

BT-NG-020621-545-0266

Bramford to Twinstead Reinforcement

Volume 8: Examination Submissions

**Document 8.7.4: Temporary Access Route off the A131 Concept Design
and Swept Path Assessment**

**Final Issue A
December 2023**

Planning Inspectorate Reference: EN020002

**The Infrastructure Planning (Examination Procedure) Rules 2010
Regulation 8(1)(k)**

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Appendix A Concept Design of A131 Ghost Island and Bellmouth
Appendix B Abnormal Indivisible Load Swept Path Assessment

Executive summary

This report has been produced for the purpose of providing a Swept Path Assessment (SPA) for the Temporary Access Route off the A131 (access point at H-AP20 through to the access point at H-AP10 in the vicinity of the Stour Valley West Cable Sealing End Compound).

The concept design for the access point off the A131 (A131 ghost island) and bellmouth in Appendix A demonstrates that the design can be suitably accommodated within the Order Limits.

The SPA in Appendix B demonstrates that the A131 ghost island and bellmouth can safely accommodate two Abnormal Indivisible Load (AIL) transport units in convoy, and that the Temporary Access Route off the A131 as currently proposed can accommodate the AIL movements within the temporary access route, and within the Order Limits.

The designs presented in Appendices A and B are indicative designs to demonstrate that the accesses can be developed safely, within the Order limits and without generating more vegetation removal than proposed. However, the precise design of the bellmouth, its location along the A131 and the alignment of the temporary access route may vary with detailed design. Requirement 11 on the draft Development Consent Order (**document 3.1**) ensures that final access designs are submitted and approved by the relevant highway authority prior to construction.

1. Introduction

1.1 Overview

- 1.1.1 This document has been produced in response to Action Point AP2 arising from Compulsory Acquisition Hearing 1 [EV-045] which required the Applicant to “*submit an appendix to the earlier technical note to deal with the environmental comparison and swept path analyses for the Applicant’s preferred route for the A131 construction haul road and the alternative routes suggested by DFP Nott and Sons and Mr PJ Nott for their holdings*”.
- 1.1.2 The environmental comparison was addressed by an update to the Technical Note at Deadline 4 in the submission of document 8.5.5 (B): Technical Note on Temporary Access Route off the A131 at Deadline 4 [REP4-009].
- 1.1.3 This document contains the Swept Path Assessment (SPA) for the Applicant’s preferred route of the Temporary Access Route off the A131 as represented in Figure 1.1 of document 8.5.5 (B): Technical Note on Temporary Access Route off the A131 [REP4-009]. Refer to Appendix B for the SPA report.
- 1.1.4 This document also incorporates a concept design for the A131 ghost island and bellmouth (refer to Appendix A) which has been incorporated within the SPA in Appendix B. This concept design also addresses queries from the local highway authorities on the nature of the proposed junction with the A131.

2. A131 Ghost Island and Bellmouth

2.1 Concept Design

- 2.1.1 Appendix A contains a concept design for the A131 ghost island and bellmouth (drawing BT-NG-020621-TAR-002). The detailed design of the A131 ghost island and bellmouth will be undertaken by the main works contractor once appointed and submitted to the relevant Local Highway Authority (Essex County Council) for approval pursuant to Requirement 11 of the draft DCO (**document 3.1**).
- 2.1.2 The A131 ghost island has been designed to allow for a right turn in (from the south) and a left turn out (to the south); for clarity AILs are not proposed to use the A131 from Sudbury to the north. The concept design includes a right turn pocket that can accommodate two AIL transport units travelling in convoy.
- 2.1.3 The concept design presently indicates the bellmouth placed on the northern boundary of the Order Limits as a worst-case arrangement, this resulting in a tighter right turn into the bellmouth and a tighter left turn out of the bellmouth along the access route. It is noted that the Order Limits allow space for the bellmouth to be re-positioned further to the south (more centrally within the Order Limits) in the detailed design which would allow for smoother initial turns by the AILs.
- 2.1.4 The concept design demonstrates that a ghost island and bellmouth can be constructed at the A131 access point at H-AP20 within the Order Limits requested by the Applicant, and that the Order Limits further allow flexibility for some repositioning of this ghost island and bellmouth to suit detailed design if required and/or following discussions with the local highway authority.

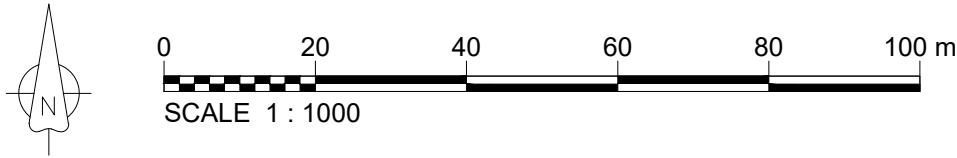
3. Swept Path Assessment

3.1 Review of Swept Path Assessment

- 3.1.1 The Applicant appointed a specialist Consultant to undertake the SPA of the Temporary Access Route off the A131 as per Figure 1.1 within document 8.5.5 (B): Technical Note on Temporary Access Route off the A131 [REP4-009]. The SPA report is attached as Appendix B.
- 3.1.2 The SPA is provided for the Temporary Access Route off the A131 (access point at H-AP20 through to the access point at H-AP10 in the vicinity of the Stour Valley West Cable Sealing End Compound). The concept design for the A131 ghost island and bellmouth as per Appendix A has been incorporated within the SPA.
- 3.1.3 Drawing 21-1030.GI01 (page 14) of Appendix B demonstrates that two AIL transport units can be safely accommodated within the 80m long right turn pocket within the ghost island, and further that two AIL transport units can be safely accommodated within the bellmouth once the right turn has been completed by both units.
- 3.1.4 Drawing 21-1030.SPA03 Sheets 1 to 17 (pages 15 to 31) of Appendix B provides the SPA of an AIL transport unit travelling from access point H-AP20 through to access point H-AP10 along the proposed temporary access route. The report notes that although in places an oversail of the temporary access route occurs, this is a result of an attempt to track the AIL vehicle along the left-hand lane of the temporary access route. If the AIL occupied the full width of the temporary access route, no oversail would be expected, and the Applicant anticipates that this would be the approach adopted by the main works contractor during the AIL deliveries.
- 3.1.5 There are predicted to be 50 AIL vehicles using this temporary access route over the construction period and AIL deliveries are tightly controlled, programmed and managed. It is therefore likely that the Applicant would effectively close the temporary access route to other construction traffic during AIL movements, enabling use of the full carriageway. One benefit of the temporary access route is that the Applicant will be the only user of the temporary access route so this can be easily managed with no impact on the local highway network after the A131 junction except for locations where the temporary access route crosses the local highway network.
- 3.1.6 The Applicant notes that in all cases the AIL remains well within the Order Limits, which allows for some flexibility in the detailed design of the Temporary Access Route off the A131 by the main works contractor to address any localised issues arising.

Appendix A

Concept Design of A131 Ghost Island and Bellmouth



1. Drawing to be printed in colour.
2. Layouts to be agreed with relevant land owners / stakeholder
3. Do not scale from this drawing.
4. All dimensions in metres unless otherwise noted
5. The accuracy of this plan is limited to the accuracy of the ordnance survey map. if any conflicting information is reported on site, this should be reported to a representative of the overseeing organisation.
6. Swept path analysis has not been undertaken due to the exceptional nature of the vehicle, but the geometry has been constructed to ensure the swept path of the worst-case abnormal indivisible load (ail) vehicle can be accommodated within the order limits.
7. Existing infrastructure such as drainage, street lighting, traffic signs and signal ducts are subject to alteration as required.
8. All road markings and signs are as per the traffic signs regulations and general directions 2016 (tsrgd) and traffic signs manual.
9. The feasibility of this design solution is subject to further work to be conducted during the next design stage.
10. The proposals are indicative and subject to alteration following completion of the topographical survey

- Proposed road markings
- Existing road markings to remain
- Proposed edge of widened carriageway
- Proposed carriageway widening
- Proposed temporary access road bellmouth

Reference should be made to Document 2.1 Guide to the Plans which provides further information on what the plans show.

NG Investment No. 21847

A	13/11/23	Issued for Information	NP	DF	RF
ISSUE	DATE	REMARKS	DRAWN	CHKD	APPD

PROJECT

Bramford to Twinstead Reinforcement

nationalgrid

TITLE Design and Layout Plans:
Proposed Ghost Island / Temporary
Access Road Bellmouth Layout
Concept Design

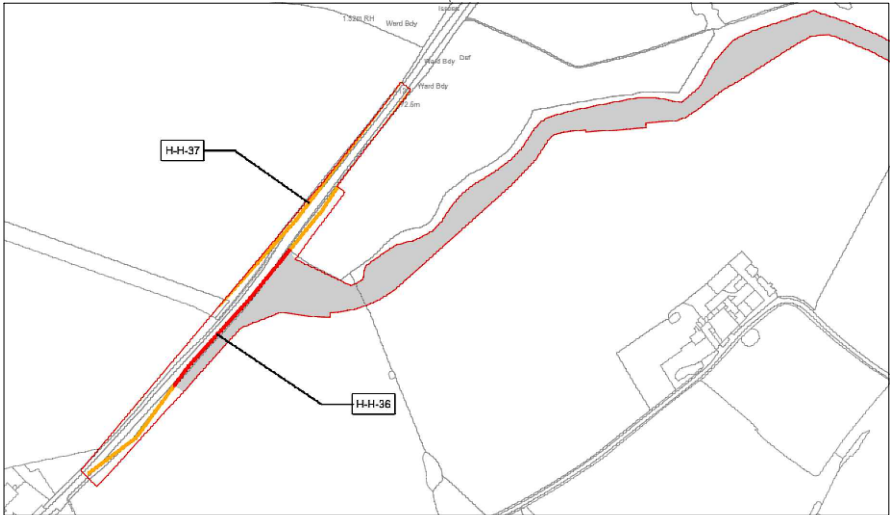
CIRCUIT / SITE	ACAD
Bramford - Pelham & Bramford - Braintree - Bulls Lodge	

ORIGINATOR DRAWING No.	A3
B2441B04-JAC-TE-B2T-TAR-002	

NG DRAWING No.	Sheet No.	No. of Sheets	Issue
BT-NG-020621-TAR-002	1	1	A

Scale:-	NTS
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INDICATIVE TEMPORARY ACCESS ROAD LAYOUT



Appendix B

Abnormal Indivisible Load Swept Path Assessment



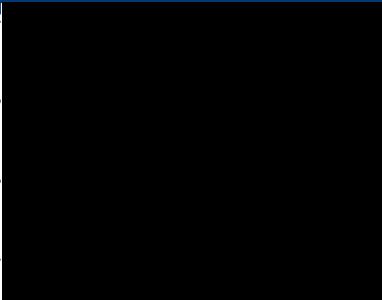
Bramford to Twinstead – Option 1 DCO (Red Route) - Abnormal Indivisible Load Swept Path Assessment Considerate of 60te Cable Drum Delivery

Prepared for National Grid





National Grid I 21-1030 Bramford to Twinstead I SPA Summary I 29.11.23

NAME		SIGNATURE	DATE
Prepared by:	Micah Orbart		28.11.23
Checked by:	Andy Pearce		28.11.23
Approved by:	Andy Pearce		28.11.23

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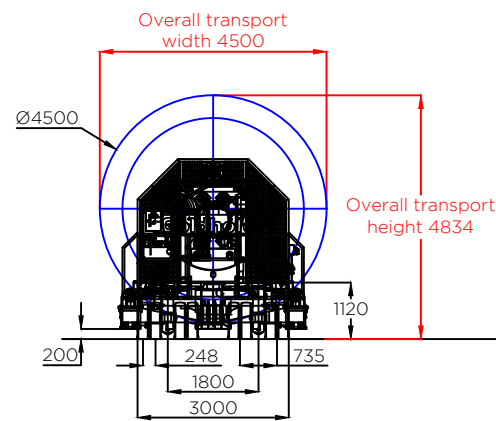
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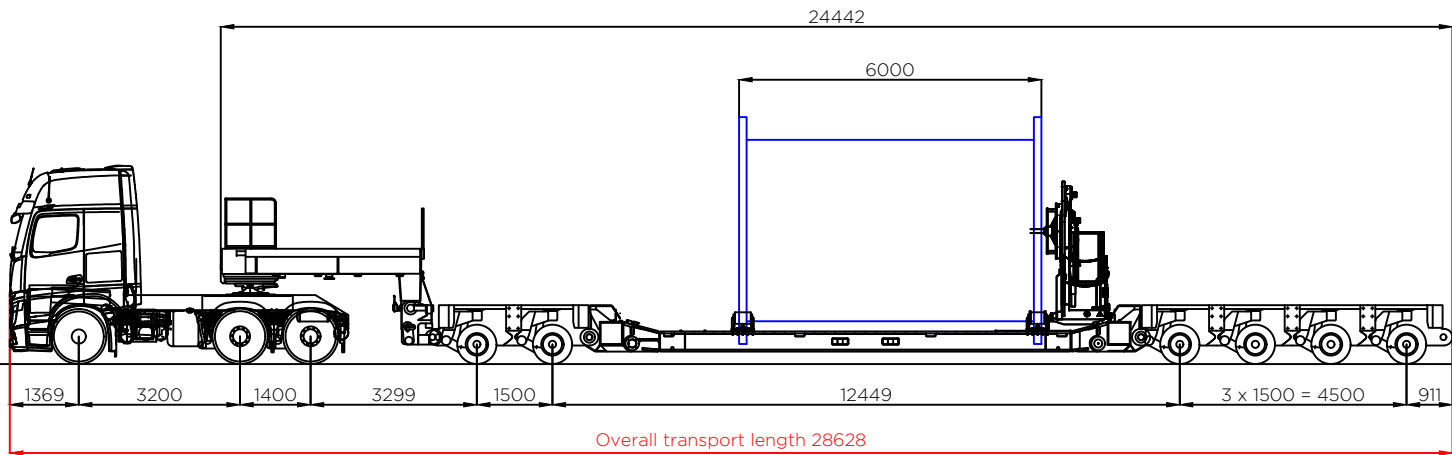
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DOCUMENT REVISIONS

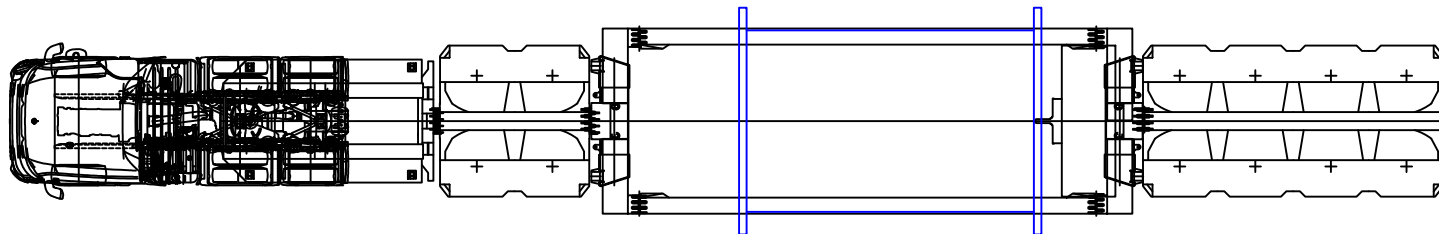
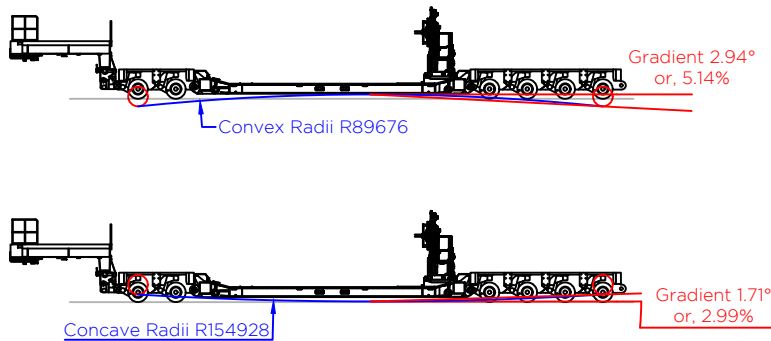
Issue	Date	Details
0	28.11.23	SPA Drawings Issued
1	29.11.23	Vertical Negotiability Updated
2		



