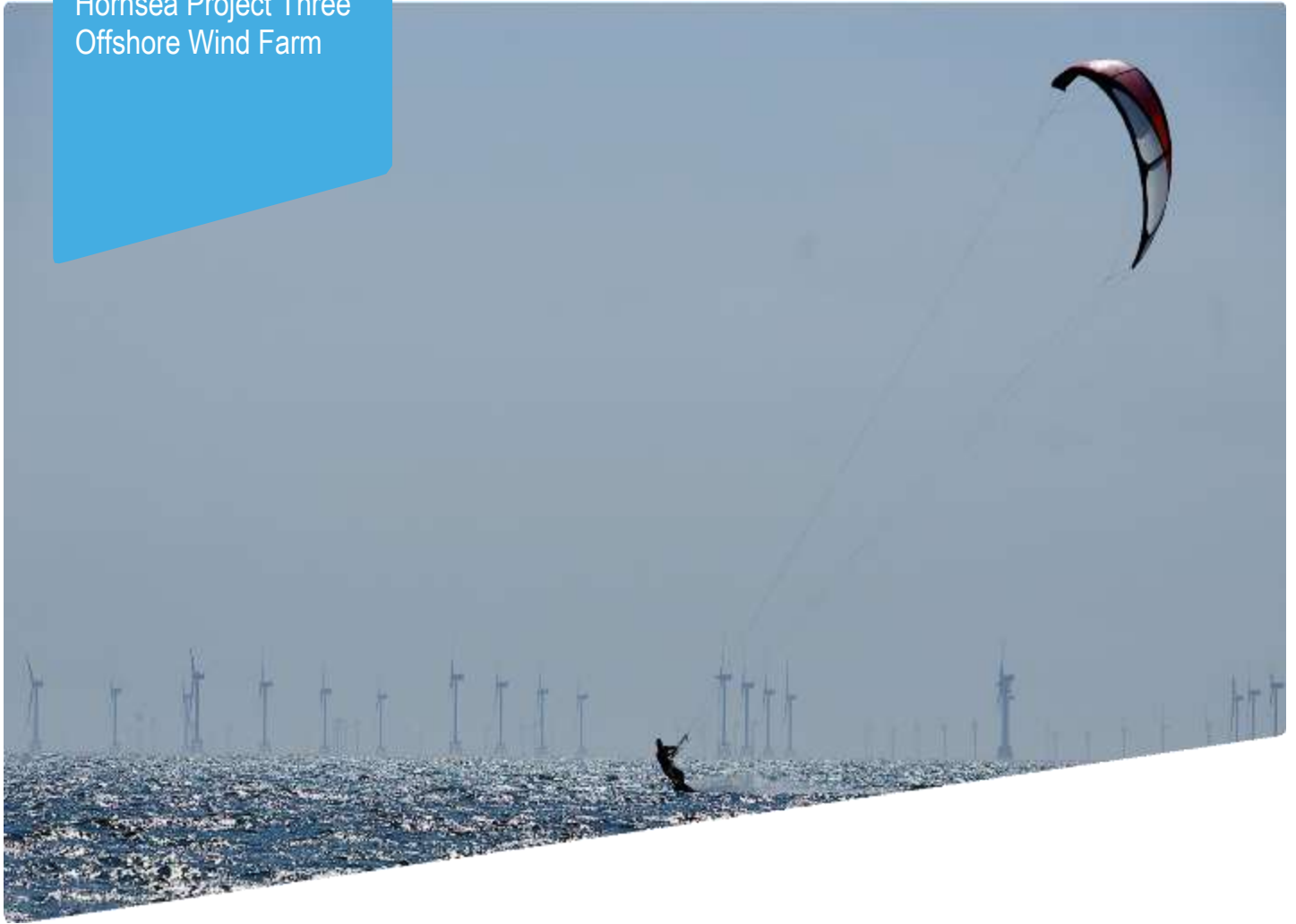


Hornsea Project Three
Offshore Wind Farm



Hornsea Project Three Offshore Wind Farm

Appendix 30 to Deadline I – Permanent Access Note for Onshore HVAC Booster Station

Date: 7th November 2018

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Front cover picture: Kite surfer near a UK offshore wind farm © Ørsted Hornsea Project Three (UK) Ltd., 2018.

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1. Introduction

Background

- 1.1 Ørsted Hornsea Project Three (UK) Ltd., on behalf of Ørsted Power (UK) Ltd., is promoting the development of the Hornsea Project Three Offshore Wind Farm (hereafter referred to as Hornsea Three). Hornsea Three is a project that will consist of an offshore generating station(s) with a capacity of greater than 100 MW and therefore is a Nationally Significant Infrastructure Project (NSIP), as defined by Section 15(3) of the Planning Act 2008, as amended. As such, there is a requirement to submit an application for a Development Consent Order (DCO) to the Planning Inspectorate (PINS) to be decided by the Secretary of State for Business, Energy and Industrial Strategy.

