

SINGLETON BIRCH, HYDROGEN DEVELOPMENT

STAGE 1 ROAD SAFETY AUDIT – DESIGNERS RESPONSE

1 Introduction

This Technical Note has been prepared by Sweco on behalf of Centrica Energy Storage Limited (the 'Applicant'), to provide a Designers Response to the Stage 1 Road Safety Audit (RSA) dated 20th November 2025 (document reference 65216055-SWE-GEN-ZZ-AS-PC-00001-P01).

The RSA was undertaken, at the request of North Lincolnshire Council (NLC) as the Local Highway Authority, to assess the design of the site access proposals and amendments within the public highway, identified as part of the proposed development off the A18 in North Lincolnshire, near Melton Ross (the 'Site').

This Designers Response is intended to be read in conjunction with the RSA report, as referenced above, and presents a response to each item raised within Section 3 of the RSA, point by point.

The RSA is based on the proposed site plan which was current at the date of the audit, (as included in the RSA report). Following the implantation of design changes, as a result of the audit recommendations, a revised site access design has been prepared and submitted in support of the planning application. For ease of reference, the plan is included as Appendix A of this Technical Note.

2 Designers Responses

The following section presents a summary of the identified items presented within Section 3 of the RSA report and the associated auditor's recommendation to each item. For each item, a Designers Response has been provided.

Item 3.1. – Existing “side road” warning sign

Summary: An existing “side road” warning triangle sign is positioned on the westbound approach to the proposed access. In the future the junction will form a staggered crossroads.

Recommendation: Replace the existing traffic sign in the westbound direction with one that warns drivers of the new staggered crossing layout.

Designers Response: The recommendation is accepted. It is proposed that the advanced warning sign be replaced with a staggered crossroads sign with the final design to be agreed as part of the S278 works to deliver the junction.

Item 3.2. – Reflective studs on centreline

Summary: The existing centreline markings feature reflective studs to improve visibility of the markings in poor lighting conditions. The proposals will impact this.

Recommendation: Provide reflective road studs along the longitudinal road markings to denote the new ghost-island layout.

Designers Response: The recommendation is accepted. It is proposed that reflective studs are incorporated into the longitudinal road marking scheme with the final design to be agreed as part of the S278 works to deliver the junction.

Item 3.3. – Right turn into adjacent access

Summary: a driver turning right into the existing access retained immediately to the east of the proposed access may not fit within the extent of the ghost island.

Recommendation: Extend the ghost-island further east and widen the lane widths at the curve into the road, so that drivers turning into the existing access can safely wait within the ghost island.

Designers Response: The recommendation is accepted. The design of the ghost island has been extended to accommodate a medium sized HGV to access the ghost island, clear of the running carriageway, whilst waiting to turn right into the existing field access. A swept path of the vehicle is included on the revised access plan, included as Appendix A.

Item 3.4. – Control of turning HGVs

Summary: The traffic island may not be sufficient on its own to fully deter HGVs from turning right out of the site.

Recommendation: Provide suitable road markings and signing to reinforce the banned turn

Designers Response: The recommendation is accepted. It is proposed that advisory signage and road markings will be incorporated, with the final design to be agreed as part of the S278 works to deliver the junction.

Furthermore, following consultation with a number of local stakeholder groups, the island has been amended to ensure that ALL vehicles are physically required to turn left out of the junction.

In combination, the advisory sign and physical shape of the island means that right turning egress is highly unlikely.

Item 3.5. – Splitter island offset

Summary: The splitter island proposed to help control the turning of HGVs is not set back from the edge of the running carriageway on the A18.

Recommendation: Provide a suitable offset between the mainline running lane and the splitter island to reduce the chance of through vehicles hitting the kerb.

Designers Response: The recommendation is accepted. The revised site access layout (see Appendix A) includes a revised splitter island which is set back half a metre from the channel line of the A18, as per standard design detail.

Item 3.6. – Existing Access track surface

Summary: The existing access to the east of the proposed access will be retained. It currently has a short section of sealed surface but is unsurfaced further into the field. Vehicles exiting this track could pull mud and detritus onto the A18 carriageway.

Recommendation: Provide a hard surfacing for a suitable distance along the existing site access track, such that mud and leaf detritus cannot easily enter the mainline.

Designers Response: It is accepted that vehicles exiting the field access may deposit mud onto the A18 carriageway, given that the field is only surfaced for a short section.

The designer considers this to be an existing issue, which is not made worse by the proposed design. The recommendation is not accepted.

Item 3.7. – Connection to existing footpaths

Summary: The existing footpaths on either side of the A18 currently require crossing of the A18 carriageway in the vicinity of the proposed access. Pedestrians are required to either walk on the uneven grass verge or walk on the A18 carriageway for the short stagger distance between the two paths.

Recommendation: Provide a safe, evenly surfaced route for walkers traversing between the two footpaths.

Designers Response: The proposals have been refined to enhance pedestrian safety and connectivity while maintaining traffic operation and protecting local ecology.

The A18 running lanes remain 3.6 m per lane, and the introduction of the ghost island (3.6 m) does not restrict available space for through traffic. The new bellmouth provides an even, surfaced route that pedestrians can use to traverse the short stagger between the two existing footpaths, avoiding the need to walk within the main running carriageway.

