

East Anglia TWO Offshore Windfarm

Appendix 26.4

East Anglia TWO and East Anglia ONE North Windfarm - Swept Path Assessment of Known Pinch Point on Heavy Load Route

Environmental Statement Volume 3

Applicant: East Anglia TWO Limited
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Author: Royal HaskoningDHV
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Revision: Version 1




East Anglia TWO & East Anglia ONE North Windfarm – Swept Path Assessment of known pinch points on heavy load route

Prepared for Scottish Power Renewables (SPR)





NAME		SIGNATURE	DATE
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DOCUMENT REVISIONS

Issue	Date	Details
0	12.02.19	Final report
1	19.02.19	Building shading colour changed
2	19.02.19	Building shading colour changed

Drawing Summary

The drawings showing the Swept Path Assessment of the transformer delivery vehicle have been constructed using topographical data for the left hand bend on the A12 through Farnham and OS Mastermap data for the B1069/A1094 Junction and B1121 and proposed site access location. It should be noted that although Mastermap data provides a degree of reliability, the accuracy may not be absolute and caution is advised during interpretation.

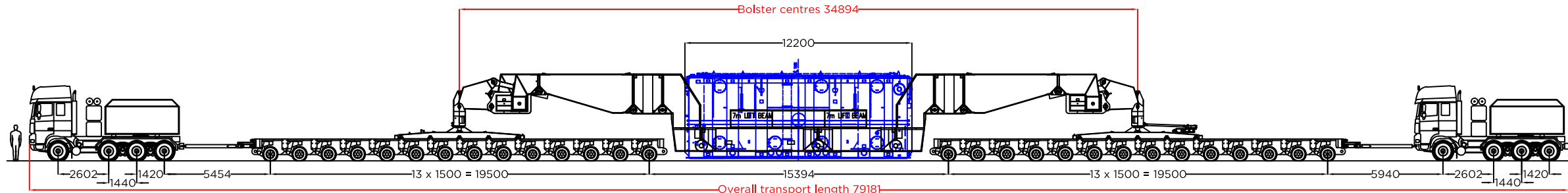
To aid clarification of the following terminology explanations are shown here:

- | | |
|-----------|--|
| SPA | Swept Path Assessment. An assessment of space requirement needed to permit unrestricted passage of a particular vehicle. |
| Road | The paved area within the highway/site ownership that is constructed to allow the overrun of vehicles. |
| Overrun | Also known as vehicle track. This is the area that is required to permit the axles and wheels of the abnormal load vehicle to pass by. |
| Over-sail | This is the area required to permit the suspended parts of the vehicle, carrying the load but outside of the wheeled areas. |
-
1. Drawing reference: 18-952.TC01 shows an indicative 28 axle girder frame transport configuration carrying an indicative 282 te transformer. This transport arrangement has been considered in the construction of the SPA and is presently considered to be the worst case in terms of trailer negotiability on the proposed route to site. It should however be noted that as detailed in the AIL access report issued 19.10.18 the routes from both Lowestoft and Felixstowe will require further detailed structural assessments to resolve access to the satisfaction of Suffolk County Council who require structural assessments to be undertaken to confirm the routes suitability. It is therefore possible that trailer arrangements required to access the site will change in the future based on the results of the structural assessments.
 2. Drawing reference: 18-952.SPA01 sheets 1 of 2 and 2 of 2 show a SPA of the left hand bend on the A12 through Farnham at approximate OS grid reference TM 362 601. It can be seen that in order for the delivery vehicle to negotiate the turn, temporary plating and packing of the outside kerbs on the approach to and through the bend would be required to accommodate overrun. There is a telegraph pole located on the nearside of the bend, the location of which should be noted when traversing this section of the bend. Extreme caution should be used when negotiating the bend due to minimal clearance between the girder frame oversail and the buildings on the nearside and offside.
 3. Drawing reference: 18-952.SPA02 shows a SPA of the right hand turn from the B1069 onto the A1094 at approximate OS grid reference TM 419 592. It can be seen that in order for the delivery vehicle to negotiate the turn, overrun of the wooded area on the northern side of the junction is necessary, requiring tree removal plus temporary plating and packing of the inside and outside kerbs would be required to accommodate the vehicle track. Temporary removal of 2 no traffic signs and 1 no traffic bollard on approach to the junction will also be required to accommodate negotiability. Detailed topographical data is required to confirm the indicative carriageway and highway boundaries along with the locations of vegetation and street furniture. Remedial works

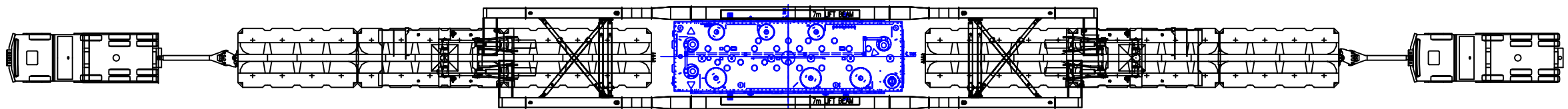


are required on third party land and access agreements with the relevant landowners will need to be secured.

