

**Norfolk Vanguard Offshore Wind Farm**

# **Norfolk Vanguard Limited**

## **Norfolk County Council Unresolved Traffic Matters Position Statement**

Document Reference: ExA; AS; 10.D9.7

Deadline 9

Date: 06 June 2019

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*Photo: Kentish Flats Offshore Wind Farm*



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## 1 NORFOLK COUNTY COUNCIL UNRESOLVED TRAFFIC MATTERS

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### 1.1 Introduction

1. A number of traffic related issues captured within the Norfolk County Council (NCC) Statement of Common Ground submitted at Deadline 9 remain unresolved. This position statement from the Applicant sets out the final position on these matters, specifically in relation to:

- Requested trenchless crossings of the B1149
- Concerns raised within a Road Safety Audit of the proposed package of highway measures along the B1145
- Coordination between Norfolk Vanguard and Hornsea Project Three

### 1.2 Position Statement

2. Table 1 sets out the position of both the Applicant and NCC in relation to the unresolved matters as identified within the respective Statements of Common Ground.

**Table 1 Unresolved Matters**

NCC position	Norfolk Vanguard position
Requested trenchless crossing of the B1149	
<p><b>Position at 30.05.2019</b></p> <p>The applicant has submitted document AS-047 “Technical Note Responding to Norfolk County Councils Request for Trenchless Crossings of the A1067 and B1149”. Appendix “F” to that document includes a drawing to show the proposed traffic management. The intention is to widen the road (as indicated pink) but the tapers at both ends of the pink land are very short – i.e. it is not clear if HGVs or abnormal loads will be able to negotiate the sharp diversion onto/off the pink land. The applicant has not extended the length of the pink land because it lies outside their control. Accordingly, we are still not convinced this is achievable.</p> <ol style="list-style-type: none"> <li>1) Subject to clarifying the above, the re-instatement specification would be acceptable.</li> <li>2) At this stage we are still not yet convinced the proposed traffic management measures will work and we need to see swept path analysis. This is important because the applicant has repeatedly indicated they do not control sufficient land to carry out trenchless crossing and it now appears they may not control sufficient land to carry out open cut either.</li> </ol> <p>The applicant needs to provide swept path analysis to show that HGVs and abnormal loads can physically negotiate the proposed roadworks to the B1149.</p> <p>If additional land is required outside the pink land, then the applicant needs to demonstrate they either have control of that land or that it forms part of the public highway.</p>	<p>In response to requests from Norfolk County Council for trenchless crossings of the A1067 and B1149 to be included in Requirement 16 of DCO, the Applicant undertook further investigations and traffic counts and submitted a trenchless crossing report to the Examination at Deadline 7.5 (ExA;AS;10.7.5.1) which demonstrated that:</p> <ul style="list-style-type: none"> <li>• Forecast traffic flows along the A1067 would exceed the total vehicles per hour level at which single lane traffic management may be undertaken without network disruption. A trenchless crossing of the A1067 has been named in DCO Requirement 16 in the updated DCO submitted at Deadline 8;</li> <li>• Forecast cumulative traffic flows along the B1149 would fall well below the total vehicles per hour level at which single lane traffic management would lead to network disruption;</li> <li>• That ground conditions at the B1149 crossing indicate that the road subsurface has good load bearing properties and a specification for the reinstatement is readily achievable that will minimise the potential for future maintenance liability, and therefore a trenchless crossing is not necessary on this basis.</li> </ul> <p>Following a review of this report, Norfolk County Council requested (on 28.05.2019) that the Applicant provide swept path drawings to demonstrate that abnormal loads can physically negotiate the proposed roadworks associated with the open cut trench solution. This request is captured in the joint position statement submitted at Deadline 8 (ExA; ISH6; 10.D8.2). The Applicant provided a set of three drawings (attached as Appendix A to this document) to Norfolk County Council on 03.06.2019. These demonstrate that the traffic management can be designed so that abnormal loads can physically negotiate the roadworks.</p> <p>Norfolk County Council responded on 05.06.2019 stating that further information was now required on safe working distances for deep excavations. The swept path drawings included the normal 0.5m safe working distance, whereas safe working distance for deep excavations should be 1.2m. Norfolk County Council went on to confirm that in the</p>

### NCC position

#### Position at 06.06.2019

The applicant's method of working is not safe.

The swept path analysis does indicate that large, articulated vehicles will be able to negotiate the works area, albeit with very little clearance.

However, the swept path analysis is totally reliant upon a 0.5m safety zone outside the work area. (i.e. the buffer between vehicles and roadworks/the open trench excavation). This is a National Speed Limit road, so should have a 1.2 m safety zone. Whilst this can be reduced with the use of a Temporary 30mph Speed Restriction, it is not so in the case of the excavation exceeding 1.2 metre depth.

The increased safety zone is related to the potential for trench shoring and consideration for ground conditions and angle of repose in the soil. NCC do not believe this can be mitigated.

In the circumstances irrespective of whether PINS grant consent or not, the applicants cannot proceed with open cut trenching unless they can provide a 1.2m wide safety zone – which at present they cannot do.

In the circumstances NCC must insist that trenchless crossing is used, and **NCC accept no liability should an unsafe method of working be approved by PINS – including any subsequent action for manslaughter.**

### Norfolk Vanguard position

absence of this detail on the drawings they must continue to insist on a trenchless crossing of the B1149.

