APPENDIX 15-5

ROAD SAFETY AUDIT

traffico
ROAD SAFETY ENGINEERING

Knockshanvo Wind Farm

Stage 1 Road Safety Audit

Futurenergy Ireland

June 2024

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Stage 1 Road Safety Audit

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Document History

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0	Draft Issue	MD	MD	JR	MD	11 June 2024
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date

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1. Introduction

1.1 Report Context

This report describes the findings of a Stage 1 Road Safety Audit associated with the proposed Knockshanvo Wind Farm.

The Audit has been completed by Traffico on behalf of Futurenergy Ireland.

1.2 Locations Examined as Part of Road Safety Audit Process

The following locations were examined as part of this road safety audit.

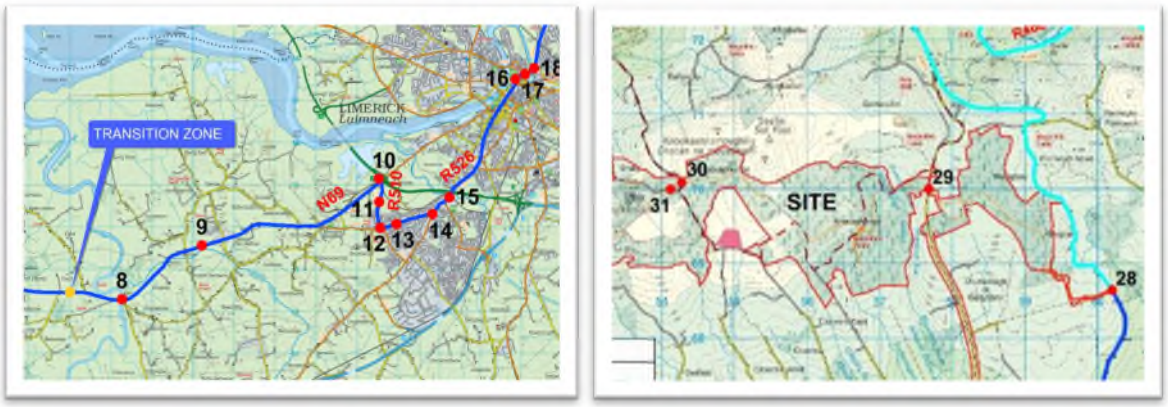

Figure 1.1 – Transition Zone (Left) & Locations 28, 29, 30 & 31 (Right)

1.3 Details of Site Inspection

Date	Daylight / Darkness	Weather & Road Conditions
Wednesday 5th June 2024	Daylight	Overcast with dry roads.

Table 1.1 – Site Inspection Details

1.4 The Road Safety Audit Team

The members of the Road Safety Audit Team have been listed following:

Status	Name / Qualifications	TII Auditor Reference No:
Audit Team Leader (ATL)	**Martin Deegan** BEng(Hons) MSc CEng MIEI	MD101312
Audit Team Member (ATM)	**John Ryan** BEng CEng MSc BE	JR*101

Table 1.2 – Audit Team Details

1.5 Design Information Examined as Part of the Audit Process

The following drawing(s) were examined as part of the Road Safety Audit (RSA) process:

Drawing No.	Drawing Title	Revision
Figure 15-1a	Site Location & Turbine Delivery Route	-
Figure 15-1b	Turbine Delivery Route Autotrack Assessment Location Plan	-
Figure 15-1c	Location of Site Access Junctions	-
Figure 15-2a	Site Location and Delivery Routes for General Construction Traffic	-
Figure 15-2b	Junction & Link Count Locations	-
Figure 15-6	Location 28 – Access Junction A on R465, Proposed Junction Layout	-
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Figure 15-8	Location 29 – Access Junction B on L-3042, Sallaybank Junction Layout	-
Figure 15-9	Location 29 – Access Junction B on L-3042, Sallaybank Junction Layout with Visibility Splays	-
Figure 15-10	Location 29 – Access Junction B on L-3042, Sallaybank Junction Vertical Profile	-
Figure 15-11	Location 30 & 31 – Access Junctions C and D, Snaty Junction Layout	-
Figure 15-12	Location 30 & 31 – Access Junctions C and D, Snaty Junction Layout with Visibility Splays	-
Figure A	Preliminary Layout of Transition Zone	-
B2310	Transition Area	-