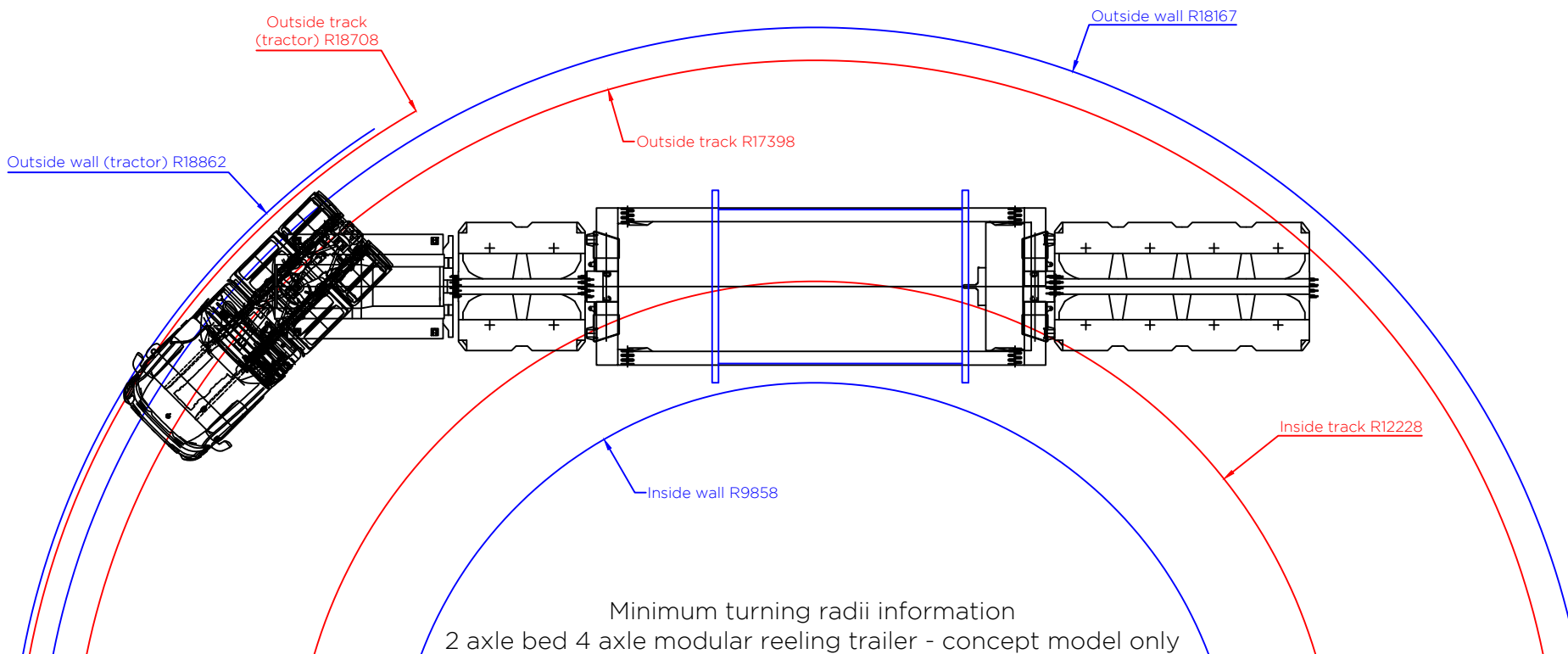
Profile view



Elevation view - 2 axle bed 4 axle modular reeling trailer - concept model only
Indicative 60 te cable drum



Plan view - 2 axle bed 4 axle modular reeling trailer - concept model only
Indicative 60 te cable drum



Minimum turning radii information
2 axle bed 4 axle modular reeling trailer - concept model only
Indicative 60 te cable drum

Load table	
4 axle modular reeling trailer	
Self weight of cable drum	60.0 te
Self weight of trailer	39.6 te
Self weight of tractor	12.0 te
Total combined weight	111.6 te
Max. load per axle line (trailer)	14.12 te
Load per axle	7.06 te
Load per wheel (4 per axle)	1.77 te
Max. overall ground bearing pressure (trailer)	4.77 te/m ²

Tractor (12 te)	
Front steer	8.1 te
Rear axle	12.7 te
Rear axle	12.7 te

Notes:

[1] The figures shown above are representative of the transport configuration portrayed. However, as tractor and trailer arrangements vary then the loads and dimensions indicated should be treated as probable values.

[2] Actual dimensions, including axle spacing and mean running height, may vary slightly depending on manufacturer of trailer deployed.


[3] All linear measures in millimetres unless stated otherwise.

[4] Minimum turning radii based upon maximum steering angle of 45 degrees. Some trailers operate to a maximum steering angle of 60 degrees, which will improve negotiability.

2	29.11.23	Vertical Negotiability Updated
1	28.11.23	Vertical Negotiability Added
0	17.06.22	Issued for comment
Rev.	Date	Amendments

Revisions

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Independent Transportation Engineers

Client:



National Grid
Hams Lane
Coleshill
West Midlands
B46 1AW

Project:

Bramford to Twinstead

Title:

Indicative transport configuration
Indicative 60.0 te cable drum carried on
2 axle bed 4 axle modular reeling trailer
showing minimum turning radii

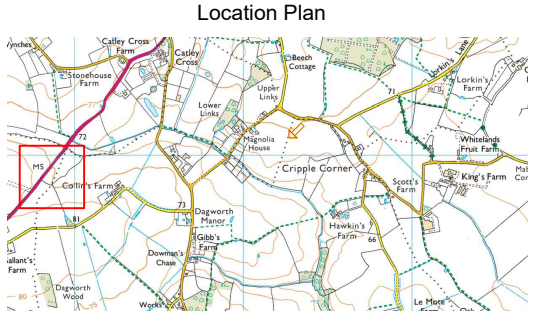
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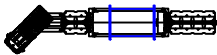
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21-1030.TC07	1 of 1	2



Ghost Island
Vehicle Position Review
Based on Client Supplied Drawing
Scale 1:500



Legend:



2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07



Extent of tractor track



Extent of trailer track



Extent of oversail



Extent of road boundary



Overrun and oversail beyond kerb



Overrun beyond kerb

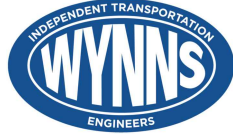


Oversail beyond kerb

1		
0	24.11.23	Issued for comment
Rev.	Date	Amendments

Revisions

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Client:

nationalgrid

Project:

Bramford to Twinstead

Title:

Ghost Island Design Review
Vehicles to wait in ghost Island, then turn right from A131
onto access road, considerate of indicative 2 axle bed 4
axle modular reeling trailer transporting 60 te cable drum.

Drawing status:

Final Report

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Investigations\21-1030 Bramford to Twinstead\Swept Path
Analysis\SPA03 22.11.23

Client supplied drawing for ghost island. The
illustration shows two transport configurations
waiting within the proposed ghost island.
Sufficient space available to accommodate.

Client supplied drawing for bell mouth.
The illustration shows two transport
configurations waiting within the proposed
bell mouth. Consideration at this time has
not been given to the access road from
the position of the bell mouth. Sufficient
space available to accommodate.

Proposed 112.5m (1:25) island
taper and 15m direct taper as
per DMRB CD 123

Approximately 60m

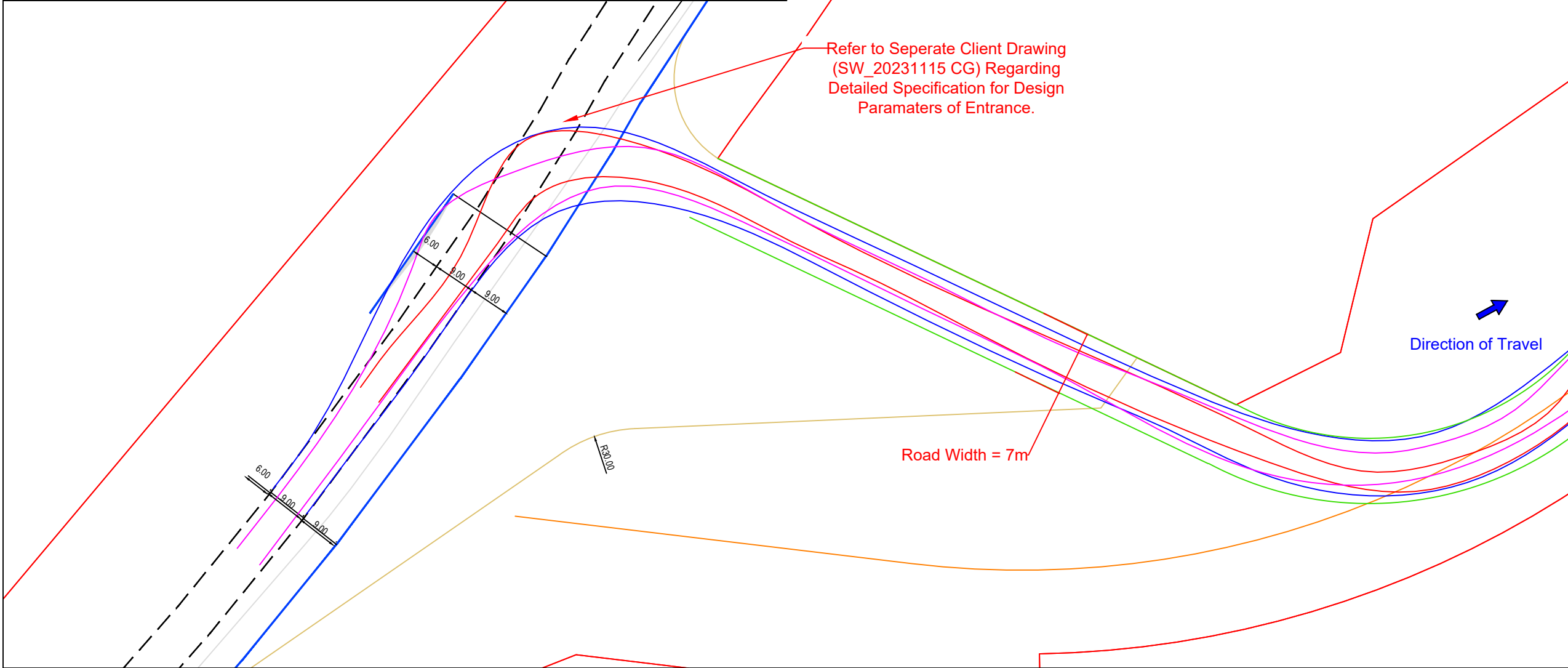
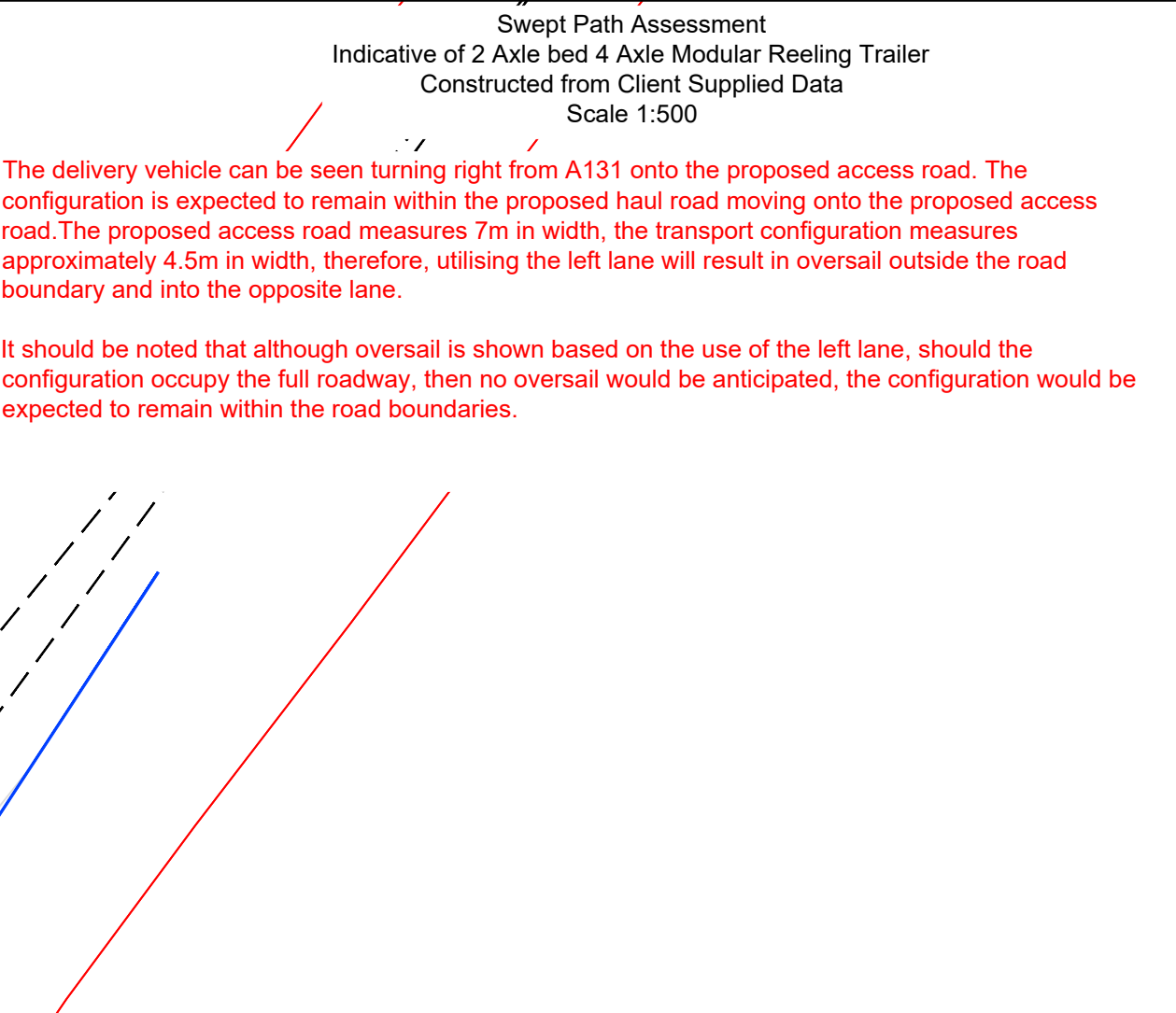
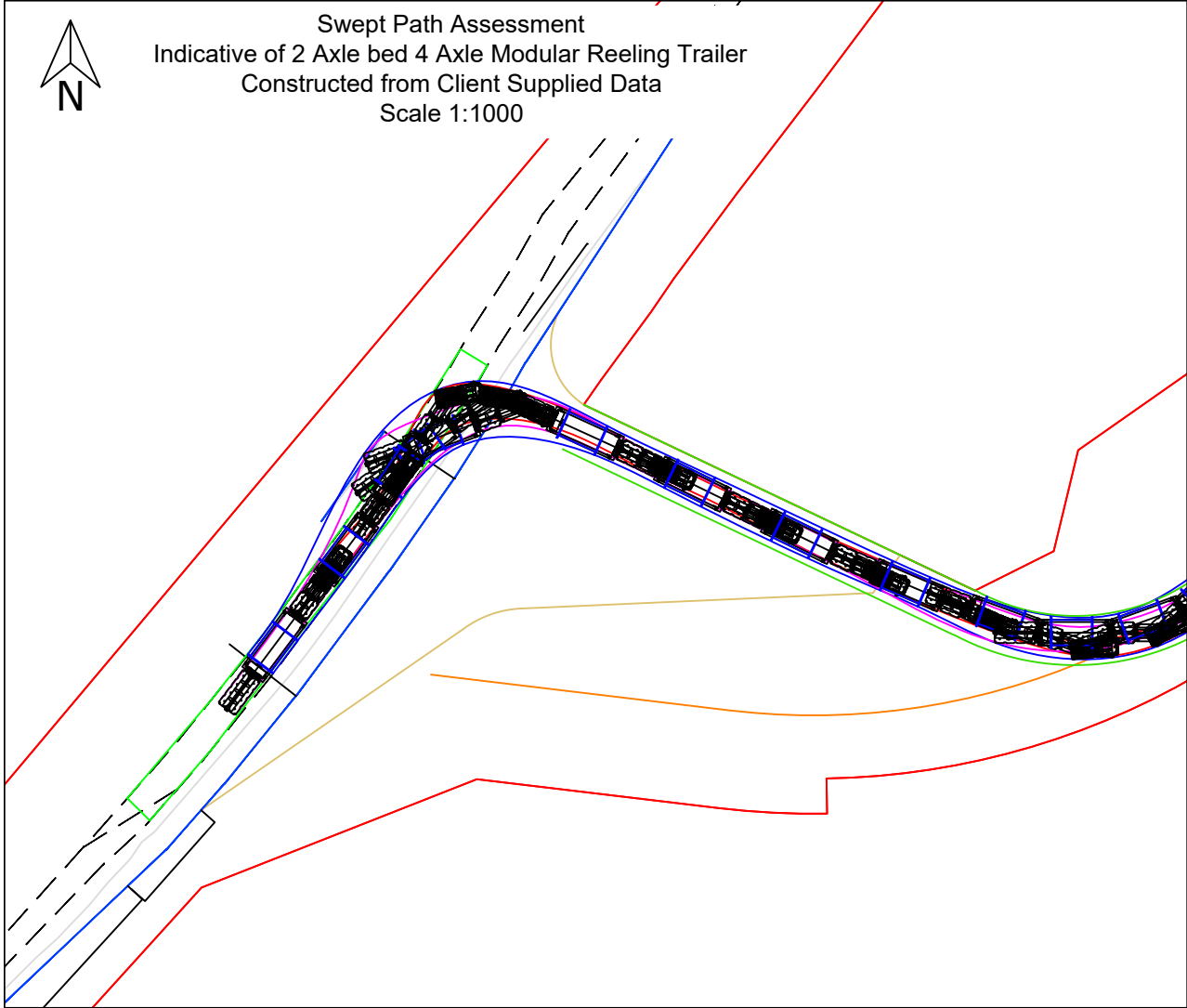
Approximately 10m

Approximately 10m

Area of haunching to ensure
3.0m wide northbound lane

Proposed 80m long right-turn pocket, capable
of accommodating 2x Abnormal Indivisible
Load (AIL) vehicles for cable delivery

Proposed carriageway widening within Order
Limits to facilitate right-turn pocket, requiring
ownership of third-party land



Location Plan

Legend:

- 2 bed 4 axle modular reeling trailer minimum turning arrangements Drawing ref. 21-1130.TC07
- Extent of tractor track
- Extent of trailer track
- Extent of oversail
- Extent of road boundary
- Overrun and oversail beyond kerb
- Overrun beyond kerb
- Oversail beyond kerb

Rev.	Date	Amendments
1		
0	22.11.23	Issued for comment

Revisions

Prepared by:

Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411
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Client:

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access, Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.