The safe working distance of 1.2m can readily be accommodated in the final design of these roadworks. The area of road widening (the pink area shown on the drawings in Appendix A) can be widened further to the west within the Order limits, and the coned off working area can be narrowed from 20m down to 15m if required as there will be no requirement to maintain a running track between the cable trenches. This would provide additional space for vehicles to manoeuvre (combined with extending the road further to the west) to ensure that the swept path remains safely negotiable, whilst at the same time maintaining a safe working area. In addition, speed restrictions can be introduced for vehicles as they traverse the single lane management. Alternatively the 1.5m deep excavation can be designed to provide additional lateral support to minimise the risks associated with working in proximity to deep excavation and ensuring a 0.5m distance of separation would be safe. These options are all within the control of the Applicant and can be readily addressed during detailed design. As Norfolk County Council highlight in their position at the 30.05.2019, land within the highway boundary, outside of the Order limits, would also be available to extend the tapers of the road widening if required, depending on the final design of the roadworks.

The roadworks required for abnormal loads as described will be required for approximately one week. The final design of the proposed roadworks will form part of the final Traffic Management Plan secured under Requirement 21. Any works proposed in this area may not commence until a Traffic Management Plan (including the detailed design of the roadworks proposed along the B1149) has been submitted to and approved by the relevant planning authority in consultation with the highway authority, i.e. approval from Norfolk County Council as Local Highway Authority of the detailed design of these roadworks will be required post-consent before the works can proceed.

It should be noted that no temporary works areas are included within the current Order limits in proximity to the B1149. As such it would not be possible to undertake a trenchless crossing in this location without additional land outside of the current Order limits. However, the Applicant remains firmly of the view that an open cut trench crossing is

NCC position	Norfolk Vanguard position
	appropriate and can be designed to meet health and safety requirements within the Order limits.
Norfolk County Council - Link 34, B1145 Cawston – Highway Mitigation Measures	
<p>Whilst it is true to say a Road Safety Audit has been undertaken and reviewed by NCC’s internal auditors – the scheme did not pass the audit. The proposed reduction in traffic numbers is greatly welcomed however our position in relation to Cawston remains unchanged.</p> <p>Norfolk County Council believes a suitable access strategy can be produced that mitigates impact however...</p> <p>The intervention scheme drawings and proposal before us are very much “work in progress”. In short, the scheme needs several changes, but they will be amendments rather than a complete re-think.</p> <p>The auditors raised several concerns that have not been addressed. These concerns were appended to the County Councils response to the Planning inspectorate dated 2 May 2019.</p> <p>At ISH6 we indicated we were due to receive the following documents from Orsted by the 3 May, however they have not yet been received and remain outstanding: -</p> <ul style="list-style-type: none"> <li>• Topographical survey</li> <li>• New ATC speed surveys</li> <li>• Update of the design through Cawston based on the safety audit and NCC comments</li> <li>• Vehicle traffic through Cawston based on the topographical survey</li> <li>• Update of the safety audit</li> <li>• Update of the Cawston Report</li> <li>• Topographical survey</li> <li>• New ATC speed surveys</li> </ul>	<p>The Applicant submitted a Cumulative Impact Assessment (CIA) at Deadline 5 which identified the requirement for mitigation along the B1145 through Cawston (Link 34) to mitigate potentially significant pedestrian amenity impacts associated with the combined peak construction traffic flows for both Norfolk Vanguard and Hornsea Project Three. The measures identified included enhanced pedestrian facilities, managed parking and road safety measures. As part of this the Applicant committed to peak traffic not exceeding 144 daily HGV movements for Norfolk Vanguard alone during the cumulative scenario. This would ensure that cumulative HGV movements (combined with Hornsea Project Three) would not exceed 271, which combined with the other measures, would reduce the identified pedestrian amenity impacts to minor adverse.</p> <p>Following discussions with Cawston Parish Council the Applicant has sought to further reduce this peak traffic to as low as practicable within the existing construction programme. The Applicant is now able to commit to a 1 week peak of 112 daily HGV movements (in both the single project and cumulative scenario), which will reduce down to 95 daily HGVs for a further 22 weeks, and then 44 daily HGVs for a further 13 weeks. These reductions do not change the findings of the CIA (the residual impacts remain minor adverse), however, they recognise the concerns of Cawston Parish Council and represent a further effort by the Applicant to reduce these short-term peaks to as low as practicable. The current scheme along with this further commitment is captured within the OTMP submitted to the examination at Deadline 8.</p> <p>The adopted scheme would be sufficient to mitigate impacts for Norfolk Vanguard alone, Hornsea Project Three alone or for both projects together. Norfolk County Council has confirmed that whilst scheme needs several changes, they are amendments rather than a complete re-think and can be addressed during detailed design. The first project to proceed to construction would be responsible for delivering the full scheme of mitigation and the second project would be responsible for removing the measures once both project’s construction phases are complete. This will be coordinated between Norfolk</p>

### NCC position

- Update of the design through Cawston based on the safety audit and NCC comments
- Vehicle traffic through Cawston based on the topographical survey
- Update of the safety audit
- Update of the Cawston Report

Subject to a satisfactory safety audit, Norfolk County Council believes a suitable access strategy can be produced that mitigates impact however the intervention scheme drawings and proposal before us are very much “work in progress”. In short, the scheme needs several changes, but we anticipate they will be amendments rather than a complete re-think.

### Norfolk Vanguard position

Vanguard and Hornsea Project Three at the time, once both project’s construction programmes are confirmed. Norfolk County Council has maintained that the scheme of mitigation must be consistent across the two projects, hence Norfolk Vanguard has committed to adopt the scheme proposed by Hornsea Project Three in full.

