



APPENDIX 15-5

TII DESIGN REPORT

PROPOSED CRUMHACH WIND FARM & PROPOSED GRID CONECTION ROUTE

Section on N59, County Sligo

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

DN-GEO-03030 Design Report

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1 INTRODUCTION

This TII Design Report has been prepared for a section of the Proposed Grid Connection Route underground cable connection (UGC) that is proposed to connect the Proposed Crumhach Wind Farm (Proposed Project), located in County Sligo, to the existing Srananagh Substation, located in the townland of Ballysumaghan, County Sligo.

It is proposed that a section of the UGC measuring approximately 23.0 km will be installed within the curtilage of the existing N59 National Secondary Road carriageway, as indicated as Section 2 shown in Figure 15-5a of the EIAR, together with the Turbine Delivery Route that will also use the N59.

An assessment of the impacts of the construction of the Proposed Grid Connection Route UGC are set out in the EIAR prepared for the Proposed Project.

Figure 15-5a of EIAR - Proposed cable grid connection route

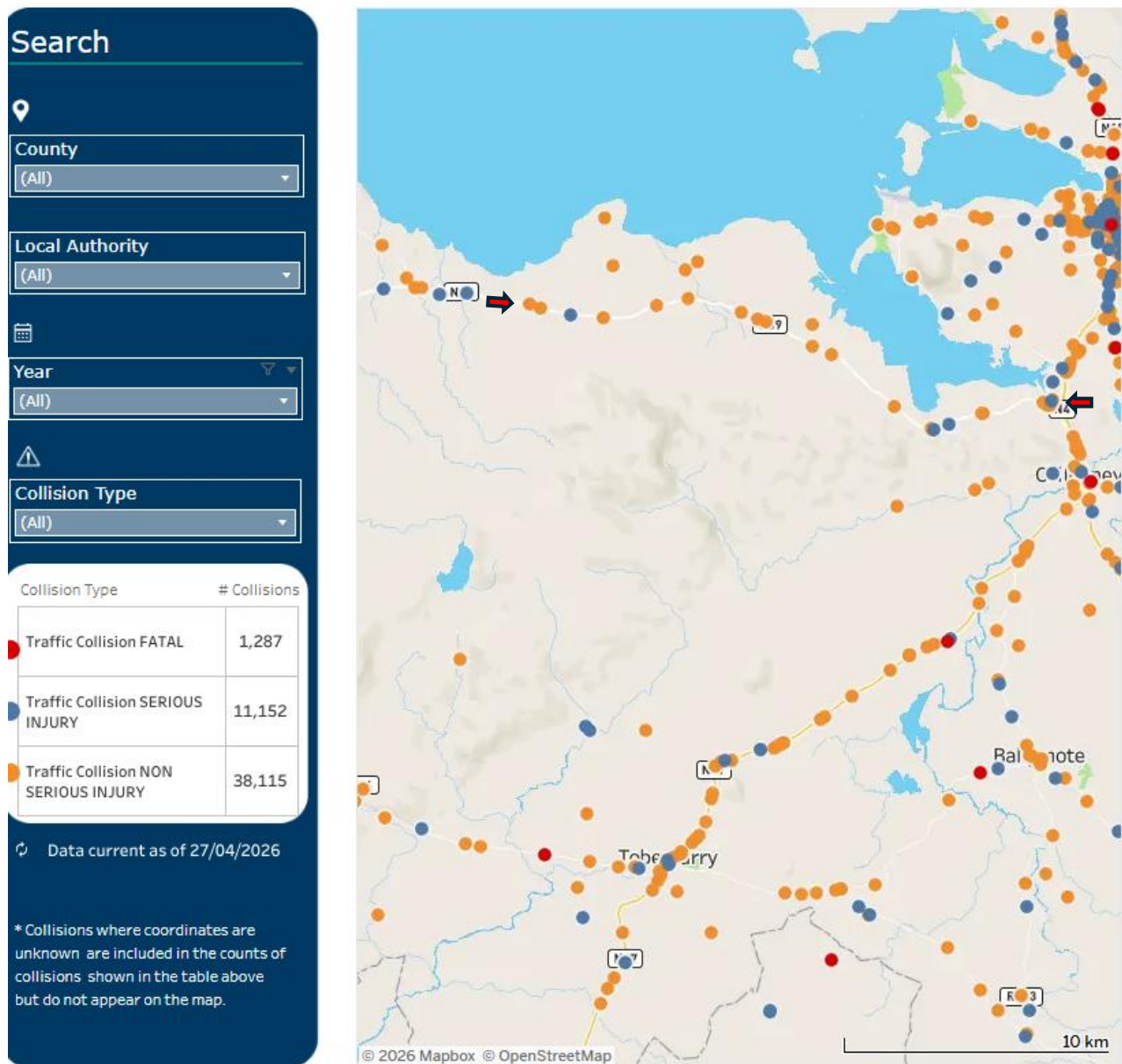


This report is as part of the Schedule of Information issued by An Coimisiún Pleanála (ACP) during the closure of the SID Determination stage of the Proposed Project.

2 COLLISION HISTORY

A snapshot of the collisions that occurred on this section of the N59 during the 9 year period from 2016 to 2024 is included in Figure 1, as extracted from the recently available portal on the Road Safety Authority website. The figure shows that on this section of the N59, indicated between the 2 red arrows on Figure 1, there were 15 collisions categorised as non serious injury, 4 serious injury collisions, with no fatal collisions recorded.

Figure 1 Collisions recorded by RSA during period 2016 – 2024, by collision severity



3 SAFETY OBJECTIVES

The safety objectives during the installation of the UGC on the 23.0 km section of the N59 are;

- To facilitate a safe environment for construction staff during the construction of the UGC.
- To provide a safe environment for background traffic on the N59 during the construction of the section of the UGC on the N59.
- To maintain the relative free flow of traffic on the N59 National Road at all times.