Drawing status:

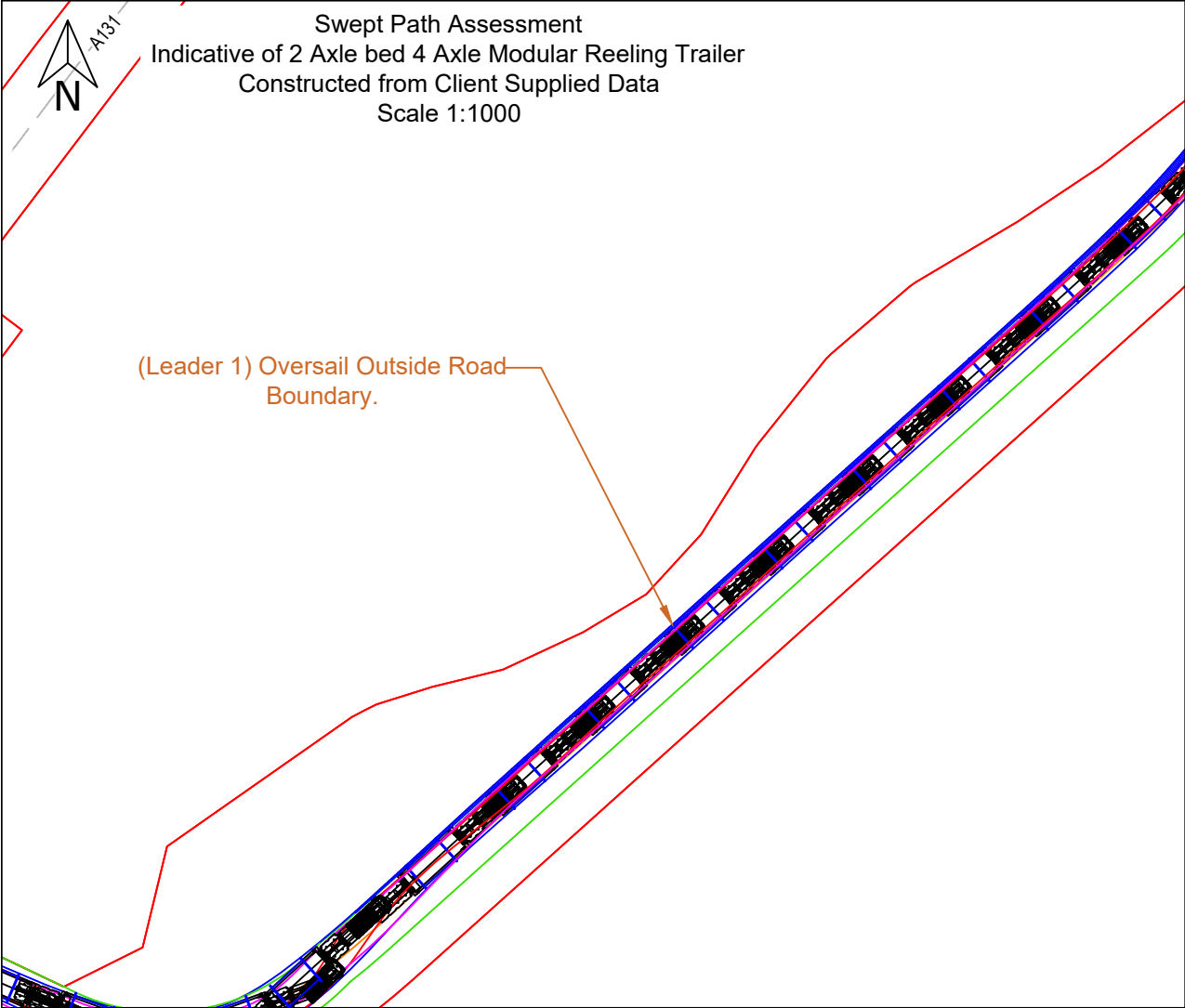
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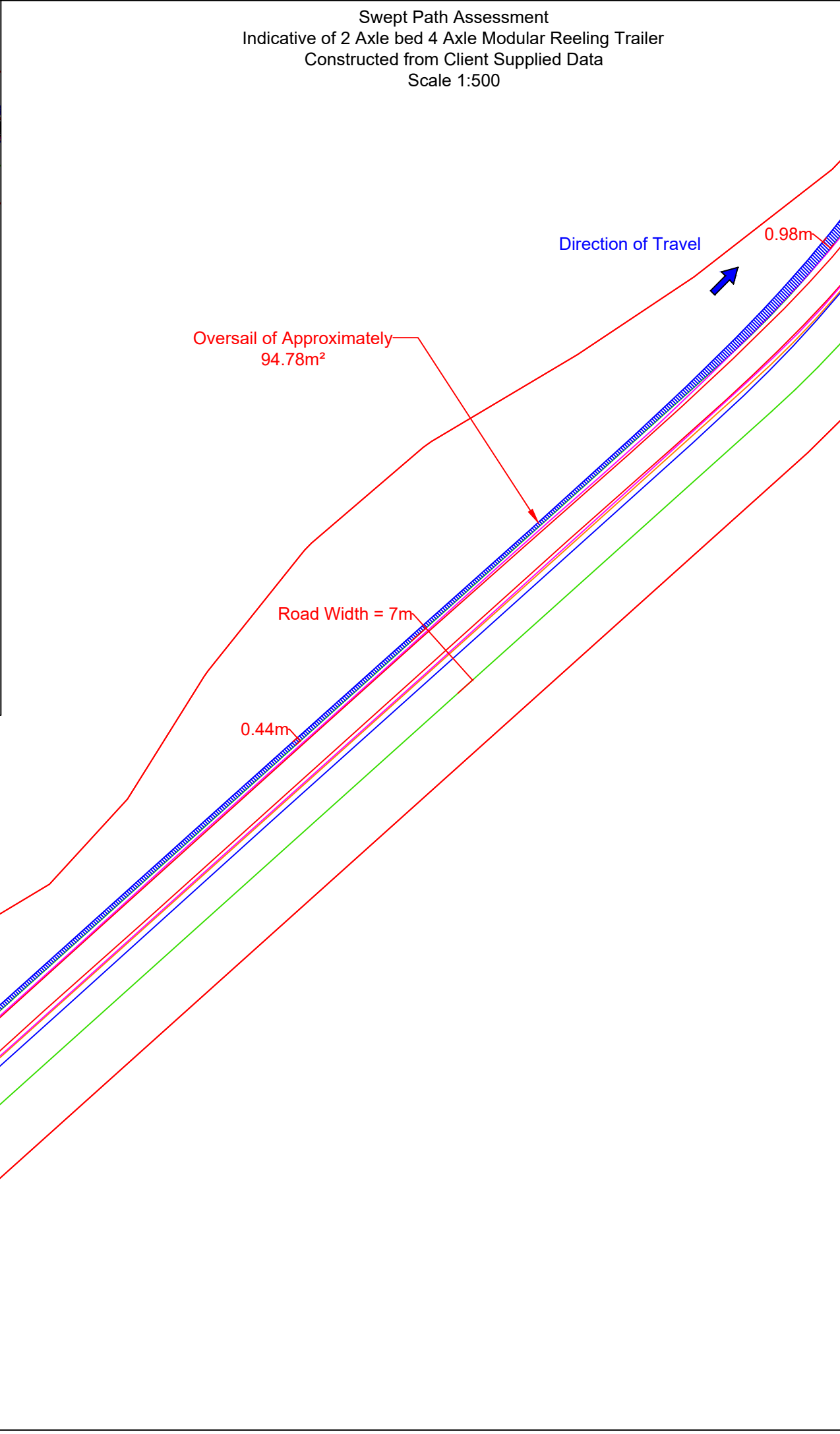
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The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.98m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.



Location Plan

Legend:

- 2 bed 4 axle modular reeling trailer minimum turning arrangements Drawing ref. 21-1130.TC07
- Extent of tractor track
- Extent of trailer track
- Extent of oversail
- Extent of road boundary
- Overrun and oversail beyond kerb
- Overrun beyond kerb
- Oversail beyond kerb

Rev.	Date	Amendments
1		
0	22.11.23	Issued for comment

Revisions

Prepared by:

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Client:

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.

Drawing status:

Final Report

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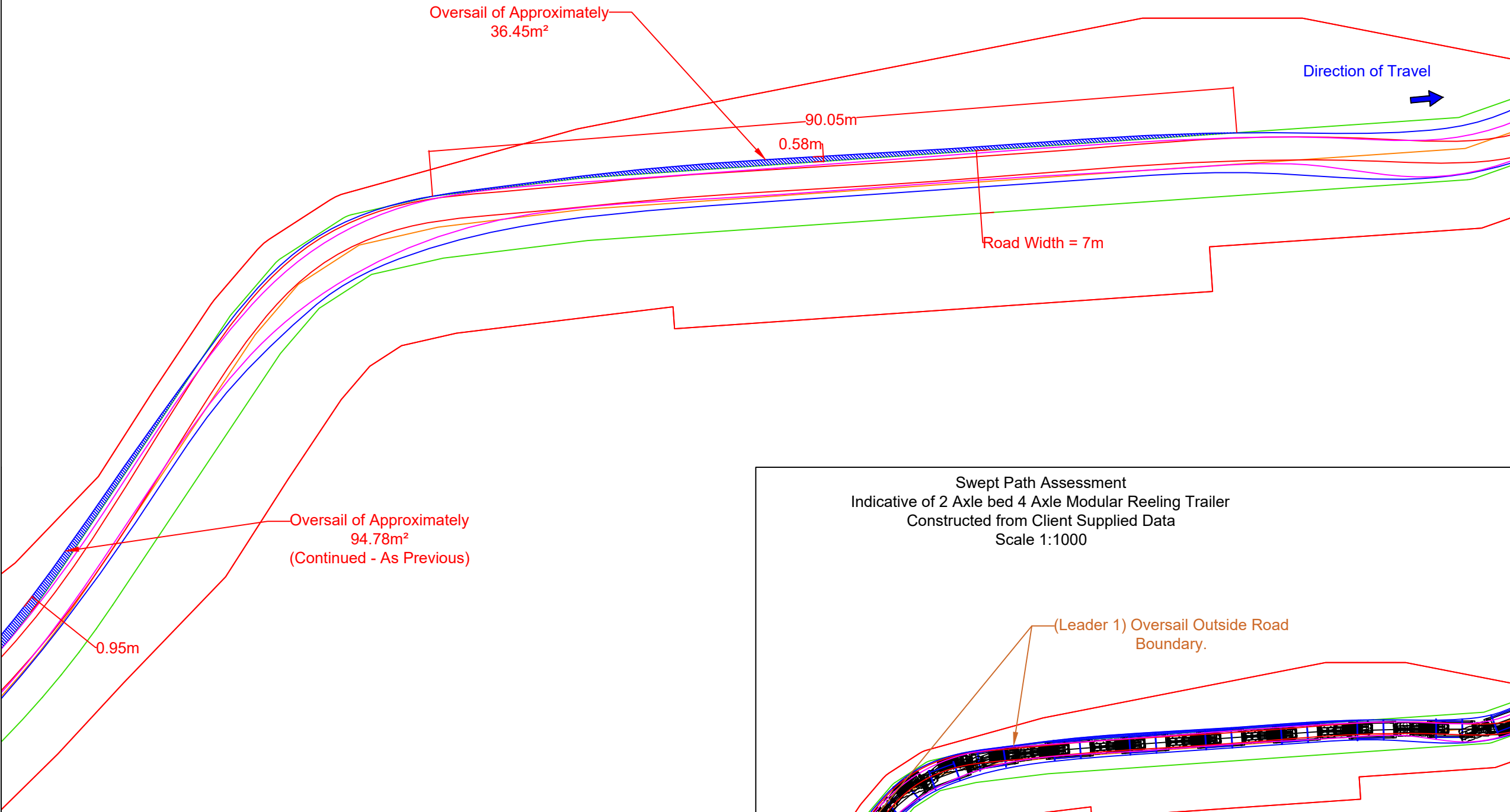
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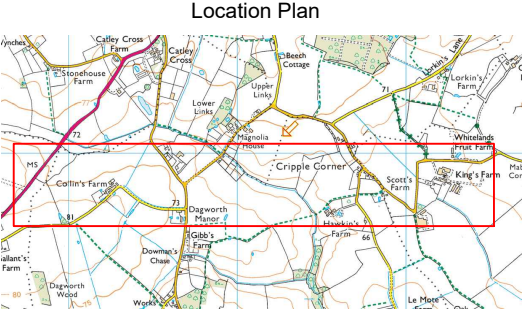
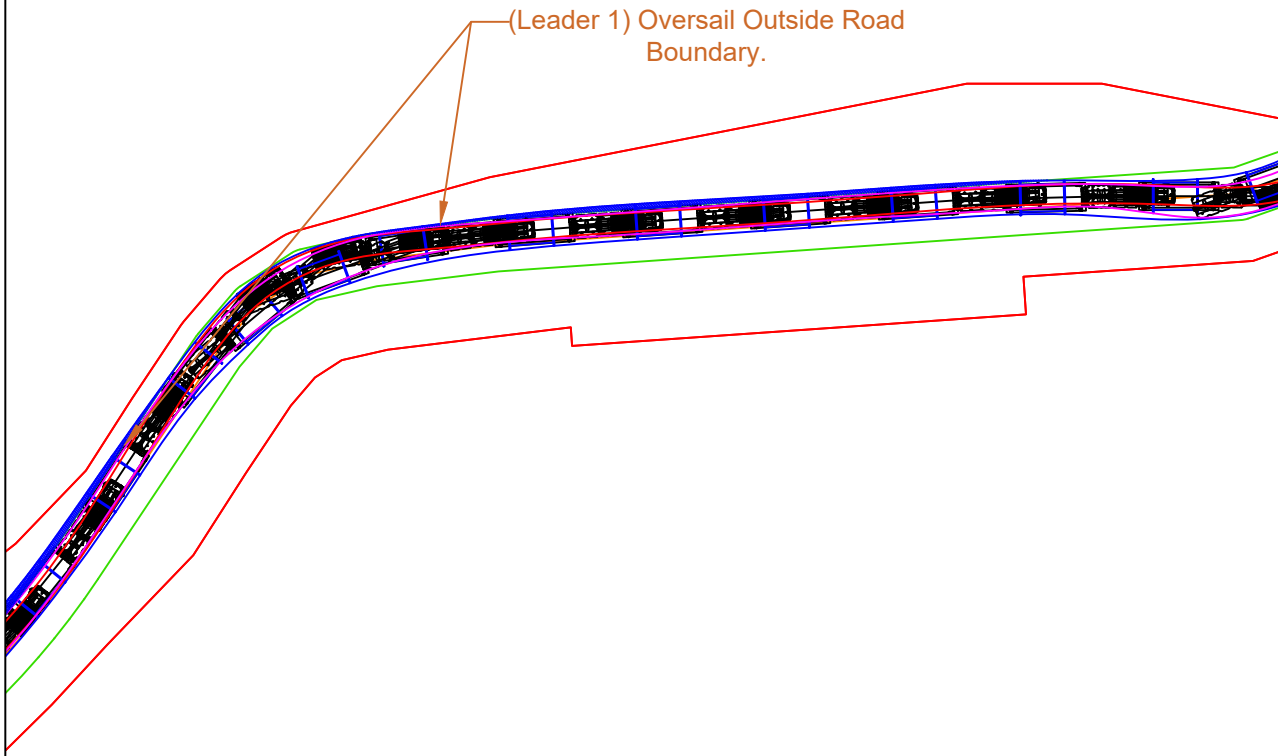
Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:500



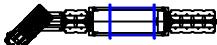


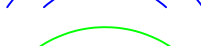




The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.95m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.