A valid Stage 1 Road Safety Audit has been undertaken by Hornsea Project Three for the proposed scheme of mitigation and NCC’s own auditors have also reviewed the proposed scheme. This identified the following areas of concern:

- The drawings provided makes no reference to signage or road markings, existing drainage tie-in following footway widening and/or visibility splays maintenance programmes;
- Existing on-street parking was observed throughout Cawston Village centre without waiting restrictions. In this instance, and due to reduced carriageway width, a vehicle was to park out of line this could obstruct the High Street;
- Existing parking on High Street / Booton Road junction may present an obstruction for larger vehicles or reduce visibility from junction;
- Existing narrow footways leading to potential pedestrian conflict with HGVs.

The Applicant understands that NCC’s closing remarks to the Hornsea Project Three examination were that the proposed scheme of mitigation along Link 34 would be suitable to mitigate traffic impacts with the incorporation of a small number of amendments to address issues raised through the Road Safety Audit, and that these can be addressed during detailed design.

Norfolk Vanguard will continue to work with Hornsea Project Three as well as Norfolk County Council and Broadland District Council post-consent to ensure that these issues are resolved post-consent in order to inform the final Traffic Management Plan.

The final design of the proposed mitigation measures along the B1145 through Cawston will form part of the final Traffic Management Plan secured under Requirement 21. No stage of the works may commence until a Traffic Management Plan (including the detailed design of the mitigation measures along the B1145) has been submitted to and approved by the relevant planning authority in consultation with the highway authority. On this basis the mitigation scheme is considered suitable to progress on to detailed design at

NCC position	Norfolk Vanguard position
	<p>which point the amendments to address issues raised through the Road Safety Audit can be addressed.</p>
<p>The Street, Oulton – Highway Mitigation Measures</p>	
<p>NCC supports the mitigation scheme however we do not accept that it will necessarily be the second project that will be responsible for removal of the mitigation or that Orsted have agreed to that. The OTMP needs to be amended to confirm that whichever project is left on site at the end will remove the mitigation – which may not necessarily be the second project to come along or that the mitigation will be removed as requested by the LHA.</p>	<p>A scheme of mitigation has been developed by Hornsea Project Three (and agreed with Norfolk County Council), which has been reviewed by the Applicant and will deliver the measures identified within the Applicant’s own assessment (and cumulative impact assessment). The scheme of mitigation will deliver the required traffic management measures for either each development alone, or both projects cumulatively.</p> <p>The Applicant has committed to adopt this scheme of mitigation in full. The commitment is that first project to proceed to construction is responsible for delivering the full scheme of mitigation and the second project would be responsible for removing the measures once both projects' construction phases are complete. This commitment has been captured in an update to the Norfolk Vanguard Outline Traffic Management Plan (OTMP) (document reference 8.8) submitted at Deadline 8. The wording of the OTMP ensures that the mitigation measures will be delivered in full, and will subsequently be removed following the completion of both construction phases are complete. This will be coordinated between Norfolk Vanguard and Hornsea Project Three at the time, once both project’s construction programmes are confirmed.</p> <p>The respective Outline Code of Construction Practice (OCoCP) as submitted for both Norfolk Vanguard (document reference 8.1) and Hornsea Project Three both include commitments to developing project specific Communication Plans post-consent and include a framework to set out the key points of how communications will be delivered. The Communication Plans will set out the process of continued engagement between Norfolk Vanguard, Hornsea Project Three and the Local Highway Authority. This will ensure that as construction programmes are refined post-consent this information is regularly shared between parties, particularly traffic demand on shared road links and that commitments to deliver shared mitigation measures are fully delivered.</p>

