

## **16 TRAFFIC AND TRANSPORT**

### **16.1 INTRODUCTION**

#### **16.1.1 Background and Objectives**

This chapter assesses the potential effects of traffic associated with the Project on the public road network and on sensitive receptors in the vicinity of the Project, describes the existing public road and junction network, identifies whether there is any potential for significant effects to arise (both in isolation and in combination with other developments) and outlines the mitigation measures that will be implemented to avoid, reduce, or offset any potential significant effects that might arise. The assessment will consider the potential effects of traffic generated by the Project during the following phases:

- Construction of the Project,
- Construction of Grid Connection.
- Transportation of Wind Turbine components on the public road network between the Port of Galway and the Project (the Turbine Delivery Route (TDR)).
- Enabling works for the transportation of Wind Turbine components on the public road network between the Port of Galway and the Project.
- Operation and maintenance of the Project.
- Decommissioning of the Project.

#### **16.1.2 Statement of Authority**

This chapter of the EIAR has been prepared by John Doogan, Senior Designer at Jennings O'Donovan & Partners Limited (JOD) who holds a Higher national diploma (Level 7) in Civil engineering from Bolton Street College of Technology. John has over 34 years of road design and traffic experience in Ireland and the UK and has worked on the design, planning and construction of over 30 wind farms projects in Ireland, UK, Europe and Mexico.

This report has been reviewed by David Kiely, Director, JOD who holds a BE in Civil Engineering from University College Dublin and MSc in Environmental Protection from IT Sligo. He is a Fellow of Engineers Ireland, a Chartered Member of the Institution of Civil Engineers (UK) and has over 42 years' experience. He has extensive experience in the preparation of Traffic and Transport Assessments, Traffic Management Plans, EIARs and EISs for environmental projects including Wind Farms, Solar Farms, Wastewater Projects and various Commercial Developments. David has also been involved in the construction of over 60 wind farms since 1997.

### 16.1.3 Site Location, Context and Project

Permission is being sought by the Applicant for the construction of 11 No. Wind Turbines, Turbine Foundations, Turbine Hardstands, Site Access Roads, a Permanent Met Mast, Onsite Substation, Internal Cabling, Temporary Construction Compounds, Borrow Pit, Permanent Spoil Storage, Grid Connection and all ancillary and associated works. Temporary accommodation requirements at locations along the TDR are not included in the planning application but are assessed as part of the EIAR.

The Project will consist of the following:

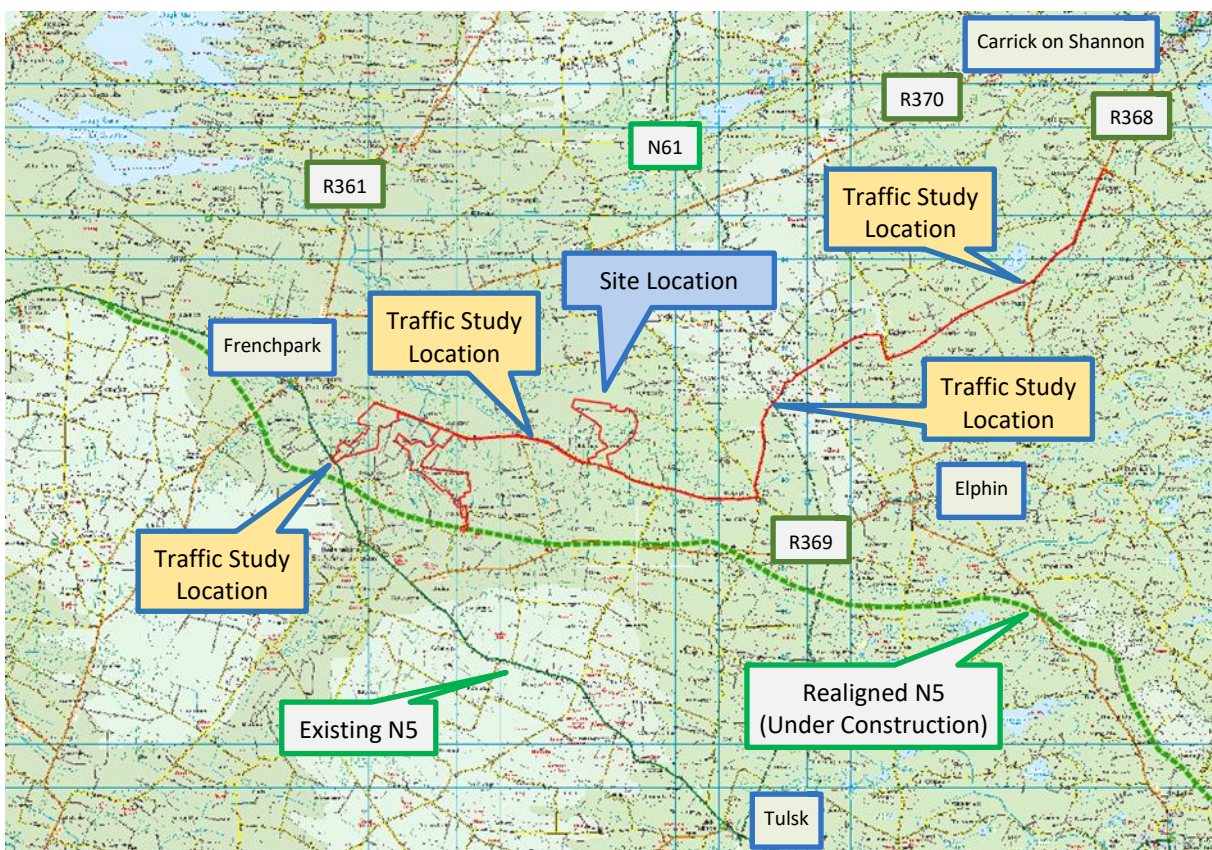
- 11 no. wind turbines with an overall turbine tip height of 185m, turbine hub height of 103.5m, and rotor blade diameter of 163m and a meteorological mast with a height of 30m, and subsequent decommissioning of the wind turbines and meteorological mast, following a 35 year operational life from the date of full commissioning of the wind turbines;
- Associated wind turbines and meteorological mast foundations and hardstanding areas,
- A 110kV substation compound (Including control buildings (with a combined floor area of 594m<sup>2</sup>) with welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, lightning protection poles, underground wastewater holding tank, site drainage and all ancillary works);
- Underground electrical (110kV) and communications cabling from the proposed 110kV substation to the existing Flagford 220kV substation (including joint bays, communication chambers, earth sheath links, and ancillary works along the underground electrical cabling route). This cabling route is primarily located within the public road corridor;
- Underground electrical (33kV) and communications cabling connecting the wind turbines and meteorological mast to the proposed 110kV substation;
- 6 no. temporary construction compounds (including site offices and welfare facilities,
- Junction accommodation works to facilitate construction access and turbine delivery to the site (off the existing N5 and new N5 national road, and L5642 and L1217 Local Roads), including a new temporary access road off the existing N5 to the L56402,
- Upgrade of existing roads/ tracks and provision of new site access roads, junctions and hardstand areas (including of the L1217, L56402, L5642, L56421, L56492 and L56491 Local Roads), including new gated site entrances at each junction,
- 2 no. Borrow Pits;
- Peat & Spoil Management;
- Site Drainage;
- Tree felling and vegetation removal;
- Biodiversity enhancement measures;
- Operational stage site signage; and

- All associated site development works and apparatus.

The applicant is seeking a 10 year permission and an operational period of 35 years for the wind turbines, meteorological mast and site signage from the date of full commissioning of the wind turbines. A permanent planning permission is being sought for all other works.

The EIAR assesses the Project which includes the works within the EIAR Boundary as outlined above as well as temporary enabling works for the transportation of Wind Turbine components using abnormal load vehicles along the proposed TDR from the Port of Galway.

The location of the Project is shown in **Figure 16.1**, the layout of the Project is shown in **Figure 16.2**, the route of the Grid Connection between the Onsite Substation and the existing Flagford 220kV substation is shown in **Figure 16.3** and the route of Internal cabling connection which connects the individual Wind Turbines to the Onsite Substation is shown in **Figure 16.4**. The Wind Turbine components for the Project will be shipped to the Port of Galway and delivered to site on the public road network using abnormal load vehicles, the Turbine Delivery Route (TDR) for the Project is shown in **Figure 16.5**.