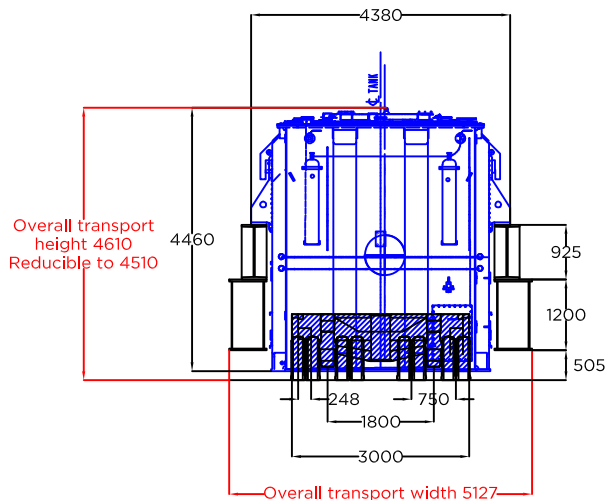
4. Drawing reference: 18-952.SPA03 shows a SPA of the right hand turn from the B1121 onto the proposed new site access road at approximate OS grid reference TM 401 611. It can be seen that in order for the delivery vehicle to negotiate the turn it is necessary to overrun the bound surface to the south east of the junction.



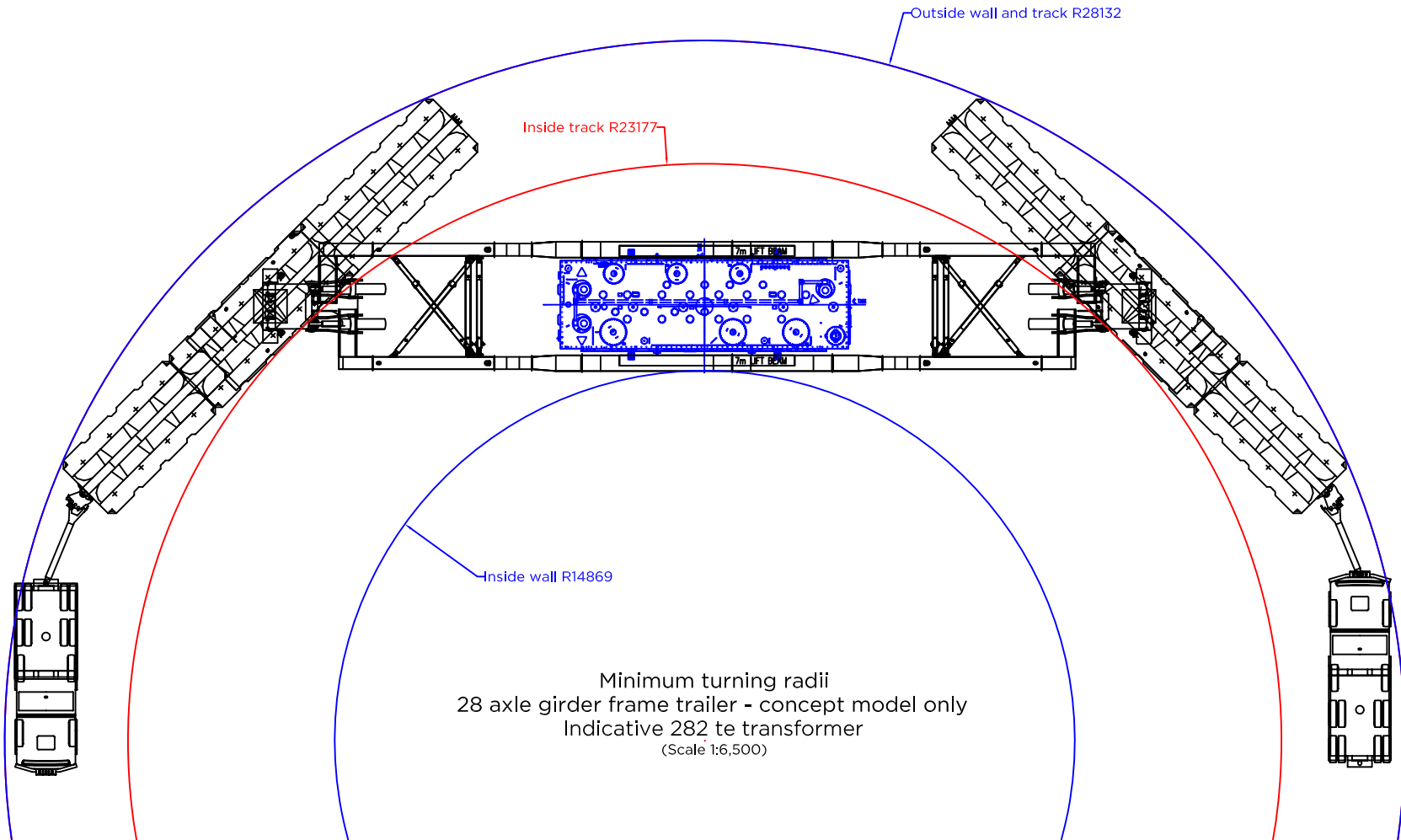
Elevation view
(Scale 1:6,500)



Plan view
(Scale 1:6,500)



Profile view
(Scale 1:3,250)



Minimum turning radii
28 axle girder frame trailer - concept model only
Indicative 282 te transformer
(Scale 1:6,500)

Load table

28-axle girder frame trailer

Self weight of transformer	282.0 te
Self weight of trailer	213.0 te
Self weight of aux. steelwork (for L&S)	5.4 te
Total combined weight	500.4 te
Load per trailer	250.2 te
Load per axle line	17.87 te
Load per axle	8.94 te
Load per wheel (4 per axle)	2.23 te
Overall ground bearing pressure	3.97 te/m ²

Tractor(s) (42 te)

Front axle	8.0 te
Second steer	10.0 te
Rear axle	12.0 te
Rear axle	12.0 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.