Table 1.3 – Designers Drawing List

1.6 Road Safety Audit Compliance

Procedure and Scope

This Road Safety Audit has been carried out in accordance with the procedures and scope set out in TII publication number GE-STY-01024 - Road Safety Audit.

As part of the road safety audit process, the Audit Team have examined only those issues within the design which relate directly to road safety.

Compliance with Design Standards

The road safety audit process is not a design check, therefore verification or compliance with design standards has not formed part of the audit process.

Minimizing Risk of Collision Occurrence

All problems described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and minimise the risk of collision occurrence.

2. Road Safety Issues Identified

2.1 Problem: Sightlines Partially Obscured by Field Boundary

Location: Transition Zone | Field Boundary Flanking Accesses

Sightlines to the left appear to be partially obscured by the existing field boundary, which includes ditch foliage and some trees. This could lead to side impact type collisions within the access junction's conflict zone.

Figure 2.1 – N69 Looking Eastbound – With Access to Transition Zone on Left

Recommendation

The ditch should be modified to ensure that an appropriate sightline is provided at the location described.

2.2 Problem: Sightlines Partially Obscured by Field Boundary

Location: Location 28 – Access Junction A | Field Boundary Flanking Accesse

The access sightlines appear to be obscured by the existing field boundary, which includes ditch foliage and some trees. This could lead to side impact type collisions within the access junction's conflict zone.

Figure 2.2 – R465 Looking Northbound – With Access Junction A Location on Left

Recommendation

The ditch should be modified to ensure that an appropriate sightline is provided at the location described.

2.3 Problem: No Road Safety Problems Identified for Location 29

Location: Location 29 – Access Junction B

No significant road safety issues have been identified for Location 29.

2.4 Problem: Constrained Geometry of Access Roads

Location: Locations 30 & 31 – Access Junctions C & D | Narrow Forestry Roads

The forestry access roads were constrained in terms of cross section, horizontal alignment and also vertical alignment. This could lead to loss of control type collisions and opposition type conflicts (where opposing vehicles have difficulty passing each other) for wind farm construction traffic, including abnormal loads.

Figure 2.3 – Constrained Geometry of Roads Serving Access Junctions 30 & 31

Recommendation

The geometry of the roads should be improved to accommodate the anticipated wind farm construction traffic. The road improvements should be supported by suitable temporary traffic management interventions to further mitigate the risks described.

3. Audit Team Statement

3.1 Certification & Purpose

We certify that we have examined the drawing(s) listed in Chapter 1 of this Report.

Sole Purpose of the Road Safety Audit

The Road Safety Audit has been carried out with the sole purpose of identifying any features of the design which could be removed or modified to improve the road safety aspects of the scheme.

3.2 Implementation of RSA Recommendations

The problems identified herein have been noted in the Report together with their associated recommendations for road safety improvements.

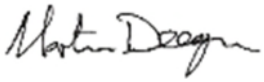
We (the Audit Team) propose that these recommendations should be studied with a view to implementation.

Audit Team's Independence to the Design Process

No member of the Audit Team has been otherwise involved with the design of the measures audited.

3.3 Road Safety Audit Team Sign-Off

Martin Deegan
Audit Team Leader
Road Safety Engineering Team
traffico

Signed: 
Date: 11th June 2024

John Ryan
Audit Trainee
Road Safety Engineering Team
traffico

Signed: 
Date: 11th June 2024

4. Designers Response

4.1 How the Designer Should Respond to the Road Safety Audit

The Designer should prepare an Audit Response for each of the recommendations using the Road Safety Audit Feedback Form attached in Appendix A.