**Figure 16.1: Site Location**

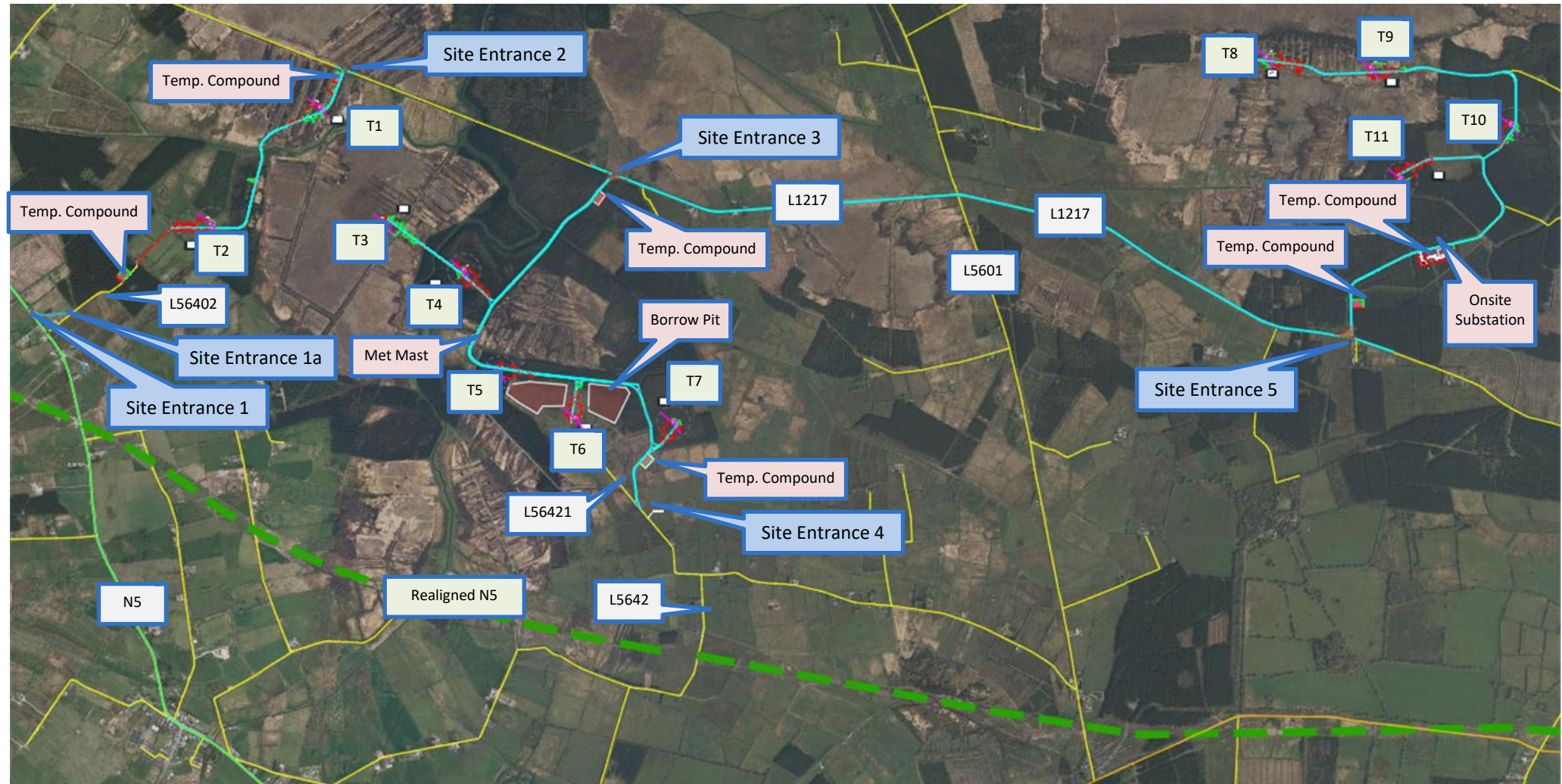


Figure 16.2: Site Layout

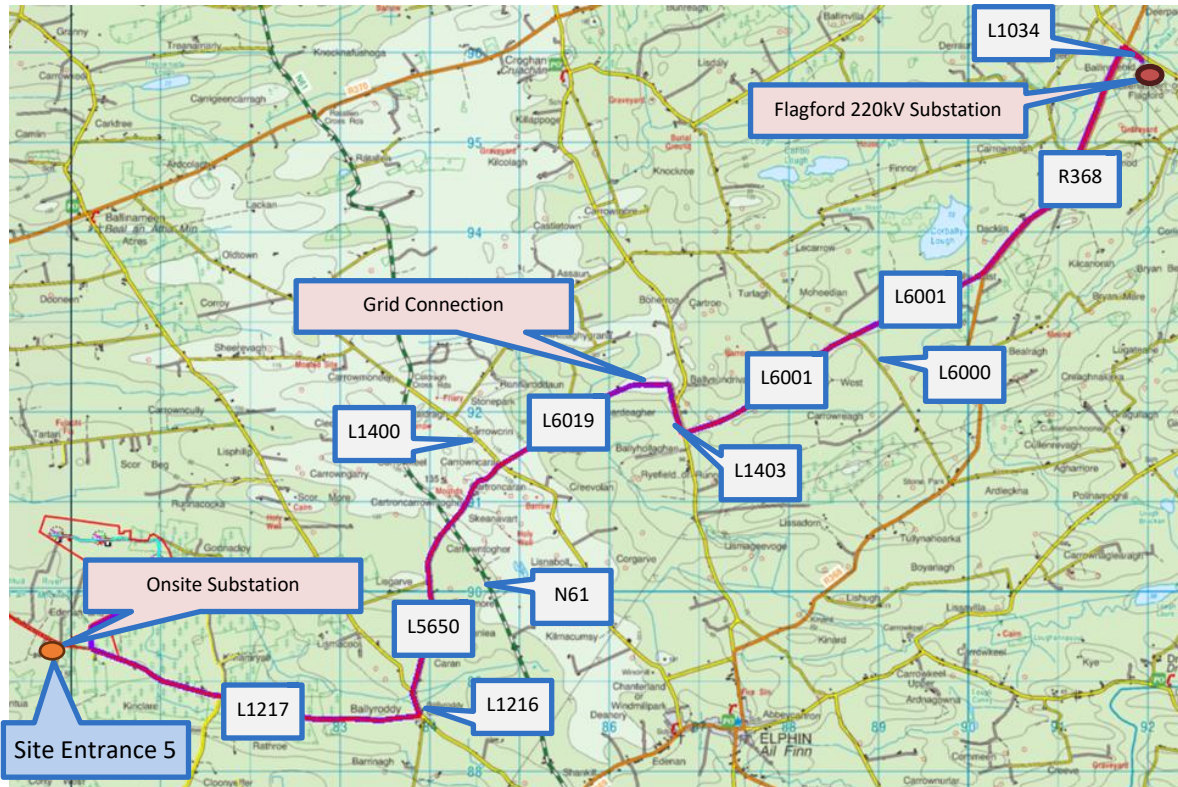


Figure 16.3: the Grid Connection

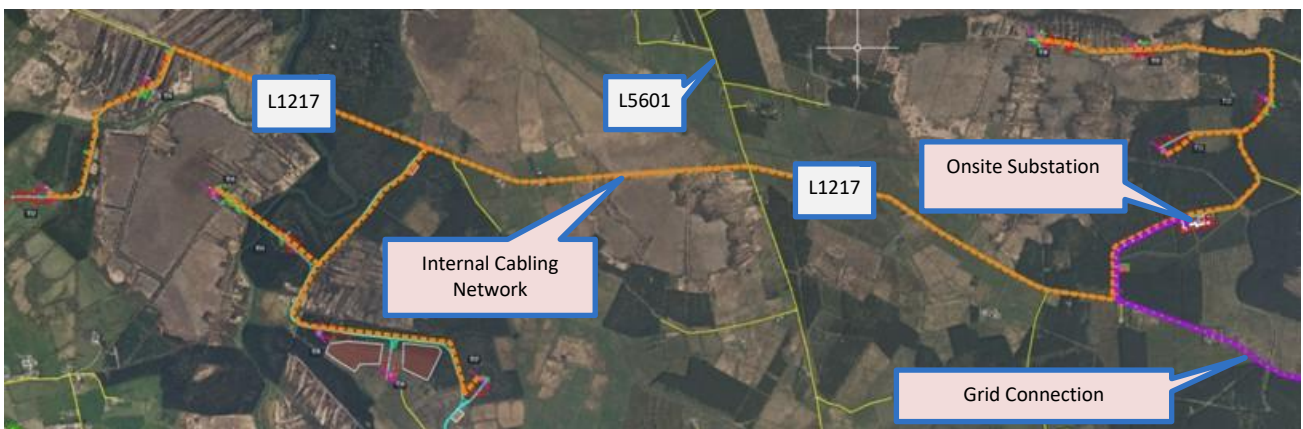
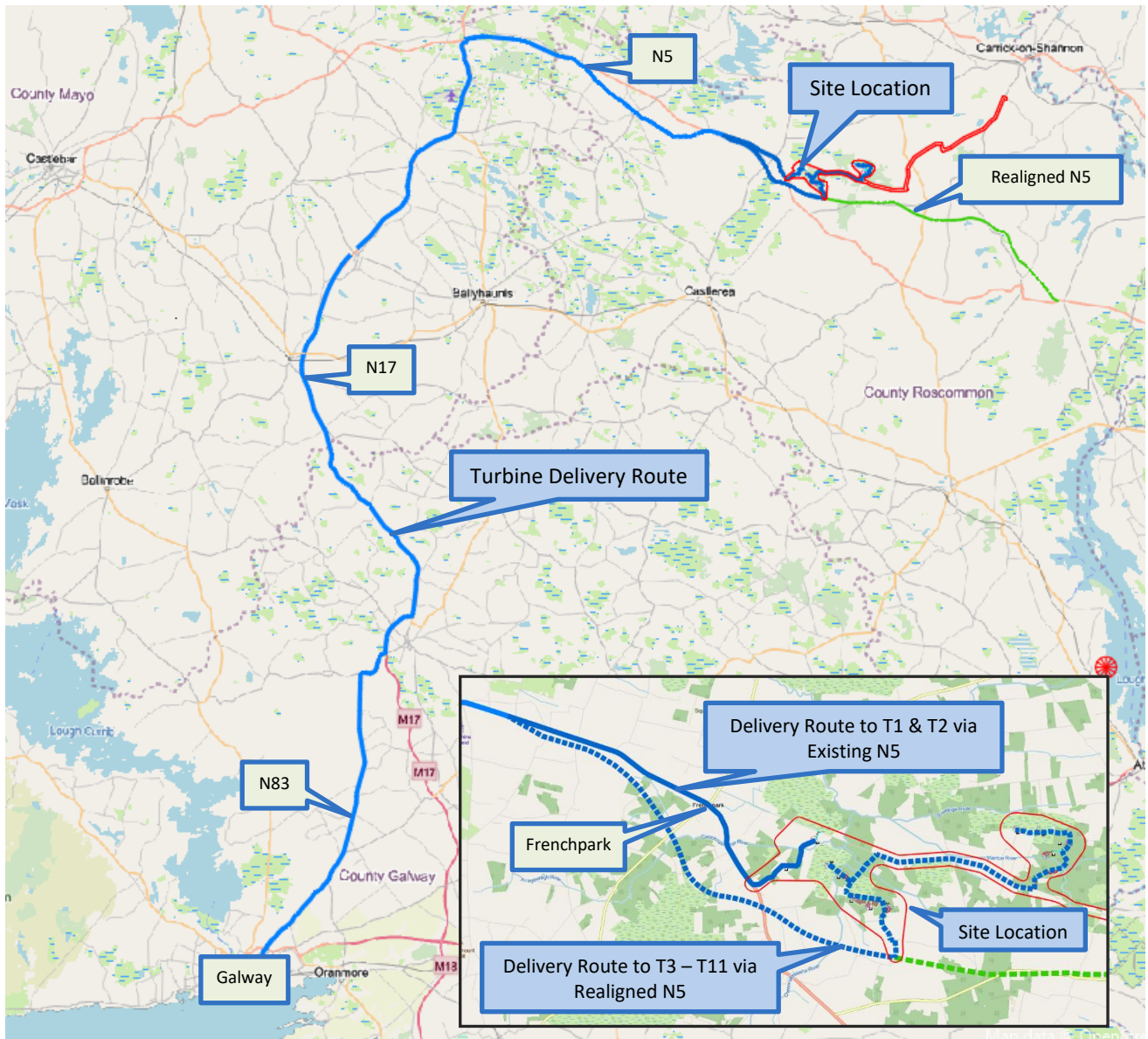


Figure 16.4: the Internal Cabling



**Figure 16.5: Turbine Delivery Route**

Common acronyms used throughout this EIAR can be found in **Appendix 1.4**. This chapter of the EIAR is to be read in conjunction with the following Appendix documents provided in **Volume IV** of this EIAR:

- **Appendix 16.1:** Traffic and Transport Assessment (TTA):
- **Appendix 16.2:** Traffic Management Plan (TMP):
- **Appendix 16.3:** Turbine Delivery Route (TDR), Swept Path Analysis – Port of Galway
- **Appendix 16.4:** Road Safety Audit (RSA)

**16.1.4 Scoping Responses and Consultation**

The Project management team contacted relevant stakeholders as part of the scoping process for the wind farm design. The consultation responses are shown in **Table 16.1**.

**Table 16.1: Consultation Responses**

Consultee / Response Date	Summary of Response	Response to Consultee
<p><b>Department of Transport</b></p> <p>17th April 2025</p>	<p><b>Re: Request for Scoping Opinion on information to be included in the preparation of an Environmental Impact Assessment (EIA) for Carrigeen Wind Farm, Co. Roscommon</b></p> <p>The Department of Transport welcomes the opportunity to comment on the consultation request relating to the Scoping Report for the Proposed Carrigeen Wind Farm, Co. Roscommon.</p> <p>It should be noted that the Department considers the construction involved in providing this development and especially, the connection cables to the national grid, may have effects on both the environment and the Regional and Local Road network.</p> <p>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:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Their installation within the lands associated with the public road may affect the stability of the road. In particular where the road is a “legacy road” (where there is no designed road structure and the subgrade may be poor or poorly drained) or bog rampart and the design needs to take account of all the variable ground conditions and not be based on a sample of the general soil conditions. This should include a constructability assessment to a 950mm minimum cover depth to</li> </ul>	<p>The location of Grid Connection in the public road network is shown in <b>Figure 16.3</b>.</p> <p>Details of traffic management systems, road closures and diversions are detailed in the TMP, <b>Appendix 16.2</b>.</p> <p>A full Grid Connection design and drawings accompanies the planning application.</p> <p>The design team carried out a site visit with Roscommon County Council staff to assess the Grid Connection on the public road network. The site visit was carried out on 12<sup>th</sup> December 2025.</p>

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	<p>the HV Cable on legacy roads, roads over peat/bog ramparts.</p> <ul style="list-style-type: none"> <li>• The possible effect on the remaining available road space (noting that there may be need to accommodate other utilities within the road cross-section in the future or additional drainage for climate adaptation) on potential future development.</li> <li>• 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.</li> </ul> <p>In this regard, please refer to Department of Transport Circular RW 07 of 2025 and the 'Interim Guidance to Road Authorities (placement of Medium or High Voltage electricity assets)' which can be accessed at <a href="https://www.gov.ie/en/publication/ece06-electricity-transmission-infrastructure-development-roads-sector-engagement-framework-interim-guidance/">https://www.gov.ie/en/publication/ece06-electricity-transmission-infrastructure-development-roads-sector-engagement-framework-interim-guidance/</a>). The 'Interim Guidelines' which, as outlined in the Circular, are issued pro tem until the development of any procedures for the planning, regulation, construction and management of Medium or High Voltage cables under public roads by the 'HV Forum' and the conclusion of any outcomes from the Private Wires Consultation undertaken by the Department of Energy, Climate and Communications.</p> <p>Notwithstanding, in relation to proposed works utilising regional and local road network, as part of the grid connection routing, it is the Department's opinion that the proposed routing must be</p>	

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	<p>undertaken in a manner to avoid the potential to impact on future maintenance, improvement and operation of the road network in this area.</p> <p>Section 12.4.1.1 'Accelerate Renewable Electricity Generation' of the Climate Action Plan 2024 (CAP24) outlines the objective of reaching 80% of electricity demand from renewable sources by 2030 through a range of measures, including; 'All relevant public bodies will carry out their functions in a manner which supports the achievement of the renewable electricity targets, including, but not limited to, the use of road and rail infrastructure to provide a route for grid infrastructure where this is the optimal solution'. Having regard to the measures identified in CAP24 and the information in relation to grid routing included in the subject application, the department recommends that there is a requirement that the Board establish that the routing proposed represents the 'optimal solution'.</p> <p>The Department considers it important that the examination of the proposal should include consideration of the following:</p> <ul style="list-style-type: none"> <li>• 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 to ensure the best performing route and technology option is selected, (ensuring compliance with CAP24). The public road should only be considered following a robust MCA determining the optimal solution including examining the most linear solutions.</li> <li>• Examination of options for connection to the national grid network at a point closer to the</li> </ul>	

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	<p>wind farm in order to reduce the adverse impact on public roads.</p> <p>In terms of detailed design of any cable routing impacting the regional and local road network, without prejudice and in accordance with DoT 'Interim Guidelines', the Department recommends the following conditions should be applied to any grant of permission that includes the laying of high voltage electricity cable in the road network where that routing is identified as the 'optimal solution'.</p> <ol style="list-style-type: none"> <li>1. Prior to commencement of development, engagement with the planning authority should discuss and agree the route for the HV Cable(s) to identify/agree the routing 'optimal solution' along with the associated requirements for traffic management, road opening licencing, times of work, reinstatement, positioning of chambers/ joint bays etc.</li> <li>2. A condition requiring the developer to, at a minimum, comply with all appropriate standards and, inter alia the Guidelines for Managing Openings in Public Roads, 2017 in order to ensure orderly development.</li> <li>3. Electricity cabling shall be laid off carriageway where feasible.</li> <li>4. Wherever possible, joint bay structures are best located off the carriageway in verges, open spaces, or adjacent sites; and where they must be under carriageway, joint bay structures will be to accepted design standards.</li> <li>5. High/medium voltage transmission underground cables should not be sited on or attached to existing roads structures, masonry bridges/ culverts and similar structures.</li> <li>6. A condition requiring that the location of the cables would be recorded as exactly as possible, using BIM</li> </ol>	

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	<p>type technology, so as to facilitate the further use of road space for utilities and the maintenance/construction of the public road by the Roads authority. This record should include as constructed surveys of all infrastructure altered, added, removed or relocated and exact detail of the road construction including any drains or other features encountered. The record should be lodged with the local authority and with the ESB Networks for retention on their records.</p> <p>7. A condition requiring the replacement of culverts that have been excavated during the cable duct placement operation. The replacement culverts should be designed appropriately and include an allowance for the effects of climate change.</p> <p>8. A condition requiring the developer to notify the Roads Authority of the owner of the cables (Owner) and the controller (Power Controller) of the power transmitted along the cables. In addition, the condition should require Owner and Power Controller to notify the Roads Authority of any change in ownership of the cables or change of Power Controller transmitting power along the cables. In all instances the Owner and Power Controller should be required to maintain an agreed contacts list with the Roads Authority.</p>	
<p>Transport Infrastructure Ireland (TII) 17th April 2025</p>	<p>Thank you for your correspondence of 18 March 2025 regarding the above. Transport Infrastructure Ireland's (TII's) position in relation to your enquiry is as follows.</p> <p>TII will endeavour to consider and respond to planning applications referred to it, given its status and duties as a statutory consultee under the Planning Acts. The approach to be adopted by TII in making such submissions or comments will seek to uphold official policy and guidelines, as outlined in</p>	<p>There are no Grid Connection or cabling works proposed on the national road network as part of the Project.</p> <p>There is one direct access, site entrance</p>

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	<p>the Section 28 Ministerial Guidelines 'Spatial Planning and National Roads Guidelines for Planning Authorities' (DoECLG, 2012). Regard should also be had to other relevant guidance available at <a href="http://www.TII.ie">www.TII.ie</a>.</p> <p>The issuing of this correspondence is provided as best practice guidance only and does not prejudice TII's statutory right to make any observations, requests for further information, objections or appeals, following the examination of any valid planning application referred.</p> <p>National Strategic Outcome 2 of the National Planning Framework includes the objective to maintain the strategic capacity and safety of the national road network. In addition, Chapter 7 'Enhanced Regional Accessibility' of the National Development Plan, 2021 – 2030, sets out the key sectoral priority of maintaining Ireland's existing national road network to a robust and safe standard for users. This requirement is further reflected in the publication of the National Investment Framework for Transport in Ireland and also the existing Statutory Section 28 'Spatial Planning and National Roads Guidelines for Planning Authorities'.</p> <p>In relation to your EIAR Scoping referral, although the site access location is not detailed in the EIAR Scoping document, it appears from the site location detail provided, that access to the N5, national road, via a private lane or direct new access may be proposed. TII's records indicate that a 100kph speed limit applies to the N5, national road, at the location concerned and also that an alternative local road access to the site is available instead of provision of a new direct access or intensification of an existing</p>	<p>1 proposed on the existing N5 to the east of Frenchpark village. Site entrance 1 is located on a section of the N5 which is subject to realignment as part of the N5 Ballaghderreen to Scramogue Scheme which is currently under construction.</p> <p>All other site entrances to the Project are located on the local road network.</p> <p>The design team contacted Roscommon Road Design office by telephone regarding the realignment of the N5 between Ballaghaderreen to Scramoge to confirm details of scheme.</p> <p>The delivery of Wind Turbines from the Port of Galway will be carried out on the national road</p>

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	<p>access to the national road at this high-speed location.</p> <p>It is critical that the developer/applicant be aware that official policy concerning access to national roads seeks to avoid the creation of additional access points from new development or the generation of increased traffic from existing accesses (i.e. non-public road access) to national roads, to which speed limits greater than 50 kph apply.</p> <p>Therefore, there are policy and road safety considerations that would need to be resolved in any subsequent application concerning access to the N5, national road, and available alternative arrangements to the local road network should be utilised and not direct access to the national road, contrary to the provisions of official policy. It is noted with concern that the EIAR Scoping Report does not appear to consider nor address this potential policy conflict nor clearly outline access proposals.</p> <p>Section 2.6 of the DoECLG Guidelines provides that planning authorities may apply a less restrictive approach to the management of access to a national road in 'exceptional circumstances' but only as part of the process of reviewing or varying the relevant development plan. However, the current Roscommon County Development Plan has not provided any agreed 'exceptional circumstances' cases for development accessing a national road such as that potentially proposed in this EIAR Scoping referral and this is a matter, where access to the N5 is proposed, that will require resolution.</p> <p>With respect to EIAR Scoping issues, the recommendations indicated below provide only</p>	<p>network as shown in <b>Figure 16.5</b>.</p> <p>An assessment of the Wind Turbine delivery route has been carried out and is included in <b>Appendix 16.3</b>. The assessment has identified locations where temporary enabling works will be required to facilitate abnormal load vehicles delivering Wind Turbines. A summary of the assessment is included in <b>Section 16.2.10</b> and in section 4 of <b>Appendix 16.2</b>.</p> <p>A description of Wind Turbine delivery vehicles is given in <b>Section 16.2.15</b>.</p>

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	<p>general guidance for the preparation of an EIAR, which may affect the national road network.</p> <p>The developer should have regard, inter alia, to the following:</p> <ul style="list-style-type: none"> <li>• TII notes that the subject study area includes a section of N5, national road, subject to a 100kph speed limit. Access to the road network is not clear in the EIAR Scoping Report and TII recommends that access proposals should be developed in accordance with official policy and road safety considerations. As outlined above, access directly to a national road, or intensification of a private access to a national road, outside a reduced 50 – 60kph speed limit location should be avoided in accordance with the provisions of official policy. Alternative arrangements should be identified to ensure adherence to the provisions of official policy.</li> <li>• 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. In that regard, consultation with Roscommon County Council concerning the N5 Ballaghderreen to Scramogue Scheme should be undertaken.</li> <li>• 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.</li> <li>• The developer should assess visual impacts from existing national roads.</li> </ul>	

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	<ul style="list-style-type: none"> <li>• 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.</li>   <li>• The developer, in preparing EIAR, should have regard to TII Publications (formerly DMRB and the Manual of Contract Documents for Road Works).</li>   <li>• The EIAR should have regard to TII's Environmental Assessment and Construction Guidelines, including the Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes (National Road Authority (NRA), 2014).</li>   <li>• The EIAR should consider the 'European Communities (Environmental Noise) Regulations, 2018, (S.I. no. 549 of 2018)', and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see 'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes (NRA, 2014)').</li>   <li>• 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</li> </ul>	

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	<p>network and junctions of lower category roads with national roads.</p> <p>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 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.</p> <p>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.</p> <ul style="list-style-type: none"> <li>• The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required.</li> <li>• 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.</li> <li>• TII recommends that the applicant/developer should clearly identify haul routes proposed and fully assess the network to be traversed. Where abnormal 'weight' loads are a feature of the development, e.g., turbine or substation components, separate structure approvals/permits and other licences may be required in connection with the proposed haul route. All national road structures on the haul route through all the relevant County Council</li> </ul>	

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	<p>administrative areas should be checked by the applicant/developer to confirm their capacity to accommodate any abnormal 'weight' load proposed. Any requirements for 'Exceptional Abnormal Loads' should also be addressed in accordance with TII Publications.</p> <ul style="list-style-type: none"> <li>• In addition, the haul route should be assessed to confirm capacity to accommodate abnormal 'length' loads and any temporary works required are identified.</li> <li>• TII notes that the EIAR Scoping Report indicates the port of entry for turbine components may be Galway and upgrade works on the turbine delivery route from Galway Port may be required.</li> </ul> <p>The national road network is managed by a combination of PPP Concessions, Motorway Maintenance and Renewal Contractors (MMaRC) and local road authorities, in association with TII.</p> <p>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.</p> <p>Where temporary works within any MMaRC Boundary are required to facilitate the transport of turbine components to site, the applicant/developer shall contact <a href="mailto:thirdpartyworks@tii.ie">thirdpartyworks@tii.ie</a> in advance, as a works specific Deed of Indemnity will be needed by TII before the works can take place.</p>	