1		
0	31.01.19	Issued for comment
Rev.	Date	Amendments

Revisions

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Independent Transportation Engineers

Client:



Project:

**East Anglia TWO &
East Anglia ONE North Windfarm**

Title:

Indicative transport configuration
Conceptual 282 te transformer carried within
28-axle girder frame trailer
showing minimum turning radii

Drawing status:

Final report

Scale (A3):	Drawn by:	Checked by:
As shown	SJW	ARP
DWG. no:	Sheet:	Rev:
18.952-TC01	1 of 1	0

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Swept Path Assessment

Considerate of indicative 28-axle girder frame trailer
Constructed from topographical survey data
Scale 1:500



Lay-by

(dis)

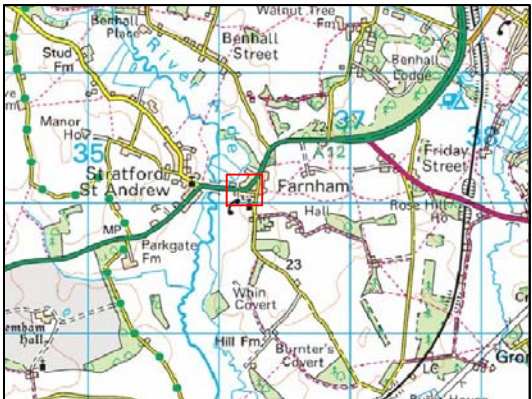
The Limes

Turret

The Old

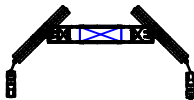
Forge
House

Location Plan



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Legend:



28-axle girder frame trailer
minimum turning arrangements



Extent of vehicle track



Extent of over-sail



Over-sail beyond kerb

Indicative Swept Path Assessment

Considerate of indicative 28-axle girder frame trailer
Google Licence Ref: JCPM2Z11CKENWEQ

Turret

The Limes

Swept Path Assessment

Considerate of indicative 28-axle girder frame trailer
Vehicle removed for clarity
Scale 1:300

It can be seen that it is possible for the transport configuration to negotiate the left hand bend whilst remaining within the carriageway boundary. Full occupation of the highway is required and traffic management requirements to be agreed with Police. Due to minimum clearance vehicle track to the offside kerb it is recommended that steel plating or timber packing is used.

Caution - minimal clearance frame oversail to telegraph pole

1.0 m

Minimal clearance vehicle track to kerb. Steel plating or timber packing to be used.

Oversail area
29 m²

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North Windfarm**

Title:

**Swept Path Assessment
Negotiability of A12 through Farnham
considerate of indicative 282 te transformer
transported within 28-axle girder frame trailer
Approximate OS grid reference TM362601**

Drawing status:

Final report

Scale (A3):

As shown

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Checked by:

ARP

DWG. no:

18.952-SPA01

Sheet:

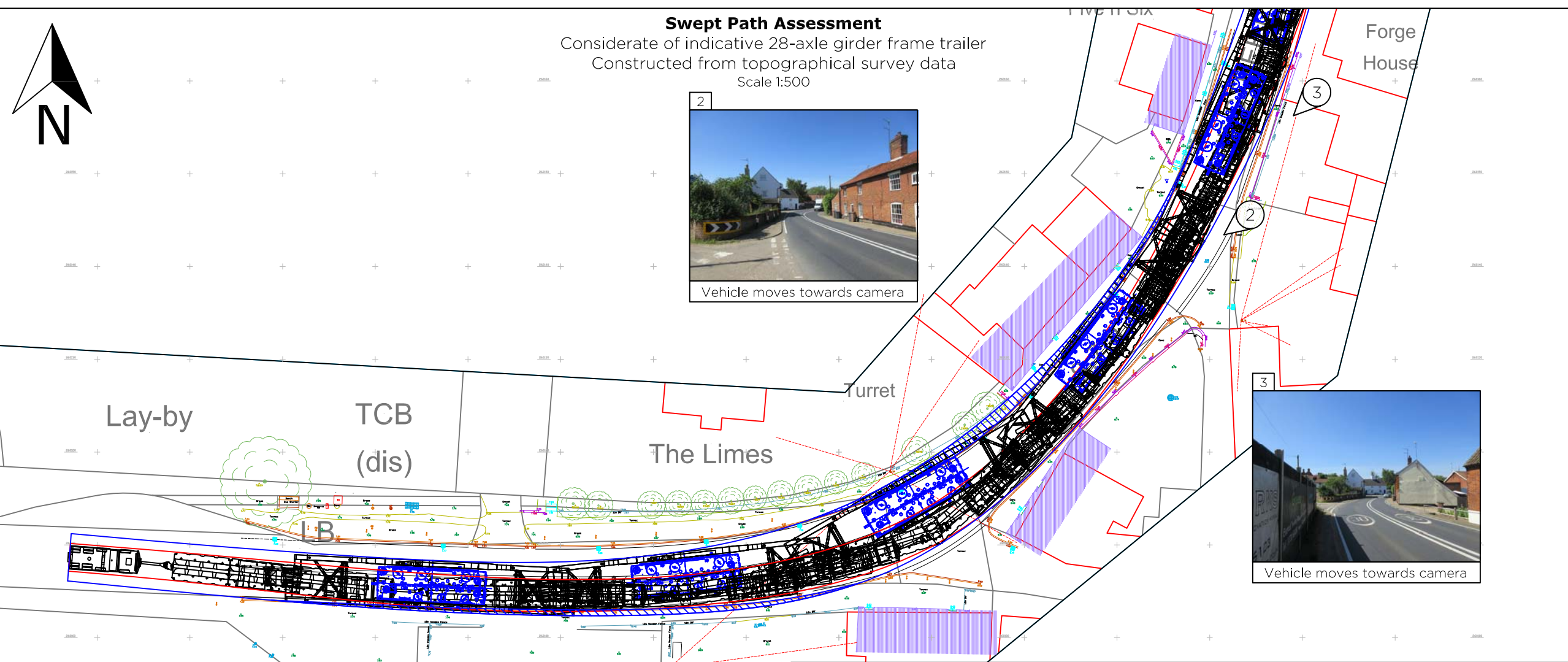
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Rev:

2

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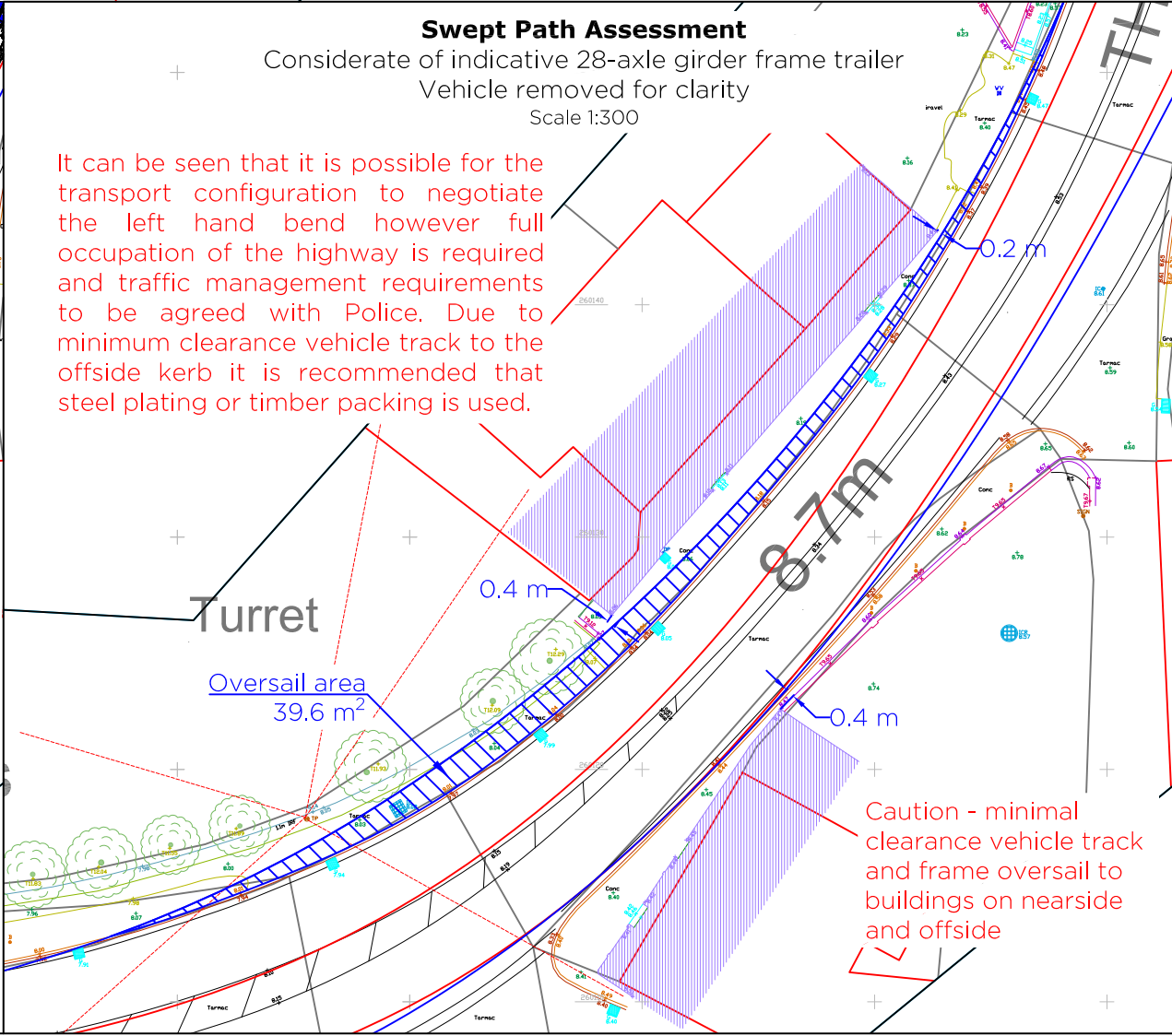
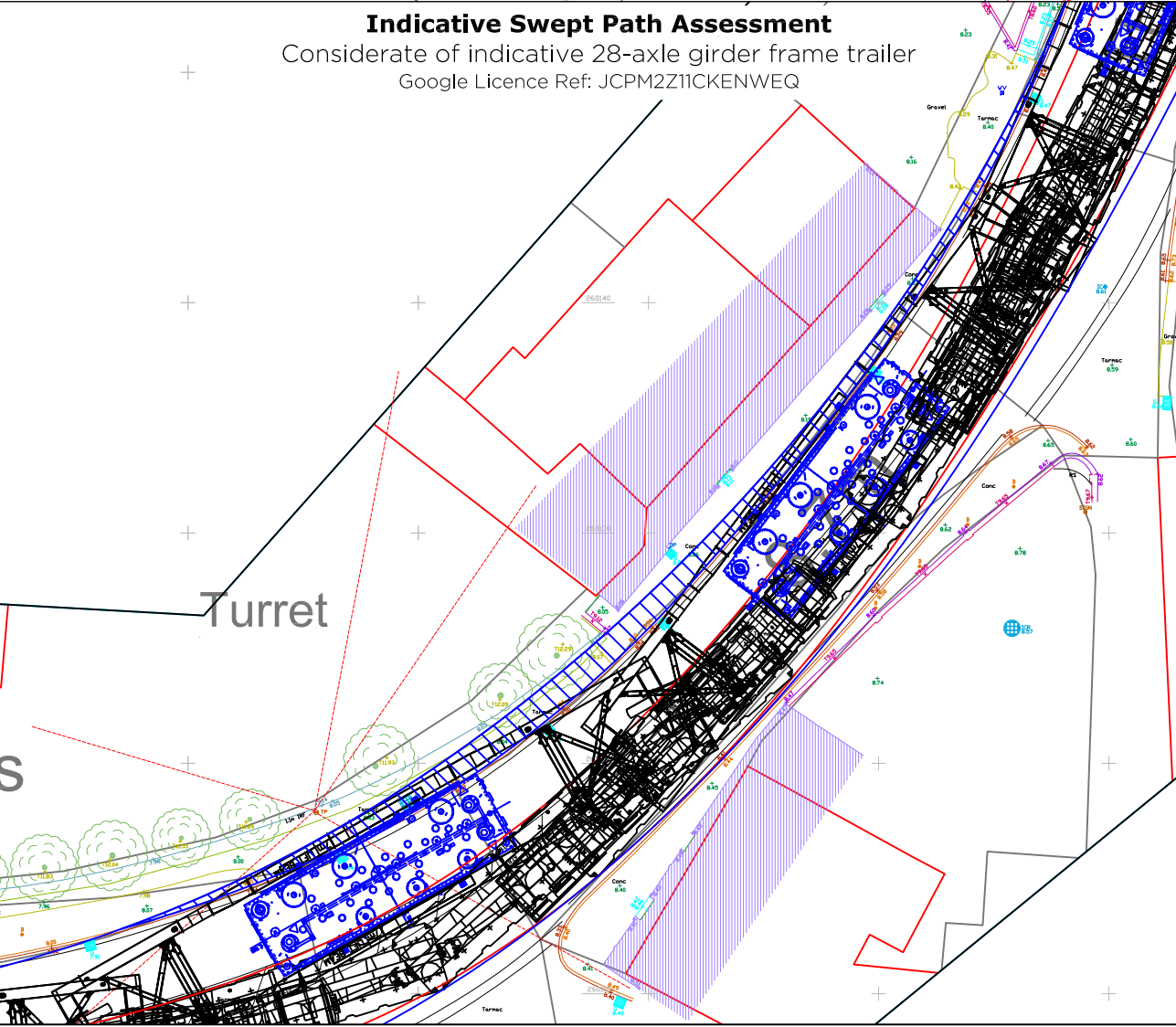
Location Plan