4 EXISTING CONDITIONS

4.1 Speed

The speed limit on this 23.0 km section of the N59 varies from 50 kph through the urban areas to 100 kph on the rural sections.

4.2 Traffic Volumes

An all-day traffic flow of 4,051 vehicles was observed on Tuesday 10th March, 2026 on the section of the N59 at Dunmore West, just west of the proposed UGC (Source – Classified Turning Count undertaken by Traffinomics Ltd for the Environmental Impact Assessment Report (EIAR) for the Proposed Project).

4.3 Horizontal Alignment

The horizontal alignment of this 23.0 km section of the N59 is variable. There are no changes proposed to the alignment of the N59 as part of the Proposed Project.

4.4 Vertical Alignment

The vertical alignment on this section of the N59 is variable. There are no changes to the vertical alignment proposed.

4.5 Cross Section, Crossfall & Super elevation

4.5.1 Cross Section

While the cross-section varies along this 23.0 km section of N59 the rural sections are typically 2 x 3.0m traffic lanes with 2 x 0.5 hard strips (Type 3 single carriageway). There are no permanent changes proposed to the existing cross section.

4.5.2 Super elevation

The superelevation on this 23.0 km section of the N59 varies along its length. There are no changes proposed to the superelevation as part of the Proposed Project.

4.6 Junctions & Accesses

There are no permanent changes proposed to existing junctions and accesses on the N59.

4.7 Facilities for Vulnerable Road Users

On the short section of the UGC route on the N59 in Ballisadare there are footpaths on both sides of the N59. Outside this urban area there are only limited sections of footpaths and limited provision for vulnerable road users. Based on the nature of the proposed works there are no facilities for vulnerable road users proposed as part of the Proposed Project.

4.8 Visibility & Sightlines

There are no changes proposed to the forward visibility along this section of the N59 or to the visibility splays available at the various junctions connecting with it.

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

It is proposed that a section of the proposed Underground Grid Connection (UGC) route measuring approximately 23.0 km will be installed within the curtilage of the existing carriageway, as shown in Figure 15-5a of the EIAR.