It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.

Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:1000



Legend:

-  2 bed 4 axle modular reeling trailer minimum turning arrangements Drawing ref. 21-1130.TC07
-  Extent of tractor track
-  Extent of trailer track
-  Extent of oversail
-  Extent of road boundary
-  Overrun and oversail beyond kerb
-  Overrun beyond kerb
-  Oversail beyond kerb

1		
0	22.11.23	Issued for comment
Rev.	Date	Amendments
Revisions		
Prepared by:		
<div><div><div>INDEPENDENT TRANSPORTATION WYNNS ENGINEERS</div></div><div>Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411</div></div>		
Independent Transportation Engineers		
Client:		
		
Project:		
Bramford to Twinstead		
Title:		
A131 Twinstead Cable Drum Access, Swept Path Assessment Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.		
Drawing status:		
Final Report		
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Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:500

Oversail of Approximately
35.32m²

89.75m

0.52m

Road Width = 7m

Direction of Travel



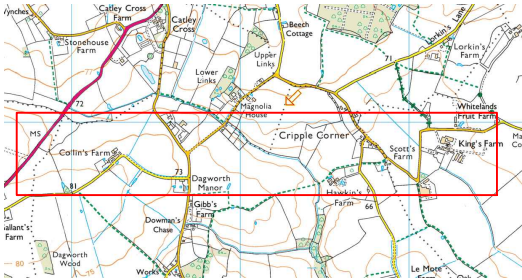
The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.52m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.

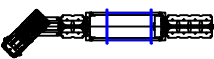
Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:1000

(Leader 1) Oversail Outside Road
Boundary.

Location Plan



Legend:



2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07



Extent of tractor track



Extent of trailer track



Extent of oversail



Extent of road boundary



Overrun and oversail beyond kerb



Overrun beyond kerb

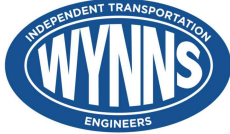


Oversail beyond kerb

1		
0	22.11.23	Issued for comment
Rev.	Date	Amendments

Revisions

Prepared by:



Shaftesbury House, 2 High Street,
Eccleshall, Stafford, ST21 6BZ
Tel: (01785) 850411

Independent Transportation Engineers

Client:

nationalgrid

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO -
Red Route), considerate of indicative 2 axle bed 4 axle
modular reeling trailer transporting 60 te cable drum.

Drawing status:

Final Report

Scale (A3):	Drawn by:	Checked by:
As shown	MTO	AP
Dwg. no:	Sheet:	Rev:
21-1030.SPA03	4 of 18	0

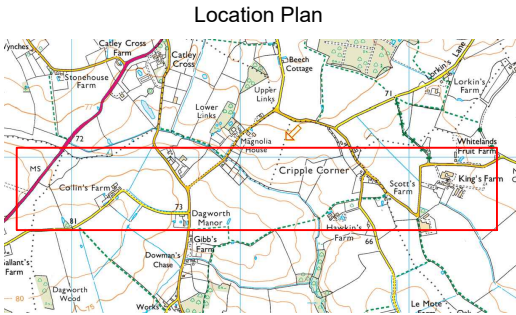
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Investigations\21-1030 Bramford to Twinstead\Swept Path
Analysis\SPA03 22.11.23

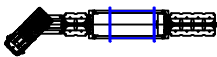


Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:500

Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:1000



Legend:



2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07



Extent of tractor track



Extent of trailer track



Extent of oversail



Extent of road boundary



Overrun and oversail beyond kerb



Overrun beyond kerb



Oversail beyond kerb

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Rev.	Date	Amendments

Revisions

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Shaftesbury House, 2 High Street,
Eccleshall, Stafford, ST21 6BZ
Tel: (01785) 850411

Independent Transportation Engineers

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nationalgrid

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.

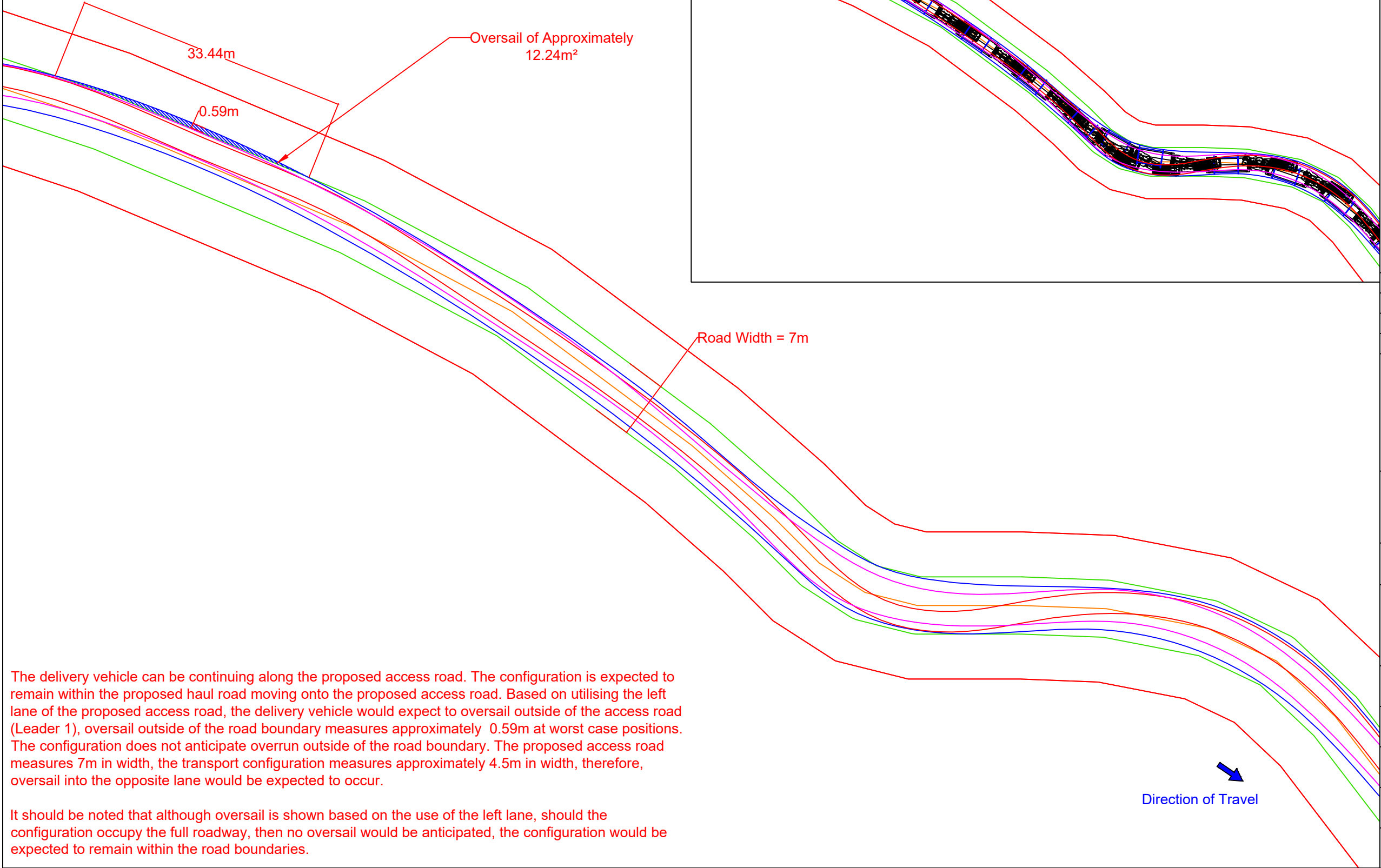
Drawing status:

Final Report

Scale (A3):	Drawn by:	Checked by:
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21-1030.SPA03	5 of 18	0

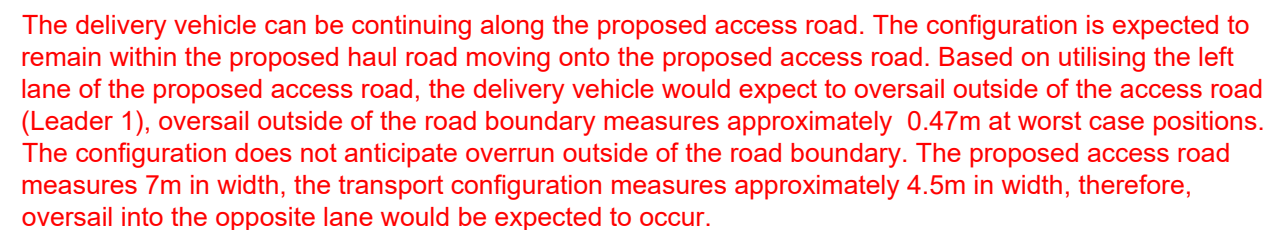
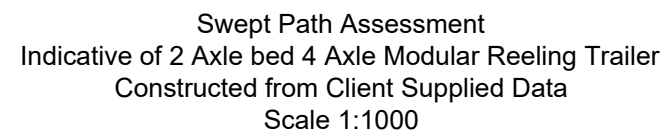
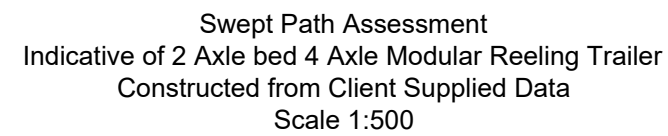
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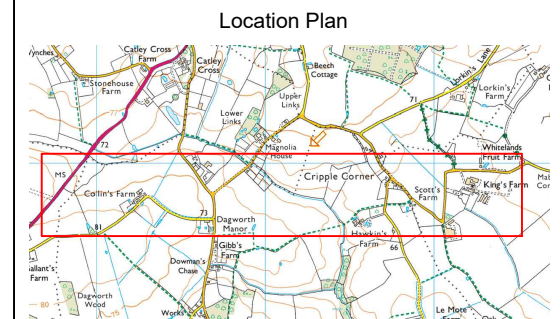


The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.59m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

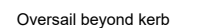
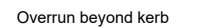
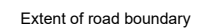
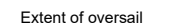
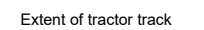
It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.



—Oversail of Approximately
27.31m²



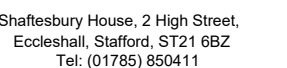
2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07



1		
0	22.11.23	Issued for comment
Rev.	Date	Amendments

Revisions

Prepared by:



Independent Transportation Engineers

Client:



Project:

Bramford to Twinstead

Title:

Title: A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO -
Red Route), considerate of indicative 2 axle bed 4 axle
modular reeling trailer transporting 60 te cable drum.

Drawing status:

Final Report

Scale (A3): As shown	Drawn by: MTO	Checked by: AP
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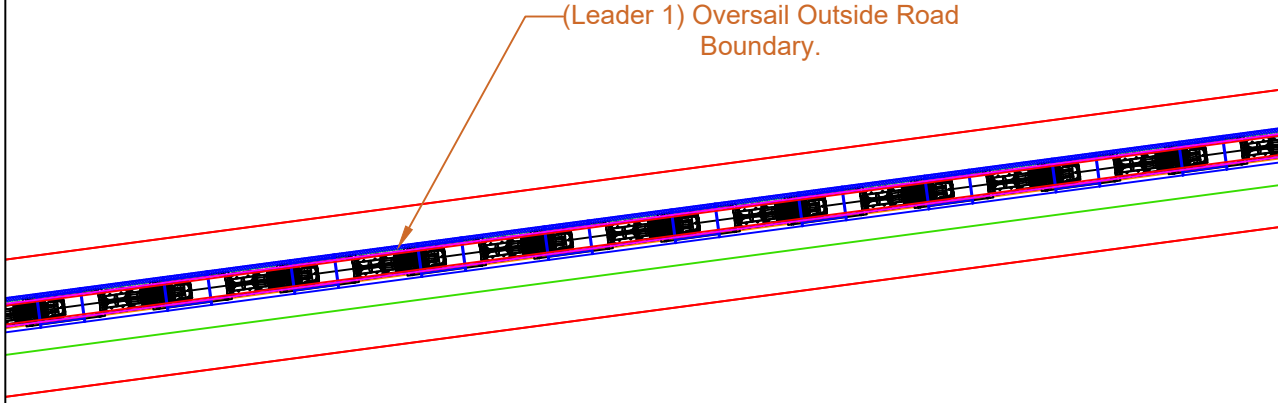


Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:500

The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.46m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.

Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:1000



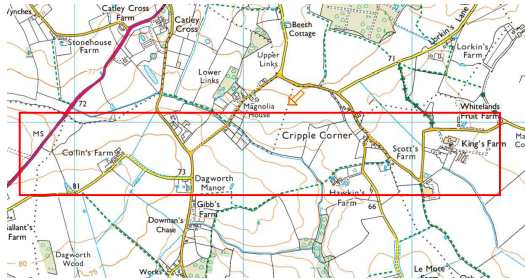
Oversail of Approximately
184.32m²

0.46m

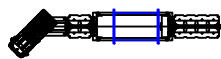
Road Width = 7m

Direction of Travel

Location Plan



Legend:



2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07



Extent of tractor track



Extent of trailer track



Extent of oversail



Extent of road boundary





Overrun and oversail beyond kerb



Overrun beyond kerb



Oversail beyond kerb

1		
0	22.11.23	Issued for comment
Rev.	Date	Amendments
Revisions		
Prepared by:		
<div><div><div>INDEPENDENT TRANSPORTATION WYNNS ENGINEERS</div></div><div>Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411</div></div>		
Independent Transportation Engineers		
Client:		
		
Project:		
Bramford to Twinstead		
Title:		
A131 Twinstead Cable Drum Access, Swept Path Assessment Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.		
Drawing status:		
Final Report		
Scale (A3):	Drawn by:	Checked by:
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21-1030.SPA03	8 of 18	0

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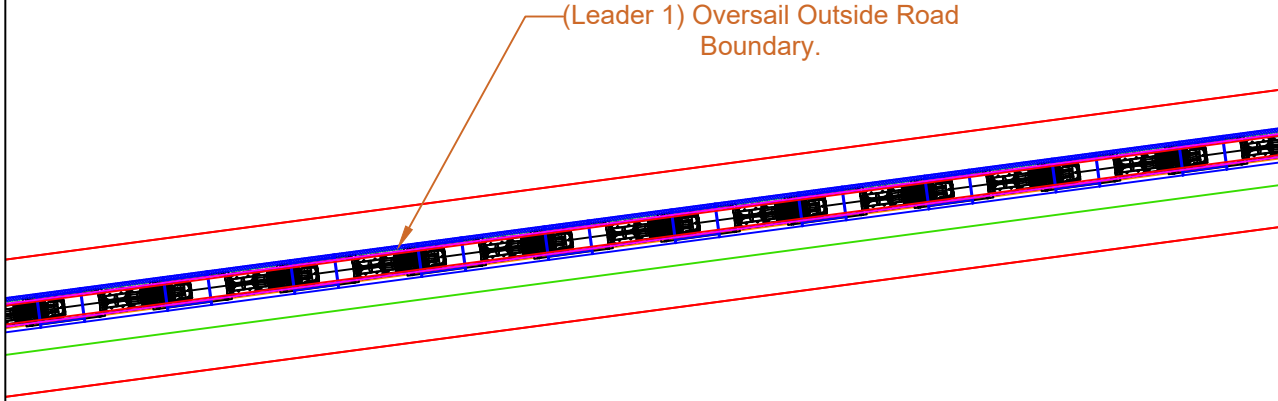


Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:500

The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.46m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.

Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:1000



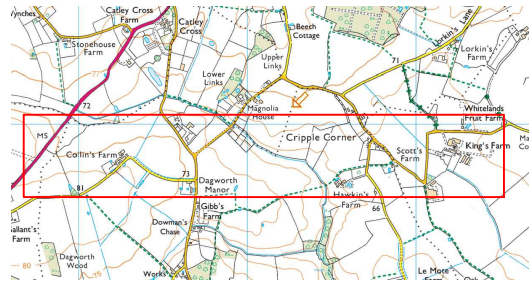
Oversail of Approximately
184.32m²

0.46m

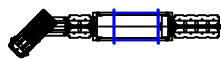
Road Width = 7m

Direction of Travel

Location Plan



Legend:



2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07



Extent of tractor track



Extent of trailer track



Extent of oversail



Extent of road boundary



Overrun and oversail beyond kerb



Overrun beyond kerb



Oversail beyond kerb

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Rev.	Date	Amendments

Revisions

Prepared by:



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Eccleshall, Stafford, ST21 6BZ
Tel: (01785) 850411

Independent Transportation Engineers

Client:

nationalgrid

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO -
Red Route), considerate of indicative 2 axle bed 4 axle
modular reeling trailer transporting 60 te cable drum.