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	<p>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.</p> <p>Any Road Safety Audit requirements should be addressed.</p> <ul style="list-style-type: none"> <li>Where grid connection and cable routing form part of any development proposal, 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.</li> </ul> <p>Where grid connection proposals impact the existing national road network, please note, in accordance with the National Planning Framework National Strategic Outcome No. 2 'Enhanced Regional Accessibility', there is a requirement to maintain the strategic capacity and safety of the network. This requirement is further reflected in the NDP, the National Investment Framework for Transport in Ireland and also the existing Statutory Section 28 'Spatial Planning and National Roads Guidelines for Planning Authorities'.</p> <p>There is around 99,000km of roads in Ireland. The national road network, which caters for strategic inter-urban travel, consists of only approx. 5.4% of</p>	

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	<p>this. There is a critical requirement to ensure the strategic capacity and safety of this national road network is maintained and significant Government investment already made in the national road network is safeguarded.</p> <p>The provision of cabling along the national road network represents a number of significant implications for TII and road authorities in the management and maintenance of the strategic national road network and TII is of the opinion that grid connection cable routing should reflect the foregoing provisions of official policy.</p> <p>Section 12.4.1.1 'Accelerate Renewable Electricity Generation' of the Climate Action Plan 2024 (CAP24) outlines the objective of reaching 80% of electricity demand from renewable sources by 2030 through a range of measures, including:  <i>"All relevant public bodies will carry out their functions in a manner which supports the achievement of the renewable electricity targets, including, but not limited to, the use of road and rail infrastructure to provide a route for grid infrastructure where this is the optimal solution".</i> (Climate Action Plan 2024, p.163)</p> <p>Consistent with CAP24, for all renewable energy developments requiring grid connection to the national grid, TII recommends that a full assessment of all route alternatives for grid connection takes place, including alternatives to public road, where appropriate. In TII's experience, grid connection accommodated on national roads has the potential, inter alia, to result in technical road safety issues such as differential settlement due to backfilling trenches and can impact on ability and cost of</p>	

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	<p>general maintenance, upgrades and safety works to existing national roads.</p> <p>The Scheme promoter should also refer to Department of Transport Circular, RW 07 of 2025 and the 'Interim Guidance to Road Authorities (placement of Medium or High Voltage electricity assets)' which can be accessed at (<a href="https://www.gov.ie/en/publication/ece06-electricity-transmission-infrastructure-development-roads-sector-engagement-framework-interim-guidance/">https://www.gov.ie/en/publication/ece06-electricity-transmission-infrastructure-development-roads-sector-engagement-framework-interim-guidance/</a>).</p> <p>Having regard to the foregoing, in TII's opinion, the grid connection routing, where it is proposed to utilise the road network, must demonstrate that the route proposed represents the 'optimal solution'. In addition, there is a finite road space available to accommodate all utilities in the road network and TII recommends that a co-ordinated approach to grid connection routing in this area is achieved to avoid risk to the effective delivery of renewable energy projects in the area.</p> <p>Other consents or licences may be required from the road authority for any trenching or cabling proposals crossing the national road. TII requests referral of all proposals agreed and licensed between the road authority and the applicant, which affect the national road network.</p> <p>Cable routing should avoid all impacts to existing TII infrastructure such as traffic counters, weather stations, etc. and works required to such infrastructure shall only be undertaken in consultation with and subject to the agreement of TII. Any costs attributable shall be borne by the applicant/developer. The developer should also be aware that separate approvals may be required for</p>	

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	<p>works traversing the national road network. All crossings in the vicinity of the national road should be by HDD and avoid all national road structures, including bridges, culverts, etc.</p> <p>Notwithstanding any of the above, the developer should be aware that this list is non-exhaustive, thus site and development specific issues should be addressed in accordance with best practice.</p> <p>I hope that this information is of assistance to you.</p>	

## 16.2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

### 16.2.1 Assessment Methodology

This assessment of the impact and effects on the traffic generated by the Project on the existing public road network and its sensitive receptors has been carried out using the following methodology:

- Policy and guidance review.
- Desk study, including review of available maps and published information.
- Site visit (driving the route) including review of road network to be used.
- Classified traffic count data.
- Topographical survey of potential constraints.
- Swept Path Analysis of the TDR (**Appendix 16.3**).
- Establishment of baseline traffic scenario and existing traffic flows / junction capacity.
- Traffic and Transport Assessment (TTA) of junctions in the vicinity of the Wind Farm Site (**Appendix 16.1**).
- Evaluation of potential effects.
- Evaluation of the significance of these effects.
- Identification of measures to avoid and mitigate potential effects (**Section 16.4**).

The methodology for the assessment has been based primarily on guidance from TII publication PE-PDV-02045, Traffic and Transport Assessment Guidelines and Guidelines on the Information to be Contained in Environmental Impact Assessment Reports published

by the Environmental Protection Agency (EPA). A full list of policy and guidance documents relating to this assessment is given in **Table 16.2**.

Traffic generated by existing developments, permitted developments and known proposed plans and projects are cumulatively assessed in the Traffic and Transport chapter of the EIAR and in the TTA in **Appendix 16.1**. This includes plans and projects that are pending a decision from the planning authority, An Coimisiún Pleanála (the Commission) and other known projects which are in the advanced stages of being prepared to be submitted for planning and have the potential for in combination effects and including the evaluation of residual effects following implementation of mitigation measures. Further details of the assessment are provided in the following sections.

### 16.2.2 Planning Policy and Guidelines / Guidance

In addition to the EIAR standards outlined in **Chapter 1: Introduction**, this assessment has been prepared and carried out in accordance with guidance contained in the documents shown in **Table 16.2**.

**Table 16.2: Policy and Guidance**

Policy / Author	Title	Policy
Roscommon County Council	Roscommon Development Plan 2022 - 2028	Chapter 7 Infrastructure, Transport and Communications  Chapter 12 Development management standards
Department of Transport, Tourism and Sport and Department of Environment, Community and Local Government	The Design Manual for Urban Roads and Streets (DMURS)	This document outlines guidelines on the design of urban roads and streets in terms of street networks, street signage, pedestrians and cyclists, carriageways (widths, surfaces, junctions etc.), policies and plans, design process and audits (safety and quality).
Transport Infrastructure Ireland (TII)	Standards and Technical Documents	A full list of the TII standards and specifications are found on the TII website at the following link, <a href="http://www.tiipublications.ie">www.tiipublications.ie</a> , a summary of the TII specifications and standards used during the design of the Project are listed below.
Transport Infrastructure Ireland (TII)	Introduction (INT)	GE-1NT-01029 Introduction to the TII publications system
Transport Infrastructure Ireland (TII)	Planning & Development (PDV)	Traffic & transport assessment guidelines

Policy / Author	Title	Policy
Transport Infrastructure Ireland (TII)	Environment (ENV)	Management of waste / landscape treatment / invasive species / Air quality / noise
Transport Infrastructure Ireland (TII)	Geometry (GEO)	Road link design / junction design / cross sections & headroom
Transport Infrastructure Ireland (TII)	Pavement (PAV)	Pavement and foundation design / materials / skid resistance
Transport Infrastructure Ireland (TII)	Drainage (DNG)	Road drainage
Transport Infrastructure Ireland (TII)	Policy (POL)	TII policy guidelines
Transport Infrastructure Ireland (TII)	Project Appraisal Guidelines (PAG)	Travel demand projections and calculations
Transport Infrastructure Ireland (TII)	Road equipment (REQ)	Design and assessment of road restraint systems
Transport Infrastructure Ireland (TII)	Safety (STY)	Guidance for road safety audits
Transport Infrastructure Ireland (TII)	Specification For Works (SPW)	Specification for materials and workmanship
Transport Infrastructure Ireland (TII)	Standard Construction Details (SCD)	Details for road construction
Department of the Environment and Local Government and Department of Transport	Traffic Management Guidelines 2012	<p>This document outlines guidelines for traffic management and sustainability, consultation and monitoring, speed management, junctions, vulnerable road users, public transport and parking.</p> <p>The guidelines recommend that consultation is carried out for schemes that involve a long construction period or area.</p> <p>The guidelines outline the relevant legislation governing different types of road works.</p> <p>The guidelines outline safety measures to be taken in the design of roads and junctions.</p> <p>The guidelines outline the arrangements for temporary traffic management where construction and improvement of roads is taking place and who should be consulted in planning for roadworks and the factors to consider.</p>
Department of Transport, Tourism and Sport	Guidelines for Managing Openings in Public Roads (Second Edition, April 2017)	The document prescribes standards in respect of the work of forming openings, backfilling and the reinstatement of road surfaces and the associated materials to be used on all roads other than National Roads. It also prescribes procedures and requirements in relation to the

Policy / Author	Title	Policy
		use of MapRoad Roadworks Licensing (MRL) and its use for all road openings in public roads other than those openings carried out by a road authority.
Department of Transport	Traffic Signs Manual www.trafficsigns.ie	Temporary traffic measures and signs for roadworks.  Regulatory / directional / information / warning signs and roadmarkings for the public road network
Transport Infrastructure Ireland (TII)	Spatial Planning and National Roads Guidelines (2012)	It is in the public interest, in so far as is reasonably practicable, that the national road network continues to serve its intended strategic purpose. The EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network, in order to demonstrate that the development can proceed complementary to safeguarding the capacity, safety and operational efficiency of that network.

### 16.2.3 Study Area

The Study Area for TTA is focused on the public road network, its associated junctions and sensitive receptors. The Study Area for the assessment is based on professional judgement and experience of similar projects and includes the public road network, junctions and site entrances which will be used by traffic generated by the Project during the following activities.

- Transportation of granular materials for Site Access Road and Turbine Hardstand construction.
- Transportation of concrete and steel reinforcement for the construction of Turbine Foundations.
- Transportation of Wind Turbine components using abnormal load vehicles along the Turbine Delivery Route from the Port of Galway to the Wind Farm Site entrances on the existing and realigned N5.
- Enabling works at junctions and pinch points on the public road network to facilitate the swept path of abnormal load vehicles delivering Wind Turbine components along the Turbine Delivery Route between the Port of Galway and the Project site entrances on the existing and realigned N5.
- Construction of the Internal cabling network on the L1217 local road between the individual Wind Turbines and the Onsite Substation.

- Construction of the Grid Connection between the Onsite Substation and the existing 220kV substation at Flagford.
- Traffic associated with the operation and maintenance of the Project during the 35-year operational life, subject to planning permission being granted.
- Traffic associated with the Decommissioning of the Project.

#### 16.2.4 Desk Study

A desk study of the existing road network in the vicinity of the Project was carried out to determine potential locations and layouts for the site entrances and to determine potential haul routes for the delivery of Wind Turbine components using abnormal load vehicles. The desk study involved using AutoCAD and AutoTRACK software combined with Lidar survey, OSI / Bing / Google Maps and Streetview to assess the suitability of public road network for junction visibility and vehicle turning movements. The Swept Path Analysis in **Appendix 16.3** has been carried out using a 80.5m long blade for a Wind Turbine with 163m rotor diameter. The blade represents the largest components to be transported. The blade will be transported using a superwing blade delivery vehicle loaded with a horizontal blade between the Port of Galway and the Project site entrances on the existing and realigned N5. The blade delivery vehicle will have the greatest impact on the public road network due to the length of the loaded vehicle.

#### 16.2.5 Field Work

The preliminary wind farm design, haul route assessment and Turbine Delivery Route assessment has been carried out using Lidar data supplied by Ordnance Survey Ireland (OSI) and supplemented using detailed topographical survey information supplied by the Applicant at proposed site entrances and watercourse crossings.

The design of the Grid Connection between the Onsite Substation and the existing 220kV substation at Flagford was carried out by the Applicant. The design was carried out using topographical survey data supplied by the Applicant.

The Turbine Delivery Route for the transportation of the Wind Turbine components between the Port of Galway and the site entrance on the N5 has been assessed by JOD. The assessments have been carried out using AutoTRACK software to determine the swept path of abnormal load vehicles delivering Wind Turbine components. Details of the assessment are included in **Appendix 16.3**.

A site visit was undertaken on the 12th of December 2025 to record traffic volumes and turning movements of vehicles at the N5 / L56402 junction, L1217 / L5601 junction, N61 / L5650 / L6019 junction and the R368 / L6001 junction. Traffic counts at the N5 / L56402 junction and the L1217 / L5601 junction were carried out between 07.30 and 13.00am to capture peak traffic flows during the morning period at junctions which will be used by general construction traffic. Traffic counts at the N61 / L5650 / L6019 junction and the R368 / L6001 junction were carried out between 14.00 and 16.00 to determine traffic volumes on the road network used during the construction of the Grid Connection. The traffic counts were carried out to determine baseline traffic volumes in the area and formed the basis of the TTA in **Appendix 16.1**. The selection of the traffic count locations is based on guidance from PE-PDV-02045 and professional judgement following site visits carried out to assess the existing road network and traffic flows. The locations of the traffic counts were chosen at the junctions which will be subject to peak wind farm traffic during the construction of the Project. The recorded traffic volumes were supplemented by data from the TII automatic traffic counter located between Frenchpark and site entrance 1. The automatic count data is freely available on the TII website.

The Project site entrances from the public road network have been subject to a Stage 1 RSA carried out by the CST Group, chartered consulting Engineers in January 2026. Details of the audit are included in **Appendix 16.4**. The recommendations of the audit relating to the design of each site entrance are discussed in **Section 16.2.6**, Receiving environment.

The design team carried out a site visit with Roscommon County Council staff to assess the Grid Connection and proposed site entrances to the Project. The site visit was carried out on 12<sup>th</sup> December 2025.

The design team contacted Roscommon Road Design office by telephone regarding the realignment of the N5 between Ballaghaderreen to Scramoge to confirm details of scheme which is under construction in January 2026.

Roscommon County Council, Department of Transport and TII were consulted as part of the proposed Project design scoping process. Consultation comments are listed in **Table 16.1**.

## 16.2.6 Receiving Environment

### 16.2.6.1 Site Entrance 1 and Site Entrance 1a

The location of the site entrances to the Project are shown on **Figure 16.2**. Site entrance 1 on the existing N5 and site entrance 1a on the L56402 will be constructed to facilitate the delivery of the Wind Turbine components to Wind Turbines T1 and T2. The site entrances will allow abnormal load vehicles to leave the N5 at site entrance 1 and join the L56402 at site entrance 1a to access Wind Turbines T1 and T2 and avoid the existing N5 / L56402 junction which is not suitable for abnormal load vehicles. The existing N5 (**Plate 16.1**) is a 6.0m wide Type 3 single carriageway with hard strips and grass verges. The N5 runs between Longford and Westport and currently has a 100km/h speed limit classification at the proposed site entrance 1. Existing traffic volumes on the N5 were obtained from the TII traffic counter on the N5 located to the east of Frenchpark near site entrance 1. The results from the automatic traffic counter show that in 2025 the N5 had an annual average daily traffic (AADT) of 6,471 vehicles with 10.6% HGV traffic. The realignment of the N5 between Ballaghaderreen to Scramoge is due to open in 2026 and the section of the N5 at site entrance 1 will become a regional / local road with reduced traffic volumes and reduced speed limit. Site entrance 1 on the N5 will be used by abnormal load vehicles during Wind Turbine delivery, general construction traffic will use the existing N5 / L56402 junction to access the Wind Farm Site. The L56402 (**Plate 16.2**) is typically a 3.0m wide single carriageway with grass verges and has a 60km/h speed limit classification. Existing traffic volumes on the L56402 are calculated from the classified traffic counts carried out by JOD on 12<sup>th</sup> December 2025 at the N5 / L56402 junction. Using the methodology from TII publication PE-PAG-02039 to calculate the AADT from short period traffic counts, the resulting AADT on the L56402 is calculated from the recorded traffic counts. The L56402 local road has an AADT of 57 vehicles at its junction with the N5 which equates to a two-way traffic flow of approximately 4 vehicles during peak hour traffic periods with 0% HGV traffic recorded during the survey period. The L56402 is currently used for forestry operations and will be used by HGV's for haulage of construction materials and components to the Wind Farm Site.

The Road Safety Audit (**Appendix 16.4**) for site entrance 1 recommended that the design team should ensure this Site Access Road and junction is removed upon completion of the wind farm. The design team response is that the short section of proposed Site Access Road has been redesigned and will be used exclusively for Wind Turbine deliveries by abnormal load vehicles. All general construction and operational traffic will continue to access the site via the existing N5/L56402 junction. The dedicated Site Access Road has been designed to bypass the existing N5/L56402 junction solely for abnormal load turbine

deliveries. Following completion of Wind Turbine deliveries, the boundary treatments along the N5 and L56402 at site entrances 1 and 1a will be reinstated to prevent ongoing access. This section of Site Access Road will remain in place for the duration of the Project and will only be reopened to facilitate the transport of any replacement Wind Turbine components that may be required in the future and to facilitate Decommissioning.