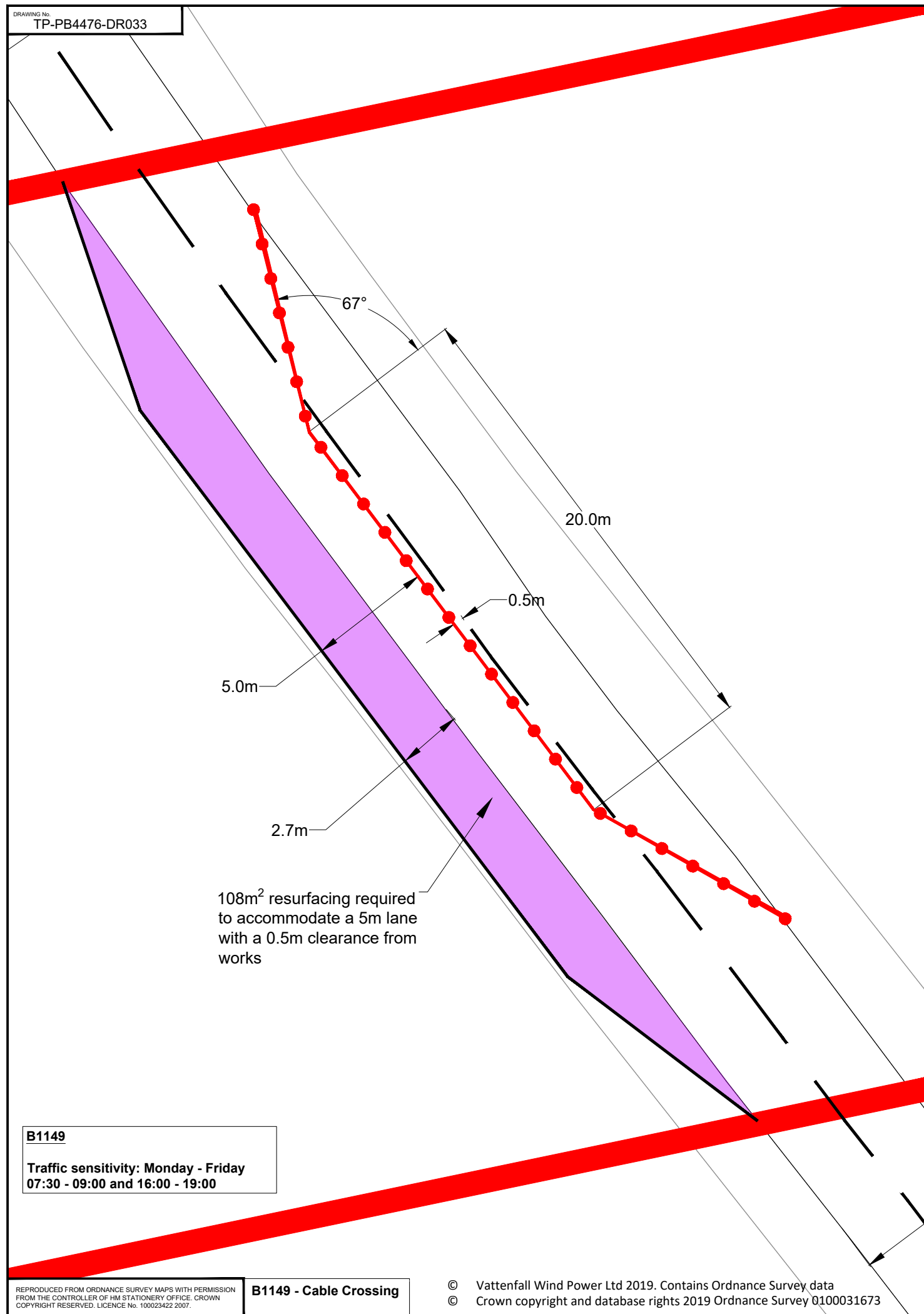


NCC position	Norfolk Vanguard position
	<p>The final details of the proposed mitigation measures along The Street, including confirmation of who is delivering the measures and who is removing the measures will form part of the final Traffic Management Plan secured under Requirement 21. No stage of the works may commence until a Traffic Management Plan (including this confirmation of responsibilities) has been submitted to and approved by the relevant planning authority in consultation with the highway authority.</p>

## 2 APPENDIX A - B1149 ROADWORKS SWEEP PATH DRAWINGS

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DRAWING No.  
TP-PB4476-DR033

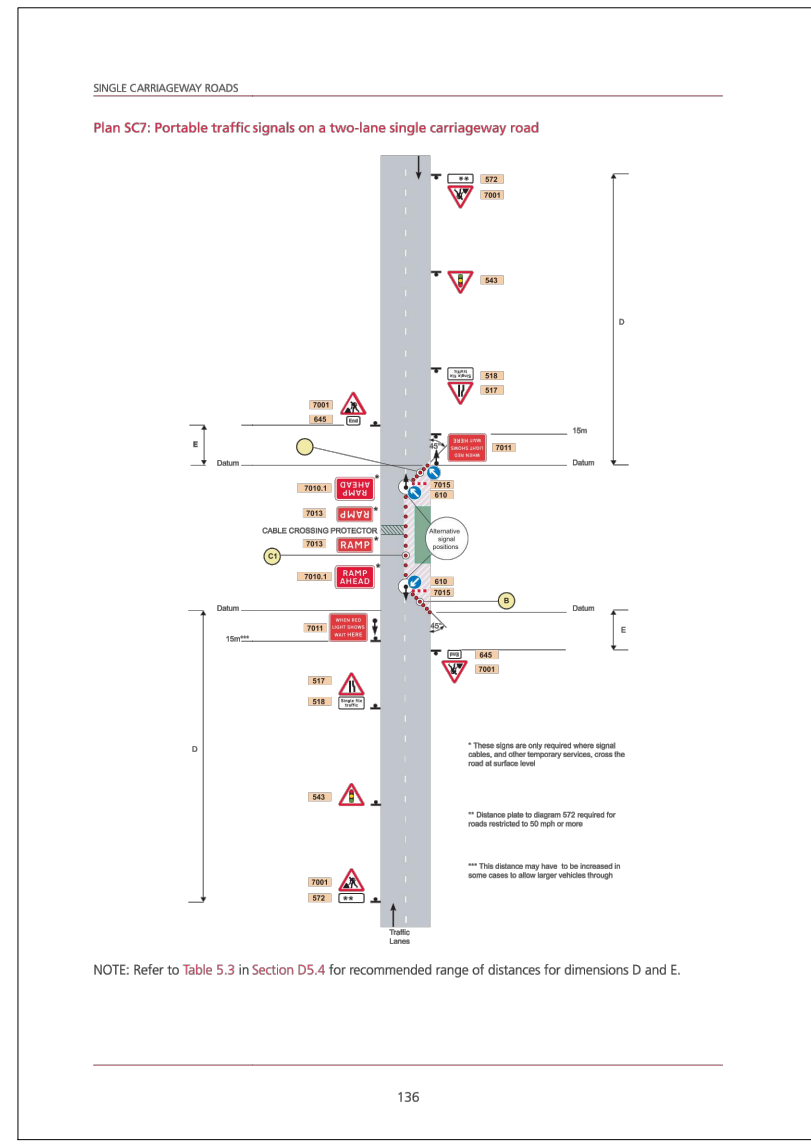
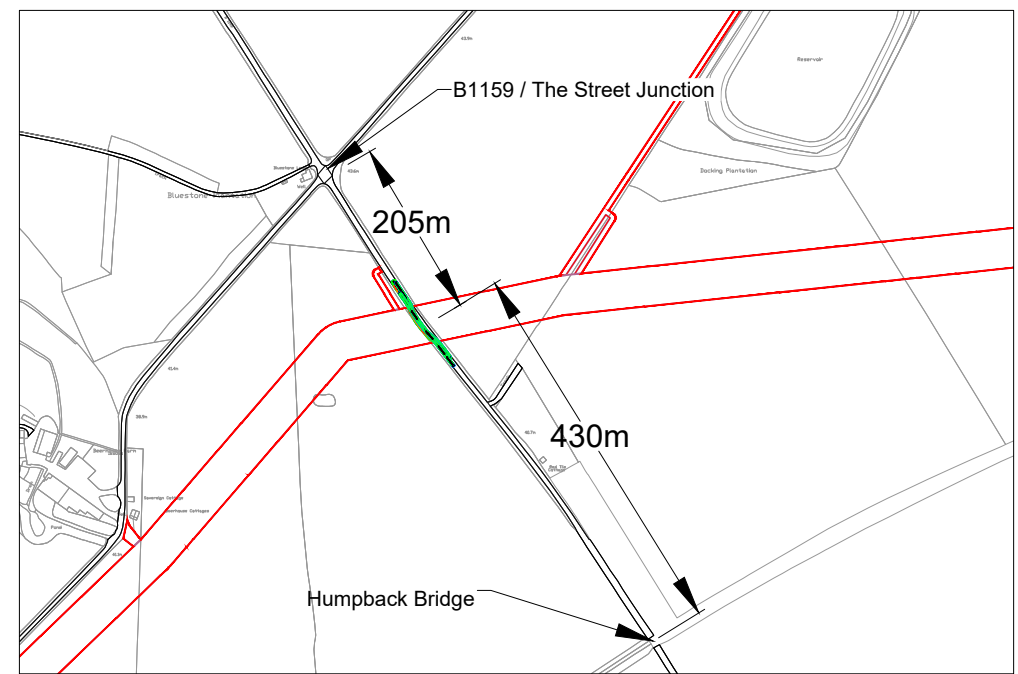