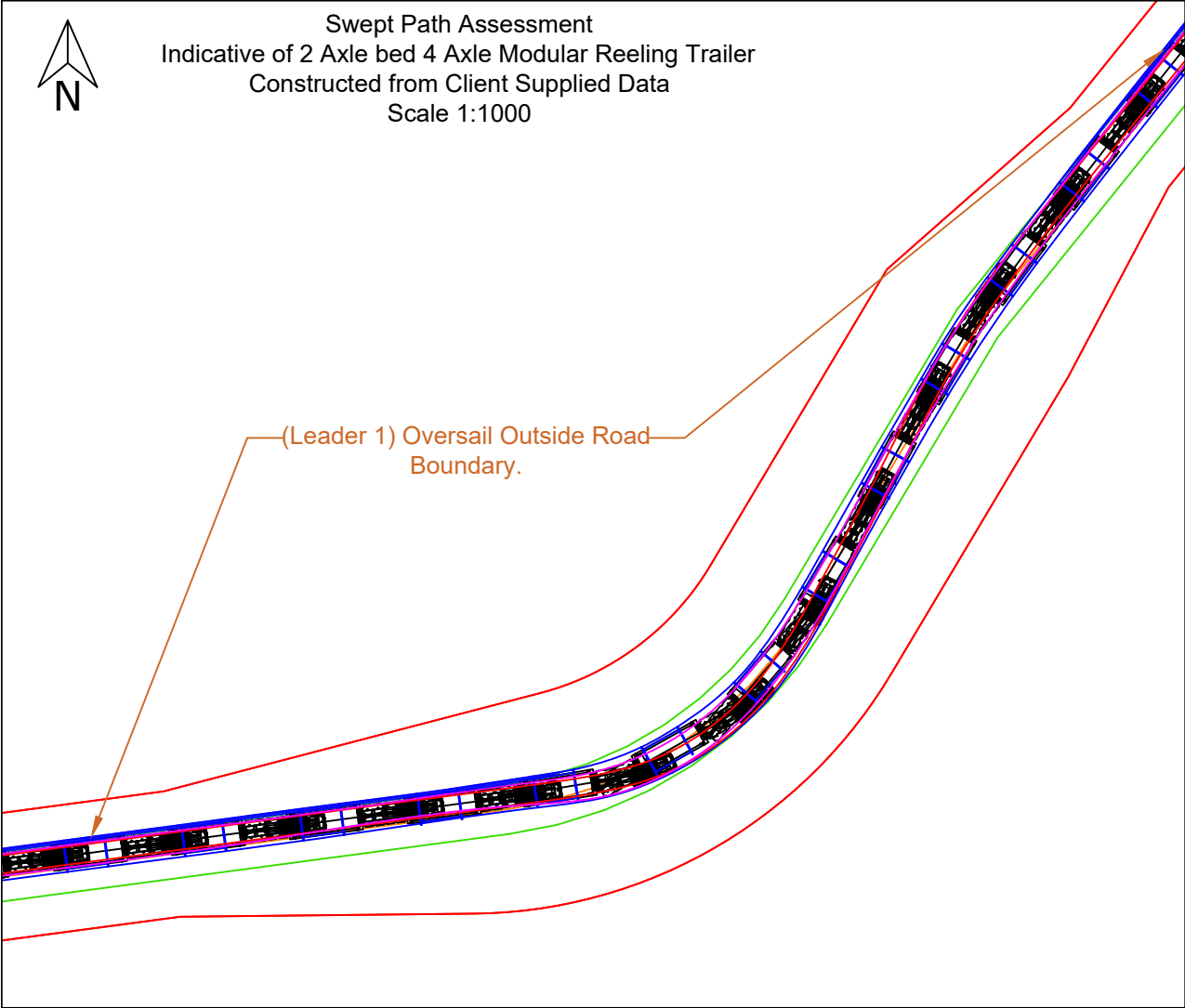
Drawing status:

Final Report

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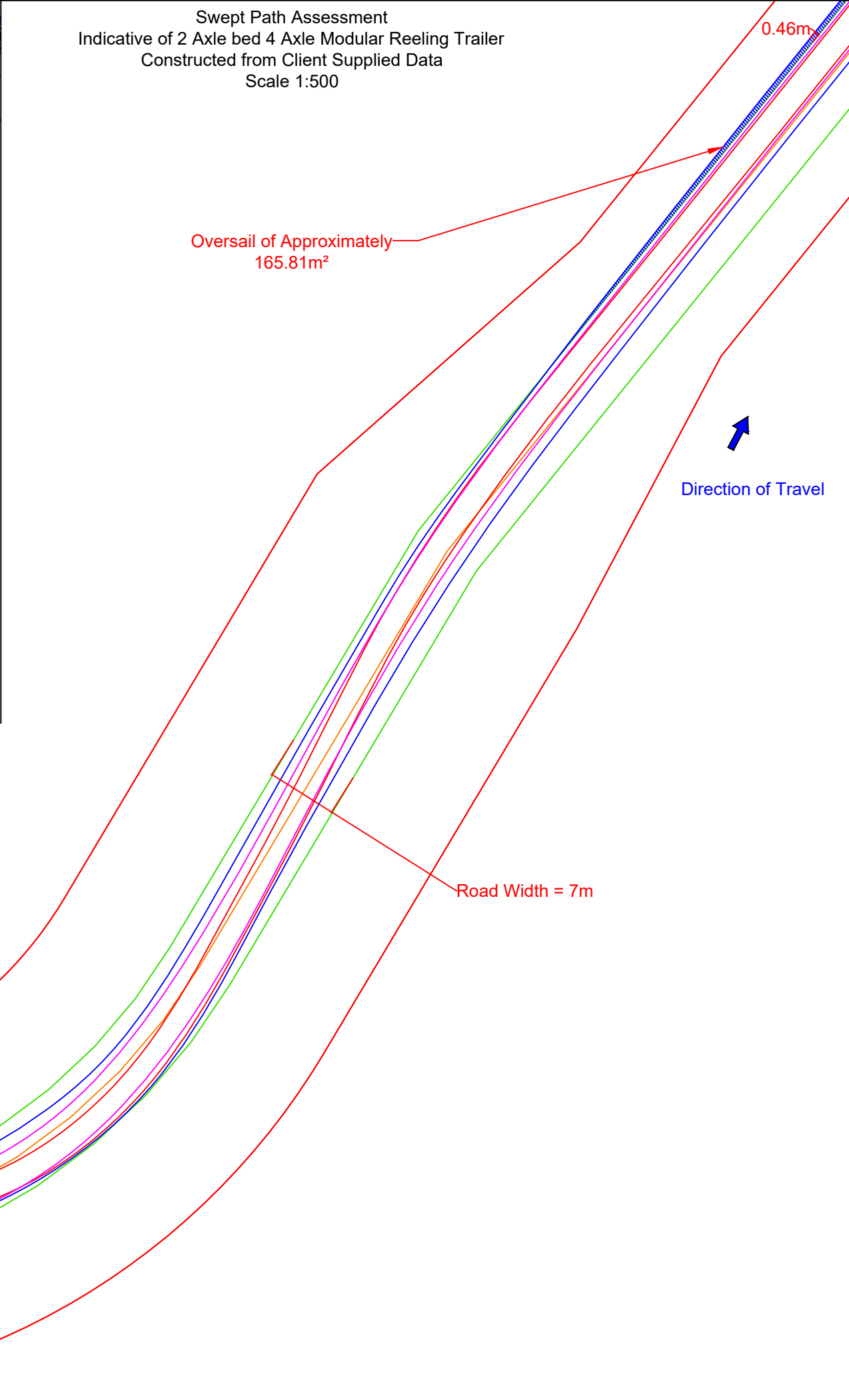
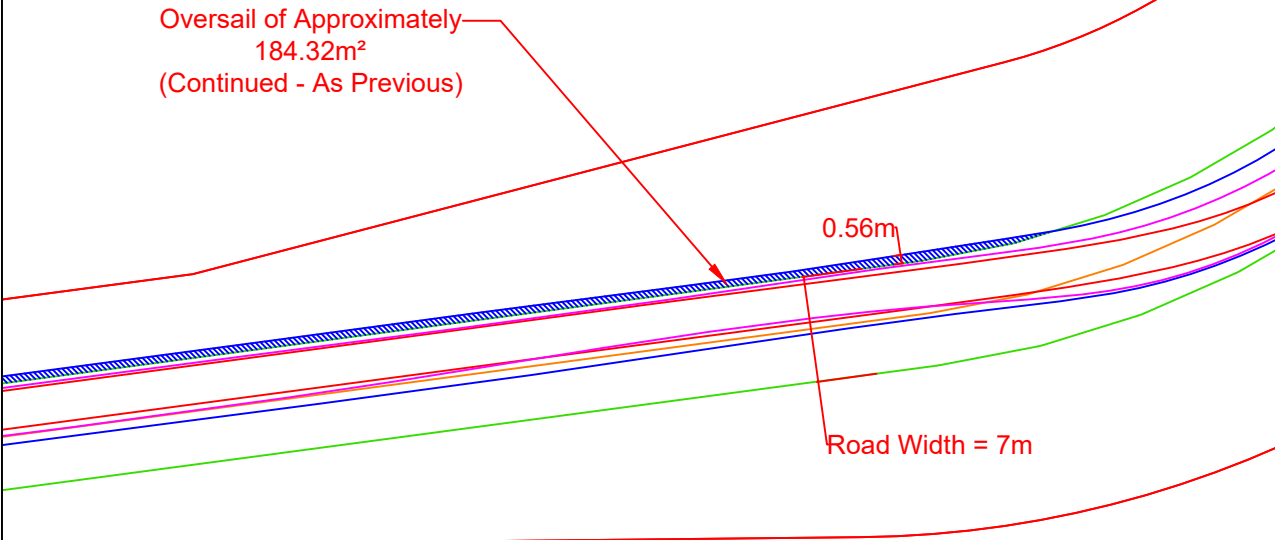
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Analysis\SPA03 22.11.23



The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.56m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.



Location Plan

Legend:

- 2 bed 4 axle modular reeling trailer minimum turning arrangements Drawing ref. 21-1130.TC07
- Extent of tractor track
- Extent of trailer track
- Extent of oversail
- Extent of road boundary
- Overrun and oversail beyond kerb
- Overrun beyond kerb
- Oversail beyond kerb

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0	23.11.23	Issued for comment
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Revisions

Prepared by:

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Independent Transportation Engineers

Client:

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.

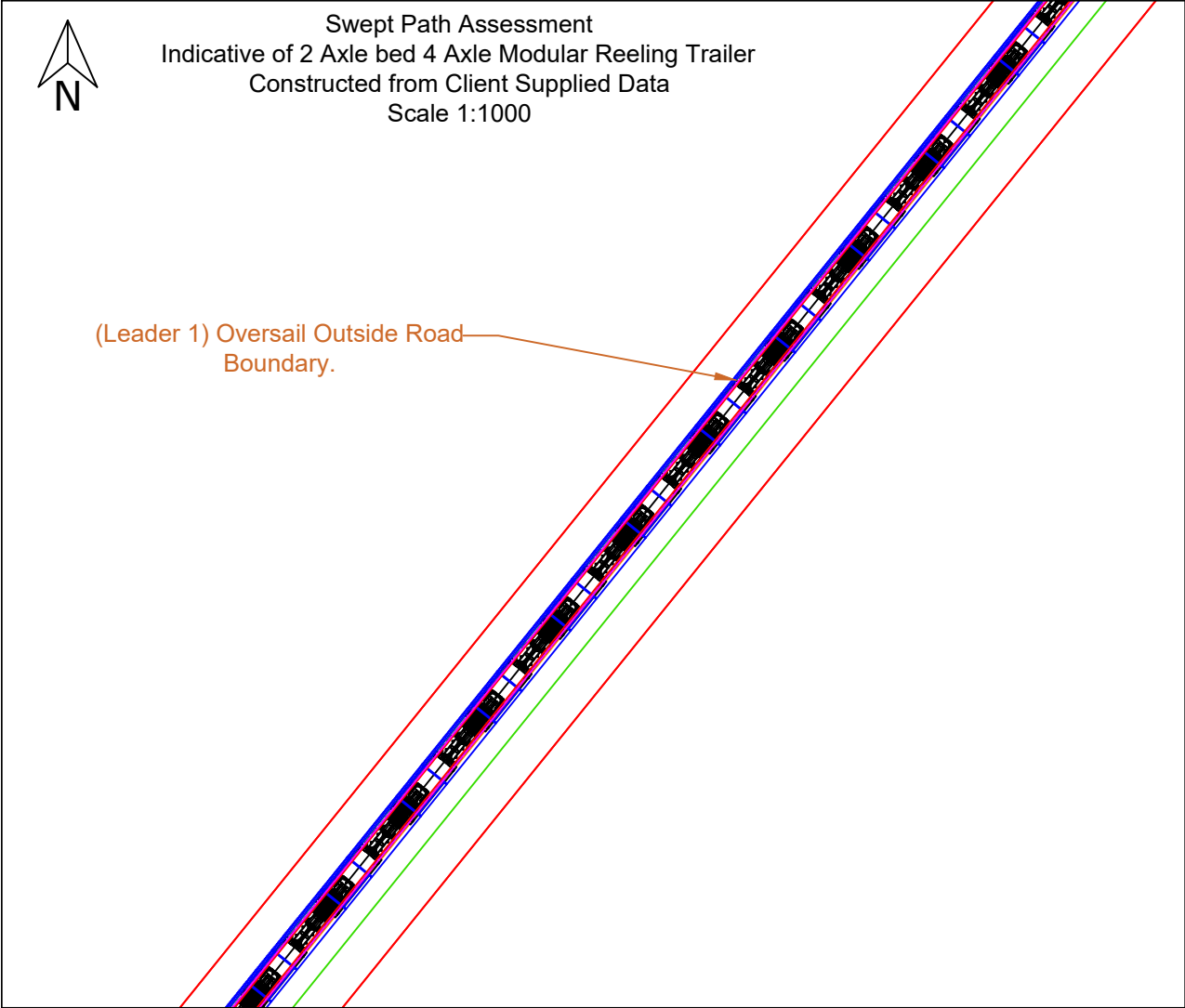
Drawing status:

Final Report

Scale (A3):	Drawn by:	Checked by:
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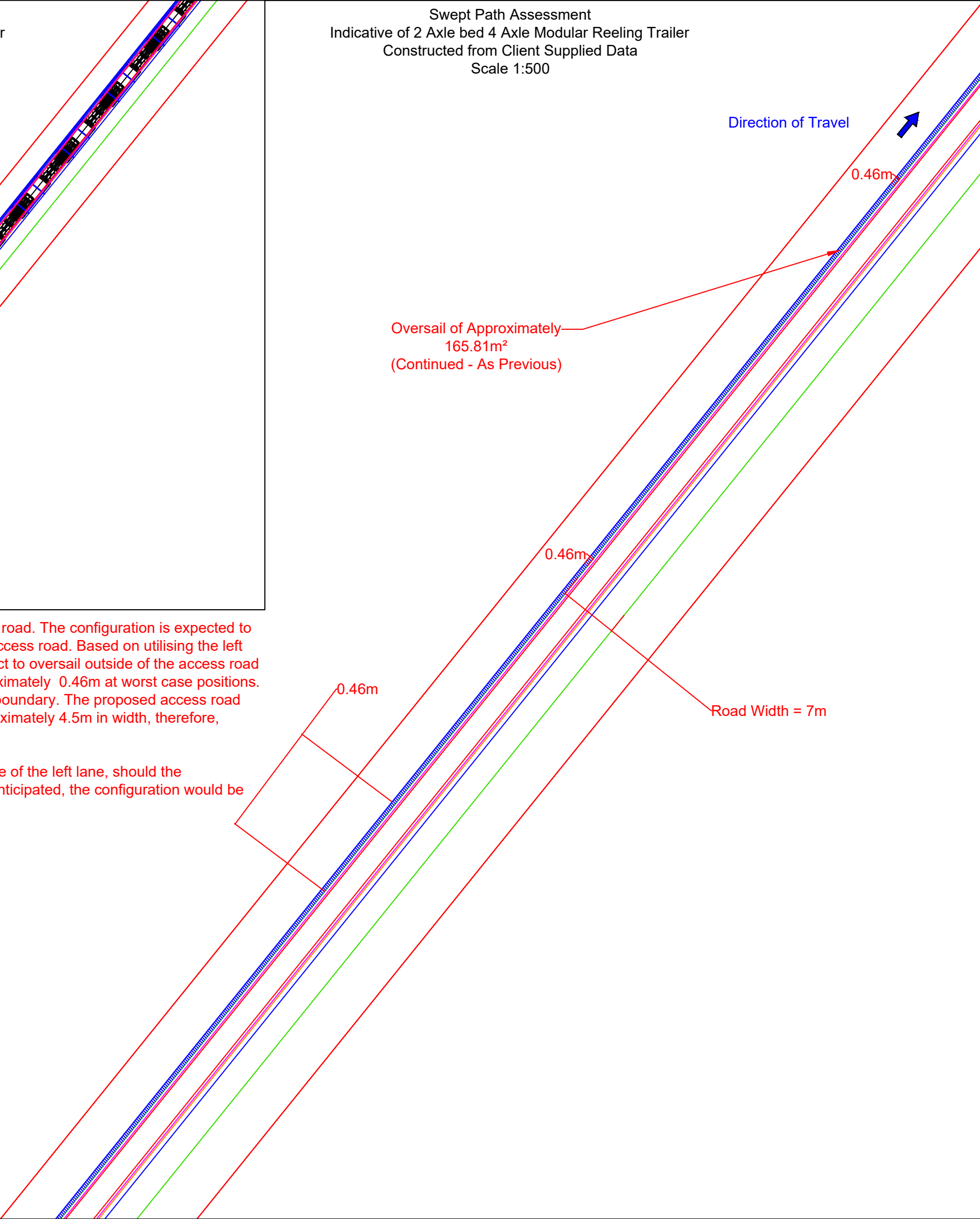
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The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.46m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.



