Royal HaskoningDHV
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Norfolk Vanguard Offshore Wind Farm

Outline Traffic Management Plan

Appendix 2
Deadline 8

Applicant: Norfolk Vanguard Limited
Document Reference: 8.8
Pursuant to: APFP Regulation: 5(2)(q)

Date: 30 May 2019
Revision: Version 3
Author: Royal HaskoningDHV

Photo: Kentish Flats Offshore Wind Farm

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Route Access Survey – Revision 2
314597

Norfolk Vanguard
Off A47 near Necton, Norfolk

Royal HaskoningDHV

Report Produced: March 2018

Royal HaskoningDHV

Contents

Report Details

Report for
Ryan Eldon
Royal HaskoningDHV
Rightwell House
Bretton
Peterborough
PE3 8DW

Attendees of Survey
Steven Mangham

Issued by
Steven Mangham

Approved by
Steven Mangham

Collett & Sons Ltd
Victoria Terminal
Albert Road
Halifax
West Yorkshire
HX2 0DF
Tel: +44 (0) 8456 255288
Fax: +44 (0) 8456 255244

Document Revisions

No	Date	Details
1	25/04/2018	Route B removed from report
2	25/04/2018	Updated to Client Comments

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Collett & Sons Ltd
Victoria Terminal
Albert Road
Halifax
West Yorkshire
HX2 0DF

+44 (0) 8456 255288
renewables@collett.co.uk
www.collett.co.uk

1 Executive Summary

1.1. One route has been assessed for the transportation of a 200Te Transformer from the Kings Lynn Port to proposed Norfolk Vanguard Site. The Route has been detailed along the A47 to site.

1.2. The start location within the Port of Kings Lynn has been chosen due to previous information regarding the heavy load quay within the dock.

Third party land

1.3. No third party land has been identified by the assessment.

Road widening

1.4. No road widening has been identified by the assessment.

Modifications to street furniture

1.5. Street furniture removal will be required at a number of locations along the route and have been detailed where required.

Manual Steering

1.6. Due to the vehicle configuration, manual steering will be utilised at numerous locations along the routes including roundabouts.

Vertical Alignment

1.7. There is an overhead bridge along Route A on the A47. Clarification of the bridge clearance height has been sought from the relevant authorities and the response has indicated a clearance of 5.18m critical. Additional clearance checks to be undertaken prior to any movements.

Structural Assessment

1.8. The relevant authorities who own or manage the structures on the route have been consulted regarding any potential issues along the proposed route. No negative responses have been received at time of issue although Kier Group, who manages the A47, would not comment without a formal BE16 being applied for.

Other areas of note

1.9. There are numerous overhead cables along both routes. Once the final loaded configuration and dimensions are finalised, the utilities services should be contacted regarding their cable heights. It may be that some cables will have to be removed or a specialist team join the delivery convoy to raise the cables, where required.

1.10. Tree pruning will be required along the route to ensure a suitable clearance is available for the load.

2. Introduction

2.1 Collett & Sons Ltd. were commissioned by Royal Haskoning DHV (RHDHV) to undertake an abnormal loads route access study to assess the transportation of a 200Te Transformer to the Norfolk Vanguard Site, off A47 near Necton, Norfolk (the site).

2.2 The site is located off the A47 near Necton, Norfolk. The purpose of this report is to detail access to the entrance of Norfolk Vanguard site from Kings Lynn Harbour.

Methodology

2.3 An initial desk based study was undertaken to identify possible loading configurations for the component (details confirmed by RHDHV).

2.4 The route surveyed in this report has been identified by Collett.

2.5 A site visit was then carried out to determine the feasibility of the identified routes and pinch points.

2.6 Following the site visit, Swept Path Analysis (SPA) was then carried out at the identified pinch points. The SPA's are detailed in this report, and indicate any areas of road widening or land take that are required.

2.7 All drawings are produced using Ordnance Survey 'OS MasterMap' mapping data, unless stated otherwise. Street furniture is not included on OS MasterMap data; this is plotted by taking measurements on site with a tape. Actual road widths are also checked and adjusted on the map data accordingly. Where adjustments to the OS MasterMap data have been made this is indicated as 'adjusted' on the drawing.

2.8 The analysis is based on the most onerous components when loaded on delivery vehicles.

2.9 The trailers used to transport the component modular. Manual Steering indicates that the steering of the axles is controlled by an operative using an override devise. Manual Steering can be used to achieve alternative swept areas where appropriate.

2.10 Upon selection of the route, the relevant authorities were contacted with regard to the structural suitability of the delivery route for the heaviest loaded vehicle.

2.11 Details pertaining to the highway boundary have not been obtained from the County Council, thus in order to determine the impact on third party land it has been assumed that fence lines, walls and hedgerows define this boundary.

2.12 In addition, the report is supplemented by photographic evidence, map referencing and CAD drawings of the 'pinch points' for the proposed routes.

3. Components

3.1. RHDHV have requested that the assessment on which this report is compiled be based on the delivery of a 200Te Transformer.

3.2. The transformer specification was supplied by RHDHV.

4. Abnormal Indivisible Load Profiles

4.1. The abnormal loads are assessed based on weight, length, width and height and loaded to the most appropriate vehicle, the weights and dimensions of these are detailed below. The loading diagrams are detailed in APPENDIX 1.

4.2.	314597-A
200te Transformer	
	Loaded vehicle dimensions
Overall vehicle Length	66.06m
Rigid Length	27.04m
Width	4.929m
Height	5.10
G.V.W excluding tractor units	332.86Te

5. Requirements for the movement of Abnormal Indivisible Loads

5.1. An abnormal load is defined as below (including the actions required for permitting and notice).

Weight

5.2. Gross weight or axle weights exceeding C & U or Authorised Weight limits up to 80,000kgs (78.74 tons).

5.3. ***Action required:*** 2 clear days' notice with indemnity to Highway and Bridge Authorities.

5.4. Gross weight (of vehicle carrying the load) exceeding 80,000kgs (78.74tons) up to 150,000kgs (147.63tons).

5.5. ***Action required:*** 2 clear days' notice to Police and 5 clear days' notice with indemnity to Highway and Bridge Authorities.

5.6. Gross weight (of vehicle carrying the load) exceeding 150,000kgs (147.63tons).

5.7. ***Action required:*** HA Special Order (form BE16), up to 8 weeks approval time, plus 5 clear days' notice to Police and 5 clear days' notice with indemnity to Highway and Bridge Authorities.

Width

5.8. Width exceeding 2.9 metres (for C & U loads) 3.0 metres (9' 10") up to 5.0 metres (16' 5") for other loads

5.9. ***Action required:*** 2 clear days' notice to the Police.

5.10. Width exceeding 5.0 metres (16' 5") up to 6.1metres (20')

5.11. ***Action required:*** HA form VR1 plus 2 clear days' notice to Police.

5.12. Width exceeding 6.1 metres (20')

5.13. ***Action required:*** HA Special Order (form BE16), up to 8 weeks approval time, plus 5 clear days' notice to Police and 5 clear days' notice with indemnity to Highway and Bridge Authorities.

Length

5.14. When exceeding 18.65 metres (61' 2") up to 30 metres (98' 5") rigid length - (Vehicle or train of vehicles)

5.15. ***Action required***: 2 clear days' notice to the Police.

5.16. Vehicle combination exceeding 25.9 metres (85').

5.17. ***Action required:*** 2 clear days' notice to the Police.

5.18. When exceeding 30.0 metres (98' 5") rigid length.

5.19. ***Action required:*** HA Special Order (form BE 16), up to 8 weeks approval time, plus 5 clear days' notice to Police and 5 clear days' notice with indemnity to Highway and Bridge Authorities.

Bridge Height

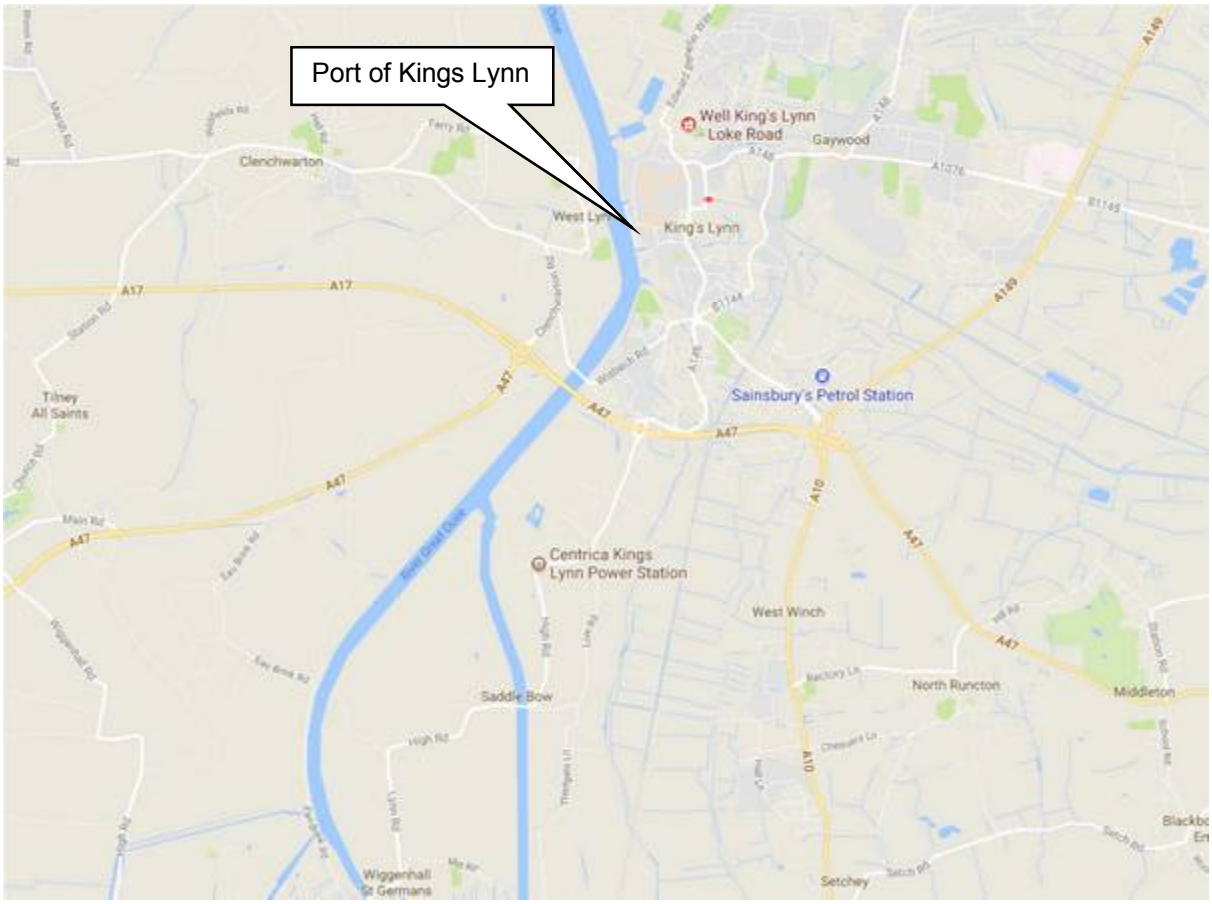
5.20. Any low bridges along the route that have a clearance less than 5.0m will be signed as a low bridge. This threshold could create difficulties in the passage of over-height or near over-height vehicles.

