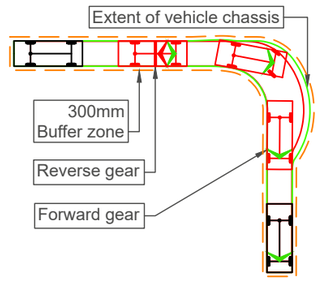
NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. Swept path analysis is based on the following vehicles traveling at 5mph, unless stated otherwise:



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

KEY



Indicative hard-standing gravel track

Indicative proposed track

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

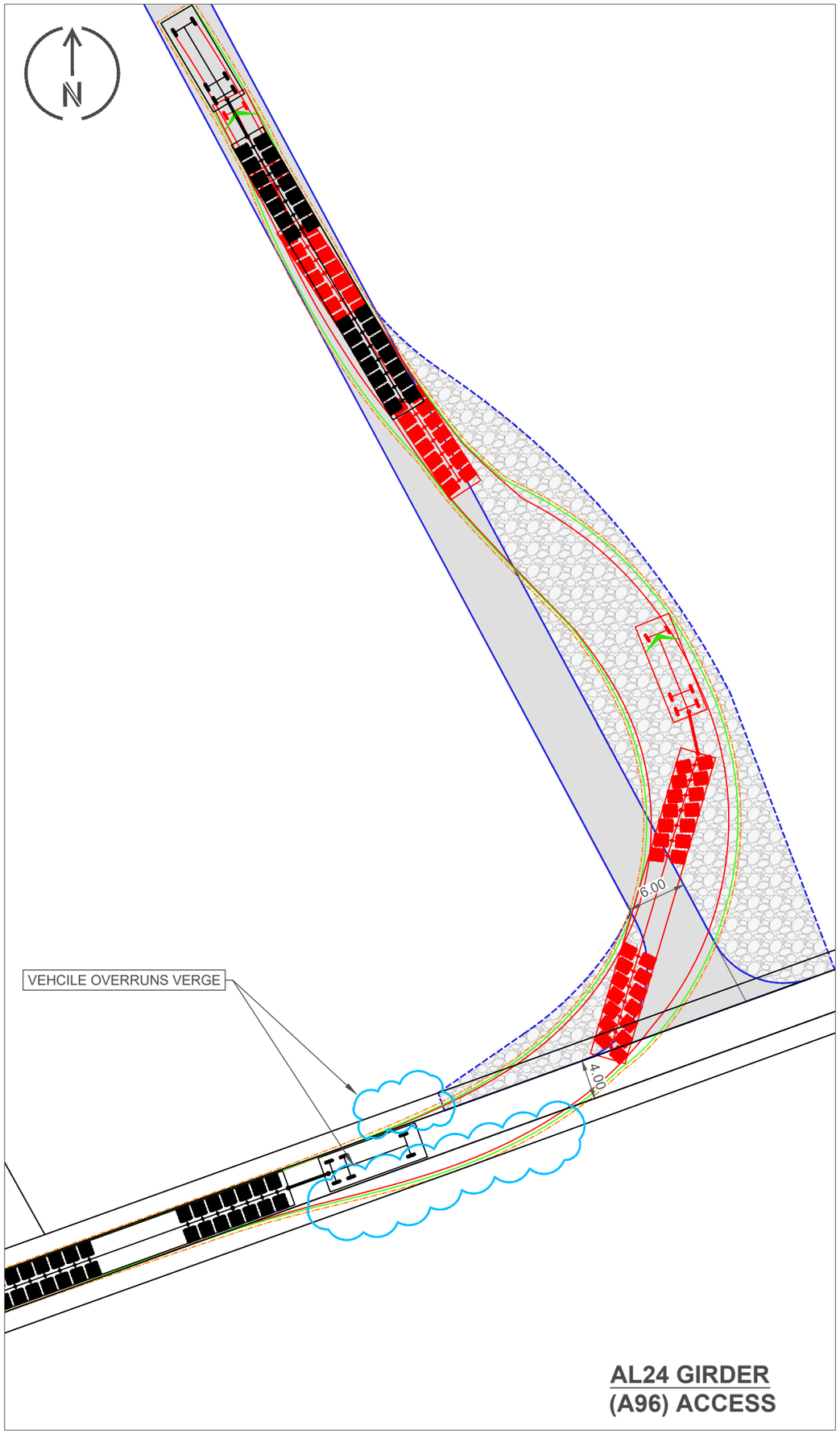
DRAWING TITLE:

CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS
NEW SITE JUNCTION INGRESS AND EGRESS

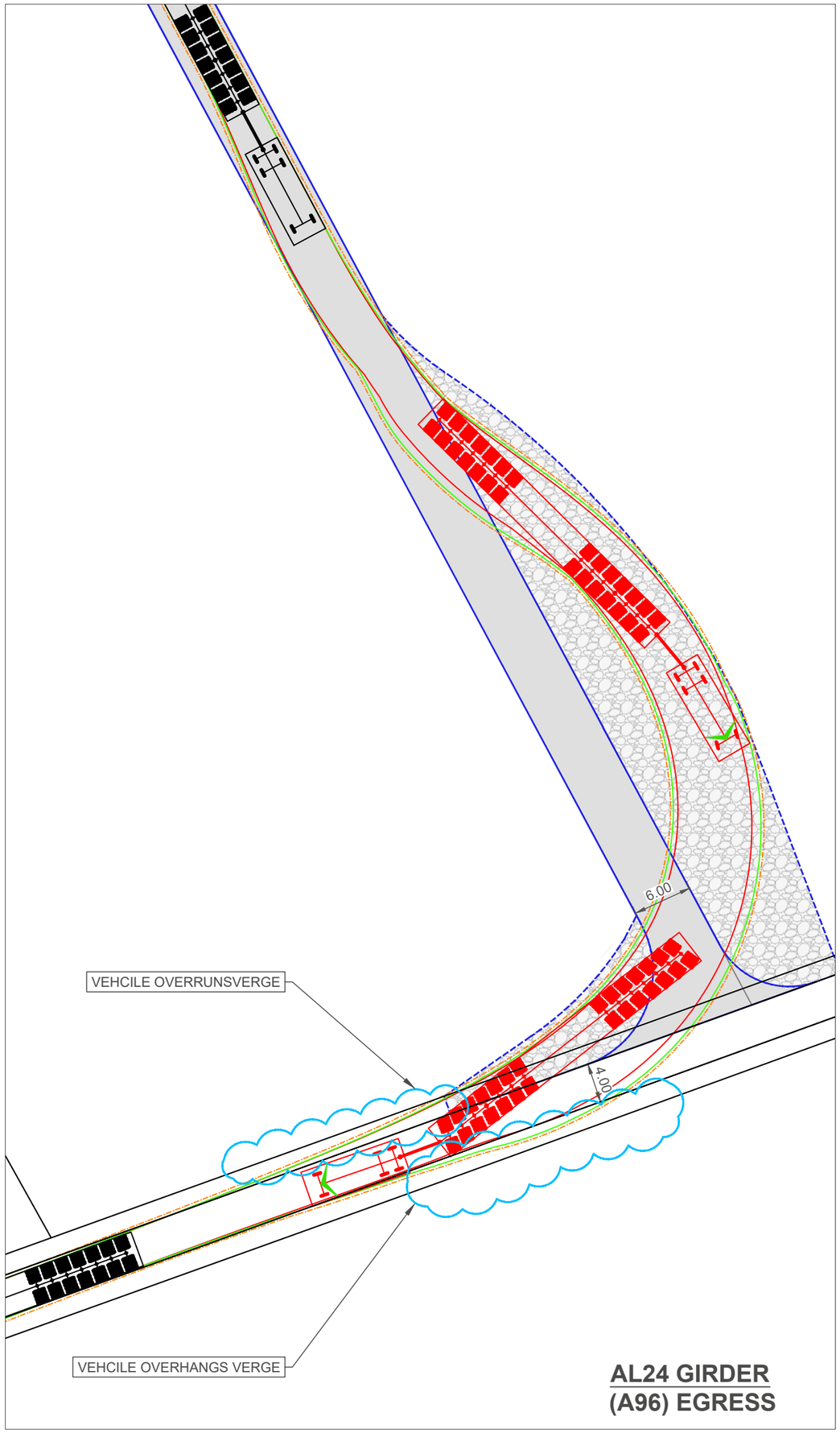
STATUS:

FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-049	A	1:250



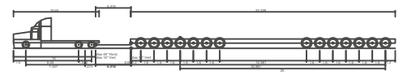
AL24 GIRDER
(A96) ACCESS



AL24 GIRDER
(A96) EGRESS

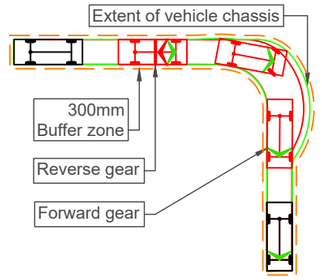
NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. Swept path analysis is based on the following vehicles traveling at 5mph, unless stated otherwise:



AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m

KEY



Indicative hard-standing gravel track

Indicative proposed track

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum
transport consultancy

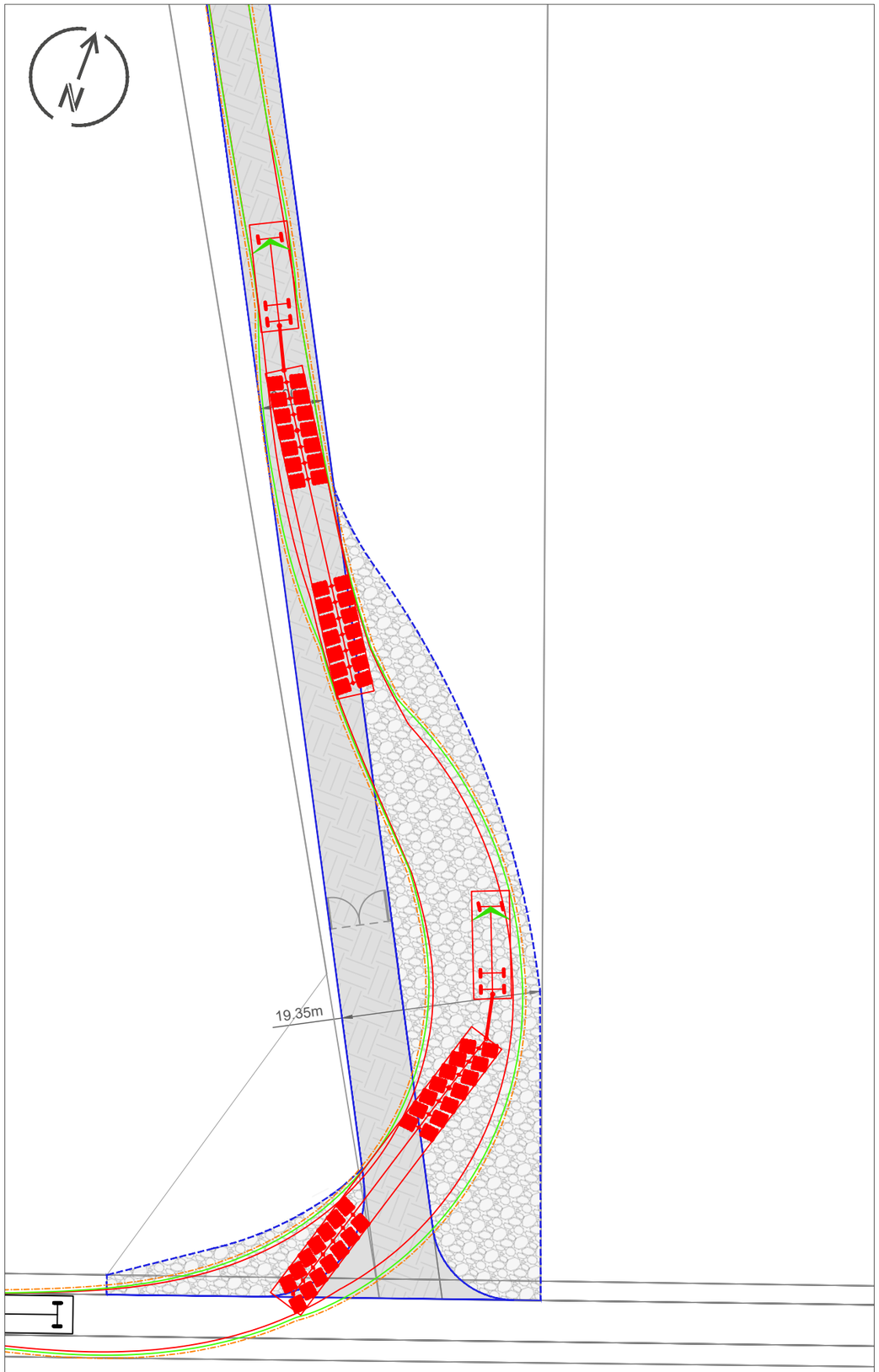
CLIENT:
Blackford Renewables Ltd

JOB TITLE:
BESS-ROTHIENORMAN

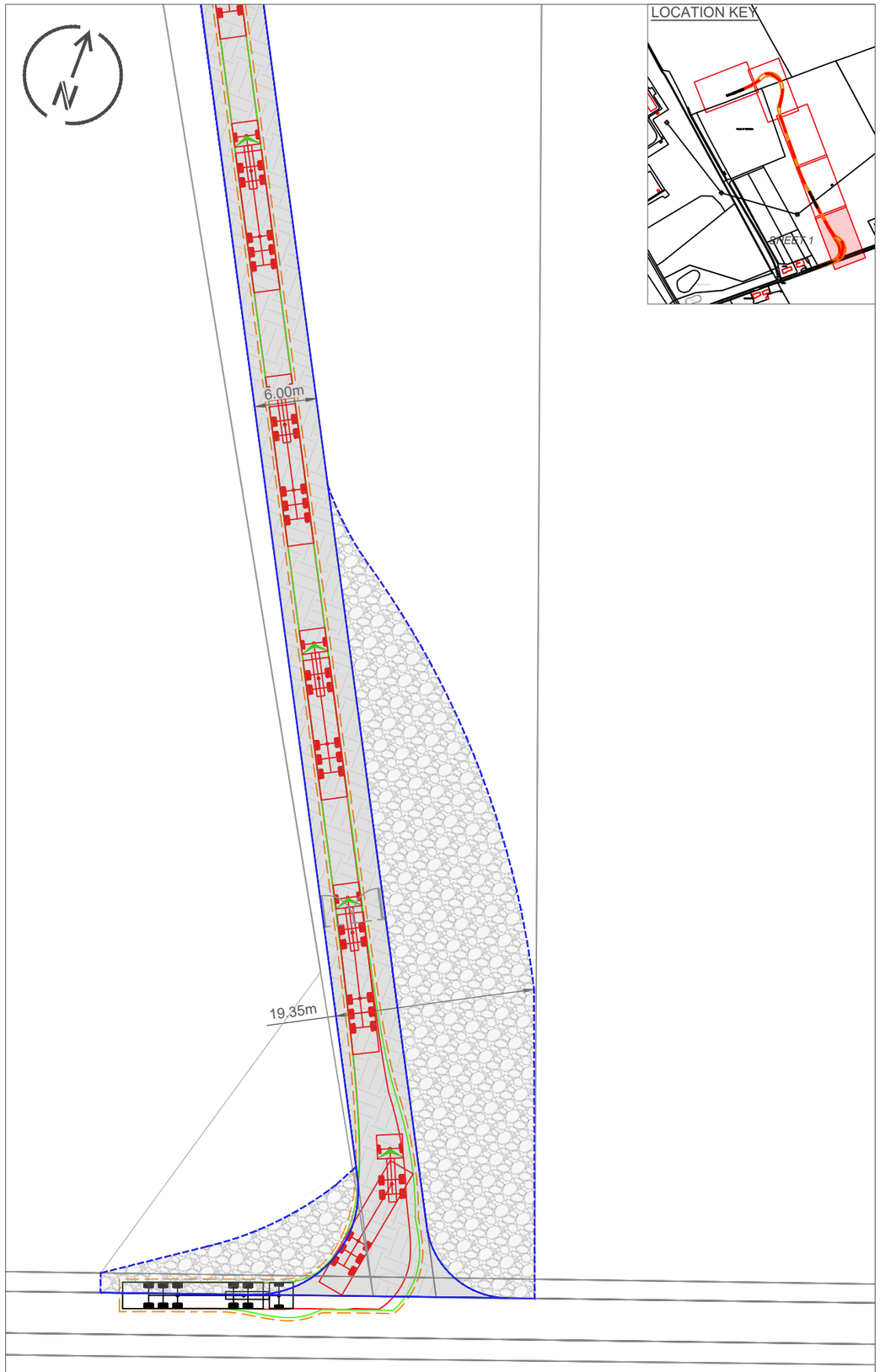
DRAWING TITLE:
CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS
SITE JUNCTION INGRESS AND EGRESS