Location Plan

Legend:

- 2 bed 4 axle modular reeling trailer minimum turning arrangements Drawing ref. 21-1130.TC07
- Extent of tractor track
- Extent of trailer track
- Extent of oversail
- Extent of road boundary
- Overrun and oversail beyond kerb
- Overrun beyond kerb
- Oversail beyond kerb

Rev.	Date	Amendments
1		
0	23.11.23	Issued for comment

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Prepared by:

Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411
Independent Transportation Engineers

Client:

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.

Drawing status:

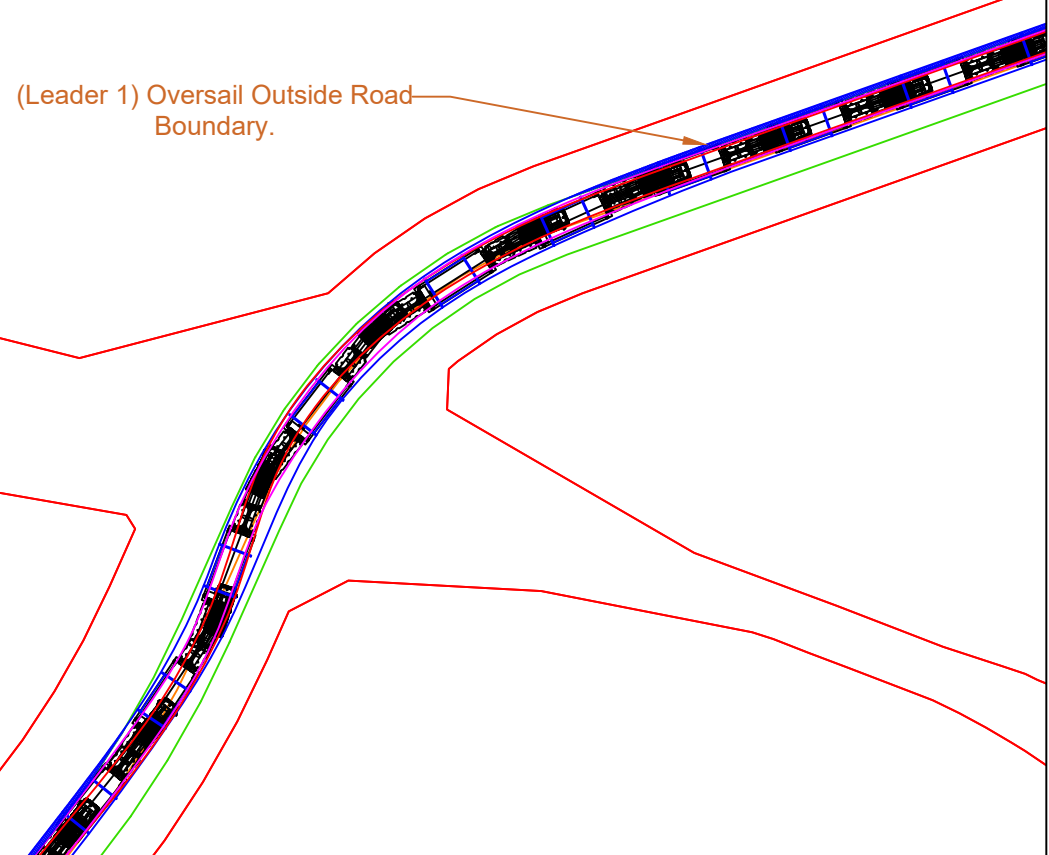
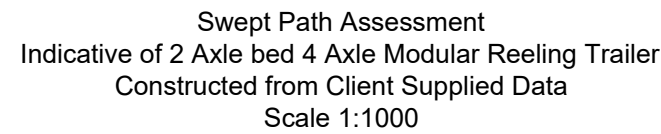
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Oversail of Approximately-
165.81m²
(Continued - As Previous)

The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.52m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

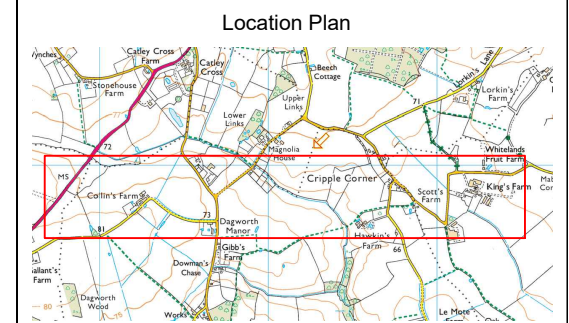
It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.

Oversail of Approximately-
204.11m²

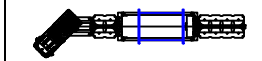
Direction of Travel

0.52mV

Road Width = 7m



Legend:



2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07



Extent of tractor track



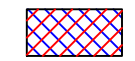
Extent of trailer track



Extent of oversail



Extent of road boundary



Overrun and oversail beyond kerb



Overrun beyond kerb

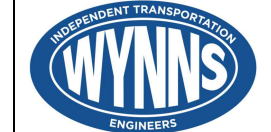


Oversail beyond kerb

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0	23.11.23	Issued for comment
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Prepared by:



Independent Transportation Engineers

Client:



Project:

Bramford to Twinstead

Title:

Title: A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO -
Red Route), considerate of indicative 2 axle bed 4 axle
modular reeling trailer transporting 60 te cable drum.

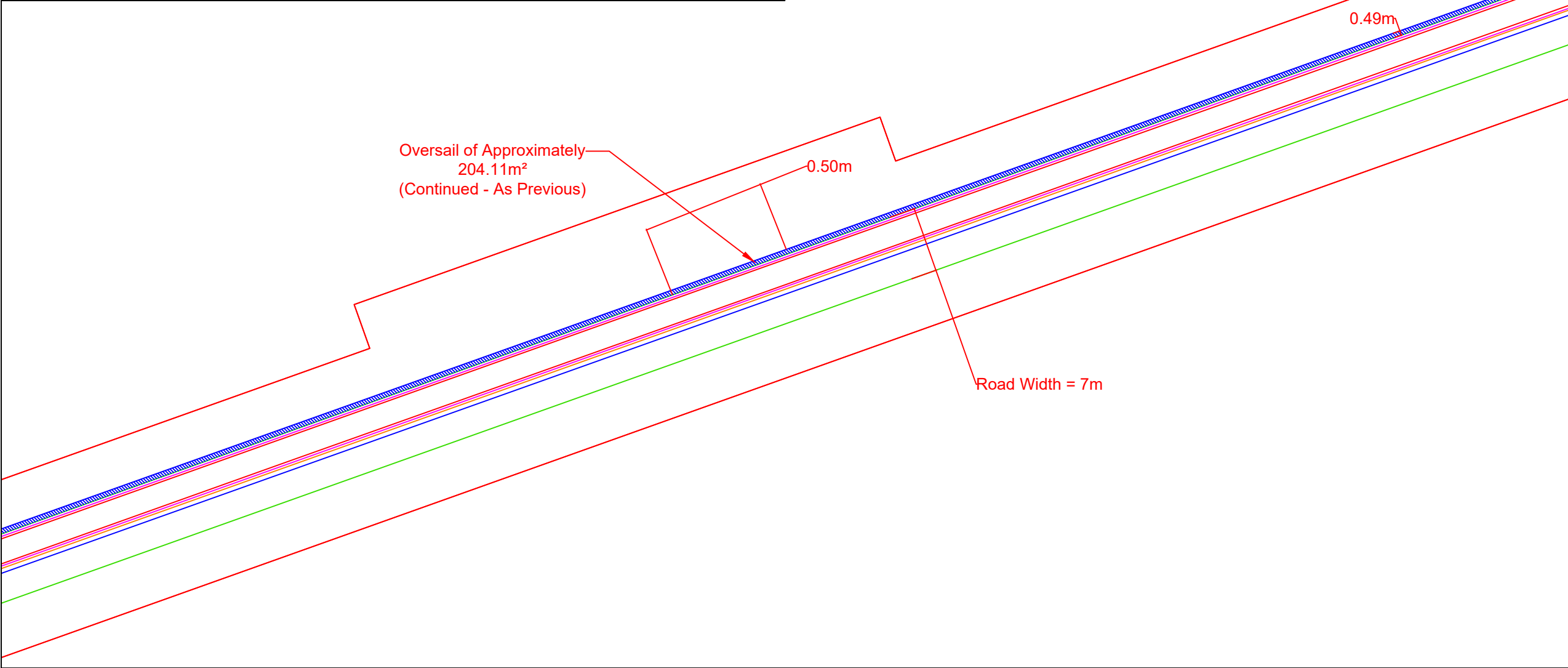
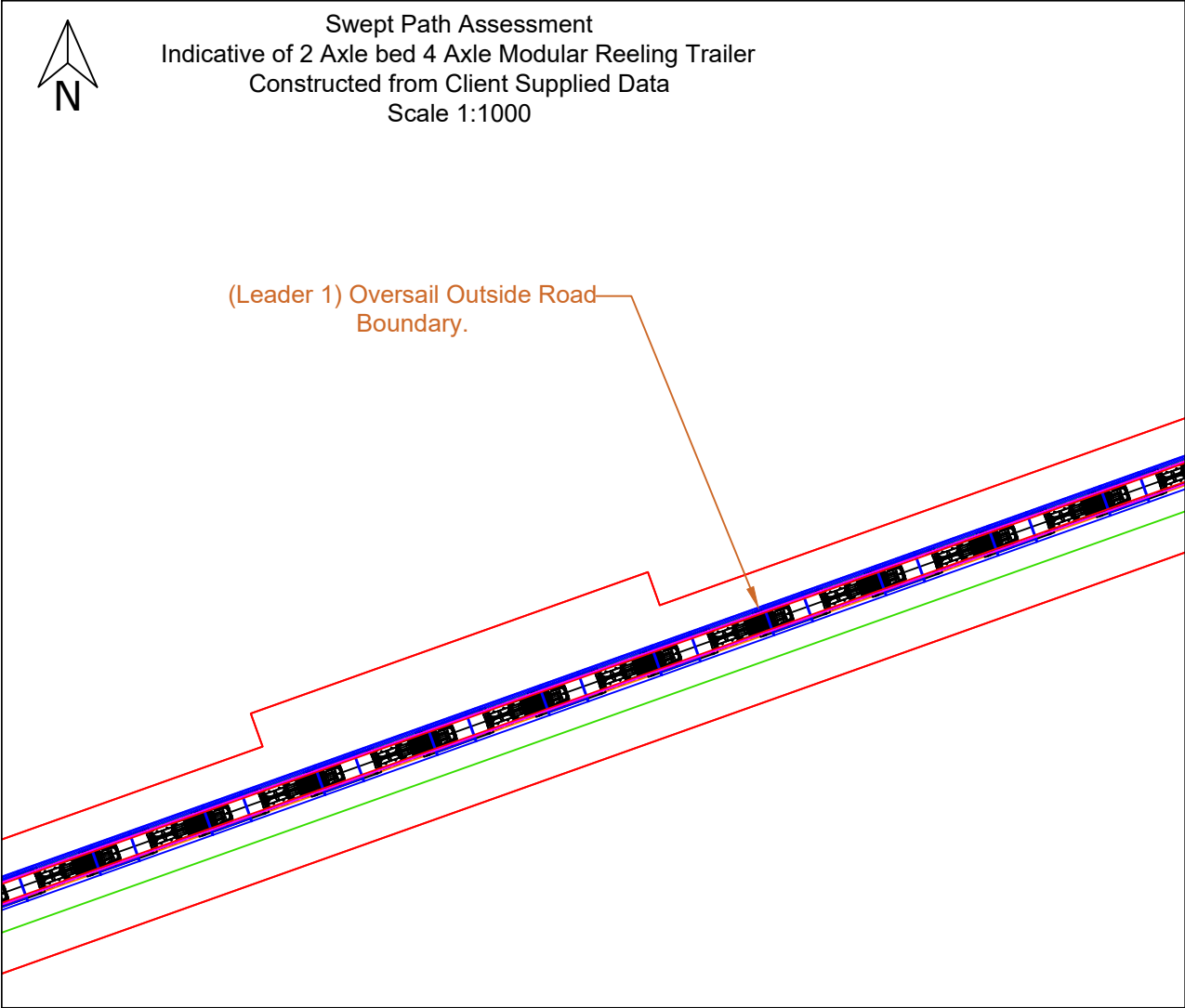
Drawing status:

Final Report

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Location Plan

Legend:

- 2 bed 4 axle modular reeling trailer minimum turning arrangements Drawing ref. 21-1130.TC07
- Extent of tractor track
- Extent of trailer track
- Extent of oversail
- Extent of road boundary
- Overrun and oversail beyond kerb
- Overrun beyond kerb
- Oversail beyond kerb

1		
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Rev.	Date	Amendments

Revisions

Prepared by:

Shaftesbury House, 2 High Street,
Eccleshall, Stafford, ST21 6BZ
Tel: (01785) 850411

Independent Transportation Engineers

Client:

nationalgrid

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.