The Road Safety Audit for site entrance 1a onto the L56402 recommended that the design team should ensure suitable junction visibility is achieved and maintained. The design team have accepted the recommendation and realigned the site entrance to provide unrestricted visibility splays at the junction.



**Plate 16.1 – N5 National Primary Road**



**Plate 16.2 – L56402**

#### **16.2.6.2 Site Entrances 2, 3 and 5**

Site entrances 2, 3 and 5 will be constructed on the L1217 local road (**Plate 16.3**). Site entrance 2 will be a new entrance and site entrances 3 and 5 will be constructed at existing forestry entrances which will be upgraded for construction and Wind Turbine delivery traffic. The L1217 runs between the R361 regional road at Frenchpark to the L1216. The L1217 is typically a 3.0m wide single carriageways with grass verges and has a 60km/h speed limit classification. The L1217 local road will be used by wind farm construction, operations and Decommissioning traffic to access the Project. Existing traffic volumes on the L1217 are calculated from the classified traffic counts carried out by JOD on 12th December 2025 at the L1216 / L5601 junction. Using the methodology from TII publication PE-PAG-02039 to calculate the AADT from short period traffic counts, the resulting AADT on the L1217 is calculated from the recorded traffic counts. The L1217 local road has an AADT of 128 vehicles at its junction with the L5601 which equates to a two-way traffic flow of approximately 9 vehicles during peak hour traffic periods with 0% HGV traffic recorded during the survey period. The L1217 is currently used for forestry operations and will be used by HGV's for haulage of construction materials and components to the Wind Farm Site.

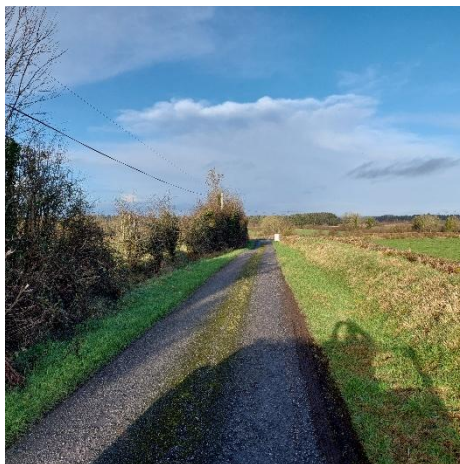
The Road Safety Audit did not include specific issues for site entrances 2, 3 and 5. The design team have accepted the general recommendation of the audit relating to drainage, access road gradients, turbine delivery over-run areas, fencing and gates.



**Plate 16.3: L1217**

#### **16.2.6.3 Site Entrances 4**

Site entrance 4 on the L56421 will be a new entrance constructed to access Wind Turbines T3 to T11 of the Project. Access to site entrance 4 will be from the new N5 / L5642 priority junction using the L5642 and L56421 local roads. The L5642 (**Plate 16.4**) and L56421 (**Plate 16.5**) local roads are typically 3.0m wide single carriageways with grass verges and have a 60km/h speed limit classification. The L5642 and L56421 local roads will be used by wind farm construction, operations and Decommissioning traffic to access the Project.



**Plate 16.4 – L5642**



**Plate 16.5 – L56421**

Details of the road network for Grid Connection works are given in **Section 16.2.8** of this report and in the Traffic Management Plan, **Appendix 16.2**. Details of the road network and

enabling works for the delivery of Wind Turbine components are given in **Section 16.2.9** of this report and in the Turbine Delivery Haul Route Assessment, **Appendix 16.3**.

**16.2.7 The Road Safety Audit for site entrance 4 onto the L56421 recommended that the design team should redesign the junction such that the service road is perpendicular with the public road. The design team have accepted the recommendation and realigned the site entrance junction with the L65421. Project Entrance Works**

The location of the five site entrances to the Project are shown on **Figure 16.2**. A detailed description of the Project site entrances and works on the public road network is given in the TMP in **Appendix 16.2**. The works will include:

Site Entrance 1 and Site Entrance 1a

- Construction of a site entrance (site entrance 1) on the existing N5 to accommodate the swept path and wheel loading from abnormal load vehicles delivering to Wind Turbines T1 and T2.
- Construction of a site entrance (site entrance 1a) onto the L56402 local road to allow abnormal load vehicles to access the L56402 delivering to Wind Turbines T1 and T2. Site entrance 1 and site entrance 1a will allow abnormal vehicles to bypass the existing N5 / L56402 junction.
- Trimming of boundary and verge vegetation for visibility at both entrances.
- Installation of all associated gates, fencing, drainage and signage.
- Reinstatement of N5 and L56402 boundaries at site entrance 1 and site entrance 1a following delivery of Wind Turbine components. Following delivery, site entrance 1 and site entrance 1a will be closed off and the public road boundaries reinstated. The site entrances and link road will remain in place for the lifetime of the Project and will only be re-opened to allow for the delivery of replacement turbine components and to facilitate Decommissioning.
- Full details of site entrance 1 and site entrance 1a are shown on Planning Drawing 6575-JOD-CGWF-XX-DR-C-0215.

Site Entrance 2

- Construction of a new site entrance onto the L1217 to facilitate maintenance traffic.
- Trimming of boundary and verge vegetation for visibility at entrance.
- Installation of all associated gates, fencing, drainage and signage.
- Full details of site entrance 2 are shown on Planning Drawing 6575-JOD-CGWF-XX-DR-C-0216.

### Site Entrance 3

- Upgrading of existing forestry entrance on the L1217 to accommodate construction and maintenance HGV Vehicles.
- Construction of a temporary overrun area at the site entrance to accommodate the swept path of abnormal load vehicles delivering Wind Turbine components to Wind Turbines T8, T9, T10, & T11.
- Trimming of boundary and verge vegetation for visibility at entrance.
- Installation of all associated gates, fencing, drainage and signage.
- Full details of site entrance 3 are shown on Planning Drawing 6575-JOD-CGWF-XX-DR-C-0217.

### Site Entrance 4

- Construction of a new site entrance onto the L56421 to accommodate construction and maintenance HGV Vehicles.
- Trimming of boundary and verge vegetation for visibility at entrance.
- Installation of all associated gates, fencing, drainage and signage.
- Full details of site entrance 4 are shown on Planning Drawing 6575-JOD-CGWF-XX-DR-C-0218.

### Site Entrance 5

- Upgrading of existing forestry entrance on the L1217 to accommodate construction and maintenance HGV Vehicles.
- Construction of a overrun area at the site entrance to accommodate the swept path of abnormal load vehicles delivering Wind Turbine components.
- Trimming of boundary and verge vegetation for visibility at entrance.
- Installation of all associated gates, fencing, drainage and signage.
- Full details of site entrance 5 are shown on Planning Drawing 6575-JOD-CGWF-XX-DR-C-0219.

## 16.2.8 Grid Connection Works

The location of the Grid Connection is shown on **Figure 16.3**. The overall length of the Grid Connection between the Onsite Substation and the existing Flagford 220kV substation is c.17.5km with c.16.8km located within the public road network. A detailed description of the Grid Connection works on the public road network is given in Section 4 and Appendix A of the TMP **Appendix 16.2**. the Grid Connection works will include:

- L1217 - 110kV cable trench in public road.

- 5 no. Joint bays in public road (Joint bays 2, 3, 4, 5, & 6)
- Stream crossing – directional drilling
  
- L1216 - 110kV cable trench in public road.
  - Stream crossing
  
- L5650 - 110kV cable trench in public road.
  - 2 no. Joint bays in public road (Joint bays 7 & 8)
  - Stream crossing
  
- N61 (crossing) - 110kV cable trench in public road.
  
- L6019 - 110kV cable trench in public road.
  - 5 no. Joint bays in public road (Joint bays 9, 10, 11, 12, & 13)
  - Stream crossing
  
- L1400 (crossing) - 110kV cable trench in public road.
  
- L1403 - 110kV cable trench in public road.
  
- L6001 - 110kV cable trench in public road.
  - 6 no. Joint bays in public road (Joint bays 14, 15, 16, 17, 18, & 19)
  - Stream crossing
  
- L6000 (crossing) - 110kV cable trench in public road.
  
- R368 - 110kV cable trench in public road.
  - 4 no. Joint bays in public road (Joint bays 20, 21, 22, & 23)
  - Stream crossing – directional drilling.
  - Stream crossing.
  
- L1034 - 110kV cable trench in public road.
  - Stream crossing – directional drilling.

### 16.2.9 Internal Cabling Works

The location of the Internal Cabling is shown on **Figure 16.4**. The overall length of the Internal Cabling within the public road network is c.4.9km. A detailed description of the Internal Cabling works on the public road network is given in Section 4 and Appendix A of the TMP **Appendix 16.2**. the Internal Cabling works will include:

- L1217 – 20 / 33kV cable trench in public road.
  - Stream crossing – directional drilling.
  - 4 no. Joint bays in public road
  
- L5601 (crossing) - 20 / 33kV cable trench in public road.

#### 16.2.10 Turbine Delivery Route and Enabling Works

The Wind Turbine components for the Project will be shipped to the Port of Galway. The Wind Turbine components will be transported on the public road network using abnormal load vehicles between the Port of Galway and the Project site entrances on the existing N5 (site entrance 1) and on the L56421 via the realigned N5 (site entrance 4). The proposed TDRs are shown on **Figure 16.5**. Delivery vehicles will use the following road network to access the Wind Farm Site from the Port of Galway,

- Exit from Port of Galway onto Dock Street – Galway City Council
- Lough Atalia Road – Galway City Council
- R339 – Galway City Council
- R336 – Galway City Council
- N83 national secondary road – Galway City Council / Galway County Council / Transport Infrastructure Ireland
- N17 national primary road –Galway County Council / Transport Infrastructure Ireland
- N17 national primary road –Mayo County Council / Transport Infrastructure Ireland
- N5 national primary road –Mayo County Council / Transport Infrastructure Ireland
- N5 - Roscommon County Council / Transport Infrastructure Ireland
- L1217 - Roscommon County Council / Transport Infrastructure Ireland
- L5642 - Roscommon County Council / Transport Infrastructure Ireland
- L56421 - Roscommon County Council / Transport Infrastructure Ireland

A detailed description of the Turbine Delivery Route and enabling works on the public road network is given in the Swept Path Analysis **Appendix 16.3**, the works will include:

- Galway Docks - Parking restrictions in Galway Port car park.
- Lough Atalia Road / R339 College Rd Junction - Contraflow at junction.
- R338 / R339 Junction - Contraflow at junction. Bollards to be removed from central island

- R339 / L5034 Junction - Traffic lights to be altered to allow temporary removal during transportation of Wind Turbine components. Lighting Columns to be relocated / modified for temporary removal. Pole to be relocated. Existing hedge to be trimmed.
- L5034 / R336 Junction - Lighting column on inside of bend to be relocated / modified for temporary removal during transportation. Temporary loadbearing area to be constructed on inside of bend. Vegetation to be trimmed for load oversail
- N17 / N83 Roundabout Junction, Tuam - Lighting Columns to be relocated / modified for temporary removal. Signs on splitter island and verge to be relocated / modified for temporary removal. Vegetation to be trimmed for load oversail
- N17 / N83 Roundabout Junction, Tuam (North) - Lighting Column to be relocated / modified for temporary removal. Signs on splitter islands and verge to be relocated / modified for temporary removal.
- N17 Milltown - Signs and bollards to be removed from central islands at two locations.
- N17 Ballindine - Signs and bollards to be removed from central islands at four locations. Bollards to be removed from central islands at two locations.
- N17 / N5 Roundabout, Charlestown - Temporary road widening in verge. Footpath strengthening. Lighting Columns at two locations to be relocated / modified for temporary removal. Signs on splitter islands at two locations to be relocated / modified for temporary removal. Vegetation to be trimmed for load oversail
- N5 Junction Charlestown - Flexible bollards to be removed from N5 and slip road during transportation. Lighting Column to be relocated / modified for temporary removal. Signs on splitter island and verge to be relocated / modified for temporary removal. Vegetation to be trimmed for load oversail. Oversail in third party land.
- Existing N5 / Realigned N5 Tie-in west of Frenchpark - Construction of an abnormal load delivery access road to allow abnormal load vehicles to access the redundant section of the N5 leading to Frenchpark from the realigned N5.
- Existing N5 - Construction of a new site entrance to access Wind Turbines T1 and T2
- Realigned N5 / L5642 Junction - Road widening at junction for abnormal load vehicles. Junction to be clear of obstructions to allow abnormal load vehicle oversail
- L4562 - Road widening in third party lands. Oversail in third party lands.
- L45621 - Road widening in third party lands. Oversail in third party lands, Construction of a new site entrance to access Wind Turbines T3 to T11)
- L1217 - Construction of three new site entrances. Road improvement works in accordance with turbine suppliers requirements

### 16.2.11 Construction Haul Route for General HGV and LGV Traffic

All HGV traffic associated with the construction of the wind farm infrastructure will use the five site entrances and road network shown in **Figure 16.2**.

Site entrance 1 on the existing N5 and site entrance 1a on the L56402 will be used by abnormal load vehicles during Wind Turbine delivery to Wind Turbines T1 and T2, site entrances 1 and 1a will remain closed when not in use for abnormal load deliveries. General construction traffic will use the existing N5 / L56402 priority junction and the L56402 local road to access the Wind Farm Site.

Site entrance 2 on the L56421 will be used during the construction, operation and Decommissioning phases of the Project. The site entrance will not be used for Wind Turbine delivery. Site entrance 2 will be linked to the existing N5 at the N5 / L56402 junction via the L56402 and the Site Access Road network.

Site entrance 3 on the L56421 will be used to access Wind Turbines T3 to T11 during the construction, Wind Turbine delivery, operation and Decommissioning phases of the Project. Access to site entrance 3 during Wind Turbine delivery will be via the site entrance 4.

Site entrance 4 on the L56421 will be used to access Wind Turbines T3 to T11 during the construction, Wind Turbine delivery, operation and Decommissioning phases of the Project. Access to site entrance 4 will be from the new N5 / L5642 priority junction using the L5642 and L56421 local roads.

Site entrance 5 on the L56421 will be used to access Wind Turbines T8 to T11 during the construction, Wind Turbine delivery, operation and Decommissioning phases of the Project. Access to site entrance 5 during Wind Turbine delivery will be via the site entrance 3.

### 16.2.12 Construction Haul Route for Grid Connection and Internal Cabling HGV Traffic

All HGV traffic associated with the construction of the Grid Connection between the Onsite Substation and the 220kV substation at Flagford will follow the Grid Connection Route and associated diversions to access the works. The route of the Grid Connection is shown in **Figure 16.3**, details of diversions during the Grid Connection works are given in the Traffic Management Plan **Appendix 16.2**. All HGV traffic associated with the construction of the Internal cabling network will follow the Internal cabling route and associated diversions to access the works. The route of the Internal cabling connection is shown in **Figure 16.4**,

details of diversions during Internal cabling connection works are given in the Traffic Management Plan **Appendix 16.2**

### 16.2.13 Haul Routes for Material Suppliers

The construction of the Project will require specific grades of granular material to be delivered to the Wind Farm Site for the structural layers of Site Access Roads, fill under Turbine Foundations and Turbine Hardstands. The construction of Turbine Foundations will require imported ready mix concrete and reinforcing steel. The construction of the Onsite Substation will require delivery of general building materials such as concrete blocks. Precast concrete products, ready mix concrete and plastic ducting will be required for the Grid Connection. The materials will be sourced from local quarries in the area such as those show on **Figure 16.6**. All construction materials will be delivered to the Wind Farm Site via the site entrances shown on **Figure 16.2** using the existing N5 and the realigned N5 as the primary access routes.



**Figure 16.6: Concrete and Aggregate Suppliers**

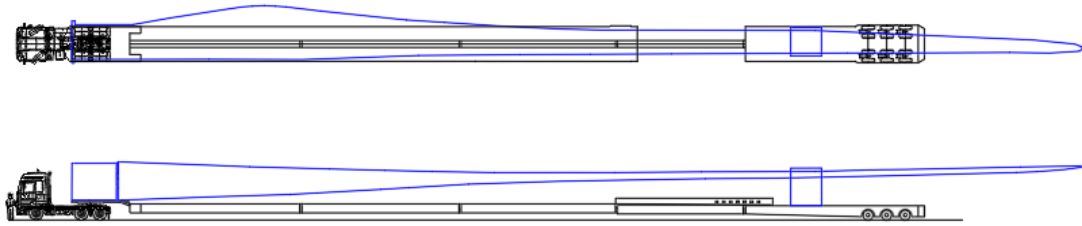
### 16.2.14 Haul Routes for the Removal of Material from Site

The construction of the Project will require the felling of commercial forestry prior to the commencement of the works. Felled timber will be removed using the existing road network

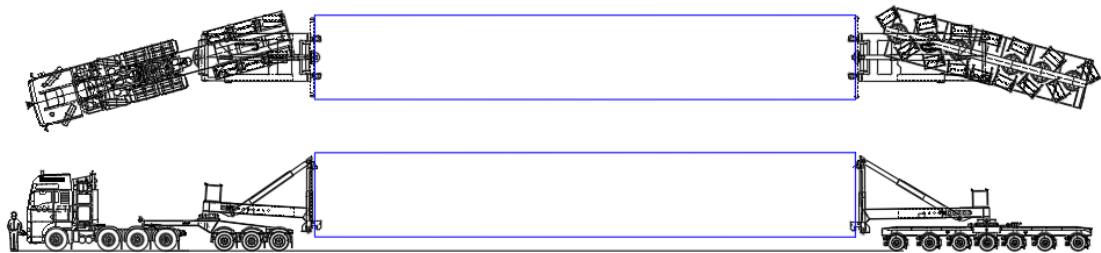
for commercial forestry operations. Topsoil and unsuitable subsoil material resulting from site clearance will be processed / graded on site and incorporated into non-structural elements of the design and used for site landscaping, suitable subsoil material resulting from site excavations will be incorporated into structural elements of the works. Surplus topsoil and subsoil will be deposited at spoil deposition locations throughout the Wind Farm Site. Volumes of excavated material are detailed in the Project spoil management plan in the CEMP. The construction of enabling works for Wind Turbine delivery on the public road network and the Grid Connection works will result in waste granular and asphalt material which will be transported for recycling / disposal at a licenced waste facility. Surplus topsoil and subsoil will be notified under Article 27 of the European Communities (Waste Directive) Regulations, 2011 or treated to comply with Article 28 if practicable. Any materials containing invasive species will be appropriately managed and sent to authorised facilities.

