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APPENDIX 15-4

TII DESIGN REPORT

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PROPOSED SESKIN WIND FARM, COUNTY CARLOW

PROPOSED TEMPORARY ACCESS FOR ABNORMALLY SIZED LOADS N78 / L-1834 JUNCTION, IN COUNTY KILKENNY

**Design Phase Procedure for Road Safety Improvement Schemes, Urban
Renewal Schemes and Local Improvement Schemes**

DN-GEO-03030 Design Report

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Client: EDF Renewables Ireland Ltd
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AL Project No: 8800

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1 INTRODUCTION

This is the **DN-GEO-03030 Design Report** for a proposed temporary access road for abnormally sized loads located to the southeast of the N78 / L-1834 junction, in County Kilkenny. It is noted that the junction has a 4th arm, the L-5872, although this arm is not impacted by the proposed temporary access road.

The proposed temporary access road at the N78 / L-1834 junction is part of the proposed Seskin Wind Farm, which includes a 7 turbine wind farm, in County Carlow. The temporary link road is part of the planning application being made to Kilkenny County Council and is assessed as part of this EIAR.

The following figures extracted from the proposed Seskin Wind Farm EIAR are referenced in this Report, all of which are included as Appendix A;

- Figure 15.8 Location 5 – N78 / L-1834, proposed temporary access road for abnormally sized loads during construction phase
- Figure 15.9 Location 5 – N78 / L-1834, proposed temporary access road for abnormally sized loads during construction phase - blade extended artic
- Figure 15.10 Location 5 – N78 / L-1834, proposed temporary access road for abnormally sized loads during construction phase - tower extended artic

A detailed description of the proposed access is provided in Section 15.1.9 of the EIAR under Location 5, – N78 / L-1834 junction, which is also shown in Figures 15-8 to 15-10. The temporary link road proposed to the southeast of the existing N78 / L-1834 junction is summarised in Section 5.1 of this report.

2 COLLISION HISTORY

There is no collision history available from the RSA website at present.

