GDG
GAVIN & DOHERTY
GEOSOLUTIONS

Illaunbaun Wind Farm - Environmental Impact Assessment Report

Chapter 19: Traffic and Transport

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

Appendix 19.1: Abnormal Loads Assessment
Appendix 19.2: Site Access Design

ACRONYMS

AADT	Average Annual Daily Traffic
AL	Abnormal Loads
ALA	Abnormal Loads Assessment
ATCs	Automatic Traffic Counters
CTMP	Construction Traffic Management Plan
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
HGV	Heavy Goods Vehicle
HV	High Voltage
IEMA	Institute of Environmental Management and Assessment
LGV	Light Goods Vehicle
MMaRC	Motorway Maintenance and Renewals Contract
NTS	Non-Technical Summary
OHL	Overhead Line
PIA	Personal Injury Accidents
PoE	Port of Entry
PPE	Personal Protective Equipment
PPP	Public-Private Partnership
TII	Transport Infrastructure Ireland
TII	Transport Infrastructure Ireland
TTA	Traffic and Transport Assessment
TTA	Traffic and Transport Assessment
UGC	Under Ground Cable
UK	United Kingdom

GLOSSARY OF TERMS

Abnormal Load	A vehicle load that exceeds standard legal limits for weight, width, or length and therefore requires special planning, route assessment, and escort arrangements under Irish road regulations.
Cumulative impacts	'The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects' (EPA, 2022a).
Indirect impact	'Impacts on the environment, which are not a direct result of the project, often produced away from (the site) or as a result of a complex pathway' (EPA, 2022a).
Mitigation	Measure or action which would avoid, reduce, or remediate an impact.
Personal Injury Accident	An incident on a public road resulting in injury to one or more individuals, typically classified as fatal, serious, or minor based on severity, and used as a key road safety indicator.
Study Area	Road links in the vicinity of the Proposed Development

19 TRAFFIC AND TRANSPORT

19.1 INTRODUCTION

This chapter of the Environmental Impact Assessment (EIA) Report presents the assessment of the likely significant effects (as per the "EIA Regulations") of the Proposed Development on Traffic and Transport arising from the construction and operation of the Proposed Development, both alone and cumulatively with other plans and projects, and was determined following the issue of the *Illaunbaun Wind Farm – Environmental Impact Assessment Scoping Report* to stakeholders described in Chapter 6: Project Scoping and Consultation.

The assessment presented is informed by the following figures/appendices:

- Figure 19-1: Study Area
- Figure 19-2: Abnormal Loads Route
- Figure 19-3: Traffic Counter Locations
- Appendix 19.1: Abnormal Loads Assessment
- Appendix 19.2: Site Access Design

The primary purpose of this chapter is to describe the existing transport network in the vicinity of the receiving environment and analyse any potential development related effects on it.

This chapter comprises the following elements:

- Summary of relevant policy and guidance;
- Data sources used to characterise the Study Area;
- Summary of consultations with stakeholders;
- Methodology followed in assessing the impacts of the Proposed Development (such as information of the Study Area and the approach taken in assessing the potential impacts);
- Review of baseline conditions;
- Assessment of likely significant effects arising from the construction and operation of the Proposed Development;
- Identification of further mitigation measures and/or monitoring requirements (if any) in respect of any significant effects; and
- Summary of residual impact assessment determinations in the case of any additional mitigation measures identified during this process.

19.1.1 RELEVANT LEGISLATION AND GUIDELINES

The following policy, legislation, plans and guidance are considered applicable to this chapter.

- PE-PDV-02045, Traffic and Transport Assessment Guidelines, Transport Infrastructure Ireland, 2014;

- PE-PAG-02017, Project Appraisal Guidelines, Unit 5.3, Travel Demand Projections, Transport Infrastructure Ireland, October 2021;
- Environmental Assessment of Traffic and Movement, Institute of Environmental Management and Assessment (IEMA), 2023; and
- Guidelines for Managing Openings in Public Roads, 2017. Department of Transport.

19.2 ASSESSMENT METHODOLOGY

19.2.1 STATEMENT OF COMPETENCE

This chapter has been prepared by SYSTRA Ltd (SYSTRA), who have extensive experience in the preparation of Traffic and Transport EIA Report Chapters and Environmental Statements. SYSTRA's EIA team has produced Traffic and Transport EIA Report Chapters and Abnormal Loads Assessment reports for numerous renewable energy developments across the UK.

This chapter has been reviewed by Alan DeVenny BEng, PhD, CEng, MICE who is a Projects Director with SYSTRA. Alan has over 25 years' experience working in traffic and transport consultancy and over 17 years' experience of working on renewable energy projects. Alan has advised on over 200 energy developments delivering EIA chapters, access assessments, abnormal load assessments, infrastructure design and traffic management plans.

19.2.2 CONSULTATION

The assessment process has been informed by responses received during the EIA Scoping Report consultation, as indicated in Chapter 6: Project Scoping and Consultation. A summary of the key consultation responses is described in Table 19-1.

Table 19-1: Summary of Consultation Responses

Consultee	Summary of Consultation Response	Response/Where Addressed
Department of Transport 20 February 2025	Where the developer proposes the placement of any cables (or additional cables) in one or more trenches within the extents of the (regional and local) public road network, it is necessary to consider the following: • Their presence within the public road will likely significantly restrict the Road Authority in carrying out its function to construct and maintain the public road and will likely add to the costs of those works post construction • Their installation within the lands associated with the public road may affect the stability of the road.	Planning permission for the grid connection route does not form part of the planning application. A separate planning permission will be sought at a later stage. However, the consultation received from Department of Transport is duly noted and will be taken into consideration when the planning application for the grid connection route will be lodged.

Consultee	Summary of Consultation Response	Response/Where Addressed
	• The possible effect on the remaining available road space. • The necessity to have the power in the cables switched off (particularly where structural failures occur due to extreme weather events) where the Road Authority considers this necessary in order to carry out its function to construct and maintain the public road and a complete operation and maintenance manual should be agreed with the Local Authority.	
Department of Transport 20 February 2025	The Department consider it important that the examination of the proposal should include consideration of the following: • Examination of all available technologies including both Overhead Line (OHL) and Underground Cable (UGC) options (or combinations of both) and route options other than the routing of cables along the public road the ensure the best performing route and technology option is selected. • Examination of options for connection to the national grid network at a point closer to the wind farm in order to reduce the adverse impact on public roads. • Details of where within the road cross section cables are to be placed so as to minimise the effect on the Roads Authority in its role of construction and maintenance. • Examination of details of any chambers proposed within the public road cross section so as to minimise the effect on the Roads Authority in its role of construction and maintenance. • Elimination of permanent jointing bays from beneath the road pavement to protect the integrity of the road structure for the safety of those driving on the public road by	Planning permission for the grid connection route does not form part of the planning application. A separate planning permission will be sought at a later stage. However, the consultation received from Department of Transport is duly noted and will be taken into consideration when the planning application for the grid connection route will be lodged.