STATUS:
FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-050	A	1:500



AL24 GIRDER

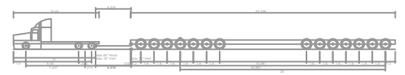


ARTICULATED VEHICLE

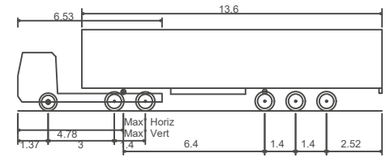
LOCATION KEY

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. Swept path analysis is based on the following vehicles traveling at 5mph, unless stated otherwise:

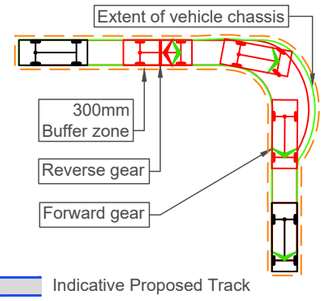


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



Indicative Proposed Track

Indicative Proposed Laybys

Indicative Proposed Hard-Standing Gravel

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

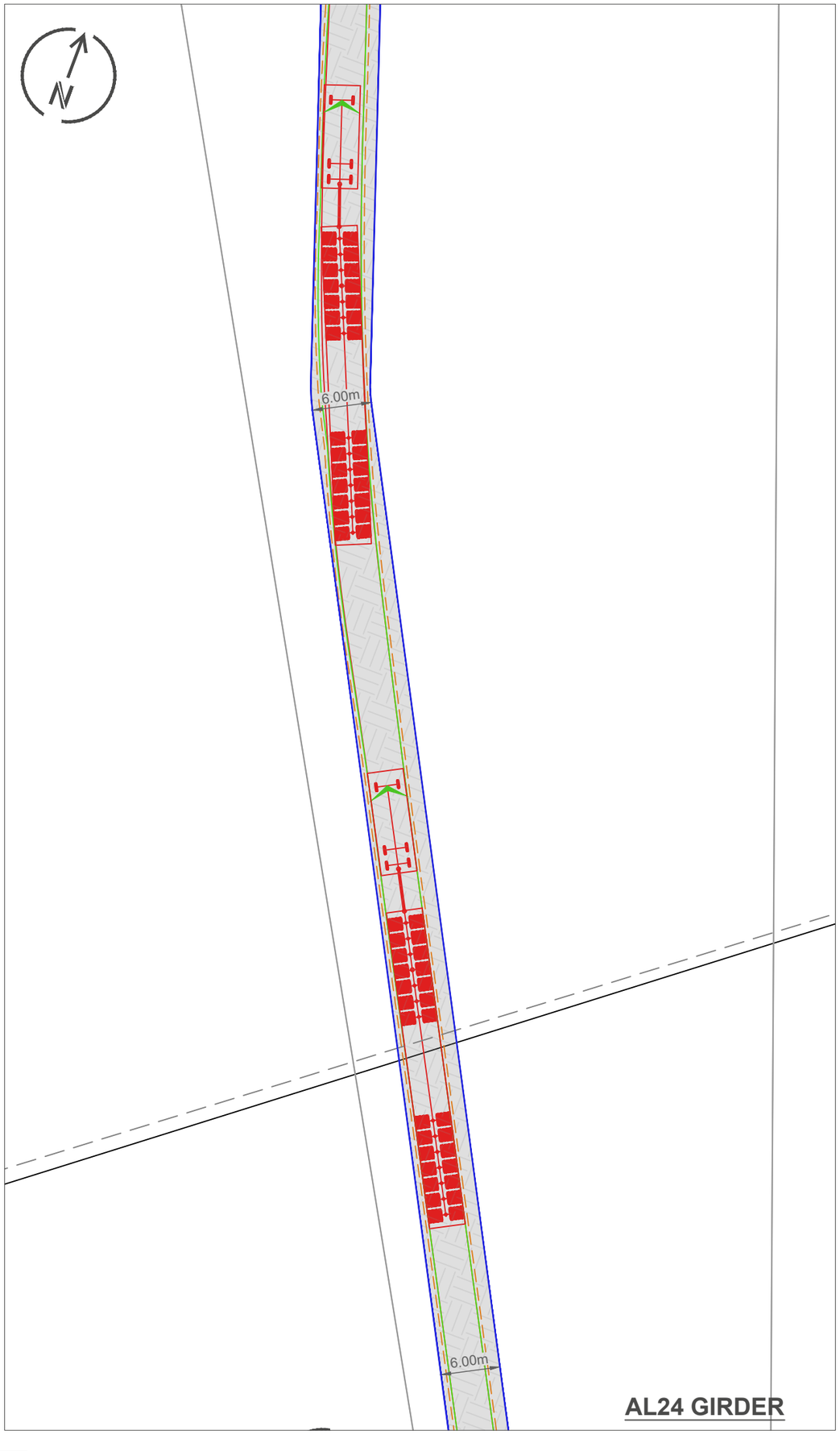
DRAWING TITLE:

CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS
PROPOSED TRACK - SHEET 1 OF 5