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Legend:

- 28-axle girder frame trailer minimum turning arrangements
- Extent of vehicle track
- Extent of over-sail
- Over-sail beyond kerb

Rev.	Date	Amendments
2	19.02.19	Building shading colour changed
1	19.02.19	Building shading colour changed
0	04.02.19	Issued for comment



Revisions

Rev.	Date	Amendments
2	19.02.19	Building shading colour changed
1	19.02.19	Building shading colour changed
0	04.02.19	Issued for comment

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Client:

Project: **East Anglia TWO & East Anglia ONE North Windfarm**

Title: **Swept Path Assessment**
Negotiability of A12 through Farnham
considerate of indicative 282 te transformer
transported within 28-axle girder frame trailer
Approximate OS grid reference TM362601

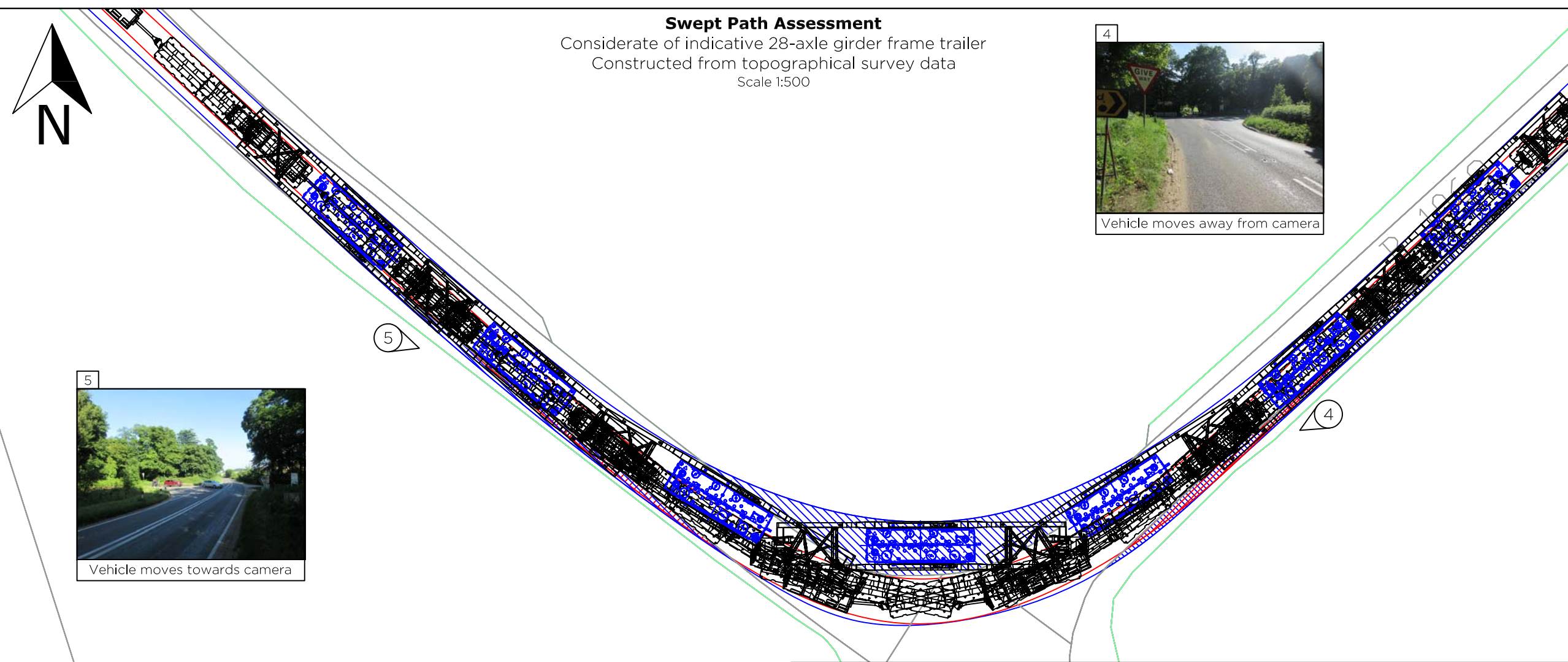
Drawing status: **Final report**

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18-952.SPA01	2 of 2	2

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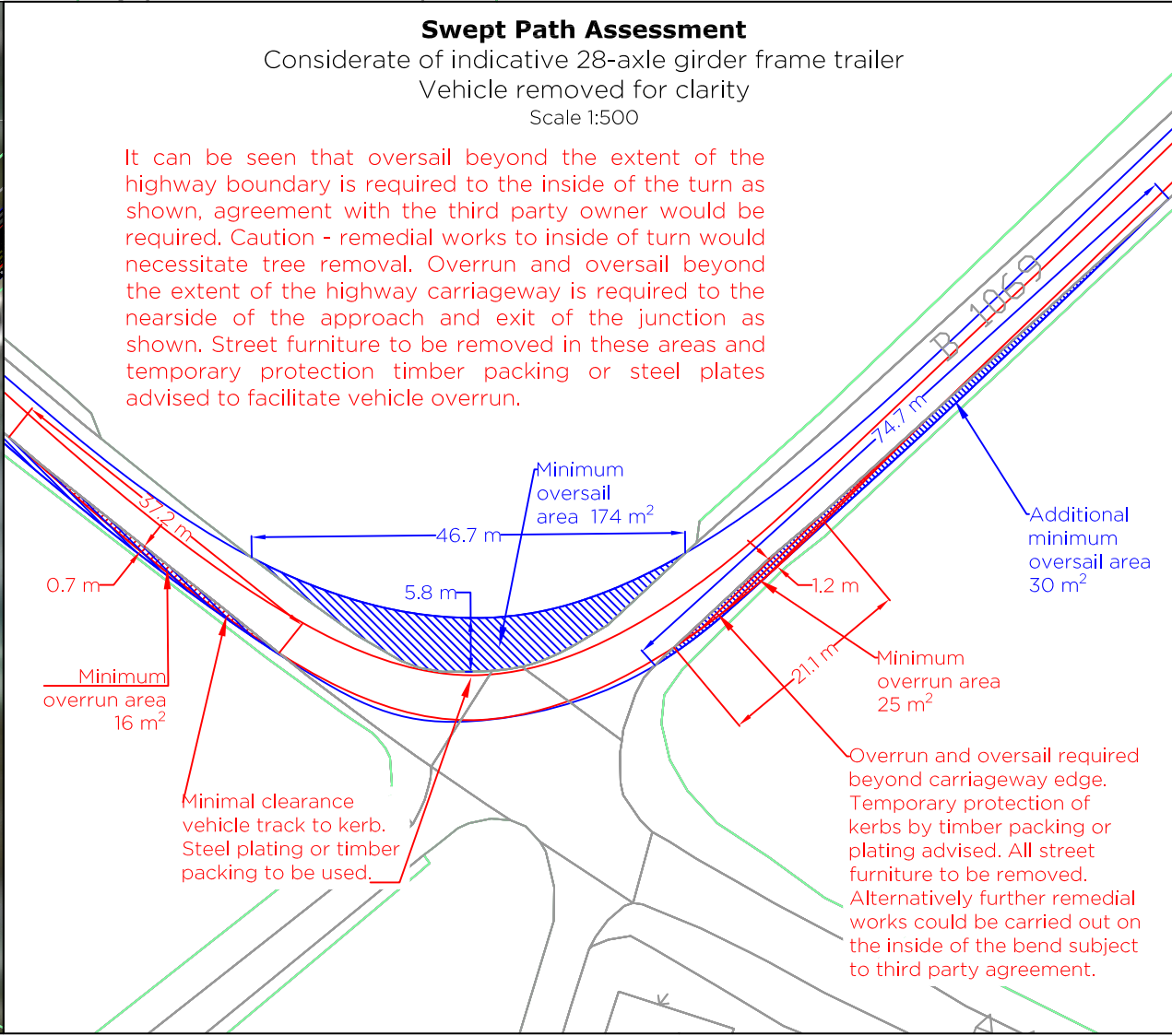