**B1149**  
Traffic sensitivity: Monday - Friday  
07:30 - 09:00 and 16:00 - 19:00

**B1149 - Cable Crossing**

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Based on Plan SC7 of Traffic Signs Manual (2009) Chapter 8 Part 1

- NOTES**
- Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
  - This drawing has been based upon Ordnance Survey Maps and Royal Haskoning can not guarantee the accuracy of data.
- KEY**
- DCO ORDER LIMITS
  - REQUIRED RESURFACING
  - INDICATIVE CONES

REV	DATE	DESCRIPTION	BY	CHK	APP

REVISIONS

CLIENT



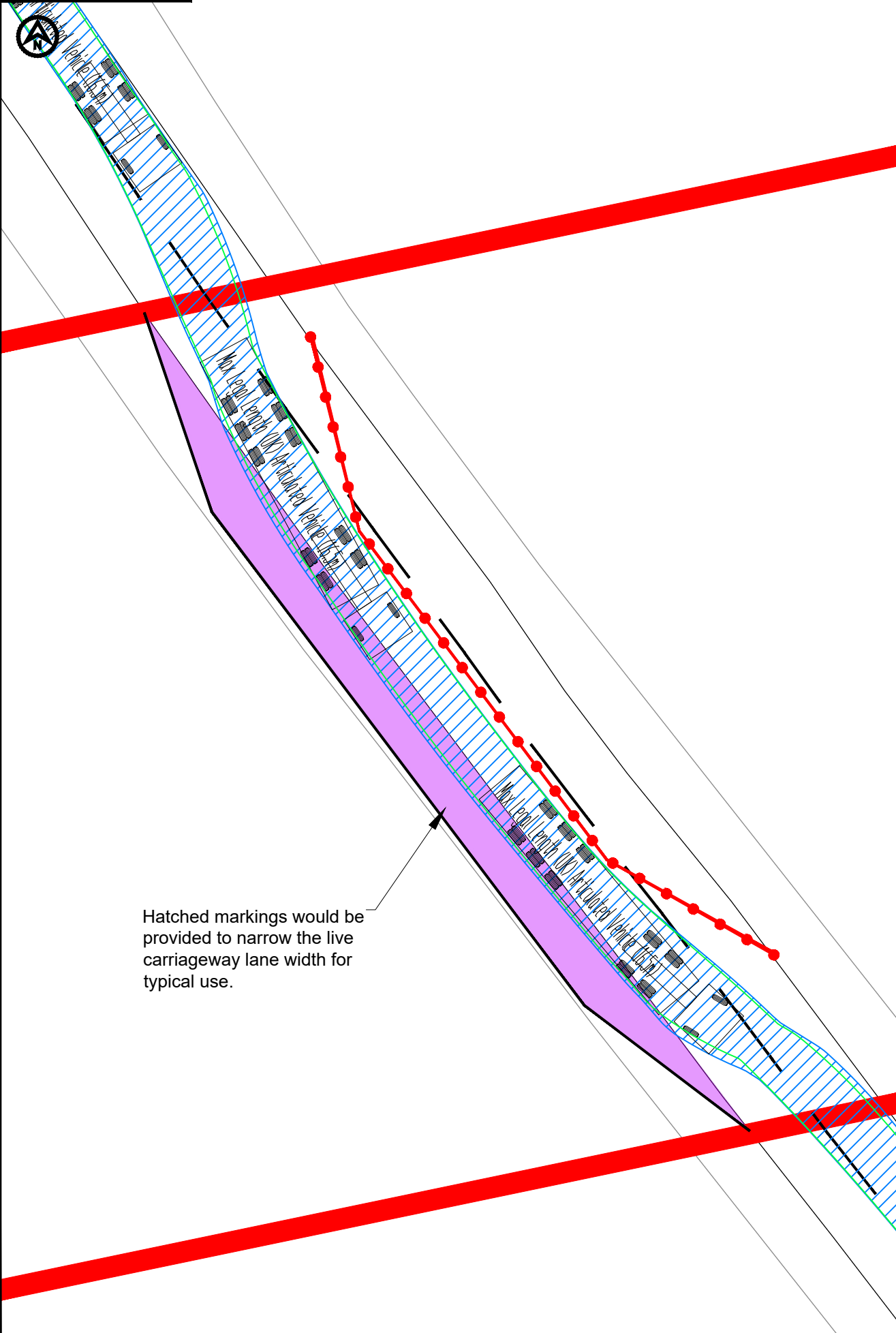
PROJECT  
NORFOLK VANGUARD OFFSHORE WIND FARM