Consultee	Summary of Consultation Response	Response/Where Addressed
	eliminating hard spots and also preserve the road width for other utilities, temporary joint bays to be used in any public road installation with permanent joint bays to be located off carriageway. • No attachment of cables to all bridge structures and culverts by diverting them beneath or away from these structures. • Rationalisation of the number of cables involved (including existing electric or possible future cables) and their diversion into one trench, in order to minimise the impacts on the road network and the environment along the road boundary (hedgerows).	
Clare County Council Transportation & Road Design Office 10 March 2025	Identified Haul route for abnormal loads with a traffic plan and autotracking carried out in any areas of concern.	An abnormal loads assessment containing route and autotracking information is provided in Appendix 19.1.
Clare County Council Transportation & Road Design Office 10 March 2025	Construction Traffic Management Plan	Section 19.5.1
Clare County Council Transportation & Road Design Office 10 March 2025	Sightline assessment for all entrances. We do not accept speed survey assessments to justify a reduced speed limit, but with the new speed limit of 60 kph on local roads, this reduces the requirement significantly.	Access junction drawings are provided in Appendix 19.2

Consultee	Summary of Consultation Response	Response/Where Addressed
Clare County Council Transportation & Road Design Office 10 March 2025	Identify the cable route and determine any road closures. Residents affected should be given a point of contact. CTMP to be agreed with Clare County Council and reinstatement of road to be agreed with the Area Engineer.	This will be actioned via CTMP, as detailed in Section 19.5.1.
Clare County Council Transportation & Road Design Office 10 March 2025	The Municipal District Area Office should be made aware of the haul route and discussions should be had relating to repairs of the roadway immediate to any entrances to the site. A pre, during and post inspection will be required with assessment carried out on any water crossings.	Noted
Clare County Council Transportation & Road Design Office 10 March 2025	Maintenance of the public road from any debris throughout the construction.	Managed via CTMP, as detailed in Section 19.5.1.
Clare County Council Transportation & Road Design Office 10 March 2025	Identify the entrances that will be maintained for operations.	The main site access, layout indicated in Appendix 19.2, would be maintained for operations.
Transport Infrastructure Ireland (TII) 6 February 2025	Consultations should be had with the relevant Local Authority/National Roads Design Office, with regard to the locations of existing and future national road schemes in the area.	It is confirmed that consultation has been undertaken with Clare County Council. While scoping responses were received by Clare County Council, no information was provided in

Consultee	Summary of Consultation Response	Response/Where Addressed
		relation to existing and future national roads schemes.
Transport Infrastructure Ireland (TII) 6 February 2025	TII would be specifically concerned as to potential significant impacts the development would have on the national road network (and junctions with national roads) in the proximity of the proposed development, including the potential haul route.	The impacts of the Proposed Development on the study area road network in terms of link flows are set out in Section 19.4.2 of this chapter.
Transport Infrastructure Ireland (TII) 6 February 2025	The developer should assess visual impacts from existing national roads	The visual impacts of the Proposed Development are set out in Chapter 15: Landscape and Visual Impact of this EIAR.
Transport Infrastructure Ireland (TII) 6 February 2025	The developer should have regard to any EIAR/EIS and all conditions and/or modifications imposed by An Bord Pleanála regarding road schemes in the area. The developer should, in particular, have regard to any potential cumulative impacts.	Cumulative impacts are addressed in Section 19.4.5 of this chapter.
Transport Infrastructure Ireland (TII) 6 February 2025	The developer, in preparing EIAR, should have regard to TII Publications (formerly DMRB and the Manual of Contract Documents for Road Works).	It is confirmed that the design of the access junctions is in accordance with TII guidelines
Transport Infrastructure Ireland (TII) 6 February 2025	It would be important that, where appropriate, subject to meeting the appropriate thresholds and criteria and having regard to best practice, a Traffic and Transport Assessment (TTA) be carried out in accordance with relevant guidelines, noting traffic volumes attending the site and traffic routes to/from the site, with reference to impacts on the national road network and junctions of lower category roads with national roads. In relation to national roads, TII's 'Traffic and Transport Assessment Guidelines' (2014) should be referred to in relation to proposed development with potential impacts on the	The assessment presented in this chapter is undertaken in accordance with appropriate guidelines and assessment undertaken where necessary. Detailed assessment is provided in Section 19.4.2

Consultee	Summary of Consultation Response	Response/Where Addressed
	national road network. The scheme promoter is also advised to have regard to Section 2.2 of TII's TTA Guidelines, which addresses requirements for sub threshold TTA.	
Transport Infrastructure Ireland (TII) 6 February 2025	Any improvements required to facilitate development should be identified. It will be the responsibility of the developer to pay for the costs of any improvements to national roads to facilitate the private development proposed, as TII will not be responsible for such costs	The applicant agrees with this condition.
Transport Infrastructure Ireland (TII) 6 February 2025	The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required.	Noted.
Transport Infrastructure Ireland (TII) 6 February 2025	In the interests of maintaining the safety and standard of the national road network, the EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network.	All construction will be undertaken in accordance with current guidelines including 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).
Transport Infrastructure Ireland (TII) 6 February 2025	TII recommends that the applicant/developer should clearly identify haul routes proposed and fully assess the network to be traversed	Abnormal Loads Assessment provided in Appendix 19.2.
Transport Infrastructure Ireland (TII) 6 February 2025	The applicant/developer should also consult with all PPP Companies, MMaRC Contractors and road authorities over which the haul route traverses, to ascertain any operational requirements, including delivery timetabling, etc., to ensure that the strategic function of the national road network is safeguarded.	The applicant agrees with this condition and these companies will be consulted.

Consultee	Summary of Consultation Response	Response/Where Addressed
Transport Infrastructure Ireland (TII) 6 February 2025	Additionally, any damage caused to the pavement on the existing national road arising from any temporary works due to the turning movement of abnormal loads (e.g., tearing of the surface course, etc.) shall be rectified in accordance with TII Pavement Standards and details in this regard shall be agreed with the road authority prior to the commencement of any development on site.	The applicant agrees with this condition.
Transport Infrastructure Ireland (TII) 6 February 2025	Any Road Safety Audit requirements should be addressed	The applicant agrees with this condition.
Transport Infrastructure Ireland (TII) 6 February 2025	Where connection and cable routing form part of any proposals, proposals should be developed to safeguard proposed road schemes, as TII will not be responsible for costs associated with future relocation of cable routing where proposals are catered for in an area of a proposed national road scheme. In that regard, consideration should be given to routing options, use of existing crossings, depth of cable laying, etc.	The applicant agrees with this condition.

19.2.3 STUDY AREA

The Study Area for the assessment of traffic and transport has been predicated on the access location to the Site and the proposed routes to the access point from the external road network. To determine appropriate access routes to the Site, detailed consideration and assessment of the surrounding road network have been undertaken. The study area is indicated in Figure 19.1.

The turbine components will likely be brought into Foynes Port or Galway Harbour, both of which have previously supported the development of onshore wind farms.

An Abnormal Loads Assessment (ALA) has been undertaken for a 57.2 m long turbine blade, which is considered as the 'worst case' scenario. This included a visual inspection, which identified pinch points along both routes to the Site access point. The Abnormal Loads route is indicated by Figure 19.2, and the Abnormal Loads Assessment report can be found in Technical Appendix 19.1.

All general construction traffic (HGVs, abnormal loads, cars, and Light Goods Vehicles (LGVs)) will access the site via Ballard Road and Slievenalicka.

It is expected that the delivery of various materials and machinery to the site during the construction phase will primarily originate from the east via the M18 and N85. The specific routes will be determined following confirmation of the Principal Contractor for the site and will be based on a number of factors, including supply locations and depot locations.

Having reviewed the road network in the area around the Proposed Development, the Study Area has been defined as follows:

- N85 from the M18 to Ennistymon;
- R460 from Inagh to Bawnslieve;
- Ballard Road/L1074 from Miltown Malbay to Bawnslieve; and
- Slievenalicka, northwest from Ballard Road to the site access.

A very small number of deliveries or staff may route to the site via the N67 from the west but it is expected that the majority would arrive from the east. The N67 is a good standard road with the capacity to accommodate an increase in HGV trips over a short period of time without detriment to existing road users; therefore, the N67 has not been included in the study area.

For the purpose of assessment in this chapter, any potential effects on Ballard Road/L1024 and the R460 are assessed using one traffic counter point on Ballard Road near Slievenalicka, as indicated in Figure 19.3.