Abnormal Load Requirements

5.21. For the specified abnormal load, the following actions will be required for the delivery vehicle.

5.22.	**314597-A**	**Action Required**
	200te Transformer	HA Special Order (form BE16), up to 8 weeks approval time, plus 5 clear days notice to Police and 5 clear days notice with indemnity to Highways and Bridge Authorities.

6. Port Information



Kings Lynn

6.1. The Port of King's Lynn is located on the Wash on the UK's east coast. Trunk roads connect the port to Cambridge, where the M11 leads down to the M25 and east to Leicester and the M1.

Table of normal acceptance dimensions of vessels

			Normal acceptance dimensions of vessels			
Dock, Jetty or quay	**Quay Length**	**Depth of water**	**Length**	**Beam**	**Draught**	**Approx. dwt**
Alexandra Dock	350m	5.3m	119m	13.85m	5.5m	4,000
Bentinck Dock	800m	5.3m	119m	13.85	5.5m	4,000
Riverside Quay	220m	Tidal	140m	20.0m	6.0m	5,500

Alexandra Dock

7. Responses from Statutory Consultees (Structures Suitability)

7.1. The loading information for this transformer configuration has been sent to the relevant authorities to ascertain if there are any issues with weights and structures within the areas of the Authorities jurisdiction – Details of the authorities can be found below.

7.2. For the purposes of the responses below, the routes referred to are as follows

Route:
• Exit Kings Lynn Harbour onto Edward Benefer Way, • Continue on Edward Benerfer Way to merge onto Grimston Road A148. • Continue on A148 to roundabout junction with A149 Queen Elizabeth Way, • At roundabout turn right onto A149 Queen Elizabeth Way, • Continue on A149 through 2 roundabouts to roundabout junction with A47, • At roundabout turn left onto A47, • At roundabout turn left onto A47, • At roundabout, continue on A47, • At roundabout continue on A47, Continue on A47 to proposed site entrance on the right hand side at approx. OS Grid refs: TF 89245 11382.

7.3. The following summarises the correspondence between the relevant authorities. The detailed responses can be viewed in APPENDIX 3.

County Council Highways	**Issues?**	**Contact Name**	**Email Address**	**Phone Number**
Norfolk Council	No	Mark North	Pandt.bridges@norfolk.gov.uk	01603 223804
Area 6	No Comment	John Hughes	John.Hughes@kier.co.uk	01223 255255
Network Rail	No	Katie Nicholson	Katie.Nicholson@networkrail.co.uk	01908 783 140
Historic Railways Estate	No	Tania Howell	Tania.Howell@jacobs.com	0118 946 8911
Canal and river trust	Not responded	N/A	abnormal.loads@canalrivertrust.org.uk	0113 2005759

Summary of Structural Issues

7.4. At the time of issue, Canal and River Trust have yet to respond and Area 6 could not comment without a formal BE16 application. Responses from the other authorities in the table above have not highlighted any structural issues.

8. Route Assessment

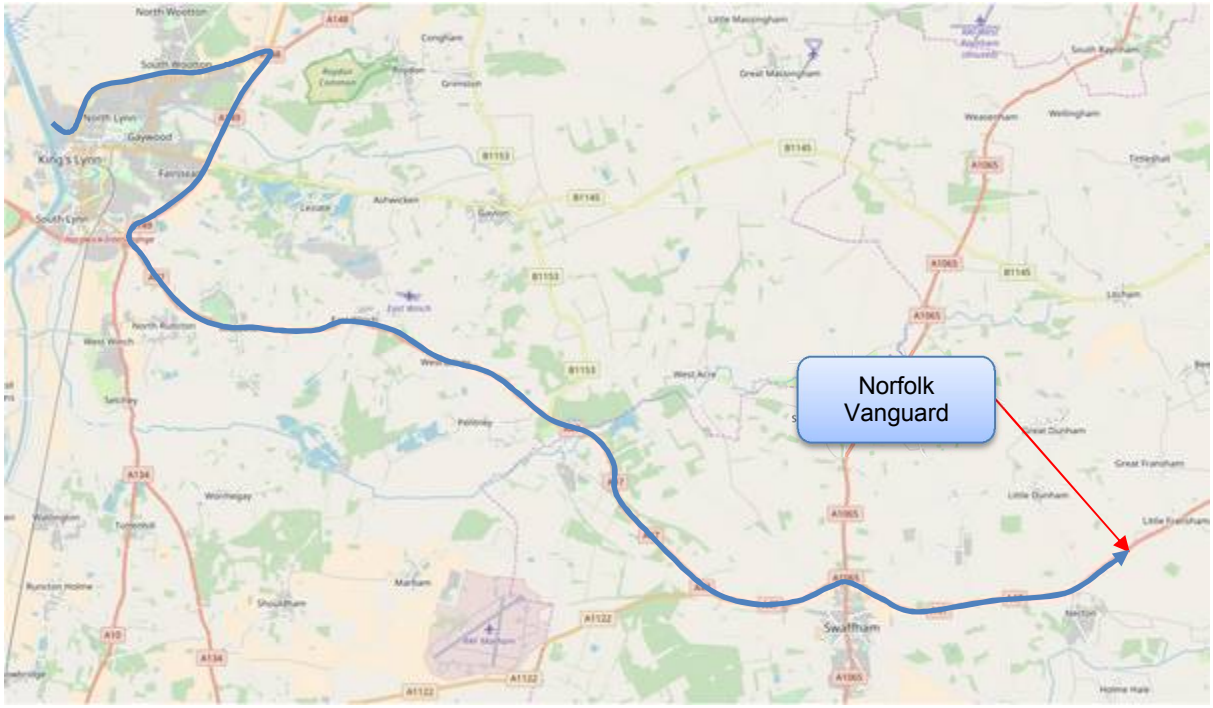
8.1. This section of the report illustrates in detail the pinch points and routes for the delivery of all abnormal load components from Kings Lynn Harbour to Norfolk Vanguard.

8.2. *Route*

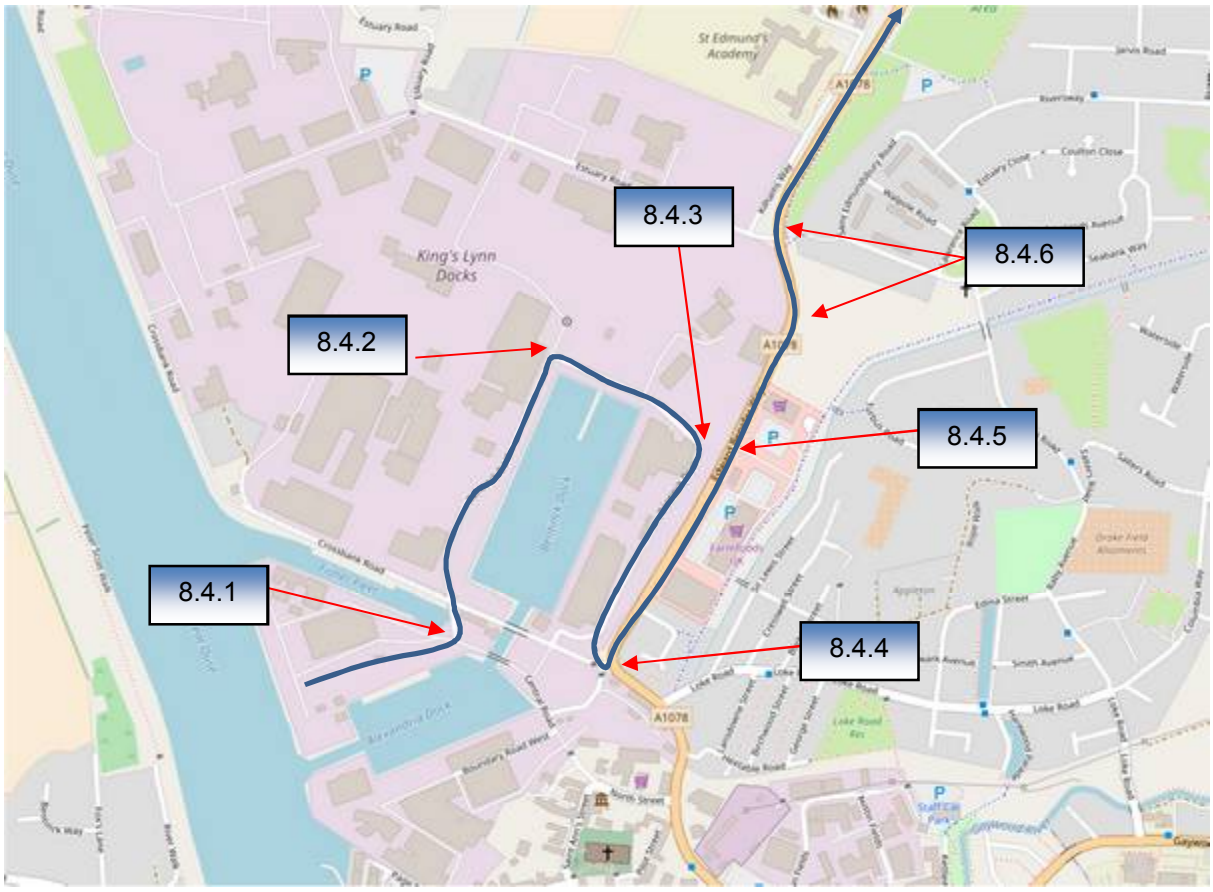
Start Location	Kings Lynn Harbour	Distance of Route	Km	Miles
Via:	A149/A47		34.1	21.2

- Exit Kings Lynn Harbour onto Edward Benefer Way,
- Continue on Edward Benerfer Way to merge onto Grimston Road A148.
- Continue on A148 to roundabout junction with A149 Queen Elizabeth Way,
- At roundabout turn right onto A149 Queen Elizabeth Way,
- Continue on A149 through 2 roundabouts to roundabout junction with A47,
- At roundabout turn left onto A47,
- At roundabout, turn left onto A47,
- At roundabout, continue on A47,
- At roundabout, continue on A47,
- Continue on A47 to site entrance on the right hand side at approx. OS Grid ref: TF 89275 11404.

8.3. Map Overview



8.4. *Map Extract*



KEY – Colour coding of modification requirements					
	Indicates major modifications are required i.e. Road widening, street furniture etc.		Indicates manoeuvre or minor modifications i.e. contraflow manoeuvre.		No modifications required.

8.4.1.1. – Aerial View of Location

8.4.1.2. – View prior to junction

8.4.1.3. – View at crossing

8.4.1.4. – View after crossing

Description:	From the Heavy Lift Quay turn left within the dock to avoid the bridges.		
Distance from previous Pinch Point	N/A	Distance to following Pinch Point	0.25km

	Modification required	Reason for Modification	Additional Information:
	Manual steering required	To assist navigation	Loaded vehicle will navigate this location without any issues.