#### **16.2.15 Delivery Vehicle Specification**

Delivery of road construction materials, concrete for Turbine Foundations, building materials, drainage, ducting and cables will be carried out using standard heavy goods vehicles (HGV). Delivery of Wind Turbine components will be carried out using specialist abnormal load vehicles. Turbine blades will be delivered on an extendable semi-trailer, one per trailer. Each Wind Turbine blade will be 80.5m long and weigh 29.3 tonnes, approximately 20m of the blade will overhang the rear of the trailer. Following delivery to the Wind Farm Site, the extendable trailer will be retracted to normal size for the return trip. Each Wind Turbine tower will be delivered to site in sections using tower clamps and extendable semi-trailers, the tower sections range in length from 31.43m to 17.17m with a maximum width of 4.3m. Wind Turbine towers weigh between 54.6 and 83.5 tonnes. The Wind Turbine nacelle measures (L)12.77m x (w)4.29m x (h)4.0m and weighs 73.42 tonnes. The Wind Turbine drivetrain measures (L)6.75m x (w)3.41m x (h)3.41m and weighs 83.85 tonnes. The Wind Turbine rotor hub measures (L)4.82m x (w)4.38m x (h)4.00m and weighs 56.33 tonnes. All material deliveries will have a maximum axle load of 12 tonnes per axle. The main crane for Wind Turbine erection will have a maximum axle loading of 12 tonnes per axle and a maximum total weight of 100 tonnes. Vehicles delivering counterweights for the crane will have a maximum axle loading of up to 12 tonnes per axle. Vehicle weights do not exceed 180 tonnes and structures on the haul route with spans not exceeding 50m are not subject to a Category 3 structural assessment as defined in Section 1.3 of DN-STR-03001 published by TII for exceptional abnormal loads. Typical abnormal load vehicles used for the transportation of Wind Turbine components are shown below. The transport vehicles used for transportation of components may differ from those shown below depending on the haulage contractor's preferences.



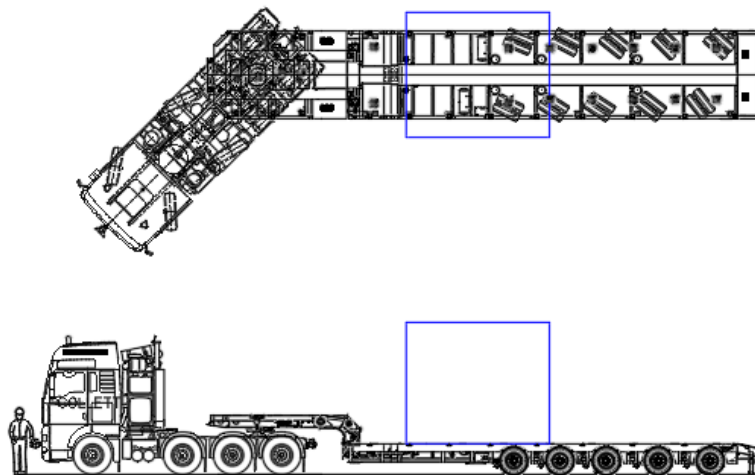
**Typical Wind Turbine Blade Transport Vehicle**



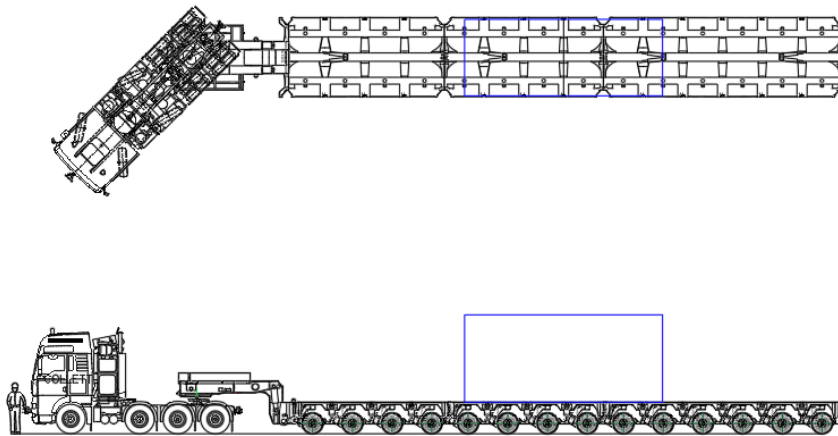
**Typical Wind Turbine Tower Transport Vehicle**



**Typical Nacelle Transport Vehicle**



**Typical Hub Transport Vehicle**



### Typical Drivetrain Transport Vehicle

#### 16.2.16 Evaluation of Potential Effects

The baseline environment is described in **Section 16.2.6** of this report and in the TTA in **Appendix 16.1**. Baseline traffic volumes have been recorded during a site visit on 12<sup>th</sup> December 2025 to record traffic volumes and turning movements of vehicles at the N5 / L56402 junction, L1217 / L5601 junction, N61 / L5650 / L6019 junction and the R368 / L6001 junction. Traffic counts at the N5 / L56402 junction and the L1217 / L5601 junction were carried out between 07.30 and 13.00am to capture peak traffic flows during the morning period at junctions which will be used by general construction traffic. Traffic counts at the N61 / L5650 / L6019 junction and the R368 / L6001 junction were carried out between 14.00 and 16.00 to determine traffic volumes on the road network used during the construction of the Grid Connection. The traffic counts were carried out to determine baseline traffic volumes in the area and formed the basis of the TTA in **Appendix 16.1**. The traffic counts were supplemented using data from the TII automatic traffic counter located to the east of Frenchpark village, between Frenchpark and site entrance 1. The locations of the traffic counts were chosen as the selected junctions will be used by peak wind farm traffic to access the Project. The location of the traffic counts are shown on **Figure 16.1**.

A traffic analysis was carried out at the N5 / L56402 junction and L1217 / L5601 junction to determine if capacity problems exist at the primary junctions in the vicinity of the Project.

Future year traffic assessments with TII factors for forecast traffic growth on the public road network were then carried out at the N5 / L56402 junction, L1217 / L5601 junction and at the realigned N5 junction with the L5642 junction using the following scenarios to determine if capacity problems would arise at the junctions with and without the Project in place.

#### Do Nothing scenarios, Likely Evolution of the Baseline

- 2027 Projected traffic flows without the Project (planning approval period)
- 2037 Projected traffic flows without the Project (planning permitted period / wind farm construction (worst case scenario for traffic growth on the public road network allowing for a 10-year planning permission))
- 2072 Projected traffic flows without the Project (End of 35-year operations period)

#### Do something scenarios

- 2037 Projected traffic flows with the Project (wind farm construction traffic (worst case scenario for traffic growth on the public road network allowing for a 10-year planning permission))
- 2072 Projected traffic flows with the Project (wind farm Decommissioning traffic)

TII forecasts for future traffic growth on the public road network are published in PE-PAG-02017 "Travel Demand Projections". The growth factors are applied to the 2025 baseline traffic flows to approximate the traffic flows on the public road network in the future assuming the Project is granted planning permission in 2027, 10-year planning grant and construction in 2037 and a 35-year operational period and Decommissioning in 2072. The growth factors for the relevant assessment years using the central-growth scenario for County Roscommon are shown in **Table 16.3**.

**Table 16.3: Traffic Growth Factors for Public Roads**

Year	LGV Growth Factor	HGV Growth Factor
2025	1.000	1.000
2027	1.022	1.058
2037	1.070	1.245
2072	1.157	2.245

A traffic assessment was carried out with the Project under construction in 2037 with additional traffic from unrelated planned and consented developments to determine if capacity problems would arise at the junctions due to combined traffic volumes in the vicinity of the Project.

The data from the TTA in **Appendix 16.1** was then used to identify and categorise potential effects likely to affect the road network resulting from the construction, operation and Decommissioning of the Project.

**16.2.17 Accident Statistics**

Mapped statistics for accident data at the site entrances to the Project were not available from the RSA website in January 2026. Data published by TII in the national road risk rating 20 to 22 shows that the existing N5 at site entrance 1 has a twice below benchmark risk rating. The existing N5 is being realigned at site entrance 1 which will reduce traffic volumes at this location which is currently within a 60km/h speed limit zone. Proposed site entrances 2, 3, 4 and 5 are located on lightly trafficked local class roads.

**16.2.18 Description of Effects**

The description of effects arising from traffic associated with the Project are given in Table 3.4 of the EPA Guidelines 2022 and are categorised as follows in **Table 16.4**.

**Table 16.4: Description of Effects**

EPA Guidelines Table 3.4 Descriptions of Effects	
<p><b>Quality of Effects</b> It is important to inform the nonspecialist reader whether an effect is positive, negative or neutral.</p>	<p><b>Positive Effects</b> A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).</p>
	<p><b>Neutral Effects</b> No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.</p>
	<p><b>Negative/Adverse Effects</b> A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).</p>
<p><b>Describing the Significance of Effects</b> 'Significance' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful (also see Determining Significance).</p>	<p><b>Imperceptible</b> An effect capable of measurement but without significant consequences.</p>
	<p><b>Not Significant</b> An effect which causes noticeable changes in the character of the environment but without significant consequences.</p>
	<p><b>Slight Effects</b> An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.</p>
	<p><b>Moderate Effects</b> An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.</p>
	<p><b>Significant Effects</b> An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.</p>
	<p><b>Very Significant</b> An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.</p>
	<p><b>Profound Effects</b> An effect which obliterates sensitive characteristics.</p>

<b>EPA Guidelines Table 3.4 Descriptions of Effects</b>	
<b>Describing the Extent and Context of Effects</b> Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly or increasingly experienced.	<b>Extent</b> Describe the size of the area, the number of sites and the proportion of a population affected by an effect.
	<b>Context</b> Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
<b>Describing the Probability of Effects</b> Descriptions of effects should establish how likely it is that the predicted effects will occur so that the CA can take a view of the balance of risk over advantage when making a decision.	<b>Likely Effects</b> The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	<b>Unlikely Effects</b> The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
<b>Describing the Duration and Frequency of Effects</b> 'Duration' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.	<b>Momentary Effects</b> Effects lasting from seconds to minutes.
	<b>Brief Effects</b> Effects lasting less than a day.
	<b>Temporary Effects</b> Effects lasting less than a year.
	<b>Short-term Effects</b> Effects lasting one to seven years.
	<b>Medium-term Effects</b> Effects lasting seven to fifteen years.
	<b>Long-term Effects</b> Effects lasting fifteen to sixty years.
	<b>Permanent Effects</b> Effects lasting over sixty years.
	<b>Reversible Effects</b> Effects that can be undone, for example through remediation or restoration.
	<b>Frequency of Effects</b> Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).
	<b>Indirect Effects (a.k.a. Secondary or Off-site Effects)</b> Effects on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
<b>Describing the Types of Effects</b>	<b>Cumulative Effects</b> The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
	<b>'Do-nothing Effects'</b> The environment as it would be in the future should the subject project not be carried out.
	<b>'Worst-case' Effects</b> The effects arising from a project in the case where mitigation measures substantially fail.
	<b>Indeterminable Effects</b> When the full consequences of a change in the environment cannot be described.
	<b>Irreversible Effects</b> When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.

EPA Guidelines Table 3.4 Descriptions of Effects	
	<p><b>Residual Effects</b> The degree of environmental change that will occur after the proposed mitigation measures have taken effect.</p>
	<p><b>Synergistic Effects</b> Where the resultant effect is of greater significance than the sum of its constituents (e.g. combination of SOx and NOx to produce smog).</p>

**16.2.19 Assessing Receptor Sensitivity**

The sensitivity of the transport infrastructure has been identified utilising the criteria outlined in the Traffic Management Guidelines published by the Department of Transport and TII publication DN-GEO-03031, Rural Road Link Design. These criteria are outlined in **Table 16.5** below.

**Table 16.5: Receptor Sensitivity**

Sensitivity of Receptor	Resource	Receptor
High	<p>Local Tertiary and Local Secondary rural roads</p> <p>Local urban Collector and Access roads</p> <p>Where the road is a minor rural road, not constructed to accommodate frequent use by heavy goods vehicle (HGVs). Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.</p>	<p>Where a location is a large rural settlement containing a high number of community and public services and facilities.</p> <p>Urban roads for local journeys and provide links to major routes. Many such roads will have residential and commercial access/frontage and there will be significant movements of pedestrians and cyclists</p>
Medium	<p>Local Primary rural, Regional roads and National Secondary Roads</p> <p>District Primary urban roads</p> <p>Roads capable of regular use by HGV traffic. Includes roads where there is some traffic calming or traffic management measures.</p>	<p>Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.</p> <p>These roads provide links between local districts within urban areas. They can have significant movements of buses and cyclists along them (segregated or on-road) and pedestrians crossing them where there are schools, shops, offices and businesses.</p>
Low	<p>National Primary Roads</p> <p>Where the road is constructed to accommodate general and HGV traffic moving between primary destinations.</p>	<p>Where a location is a small rural settlement, few community or public facilities or services.</p>

Sensitivity of Receptor	Resource	Receptor
	Includes roads with little or no traffic calming or traffic management measures.	
Very Low	Motorways and Dual carriageways Where roads have no adjacent settlements.	Where a location includes individual dwellings or scattered settlements with no facilities or residents/workers travelling by foot or by vehicle.

### 16.2.20 Assessing Magnitude of Change

The magnitude of potential impacts has been defined in accordance with the criteria provided in TII Publication PE-PDV-02045, Traffic and Transport Assessment Guidelines and traffic management guidelines published by the Department of Transport. PE-PDV-02045 requires a traffic and transport assessment to be carried out for developments which will generate the following vehicle movements:

- 100 trips in / out combined in the peak hours for the Project.
- Development traffic exceeds 10% of turning movements at junctions with and on National Roads.
- Development traffic exceeds 5% of turning movements at junctions with National Roads if location has potential to become congested or sensitive.

The traffic management guidelines require a traffic assessment for the following criteria:

- Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road.
- Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive.

The assessment of priority road junction and road network capacity is carried out using industry standard TRL traffic modelling software PICADY to model isolated priority junctions as recommended in PE-PDV-02045 section 2.5.2. The software is also used to model pedestrian crossings at junctions to determine levels of service for pedestrians.