Location Plan

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Legend:

- 28-axle girder frame trailer minimum turning arrangements
- Extent of vehicle track
- Extent of over-sail
- Overrun beyond kerb
- Oversail beyond kerb
- Overrun and oversail beyond kerb

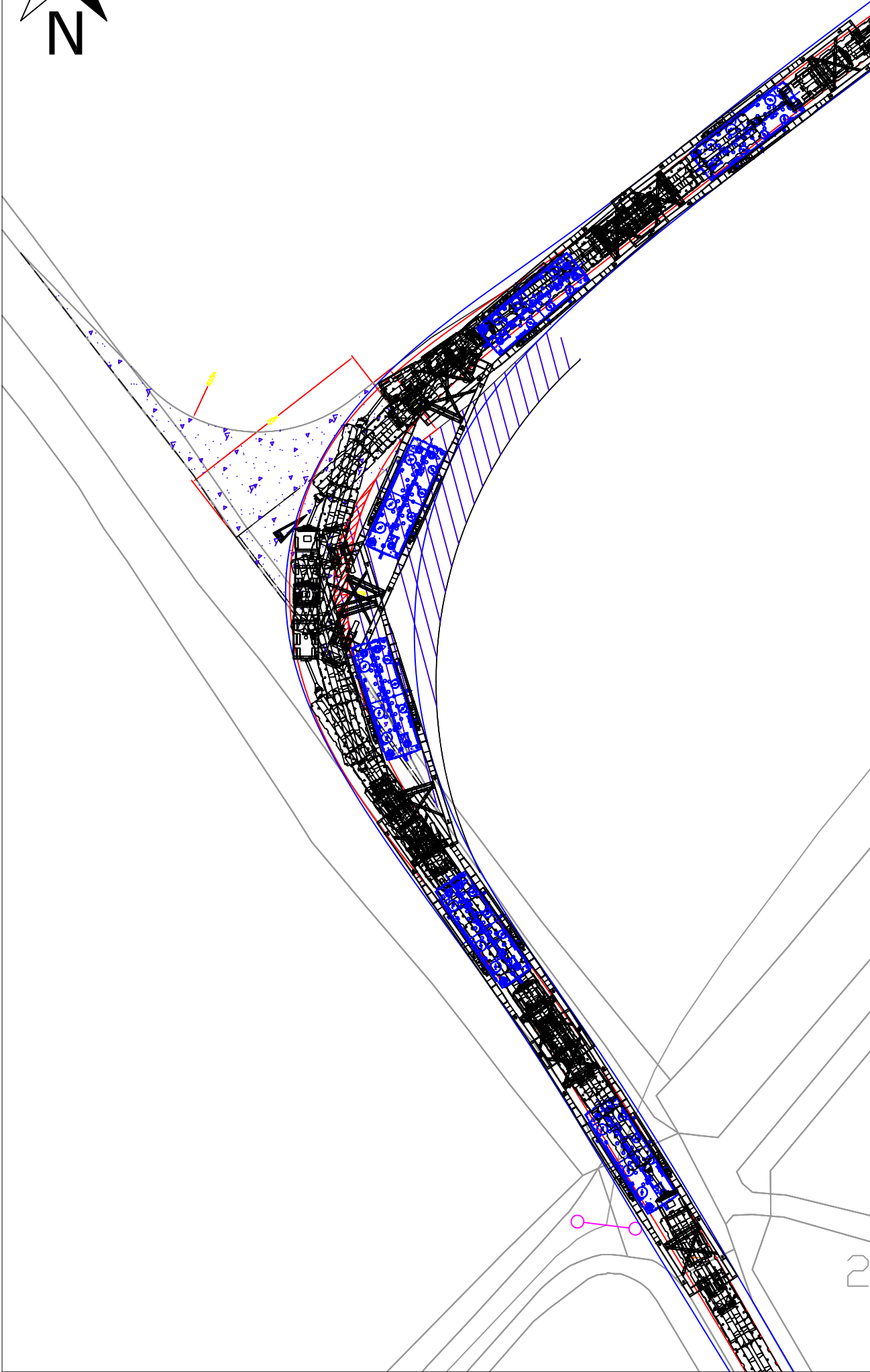


1		
0	08.02.19	Issued for comment
Rev.	Date	Amendments
Revisions		
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Independent Transportation Engineers		
Client:		
		
Project:		
East Anglia One North Windfarm		
Title:		
Swept Path Assessment Negotiability of B1069/A1094 junction considerate of indicative 282 te transformer transported within 28-axle girder frame trailer Approximate OS grid reference TM419592		
Drawing status:		
Final report		
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Swept Path Assessment