Item No:	Title	OS Grid Ref:	TF 61628 20743
8.4.1	Exit form he Quay	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.4.2.1. – Aerial View of Location

8.4.2.2. – View prior to bend

8.4.2.3. – View at crossing

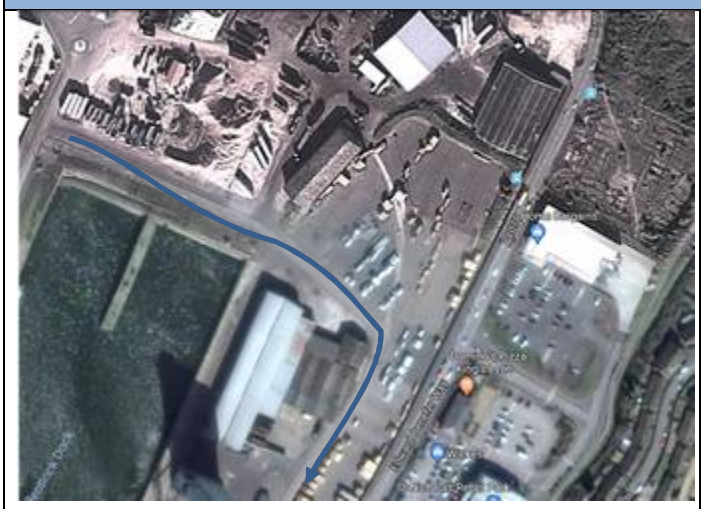
8.4.2.4. – Reverse view of bend

Description:	Continue through the port to 90° right hand bend.

Distance from previous Pinch Point	0.25km	Distance to following Pinch Point	0.05km

	Modification required	Reason for Modification	Additional Information:
	Street furniture/Manual steering	To provide clear envelope	Street furniture to be cleared on inside of bend to allow navigation.

Item No:	Title	OS Grid Ref:	TF 61756 21132
8.4.2	90° Right hand bend within the port	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A



8.4.3.1. – Aerial View of Location

8.4.3.2. – View prior to bend

8.4.3.3. – View after bend

Description:	Continue through the port to 90 right hand bend.

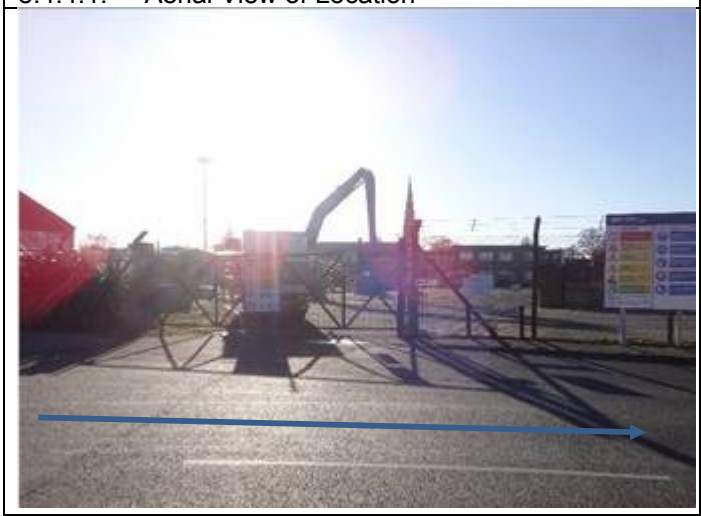
Distance from previous Pinch Point	0.5km	Distance to following Pinch Point	0.25km

	Modification required	Reason for Modification	Additional Information:
	Street furniture/Manual steering	To provide clear envelope	Area around bend required to be cleared.

Item No:	Title		
8.4.3	Right hand bend within the port	OS Grid Ref:	TF 61962 21018
		Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.4.4.1. – Aerial View of Location

8.4.4.2. – Port Exit



8.4.4.3. – Reverse back past Gatehouse

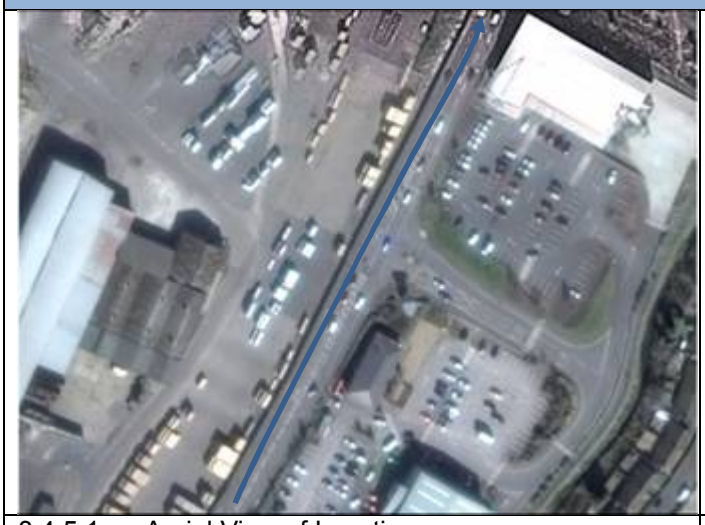
8.4.4.4. – Left turn onto Edward Benefer Way

Description:	Continue to port exit to junction with Edwards Benefer Way. At junction preform a 3 point turning manoeuvre to travel north on Edwards Benefer Way.

Distance from previous Pinch Point	0.25km	Distance to following Pinch Point	0.35km

	Modification required	Reason for Modification	Additional Information:
	Reverse manoeuvre and manual steering required	To exit the port	Loaded vehicle to turn left out of exit gate, reverse back past gate house and then turn left onto Edwards Benefer Way.

Item No:	Title	OS Grid Ref:	TF 61842 20712
8.4.4	Port exit	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-100A1.1



8.4.5.1. – Aerial View of Location

8.4.5.2. – View of splitter island

8.4.5.3. – View on junction

8.4.5.4. – View on junction

Description:	Continue on Edwards Benefer Way through junction with St Nicholas Retailer Park. At junction continue on Edwards Benefer Way

Distance from previous Pinch Point	0.35km	Distance to following Pinch Point	0.30km

	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at this location	Loaded vehicle will navigate past these splitter islands without any issues.

Item No:	Title	OS Grid Ref:	TF 62008 21014
8.4.5	Edwards Benefer Way junction with Retail Park	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.4.6.1. – Aerial View of Location

8.4.6.2. – View on left hand bend

8.4.6.3. – View on junction

8.4.6.4. – View on junction

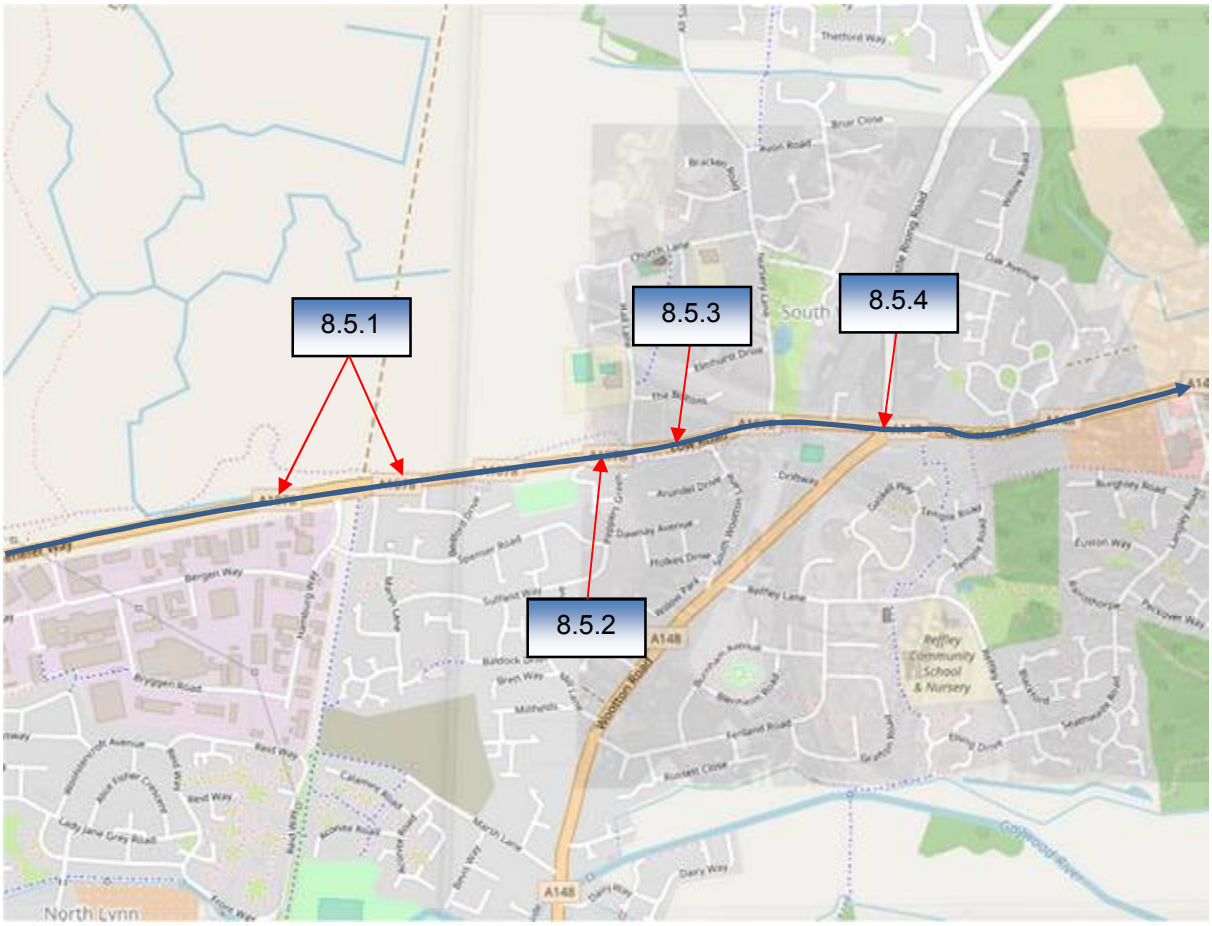
Description:	Continue on Edwards Benefer Way through junction with Estuary Road. At junction continue on Edwards Benefer Way.

Distance from previous Pinch Point	0.30km	Distance to following Pinch Point	1.50km

	Modification required	Reason for Modification	Additional Information:
	Modifications to street furniture required	To provide clear envelope	All street furniture on splitter islands to be removed.

Item No:	Title	OS Grid Ref:	TF 62054 21308
8.4.5	Edwards Benefer Way junction with Estuary Road	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.5. **Map Extract**



8.5.1.1. – Aerial View of Location

8.5.1.2. – View on left hand bend

8.5.1.3. – View on junction

8.5.1.4. – View on junction

Description:	Continue on Edwards Benefer Way through junction with Hamburg way. At junction continue on Edwards Benefer Way.

Distance from previous Pinch Point	1.50km	Distance to following Pinch Point	0.40km

	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	Loaded vehicle will navigate this location without any issues.

Item No:	Title		
8.5.1	Splitter islands at junction of Hamburg Way	OS Grid Ref:	TF 63321 22213
		Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.5.2.1. – Aerial View of Location

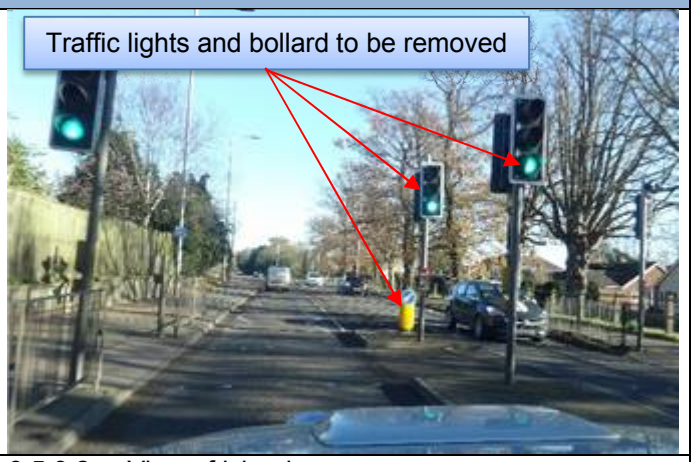
8.5.2.2. – View of island

Description:	Continue on Edwards Benefer Way.		
Distance from previous Pinch Point	0.40km	Distance to following Pinch Point	0.19km

	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	Loaded vehicle will navigate this location without any issues.