TITLE  
B1149 TRAFFIC MANAGEMENT

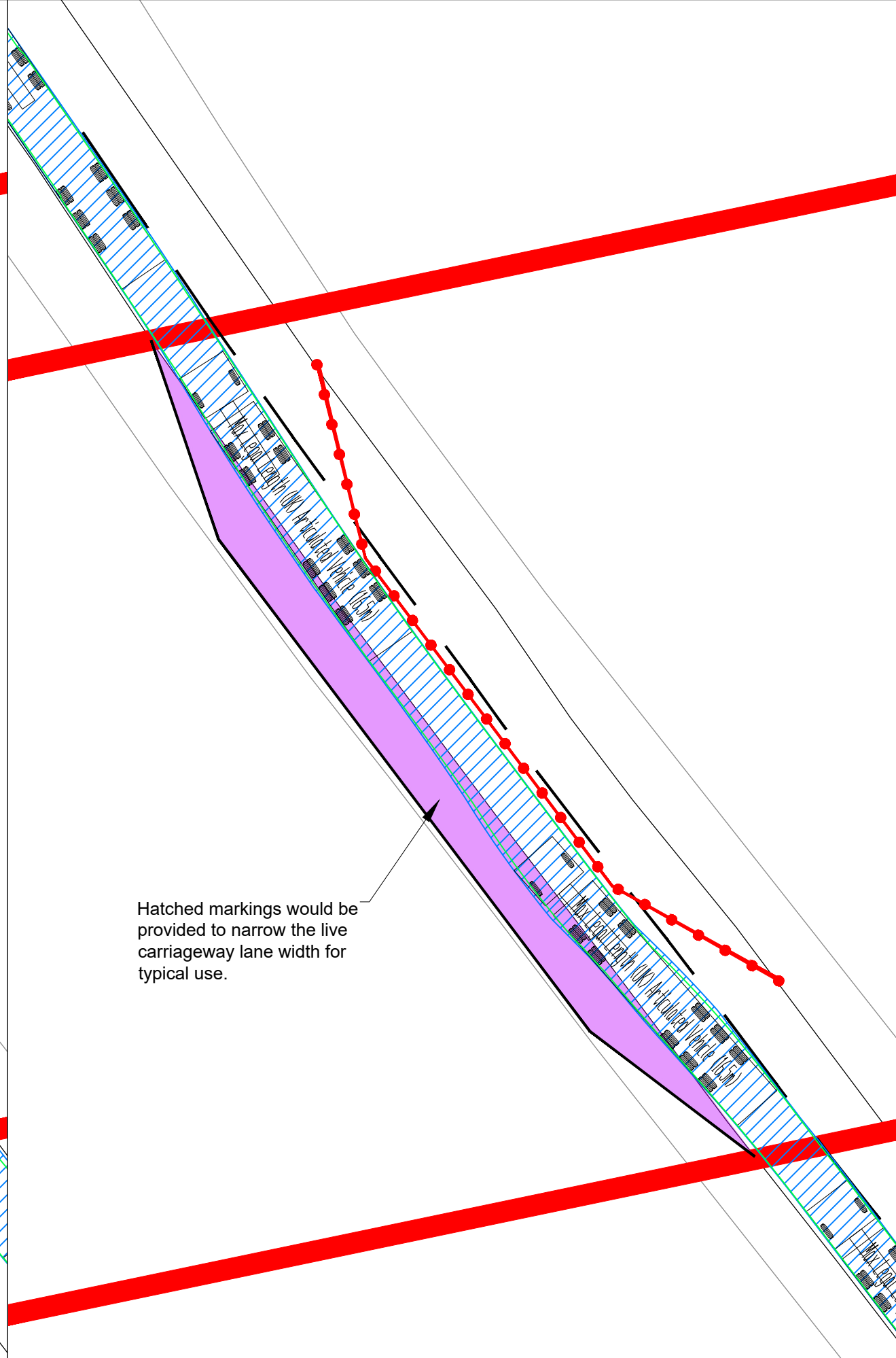


DRAWN	RNE	CHECKED	ADR	APPROVED	ADR

DATE: 31.05.19 SCALE AT A1: 1:250 CLIENTS REF: DRAWING No. TP-PB4476-DR033 REVISION: F1.1



Hatched markings would be provided to narrow the live carriageway lane width for typical use.

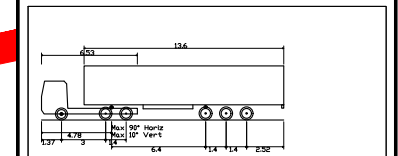


Hatched markings would be provided to narrow the live carriageway lane width for typical use.