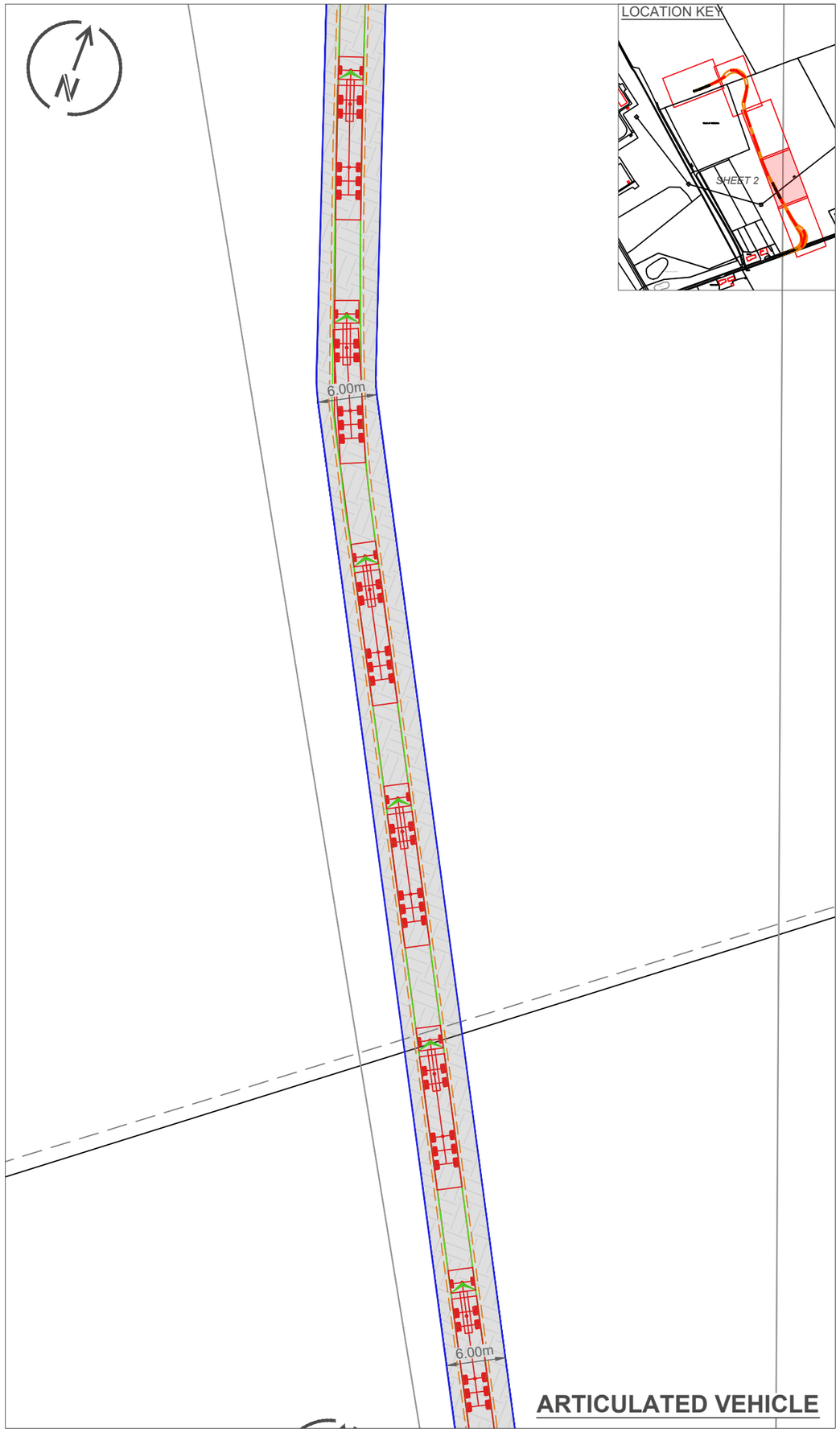
STATUS:

FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-051	A	1:500



AL24 GIRDER

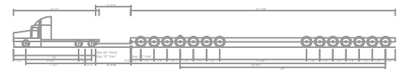


ARTICULATED VEHICLE

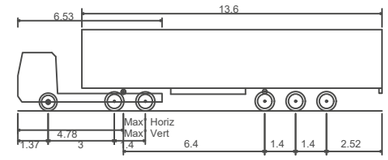
LOCATION KEY

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. Swept path analysis is based on the following vehicles traveling at 5mph, unless stated otherwise:

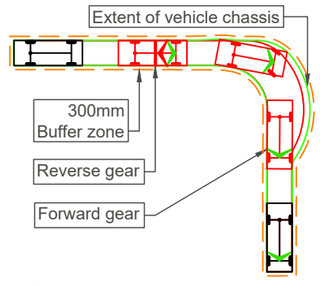


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



Proposed track
Proposed laybys
Existing trees
Tree root protection zone

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

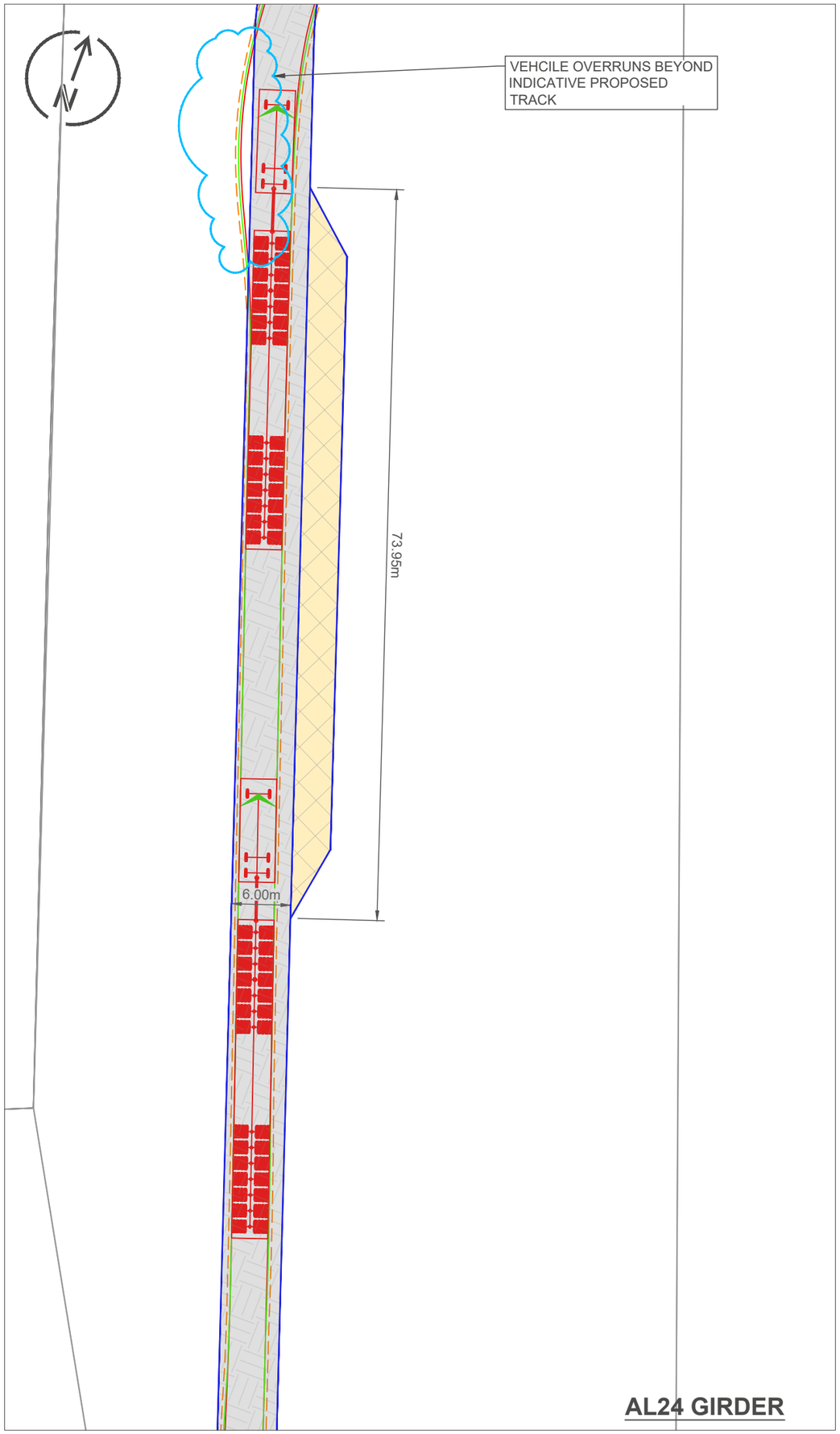
DRAWING TITLE:

CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS
PROPOSED TRACK - SHEET 2 OF 5

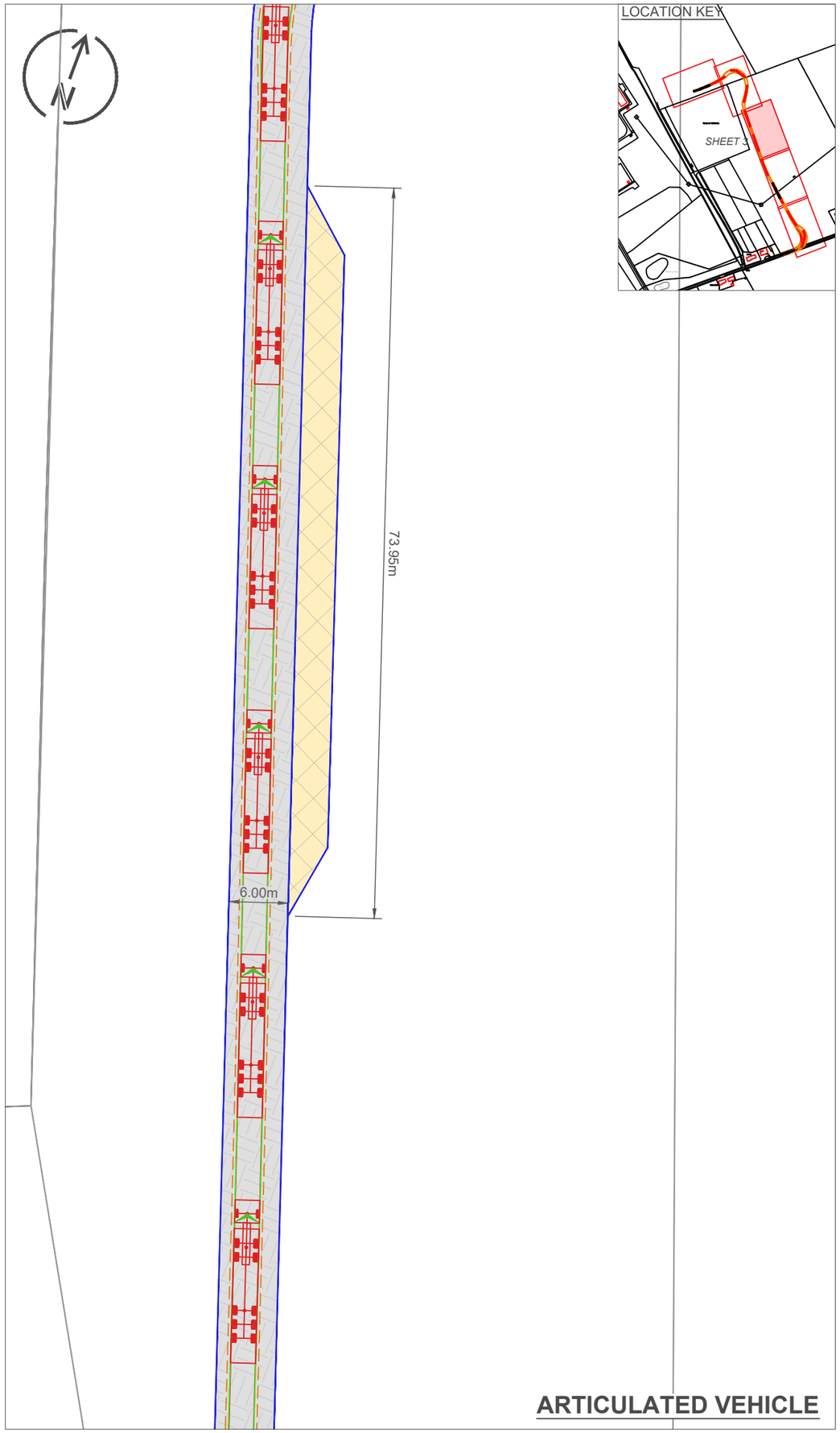
STATUS:

FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-052	A	1:500



AL24 GIRDER

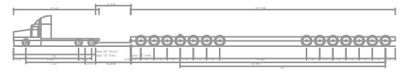


ARTICULATED VEHICLE

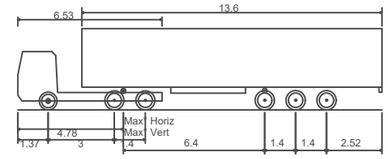
LOCATION KEY

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. Swept path analysis is based on the following vehicles traveling at 5mph, unless stated otherwise:

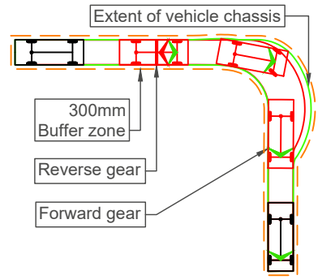


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



Proposed track
Proposed laybys
Existing trees
Tree root protection zone

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

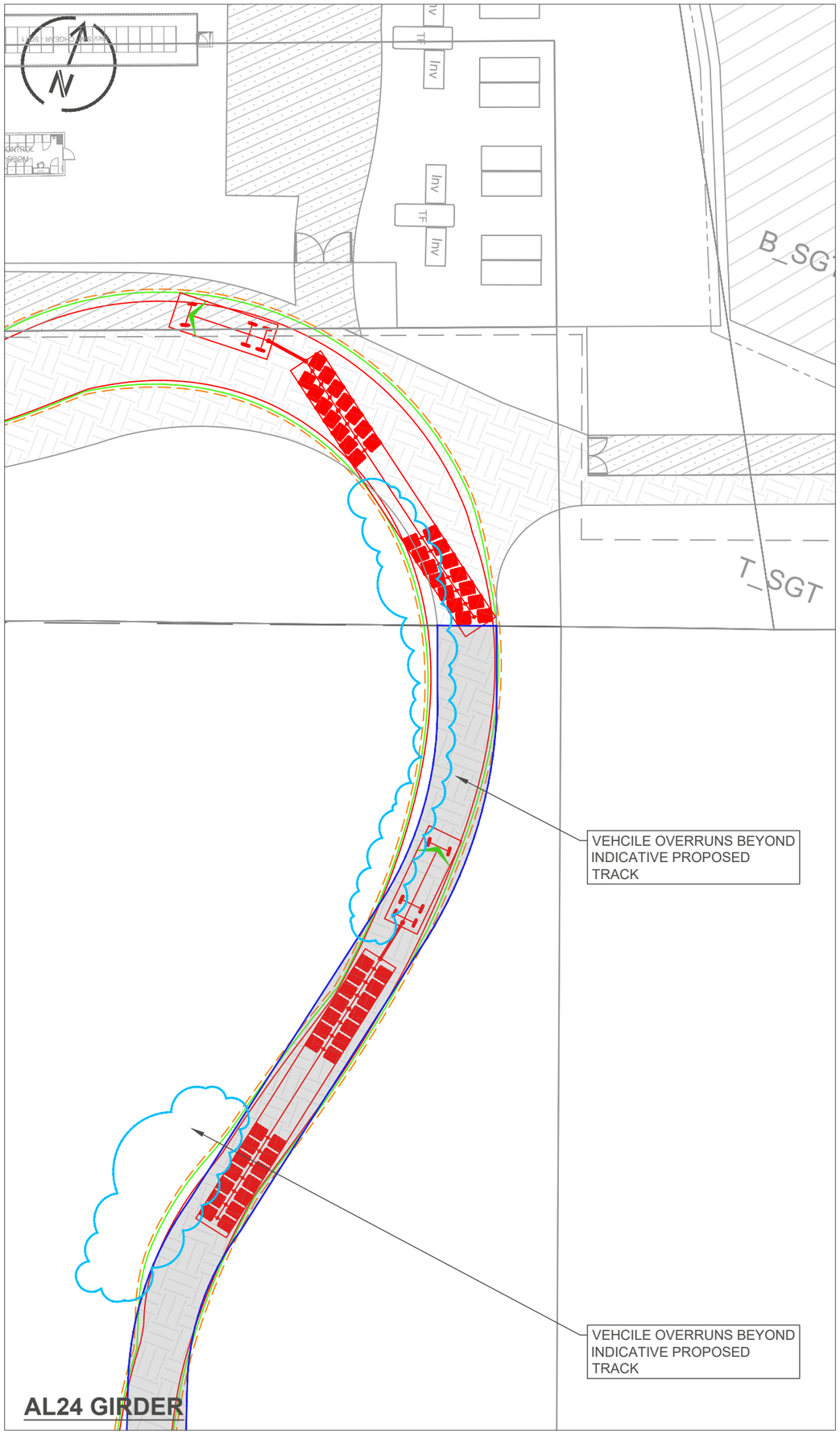
DRAWING TITLE:

CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS
PROPOSED TRACK - SHEET 3 OF 5

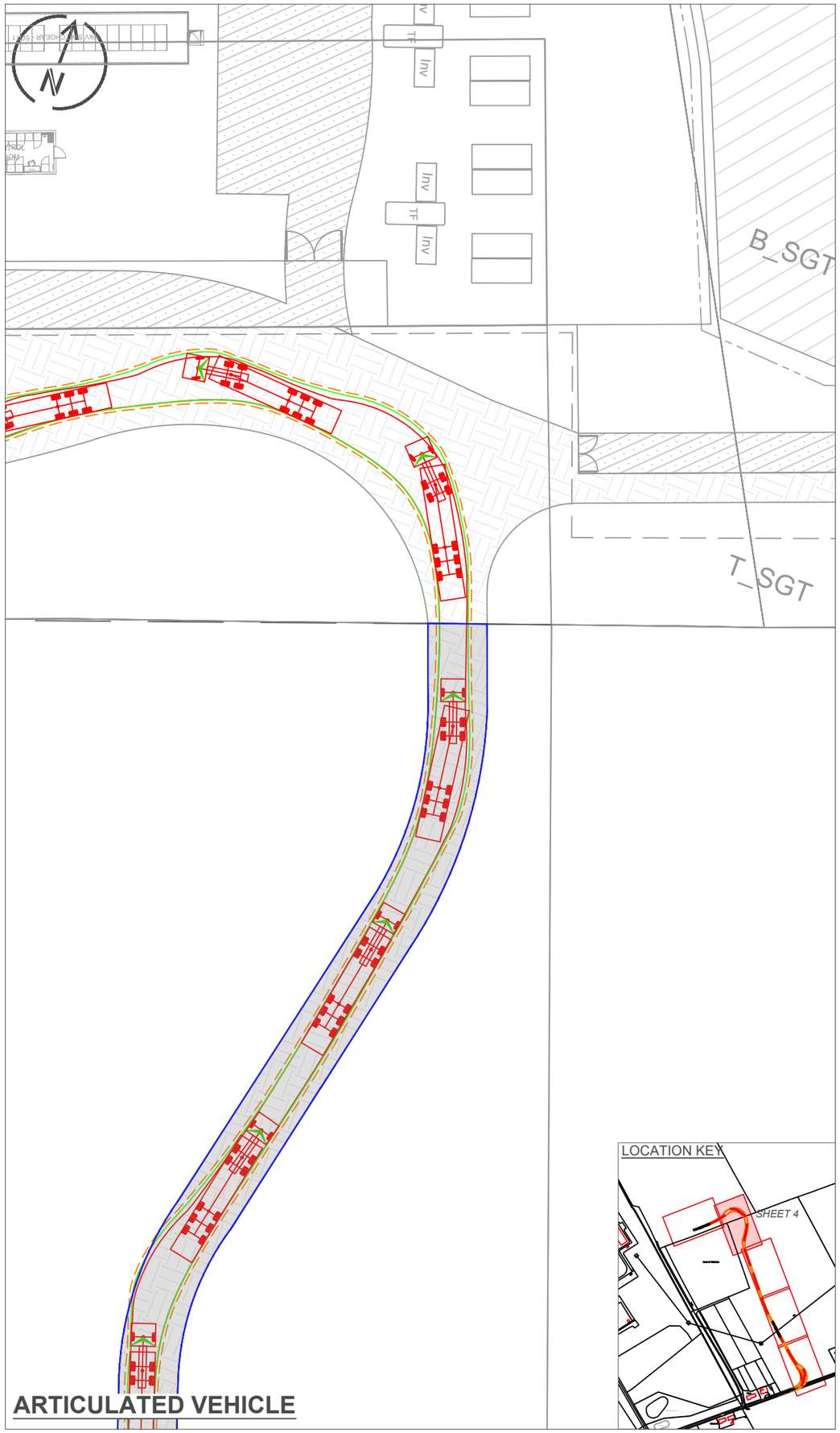
STATUS:

FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-053	A	1:500



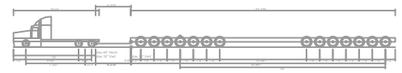
AL24 GIRDER



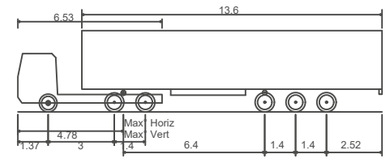
ARTICULATED VEHICLE

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. Swept path analysis is based on the following vehicles traveling at 5mph, unless stated otherwise:

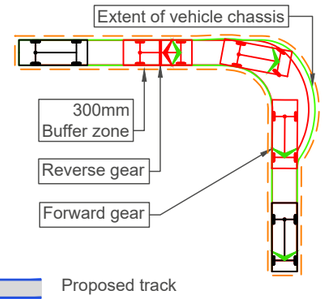


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



Proposed track

Proposed laybys

Existing trees

Tree root protection zone

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

LOCATION KEY

momentum transport consultancy

CLIENT:

Blackford Renewables Ltd

JOB TITLE:

BESS-ROTHIENORMAN

DRAWING TITLE:

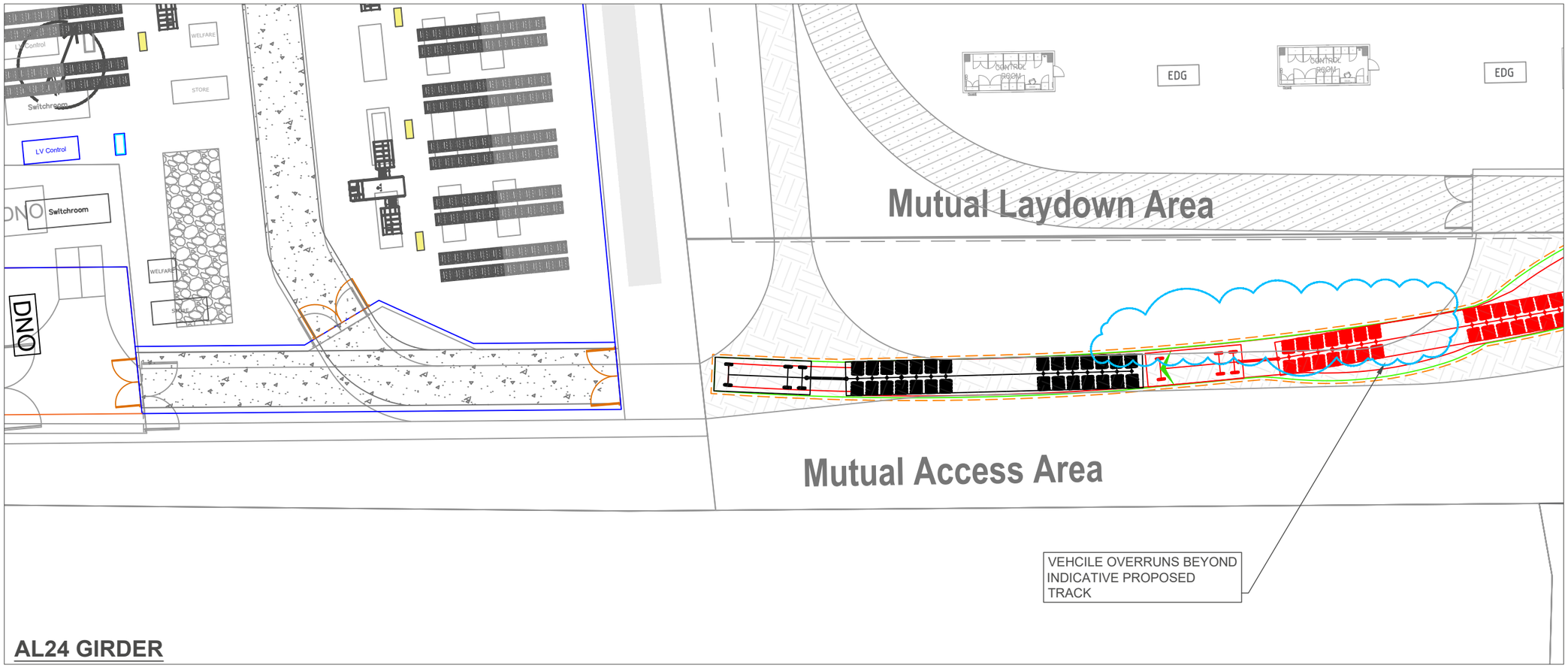
CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS
PROPOSED TRACK - SHEET 4 OF 5

STATUS:

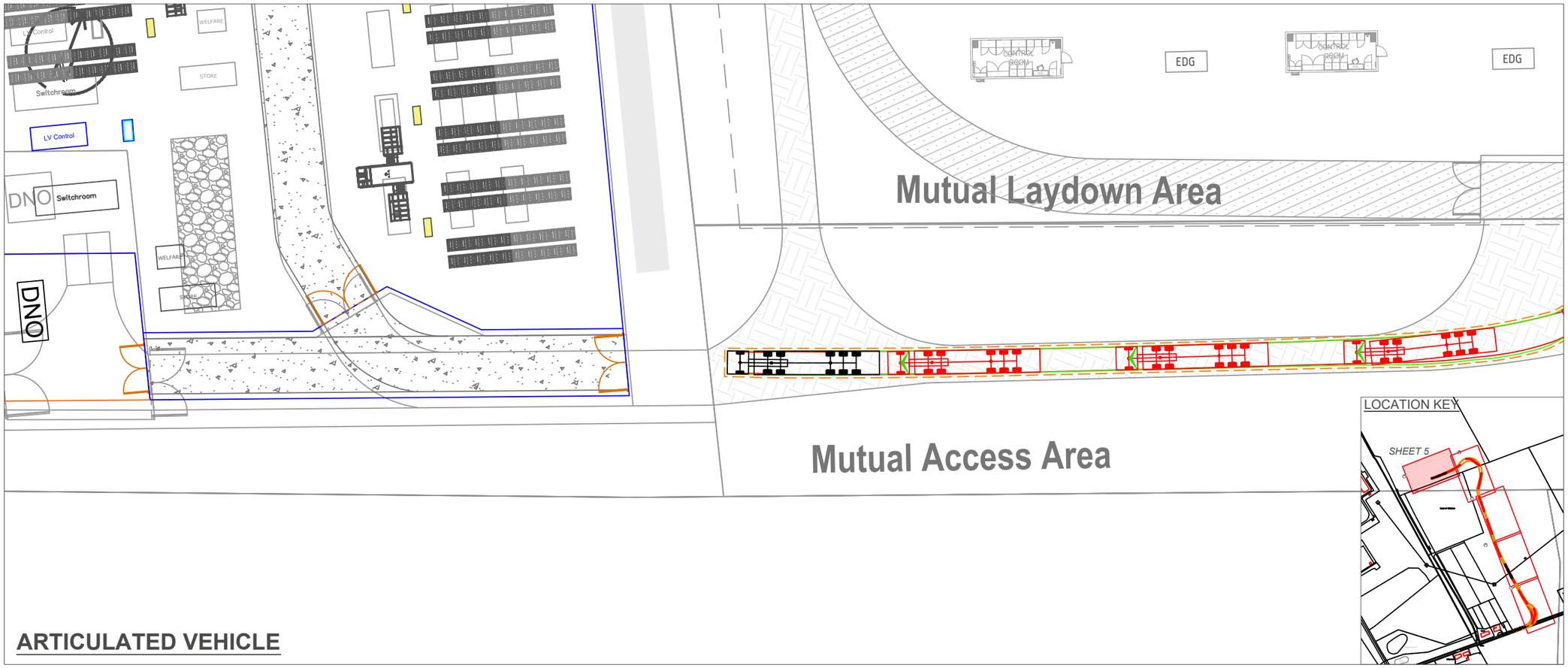
FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-054	A	1:500

ISO FULL BLEED A3 420 X 297 MM



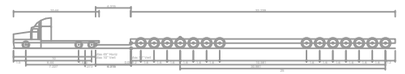
AL24 GIRDER



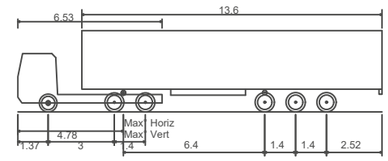
ARTICULATED VEHICLE

NOTES

1. Do not scale from this plan
2. This drawing is for discussion purpose only
3. Swept path analysis is based on the following vehicles traveling at 5mph, unless stated otherwise:

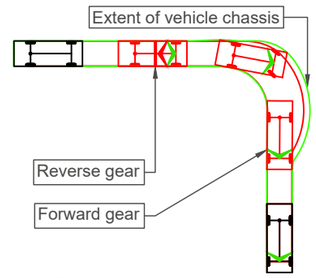


AL24 Girder	
Overall Length	46.496m
Overall Width	3.650m
Overall Body Height	3.725m
Min Body Ground Clearance	0.018m
Max Track Width	3.650m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	31.150m