Item No:	Title	OS Grid Ref:	TF 63954 22324
8.5.2	Splitter islands at junction of Hall Way	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.5.3.1. – Aerial View of Location



8.5.3.2. – View of island

Description:	Continue on Edwards Benefer Way.		
Distance from previous Pinch Point	0.19km	Distance to following Pinch Point	0.19km

	Modification required	Reason for Modification	Additional Information:
	Modifications to street furniture required	To provide clear envelope	Splitter island to be cleared of street furniture.

Item No:	Title	OS Grid Ref:	TF 64045 22334
8.5.3	Splitter islands after junction of Hall Way	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.5.4.1. – Aerial View of Location | 8.5.4.2. – View of island 3

Description:	Continue on Edwards Benefer Way.		
Distance from previous Pinch Point	0.19km	Distance to following Pinch Point	0.35km

	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	Loaded vehicle will navigate this location without any issues.

Item No:	Title	OS Grid Ref:	TF 64342 22397
8.5.4	Splitter island at junction of Nursery Way	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

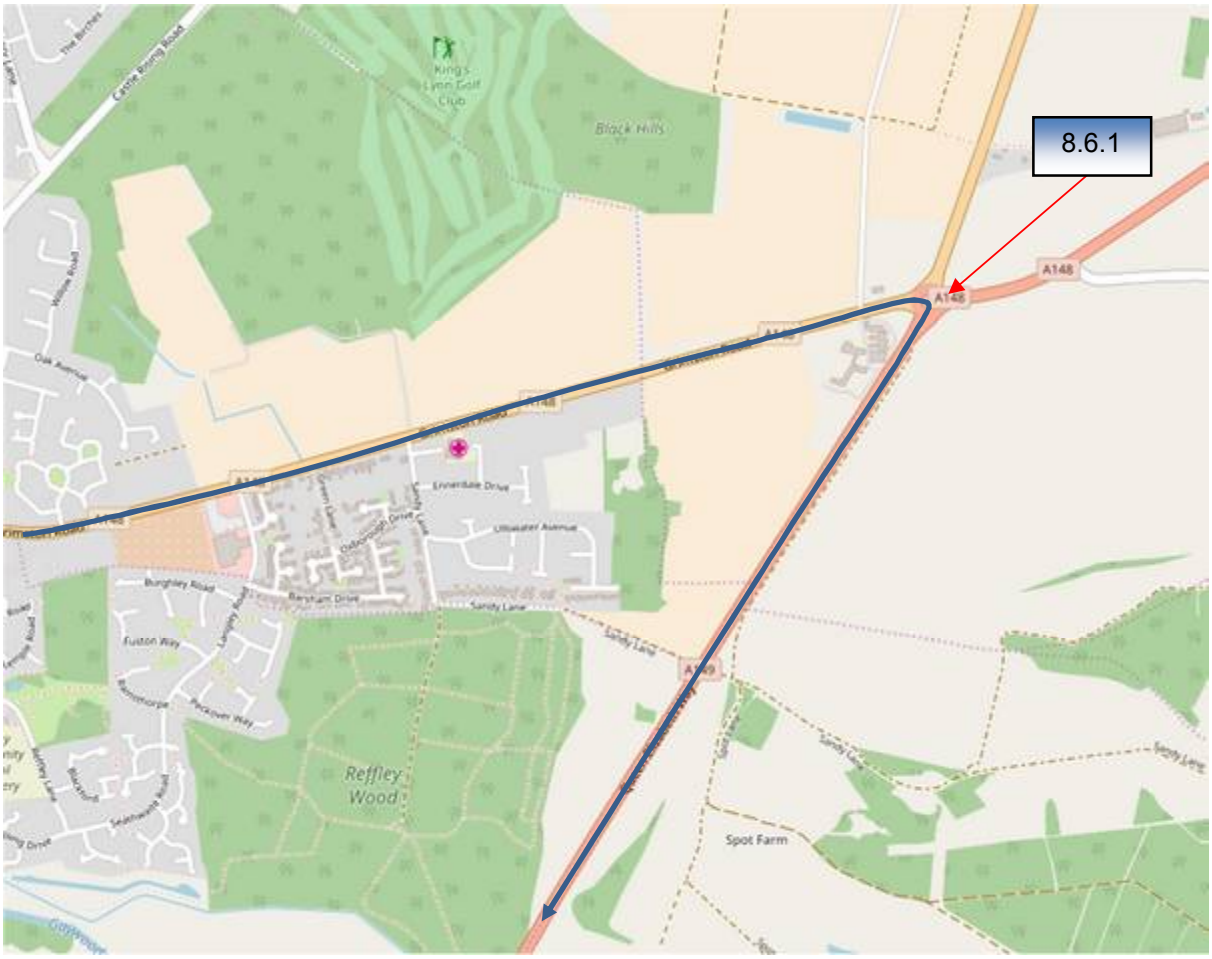
8.5.5.1. – Aerial View of Location | 8.5.5.2. – View of island

Description:	Continue on Edwards Benefer Way to junction with A148. At junction continue onto A148.		
Distance from previous Pinch Point	0.35km	Distance to following Pinch Point	2.30km

Load:	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	Loaded vehicle will navigate this location without any issues.

Item No:	Title	OS Grid Ref:	TF 66758 22973
8.5.5	Splitter islands at junction of A148	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.6. **Map Extract**



8.6.1.1. – Aerial View of Location

8.6.1.2. – View on prior to roundabout

8.6.1.3. – View on roundabout

8.6.1.4. – View on junction

Description:	Continue on A148 to roundabout junction with A149. At roundabout turn right onto A149.

Distance from previous Pinch Point	2.30km	Distance to following Pinch Point	3.00km

Load:	Modification required	Reason for Modification	Additional Information:
	Contraflow manoeuvre required	To allow navigation	A contra flow manoeuvre is required at this roundabout in order to navigate this roundabout.

Item No:	Title		
8.6.1	A148 roundabout junction with A149	OS Grid Ref:	TF 66767 22985
		Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-120A1.1

8.7. **Map Extract**

8.7.1.1. – Aerial View of Location

8.7.1.2. – View on prior to roundabout

8.7.1.3. – View on roundabout

8.7.1.4. – View of exit of roundabout

Description:	Continue on A149 to roundabout junction with A1076. At roundabout continue on A149.

Distance from previous Pinch Point	3.00km	Distance to following Pinch Point	2.00km

	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	No issues at this roundabout.

Item No:	Title	OS Grid Ref:	TF 65346 20197
8.7.1	A149 roundabout junction with A1076	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-130A1.1

8.7.2.1. – Aerial View of Location

8.7.2.2. – View of entrance to roundabout

8.7.2.3. – View on roundabout

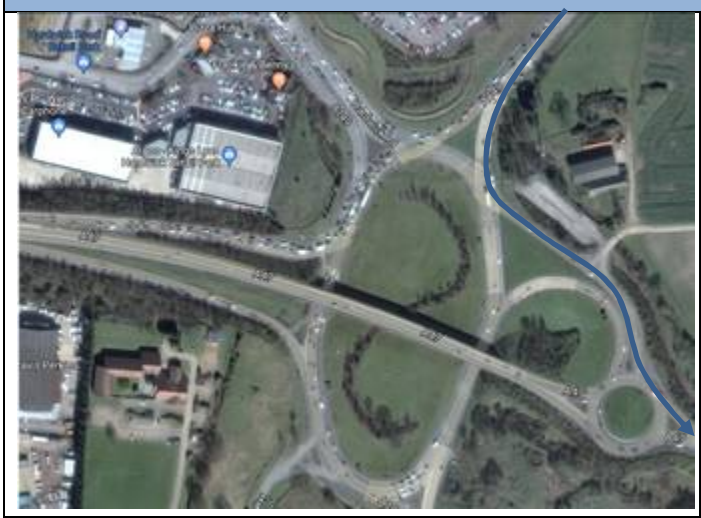
8.7.2.4. – View of exit of roundabout

Description:	Continue on A149 to roundabout junction with Sainsbury's. At roundabout continue on A149.

Distance from previous Pinch Point	2.00km	Distance to following Pinch Point	1.00km

	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	No issues at this roundabout.

Item No:	Title	OS Grid Ref:	TF 63970 18745
8.7.2	A149 roundabout junction with Sainsbury's.	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-140A1.1



8.7.3.1. – Aerial View of Location

8.7.3.2. – View of entrance to roundabout

8.7.3.3. – View on exit of roundabout

8.7.3.4. – View after roundabout exit

Description:	Continue on A149 to roundabout junction with A47. At roundabout turn right onto A47.

Distance from previous Pinch Point	1.00km	Distance to following Pinch Point	0.90km

	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	No issues at this roundabout.

Item No:	Title	OS Grid Ref:	TF 63297 18102
8.7.3	A149 roundabout junction with A47	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-150A1.1

8.7.3.1. – Aerial View of Location

8.7.3.2. – View of entrance to roundabout

8.7.3.3. – View on roundabout

8.7.3.4. – View of exit of roundabout

Description:	Continue on A47 to roundabout junction with A47. At roundabout turn left onto A47.

Distance from previous Pinch Point	0.90km	Distance to following Pinch Point	18.30km

Load:	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	No issues at this roundabout.

Item No:	Title	OS Grid Ref:	TF 63500 18057
8.7.4	A47 roundabout	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-160A1.1

8.8. **Map Extract**

8.8.1.1. – Aerial View of Location

8.8.1.2. – View of entrance to roundabout

8.8.1.3. – View on roundabout

8.8.1.4. – View of exit of roundabout

Description:	Continue on A47 to roundabout junction with A1122. At roundabout, continue straight on A47.

Distance from previous Pinch Point	18.30km	Distance to following Pinch Point	3.00km

Load:	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at location	No issues at this roundabout.

Item No:	Title	OS Grid Ref:	TF 78322 09905
8.8.1	A47/A1122 roundabout	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-170A1.1

	
8.8.2.1. – Aerial View of Location	8.8.2.2. – Reverse view of bend

Description:	Continue on A47 to overhead bridge.		
Distance from previous Pinch Point	3.00km	Distance to following Pinch Point	3.40km

	Modification required	Reason for Modification	Additional Information:
	No modification required	No issues at location	Clarification of the bridge clearance height was sought from the relevant authorities. Response has highlighted a clearance height of 5.2m although this should be reassessed prior to any delvieries being undertaken.

Item No:	Title		
8.8.2	Overhead bridge on A47	OS Grid Ref:	TF 81184 09866
		Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.8.3.1. – Aerial View of Location

8.8.3.2. – View of entrance to roundabout

8.8.3.3. – View on roundabout

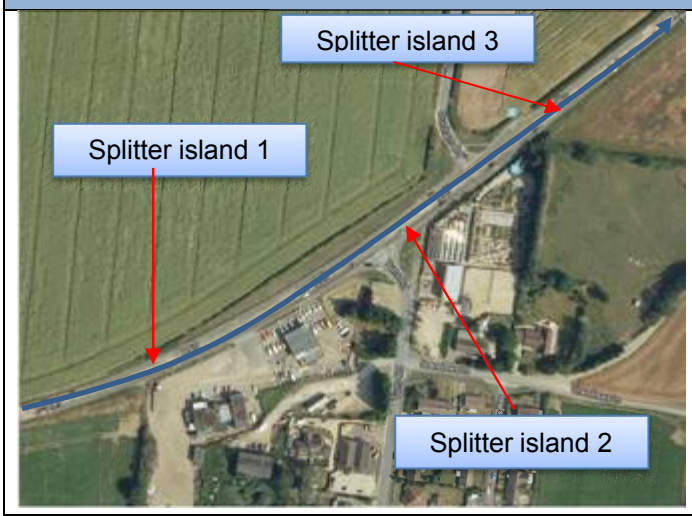
8.8.3.4. – View of exit of roundabout

Description:	Continue on A47 to roundabout at junction with Norwich Road. At roundabout, continue straight on A47.