Purpose of this Briefing note

- 1.2 This briefing note has been prepared to set out the actions taken in order to achieve a safe provision of a HGV access for an onshore HVAC booster station off the B1149, north of Saxthorpe, which is to be part of the Hornsea Three DCO application.
- 1.3 This Permanent Access Note has also been prepared to provide a centralised, single source of information pertaining to the booster station access, drawing from information already provided within the Application and expanding on specific points where relevant. This approach has been agreed with Norfolk County Council to supply a single document as part of the Statement of Common Ground and in response to RR-033.
- 1.4 A road safety audit was undertaken in October 2018 by CJ Safety Audit, who was appointed by Create Consulting Engineers LTD in order to demonstrate that the provision of the aforementioned HVAC booster station access did not have any concerning safety implications for the existing traffic on the B1149 or any future traffic generated by Hornsea Three. The road safety audit report is included as part of Annex B of this report and is also summarised in section 3 of this report.

2. Draft Scheme

- 2.1 The proposal is for an access junction off B1149, just north of Saxthorpe. At this point, the B1149 is subject to the national 60mph speed limit.
- 2.2 The scheme comprises improvements to the existing farm access junction in order to cater for HGVs and abnormal vehicles during 24month construction period (the latter on a right-in/left-out basis only).
- 2.3 Regarding the above, the junction has been designed accordingly, and Create drawing 1554_03_202 'Booster Station Access Junction on B1149' has been include to this report, in Annex A.
- 2.4 The plan shows the proposed access junction layout as well as the tracking of abnormal vehicles expected to access/egress the site during the construction phase.

3. Road Safety Audit

- 3.1 A road safety audit was undertaken in October 2018 by CJ Safety Audit, who was appointed by Create Consulting Engineers LTD in order to demonstrate that the provision of the aforementioned HVAC booster station access did not have any concerning safety implications for the existing traffic on the B1149 or any future traffic generated by Hornsea Three. The road safety audit report is included as part of Annex B.
- 3.2 The CJ Safety Audit report raises a number of comments that are summarised in table 3.1 below.

Table 3.1: Summary of the Safety Audit comments.

Comment ref. (para no.)	Location	Comment
3.3	B1149 at site access junction	<p>Junction visibility splays on the drawing indicate 160m to the south and 100m to the north (although 120m appears to be available). These equate to design speeds of 85kph and 70kph respectively; however no speed measurement data was submitted to support this. Timings taken on site by the Auditors indicate that cars were visible on each approach for 8 to 10 seconds, suggesting that traffic speeds lie within these design speeds. This issue is not therefore raised as a safety problem, nevertheless the local highway authority may require speed data to support the proposals.</p> <p>Furthermore, part of the visibility envelope to the north appears to lie over uncultivated private land (although the precise highway boundary is difficult to identify). Due to the ground profile, regular maintenance of this verge will be necessary to sustain visibility, and formal arrangements with the landowner may be required.</p>
3.4	Site access junction	<p>The drawing provided for audit does not give any detail of the proposed form of construction - kerbing, pavement, drainage etc. This could have a bearing on safe operation of the junction, particularly the avoidance of ponding/detritus on the highway. The latter is of particular importance as the access road is on a down gradient towards the junction. Early consideration is advised.</p>