The underground cabling works will consist of the installation of ducts in an excavated trench to accommodate power cables, and fibre communications cables to allow communications between the proposed 110kV onsite substation and the existing 220kV Srananagh Substation.

The Proposed Grid Connection Route works will require a road opening licence under Section 254 of the Planning and Development Act 2000. A Traffic Management Plan (TMP) (included as Appendix 15-2 of the Crumhach Wind Farm EIAR) will be agreed with TII and the local authority prior to the commencement of the development.

At a minimum it is proposed that a “Stop & Go” traffic system will be in operation for the full duration of the works in order to maintain 2-way flow at all times. During the detailed design of traffic management measures all efforts will be made to retain a 2-way traffic flow through the point of construction. It is estimated that the duration of the works on the N59 will last approximately 230 working days. A detailed traffic management layout will be prepared for the transient work on the N59 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). A member of construction staff (flagman) and signage will be present at all times. A temporary reduction in the speed limit on the N59 to a maximum 60 kph at the section on which the UGC is being constructed, is proposed as part of the traffic management measures.

All road surfaces and boundaries will be re-instated to pre-development condition, as agreed with the local authority engineers. All works will be done in accordance with the Guidelines for the Opening, Backfilling and Reinstatement of Openings in Public Roads, DTToS, September 2015.

6.2 Link capacity and junction capacity

In accordance with Rural Road Link Design the capacity of this section of the N59, which is a Type 3 Single Carriageway, is 5,000 ADT, at level of Service D. During the detailed design of the traffic management measures proposed for the estimate 230 day construction period, all efforts will be made to minimise the impact on the carrying capacity on this section of the N59.

6.3 Land Acquisition

There is no land acquisition required as part of the proposed temporary works.

6.4 Horizontal Alignment

There are no changes proposed to the horizontal alignment on the N59.

6.5 Vertical Alignment

There are no changes proposed to the vertical alignment on the N59.

6.6 Cross Section Crossfall & Super elevation

6.6.1 Cross Section

There are no permanent changes proposed to the cross section on this section of the N59.

6.6.2 Crossfall

There are no changes proposed to the crossfall on the N59.

6.6.3 Super elevation

There is no changes to the superelevation on this section of the N59 proposed.

6.7 Facilities for Vulnerable Road Users

There are no changes proposed for conditions for vulnerable road users on the N59.

6.8 Junctions & Accesses

There are no permanent changes proposed to existing junctions and accesses on the N59. Access to all existing properties will be maintained at all times during the construction of the UGC on this section of the N59. There are approximately 20 local roads that join this section of the N59 via priority type junctions in addition to a number of agricultural/business and residential accesses. Access to the side roads will be disrupted for very short periods only (<1 day each) during periods when the construction of the UGC on the N59 crosses each one. Access to properties will be maintained at all times during the estimated 230 day construction period.

6.9 Visibility and Sightlines

No changes are proposed relating to sightlines or forward visibility on this section of the N59.

6.10 Drainage

On completion of the proposed works all drainage on this section of the N59 will be reinstated to its pre works condition.

6.11 Pavement

On completion of the proposed works the carriageway pavement on this section of the N59 will be reinstated to its pre works condition.

6.12 Safety Barrier Risk Assessment and Provision

There are no changes proposed to safety barriers on this section of the N59.

6.13 Traffic Signs and Road Markings

On completion of the proposed works all traffic signs and road markings on this section of the N59 will be reinstated to pre works condition.

6.14 Accommodation Works

All works will be undertaken within a cordoned environment 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).

6.15 Lighting

There are no changes proposed to the permanent lighting on this section of the N59. Temporary lighting will be installed at the point of construction as part of the temporary works.

6.16 Departures from Standard

The proposed works involve the installation of a proposed UGC within the curtilage of the carriageway of a 23.0 km section of the N59 which will require temporary traffic management measures for a period of approximately 230 days. There are no other changes proposed on the N59.

7 ROAD SAFETY AUDIT

A Road Safety Audit will be undertaken in relation to the detailed traffic management measured prior to construction.

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 a construction tender package.