When completed, this form should be signed by the Designer and returned to the Audit Team for consideration. See flow-chart following for further description.

Figure 4.1 – Road Safety Audit Sign-Off and Completion Process

4.2 Returning the Completed Feedback Form

The Designer should return the completed Road Safety Audit Feedback Form attached in Appendix A of this report to the following email address:

- Email address: martin@traffico.ie

The Audit Team will consider the Designer's response and reply indicating acceptance or otherwise of the Designers response to each recommendation.

Triggering the Need for an Exception Report

Where the Designer and the Audit Team cannot agree on an appropriate means of addressing an underlying safety issue identified as part of the audit process, an Exception Report must be prepared by the Designer on each disputed item listed in the audit report.

Appendix A

A.1 Road Safety Audit Feedback Form

Road Safety Audit Feedback Form

Scheme: Knockshanvo Wind Farm	
Audit Stage: Stage 1 Road Safety Audit	**Audit Date:** 11th June 2024

Problem Reference (Section 2)	Designer Response Section			Audit Team Response Section
	Problem Accepted (yes / no)	Recommended Measure Accepted (yes / no)	Alternative Measures or Comments	Alternative Measures Accepted (yes / no)
2.1	Yes	Yes	See Note 1	Comment noted & accepted.
2.2	Yes	Yes	All vegetation and foliage will be cleared in order to provide the 3m x 160m visibility splays along the R465, as shown in Figure 15-7 of the EIAR.	Comment noted & accepted.
2.4	Yes	Yes	See Note 2	Comment noted & accepted.

Note 1

It is acknowledged that visibility splays are constrained at the location of the proposed Temporary Transition Compound. Appropriate traffic management measures are set out in Section 15.1.2.3 of the EIAR During the construction of the proposed TTC access to and from the site off the N69 will be controlled by traffic management measures, including temporary signage in accordance with the *"Traffic Signs Manual, Section 8 – Temporary Traffic Measures and Signs for Road Works"* (DoT now DoTT&S) and "Guidance for the Control and Management of Traffic at Roadworks" (DoTT&S). Construction staff (flagman) will be present at this location during all times that deliveries are made to and from the site. The site will be closed to all traffic by means of fencing at all other times.

Note 2

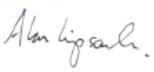
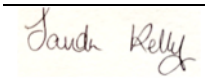
All construction, operational and decommissioning traffic requiring access to turbines Nos 1 to 3 will require to cross the L-30144-0 local road at Access Junction C, with the proposed junction layout shown in Figure 15-11 of the EIAR. At present there is an existing agricultural/forest access that links into the L-30144-0 local road from the east. It is proposed to retain this access, with 6m junction radii proposed in accordance with the existing access.

A new access is proposed on the west side of the L-30144-0 local road. This access is for the purpose of development generated traffic only, with no turning movements permitted. Nominal junction radii of 3m proposed at this location. It is proposed that the access on the western side is gated and opened during construction periods and for maintenance visits only.

The junction layout proposed at Access Junction D, also shown in Figure 15-11, takes the form of 2 staggered priority junctions with the L-30426-23 local road that will be in place permanently during the operational phase, with temporary routes through the junction to be used during the construction phase only.

The gravel track nature of the L-30426-23, together with alignment of the existing road, results in speeds being very low (ie approx. 30 km/h). For the assessment of visibility splays a design speed of 50 km/h is adopted at this location, with 2.4m x 70m visibility splays shown in Figure 15-12.

Both of these junctions will be managed by site staff during the construction of the Proposed Development.

Designer's Name:	Alan Lipscombe	Designer's Signature:		Date:	11/06/24
Employer's Name:	Sandra Kelly	Employer's Signature:		Date:	11/06/24
Audit Team's Name:	Martin Deegan	Audit Team's Signature:		Date:	12 June 2024

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