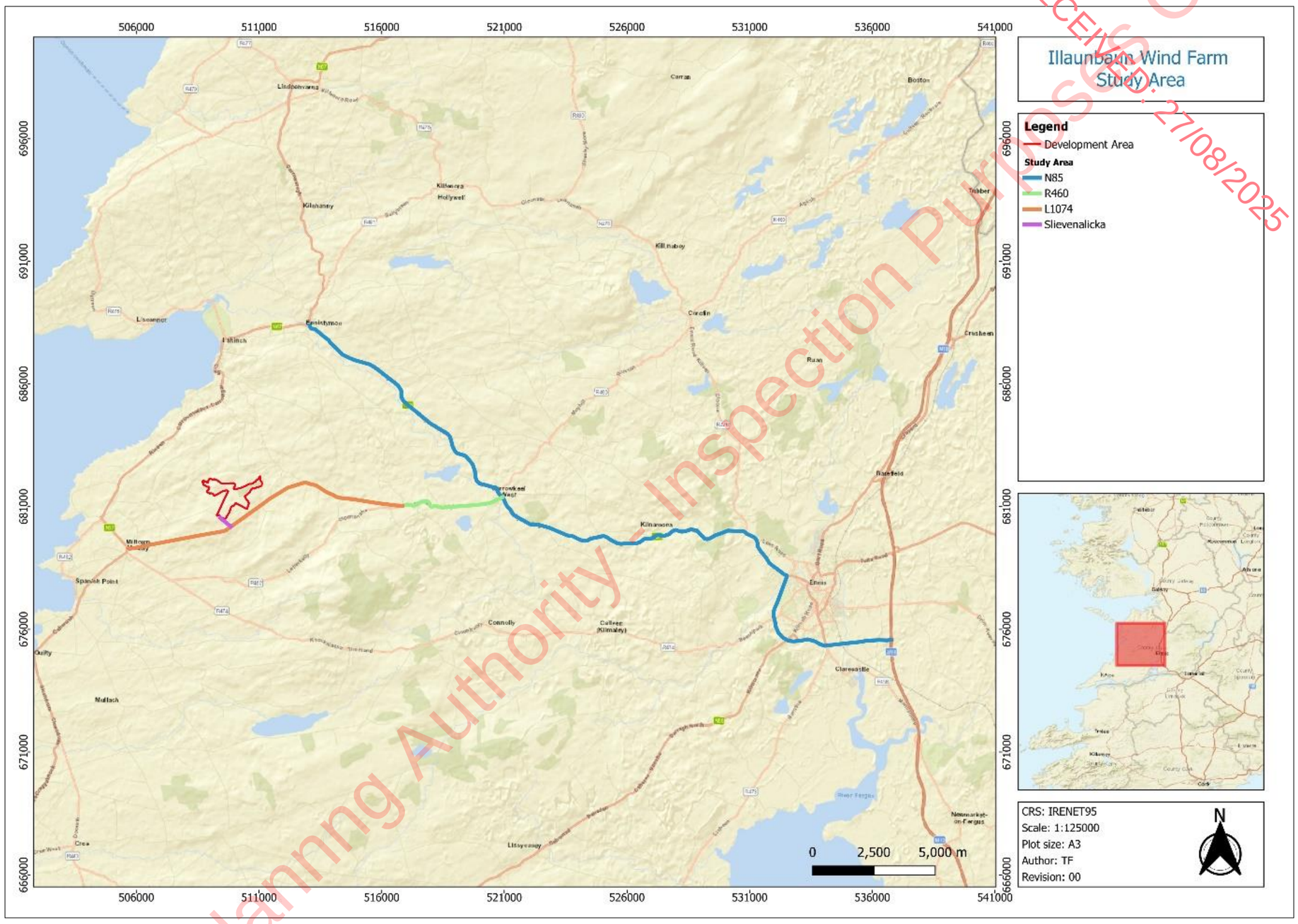

Figure 19-1: Study Area

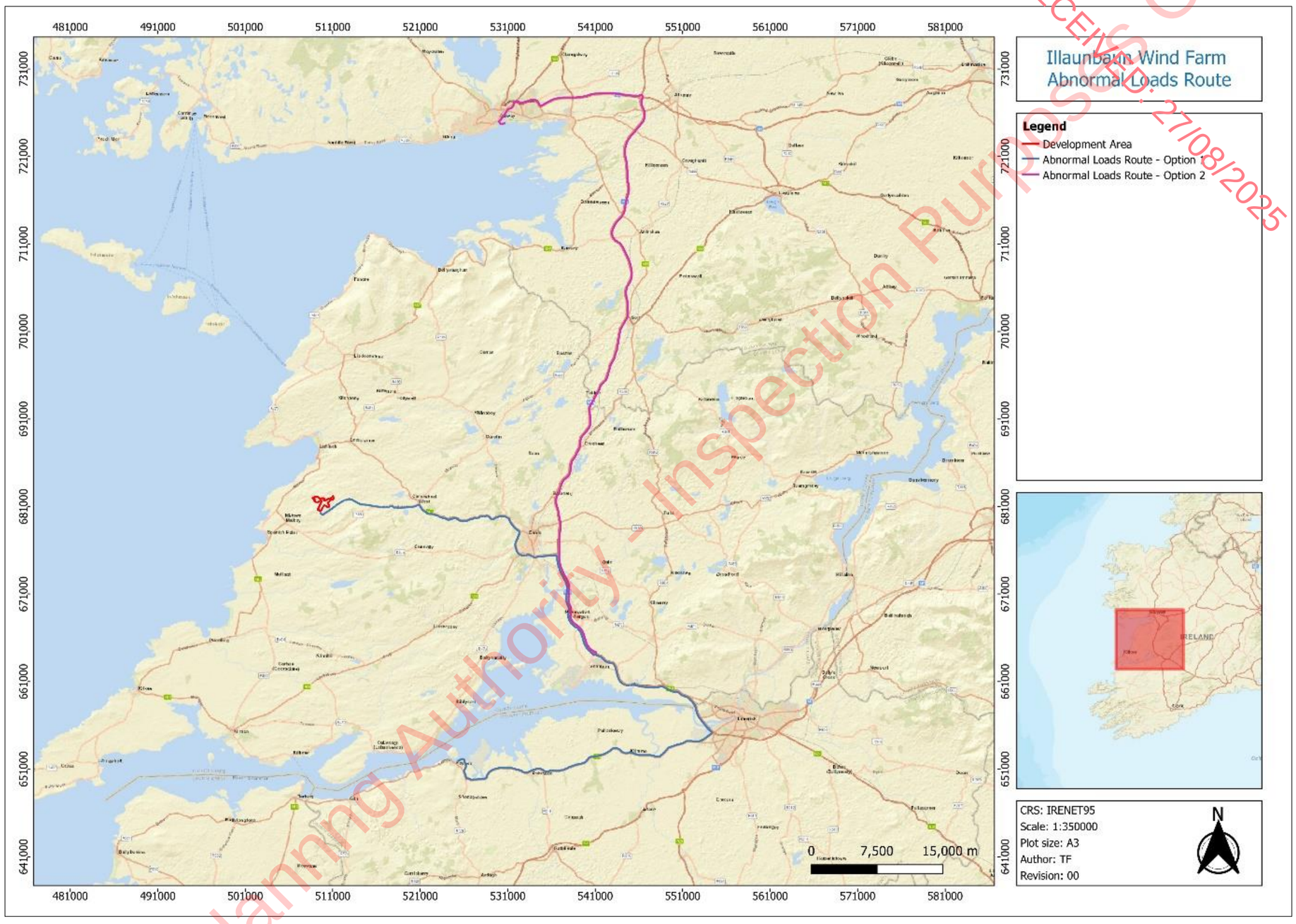

Figure 19-2: Abnormal Loads Route

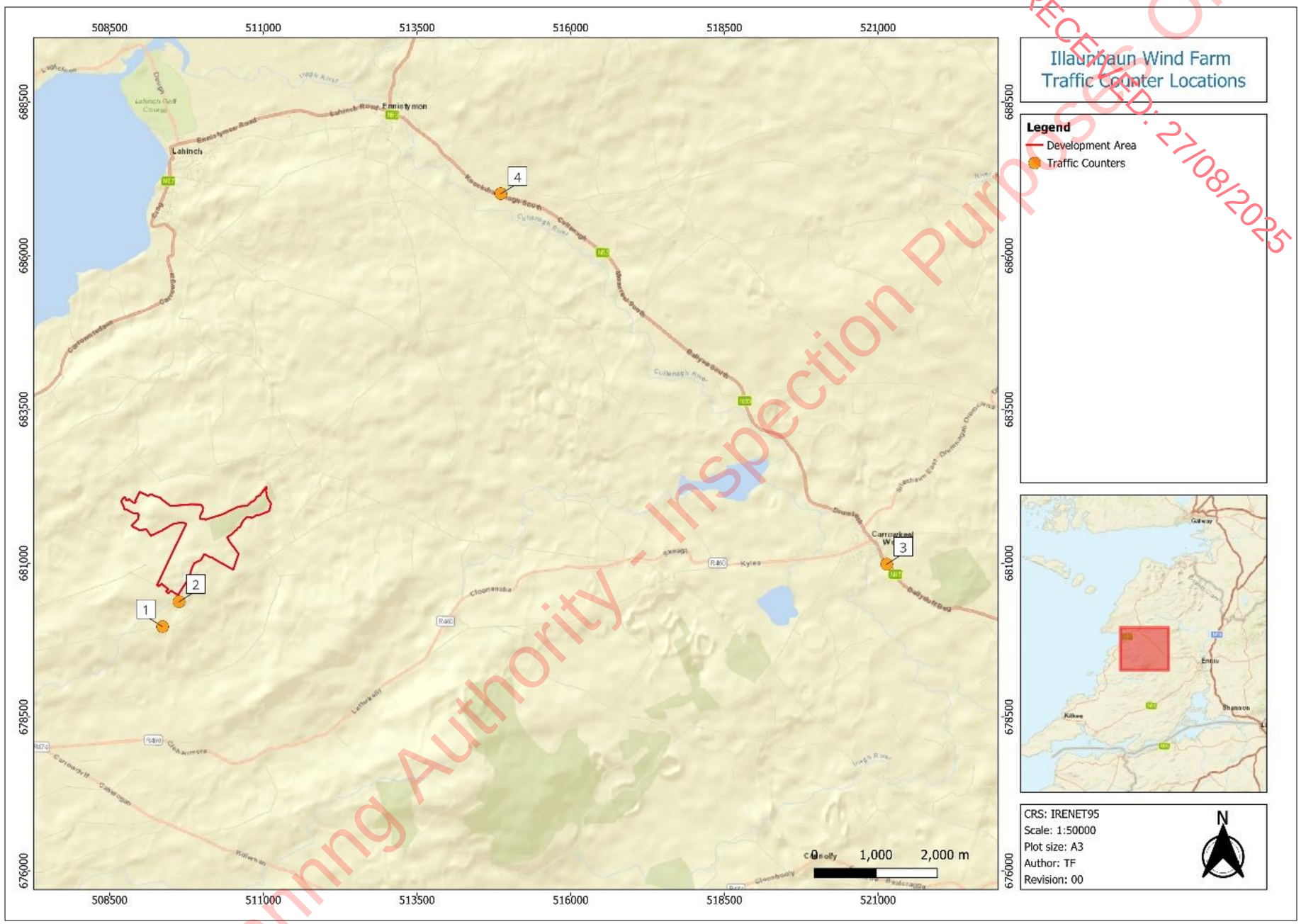

Figure 19-3: Traffic Counter Locations

19.2.4 DATA SOURCES

Traffic count data for the N85 (south of Inagh), Ballard Road and Slievenalicka has been obtained from 24-hour Automatic Traffic Counters (ATCs) surveys carried out in September 2023. Traffic count data for the N85 south of Ennistymon has been obtained from the TII traffic data website.

The relevant annual central growth rates have been obtained from the TII document 'Project Appraisal Guidelines for National Roads' (Unit 5.3).

Road traffic collision data for relevant road networks has been obtained from the Road Safety Authority.

19.2.5 ASSESSMENT OF EFFECTS

19.2.5.1 POTENTIAL ENVIRONMENTAL EFFECTS

The TII publication "Traffic and Transport Assessment Guidelines" provide information on defining thresholds at which studies are recommended as part of a planning proposal to minimise the impact of future proposals on the national roads network. The main criteria for the requirement of assessment is traffic to and from a development exceeding 10% of the traffic flow on the adjoining road. This 10% threshold for total traffic will be applied to the National Roads within the study area (N85).

Guidance for the assessment of the environmental effects of generated traffic is provided in the IEMA document, "Environmental Assessment of Traffic and Movement". The document is the only guidance document currently available that sets out a methodology for assessing potentially significant environmental impacts where a Proposed Development is likely to give rise to changes in traffic flows.

The assessment is structured around the consideration of potential environmental effects relating to traffic and transport, as identified by the IEMA Guidelines and including the following:

- Severance of communities
- Road vehicle driver and passenger delay
- Non-motorised user delay and amenity
- Fear and intimidation on and by road users
- Road user and pedestrian safety
- Hazardous and large loads

There are no hazardous loads associated with the Proposed Development.

The guidance suggests that in order to determine the scale and extent of the assessment and the level of impact the development will have on the surrounding road network, the following two 'rules' should be followed.

- Rule 1 – Include road links where traffic flows are predicted to increase by more than 30%; and

- Rule 2 – Include any other specifically sensitive area where traffic flows are predicted to increase by 10% or more.

These rules are used to identify the road links within the study area where a full assessment of environmental effects associated with an intensification in road traffic may be required. It is noted that further consideration should be given to road user and pedestrian safety as well as driver delay effects, even if the above thresholds are not exceeded.