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

KEY



Proposed track
Proposed laybys
Existing trees
Tree root protection zone

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

LOCATION KEY

momentum transport consultancy

CLIENT:
Blackford Renewables Ltd

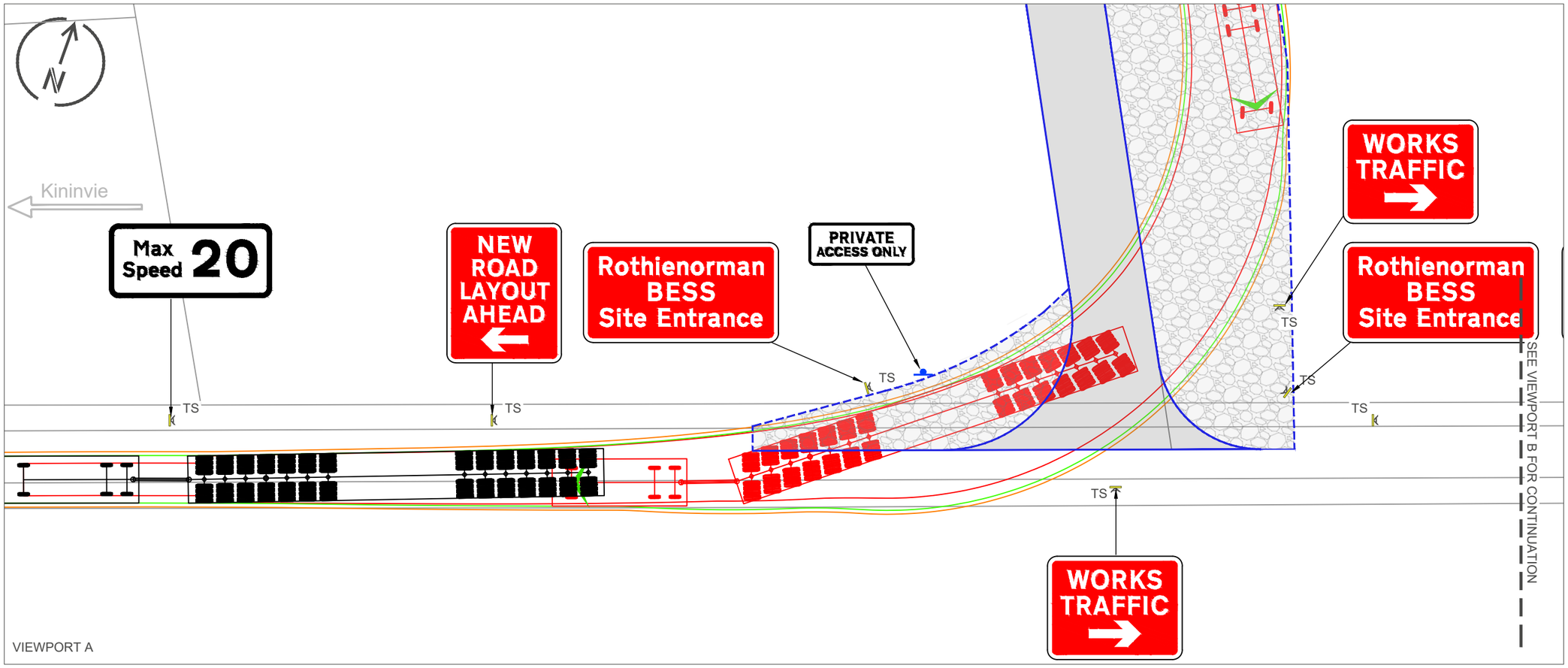
JOB TITLE:
BESS-ROTHIENORMAN

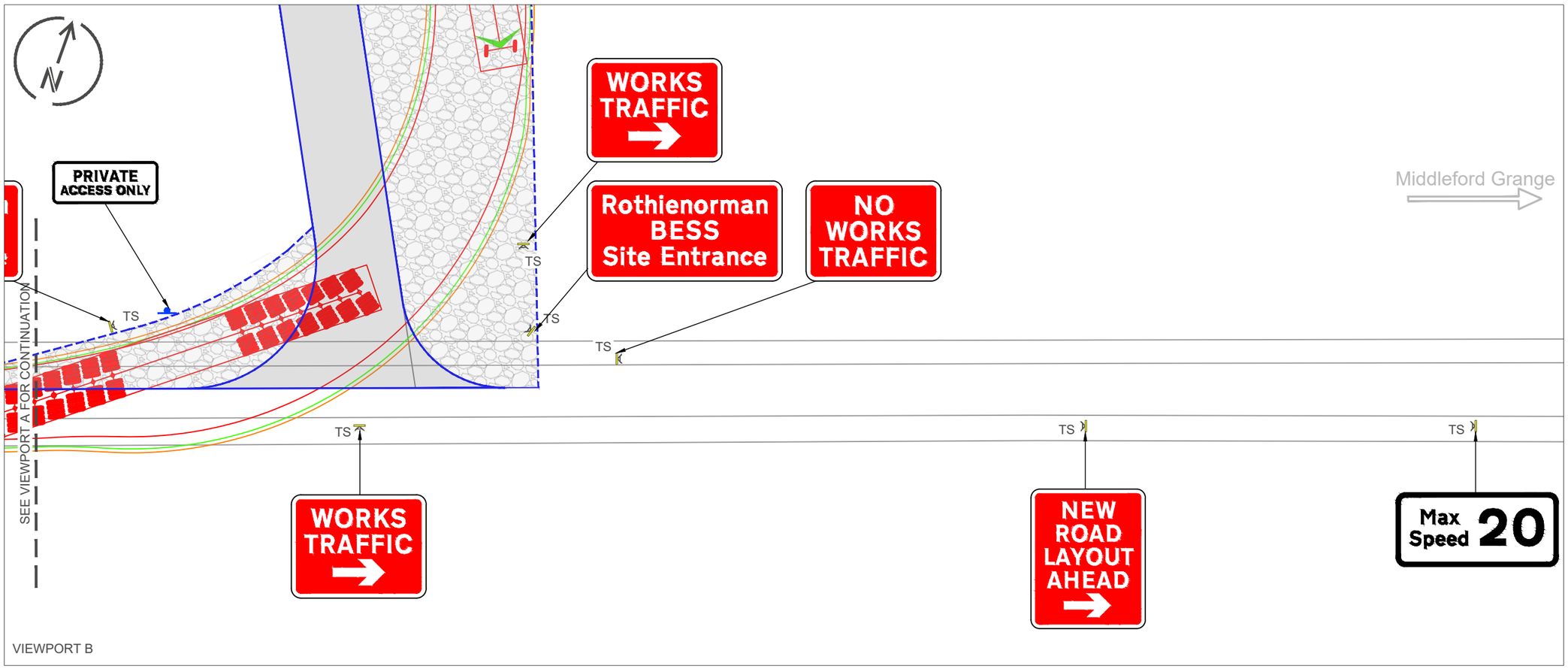
DRAWING TITLE:
CONSTRUCTION LOGISTICS
SWEPT PATH ANALYSIS
PROPOSED TRACK - SHEET 5 OF 5

STATUS:
FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-TR-055	A	1:500

APPENDIX C – SITE ACCESS SIGNAGE STRATEGY





NOTES

1. Do not scale from this plan.
2. This drawing is for discussion purpose only.
3. See drawing M001289-2-1-DR-011 for construction logistics over-view plan
4. Proposed new access track for power plant has not been subject to a Road Safety Audit.

KEY

- TS — Indicative Proposed Traffic Sign (A frame)
- Indicative Proposed Traffic Sign (Sign & Pole)
- Indicative proposed new access track
- Indicative proposed hard-standing gravel track

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
A	20/12/24	First issue	FR	IH	JT

momentum transport consultancy

CLIENT: Blackford Renewables Ltd

JOB TITLE: BESS-ROTHIENORMAN

DRAWING TITLE: PROPOSED TRAFFIC MANAGEMENT PLAN AT JUNCTION

STATUS: FOR INFORMATION

DRAWING NO:	REV:	SCALE AT A3:
M001289-2-1-DR-012	A	N.T.S

Project & Document Details

Project Name	BESS-Rothienorman Phase 2
Project Number	M001289-2
Document Title	Construction Traffic Management Plan

Document History

Issue	Status	Reason for Issue	Issued to
1.0	Draft	Draft for client comment	Blackford Renewables Ltd
2.0	Final	For Issue	Blackford Renewables Ltd
3.0	Final	For Issue	Blackford Renewables Ltd

Issue Control

Issue	Date	Author	Contributors	Authorisation	
				Name	Signature
1.0	23/12/24	RO	KN	JT	
2.0	31/01/25	RO	KN	JT	
3.0	25/04/25	KN	JT	JT	