Road network and junction capacity is measured in terms of level of service (LOS) thresholds which are based on the queuing delay on each arm of the junction. The transportation LOS system uses the letters A through F, with the following definitions:

- A = Free flow
- B = Reasonably free flow
- C = Stable flow

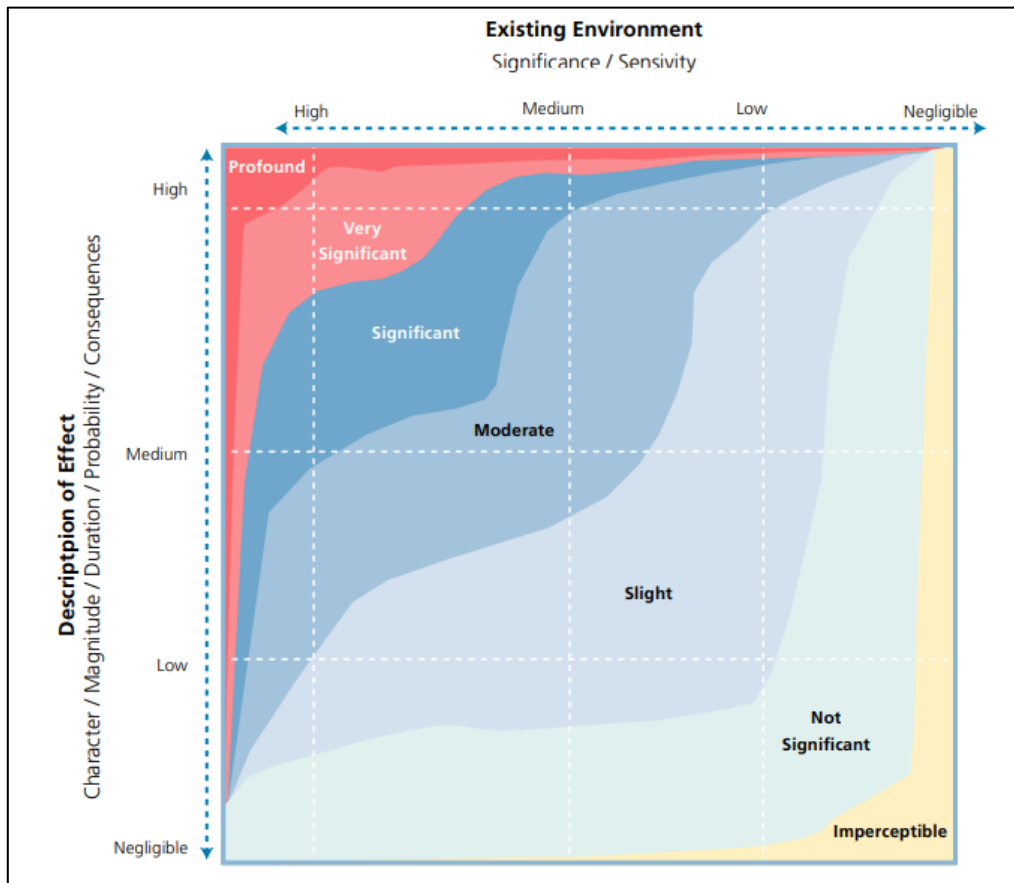
- D = Approaching unstable flow
- E = Unstable flow
- F = Forced or breakdown flow

The magnitude of change (using EPA Guidelines, Figure 3.4 replicated in **Figure 16.7**) based on increased traffic volumes on the public road network is measured in terms of LOS on the network arm as follows.

- High – considerable deterioration – Network arm has exceeded LOS = D (Approaching Unstable Flow) due to increased traffic volumes.
- Medium – readily apparent change in conditions - Network arm has entered LOS = D (Approaching unstable flow) due to increased traffic volumes.
- Low – perceptible change in conditions - Network arm has entered LOS = C (Stable Flow) due to increased traffic volumes.
- Negligible — no discernible change in conditions - Network arm has a LOS = A (Free Flow) / B (Reasonably free flow).

#### **16.2.21 Assessing Significance of Effects**

To determine the overall significance of the effects, the results from the receptor sensitivity and impacts magnitude assessment are correlated and classified using Figure 3.4 of the EPA Guidelines, May 2022 as shown in **Figure 16.7**.



**Figure 16.7: EPA Guidelines 2022, Significance of Effects (Figure 3.4)**

**16.2.22 Sensitive Receptors – Construction Period**

The following sensitive receptors will be impacted by the additional traffic generated by the construction of the Project and by works carried on and adjacent to the public road network as part of the Project. Detailed descriptions of the works locations and traffic management measures are included in the Traffic Management Plan in **Appendix 16.2**. The assessment of sensitive receptors is carried out in **Section 16.3.2** of this report.

**Table 16.6: Sensitive Receptors - Construction**

Receptor	Sensitivity	Reason for inclusion
Frenchpark Village	High	Increased traffic volumes due to construction traffic.
N5 / L56402 Junction	Medium	Increased turning movements due to construction and Wind Turbine delivery traffic.
Realigned N5 / L5642 Junction	Medium	Increased turning movements due to construction and Wind Turbine delivery traffic. Enabling works for Wind Turbine delivery at junction
L1217 / L5601 Junction	High	Increased turning movements due to construction and Wind Turbine delivery traffic.
L5642 / L56421 Junction	High	Increased turning movements due to construction and Wind Turbine delivery traffic.

Receptor	Sensitivity	Reason for inclusion
Existing N5	Low	Increased traffic Volumes due to construction and Wind Turbine delivery traffic. Site entrance construction Enabling works for Wind Turbine delivery at tie-in to realigned N5
Realigned N5	Low	Increased traffic Volumes due to construction and Wind Turbine delivery traffic.
L1217	Medium	Increased traffic Volumes due to construction and Wind Turbine delivery traffic. Internal cabling works Grid Connection works Site entrance construction Road upgrade works
L56402	High	Increased traffic Volumes due to construction traffic.
L5642	Medium	Increased traffic Volumes due to construction and Wind Turbine delivery traffic. Enabling works for Wind Turbine delivery
L56421	High	Increased traffic Volumes due to construction and Wind Turbine delivery traffic. Site entrance construction Enabling works for Wind Turbine delivery
L1216	Medium	Increased traffic volumes, road closure and traffic management during Grid Connection works and traffic diversions
L5650	Medium	Increased traffic volumes, road closure and traffic management during Grid Connection works
N61	Low	Traffic management during Grid Connection works Increased traffic volumes during traffic diversions
L6019	Medium	Increased traffic volumes, road closure and traffic management during Grid Connection works
L1403	Medium	Increased traffic volumes, road closure and traffic management during Grid Connection works. Increased traffic volumes during traffic diversions
L6001	Medium	Increased traffic volumes, road closure and traffic management during Grid Connection works
L6000	Medium	Traffic management during Grid Connection works Increased traffic volumes during traffic diversions
R368	Medium	Increased traffic volumes and traffic management during Grid Connection works Increased traffic volumes during traffic diversions
L1034	Medium	Increased traffic volumes and traffic management during Grid Connection works
R361	Medium	Increased traffic volumes during diversion for Internal cabling works
R370	Medium	Increased traffic volumes during diversion for Internal cabling works
L5601	Medium	Increased traffic volumes during diversion for Internal cabling works and Grid Connection works

Receptor	Sensitivity	Reason for inclusion
L5644	Medium	Increased traffic volumes during diversion for Internal cabling works and Grid Connection works
L1400	Medium	Increased traffic volumes during diversion for Grid Connection works
L6150	Medium	Increased traffic volumes during diversion for Grid Connection works
L60191	High	Increased traffic volumes during diversion for Grid Connection works
L5872	Medium	Increased traffic volumes during diversion for Grid Connection works
L1030	Medium	Increased traffic volumes during diversion for Grid Connection works
Lough Atalia Road	High	Increased traffic volumes and traffic management due to Wind Turbine delivery traffic.
R339	Medium	Enabling works for Wind Turbine delivery. Increased traffic volumes and traffic management due to Wind Turbine delivery traffic.
R336	Medium	Enabling works for Wind Turbine delivery. Increased traffic volumes and traffic management due to Wind Turbine delivery traffic.
N83	Low	Enabling works for Wind Turbine delivery. Increased traffic volumes and traffic management due to Wind Turbine delivery traffic.
N17	Low	Enabling works for Wind Turbine delivery. Increased traffic volumes and traffic management due to Wind Turbine delivery traffic.

### 16.2.23 Sensitive Receptors – Operations Period

The following sensitive receptors will be impacted by the additional traffic generated by the operation of the Project. The assessment of sensitive receptors is carried out in **Section 16.3.2** of this report.

**Table 16.7: Sensitive Receptors - Operation**

Receptor	Sensitivity	Reason for inclusion
Frenchpark Village	High	Increased traffic volumes due to operations traffic.
N5 / L56402 Junction	Medium	Increased traffic volumes due to operations traffic.
Realigned N5 / L5642 Junction	Medium	Increased traffic volumes due to operations traffic.
L1217 / L5601 Junction	High	Increased turning movements due to operations traffic.
L5642 / L56421 Junction	High	Increased turning movements due to operations traffic.
Existing N5	Low	Increased traffic volumes due to operations traffic.

Receptor	Sensitivity	Reason for inclusion
Realigned N5	Low	Increased traffic volumes due to operations traffic.
L1217	Medium	Increased traffic volumes due to operations traffic.
L56402	High	Increased traffic volumes due to operations traffic.
L5642	Medium	Increased traffic volumes due to operations traffic.
L56421	High	Increased traffic volumes due to operations traffic.

#### 16.2.24 Sensitive Receptors – Decommissioning Period

The following sensitive receptors will be impacted by the additional traffic generated by the Decommissioning of the Project and by works carried on and adjacent to the public road network as part of the Project. The assessment of sensitive receptors is carried out in **Section 16.3.2** of this report.

**Table 16.8: Sensitive Receptors - Decommissioning**

Receptor	Sensitivity	Reason for inclusion
Frenchpark Village	High	Increased traffic volumes due to Decommissioning traffic.
N5 / L56402 Junction	Medium	Increased traffic volumes due to Decommissioning traffic.
Realigned N5 / L5642 Junction	Medium	Increased turning movements due to Decommissioning and Wind Turbine removal traffic.
L1217 / L5601 Junction	High	Increased traffic volumes due to Decommissioning traffic.
L5642 / L56421 Junction	High	Increased traffic volumes due to Decommissioning traffic.
Existing N5	Low	Increased traffic volumes due to Decommissioning and Wind Turbine removal traffic. Removal of wind farm site entrance
Realigned N5	Low	Increased traffic volumes due to Decommissioning traffic. Removal of wind farm site entrance
L1217	Medium	Increased traffic volumes due to Decommissioning and Wind Turbine removal traffic.
L56402	High	Increased traffic volumes due to Decommissioning traffic.
L5642	Medium	Increased traffic volumes due to Decommissioning traffic.

Receptor	Sensitivity	Reason for inclusion
L56421	High	Increased traffic volumes due to Decommissioning traffic.

## 16.3 ASSESSMENT OF POTENTIAL EFFECTS

### 16.3.1 Wind Farm Traffic Generation

The estimated timescale for the completion of the construction phase is 18 months, inclusive of all works to Site Access Roads, Onsite Substation and erection and commissioning of Wind Turbines and the Grid Connection works.

The estimated HGV and abnormal load deliveries of materials and Wind Turbine components required to construct the Project, and the Grid Connection are given in **Table 16.9**. It is estimated that during the wind farm construction, an approximate total of 8,983 loads of material and building supplies will be delivered and removed from the Project. The majority of HGV movements to and from the Wind Farm Site and Grid Connection will occur during the first ten months of the construction period and will be associated with Site Access Road construction, Turbine Hardstand construction, Turbine Foundation construction, and Grid Connection construction.

The number of staff on site will vary according to the phase of the construction, peaking at approximately 60 at the height of the construction period. It is expected that the majority of workers will arrive on site in mini-buses and crew vehicles which are used to transport teams of workers from different construction disciplines. Labour vehicle sharing will be actively encouraged to reduce vehicular movements.

It is estimated that 35-40 staff light goods vehicles (LGV) will visit the Wind Farm Site daily during the peak construction period. Parking for staff will be provided within the Temporary Construction Compound and within the works area during Grid Connection and TDR enabling works. No parking will be allowed for construction workers on the public road network in the vicinity of the Wind Farm Site. Additional LGV trips generated by site visitors and staff will occur on a daily basis throughout the construction period.

**Table 16.9: HGV and Abnormal Load Deliveries**

Materials	Quantity	No. Of Deliveries	Timeframe (Months)	Maximum Loads / Day	Vehicle Type
Site establishment (plant, offices, welfare facilities)		30	1	5	OGV2
Site entrance construction - 5 No.	1,250m3	125	1	10	OGV2

Materials	Quantity	No. Of Deliveries	Timeframe (Months)	Maximum Loads / Day	Vehicle Type
Fencing	200m	10	1	5	OGV2
Temporary Construction Compound	700m <sup>3</sup>	70	1	10	OGV2
Construction of Site Access Roads	16,000m <sup>3</sup>	1,600	2-7	10	OGV2
Site drainage	-	20	2-5	5	OGV2
Onsite Substation buildings	-	50	4-9	5	OGV2
Onsite Substation compound construction	400m <sup>3</sup>	40	4	10	OGV2
Onsite Substation electrical works	-	20	10-14	5	OGV2
Onsite Substation commissioning	-	5	15-16	1	
Construction of Turbine Hardstands	27,300m <sup>3</sup>	2,730	2-10	10	OGV2
Construction of Turbine Foundations (950m <sup>3</sup> Per Base)	10,550m <sup>3</sup>	1318	2-10	120	OGV2
Internal Cabling installation	7,330m	100	9-12	5	OGV2
Internal Cabling installation in public road (2,925m <sup>3</sup> excavation) (2,925m <sup>3</sup> reinstatement)	4,870m	585	9-12	12	OGV2
Wind Turbine delivery and erection (turbine delivery)	11 Turbines	110	11-16	3	OGV2
Wind Turbine delivery and erection (cranes)	-	10	11	5	OGV2
Grid Connection (17.5km) (10,500m <sup>3</sup> excavation) (10,500m <sup>3</sup> reinstatement)	-	2,100	10-16	12	OGV2
Energisation	-	5	16	2	OGV1
Wind Turbine commissioning	-	5	16-18	2	OGV1
Site restoration	-	50	16-18	5	OGV1 / OGV2
Total		8,983			

A schedule of maximum predicted daily traffic movements which may occur on the public road network due to the combined site activities over the 18-month construction period is shown in **Table 16.10**.

**Table 16.10: HGV and Abnormal Load Deliveries to Site During Construction**

Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Site establishment	5																	
Site entrance construction -5No.	10																	
Fencing	5																	
Temporary Construction Compound	10																	
Construction of Site Access Roads		10	10	10	10	10	10											
Site drainage		5	5	5	5													
Onsite Substation buildings				5	5	5	5	5	5									
Onsite Substation compound construction				10														
Onsite Substation electrical works										5	5	5	5	5				
Onsite Substation commissioning															1	1		
Construction of Turbine Hardstands		10	10	10	10	10	10	10	10	10								
Construction of Turbine Foundations (950m3 Per Base)		120	120	120	120	120	120	120	120	120								
Internal Cabling installation									5	5	5	5						
Internal Cabling installation in public road									12	12	12	12						
Wind Turbine delivery and erection (turbine components)											3	3	3	3	3	3		
Wind Turbine delivery and rection (crane)											5							
Grid Connection										12	12	12	12	12	12	12		
Energisation																2		
Wind Turbine commissioning																	2	2
Site restoration																	5	5
Total	30	145	145	160	150	145	145	135	152	164	42	37	20	20	16	18	7	7

The first month of the wind farm construction period will involve deliveries of materials for site access works, Temporary Construction Compound, site offices and site security. This period will include deliveries of fencing materials for site boundaries and compounds, temporary fencing to protect trees, hedges and ecological buffer zones, road construction materials for Temporary Construction Compound and site entrance, and delivery of temporary site office units. It is anticipated that a maximum of 30 HGV vehicles (60 HGV movements) will visit the Wind Farm Site and Grid Connection works on a daily basis during the first month of the contract.

Months 2 to 10 will involve deliveries of materials for Turbine Hardstands, Turbine Foundations, Site Access Roads, Onsite Substation and Internal Cabling, this period will include deliveries of road construction materials for Site Access Roads and Turbine Hardstands, ready mix concrete and steel reinforcement for Turbine Foundations. It is anticipated that a maximum of 164 HGV vehicles (328 HGV movements) will visit the Wind Farm Site on a daily basis during the period (when works overlap with the Grid Connection). The peak traffic will occur on 11 days during the 9 month period between months 2 to 10 when Turbine Foundations are poured. Concrete pours for individual Turbine Foundations will generate 120 HGV arrivals (240 HGV movements).

Months 10 to 18 will involve HGV movements for works associated with Wind Turbine delivery, erection, & commissioning, electrical works, Grid Connection works, road reinstatement, road surfacing, site landscaping and the removal of temporary works materials such as offices and fencing from site. It is anticipated that a maximum of 42 HGV vehicles (82 HGV movements) will visit the Wind Farm Site on a daily basis during this period. Full details of the timeframe for each section of the Grid Connection works and Internal Cabling connection on the public road network together with traffic management systems and details of road closures / diversions are included in **Appendix 16.2**.

Based on the indicative timetable outlined above the peak times for HGV deliveries to the Wind Farm Site will be during months 2 to 10 (44 daily HGV deliveries + 120 additional deliveries during concrete pours which will take place on nine separate days during this period). Project traffic will be distributed throughout the day with morning, afternoon and evening peaks. The distribution of Project traffic is shown in **Table 16.11** during the construction of Turbine Foundations.

**Table 16.11: Development Traffic Profile**

Time	Arrivals		Departures	
	HGV	LGV	HGV	LGV
06.00 – 07.00		30		
07.00 – 08.00	20	10	20	
08.00 – 09.00	15	5	15	2
09.00 – 10.00	16	2	16	2
10.00 – 11.00	15		15	
11.00 – 12.00	18		18	
12.00 – 13.00	15		15	

Time	Arrivals		Departures	
	HGV	LGV	HGV	LGV
13.00 – 14.00	10	5	10	5
14.00 – 15.00	15	1	15	1
15.00 – 16.00	15		15	
16.00 – 17.00	10		10	
17.00 – 18.00	10	2	10	5
18.00 – 19.00	5		5	10
19.00 – 20.00				30

### 16.3.2 Magnitude and Significance of Effects

The magnitude and significance of effects and their impact on public road users at works locations on the public road network is analysed in **Table 16.13**. The impact of the effects is based on the Traffic and Transport Assessment in **Appendix 16.1** which gives details of traffic analysis at junctions in the vicinity of the Wind Farm Site and the Traffic Management Plan in **Appendix 16.2** which gives details of works duration, traffic management, road closures and diversions. A summary of the traffic analysis from **Appendix 16.1** is shown in **Figure 16.8** for the N5 / L56402 Junction, **Figure 16.9** for the Realigned N5 / L5642 and **Figure 16.10** for the L1217 / L5601 Junction. The results of the analysis show that the junctions will not exceed the 0.85 ratio of flow to capacity (RFC) and will continue to operate with reserve capacity beyond 2075. The ratio of flow to capacity (RFC) is calculated from Junctions 9 PICADY software. An RFC value of 1.0 indicates that the junction is operating at full capacity with a value of 0.85 considered to be the maximum RFC value after which the junction will begin to experience some capacity issues. Key metrics for the assessment of sensitive receptors in the vicinity of the Wind Farm Site during the construction period are shown in **Table 16.12**.