Paragraph 1.30 of the IEMA Guidelines identifies groups, locations and special interests which may be sensitive to changes in traffic conditions as follows:

- People at home
- People at work
- Sensitive and/or vulnerable groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors)
- Locations with concentrations of vulnerable users (e.g. hospitals, places of worship, schools)
- Retail areas
- Recreational areas
- Tourist attractions
- Collision clusters and routes with road safety concerns
- Junctions and highway links at (or over) capacity

The significance of each effect is considered against the criteria within the IEMA Guidelines, where possible. In terms of traffic and transport impacts, the receptors are the users of the roads within the study area and the locations through which those roads pass.

The N85 within the study area will be subject to the TII 'Traffic and Transport Assessment Guidelines' threshold whereby a 10% increase in total traffic will trigger the requirement for a detailed assessment.

In reference to the indicators outlined in the IEMA Guidelines, Ballard Road and Slievenalicka will be considered as sensitive receptors due to the presence of:

- The settlements of Inagh and Miltown Malbay
- The residents of properties located along the routes
- Rockmount School on Slievenalicka
- Potential recreational road users

Ballard Road and Slievenalicka will therefore be subject to IEMA Rule 2, whereby a 10% increase in total or HGV traffic will trigger the requirement for a full assessment of environmental effects associated with increased traffic.

19.2.5.2 ASSESSMENT OF SIGNIFICANCE

The following section sets out the methodology used to assess the significance of effects at locations along the proposed public road routes within the study area where total traffic levels or the level of HGV traffic exceed the screening thresholds set out by IEMA.

Sensitivity

The sensitivity to change in traffic levels of any given road segment and the receptors located along that road segment are generally assessed by considering the residual capacity of the network under existing conditions.

Where there is a high degree of residual capacity, the network may readily accept and absorb an increase in traffic and therefore, the sensitivity may be said to be low. Conversely, where the existing traffic levels are high compared to the road capacity, there is little spare capacity, and the sensitivity to change in traffic levels will be considered to be high.

Consideration has been given to the composition of the traffic on the road network, under both existing and proposed conditions. For example, LGVs have less effect on traffic and the road system than HGVs. Similarly, HGVs can have less effect than abnormal load vehicles, depending on the frequency of the abnormal loads.

The criteria that have been used to make judgements on the sensitivity of the receptor(s) is presented in Table 19-2.