Considerate of indicative 28-axle girder frame trailer
Constructed from topographical survey data
Scale 1:500



Indicative Swept Path Assessment

Considerate of indicative 28-axle girder frame trailer
Google Licence Ref: JCPM2Z1ICKENWEQ



Location Plan

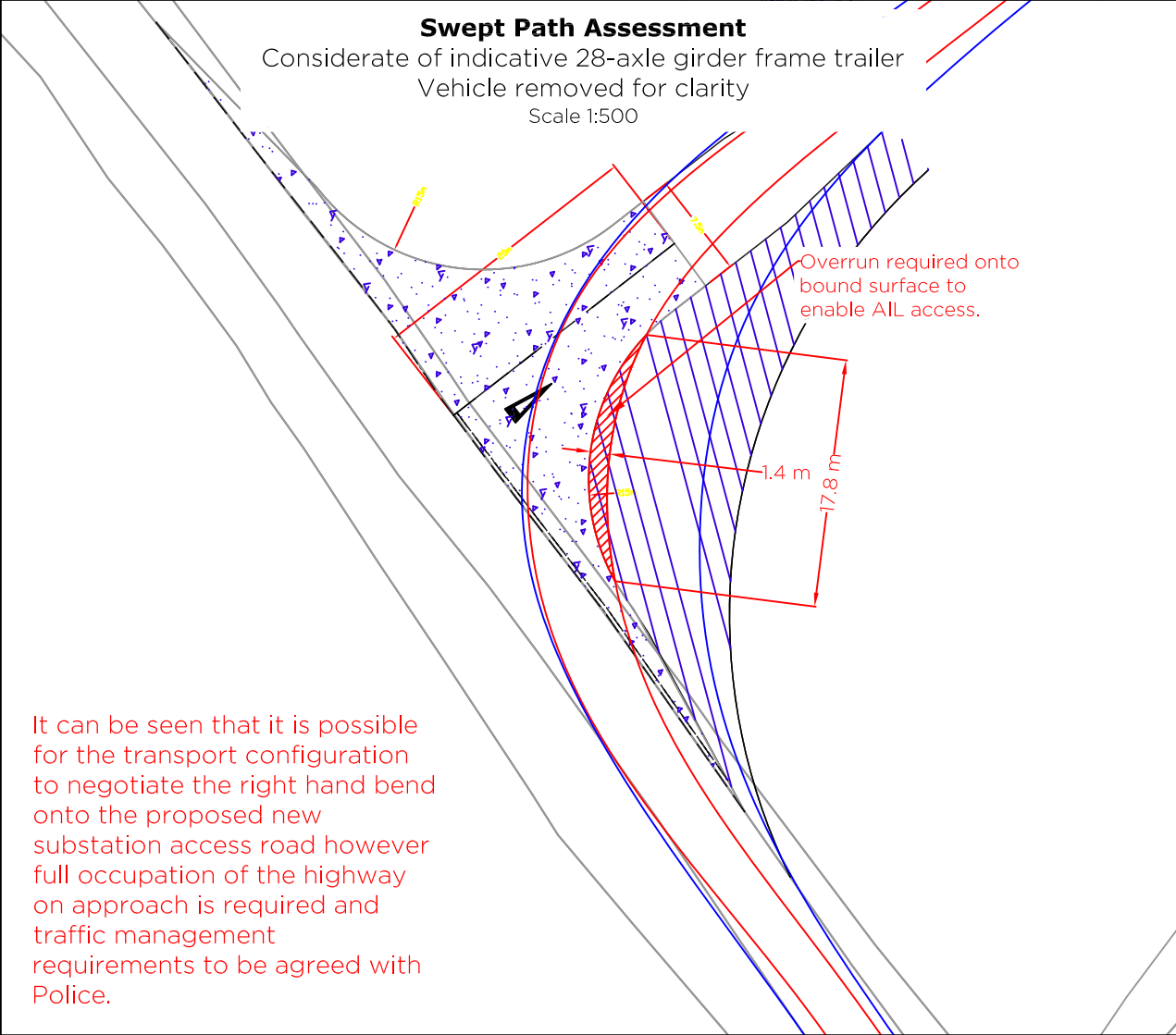


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Legend:

- 28-axle girder frame trailer
minimum turning arrangements
- Extent of vehicle track
- Extent of over-sail
- Overrun beyond kerb

Swept Path Assessment
Considerate of indicative 28-axle girder frame trailer
Vehicle removed for clarity
Scale 1:500



It can be seen that it is possible for the transport configuration to negotiate the right hand bend onto the proposed new substation access road however full occupation of the highway on approach is required and traffic management requirements to be agreed with Police.

1	19.02.19	Bound surface shading colour changed
0	11.02.19	Issued for comment
Rev.	Date	Amendments

Revisions

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Independent Transportation Engineers

Client:



Project:

East Anglia TWO & East Anglia ONE
North Windfarm

Title:

Swept Path Assessment
Negotiability of B1121/proposed site access junction
considerate of indicative 282 te transformer
transported within 28-axle girder frame trailer
Approximate OS grid reference TM401611

Drawing status:

Final report

Scale (A3):	Drawn by:	Checked by:
1:500	SJW	ARP
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18-952.SPA03	1 of 1	1

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