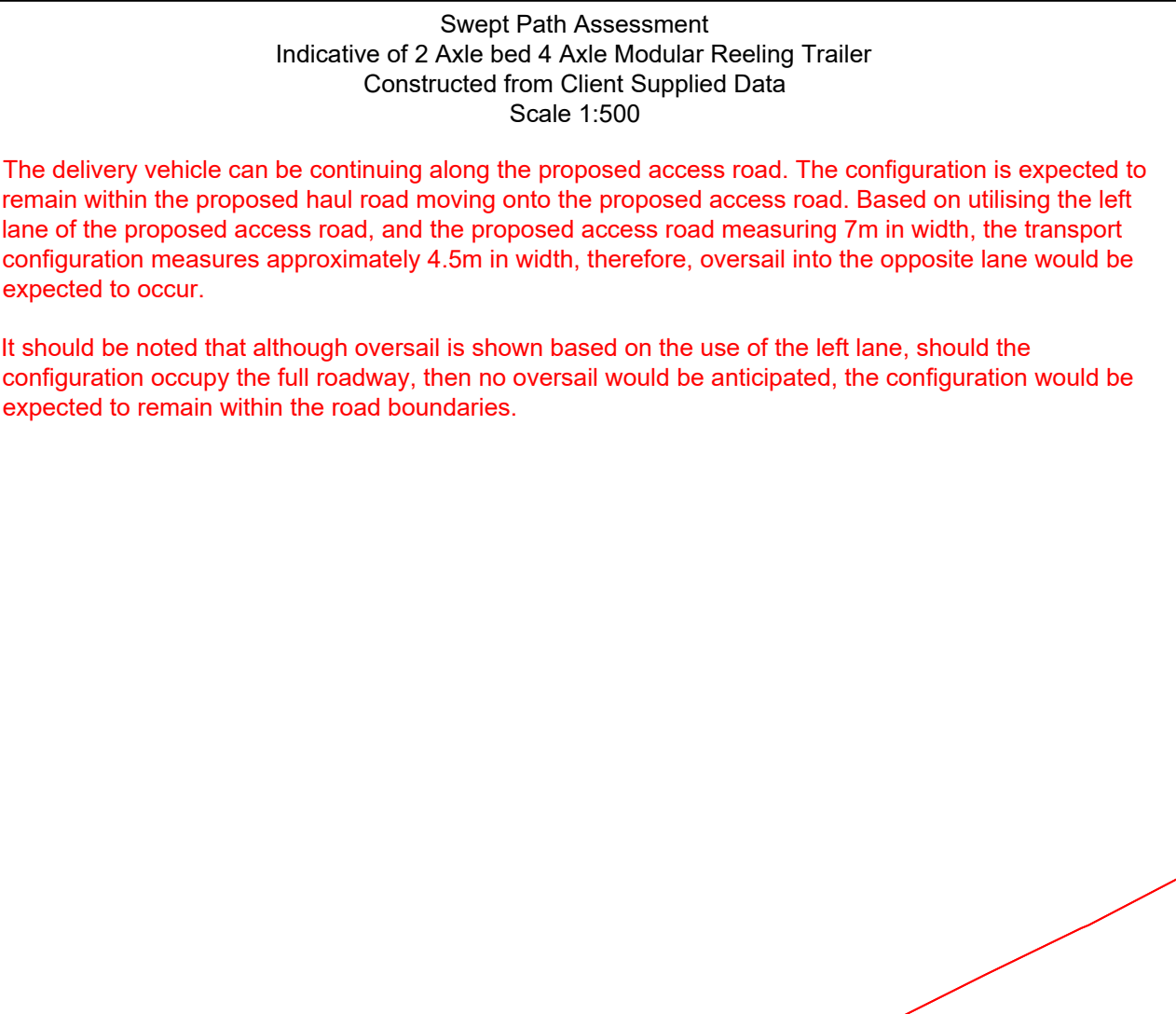
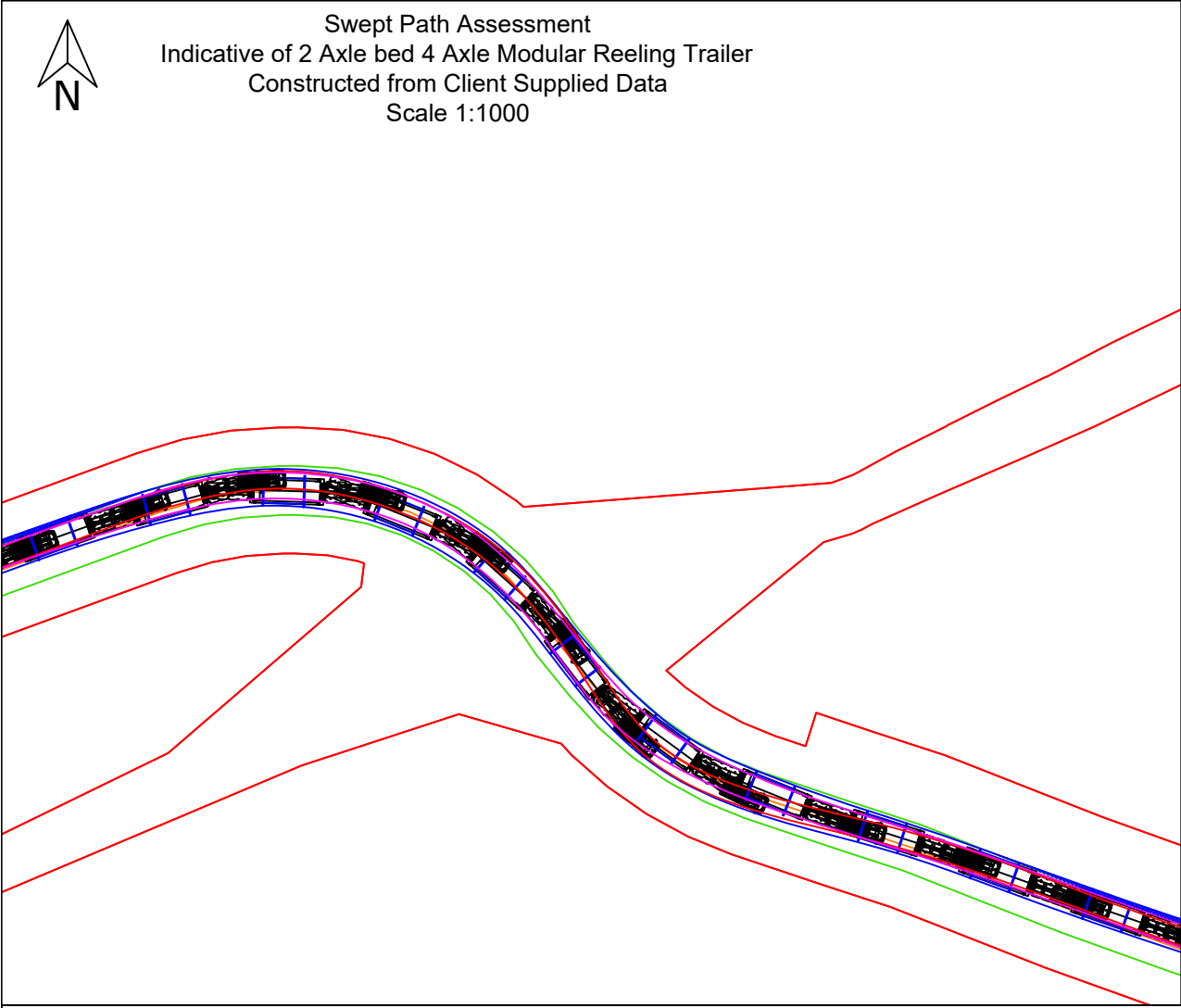
Drawing status:

Final Report

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21-1030.SPA03	13 of 18	0



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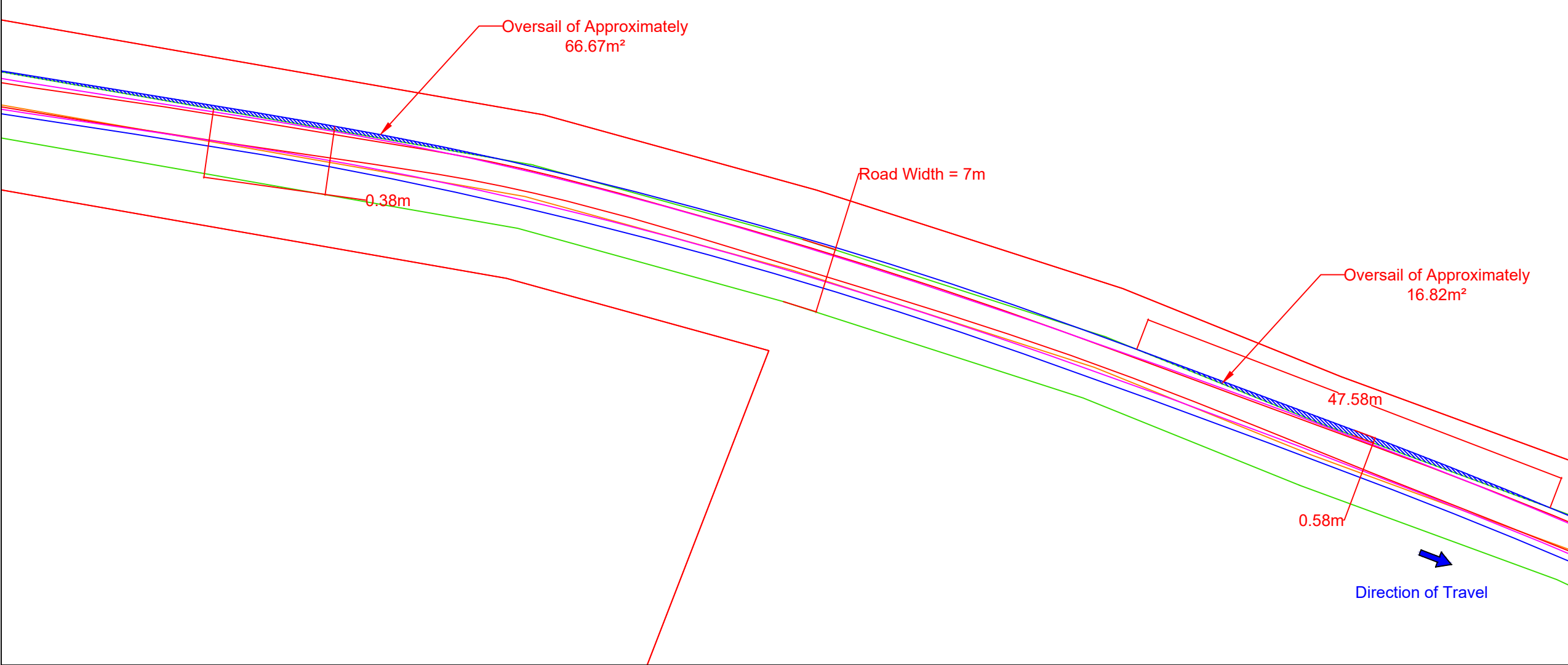
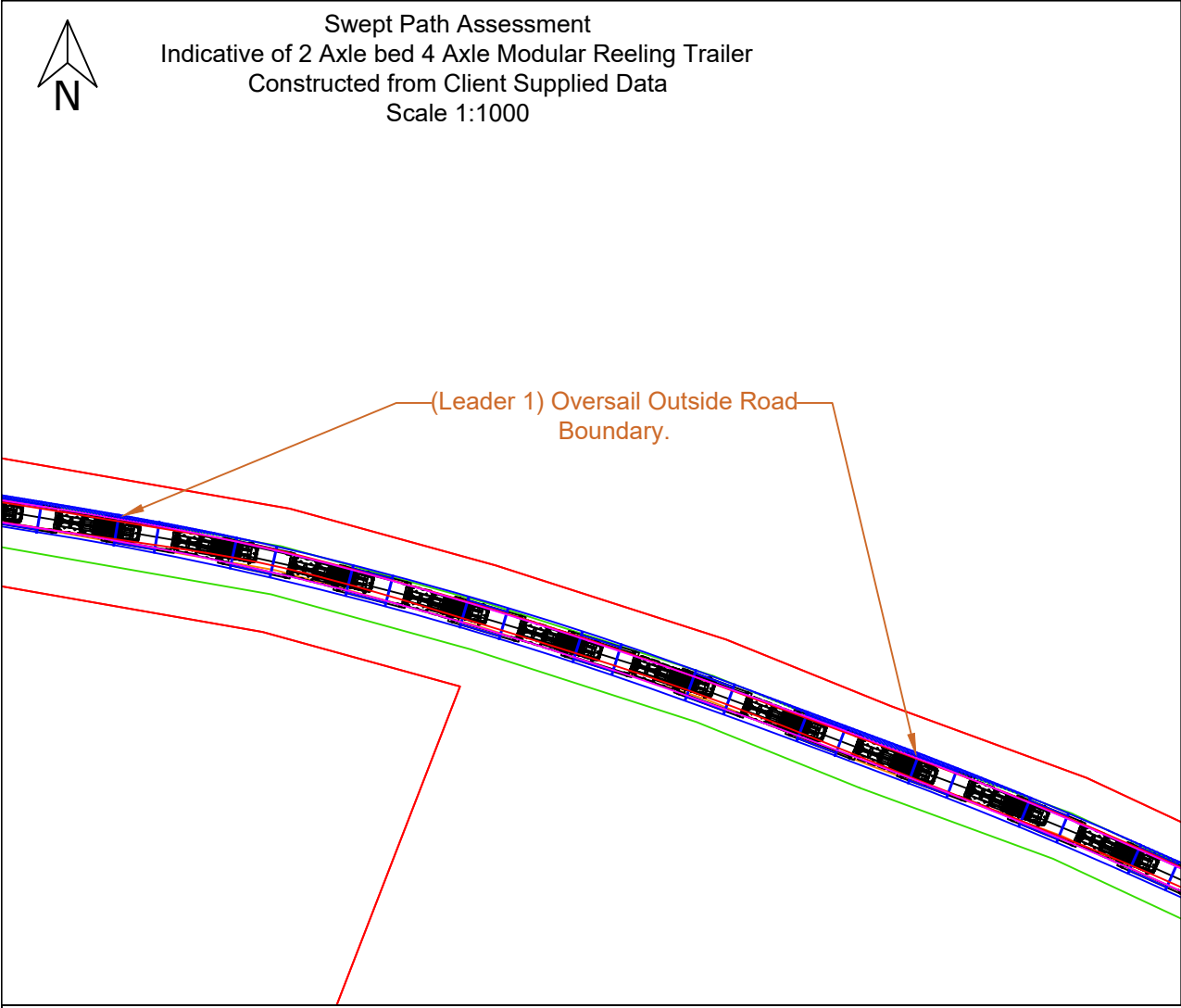
P:\Clients\Existing Clients\National Grid Company\Proposed New sites Investigations\21-1030 Bramford to Twinstead\Swept Path Analysis\SPA03 22.11.23



Location Plan

- Legend:
- 2 bed 4 axle modular reeling trailer minimum turning arrangements Drawing ref. 21-1130.TC07
 - Extent of tractor track
 - Extent of trailer track
 - Extent of oversail
 - Extent of road boundary
 - Overrun and oversail beyond kerb
 - Overrun beyond kerb
 - Oversail beyond kerb

1		
0	23.11.23	Issued for comment
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Revisions		
Prepared by:		
<div><div><div>INDEPENDENT TRANSPORTATION WYNNS ENGINEERS</div></div><div>Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411</div></div>		
Independent Transportation Engineers		
Client:		
		
Project:		
Bramford to Twinstead		
Title:		
A131 Twinstead Cable Drum Access, Swept Path Assessment Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.		
Drawing status:		
Final Report		
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Location Plan

- Legend:
- 2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07
 - Extent of tractor track
 - Extent of trailer track
 - Extent of oversail
 - Extent of road boundary
 - Overrun and oversail beyond kerb
 - Overrun beyond kerb
 - Oversail beyond kerb

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Rev.	Date	Amendments

Revisions

Prepared by:

Shaftesbury House, 2 High Street,
Eccleshall, Stafford, ST21 6BZ
Tel: (01785) 850411

Independent Transportation Engineers

Client:

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.

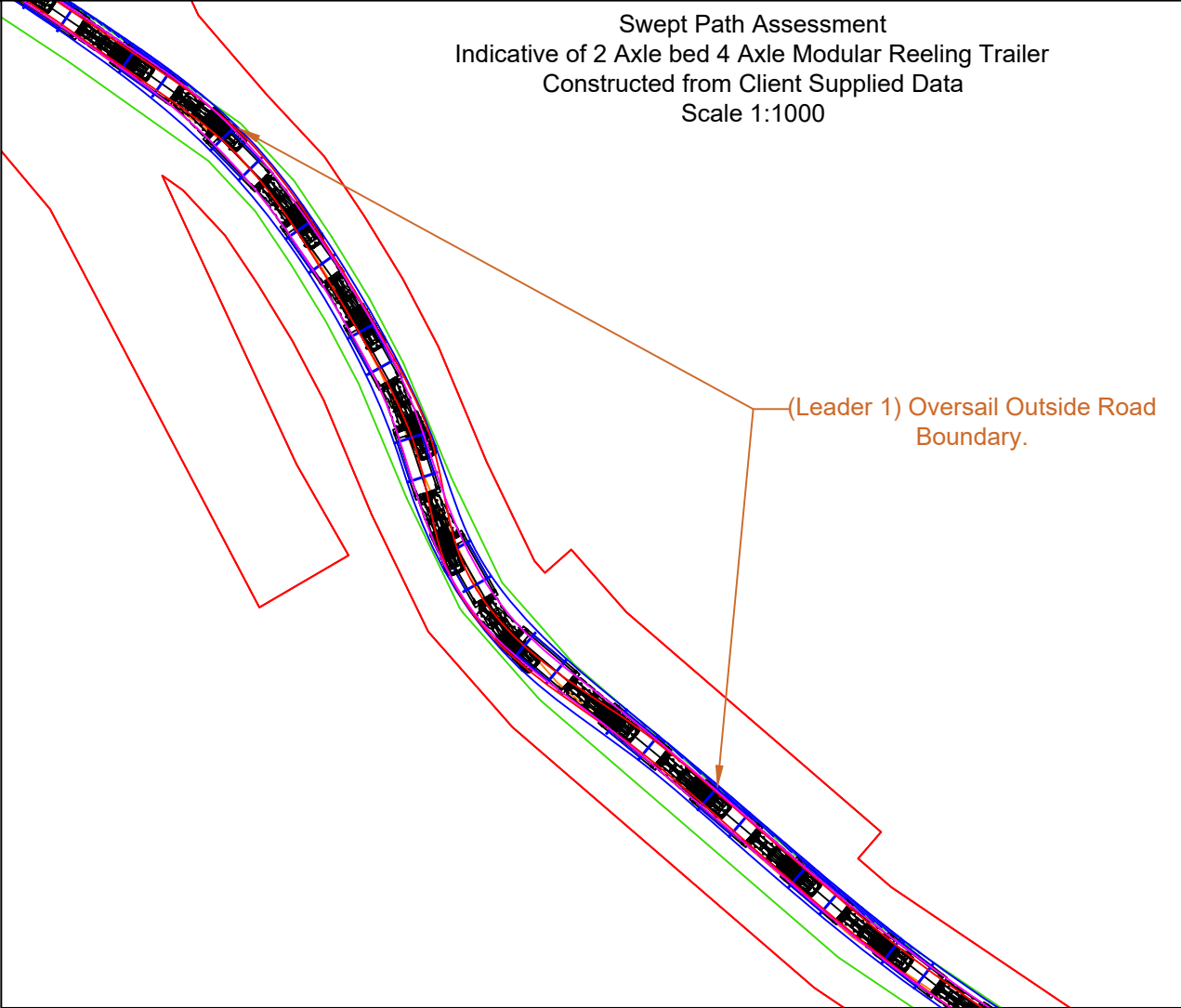
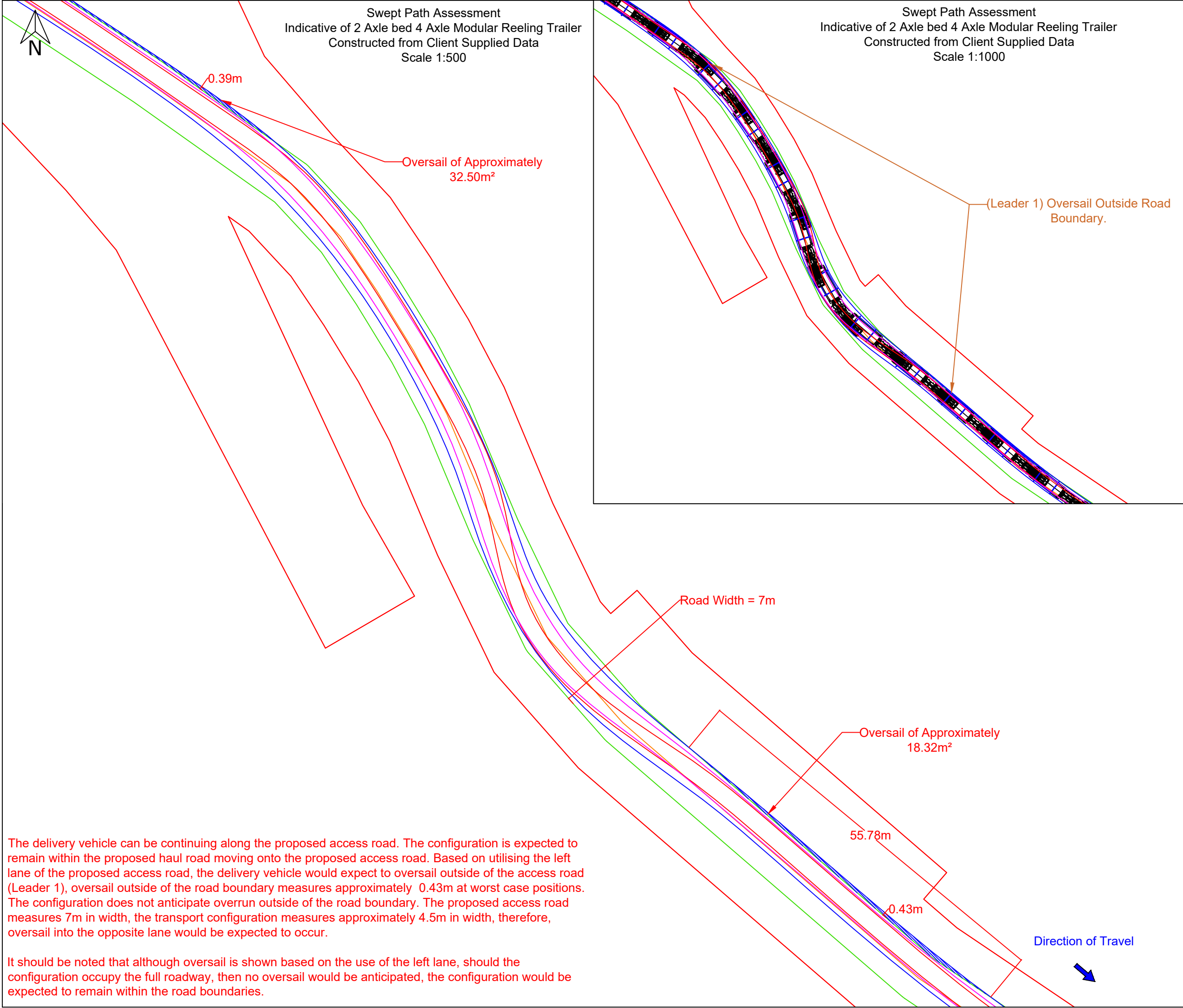
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Location Plan