Table 19-2: Framework for Determining Sensitivity of Receptors

Sensitivity	Description
High	Receptors of high importance and value on international or national scales. Designated or heritage areas of unique value. Large settlements with a large number of public services and facilities, traffic control measures and regular use by pedestrians and cyclists. Minor and historic roads not generally suitable for frequent HGV traffic.
Medium	Receptors of some regional importance. Medium-sized settlements with some public services facilities and infrastructure and some traffic control measures, including some accommodation for pedestrians and cyclists. Roads generally capable of supporting regular HGV traffic.
Low	Receptors with low regional importance. Typically, small settlements with few facilities and no traffic control measures and with nearby trunk or A-class roads that are able to accommodate HGV traffic.
Negligible	Users not sensitive to transport effects. Includes very small settlements and roads with no significant settlements including new strategic trunk roads or motorways.

Magnitude

The magnitude of traffic change is a function of the existing traffic volumes, the percentage increase and change due to the Proposed Development, changes in the type of traffic and the temporal distribution of traffic (day of week, time of day).

The determination of magnitude has been undertaken by reviewing the Proposed Development, establishing the parameters of the receptors that may be affected and quantifying these effects utilising IEMA Guidelines and professional judgement.

Consideration is given to the composition of the traffic on the road network, under both existing and proposed conditions. For example, LGVs have less effect on traffic and the road system than HGVs. Similarly, HGVs can have less effect than abnormal load vehicles, depending on the frequency of the abnormal loads.

The criteria used to make judgement on the magnitude of change on the receptor(s) is presented in Table 19-3.

Table 19-3: Framework for Determining Magnitude of Change

Magnitude	Description
Major	Generally, a rule of >90% (or >70% at sensitive receptors) change in traffic is considered to be a major magnitude.
Moderate	Generally, a rule of 60% - 90% (or 40% - 70% at sensitive receptors) change in traffic is considered to be a moderate magnitude.
Minor	Generally, a rule of 30 – 60% (or 10% - 40% at sensitive receptors) change in traffic is considered to be a minor magnitude.
Negligible	Generally, a rule of <30% (or <10% at sensitive receptors) change in traffic is considered to be a negligible magnitude.

Significance

As a guide to inform the assessment, but not as a substitute for professional judgement, criteria for determining the significance of traffic related effects are set out in Table 19-4. This is based on combining the magnitude of change with the receptor sensitivity.

Table 19-4: Significance Criteria Matrix

Sensitivity of Receptor	Magnitude of Change			
	Major	Moderate	Minor	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Minor
Low	Moderate	Minor	Minor	Negligible

Sensitivity of Receptor	Magnitude of Change			
	Major	Moderate	Minor	Negligible
Negligible	Minor	Negligible	Negligible	Negligible
The effects cells highlighted in grey are considered to be 'Significant'				

Significance is categorised as major, moderate, minor or negligible. Effects judged to be of minor or negligible significance are considered Not Significant.

19.2.6 LIMITATIONS OF ASSESSMENT

The assessment provided in this chapter is based upon average traffic flows obtained from the TII survey database for 2024 and project specific 7-day ATCs surveys carried out in September 2023. It is expected that there may be localised peaks and seasonal variation in baseline traffic flows on the road network within the study area.

19.3 BASELINE: TRAFFIC AND TRANSPORT IN RECEIVING ENVIRONMENT

19.3.1 EXISTING ROAD NETWORK

The following paragraphs detail the baseline conditions of the road links identified as being within the study area.

19.3.1.1 N85

The N85 is a national secondary road in County Clare routing approximately 32 km in a northwest direction from the M18 at Ennis, to the N67 at Ennistymon and bypassing the village of Inagh. The N85 provides a connection between the M18 motorway and the site, via the R460 and Ballard Road.

The road is dual carriageway for approximately 2.7 km west of its junction with the M18, before reverting to single carriageway for the remainder of the route. The N85 has a speed limit of 80-100 km/h except through major junctions or villages where the speed limit reduces to 50-60 km/h. The road is generally rural in nature with grass verges either side of the road and a width of approximately 5m.

A significant proportion of construction traffic is expected to use the N85 to access the site from the M18 motorway.

19.3.1.2 R460

The R460 is a regional road in County Clare, routing approximately 58 km in a southwest direction from Gort, a town in County Galway, to its junction with the R474, approximately 2 km south of Miltown Malbay. In the context of the study area, the R460 routes approximately 4 km west from Inagh to Bawnslieve, where three other local roads (L5208, L1074 and L1084) form a junction with the R460.

The R460 is a rural single carriageway road of approximately 5 m width and has a speed limit of 80 km/h, except through settlements such as Inagh where the speed limit reduces to 60 km/h.

19.3.1.3 BALLARD ROAD / L1074

Ballard Road is a minor road leading from Miltown Malbay, in a generally east west direction. Ballard road is a rural road of varying width with narrow grass verges and a speed limit of 80 km/h, with the exception of sections through settlements where the speed limit reduces to 50 km/h. The minor road (Slievenalicka) from which the Proposed Development will be accessed is approximately 3.8km east of Miltown Malbay.

For the purposes of identification, the whole section of the road from Miltown Malbay to the L1074 shall be described as Ballard Road. It is noted that the route changes name to Toreen, then has an unnamed section before becoming named as the L1074.

The L1074 is a 2.5 km long minor road leading west from Bawnslieve, which continues as Ballard Road all the way to Miltown Malbay. The L1074 is generally approximately 3 m in width.

The most likely route for construction traffic to the site will be from the M18, via the N85, R460, L1074 and Ballard Road to Slievenalicka, where the site access is located.

19.3.1.4 SLIEVENALICKA

Slievenalicka is a minor road which routes north for approximately 1.2 km from Ballard Road. The road is a single track of approximately 2.5 m in width with passing places and provides access to several residential properties and a primary school (Rockmount School). Access to the Proposed Development is located approximately 500 m north of the Ballard Road junction.

19.3.2 BASELINE AND CONSTRUCTION YEAR TRAFFIC FLOWS

The 'Project Appraisal Guidelines for National Roads (Unit 5.3)' set out link based annual growth rates by metropolitan area and by county in Tables 6.1 and Table 6.2 of the guidance note. The annual central growth rates for light (car & LGV) and heavy vehicles for County Clare are shown in Table 19-5 for the relevant years.

Table 19-5: Study Area Annual Central Growth Rates

Year	County Clare	
	Light Vehicle	Heavy Vehicle
2016-2030	1.0156	1.0417

Traffic data for the study area was sourced from the TII Traffic Count Data Website and commissioned traffic surveys at key locations as indicated on Figure 19.3. The Central Growth Rate for County Clare has been applied to the surveyed 2023 traffic flows and the TII 2024 traffic data to derive 2025 baseline traffic counts.

Table 19-6 indicates the 2025 derived baseline two-way Average Annual Daily Traffic (AADT) in the study area and the percentage of traffic which is classified as HGVs.

Table 19-6: Study Area Baseline Traffic Flows

Counter Location	Road Link Category	Source	2025 Base AADT	2025 Base HGV	Percentage HGV
1. Ballard Rd	Local Road	2023 ATCs Survey	425	38	9%
2. Slievenalicka	Public Road	2023 ATCs Survey	207	19	9%
3. N85 (S of Inagh)	National Secondary Road	2023 ATCs Survey	8,001	805	10%
4. N85 (S of Ennistymon)	National Secondary Road	TII 2024	6,559	141	2%

Table 19-7 presents the construction year (2027) derived baseline traffic flows by vehicle type.

Table 19-7: Study Area Construction Year (2027) Baseline Traffic Flows

Counter Locations	2027 AADT	2027 HGV	Percentage HGV
1. Ballard Rd	440	41	9%
2. Slievenalicka	214	21	10%
3. N85 (S of Inagh)	8296	873	11%
4. N85 (S of Ennistymon)	6773	153	2%

19.3.3 ROAD SAFETY

The Road Safety Authority publish tables on "Road Casualties and Collisions in Ireland" each year. The last published table is for 2017. Accident records are categorised as occurring "Inside Built-Up Areas" or "Outside Built-up Areas". Table 19-8 summarises the accidents occurring on the N85 from 2013-2017.