**NOTES**  
 1. Do not scale from this drawing, all dimensions are in metres unless noted otherwise.  
 2. This drawing has been based upon Ordnance Survey Maps and Royal Haskoning can not guarantee the accuracy of data.

**KEY**  
 ORDER LIMITS

**VEHICLE TRACKING**



Max Legal Length (UK) Articulated Vehicle (16.5m)  
 Overall Length 16.500m  
 Overall Width 2.550m  
 Overall Body Height 3.281m  
 Min Body Ground Clearance 0.41m  
 Max Truck Width 2.500m  
 Lock to lock time 6.705s  
 Kerb to Kerb Turning Radius 6.855m

VEHICLE BODY SWEEP PATH (FORWARD GEAR)  
 VEHICLE CHASSIS SWEEP PATH  
 REQUIRED RESURFACING  
 INDICATIVE CONES

**DRAFT - NOT FOR CONSTRUCTION**

D.01		FIRST ISSUE			
REV	DATE	DESCRIPTION	BY	CHK	APP

REVISIONS

CLIENT

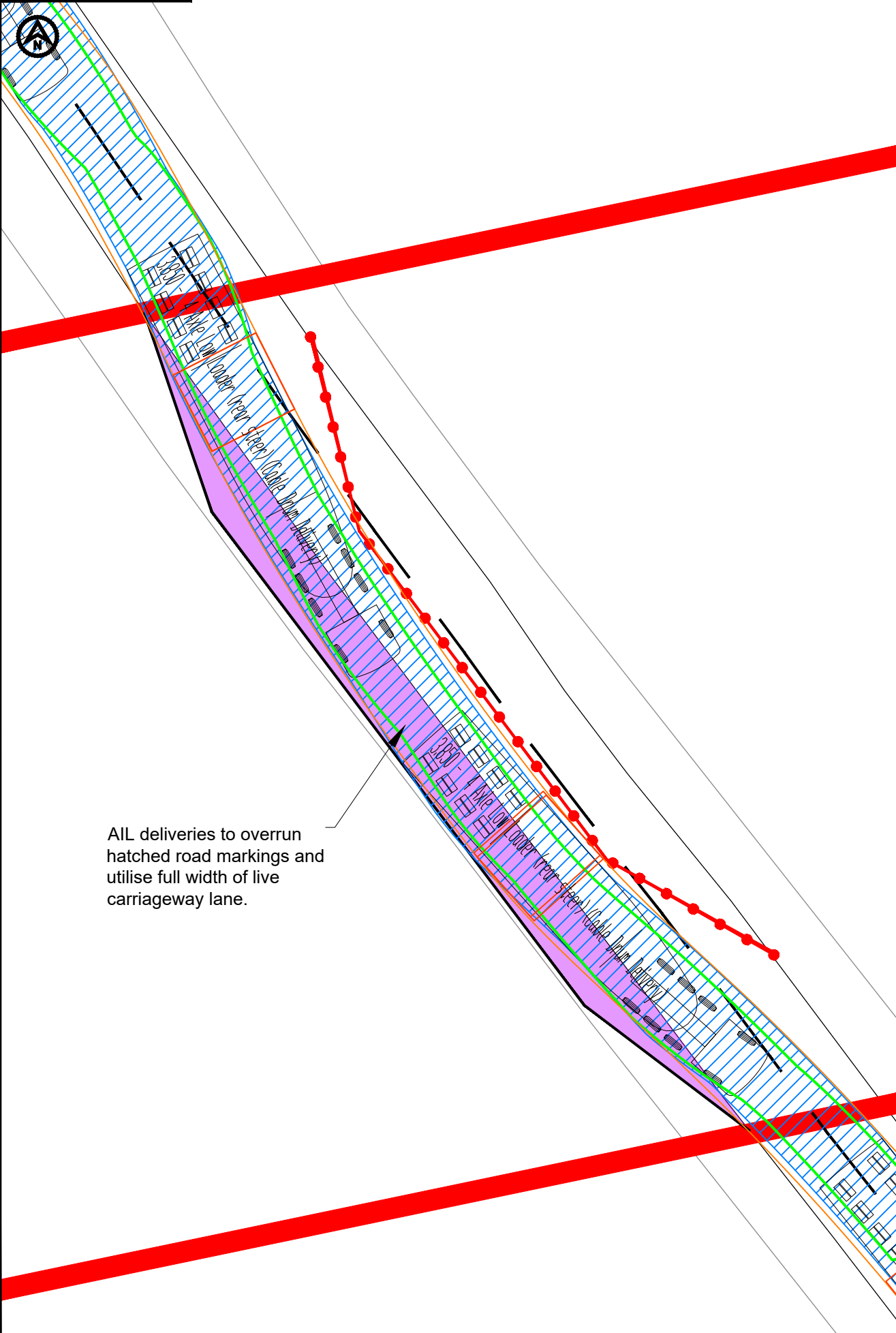


PROJECT  
 NORFOLK VANGUARD OFFSHORE WIND FARM

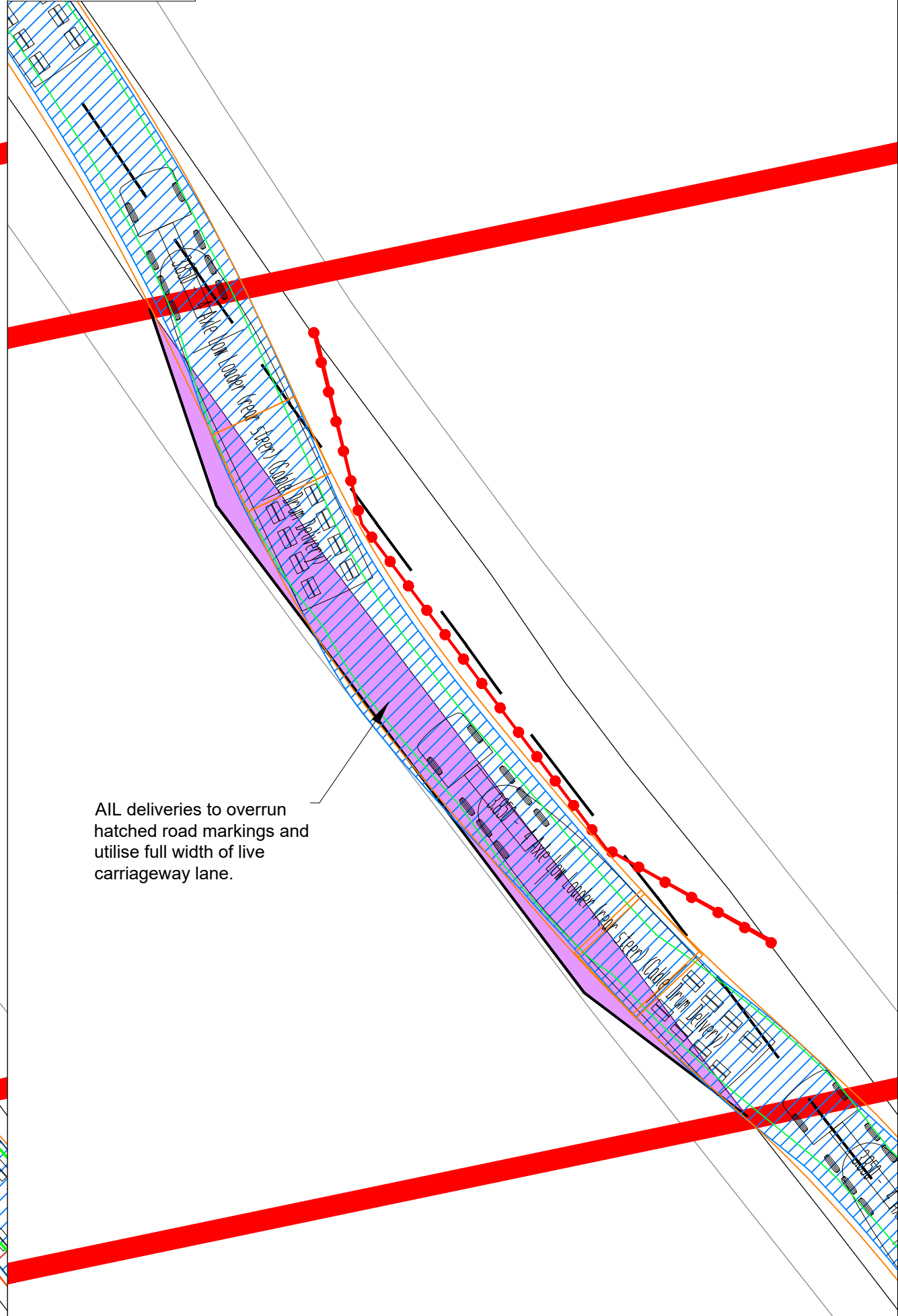
TITLE  
 B1149 TRAFFIC MANAGEMENT  
 ARTICULATED LORRY SWEEP PATH ANALYSIS



DRAWN	RNE	CHECKED	ADR	APPROVED	ADR
DATE	31.05.19	SCALE AT A3	1:250	CLIENTS REF.	
DRAWING No.	TP-PB4476-DR034			REVISION	F1.0
CLIENT DWG No.					



AIL deliveries to overrun hatched road markings and utilise full width of live carriageway lane.