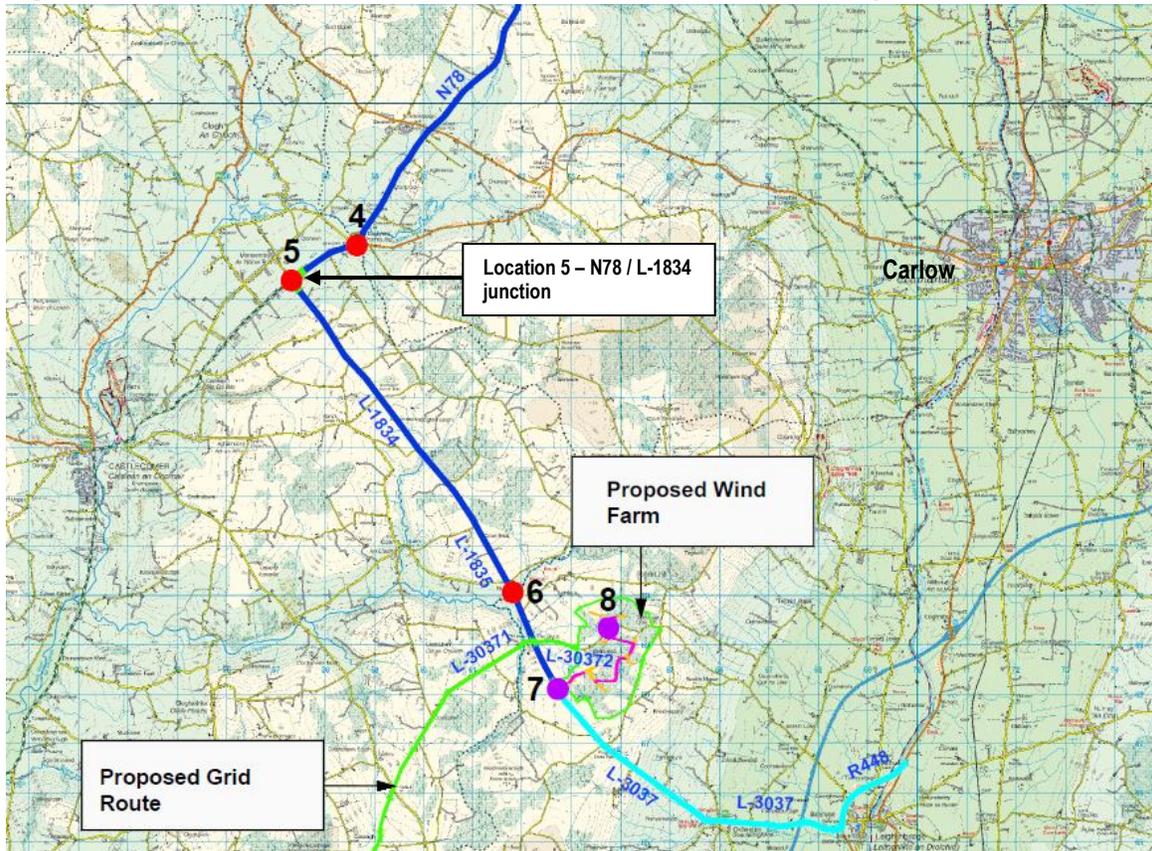
3 SAFETY OBJECTIVES

The safety objectives of the proposed temporary access at the N78 / L-1834 junction for the delivery of abnormal loads during night-time hours are;

- To provide safe access for the delivery of all abnormally sized loads to the site.

- To provide a safe environment for background traffic on the N78 and the L-1834 by means of transient traffic management measures provided by An Garda Síochána and the haulage company.
- To provide a safe environment for existing traffic and construction workers during the construction of the proposed temporary access road via the temporary access of the L-1834.

Figure 1 Wind Farm Site location and Location 5 – N78 / L-1834 junction



4 EXISTING CONDITIONS

The existing environment is shown in Plates 1 to 3 below.

4.1 Speed

The speed limit on the N78 is 100km/hr.

4.2 Traffic Volumes

A summary of the traffic volumes observed on the N78 and L-1834 arms of the existing 4-armed junction are shown in Table 1. The counts were undertaken on Tuesday 20th February, 2024 as part of the EIAR prepared for the proposed Seskin Wind Farm. The figures show that a 2-way daily flow of 3,752 vehicles and 838 vehicles were observed on the N78 and the L-1834 respectively.

During the night-time hours when the convoys of the abnormally sized loads will utilise the proposed temporary access road to the southeast of the N78 / L-1834 junction, 2-way daily flows of 17 vehicles and 2 vehicles were observed on the N78 and the L-1834 during the hours of 00:00 to 01:00. Traffic volumes during night-time hours are therefore very low, which is the reason that these deliveries are made during this period.

Table 1 Observed 2-way traffic flows by road and time period

Link	24 hour	1 hour (00:00 to 01:00)
N78	3,752	17
L-1834	838	2

Tuesday 20th February, 2024

4.3 Horizontal Alignment

Figure 15-8 appended to the rear of this report shows the existing N78 / L-1834 junction and the location of the proposed temporary access road. The figure shows that the N78 is relatively straight at this location, with the L-1834 connecting into the national road at 90°. Outside the hours that the delivery of the abnormal loads will take place, no changes are proposed to the existing N78 or the N78 / L-1834 junction.

4.4 Vertical Alignment

The vertical alignment at the existing N78 / L-1834 junction is flat. There are no changes to the vertical alignment proposed.

4.5 Cross Section, Crossfall & Super elevation

4.5.1 Cross Section and crossfall

In the proximity of the proposed temporary access for abnormal loads and the existing junction with the L-1834 the N78 is a Type 1 single carriageway with hard shoulders. There are no changes to the cross-section proposed on the N78.

There is generally standard cross fall on the N78 at the junction with L-1834. There are no changes to the crossfall on the N78 or the L-1834 proposed.

4.5.2 Super elevation

There is no superelevation on this relatively straight section of the N78. There are no changes to the superelevation on the N78 proposed.

4.6 Junctions & Accesses

As shown in Figure 15-8, there are accesses to 2 existing residential properties on the north side of the N78 and an access to a public house on the southeast corner of the N78 / L-1834 junction. It is noted that these accesses will not be impacted by the proposed temporary link road.

Plate 1 Looking northeast along N78 with location of proposed temporary access for abnormal loads on right



Plate 2 Looking southwest along N78 with L-1835 junction on the left



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Plate 3 Taken from the N78 Looking southeast along L-1834



4.7 Facilities for Vulnerable Road Users

There are currently no facilities for vulnerable users at the location of the proposed temporary access road for abnormal loads on the N78 or the L-1834. Based on the nature of the temporary access for the delivery of abnormal loads, there are no facilities for vulnerable road users proposed as part of the Proposed Project.