Table 19-8: Accident Statistics for the N85 2013 to 2017

Year	Inside Built Up Areas				Outside Built Up Areas				Overall Total	Collision Rate per KM
	Fatal	Serious Injury	Minor Injury	Total	Fatal	Serious Injury	Minor Injury	Total		
2017	0	0	2	2	1	1	4	6	8	0.25
2016	0	0	1	1	0	0	4	4	5	0.16
2015	0	0	1	1	0	0	3	3	4	0.13
2014	0	0	1	1	0	0	1	1	2	0.06
2013	0	0	0	0	0	0	6	6	6	0.13

Table 19-8 indicates that outside built-up areas tend to experience more accidents than inside built-up areas. The tables indicate that there are a number of recorded accidents over the record period for the N85. The results are fairly typical for a national secondary road and it is considered that there are no particular accident issues that would warrant special consideration as part of this application.

19.4 ASSESSMENT OF EFFECTS

19.4.1 "DO-NOTHING" SCENARIO

If the Proposed Development was not implemented, then it is likely that there would be no significant changes to the traffic and transport situation in the vicinity of the Proposed Development, other than changes to background traffic as a result of general traffic growth and any nearby committed developments.

19.4.2 CONSTRUCTION PHASE IMPACTS

The construction traffic associated with the Proposed Development will comprise construction workers, HGVs / LGVs carrying construction materials and plant, and abnormal loads carrying the main wind turbine components.

Construction of the Proposed Development is estimated to take 12 months. General working hours are expected to be between 07:00 and 19:00 on weekdays and 07:00 and 12:00 on Saturdays which means that staff will predominantly arrive and depart outside the peak hours associated with the surrounding road network.

Turbine delivery, erection and commissioning activities may also take place out-with these hours depending on weather conditions.

The potential number of traffic movements that will result from the Proposed Development are set out in Table 19-9 whilst Table 19-10 indicates the distribution of traffic flows across the construction programme.

This is based on a worst-case scenario of 52% of total stone requirements imported to site for a robust assessment, although it is anticipated that almost all stone will be sourced from on-site borrow pits as indicated by the borrow pit assessment which confirms the quantity of available stone along with confirmation that the stone is of sufficient quality. Concrete will be imported rather than on-site batching.

Estimated movements are two-way and include HGV and abnormal loads. The movements are noted in line with an approximate 12 month construction programme and general assumptions around the composition and dimensions of associated infrastructure.

Table 19-9: Construction HGV Movements

Construction Task	Vehicle Type	Approximate Number of Loads
Site Establishment	Low Loader and Dump Truck	70
General site deliveries	Low Loader and Dump Truck	80
Imported stone *	Dump Truck	5,900
Reinforcement	Low Loader	22
Foundations	Concrete Wagon	1,249
Cabling deliveries and sand	Low Loader	220
Geotextile separators	Low Loader	70
Delivery of HV electrical items	Dump Truck	25
Construction of Sub-station	Various	50
Cranes and related lifting equipment	Crane Vehicle	40
Erection of turbines	Abnormal Loads	66
Site reinstatement and restoration	Various	50
Total (one-way trips)		**7,842**
Total (two-way trips)		**15,683**
*Based on a worst case 52% of stone will be imported to site with remaining won on site.		

Table 19-10: Construction HGV Movements per Month

Task	Month												Total
	1	2	3	4	5	6	7	8	9	10	11	12	
Site Establishment	24	23	23										70
General site deliveries	15	15	12	8	3	3	3	3	4	4	5	5	80
Imported stone *	1,200	1,200	1,200	900	900	500							5,900
Reinforcement				6	6	5	5						22
Foundations				313	312	312	312						1,249
Cabling deliveries and sand							45	45	65	65			220
Geotextile separators				18	18	17	17						70
Delivery of HV electrical items						13	12						25
Construction of Sub-station					18	16	16						50
Cranes and related lifting equipment					25	15							40
Erection of turbines							17	17	16	16			66
Site reinstatement and restoration											20	30	50
Total (one-way trips)	**1,239**	**1,238**	**1,235**	**1245**	**1282**	**881**	**427**	**65**	**85**	**85**	**25**	**35**	**7842**
Total (two-way trips)	**2,478**	**2,476**	**2,470**	**2490**	**2564**	**1762**	**854**	**130**	**170**	**170**	**50**	**70**	**15684**

As Table 19-9 and Table 19-10 indicate, the predicted peak of HGV movements to and from the Proposed Development Site would be during month five of the delivery programme, with 1,282 inbound / 2,564 two-way HGV movements. The predicted HGV movements are lower during the other 11 months and significantly lower during months eight to 12.

If an average four-week month is considered, this would equate to 641 two-way weekly HGV movements. If a 5.5 working day week is considered, this would equate to a total of 117 two-way daily HGV movements during month five of the delivery programme.

With regard to staff movements, it is estimated that there would be approximately 30 staff members on site on an average day. This will result in an average daily movement of 60 cars/LGVs (30 trips in, and 30 trips out daily) in addition to the daily average HGV movements indicated in Table 19-9.

Table 19-11 indicates the daily percentage increases on the road links within the study area for the busiest month of the construction period (month five) in the assumed year of construction (2029).

A worst-case scenario of 100% construction traffic (HGV and staff movements) has been applied to all links within the study area to determine whether any further detailed assessment of environmental effects associated with increased traffic is required.

Table 19-11: Construction Traffic Effect on Routes within the Study Area

Scenario	1. Ballard Rd	2. Slievenalicka	3. N85 South of Inagh	4. N85 South of Ennistymon
2027 AADT	440	214	8296	6773
2027 HGV	41	21	873	153
2027 % HGV	9%	10%	11%	2%
Month 5 Total Daily Construction Traffic	177	177	177	177
Month 5 HGV	117	117	117	117
Percentage increase in Total Traffic	40%	82%	2%	3%
Percentage Increase in HGV Traffic	282%	568%	13%	76%

Guidance contained within TII Traffic and Transport Assessment Guidelines states:

> ” In general, the study area should include all road links and associated junctions where traffic to and from the development may be expected to exceed 10% of the existing traffic movements, or 5% in congested or other sensitive locations, including junctions with national roads”.

The increase in total traffic levels on the N85 at the two count locations assessed (3 and 4) is anticipated to be 2% and 3 % respectively, well within the 10% threshold indicated by the TII guidance. The 76% increase in HGV traffic indicated on the N85 to the north is due to the low baseline levels of HGV traffic utilising the route rather than a large increase in HGV traffic due to construction of the Proposed Development. The N85 is a good standard national road which can accommodate a 2-3% increase in total traffic volume without detriment to existing road users. Therefore, a detailed assessment of the N85 has not been undertaken.

As stated previously, IEMA Guidelines Rules 1 and 2 can be used as thresholds to determine the requirement for a full assessment of potential environmental effects in relation to an increase in traffic flows associated with the construction of the Proposed Development.

Table 19-11 indicates that for count location one (Ballard Road), total traffic levels are anticipated to increase by 40% and HGV traffic levels by 282% during the peak month of the construction phase. At count location two near the site access on Slievenalicka, total traffic levels are anticipated to increase by 82% and HGV levels by 568%.

The large percentage increases noted on these two road links are primarily due to the low baseline levels of total and HGV traffic using these roads. Nevertheless, the percentage increases exceed the IEMA Rule 2 threshold of 10% for sensitive locations and a full assessment of effects has been undertaken for Ballard Road (also including Tooreen, the L1074 and R460) and Slievenalicka.

19.4.2.1 DETAILED ASSESSMENT

Severance of Communities

The IEMA Guidelines advise that “Severance is the perceived division that can occur within a community when it becomes separated by major transport infrastructure”.

The potential for traffic associated with the Proposed Development to cause severance is assessed on a case by case basis using professional judgement, where non-negligible traffic increases are predicted on roads through residential settlements.

Increased severance can result in the isolation of areas of a settlement or individual properties. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure. Severance effects could equally be applied to residents, motorists or pedestrians.

Table 19-12 provides an assessment of the effect of construction traffic on severance of communities for each road link. As stated previously, the Ballard Road counter is also used to represent effects on Tooreen, the L1074 and R460.