Distance from previous Pinch Point	3.40km	Distance to following Pinch Point	3.40km

	Modification required	Reason for Modification	Additional Information:
	Modifications to street furniture, tree pruning and manual steering required.	To allow navigation	Street furniture on central island of roundabout to be removed due to oversail of loaded vehicle. Tree on central island to be pruned.

Item No:	Title	OS Grid Ref:	TF 84328 09486
8.8.3	Roundabout prior to site	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-180A1.1



8.8.4.1. – Aerial View of Location

8.8.4.2. – Splitter Island 1

8.8.4.3. – Splitter Island 2

8.8.4.4. – Splitter Island 3

Description:	Continue on A47 through Necton.

Distance from previous Pinch Point	3.40km	Distance to following Pinch Point	2.10km

	Modification required	Reason for Modification	Additional Information:
	No modifications required	No issues at this location	Loaded vehicle will navigate past these splitter islands without any issues.

Item No:	Title	OS Grid Ref:	TF 87765 10171
8.8.4	Splitter islands in Necton	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	N/A

8.8.5.1. – Aerial View of Location

8.8.5.2. – View of entrance to roundabout

8.8.5.3. – View on roundabout

Description:	Continue on A47 to proposed site entrance.

Distance from previous Pinch Point	2.10km	Distance to following Pinch Point	N/A

	Modification required	Reason for Modification	Additional Information:
	New site entrance to be constructed	To allow access into site	Swept Path Analysis has been undertaken on the proposed site entrance design and showed that the loaded vehicle could access the site based on that design.

Item No:	Title	OS Grid Ref:	TF 89255 11397
8.8.5	Proposed site entrance location	Customer	RHDHV
		Project	Norfolk Vanguard
		Drawing Nos	314597-190A1.1

9. Recommendations

9.1. If suitable agreements and necessary amendments to the route can be made with both the highway authorities and land owners then this route is recommended for the delivery of all the components.

9.2. These recommendations are made from a purely transport orientated view, and do not consider any political issues in terms of land ownership, or any other precincts raised, that may otherwise be restrictive. It is recommended to have adequate warning signs implemented to warn other road users at critical points along the route.

9.3. All hedges, shrubs, bushes, trees and overhanging branches along the nominated routes must be trimmed to allow a minimum envelope on the road of 7.5m wide by 7.5m high for load A and for load B they should be 6.0m by 6.0m.

9.4. All street furniture, signage etc. along the nominated route must be removed to allow a minimum envelope on the road of 7.5m by 7.5m high for load A and for load B they should be 6.0m by 6.0m. Other specific street furniture has been nominated in this report to facilitate ‘over-sailed’ and ‘swept’ areas.

10. Important notes

10.1. The loaded configuration is based on a generic load size identified by Royal Haskoning DHV. No technical drawings were received of the Transformer and it is possible that the load cannot be loaded in the configuration identified in this report. If this is the case, it may result in different loaded dimensions and as a result, the route becoming unsuitable.

10.2. Police escort or Pilot car will be required for all component trailers to negotiate the route, in order to assist with traffic control and control oncoming traffic flow.

10.3. The information contained in this report is privileged and confidential and is for the exclusive use of the client nominated herein.

10.4. All access diagrams and assessments are made and calculated for the road movement of loaded trailer equipment carrying the components. These dimensions are based on the turning circles and specification of Collett & Sons Ltd trailer equipment.

10.5. Land take is usually referred to when land is required from Private Land Owners; road widening is usually referred to when land is required within highways boundaries. The boundaries between private land and highways property are assumed by using obvious demarcation such as fence lines/hedges etc. It should be noted that actual boundaries between highways and private land are not substantiated in this report and can only be authenticated by carrying out land searches.

10.6. All drawings produced of swept path diagrams are illustrated by using the automatic steering principle for the steerable trailers, unless otherwise stated. However, all steerable trailers have a manual override system that if used will alter the path of the trailer.

10.7. All drawings are produced using Ordnance Survey ‘OS MasterMap’ mapping data, unless stated otherwise. Street furniture is not included on OS MasterMap data, this is plotted by taking measurements on site with a tape, actual road widths are also checked and adjusted on the map data accordingly. Where adjustments to the OS MasterMap data have been made this is indicated as ‘adjusted’ on the drawing.

10.8. All route assessment, proposed land-take and removal/re-instatement of nominated street furniture is deemed accurate by Collett & Sons Ltd at the date that this report is created. We cannot be held responsible for the development of future road schemes or alterations to the routes surveyed that may leave this report inaccurate.

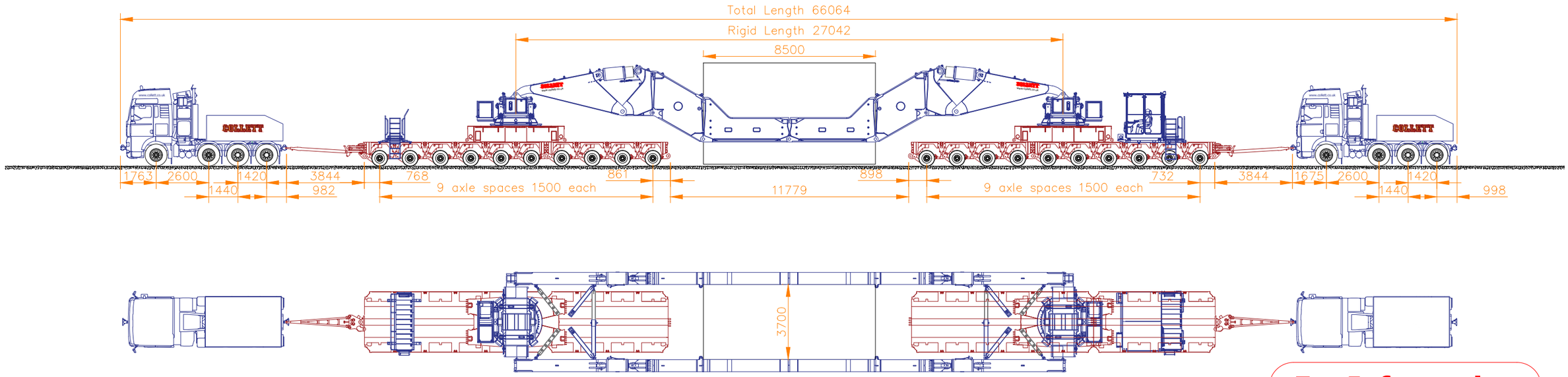
11. List of Drawing Numbers

11.1. Transformer

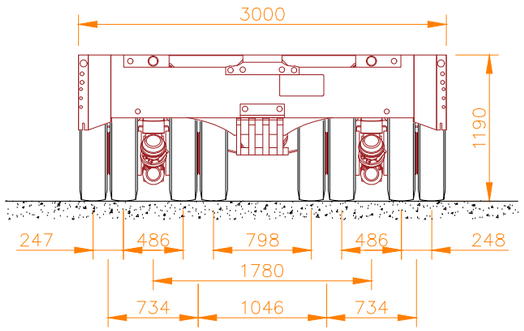
Drawing No	Title
314597-100A1.1	Exit from Kings Lyn port
314597-120A1.1	A148 roundabout junction with A149
314597-130A1.1	A149 roundabout junction with A1076
314597-140A1.1	A149 roundabout junction with Sainsbury's
314597-150A1.1	A149 roundabout junction with A47
314597-160A1.1	A47 Roundabout
314597-170A1.1	A47/A1122 Roundabout
314597-180A1.1	A47/Norwich Road Roundabout
314597-190A1.1	Proposed site entrance off A47

APPENDIX 1 - ELEVATION DRAWINGS OF SWEPT PATH MODELS

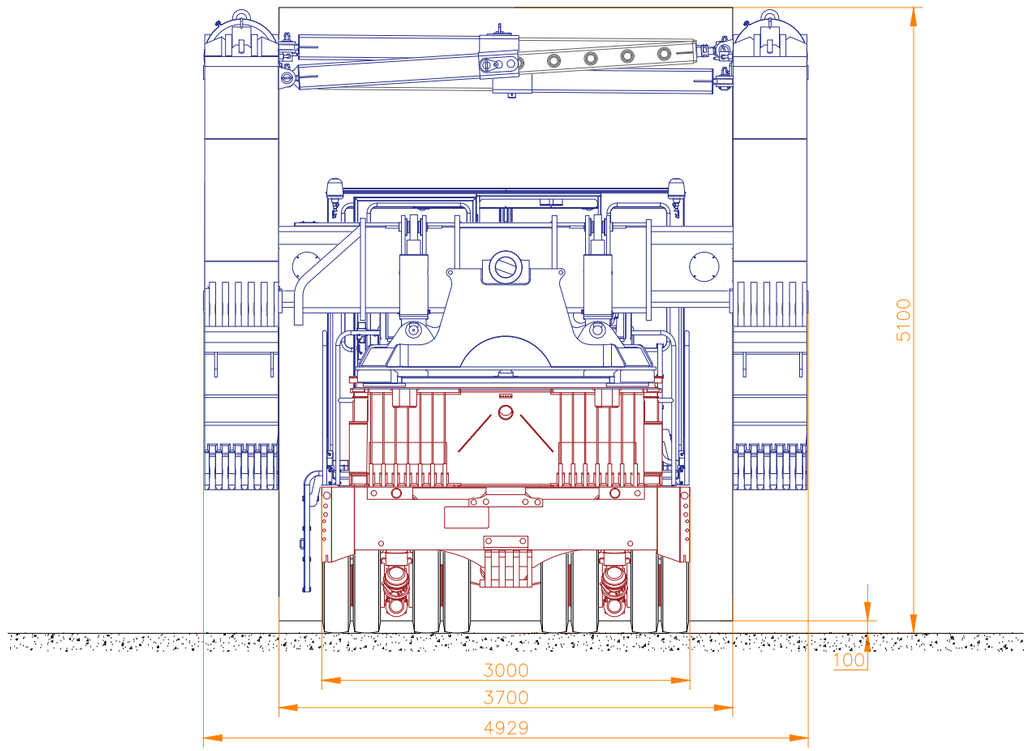
PLAN & SIDE ELEVATION VIEW. SCALE 1:200



TRAILER END ELEVATION VIEW. SCALE 1:50



END ELEVATION VIEW. SCALE 1:50



For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE PREPARATION OF THE TRANSPORT AREAS TO ENSURE THAT IT IS CAPABLE OF ACCOMMODATING THE LOADS GENERATED BY THE TRAILERS DURING ALL TRANSPORT / LOADING AND UNLOADING OPERATIONS. GROUND TO BE SUITABLY COMPACTED AND LEVELLED FOR A SAFE AND CONVENIENT TRANSPORT OPERATION.
5.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
6.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT. IT IS ASSUMED THE TRANSFORMER WILL BE FITTED WITH TRANSPORT BRACKETS.
7.	SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD. ALL STRAPS AND CHAINS TO BE TIGHTENED WITH RATCHET BINDERS. ANTI SLIP RUBBER MATTING TO BE USED BETWEEN THE TRAILER AND THE BASE OF THE LOAD INCLUDING ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
8.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
9.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Weights Table		
Type	Description	Weight
Type of Trailer	20 Axle Girder Bridge Combination	132.860 t
Type of Load	Transformer	200.000 t
	Total loaded weight excluding tractor units	332.860 t
	Load per axle line on trailer (equivalent to 2 file)	16.643 t
	Load per axle per file	8.322 t
	Load per wheel	2.080 t
Abnormal Load Classification: **Special Order (BE16)**		

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	19/03/2018	S.Mangham	19/03/2018

Description: First Issue

Client: **Royal Haskoning DHV**

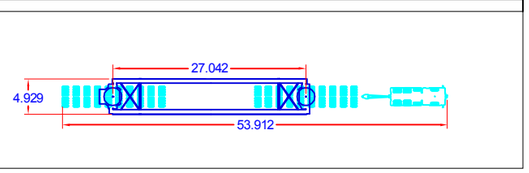
Project: **Norfolk Vanguard**

Title: **200 ton Transformer Transport Arrangement**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	As Noted	314597	COL-D-314597-1-1	1 of 1

APPENDIX 2 – SWEPT PATH ANALYSIS



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer

Exit Kings Lynn port onto Edward Benefer Way.