4.8 Visibility & Sightlines

Visibility splays along the N78 taken from the L-1834 are adequate with no changes proposed at this location as part of the Proposed Project.

5 ENVIRONMENTAL, ARCHAEOLOGICAL AND OTHER CONSTRAINTS

5.1 Appropriate Assessment

Not Applicable

5.2 Ecological Assessment

Not Applicable

5.3 Other Environmental Surveys

Not Applicable.

5.4 Archaeological Constraints

Not Applicable.

6 PROPOSED DESIGN

6.1 General

As set out previously the following figures from the proposed Seskin Wind Farm EIAR are referenced in this section, all of which are included as Appendix A of this report;

Figure 15.8 Location 5 – N78 / L-1834, proposed temporary access road for abnormally sized loads during construction phase

Figure 15.9 Location 5 – N78 / L-1834, proposed temporary access road for abnormally sized loads during construction phase - blade extended artic

Figure 15.10 Location 5 – N78 / L-1834, proposed temporary access road for abnormally sized loads during construction phase - tower extended artic

The proposed temporary access at the N78 / L-1834 junction is part of the proposed Seskin Wind Farm which includes a 7 turbine wind farm, in County Carlow. The temporary link road is part of the planning application being made to Kilkenny County Council and is assessed as part of this EIAR.

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It is proposed that a temporary access road will be constructed linking the N78 to the L-1834 in order to bypass the existing junction to the southeast, shown as location 5 in Figure 1 on page 5 of this report. The sole purpose of this temporary access road will be to facilitate the delivery of the abnormally sized turbine components only. It is proposed that the temporary access road will be opened temporarily and only on designated hours on the nights that the abnormally sized vehicle convoys deliver to the proposed wind farm site. This access is not designed in accordance with TII Guidelines, and no visibility splays are provided at this location as this is a temporary facility that will be used on the 19 nights when a convoy of 3 abnormally sized loads will be escorted onto the proposed access road from the N78, and onto the L-1834, by means of an escort provided by An Garda Síochána. On these nights, transient traffic management will also be provided on the N78 and L-1834. At all other times during the construction period the temporary access points on the N78 and L-1834 will be closed by means of a gate. On the completion of the construction phase the boundaries on the N78 and the L-1834 will be fenced off and re-instated to their original state and will be opened only for the purpose of replacing large turbine component parts.

All other traffic generated by the Proposed Wind Farm, including standard HGVs, trucks and construction staff cars will use the existing N78 / L-1834 junction.

The area of land that is available for the proposed temporary access is shown in Figure 15-8 with the autotrack assessments undertaken for the blade and tower extended articles included as Figures 15-9 and 15-10 respectively. The figures show that the turning requirements of both vehicles will be accommodated within the confines of the land available.

It is noted that while there are no junction designs or visibility splays required at the access junction off the N78, or at the exit from the L-1834, as all deliveries will be accompanied by a Garda escort, traffic management measures will be put in place during the construction of the accommodation works. It is proposed that the accommodation works will be constructed via the L-1834 in order to ensure that there are no impacts to the operation of the N78 National Secondary Road.

6.2 Land Acquisition

The land required to provide the temporary access road for the delivery of abnormal loads has been acquired by the Applicant.

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6.3 Horizontal Alignment

As part of the introduction of the proposed temporary access road for the delivery of abnormal loads, as shown in Figure 15-8, there are no changes proposed to the horizontal alignment on the N78, or the L-1834 approach to the junction with the N78.

6.4 Vertical Alignment

It is confirmed that there are no changes proposed to the vertical alignment on the N78 or the L-1834 approach to the junction with the N78.

6.5 Cross Section Crossfall & Super elevation

6.5.1 Cross Section

There are no changes proposed to the cross section on the N78 or the L-1834 approach to the junction with the N78.

6.5.2 Crossfall

There are no changes proposed to the crossfall on the N78 or the L-1834 approach to the junction with the N78.

6.5.3 Super elevation

There are no changes proposed to the superelevation on the N78 or the L-1834 approach to the junction with the N78.

6.6 Facilities for Vulnerable Road Users

There are no changes proposed for conditions for vulnerable road users on the N78 or the L-1834 approach to the junction with the N78.