4. Designer Response to Road Safety Audit

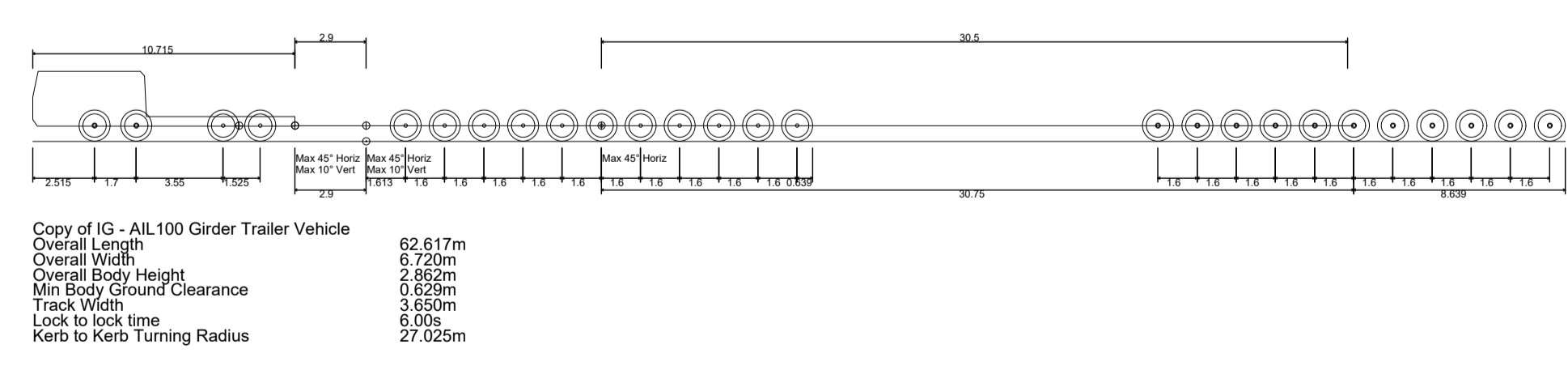
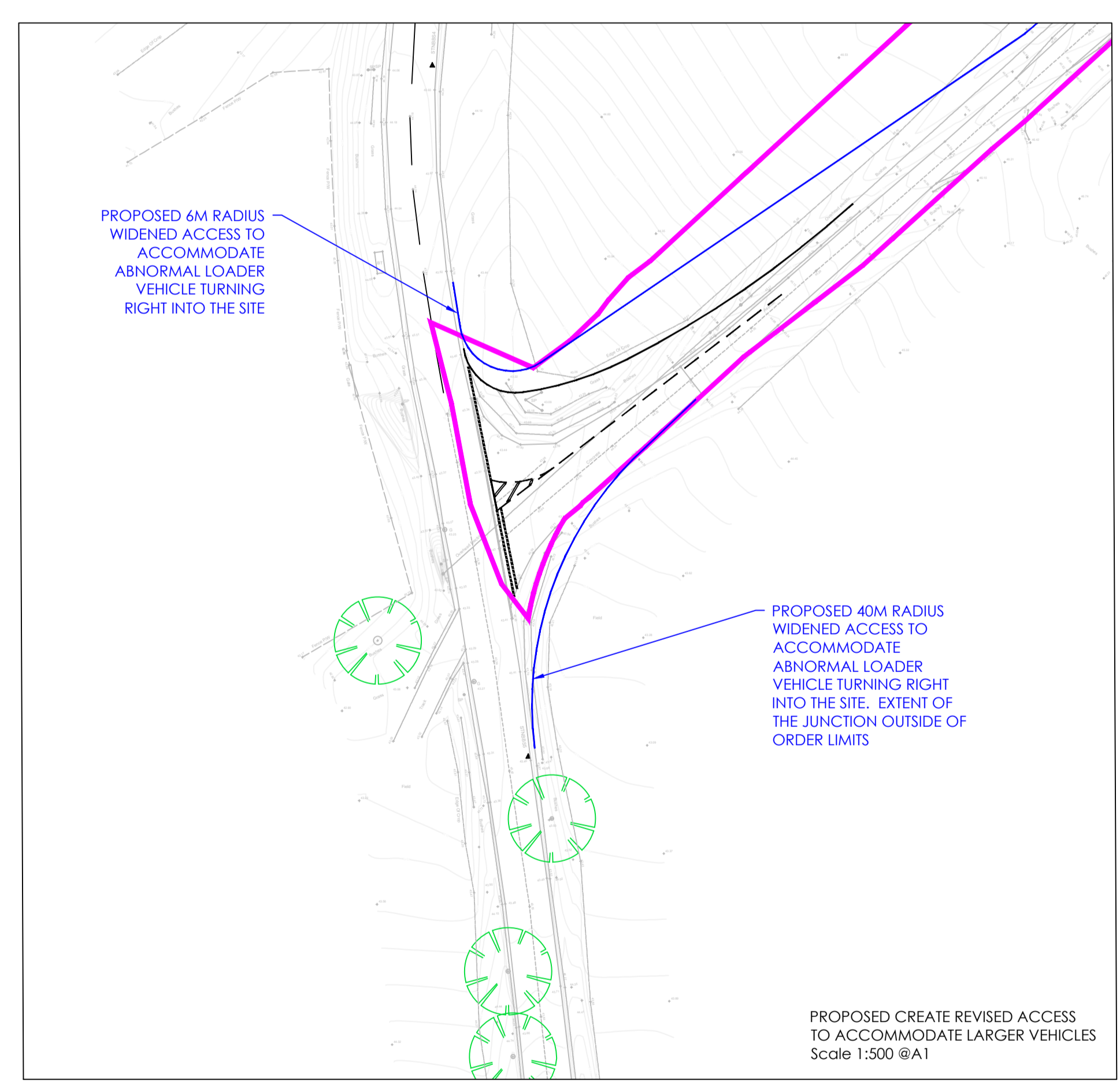
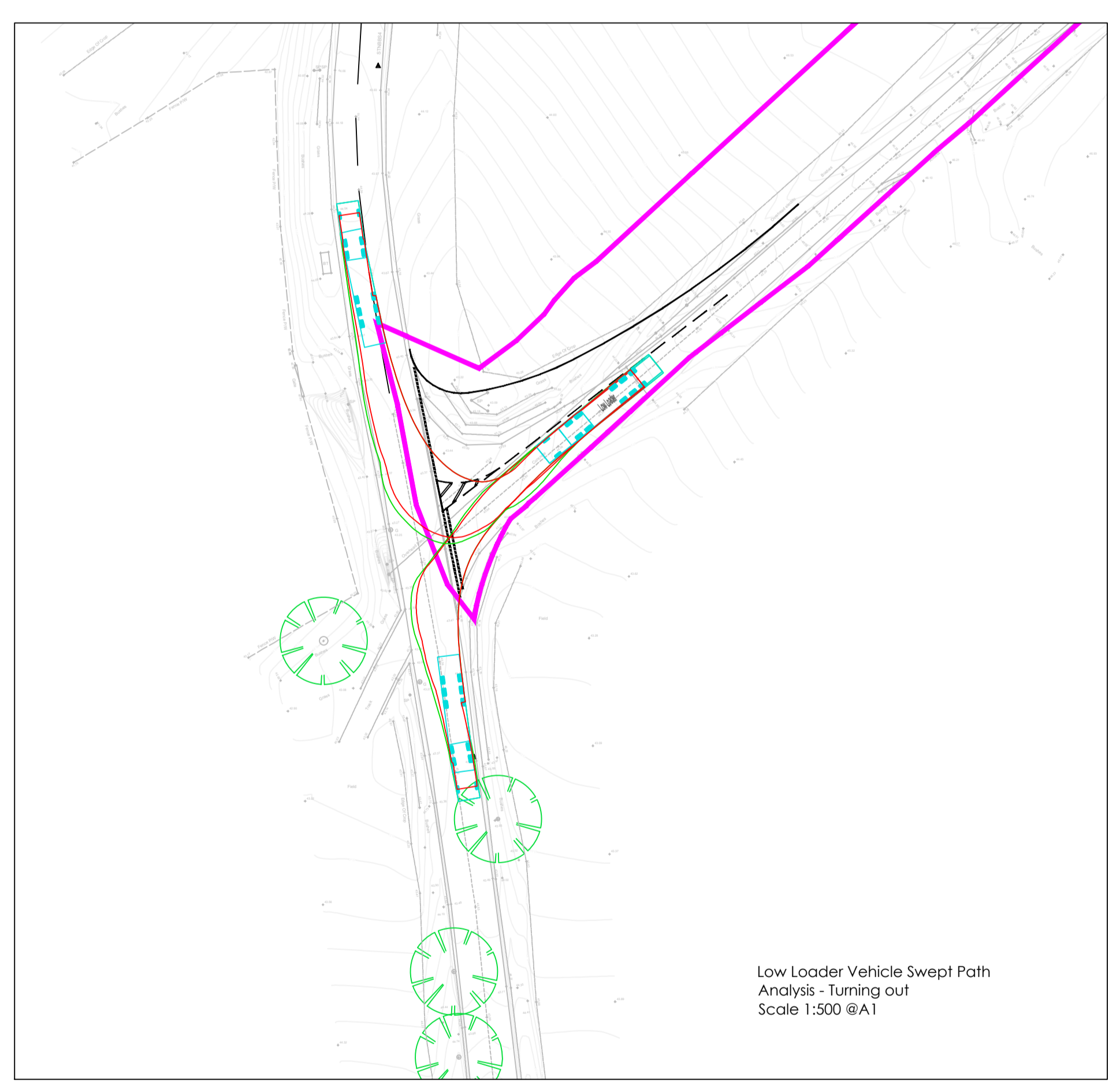
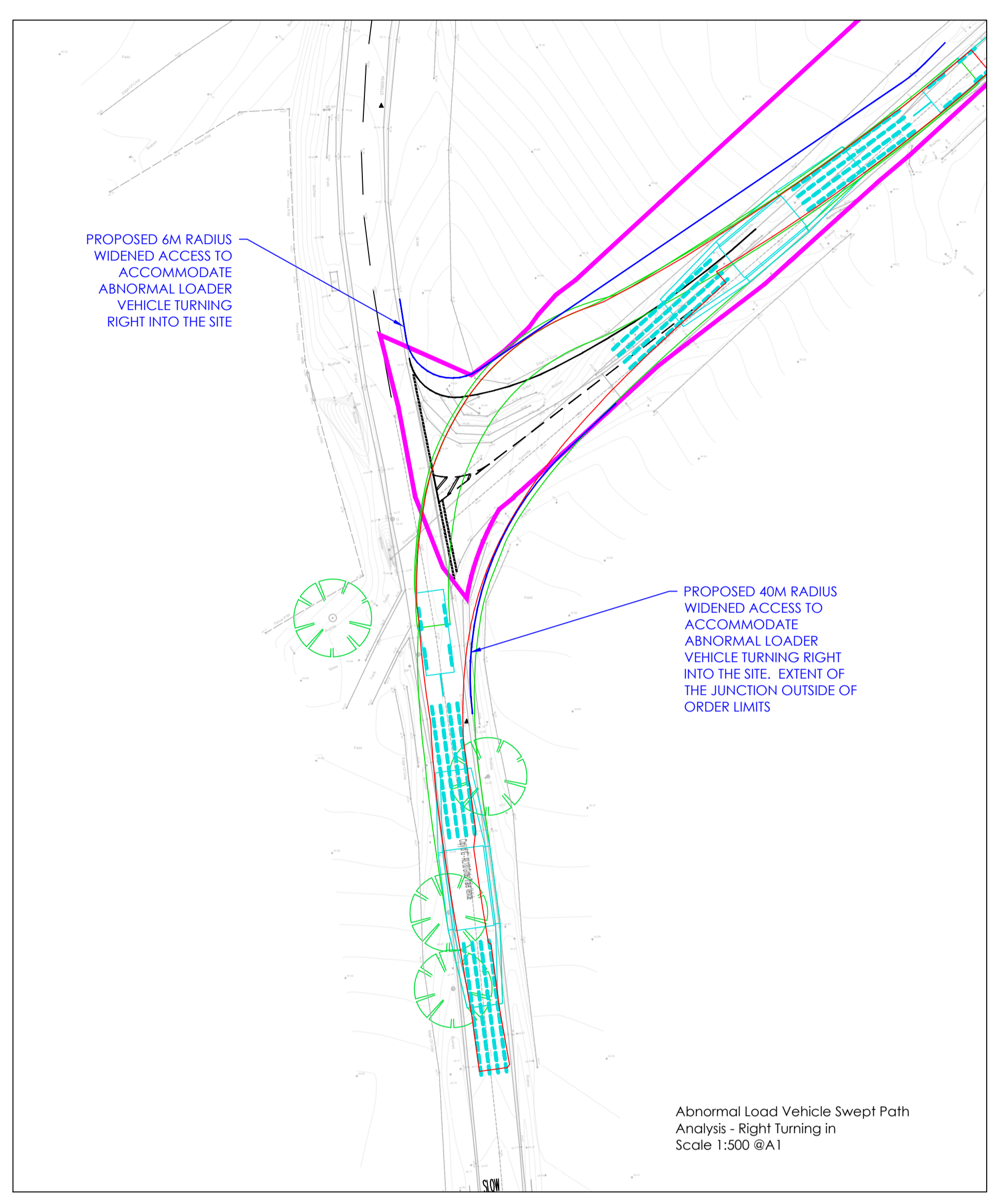