Figure 16.8: Traffic Analysis Summary for the N5 / L56402 Junction

AM									
	Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
<b>2027 - Forecast Traffic Flows (No Project) - Planning Grant</b>									
Stream B-AC	D2	0.0	~1	0.00	0.00	A	0.05	A	460 %
Stream C-AB		0.0	0.7	6.62	0.01	A			
<b>2027 - Forecast Traffic Flows (No Project) - Planning Period</b>									
Stream B-AC	D3	0.0	~1	0.00	0.00	A	0.05	A	416 %
Stream C-AB		0.0	0.7	6.65	0.01	A			
<b>2072 - Forecast Traffic Flows (No Project) - Operational Lifespan</b>									
Stream B-AC	D4	0.0	0.8	16.17	0.03	C	0.26	A	119 %
Stream C-AB		0.0	0.7	6.82	0.01	A			
<b>2037 - Forecast Traffic Flows - Project Construction Traffic</b>									
Stream B-AC	D5	0.3	0.9	19.36	0.12	C	1.69	A	93 %
Stream C-AB		0.2	1.2	6.84	0.07	A			
<b>2072 - Forecast Traffic Flows - Project Decommissioning Traffic</b>									
Stream B-AC	D6	0.3	1.0	21.77	0.15	C	1.60	A	56 %
Stream C-AB		0.2	1.6	6.78	0.09	A			
<b>2037 - Forecast Traffic Flows - Project Construction Traffic - Additional Developments</b>									
Stream B-AC	D7	0.6	2.8	23.29	0.24	C	3.24	A	46 %
Stream C-AB		0.3	1.2	7.23	0.14	A			
<b>2072 - Forecast Traffic Flows - Project Decommissioning Traffic - Additional Developments</b>									
Stream B-AC	D8	<b>0.7</b>	<b>2.8</b>	<b>26.87</b>	<b>0.27</b>	<b>D</b>	<b>3.12</b>	<b>A</b>	<b>24 %</b>
Stream C-AB		<b>0.5</b>	<b>1.7</b>	<b>7.18</b>	<b>0.16</b>	<b>A</b>			

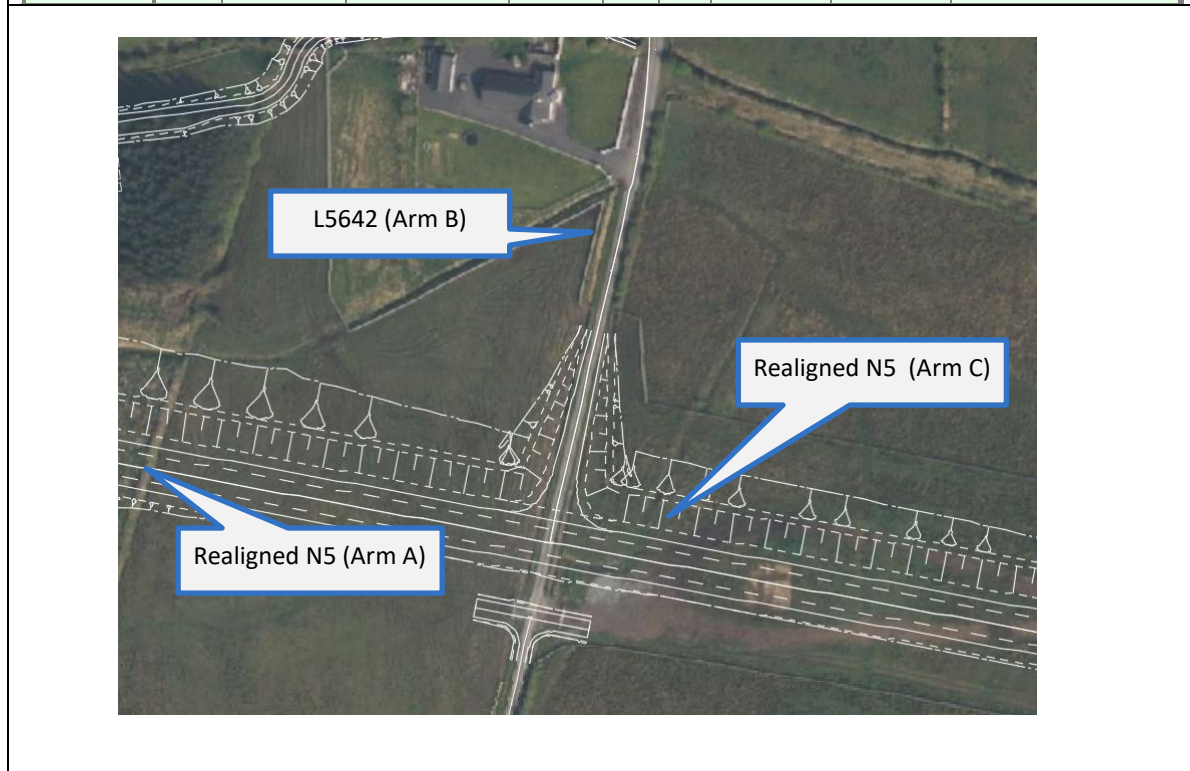


Figure 16.9: Traffic Analysis Summary for the N5 / L5642 Junction

AM					
Set ID	Queue (PCU)	Delay (s)	RFC	LOS	
<b>2025 Existing Traffic Flows</b>					
Stream B-ACD	D1	0.0	0.00	0.00	A
Stream A-BCD		0.0	6.25	0.00	A
Stream D-ABC		0.0	0.00	0.00	A
Stream C-ABD		0.0	0.00	0.00	A
<b>2027 - Forecast Traffic Flows (No Project) - Planning Grant</b>					
Stream B-ACD	D2	0.0	0.00	0.00	A
Stream A-BCD		0.0	6.25	0.00	A
Stream D-ABC		0.0	0.00	0.00	A
Stream C-ABD		0.0	0.00	0.00	A
<b>2037 - Forecast Traffic Flows (No Project) - Planning Period</b>					
Stream B-ACD	D3	0.0	0.00	0.00	A
Stream A-BCD		0.0	6.25	0.00	A
Stream D-ABC		0.0	0.00	0.00	A
Stream C-ABD		0.0	0.00	0.00	A
<b>2072 - Forecast Traffic Flows (No Project) - Operational Lifespan</b>					
Stream B-ACD	D4	0.0	0.00	0.00	A
Stream A-BCD		0.0	6.25	0.00	A
Stream D-ABC		0.0	0.00	0.00	A
Stream C-ABD		0.0	0.00	0.00	A
<b>2037 - Forecast Traffic Flows - Project Construction Traffic</b>					
Stream B-ACD	D5	<b>0.0</b>	<b>0.00</b>	<b>0.00</b>	<b>A</b>
Stream A-BCD		<b>0.0</b>	<b>6.18</b>	<b>0.00</b>	<b>A</b>
Stream D-ABC		<b>0.0</b>	<b>0.00</b>	<b>0.00</b>	<b>A</b>
Stream C-ABD		<b>0.0</b>	<b>6.33</b>	<b>0.00</b>	<b>A</b>
<b>2072 - Forecast Traffic Flows - Project Decommissioning Traffic</b>					
Stream B-ACD	D6	0.0	0.00	0.00	A
Stream A-BCD		0.0	6.18	0.00	A
Stream D-ABC		0.0	0.00	0.00	A
Stream C-ABD		0.0	6.33	0.00	A
<b>2037 - Forecast Traffic Flows - Project Construction Traffic - Additional Developments</b>					
Stream B-ACD	D7	0.0	0.00	0.00	A
Stream A-BCD		0.0	6.11	0.00	A
Stream D-ABC		0.0	0.00	0.00	A
Stream C-ABD		0.0	6.38	0.00	A
<b>2072 - Forecast Traffic Flows - Project Decommissioning Traffic - Additional Developments</b>					
Stream B-ACD	D8	0.0	0.00	0.00	A
Stream A-BCD		0.0	6.11	0.00	A
Stream D-ABC		0.0	0.00	0.00	A
Stream C-ABD		0.0	6.38	0.00	A



Figure 16.10: Traffic Analysis Summary for the L1217 / L5601 Junction

**Table 16.12: Key Assessment Metrics**

Receptor	Assessment Criteria	2037 Without the Project	2037 With the Project Construction Traffic	Comment
Frenchpark Village	N5 Traffic volumes	Average workday between 07.00 and 17.00 traffic volumes without construction traffic 3924 LGV + 730 HGV	Average workday between 07.00 and 17.00 traffic volumes with construction traffic during concrete pours (11 days) 4034 LGV + 1058 HGV  Average workday between 07.00 and 17.00 traffic volumes with construction traffic during general construction 4034 LGV + 818 HGV	During construction LGV volumes will increase by 3%  During construction HGV volumes will increase by 45% on 11 days during the construction period. Average construction traffic will lead to 12% increase in HGV traffic.
	Pedestrian Facilities			No proposed changes to pedestrian facilities in the village of Frenchpark.
N5 / L56402 Junction	N5 / L56402 Junction Analysis	Junction LOS = A	Junction LOS = A	Vehicles joining the N5 will experience delays of approximately 20 seconds when joining the N5 during peak construction traffic.  The realignment of the N5 will lead to a significant reduction in traffic volumes at this location.
Realigned N5 / L5642 Junction	Realigned N5 / L5642 Junction Analysis	Junction LOS = A	Junction LOS = A	Vehicles joining the realigned N5 will experience delays of approximately 20 seconds when joining the N5 during peak construction traffic. (Traffic volumes on the realigned N5 are assumed to be similar to the existing N5)
L1217 / L5601 Junction	L1217 / L5601 Junction Analysis	Junction LOS = A	Junction LOS = A	No delays are expected during construction due to low baseline traffic volumes
L5642 / L56421 Junction	Traffic Volumes	Low baseline traffic volumes		No delays are expected during construction due to low baseline traffic volumes
Existing N5	Traffic Volumes	Average workday between 07.00 and 17.00 traffic volumes without construction traffic 3924 LGV + 730 HGV	Average workday between 07.00 and 17.00 traffic volumes with construction traffic during concrete pours (11 days) 4034 LGV + 1058 HGV  Average workday between 07.00 and 17.00 traffic volumes with construction traffic	During construction LGV volumes will increase by 3%  During construction HGV volumes will increase by 45% on 11 days during the construction period when concrete pours for individual turbine foundations are taking place. Average construction traffic will lead to 12% increase in HGV traffic.

Receptor	Assessment Criteria	2037 Without the Project	2037 With the Project Construction Traffic	Comment
			during general construction 4034 LGV + 818 HGV	Analysis has shown that construction traffic will not lead to significant delays or disruption on the existing N5
Realigned N5	Traffic Volumes	Average workday between 07.00 and 17.00 traffic volumes without construction traffic 3924 LGV + 730 HGV	Average workday between 07.00 and 17.00 traffic volumes with construction traffic during concrete pours (11 days) 4034 LGV + 1058 HGV  Average workday between 07.00 and 17.00 traffic volumes with construction traffic during general construction 4034 LGV + 818 HGV	During construction LGV volumes will increase by 3%  During construction HGV volumes will increase by 45% on 11 days during the construction period. Average construction traffic will lead to 12% increase in HGV traffic.  Analysis has shown that construction traffic will not lead to significant delays or disruption on the existing N5 (Traffic volumes on the realigned N5 are assumed to be similar to the existing N5)
L1217	Traffic Volumes	Average workday between 07.00 and 17.00 traffic volumes without construction traffic 70 LGV + 0 HGV	Average workday between 07.00 and 17.00 traffic volumes with construction traffic during concrete pours (11 days) 180 LGV + 328 HGV  Average workday between 07.00 and 17.00 traffic volumes with construction traffic during general construction 180 LGV + 88 HGV	Analysis has shown that construction traffic will not lead to significant delays or disruption on the existing L1217.  Traffic diversions will be in place during road closures on the L1217.  Pedestrian, local and emergency access will be maintained at all times through the works.
L56402	Traffic Volumes	Low traffic volumes	Construction traffic, Table 16.11	Increased traffic volumes for a period of 18 months
L5642	Traffic Volumes	Low traffic volumes	Construction traffic, Table 16.11	Increased traffic volumes for a period of 18 months
L56421	Traffic Volumes	Low traffic volumes	Construction traffic, Table 16.11	Increased traffic volumes for a period of 18 months
L1216	Driver Delay / Traffic Volumes / Access Restrictions	Normal traffic conditions	Road closure for 1 day during Grid Connection works.  Short term increases in traffic volumes associated with diversions for Grid Connection works	Short delay due to diversion during Grid Connection works.  Low volume of diverted traffic for a period of 39 days  Local and pedestrian access to be provided at all times
L5650	Driver Delay / Traffic Volumes /	Normal traffic conditions	Road closure for 10 days during Grid Connection works.	Short delay due to diversion during Grid Connection works.

Receptor	Assessment Criteria	2037 Without the Project	2037 With the Project Construction Traffic	Comment
	Access Restrictions		Short term increases in traffic volumes associated with diversions for Grid Connection works	Low volume of diverted traffic for a period of 1 day  Local and pedestrian access to be provided at all times
N61	Driver Delay / Traffic Volumes	Normal traffic conditions	Delays during traffic management for Grid Connection works.  Short term increases in traffic volumes associated with diversions for Grid Connection works	Short delay of approximately 5 minutes over 8 days for traffic management during Grid Connection works.  Low volume of diverted traffic for a period of 29 days
L6019	Driver Delay / Access Restrictions	Normal traffic conditions	Road closure for 17 days during Grid Connection works.	Short delay due to diversion during Grid Connection works.  Local and pedestrian access to be provided at all times
L1403	Driver Delay / Access Restrictions	Normal traffic conditions	Road closure for 2 days during Grid Connection works.	Short delay due to diversion during Grid Connection works.  Local and pedestrian access to be provided at all times
L6001	Driver Delay / Access Restrictions	Normal traffic conditions	Road closure for 19 days during Grid Connection works.	Short delay due to diversion during Grid Connection works.  Local and pedestrian access to be provided at all times
L6000	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Grid Connection works	Low volume of diverted traffic for a period of 19 days
R368	Driver Delay	Normal traffic conditions	Delays during traffic management for Grid Connection works.	Short delay of approximately 5 minutes over 8 days for traffic management during Grid Connection works.  Local and pedestrian access to be provided at all times
L1034	Driver Delay / Access Restrictions	Normal traffic conditions	Road closure for 4 days during Grid Connection works.	Short delay due to diversion during Grid Connection works.  Local and pedestrian access to be provided at all times
R361	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Internal Cabling works	Low volume of diverted traffic for a period of 14 days

Receptor	Assessment Criteria	2037 Without the Project	2037 With the Project Construction Traffic	Comment
R370	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Internal Cabling works	Low volume of diverted traffic for a period of 14 days
L5601	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Internal Cabling and Grid Connection works	Low volume of diverted traffic for a period of 43 days
L5644	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Internal Cabling and Grid Connection works	Low volume of diverted traffic for a period of 29 days
L1400	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Grid Connection works	Low volume of diverted traffic for a period of 10 days
L6150	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Grid Connection works	Low volume of diverted traffic for a period of 21 days
L60191	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Grid Connection works	Low volume of diverted traffic for a period of 12 days
L5872	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Grid Connection works	Low volume of diverted traffic for a period of 4 days
L1030	Traffic Volumes	Normal traffic conditions	Short term increases in traffic volumes associated with diversions for Grid Connection works	Low volume of diverted traffic for a period of 4 days
Lough Atalia Road	Traffic Volumes	Normal traffic conditions	Short term driver and pedestrian delays due to traffic management during the transportation of Wind Turbine components	Transportation of Wind Turbine components will be carried out during off peak times to minimise driver and pedestrian delay.
R339		Normal traffic conditions	Short term driver and pedestrian delays due to traffic management at enabling works locations and during the transportation of Wind Turbine components	Transportation of Wind Turbine components will be carried out during off peak times to minimise driver and pedestrian delay.
R336		Normal traffic conditions	Short term driver and pedestrian delays due to	Transportation of Wind Turbine components will be

Receptor	Assessment Criteria	2037 Without the Project	2037 With the Project Construction Traffic	Comment
			traffic management at enabling works locations and during the transportation of Wind Turbine components	carried out during off peak times to minimise driver and pedestrian delay.
N83	Traffic Volumes / Traffic Volumes	Normal traffic conditions	Short term driver and pedestrian delays due to traffic management at enabling works locations and during the transportation of Wind Turbine components	Transportation of Wind Turbine components will be carried out during off peak times to minimise driver and pedestrian delay.
N17	Traffic Volumes / Delay / Pedestrian Facilities	Normal traffic conditions	Short term driver and pedestrian delays due to traffic management at enabling works locations and during the transportation of Wind Turbine components	Transportation of Wind Turbine components will be carried out during off peak times to minimise driver and pedestrian delay.