Table 19-12: Assessment of Severance of Communities

Road Link	Magnitude of Change	Sensitivity	Justification	Significance
Ballard Road	Major	Medium	An increased severance effect may be experienced by residents, pedestrians and motorists along the route particularly in the village of Inagh. However, the presence of an uncontrolled pedestrian crossing over the R460 in Inagh will help alleviate the effect for pedestrians.	Major - Significant
Slievenalicka	Major	High	An increased severance effect may be experienced by residents and those travelling to Rockmount School, particularly due to the single track nature of the road.	Major - Significant

Road Vehicle and Passenger Delay

Some driver delay may be experienced when construction traffic is accessing the Site. The IEMA Guidelines advise "delays are only likely to be significant when the traffic on the network surrounding the Site is already at, or close to, the capacity of the system".

Traffic delay to non-development traffic may occur at several points on the network surrounding the Site including:

- At the Site access points where there will be additional turning movements;
- At intersections along the local road network which might be affected by increased traffic; and
- At side roads where the ability to find gaps in traffic may be reduced, thereby lengthening delays.

It is noted that there are no significant areas of congestion within the Study Area at present. Table 19-13 provides an assessment of the effect of construction traffic on road vehicle driver and passenger delay for each road link.

Table 19-13: Assessment of Road Vehicle Driver and Passenger Delay

Road Link	Magnitude of Change	Sensitivity	Justification	Significance
Ballard Road	Major	Medium	Although baseline traffic levels are low, delay to non-development traffic is likely to be increased on the route due to the road width (3-4 m) and increased number of heavy goods vehicles.	Major - Significant
Slievenalicka	Major	High	Although baseline traffic levels are low, delay to non-development traffic is likely to be increased on the route due to the road width (approx. 2.5 m) and increased number of heavy goods vehicles.	Major - Significant

Non-Motorised User Delay and Amenity

The IEMA Guidelines advise that "The assessment of pedestrian delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads".

Traffic volumes, traffic composition, traffic speed, the existence of pedestrian footways and the existence of pedestrian crossings all contribute to the level of general pleasantness experienced by pedestrians and other vulnerable road users.

Table 19-14 provides an assessment of the effect of construction traffic on non-motorised user delay and amenity for each road link.

Table 19-14: Assessment of Non-Motorised User Delay and Amenity

Road Link	Magnitude of Change	Sensitivity	Justification	Significance
Ballard Road	Major	High	Pedestrian movements are likely to be greatest within villages such as Inagh (which has an uncontrolled pedestrian crossing facility), and Miltown Malbay (no significant volumes of construction traffic are expected to route from the west through Miltown Malbay). Recreational road users may be affected by increased HGV movements.	Major - Significant

Road Link	Magnitude of Change	Sensitivity	Justification	Significance
Slievenalicka	Major	High	Pedestrian movements are likely in the vicinity of the school. Recreational road users may be affected by increased HGV movements.	Major / Significant

Fear and Intimidation on and by Road Users

IEMA guidelines state that "a further environmental impact that affects people is the fear and intimidation created by all moving objects", with the extent of fear and intimidation dependent upon:

- The total volume of traffic
- The heavy vehicle composition
- The speed these vehicles are passing
- The proximity of traffic to people

Based on the IEMA weighting system, the baseline level of fear and intimidation calculated for both road links is considered 'small', and the magnitude of change due to the impact of construction traffic is considered 'Low'. This effect is considered Not Significant as per the IEMA guidelines.

Road User and Pedestrian Safety

The most recently available accident data for the road links within the Study Area has been summarised in Table 19-8.

An approximate calculation has been undertaken to quantify the level of accident risk that could be expected due to an increase in traffic associated with the Proposed Development. The likelihood of an accident occurring is commonly expressed in accidents per million vehicle-km. Accidents that are appraised in relation to transport are predominantly those in which personal injury is sustained by those involved (Personal Injury Accidents (PIAs)).

For the purpose of this calculation, it has been assumed that the length of road is 12 km for Ballard Road/ L1074 and R460 (from Inagh to Slievealicka) and 0.6 km for Slievenalicka (from Ballard Road to the Site access) making a total of approximately 12.6 km, which can be generally classified as 'rural typical single carriageway' in accordance with the criteria set out within DMRB.

Accident rates from the DMRB for this standard of road are:

- 0.404 PIAs per million vehicle-km

Assuming a two-way trip on the 12.6 km route for each of the 8950vehicles during the construction phase, a total distance of 225,540km is obtained. Based on the rate above; this suggests 0.0901 accidents during the construction period associated with the additional traffic.

It is considered that the magnitude of this effect is negligible. However, receptor sensitivity to this effect is always considered as high. When combined, the effect can be classified as minor and Not Significant.

Hazardous and Large Loads

There are no hazardous loads associated with the Proposed Development.

The movement of large (abnormal) loads is heavily regulated and would be subject to separate agreement with the relevant highway authorities, emergency services and other relevant stakeholders. The effect of the movement of abnormal loads is considered Not Significant. However, management of abnormal loads will be heavily controlled through the CTMP.

Effects on Public Transport

The N85 is a bus route. In the context of the study area, bus stops are located in Inagh for bus services 350 and 331. Bus services on the N85 are unlikely to be affected by the impact of construction traffic, as the N85 is a good standard national road with capacity to accommodate additional HGV traffic over the temporary construction phase without detriment to existing road users.

Ballard Road/L1074 and the R460 are not part of any bus routes.

19.4.3 OPERATIONAL PHASE IMPACTS

Once the Proposed Development is operational, the amount of traffic associated with a wind farm is minimal, relating to maintenance of the turbines only. It is estimated that on average there will be just single 4x4s accessing the Proposed Development Site from time to time.

Therefore, the effect of vehicle movements during the operational phase will be negligible. In respect of transport, the operational phase of the Proposed Development is therefore not assessed further.

19.4.4 DECOMISSIONING PHASE IMPACTS

Upon reaching the end of its operational lifespan, the Proposed Development would undergo decommissioning, during which the turbines would be dismantled and removed. Alternatively, there could be an option to submit a new application aimed at replacing the existing turbines with new ones, thereby potentially extending the life of the project. This choice between removal or replacement would be dictated by future needs, technological advancements, and regulatory considerations at that time.

If the Proposed Development was to be decommissioned, traffic generation associated with the decommissioning phase would generally be less that of the construction phase. The highest traffic generating tasks of the construction phase are the importation of stone and concrete for access tracks and turbine bases, which are generally left in-situ after decommissioning. Therefore, these trips would not apply to the decommissioning phase.

It can therefore be assumed that the assessment of the construction phase carried out in Section 19.4.2 also provides a worst-case scenario for the decommissioning phase.

19.4.5 CUMULATIVE EFFECTS AND OTHER INTERACTIONS

19.4.5.1 CONSTRUCTION PHASE

Cumulative effects have been assessed for other developments which may utilise sections of the road network required for accessing the Proposed Development. Operational wind farms have been discounted as they have negligible operational traffic and therefore have no cumulative traffic effect.

A review of the Clare County Council online planning portal and the An Bord Pleanála planning map were undertaken to determine if there were any developments which should be considered in a cumulative assessment. The review did not establish any consented or live planning applications for developments which would be likely to utilise the same construction traffic routes as the Proposed Development. We have identified that Slievacurry Windfarm Development is coming forward and an application is expected later this year for a nine turbine scheme located to the southeast of the Proposed Development. The application follows a previous application for 8 turbines on the same site which was refused planning consent by An Bord Pleanala in May 2024. There is no information available at this time in relation to expected traffic flows and the construction timeline for the proposed windfarm but it is likely that the Slieveacurry Windfarm will utilise the same routes to access their site as the Proposed Development. Whilst a detailed assessment of cumulative impacts is not possible at this time, it is acknowledged that there will be a need to co-ordinate construction activities at a later date should the two developments be consented and in the unlikely event that the construction periods of the two developments coincide. This co-ordination would be undertaken through the construction stage traffic management process which would ensure that there is liaison between the two construction projects with an objective being that high traffic generating activities such as concrete pours do not coincide. The applicant is fully committed to engaging in such a process if or when required.