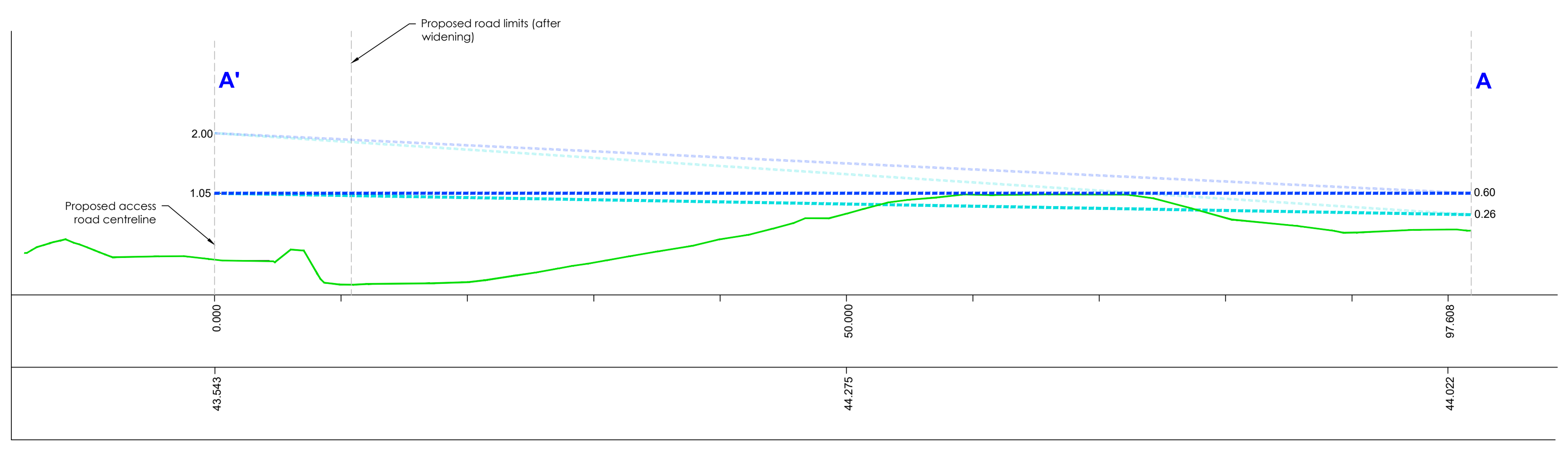
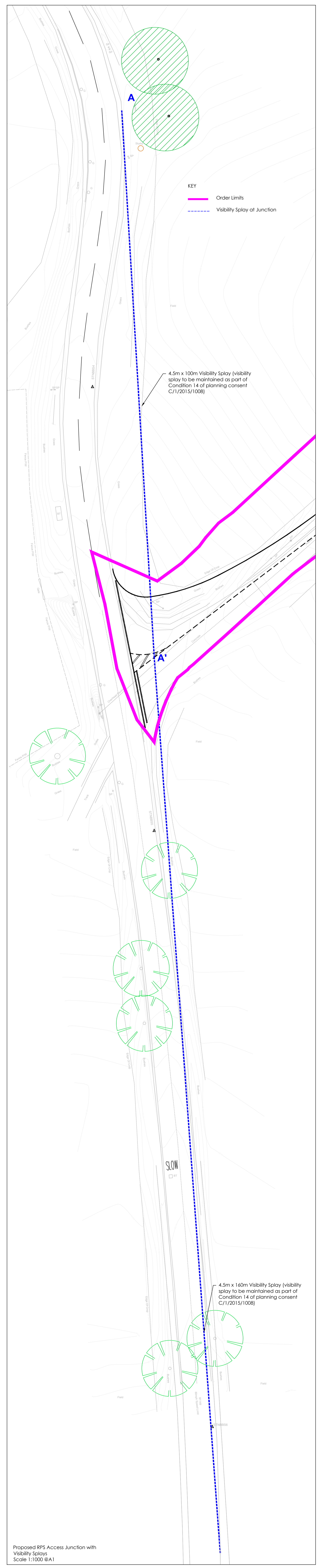
- 4.1 In response to the comments raised within the road safety audit report a designer response to road safety audit has been prepared by Create Consulting Engineers and the aforementioned report is included as part of Annex B of this report.
- 4.2 A summary of the reasons or proposals the designer has put together in response to the safety audit comments is shown in table 4.1 below.