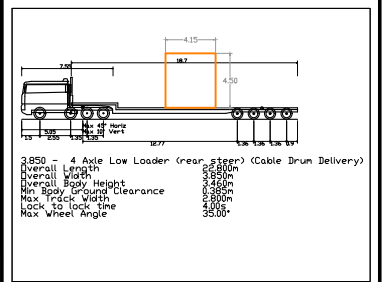
AIL deliveries to overrun hatched road markings and utilise full width of live carriageway lane.

- NOTES**
- Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
  - This drawing has been based upon Ordnance Survey Maps and Royal Haskoning can not guarantee the accuracy of data.
  - Cable drum dimensions taken from Horsea 3 Offshore Windfarm document 'Main Construction Compound Access Strategy' September 2018
  - Typical AIL vehicle used suitable for cable drum loadings.

**KEY**

- ORDER LIMITS

**VEHICLE TRACKING**



- VEHICLE BODY SWEEP PATH (FORWARD GEAR)
- VEHICLE CHASSIS SWEEP PATH
- INDICATIVE CABLE DRUM SWEEP PATH
- REQUIRED RESURFACING
- INDICATIVE CONES

**DRAFT - NOT FOR CONSTRUCTION**

D.01		FIRST ISSUE			
REV	DATE	DESCRIPTION	BY	CHK	APP

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PROJECT  
NORFOLK VANGUARD OFFSHORE WIND FARM

TITLE  
B1149 TRAFFIC MANAGEMENT  
TYPICAL AIL CABLE DRUM DELIVERY  
SWEEP PATH ANALYSIS



DRAWN	RNE	CHECKED	ADR	APPROVED	ADR
DATE	31.05.19	SCALE AT A3	1:250	CLIENTS REF.	
DRAWING No.	TP-PB4476-DR035			REVISION	F1.0
CLIENT DWG No.					