6.7 Junctions & Accesses

There are no changes proposed to existing junctions and accesses on the N78 or the L-1834 approach to the junction with the N78.

6.8 Visibility and Sightlines

No changes are proposed relating to visibility or sightlines on the N78 or the L-1834 approach to the junction with the N78.

6.9 Drainage

No changes are proposed relating to drainage on the N78 or the L-1834 approach to the junction with the N78.

6.10 Pavement

No changes are proposed relating to pavement design on the N78 or the L-1834 approach to the junction with the N78.

6.11 Safety Barrier Risk Assessment and Provision

There are currently no safety barriers on the N78 in the proximity of the junction with the L-1834. No changes are proposed.

6.12 Traffic Signs and Road Markings

No changes are proposed relating to the existing traffic signs and markings at the N78 / L-1834 junction.

6.13 Accommodation Works

As set out previously, the accommodation works for this temporary access will be constructed via the temporary access on the L-1834, commencing at the southwestern end of the temporary access working northeast towards the connection with the N78. Temporary traffic management measures will be put in place on the L-1834 to ensure the safe operation of this temporary access. Using this method of construction there will be no impact on the N78 during the construction of the temporary access for the abnormally sized loads.

6.14 Lighting

There is currently no lighting on the N78 or the L-1834 in the proximity of the existing junction or the proposed temporary access for abnormal loads. No changes are proposed.

6.15 Departures from Standard

As set out above, the proposed temporary access for the purpose of the delivery of abnormally sized loads to the site is a temporary access route to be opened up only during the times of delivery of the abnormal loads during which times traffic management will be provided by An Garda Síochána. There are no other changes to the N78 or the N78 / L-1834 junction proposed.

7 ROAD SAFETY AUDIT

The situations that require a Road Safety Audit are set out in TII guidelines *Road Safety Audit Guidelines (GE-STY-01024)* and are set out in Section 2.1 of the document as follows;

2.1 Schemes to be audited

This Standard shall apply to all National Road Schemes. This includes work carried out under agreement with the Overseeing Organisation resulting from developments alongside or affecting the National Roads.

The Standard sets out two categories of scheme:

- **Road Scheme.** A scheme results in new road construction or permanent change to the existing road or roadside layout.
- **Development Scheme.** A scheme which results in a change to the road or roadside layout that is initiated and/or executed for commercial or private development.

A Road Safety Audit is required on any piece of road infrastructure which requires a design. No Audit is required on like-for-like repair or replacement of existing road infrastructure.

Appendix A provides a representative sample of types of Scheme and guidance on the requirement for Audit for each type of Scheme, and also on the relevant Audit Stages to be carried out if Audit is required.

As none of these conditions apply to the proposals for the existing N78 / L-1834 junction, it is considered that a Road Safety Audit may not be required at this location. It is noted, however, that a Stage 1 Road Safety Audit for the proposed temporary measures in the proximity of the N78 / L-1834 junction is currently being undertaken on behalf of the Applicant by Traffico Ltd.

8 TOTAL SCHEME BUDGET

There are no cost estimates available at present.

9 PROPOSED NEXT STEPS

Subject to being granted planning permission the next steps will be to finalise construction drawings and compile construction tender package.

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NOTES:
 PLANNING DRAWING ONLY - NOT FOR CONSTRUCTION PURPOSES

Figure 15-8 Location 5 - N78 / L-1834, proposed temporary access road for abnormally sized loads during construction phase

PROJECT: Seskin Wind Farm, Co.Carlow		SCALE: 1:1000
CLIENT: EDF Renewables Ireland Ltd		DRAWN BY: AL
PROJECT NO: 8800	DATE: 27.04.24	

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NOTES:
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Figure 15-9 Location 5 - N78 / L-1834, proposed temporary access road for abnormally sized loads - blade extended artic

PROJECT: Seskin Wind Farm, Co. Carlow		SCALE: 1:1000
CLIENT: EDF Renewables Ireland Ltd		DRAWN BY: AL
PROJECT NO: 8800	DATE: 27.04.24	

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NOTES:
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Figure 15-10 Location 5 - N78 / L-1834, proposed temporary access road for abnormally sized loads
 - tower extended artic

PROJECT:	Seskin Wind Farm, Co.Carlow	
CLIENT:	EDF Renewables Ireland Ltd	SCALE: 1:1000
PROJECT NO: 8800	DATE: 27.04.24	DRAWN BY: AL

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