**Table 16.13: Magnitude and Significance of Impacts**

Receptor	Sensitivity	Magnitude	Significance of Effect	Duration of Effect	Conclusion
Construction Period					
Frenchpark Village	High	Low / Medium	Moderate	Short Term	Not Significant
N5 / L56402 Junction	Medium	Medium	Moderate	Short Term	Not Significant
Realigned N5 / L5642 Junction	Medium	Medium	Moderate	Short Term	Not Significant
L1217 / L5601 Junction	High	Medium	Moderate	Short Term	Not Significant
L5642 / L56421 Junction	High	Medium	Moderate	Short Term	Not Significant
Existing N5	Low	Medium	Slight	Short Term	Not Significant
Realigned N5	Low	Medium	Slight	Short Term	Not Significant
L1217	Medium	Medium	Moderate	Short Term	Not Significant
L56402	High	Medium	Moderate	Short Term	Not Significant
L5642	Medium	Medium	Moderate	Short Term	Not Significant
L56421	High	Medium	Slight	Short Term	Not Significant

Receptor	Sensitivity	Magnitude	Significance of Effect	Duration of Effect	Conclusion
L1216	Medium	Medium	Slight	Temporary	Not Significant
L5650	Medium	Medium	Moderate	Temporary	Not Significant
N61	Low	Medium	Moderate	Temporary	Not Significant
L6019	Medium	Medium	Moderate	Temporary	Not Significant
L1403	Medium	Medium	Slight	Temporary	Not Significant
L6001	Medium	Medium	Slight	Temporary	Not Significant
L6000	Medium	Low	Slight	Temporary	Not Significant
R368	Medium	Medium	Slight	Temporary	Not Significant
L1034	Medium	Medium	Slight	Temporary	Not Significant
R361	Medium	Low	Slight	Temporary	Not Significant
R370	Medium	Low	Slight	Temporary	Not Significant
L5601	Medium	Low	Slight	Temporary	Not Significant
L5644	Medium	Low	Slight	Temporary	Not Significant
L1400	Medium	Low	Slight	Temporary	Not Significant
L6150	Medium	Low	Slight	Temporary	Not Significant
L60191	High	Low	Slight	Temporary	Not Significant
L5872	Medium	Low	Slight	Temporary	Not Significant
L1030	Medium	Low	Slight	Temporary	Not Significant
Lough Atalia Road	High	Low	Slight	Temporary	Not Significant
R339	Medium	Low	Slight	Temporary	Not Significant
R336	Medium	Low	Slight	Temporary	Not Significant
N83	Low	Low	Slight	Temporary	Not Significant
N17	Low	Low	Slight	Temporary	Not Significant
<b>Operations Period</b>					
Frenchpark Village	High	Negligible	Not Significant	Long Term	Not Significant
N5 / L56402 Junction	Medium	Negligible	Not Significant	Long Term	Not Significant
Realigned N5 / L5642 Junction	Medium	Negligible	Not Significant	Long Term	Not Significant
L1217 / L5601 Junction	High	Negligible	Not Significant	Long Term	Not Significant
L5642 / L56421 Junction	High	Negligible	Not Significant	Long Term	Not Significant

Receptor	Sensitivity	Magnitude	Significance of Effect	Duration of Effect	Conclusion
Existing N5	Low	Negligible	Not Significant	Long Term	Not Significant
Realigned N5	Low	Negligible	Not Significant	Long Term	Not Significant
L1217	Medium	Negligible	Not Significant	Long Term	Not Significant
L56402	High	Negligible	Not Significant	Long Term	Not Significant
L5642	Medium	Negligible	Not Significant	Long Term	Not Significant
L56421	High	Negligible	Not Significant	Long Term	Not Significant
<b>Decommissioning Period</b>					
Frenchpark Village	High	Low	Slight	Short Term	Not Significant
N5 / L56402 Junction	Medium	Medium	Moderate	Short Term	Not Significant
Realigned N5 / L5642 Junction	Medium	Medium	Moderate	Short Term	Not Significant
L1217 / L5601 Junction	High	Medium	Moderate	Short Term	Not Significant
L5642 / L56421 Junction	High	Medium	Moderate	Short Term	Not Significant
Existing N5	Low	Medium	Slight	Short Term	Not Significant
Realigned N5	Low	Medium	Slight	Short Term	Not Significant
L1217	Medium	Medium	Moderate	Short Term	Not Significant
L56402	High	Medium	Moderate	Short Term	Not Significant
L5642	Medium	Medium	Moderate	Short Term	Not Significant
L56421	High	Medium	Slight	Short Term	Not Significant

### 16.3.3 Air Quality

Construction HGV's, LGV's and private vehicles are subject to government HCV, LCV, ADR and NCT emissions tests. A full air quality assessment is included in **Chapter 18: Air** of the EIAR.

### 16.3.4 Noise and Vibration

There is likely to be some noise and vibration due to the predicted short-term increase in HGV movements along the Construction Haul Routes to the Project. The increased traffic volumes may cause disturbance to residents living along the local road network on the Project Construction Haul Route and Turbine Delivery Route. Due to the relatively low number of trips generated per day in relation to existing traffic volumes on the national and regional road network, the restrictions on working hours and the short-term nature of the construction and Decommissioning phases, the effects of noise and vibration are not predicted to be significant. Construction HGV's, LGV's and private vehicles are subject to government HCV, LCV and NCT noise and suspension tests. A full noise and vibration assessment is included in **Chapter 13: Noise** of the EIAR.

### 16.3.5 Pedestrians and Vulnerable Road Users

Pedestrian and other vulnerable road users may be affected by the works at the Project entrance, Construction Haul Routes, Turbine Delivery Route enabling works and increased vehicle movements during construction and delivery of Wind Turbine components. The construction of the site entrances and modifications to the public road network at various locations along the Turbine Delivery Route will be carried out under a road opening licence and traffic management plan which will accommodate pedestrians at the works locations. Pedestrian networks are assessed as high sensitivity receptors located in urban centres and isolated rural locations. Pedestrian facilities may be altered for short periods during the transportation of Wind Turbine components. During these periods alternative arrangements will be put in place for pedestrians. The effect of the works at pedestrian locations has been assessed in **Table 16.12** as low magnitude for a short-term duration. The overall effect of works which will impact on pedestrian facilities has been assessed as **non-significant**.

### 16.3.6 Driver Delay

The traffic analysis carried out in the Traffic and Transport Assessment in **Appendix 16.1** shows that drivers will experience short delays due to increased traffic volumes during the wind farm construction and Decommissioning periods.

In 2037, vehicles joining the N5 from the L56402 will not experience any delays without development construction traffic and a delay of 13 seconds with the additional traffic generated by wind farm construction. In 2072, vehicles joining the N5 from the L56402 will experience a delay of 3 seconds without development Decommissioning traffic and a delay of 15 seconds with the additional traffic generated by wind farm Decommissioning. In 2036, vehicles joining the Realigned N5 from the L5642 will experience a delay of 10 seconds

without development construction traffic and a delay of 19 seconds with the additional traffic generated by wind farm construction. In 2072, vehicles joining the Realigned N5 from the L5642 will experience a delay of 16 seconds without development Decommissioning traffic and a delay of 19 seconds with the additional traffic generated by wind farm Decommissioning. The effect is assessed as **non-significant**. The results from the traffic analysis are summarised in **Figure 16.8**, **Figure 16.9** and **Figure 16.10**.

The effects of the additional traffic volumes on the national road network are assessed as slight / moderate and temporary with a duration of 18 months. The effects of the additional traffic volumes on the regional road network are assessed as slight / moderate and temporary with a duration of 18 months. The effects of the additional traffic volumes on the local road network are assessed as slight / moderate and temporary with a duration of 18 months. The effect of construction, operation and Decommissioning traffic on the national, regional and local road networks are assessed as **non-significant**.

Works on the public road network will be carried out using road closures at locations where the road width is restricted and it is not possible to maintain traffic flows. Delays due to diversions will typically range from 5 to 15 minutes due to the additional distance required to reach a desired destination. Local access, emergency service access and access for pedestrians will be maintained at all times through the works. The effect of road closures is assessed as slight / moderate and temporary. The significance of road closures is assessed as **non-significant**. The location and duration of works requiring temporary traffic lights / flagmen is detailed in the Traffic Management Plan in **Appendix 16.2**.

Works on the public road network will be carried out using traffic management and temporary traffic signals at locations where it is not possible to maintain two-way traffic flows. Delays due to traffic lights will typically range from 3 to 5 minutes, depending on the length of the works. The timing of works will be scheduled to avoid peak traffic periods and flagmen will be used in place of traffic lights to prevent delays due to unbalanced traffic flows. The effect of the traffic management controls using traffic lights and flagmen are assessed as slight and temporary. The effect of traffic management using traffic signals and flagmen is assessed as **non-significant**. The location and duration of works requiring temporary traffic lights / flagmen is detailed in the Traffic Management Plan in **Appendix 16.2**.

The delivery of Wind Turbine components will take place outside peak traffic periods to avoid disruption on the public road network. The sections of the TDR for the transportation

of Wind Turbine components consisting of dual carriageway will have unrestricted passing opportunities and no delays to public road users are expected. There is potential for momentary delay to public road users in the urban areas surrounding the Port of Galway and at junctions on the haul route leading to the site entrances. Following assessment, it is concluded that delays to traffic due to Wind Turbine delivery will be imperceptible and momentary in duration. The effect of Wind Turbine component delivery on the public road network is assessed as **non-significant**.

## 16.4 MITIGATION MEASURES

### 16.4.1 Construction Phase

Although no long-term significant effects have been predicted, the proposed mitigation measures have been incorporated into the design to maintain the highest standard of road safety, minimise delay and disruption to all public road users, and to comply with statutory regulations:

- The appointed Contractor shall inform local residents, businesses and emergency services of proposed works on the public road network in advance of any works taking place on the Wind Farm Site. Access shall be maintained to properties at all times during the course of the works. The Contractor will appoint a project coordinator who will be the main point of contact for matters relating to traffic which will affect the general public, local businesses and emergency services. An out of hours contact number shall also be provided.
- Prior to delivery of abnormal loads i.e. Wind Turbine components, the Applicant or their representatives, will consult with An Garda Síochána, TII, PPP operators and all relevant Local Authorities to obtain all necessary abnormal load permits and discuss the requirement for a Garda escort. The Applicant will also outline the intended timescale for deliveries and efforts can be made to avoid peak times such as school drop off times, church services, peak traffic times where it is considered this may lead to unnecessary disruption, and abnormal loads may travel at night and outside the normal construction times as may be required by An Garda Síochána. Local residents at sensitive locations along the affected route will be notified of the timescale for abnormal load deliveries.
- Prior to delivery of abnormal loads, the Applicant or their representatives, will consult with TII, PPP operators and all Local Authorities through which the abnormal loads will pass and agree the specification for any enabling works to be carried out on the Turbine Delivery Route.
- Prior to the delivery of Wind Turbine components, a survey of the Turbine Delivery Route will be undertaken to identify if any overhead lines or height restrictions at toll

booths will need to be lifted along the route to allow abnormal loads such as tower sections and nacelles to be delivered.

- Prior to the delivery of Wind Turbine components, a trial run shall be carried out between Port of Galway and the Project entrances using an abnormal load vehicle with a retractable load gauge to determine that abnormal load vehicles can transverse the route without undue delay and disruption to public road users.
- During the construction and Decommissioning phases, road works signs in accordance with the requirements of Chapter 8 of the Traffic Signs Manual will be erected at all the Project entrance and at all locations on the Grid Connection route and Turbine Delivery Route which are being modified to facilitate Wind Turbine delivery. Details of signage are given in the Traffic Management Plan in **Appendix 16.2**.
- Wheel cleaning equipment will be used at all site entrance with the public road to prevent any mud and/or stones being transferred from Site to the public road network. All drivers will be required to see that their vehicle is free from dirt and stones prior to departure from the Wind Farm Site.
- To reduce dust emissions, vehicle containers/loads will be covered during both entrance and egress to the Wind Farm Site where required.
- All 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 may be employed.
- Access to the construction site will be controlled by on Site personnel and all visitors will be asked to sign in and out of the Wind Farm Site by security/site personnel on entering and exiting the Wind Farm Site.
- 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.
- A condition survey of the road network in the vicinity of the site entrances will be carried out and agreed with Roscommon County Council prior to any works being carried out on site.
- All works on the public road network will be carried out using an approved road opening licence and Traffic Management Plan.
- All wind farm vehicles shall have roof mounted flashing beacons when working on the public road network or will use their hazard lights within the Wind Farm Site.
- A speed limit of 25 km/h shall apply to all vehicles within the Wind Farm Site.

## 16.5 CUMULATIVE EFFECTS

### 16.5.1 Unrelated Proposed and Consented Developments

The Roscommon County Council planning portal provides details of planned developments in County Roscommon. A search of the portal in January 2026 shows that there are no planned residential or commercial developments in the vicinity of the Project site entrances which will generate a significant number of new long term trips on the public road network. A search of the Commission case map in January 2026 shows that there are no planned developments in the vicinity of the Project site entrances which will generate a significant number of new long-term trips on the public road network. The N5 Ballaghaderreen to Scramoge road project is planned to be completed prior to the construction of the Project. The Project is located close to the national and regional road network with links to the N5 National primary road. The results of the traffic analysis in **Appendix 16.1** show that the road and junction network will continue to operate with reserve capacity during construction, operation and Decommissioning of the Project. An additional analysis was carried out to test the capacity of the junctions during construction in 2037 and Decommissioning in 2072 with additional traffic from a similar size development or forestry operations occurring at the same time. The results of the analysis show that the road network will continue to operate with reserve capacity with additional development traffic during construction in 2037 and Decommissioning in 2072. The results of the traffic analysis are included in **Appendix 16.1**.

## 16.6 RESIDUAL EFFECTS OF THE PROJECT

### 16.6.1 Construction Phase Residual Effects

The results of the traffic analysis in **Appendix 16.1** have shown that the existing public road network can accommodate the increased traffic volumes generated by the Project. Works on the public road network will be carried out using an approved traffic management plan and site entrances will be signposted in accordance with Chapter 8 of the Traffic Signs Manual. Visibility at site entrance will be maintained in accordance with the Roscommon County Council Development Plan.

### 16.6.2 Operational Phase Residual Effects

There will be no residual effects on the public road network during the operational phase of the Project. The results of the traffic analysis in **Appendix 16.1** have shown that the existing public road network can accommodate the operational traffic generated by the Project when combined with predicted public traffic growth beyond 2072. The interface between the Project and the public road network has been designed to eliminate residual risk with visibility splays, signs and road markings and dwell areas to allow vehicles to pull off the road when entering the Wind Farm Site.

### **16.6.3 Final Decommissioning Phase Residual effects**

The results of the traffic analysis in **Appendix 16.1** have shown that the existing public road network can accommodate the increased traffic volumes generated by the Project during Decommissioning. There is likely to be a slight residual effect on the condition of road surfaces at the site entrance due to vehicles turning. The Decommissioning will be subject to a separate Traffic Management Plan as the destination for recycled turbine parts may differ from the port of origin.

## **16.7 SUMMARY OF SIGNIFICANT EFFECTS**

This section has assessed the significance of potential effects of the Project on traffic and transport.

Following assessment of the quality of effects on the public road network, it has been concluded that the quality of effects will be neutral with increased traffic flows during the construction and Decommissioning of the Project with no permanent changes to the horizontal or vertical geometry of the public road network and its associated junctions.

Following assessment, it has been concluded that the significance of the effects on the public road network where traffic management / two-way traffic flows can be maintained during works has been assessed as slight.

Following assessment, it has been concluded that the duration of effects relating to increased HGV traffic flows in the vicinity of the Wind Farm Site and Grid Connection works have been assessed as temporary and may last up to 18 months during the construction and Decommissioning of the Project, the maximum effects from increased HGV traffic flows will occur on 11 days during the 18 month construction period during the construction of Turbine Foundations.

Following assessment, it has been concluded that the duration of effects relating to enabling works on the TDR and delivery of the Wind Turbine components have been assessed as temporary lasting less than one year.

## **16.8 STATEMENT OF SIGNIFICANCE**

This assessment has identified the potential effects of the Project on Traffic and Transport during the construction, operation and Decommissioning of the Project. The assessment takes account of proposed mitigation measures embedded in the design and implementation during the construction, operation and Decommissioning of the Project. The

potential effects of the Project are considered to be **Slight / Moderate** on the local road network and **Slight / Moderate** on the national and regional road network during the construction of the Project. The potential effects of the project on traffic during the operation of the Project are considered to be **Not Significant** on the public road network. The potential effects of the Project on traffic and transport during the Decommissioning of the Project are considered to be **Slight / Moderate** on the local road network and **Slight / Moderate** on the national and regional road network.