Caution

- A reverse manoeuvre is required when exiting the port in order to avoid modifications.
- Vehicle to turn left onto Edward Benefer towards town centre then reverse back into Port Entrance.
- Vehicle will then turn left onto Edward Benefer Way..

UK Grid Reference: TF 61846 20715

- The swept path analysis provided is produced from a purely transport orientated view, and does not consider any political issues in terms of land ownership, or any other precincts raised, that may otherwise be restrictive.
- The drawing has been produced from data created by Collett. A site visit has **not** been conducted to verify road widths or the presence of street furniture.
- All swept path diagrams and assessments are made and calculated for the road movement of loaded trailer equipment carrying Turbine components. These dimensions are based on the turning circles and specification of Collett & Sons Ltd trailer equipment.
- This SPA is a means of providing evidence of minimum requirements of any one vehicle as a footprint and there is no safety factor or margin included.
- Turbine delivery vehicles can be both left and right hand drive vehicles, therefore due to drivers perception it must be assumed that every vehicle will not follow the exact same line and so a margin of additional space should be allowed for.
- Land take is usually referred to when land is required from Private Land Owners; road widening is usually referred to when land is required within highways boundaries. The boundaries between private land and highways property are assumed by using obvious demarcation such as fence lines/hedges etc. It should be noted that actual boundaries between highways and private land are not substantiated in this report and can only be authenticated by carrying out land searches.
- Police escorts and permits will be required for the movement of all of the components. Form 'BE16' permits will also be required to undertake the movement of the vehicle shown in the swept path analysis. These permits are at the discretion of the Highway Agency (HA). Therefore, approval of these 'permits for movements' by the HA are a major consideration before the physical capability to deliver these components are undertaken.
- In critical areas, where modifications are required, the road construction must be formed to the minimum specification contained in the Turbine Manufactures Transport Guidance Notes.
- The Turbine Manufactures Transport Guidance Notes will state the minimum road width required for the transport of components. Any roads below this stated width will require widening to reflect this regardless of any swept path analysis not indicating modifications.
- The information is privileged and confidential and is for the exclusive use of the nominated client.
- All dimensions in meters

Area within red outline will be swept by tractor and trailer axles

Hatched area within red outline to be levelled and prepared to accept axle loadings

Area within magenta outline will be oversailed by load and projections

Area within green outline will be oversailed by trailer body

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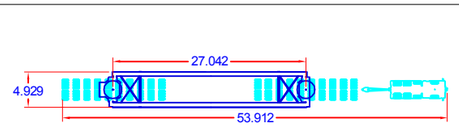
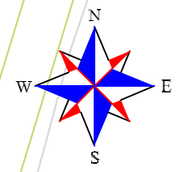
Victoria Terminal TEL: +44(0)8456 255288
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN S.MANGHAM	TITLE EXIT KINGS LYNN PORT ONTO EDWARD BENEFER WAY		
DATE 20/03/2018	MAPPING ORDNANCE SURVEY Not Adjusted	CUSTOMER ROYAL HASKONING DHV	
SCALE 1:500 / SIZE A3	PINCH POINT IDENTIFIED BY COLLETT	SITE NORFOLK VANGUARD	DWG. NO 314597-100A1.1



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer



Continue on A148 to roundabout junction with A149 Queen Elizabeth Way,

Caution

- Loaded vehicle will navigate this roundabout utilising a contraflow manoeuvre.

UK Grid Reference: TF 66754 22967

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Area within red outline will be swept by tractor and trailer axles

Hatched area within red outline to be levelled and prepared to accept axle loadings

Area within magenta outline will be oversailed by load and projections

Area within green outline will be oversailed by trailer body

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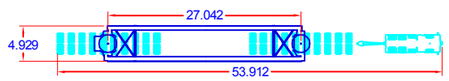
Victoria Terminal TEL: +44(0)8456 255288
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN S.MANGHAM	TITLE A148 ROUNDBAOUT JUNCTION WITH A149		
DATE 20/03/2018	MAPPING ORDNANCE SURVEY Not Adjusted	CUSTOMER ROYAL HASKONING DHV	
SCALE 1:500 SIZE A3	PINCH POINT IDENTIFIED BY COLLETT	SITE NORFOLK VANGUARD	DWG. NO 314597-120A1.1



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer

Continue on A149 to roundabout to at junction with A1076.
At roundabout continue on A149.

Caution

- Loaded vehicle will navigate this roundabout utilising manual steering.

UK Grid Reference: TF 65339 20203

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Hatched area within red outline to be levelled and prepared to accept axle loadings

Area within magenta outline will be oversailed by load and projections

Area within green outline will be oversailed by trailer body

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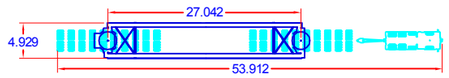
COLLETT & SONS LIMITED
Victoria Terminal TEL: +44(0)8456 255288
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN S.MANGHAM	TITLE A149 ROUNDABOUT JUNCTION WITH B1145		
DATE 20/03/2018	MAPPING ORDNANCE SURVEY Not Adjusted	CUSTOMER ROYAL HASKONING DHV	
SCALE 1:500 SIZE A3	PINCH POINT IDENTIFIED BY COLLETT	SITE NORFOLK VANGUARD	DWG. NO 314597-130A1.1



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer

Continue on A149 to roundabout to at junction with Sainburys.
At roundabout continue on A149.

****Caution****

- Loaded vehicle will navigate this roundabout utilising manual steering.

UK Grid Reference: TF 63957 18715

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Area within magenta outline will be oversailed by load and projections

Area within green outline will be oversailed by trailer body

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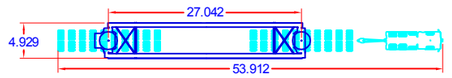
Victoria Terminal TEL: +44(0)8456 255288
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN S.MANGHAM	TITLE A149 ROUNDABOUT JUNCTION WITH SAINBURYS		
DATE 20/03/2018	MAPPING ORDNANCE SURVEY Not Adjusted	CUSTOMER ROYAL HASKONING DHV	
SCALE 1:500	SIZE A3	PINCH POINT IDENTIFIED BY COLLETT	SITE NORFOLK VANGUARD	DWG. NO 314597-140A1.1



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer

Continue on A149 to roundabout junction with A47,
At junction turn right onto A47

****Caution****

- Loaded vehicle will navigate this roundabout utilising manual steering.

UK Grid Reference: TF 63240 18156

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- All dimensions in meters

Area within red outline will be swept by tractor and trailer axles

Hatched area within red outline to be levelled and prepared to accept axle loadings

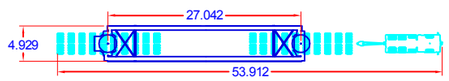
Area within magenta outline will be oversailed by load and projections

Area within green outline will be oversailed by trailer body

COLLETT
EXPERTS IN MOTION

COLLETT & SONS LIMITED
Victoria Terminal TEL: +44(0)8456 255288
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN S.MANGHAM		TITLE A149/A47 ROUNDABOUT JUNCTION	
DATE 20/03/2018		MAPPING ORDNANCE SURVEY Not Adjusted	CUSTOMER ROYAL HASKONING DHV
SCALE 1:500	SIZE A3	PINCH POINT IDENTIFIED BY COLLETT	SITE NORFOLK VANGUARD / DWG. NO 314597-150A1.1



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer

Continue on A47 to roundabout.
At roundabout, turn left onto A47.

****Caution****

- Loaded vehicle will navigate this roundabout utilising manual steering.

UK Grid Reference: TF 63500 18063

- The swept path analysis provided is produced from a purely transport orientated view, and does not consider any political issues in terms of land ownership, or any other precincts raised, that may otherwise be restrictive.
- The drawing has been produced from data created by Collett. A site visit has **not** been conducted to verify road widths or the presence of street furniture.
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Area within red outline will be swept by tractor and trailer axles

Hatched area within red outline to be levelled and prepared to accept axle loadings

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Area within green outline will be oversailed by trailer body