Table 4.1: Summary of the Designer Response

Problem (para no.)	Agree/ Disagree	Reasons/Proposals
3.3	Agree	A speed data survey is to be provided to the Highway Authority prior commencement of any access works, in order to demonstrate that traffic speeds lie within design speeds of the road.
3.4	Agree	An updated plan containing the proposed construction of the junction or temporary left turn overrun area; including kerbing, pavement material and drainage would be submitted prior to commencement of any work for approval.

- 4.3 In addition to the above a series of minor alterations have been made to the drawing in response to comments from Norfolk County Council and to reflect property ownership boundaries.
- 4.4 The changes made are shown on Create drawing number 03 / 202 Rev A in Appendix A and include the following;
- Temporary overrun area include which is to be removed post construction, coloured in yellow on the plan;
 - Junction vertical visibility changed in discussion with Norfolk County Council to accommodate a vertical visibility splay of 1.05m to 0.26m; and
 - Temporary overrun area relocated to the north of the current farm track.

Annex A Draft & Final Scheme



Vehicle Type	Overall Length	Overall Height	Min. Body Ground Clearance	Track Width	Lock to lock time	Kerb to Kerb Turning Radius
Copy of 10 - All 100 Gider Trailer Vehicle	62.817m	6.532m	2.852m	3.822m	6.202s	27.025m
Low Loader	16.632m	2.592m	1.322m	3.202m	2.202s	8.790m

REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED

PROJECT HORNSSEA 3 OFF-SHORE WIND FARM	DATE 26.10.18	DRAWING STATUS INFORMATION	
DRAWING FILE BOOSTER STATION ACCESS JUNCTION	DESIGNED AS SHOWN	DRAWN EC	
CHECKED PZ	APPROVED PZ	1554	create CONSULTING ENGINEERS LTD
CUSTOMER ORSTED	DRAWING No 03/202	REVISION	

www.createconsultingengineers.co.uk

Annex B Road Safety Audit



C J Safety Audit

**HORNSEA 3 OFF-SHORE WIND FARM
SAXTHORPE, NORFOLK: BOOSTER STATION
HIGHWAY ACCESS WORKS**

STAGE 1 ROAD SAFETY AUDIT

**REPORT REF: CCE11B/NGC/RSA1
October 2018**

Report prepared for: Create Consulting Engineers Ltd
15 Princes Street
Norwich
Norfolk
NR3 1AF

Project Information:

Client	Create Consulting Engineers Ltd on behalf of Orsted
Client Ref	1554
Title	Booster Station, Saxthorpe, Norfolk: Highway Access Works
Report author	N G Calder BSc(Hons) CEng MICE MCIHT MSoRSA

Report Status:

Issue	Status	Purpose	Date
1	Draft	Client approval	29/10/18
2	Final	Client issue	30/10/18

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Disclaimer: C J Safety Audit accepts no responsibility to any third parties to whom the information contained in this report is made known.