Legend:

2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07

Extent of tractor track

Extent of trailer track

Extent of oversail

Extent of road boundary

Overrun and oversail beyond kerb

Overrun beyond kerb

Oversail beyond kerb

1		
0	23.11.23	Issued for comment
Rev.	Date	Amendments

Revisions

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Project:

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A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.

Drawing status:

Final Report

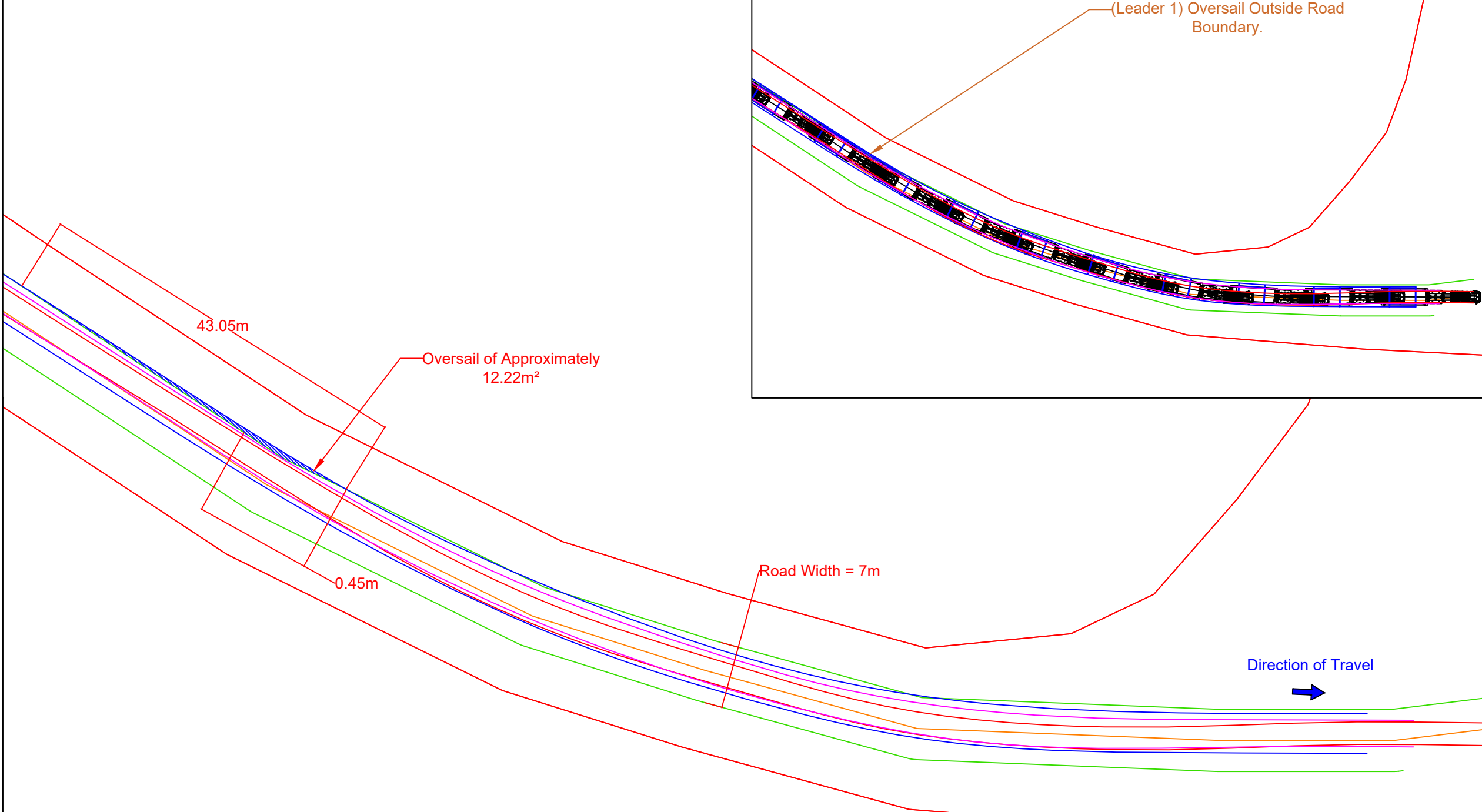
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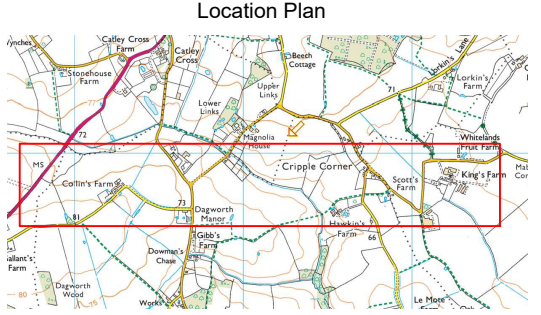
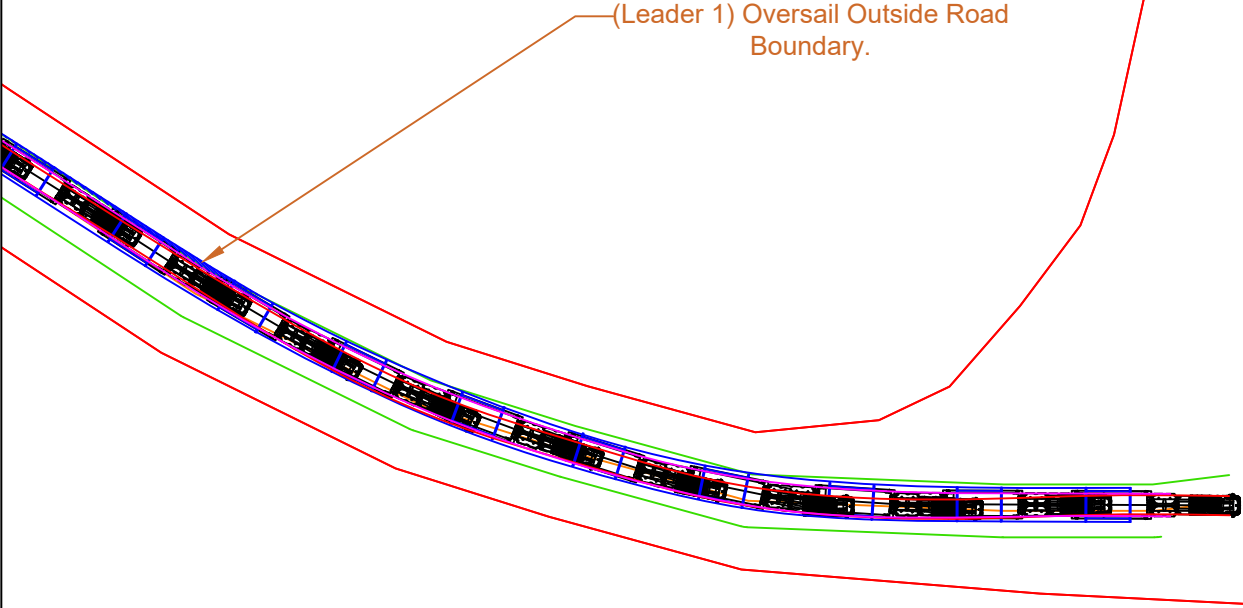
Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:500



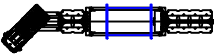
The delivery vehicle can be continuing along the proposed access road. The configuration is expected to remain within the proposed haul road moving onto the proposed access road. Based on utilising the left lane of the proposed access road, the delivery vehicle would expect to oversail outside of the access road (Leader 1), oversail outside of the road boundary measures approximately 0.45m at worst case positions. The configuration does not anticipate overrun outside of the road boundary. The proposed access road measures 7m in width, the transport configuration measures approximately 4.5m in width, therefore, oversail into the opposite lane would be expected to occur.

It should be noted that although oversail is shown based on the use of the left lane, should the configuration occupy the full roadway, then no oversail would be anticipated, the configuration would be expected to remain within the road boundaries.


Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:1000




Legend:




2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07




Extent of tractor track




Extent of trailer track



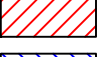
Extent of oversail




Extent of road boundary





Overrun and oversail beyond kerb



Overrun beyond kerb



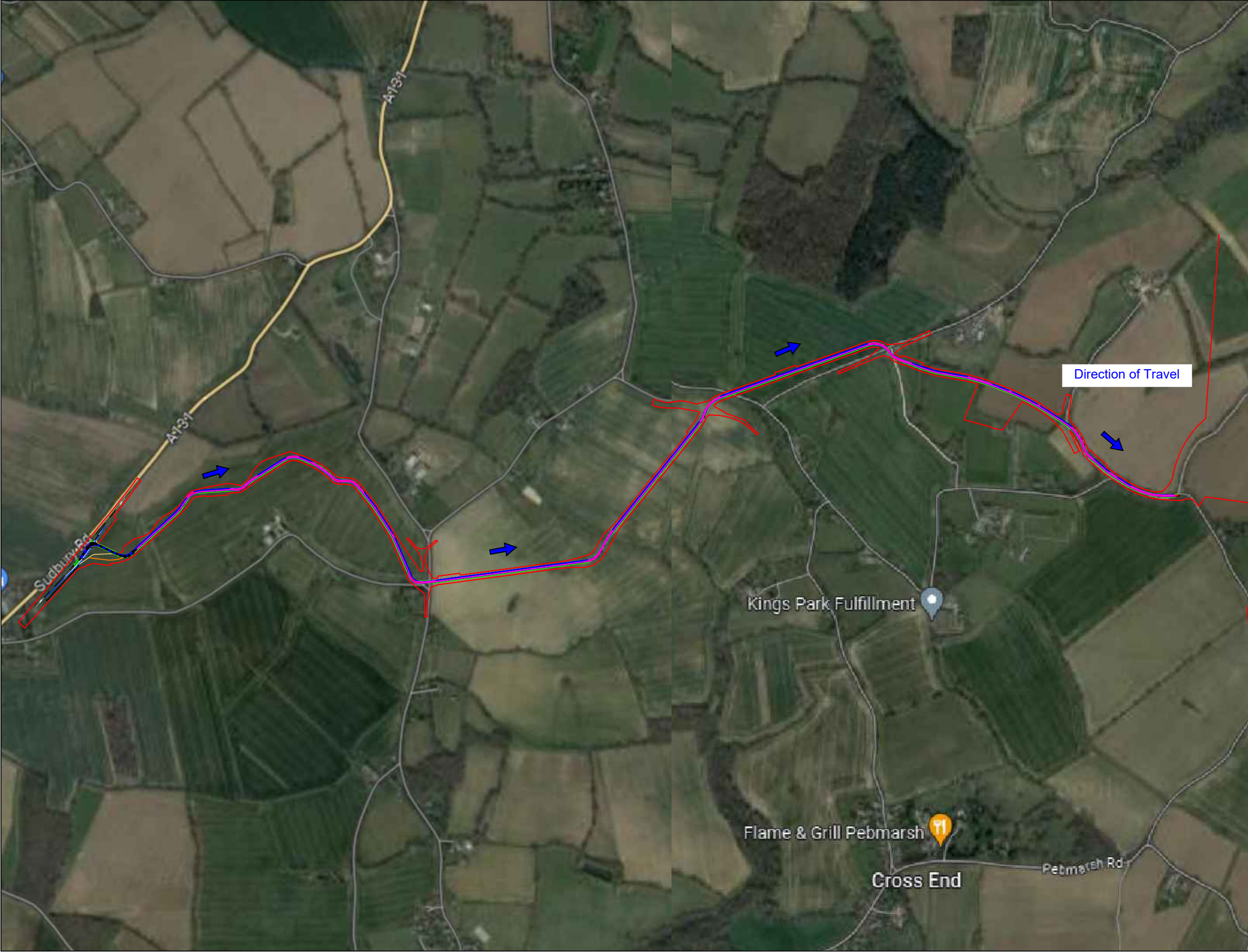
Oversail beyond kerb

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Rev.	Date	Amendments
Revisions		
Prepared by:		
<div><div><div>INDEPENDENT TRANSPORTATION WYNNS ENGINEERS</div></div><div>Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411</div></div>		
Independent Transportation Engineers		
Client:		
		
Project:		
Bramford to Twinstead		
Title:		
A131 Twinstead Cable Drum Access, Swept Path Assessment Negotiability of proposed access road (Option 1, DCO - Red Route), considerate of indicative 2 axle bed 4 axle modular reeling trailer transporting 60 te cable drum.		
Drawing status:		
Final Report		
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Swept Path Assessment
Indicative of 2 Axle bed 4 Axle Modular Reeling Trailer
Constructed from Client Supplied Data
Scale 1:10000

NOTE: Overlay onto aerial image is not
representative of the configuration relative to
the environment. This is for illustrative purposes
only, and should only be taken as such.



Location Plan

Legend:

2 bed 4 axle modular reeling trailer
minimum turning arrangements
Drawing ref. 21-1130.TC07

Extent of tractor track

Extent of trailer track

Extent of oversail

Extent of road boundary

Overrun and oversail beyond kerb

Overrun beyond kerb

Oversail beyond kerb

1		
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Client:

Project:

Bramford to Twinstead

Title:

A131 Twinstead Cable Drum Access,
Swept Path Assessment
Negotiability of proposed access road (Option 1, DCO -
Red Route), considerate of indicative 2 axle bed 4 axle
modular reeling trailer transporting 60 te cable drum.

Drawing status:

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