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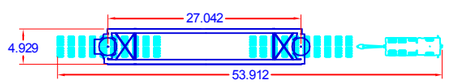
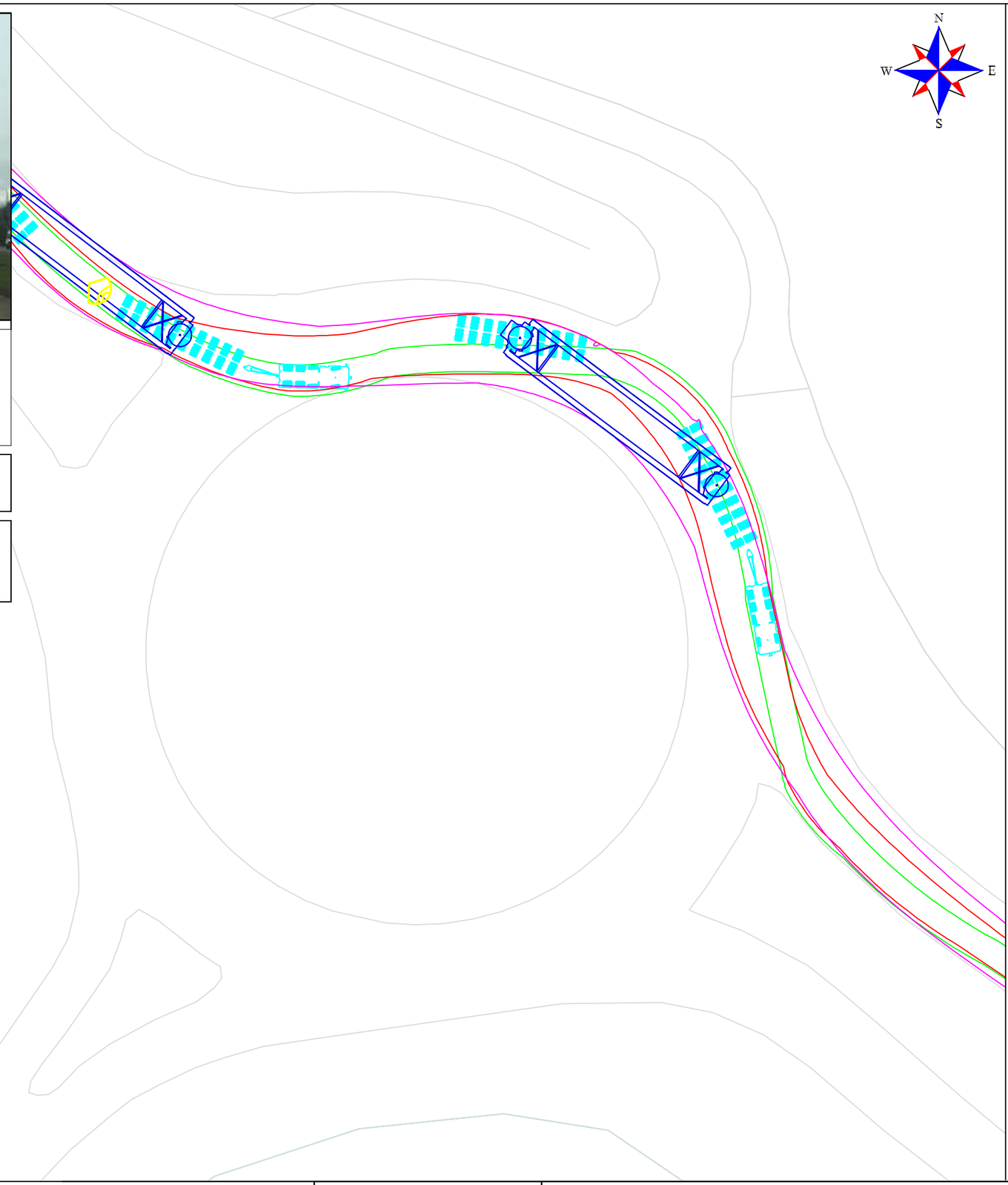
Victoria Terminal TEL: +44(0)8456 255288
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN S.MANGHAM	TITLE A47 ROUNDABOUT		
DATE 20/03/2018	MAPPING ORDNANCE SURVEY Not Adjusted	CUSTOMER ROYAL HASKONING DHV	
SCALE 1:500 SIZE A3	PINCH POINT IDENTIFIED BY COLLETT	SITE NORFOLK VANGUARD	DWG. NO 314597-160A1.1



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer



Continue on A47 to roundabout at junction with A1122.
At roundabout, continue on A47.

Caution

- Loaded vehicle will navigate this roundabout utilising manual steering.

UK Grid Reference: TF 78318 09912

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Area within magenta outline will be oversailed by load and projections

Area within green outline will be oversailed by trailer body

COLLETT
EXPERTS IN MOTION

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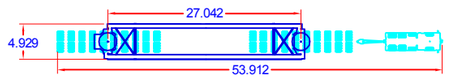
Victoria Terminal TEL: +44(0)8456 255288
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN S.MANGHAM	TITLE A47/A1122 ROUNDABOUT		
DATE 20/03/2018	MAPPING ORDNANCE SURVEY Not Adjusted	CUSTOMER ROYAL HASKONING DHV	
SCALE 1:500	SIZE A3	PINCH POINT IDENTIFIED BY COLLETT	SITE NORFOLK VANGUARD	DWG. NO 314597-170A1.1



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer

Continue on A47 to roundabout with Norwich Road.
At roundabout, continue on A47.

Caution

- Road signs on central island of the roundabout to be removed.
- Trees on roundabout to be pruned.
- Girder Bridge to be raised to clear central island.

UK Grid Reference: TF 84305 09509

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Area within magenta outline will be oversailed by load and projections

Area within green outline will be oversailed by trailer body

COLLETT
EXPERTS IN MOTION

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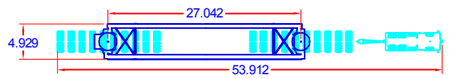
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN S.MANGHAM	TITLE A47/NORWICH ROAD ROUNDABOUT		
DATE 20/03/2018	MAPPING ORDNANCE SURVEY Not Adjusted	CUSTOMER ROYAL HASKONING DHV	
SCALE 1:500 SIZE A3	PINCH POINT IDENTIFIED BY COLLETT	SITE NORFOLK VANGUARD	DWG. NO 314597-180A1.1



Swept Path indicates trailer utilising MANUAL steering

20 Row Girder Bridge Arrangement for the movement of a 200Te Transformer

Continue on A47 to proposed site entrance.

****Caution****

- Proposed junction alignment can be navigated utilising manual steering.

UK Grid Reference: TF 89245 11382

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COLLETT
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Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN	S.MANGHAM	TITLE	PROPOSED SITE ENTRANCE OFF A47		
DATE	20/03/2018	MAPPING	PROVIDED BY CLIENT	CUSTOMER	ROYAL HASKONING DHV
SCALE 1:500	SIZE A3	PINCH POINT IDENTIFIED BY	COLLETT	SITE	NORFOLK VANGUARD
				DWG. NO	314597-190A1.1

APPENDIX 3 - COUNCIL CORRESPONDENCE AND COMMENTS

COLLETT
EXPERTS IN MOTION

Victoria Terminal
Albert Road
HALIFAX
West Yorkshire
HX2 0DF

Mistral Point
AW Nielsen Road
GOOLE
East Yorkshire
DN14 6UE

Baltic House
Central Dock Road
GRANGEMOUTH
Central Scotland
FK3 8TY

Tel. +44 (0) 8456 255 233
Fax +44 (0) 8456 255 244
Email info@collett.co.uk
www.collett.co.uk

Our Ref:	314597	**Date:**	10th March 2018

Application for 'Confirmation of suitable route' for Norfolk Vanguard.

To Whom it May Concern,

I am currently carrying out a survey to a site called 'Norfolk Vanguard', off A47 near Necton.

Could you please **confirm in writing** that the **route** detailed below and all structures that are involved in your area on this route are suitable in terms of axle loadings, spacing and Gross vehicle weights, in connection with the loaded vehicle specifications below.

Route:

- Exit Kings Lynn Harbour onto Edward Benefer Way,
- Continue on Edward Benerfer Way to merge onto Grimston Road A148.
- Continue on A148 to roundabout junction with A149 Queen Elizabeth Way,
- At roundabout turn right onto A149 Queen Elizabeth Way,
- Continue on A149 through 2 roundabouts to roundabout junction with A47,
- At roundabout turn left onto A47,
- At roundabout turn left onto A47,
- At roundabout, continue on A47,
- At roundabout continue on A47,
- Continue on A47 to proposed site entrance on the right hand side at approx. OS Grid refs: TF 89245 11382.

Load A: Girder Bridge Only

Rigid Length	27.042	Overall Length	49.70	Overall Width	7.39	Overall Height	4.929	Gross Vehicle Weight	332.86Te

-

	1	2	3	4	5	6	7	8	9	10	11	12	13
Number of wheels per axle	8	8	8	8	8	8	8	8	8	8	8	8	8
Axle Weight (Te.)	16.64	16.64	16.64	16.64	16.64	16.64	16.64	16.64	16.64	16.64	16.64	16.64	16.64
Axle Spacing		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	11.78	1.50	1.50	1.50

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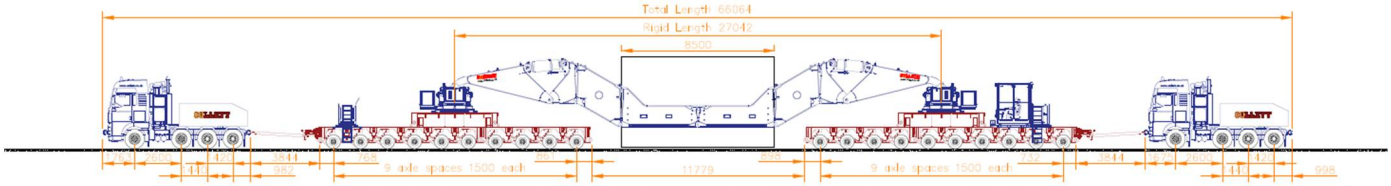
www.collett.co.uk

14	15	16	17	18	19	20
8	8	8	8	8	8	8
16.64	16.64	16.64	16.64	16.64	16.64	16.64
	1.50	1.50	1.50	1.50	1.50	1.50



Should there be any problem with any part of the route detailed, I would appreciate your immediate response.

Your urgent response would be greatly appreciated.
Many thanks & best regards

Steven Mangham

COLLETT & SONS LTD

COLLETT
EXPERTS IN MOTION

Victoria Terminal
Albert Road
HALIFAX
West Yorkshire
HX2 0DF

Mistral Point
AW Nielsen Road
GOOLE
East Yorkshire
DN14 6UE

Baltic House
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FK3 8TY

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Fax +44 (0) 8456 255 244
Email info@collett.co.uk

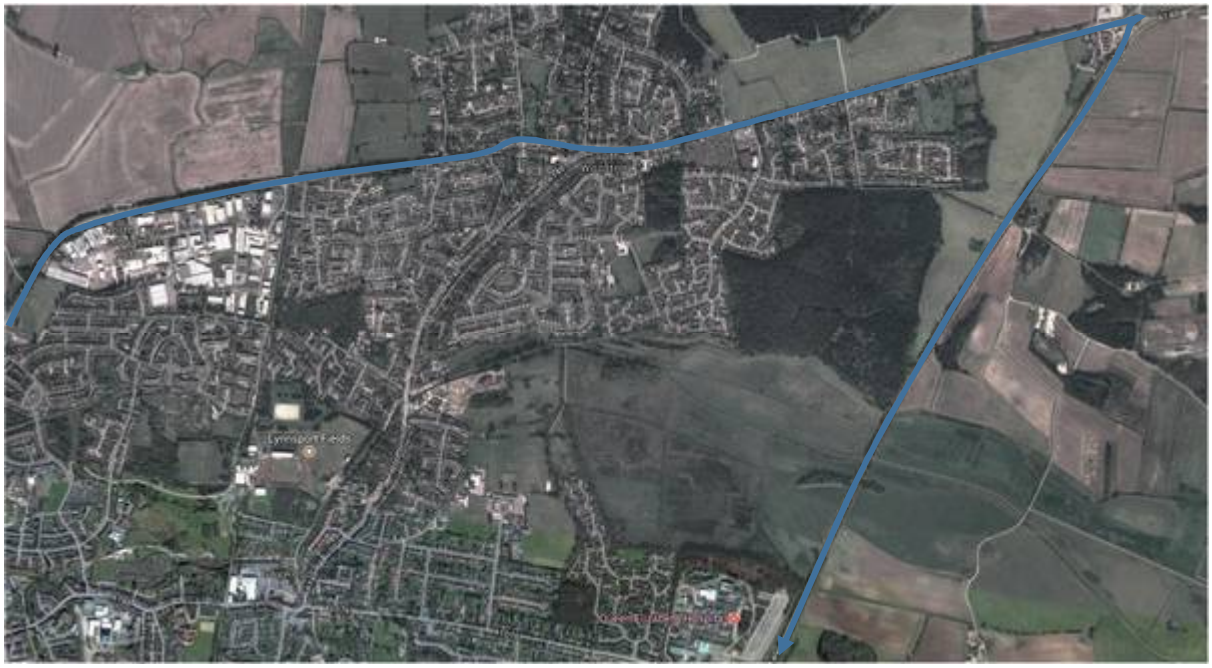
www.collett.co.uk

Map of Routes

Route A

Exit from Kings Lynn Harbour on Edward Benefer Way.