The only wind farm within a 5 km radius of the Proposed Development is Boolinrudda which is operational and therefore cumulative effects are considered to be negligible and Not Significant.

19.5 MITIGATION MEASURES FOR TRAFFIC AND TRANSPORT

19.5.1 CONSTRUCTION PHASE MITIGATION MEASURES

The assessment predicts that, prior to mitigation measures, the following effects would be Significant along Ballard Road (including the L1074 and R460) and Slievenalicka within the Study Area as a result of construction traffic associated with the Proposed Development:

- Severance of communities
- Road vehicle driver and passenger delay
- Non-motorised user delay and amenity

Therefore, in accordance with the EIA Regulations, mitigation is required to address these potential effects. It is therefore proposed to prepare and implement a comprehensive Construction Traffic Management Plan (CTMP) which is intended to mitigate the identified effects by ensuring that they are minimised as far as possible within the Study Area to a level which is considered to be not significant.

The CTMP will identify measures to reduce the number of construction vehicles, as well as measures to mitigate the impact of vehicles. The CTMP will identify the programme of works, the agreed routes to Site and details of a Site Liaison Officer who will have responsibilities for managing traffic and transport impacts and effects. The CTMP will also identify measures to reduce and manage construction staff travel by private car, particularly single occupancy trips.

Prior to construction and once the contractors have confirmed their suppliers, the CTMP will be updated in consultation with Clare County Council and An Garda Síochána as necessary. Potential measures could include (but are not limited to):

- Immediately upon commencement, all deliveries, operatives and visitors to the Proposed Development Site will report to the security gate and be required to sign in and out. All Site visitors will undergo a Site induction covering Health and Safety issues at the Contractor's temporary compound and will be required to wear appropriate Personal Protective Equipment (PPE) while onsite. This will be communicated to all early works contractors at their pre-start meeting.
- The main contractor will develop a logistics plan highlighting the access point for the project, loading bay, pedestrian / vehicular segregation, welfare, storage, security and material handling that would be enforced following full site establishment.
- Approved haul routes will be identified to the Proposed Development Site and protocols put in place to ensure that HGVs adhere to these routes:
    - Prior to delivery of abnormal loads i.e. turbine components, the Applicant or their representatives, will consult with An Garda Síochána and Clare County Council Roads Departments to discuss the requirement for a Garda escort.
    - Abnormal loads are likely to travel at night and outside the normal construction times as may be required by An Garda Síochána. Local residents along the affected route will be notified of the timescale for abnormal load deliveries.
    - Works on public roads on the turbine delivery road and grid connection will be strictly in accordance with "Guidance for the Control and Management of Traffic at Road Works – 2nd Edition 2010" as well as "Traffic Signs Manual 2010-Chapter 8 - Temporary Traffic Measures and Signs at Roadworks".
- All contractors will be provided with a site induction pack containing information on delivery routes and any restrictions on routes.
- Temporary construction site signage will be erected along the identified construction traffic routes to warn people of construction activities and associated construction vehicles.

- A construction traffic speed limit (for example, 25 km/h) will be imposed through sensitive areas and on the wind farm site.
- The construction material 'lay down' areas will allow for a staggered delivery schedule throughout the day, avoiding peak and unsociable hours (i.e. before 6 am and after 10 pm).
- With consultation and agreement from Clare County Council, passing bays will be created on the L1074 in order to ease traffic movement on the route during the construction phase.
- An integral part of the progress meetings held with all trade contractors will be the delivery schedule pro-forma. All contractors will be required to give details of proposed timing of material deliveries to the Site. At this stage, they will be given a specific area for delivery.
- The CTMP and the control measures therein will be included within all trade contractor tender enquiries to ensure early understanding and acceptance / compliance with the rules that will be enforced on this project.
- Under no circumstances will HGVs be allowed to lay-up in surrounding roads. All personnel in the team will be in contact with each other and with Site management, who in turn will have mobile and telephone contact with the subcontractors.
- All vehicles accessing the wind farm site will either have roof mounted flashing beacons or will use their hazard lights.
- Roads will be maintained in a clean and safe condition.
- A wheel cleaning facility will be installed on-site during the construction period in order to reduce mud and debris being deposited onto the local road network.
- In addition, any dust generating activities will be minimised where practical during windy conditions, and drivers will adopt driving practices to minimise the creation of dust. Where conditions exist for dust to become friable, techniques such as damping down of the potentially affected areas will be employed.
- To reduce dust emissions, vehicle containers/loads of crushed stone will be covered during both entrance and egress to the Site.

19.6 ASSESSMENT OF RESIDUAL EFFECTS

The potential effects of construction traffic on the study area roads were evaluated and a summary of the assessment is provided in Table 19-15.

The assessment has been carried out considering the peak in construction traffic levels for the Proposed Development and any high percentage increase in HGV traffic, particularly on the Ballard Road and Slievenalicka, is reflective of the low baseline HGV traffic volumes.

Furthermore, it is important to recognise that all effects associated with increased construction traffic will be temporary and local in nature, and that this assessment has considered the worst-case possible impact at each location.

The residual effects after implementation of mitigation in the form of a CTMP are therefore considered to be minor and Not Significant.

19.7 SUMMARY

Table 19-15. Summary of potential effects of construction traffic on the Study Area roads

Potential Effect	Construction/ Operation	Beneficial /Adverse/ Neutral	Extent (Site/Local/ National/ Transboundary)	Short term / Long term	Direct/ Indirect	Permanent/ Temporary	Reversible/ Irreversible	Significance of Effect (according to defined criteria)	Proposed mitigation	Residual Effects (according to defined criteria)
Severance of Communities	Construction	Adverse	Local	Short Term	Direct	Temporary	Reversible	Major/ Significant	CTMP	Not Significant
Road vehicle driver and passenger delay	Construction	Adverse	Local	Short Term	Direct	Temporary	Reversible	Major/ Significant	CTMP	Not Significant
Non-motorised user delay and amenity	Construction	Adverse	Local	Short Term	Direct	Temporary	Reversible	Major/ Significant	CTMP	Not Significant

19.8 REFERENCES

Institute of Environmental Management and Assessment. (2023). *Environmental assessment of traffic and movement*.

Road Safety Authority. (2017). *Road casualties and collisions in Ireland: 2013–2017*.

Transport Infrastructure Ireland. (2014). *Traffic and transport assessment guidelines* (PE-PDV-02045).

Transport Infrastructure Ireland. (2021). *Project appraisal guidelines: Unit 5.3, travel demand projections* (PE-PAG-02017).

JC MONT-FORT
Green Power Generation

GDG
GAVIN & DOHERTY
GEOSOLUTIONS

GLOBAL PROJECT REACH

Offices

Dublin (Head Office)
Gavin & Doherty Geosolutions
Unit A2, Nutgrove Office Park
Rathfarnham
Dublin 14, D14 X627
Phone: +353 1 207 1000

Cork
Gavin & Doherty Geosolutions
First Floor, 12 South Mall
Cork
T12 RD43

London
Gavin & Doherty Geosolutions (UK) Limited
85 Great Portland Street, First Floor
London
W1W 7LT

Utrecht
Gavin & Doherty Geosolutions
WTC Utrecht, Stadsplateau 7
3521 AZ Utrecht
The Netherlands

Belfast
Gavin & Doherty Geosolutions (UK) Limited
Scottish Provident Building
7 Donegall Square West
Belfast
BT1 6JH

Edinburgh
Gavin & Doherty Geosolutions (UK) Limited
22 Northumberland Street SW Lane
Edinburgh
EH3 6JD

Rhode Island
Gavin & Doherty Geosolutions Inc.
225 Dyer St, 2nd Floor
Providence, RI 02903
USA

GDG
GAVIN & DOHERTY
GEOSOLUTIONS

Website: www.gdgeo.com
Email: info@gdgeo.com

A Venterra Group Plc
Member Company