In addition, the design has been updated to include a kerbed pedestrian refuge (see Appendix A), enabling a clear, two-stage crossing of the A18. This

arrangement improves visibility, shortens exposure time to live traffic, and provides a protected waiting area.

A continuous, dedicated footway was explored, however the land take required would adversely affect adjacent ecologically significant trees and is therefore not proposed at this stage. On balance, the revised layout delivers a safer, more legible crossing arrangement and an improved, evenly surfaced route across the bellmouth, while safeguarding environmental assets.

Item 3.8. – Unclear which access is which

Summary: Drivers may mistake the proposed access road and the field access resulting in corrective manoeuvres in the A18 carriageway.

Recommendation: Provide advertising boards and signs at the entrance to the new road, making it clear which site it provides access to.

Designers Response: The existing access leads into a field, with only a short distance of sealed surface. Once constructed the proposed access will open up onto a surfaced road, with central road markings, verge and boundary treatments. The two access points are therefore anticipated to be uniquely distinct from each other.

The site is a private site and only accessible by those authorised to visit. Therefore an advertising board is considered unsuitable. However, to avoid confusion, it is accepted that some form of way finding sign may prove useful. The access will therefore feature a name plate visible from the A18 carriageway. Details of sign post type and location will be agreed with the LHA, as part of the S278 works to deliver the junction.

Appendix A

Project Number 65216055
Project Name SINGLETON BIRCH



CARRIAGEWAY WIDENING
ALONG THE NORTHERN VERGE

PROPOSED ISLAND TO
ENFORCE THE LEFT OUT
ARRANGEMENT FOR ALL VEHICLES

NEW PEDESTRIAN REFUGE ON THE A18
TO FACILITATE CROSSING TO/FROM
EXISTING PUBLIC RIGHT OF WAYS

100
90
80
70
60
50
40
30
20
10
0

NOTES

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P03	02.12.2025	AMENDED FOLLOWING COMMENTS	DM	IB	IB
P02	05.09.2025	AMENDED FOLLOWING COMMENTS	DM	IB	IB
P01	02.09.2025	FIRST ISSUE	DM	IB	IB
Rev	Date	Amendment Details	Dr'n	Chk'	App'

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Client
CENTRICA POWER

Project Title
SINGLETON BIRCH

Drawing Title
**PROPOSED ACCESS JUNCTION
GENERAL ARRANGEMENT**

Purpose Of Issue PRELIMINARY			
Status S0	Status Description INITIAL STATUS OR WIP		
Drawn DM	Designed DM	Checked IB	Approved IB
Sheet Size A3	Scale 1:500	Sweco Ref 65216055	Revision P03

Drawing Number
65216055-SWE-XX-ZZ-D-TP-0002b



CARRIAGEWAY WIDENING
ALONG THE NORTHERN VERGE

PROPOSED ISLAND TO
ENFORCE THE LEFT OUT
ARRANGEMENT FOR ALL VEHICLES

CARRIAGEWAY NARROWS
TO EXISTING FOLLOWING
THE JUNCTION

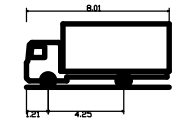
4.5m X 120m
VISIBILITY SPLAYS

NEW PEDESTRIAN REFUGE ON THE A18
TO FACILITATE CROSSING TO/FROM
EXISTING PUBLIC RIGHT OF WAYS

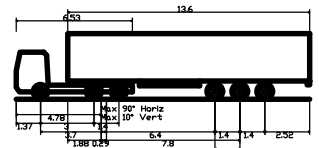
VEHICLES ACCESSING/
EGRESSING THE SITE

NOTES

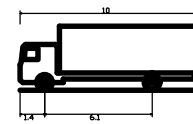
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7.5t Box Van
Overall Length 8.010m
Overall Width 2.100m
Overall Body Height 3.556m
Min Body Ground Clearance 0.351m
Track Width 2.364m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 7.400m



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m



ETA Design 13/18 Tonne Rigid Vehicle (2016)
Overall Length 10.000m
Overall Width 2.550m
Overall Body Height 3.645m
Min Body Ground Clearance 0.440m
Track Width 2.470m
Lock to lock time 5.00s
Kerb to Kerb Turning Radius 11.000m

Rev	Date	Amendment Details	Dr'n	Chk'	App'
P03	02.12.2025	AMENDED FOLLOWING COMMENTS	DM	IB	IB
P02	05.09.2025	AMENDED FOLLOWING COMMENTS	DM	IB	IB
P01	02.09.2025	FIRST ISSUE	DM	IB	IB

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Client
CENTRICA POWER

Project Title
SINGLETON BIRCH

Drawing Title
PROPOSED ACCESS JUNCTION INCLUDING VISIBILITY SPLAYS AND SWEEPED PATH ANALYSIS

Purpose Of Issue
PRELIMINARY

Status	Status Description			
S0	INITIAL STATUS OR WIP			
Drawn	Designed	Checked	Approved	
DM	DM	IB	IB	

Sheet Size	Scale	Sweco Ref	Revision
A3	1:1000	65216055	P03

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