Continue on Edward Benefer Way to merge on Grimston Road A148.



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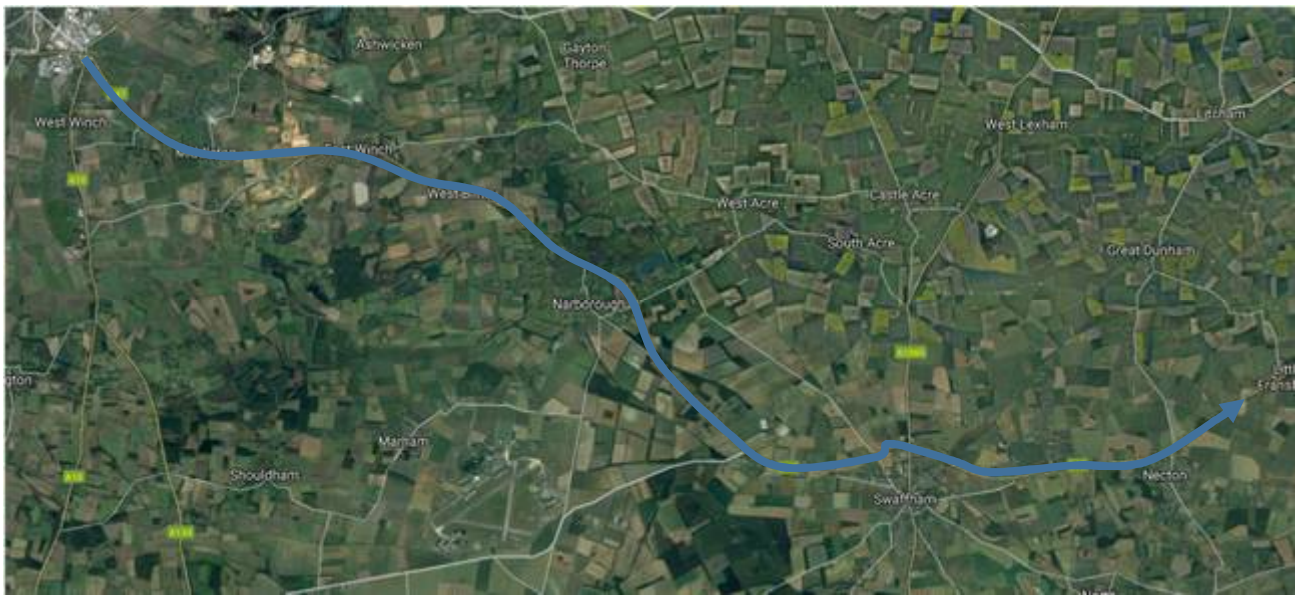
Continue on A148 to roundabout jucntion with A47.

Continue on A47 to Site



Steven Mangham

From: Howell, Tania <Tania.Howell@jacobs.com>
Sent: 21 March 2018 08:19
To: Steven Mangham
Subject: RE: Confirmation of Suitable Route - 314597

Good morning Steven,

Thank you for your enquiry.
I can confirm that neither of the route options will affect any Historic Railways Estate structures.

Regards
Tania

Tania Howell
Abnormal Loads Officer
Jacobs
DDI: 0118 946 8911

If your mail concerns abnormal load movements, please reply to RSGBRB@jacobs.com

---

From: Steven Mangham [mailto:Steven.Mangham@collett.co.uk]
Sent: 20 March 2018 16:54
To: abloads.area6@kier.co.uk; roadspace.area6@kier.co.uk; abnormalloads@norfolk.gov.uk; Abnormal Loads Contact (AbnormalLoadsContact@networkrail.co.uk) <AbnormalLoadsContact@networkrail.co.uk>; abnormal.loads@canalrivertrust.org.uk; RSGBRB@jacobs.com
Subject: [EXTERNAL] Confirmation of Suitable Route - 314597

Good Afternoon,

To Whom It May Concern:

Please find attached a Confirmation of Suitable Route request for Norfolk Vanguard.

Please note that, at present, we do not require a permit to move. This request is for information purposes only to ensure that the route is suitable to accept the axles loads proposed and to identify any potential structure issues there may be on the identified route.

If you could response in writing to steven.mangham@collett.co.uk that would be much appreciated.

Kind Regards,

Steven Mangham
Consulting Team Manager/Renewables Project Manager

Collett & Sons Ltd | Victoria Terminal | Albert Road | Halifax | HX2 0DF | UK
Tel: +44 (0)8456 255288 | Fax: +44 (0)8456 255244 | Mob: [redacted]
Email: steven.mangham@collett.co.uk | Web: www.collett.co.uk

Steven Mangham

From: Administrator
Sent: 26 March 2018 12:11
To: Steven Mangham
Subject: FW: 2018-03-23 00-00 Confirmation_of_suitable_route_314597
Attachments: 2018-03-23 00-00 Confirmation_of_suitable_route_314597.pdf; 2018-03-23 00-00 Confirmation_of_suitable_route_314597.xlsx

Michael Collett
Director

Collett & Sons Ltd | Victoria Terminal | Albert Road | Halifax | HX2 0DF | UK
Tel: +44 (0)8456 255233 | Fax: +44 (0)8456 255244 | [redacted]

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www.collett.co.uk

From: Hughes, John [mailto:John.Hughes@kier.co.uk]
Sent: 26 March 2018 11:59
To: info at collett
Cc: Nick Hyde (Nicolas.hyde@highwaysengland.co.uk); Chimwemwe Banda
Subject: 2018-03-23 00-00 Confirmation_of_suitable_route_314597

Steven Mangham
Proposals such as in the attached have to be dealt with by due process.
If you have not already done so you must submit a Special Order Notification to:-

> Abnormal Loads
> Highways England | The Cube | 199 Wharfside Street | Birmingham | B1 1RN
> **Tel**: 0300 470 3102
> **Abnormal Loads Team Tel:** 0300 470 3004
> Web: http://www.highways.gov.uk

I believe that this is done via ESDAL.

There are potentially twenty structures belonging to Highways England that may be affected by your proposal, though I note that you are avoiding some of the larger span structures in your attached proposal.

The structures potentially affected by your proposal are listed in the attached excel spreadsheet.
We at Kier are unable to process your proposal further without a notification and Special Order reference from Highways England.

Regards

John Hughes Bsc. C.Eng MICE

Project Manager Structures
Abnormal Loads Coordinator Highways England Areas 6 and 8

Kier Services I **Highways** I Sandy Highways Depot, Beamish Close, Sandy **SG19 1SD**
T: I 01223 255255 I E: john.hughes@kier.co.uk
Web www.kier.co.uk

Steven Mangham

From: Nicholson Katie <Katie.Nicholson@networkrail.co.uk> on behalf of Network Rail Abnormal Loads <NetworkRailAbnormalLoads@networkrail.co.uk>
Sent: 23 March 2018 13:20
To: Steven Mangham
Subject: QID 615 RE: Confirmation of Suitable Route - 314597

Hi Steven,

Your proposed movement does not affect any Network Rail owned road over rail bridges or tunnels therefore we have no objection to your proposed routes.

Please note we only check the load carrying capacity of Network Rail owned road over rail bridges affected we do not check anything else including:

- Load carrying capacity of level crossings
- Clearance to bridge parapets
- Clearance under a rail bridge
- Clearance to overhead wires at level crossings

Many Thanks

Katie Nicholson
Abnormal Loads Assistant
Abnormal Loads Help Desk: 01908 783 140

NetworkRail Route Services

Abnormal Loads | National Records Group | Route Services
The Quadrant | Elder Gate | Milton Keynes | MK9 1EN
D 01908 783 140 | **E** Katie.Nicholson@networkrail.co.uk **W** Network Rail Abnormal Loads

---

From: Steven Mangham [mailto:Steven.Mangham@collett.co.uk]
Sent: 20 March 2018 16:53
To: abloads.area6@kier.co.uk; roadspace.area6@kier.co.uk; abnormalloads@norfolk.gov.uk; Network Rail Abnormal Loads; abnormal.loads@canalrivertrust.org.uk; rsgbrb@jacobs.com
Subject: Confirmation of Suitable Route - 314597

Good Afternoon,

To Whom It May Concern:

Please find attached a Confirmation of Suitable Route request for Norfolk Vanguard.

Please note that, at present, we do not require a permit to move. This request is for information purposes only to ensure that the route is suitable to accept the axles loads proposed and to identify any potential structure issues there may be on the identified route.

If you could response in writing to steven.mangham@collett.co.uk that would be much appreciated.

Kind Regards,

Steven Mangham
Consulting Team Manager/Renewables Project Manager

Collett & Sons Ltd | Victoria Terminal | Albert Road | Halifax | HX2 0DF | UK
Tel: +44 (0)8456 255288 | Fax: +44 (0)8456 255244 | Mob: [redacted]
Email: steven.mangham@collett.co.uk | Web: www.collett.co.uk

Steven Mangham

From: ETD Bridges <pandt.bridges@norfolk.gov.uk>
Sent: 21 March 2018 12:15
To: Steven Mangham
Subject: RE: MOVING - NO DATE FW: Confirmation of Suitable Route - 314597 ABNORMAL LOAD

Hi Steven

I have checked the routes and do not see any problems with the proposed vehicle/axle loads travelling over the NCC owned structures on the route. NCC are not responsible for the structures on the A47 and you will need to contact Highways England for them to comment on the suitability of that part of the route.

Regards

Mark

Mark North
Bridge Network Engineer
Highways & Transport
Community and Environmental Services

Direct Dial Telephone No: 01603 223804
Direct Fax No: 01603 223305
E-mail: mark.north@norfolk.gov.uk

Norfolk County Council
General enquiries: 0344 800 8020 or information@norfolk.gov.uk
Website: www.norfolk.gov.uk

From: Abnormal Loads
Sent: 21 March 2018 08:56
To: ETD Bridges <pandt.bridges@norfolk.gov.uk>
Subject: MOVING - NO DATE FW: Confirmation of Suitable Route - 314597 ABNORMAL LOAD

From: Steven Mangham [mailto:Steven.Mangham@collett.co.uk]
Sent: 20 March 2018 16:53
To: abloads.area6@kier.co.uk; roadspace.area6@kier.co.uk; Abnormal Loads <abnormalloads@norfolk.gov.uk>; Abnormal Loads Contact (AbnormalLoadsContact@networkrail.co.uk) <AbnormalLoadsContact@networkrail.co.uk>; abnormal.loads@canalrivertrust.org.uk; rsgbrb@jacobs.com
Subject: Confirmation of Suitable Route - 314597

Good Afternoon,

To Whom It May Concern:

Please find attached a Confirmation of Suitable Route request for Norfolk Vanguard.

Please note that, at present, we do not require a permit to move. This request is for information purposes only to ensure that the route is suitable to accept the axles loads proposed and to identify any potential structure issues there may be on the identified route.

If you could response in writing to steven.mangham@collett.co.uk that would be much appreciated.

Kind Regards,

Steven Mangham
Consulting Team Manager/Renewables Project Manager

Collett & Sons Ltd | Victoria Terminal | Albert Road | Halifax | HX2 0DF | UK
Tel: +44 (0)8456 255288 | Fax: +44 (0)8456 255244 | [redacted]
Email: steven.mangham@collett.co.uk | Web: www.collett.co.uk

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