1. Introduction

- 1.1 This report has been produced as a result of a Stage 1 Road Safety Audit (RSA) carried out at the request of Create Consulting Engineers Ltd on behalf of Orsted.
- 1.2 The RSA Team membership was as follows:-
- N G Calder BSc(Hons) CEng MICE MCIHT MSoRSA
Principal Road Safety Consultant
CJ Safety Audit
- J M Jones IEng MCIHT FIHE MSoRSA
Principal Road Safety Consultant
CJ Safety Audit
- 1.3 The RSA was undertaken in October 2018 and comprised an examination of the documents provided by the client (see Appendix A) together with a site visit on 24 October 2018 between the hours of 15:15 and 15:45. The weather was bright and the road surface dry. Traffic flows were moderate and free-flowing.
- 1.4 The terms of reference of the RSA are as described in Road Safety Audit Standard HD19/15. The audit team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.
- 1.5 The proposed Booster Station for the Hornsea 3 project is located off B1149 just north of Saxthorpe. At this point, the B1149 is subject to the national 60mph speed limit. The audited scheme comprises improvements to the existing farm access junction in order to cater for HGVs and abnormal vehicles during the 9 month construction period (the latter on a right-in/left-out basis).
- 1.6 The auditors have reviewed the most recent 5-year police accident record (2013-2017) for the location on Crashmap.co.uk. During this period there have been two recorded accidents (1 serious, 1 slight) on B1149 within 200m of the scheme: one involved conflict between a m/c and car on the sharp bend north of the access; the other a m/c loss of control (no other veh involved) approx. 70m to the south.
- The record has no specific implications for the proposed scheme.
- 1.7 A problem location plan has been included in Appendix B to the report.

2. Items Raised at Previous Road Safety Audits

The auditors are not aware of any previous audits.

3. Items Raised at this Stage 1 Road Safety Audit

General

3.1 No comment

Road Alignment

3.2 No comment

Junctions

3.3 Comment

Location: B1149 at site access junction

Junction visibility splays on the drawing indicate 160m to the south and 100m to the north (although 120m appears to be available). These equate to design speeds of 85kph and 70kph respectively; however no speed measurement data was submitted to support this. Timings taken on site by the Auditors indicate that cars were visible on each approach for 8 to 10 seconds, suggesting that traffic speeds lie within these design speeds. This issue is not therefore raised as a safety problem, nevertheless the local highway authority may require speed data to support the proposals.

Furthermore, part of the visibility envelope to the north appears to lie over uncultivated private land (although the precise highway boundary is difficult to identify). Due to the ground profile, regular maintenance of this verge will be necessary to sustain visibility, and formal arrangements with the landowner may be required.

3.4 Comment

Location: Site access junction

The drawing provided for audit does not give any detail of the proposed form of construction - kerbing, pavement, drainage etc. This could have a bearing on safe operation of the junction, particularly the avoidance of ponding/detritus on the highway. The latter is of particular importance as the access road is on a down gradient towards the junction. Early consideration is advised.

Non-Motorised Users

3.5 No comment

Signing and Lighting

3.6 No comment

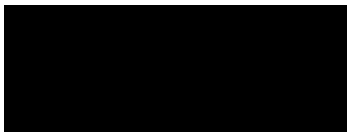
4. Audit Team Statement

We certify that this audit has been carried out in accordance with Road Safety Audit Standard HD19/15.

Audit Team Leader

Nevil Calder
Member of the Society of Road Safety Auditors (MSoRSA)
Principal Road Safety Consultant
CJ Safety Audit

Signed:

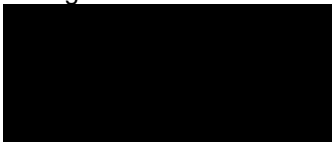


Date: 30 October 2018

Audit Team Members

Malcolm Jones
Member of the Society of Road Safety Auditors (MSoRSA)
Principal Road Safety Consultant
CJ Safety Audit

Signed:



Date: 30 October 2018

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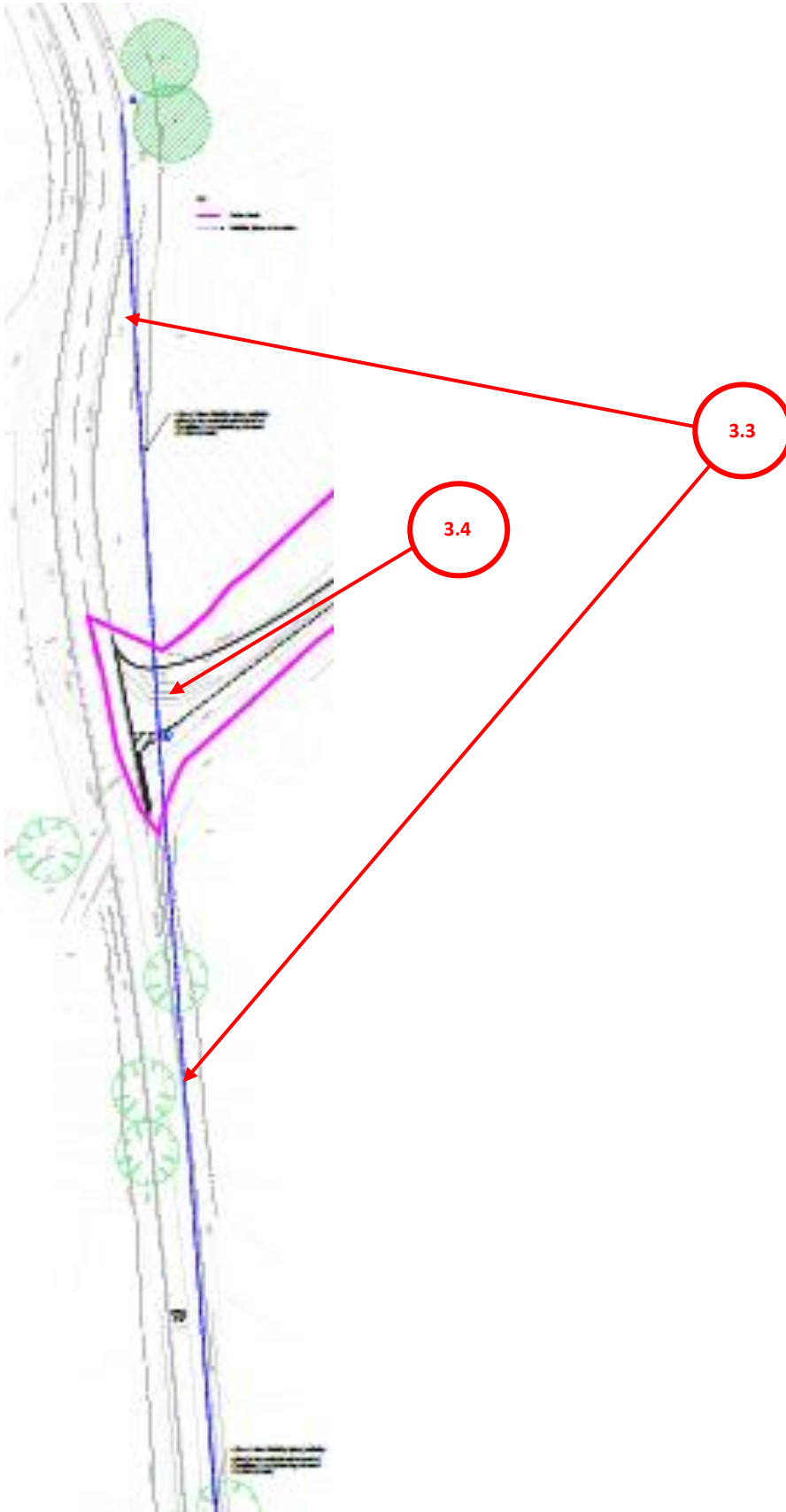
APPENDIX A - Audit Submission Documents

The following documents were submitted for this road safety audit:-

Drg no 1554/03/202	var	Booster Station Access Junction
Drg no JNY8772-81 Rev B	var	Booster Station Access AL100 Trailer
Predicted HGV movement data		
5yr Accident Data from Crashmap.co.uk		

No departures from standard were advised.

APPENDIX B – Problem Location Plan



Annex C Designer Response

Introduction

- 4.6 A road safety audit was undertaken in October 2018 by CJ Safety Audit, who was appointed by Create consulting Engineers LTD on behalf of Ørsted in order to demonstrate that the provision of the aforementioned HVAC booster station access did not have any concerning safety implications for the existing traffic on the B1149 or any future traffic generated by Hornsea Three.
- 4.7 This report details Create Consulting Engineers Ltd's ('Create') response to the Stage 1 Road Safety Audit (RSA) Report carried out on the proposed access junction off B1149, north of Saxthorpe ('the Site'). A site visit on 24 October between the hours of 15:15 and 15:45 was undertaken and the results were issued in report reference CCE11B/NGC/RSA1.

Response to Items Raised at the Stage 1 Road Safety Audit

4.8 This section provides a formal “Designer Response” to the comments made in the Stage 1 Road Safety Audit including the general comments in Section 3 of the RSA. The RSA’s paragraph numbers are used here as reference numbers. Items raised by the Stage 1 Road Safety Audit carried out by CJ Safety Audit are presented below and addressed by Create Consulting Engineer’s as a formal “Designer Response”.

Junctions:

4.9 Ref 3.3: Junction visibility splays on the drawing indicate 160m to the south and 100m to the north (although 120m appears to be available). These equate to design speeds of 85kph and 70kph respectively; however no speed measurement data was submitted to support this. Timings taken on site by the Auditors indicate that cars were visible on each approach for 8 to 10 seconds, suggesting that traffic speeds lie within these design speeds. This issue is not therefore raised as a safety problem, nevertheless the local highway authority may require speed data to support the proposals.

4.10 Furthermore, part of the visibility envelope to the north appears to lie over uncultivated private land (although the precise highway boundary is difficult to identify). Due to the ground profile, regular maintenance of this verge will be necessary to sustain visibility, and formal arrangements with the landowner may be required.

Engineer’s Response:

4.11 A speed data survey is to be provided to the Highway Authority prior commencement of any access works, in order to demonstrate that traffic speeds lie within design speeds of the road.

4.12 Ref 3.4: The drawing provided for audit does not give any detail of the proposed form of construction - kerbing, pavement, drainage etc. This could have a bearing on safe operation of the junction, particularly the avoidance of ponding/detritus on the highway. The latter is of particular importance as the access road is on a down gradient towards the junction. Early consideration is advised.

Engineer’s Response:

4.13 An updated plan containing the proposed construction of the junction or temporary left turn overrun area; including kerbing, pavement material and drainage would be submitted prior to commencement of any work for approval.