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Environmental Impact Assessment Report (EIAR)

Cunlaghfadda Green
Energy Project, Co. Mayo

Chapter 15 – Material Assets



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15.

MATERIAL ASSETS

Material Assets are defined in the 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA, 2022) "as 'built services and infrastructure. Traffic is included because in effect traffic consumes transport infrastructure'. The cultural assets of Archaeology, Architectural and Cultural Heritage are addressed in Chapter 14 of this Environmental Impact Assessment Report (EIAR). Economic assets of natural heritage include non-renewable resources such as minerals or soils, and renewable resources such as wind and water. These assets are addressed in Chapter 8 Land, Soils and Geology, Chapter 9 Water, Chapter 10 Air Quality, and Chapter 11 Climate. Tourism and amenity resources, which are also considered material assets, are addressed in Chapter 5 Population and Human Health. The Population and Human Health chapter also addresses existing land-uses (economic assets), including forestry and agriculture.

This chapter of the EIAR addresses the likely significant effects of the Proposed Project on transportation infrastructure (Section 15.1 Traffic and Transport), on Telecommunications and Aviation (Section 15.2) and Other Material Assets (Section 15.3), which are economic assets of human origin. Waste Management is also considered within EPA, 2022 as part of Material Assets. EPA Waste Management pertaining to the construction, operation and decommissioning of the Proposed Project is summarised in Section 4.5.6 of Chapter 4 Description of the Proposed Project of the EIAR. A Waste Management Plan (WMP) is included in the Construction and Environmental Management Plan which is included as Appendix 4-5 of this EIAR. Traffic volumes generated by the removal of waste from the Site to fully authorised waste facilities, is considered in Section 15.1 below.

This chapter of the EIAR has been prepared in accordance with the requirements of the EIA legislation and guidance detailed in Chapter 1 Introduction.

For the purposes of this EIAR:

- › Where the 'Proposed Wind Farm' is referred to, this refers to turbines and associated foundations and hardstanding areas, including access tracks, underground cabling, permanent meteorological mast, temporary construction compound, peat and spoil management, biodiversity enhancement, tree felling, site drainage, operational stage signage, turbine delivery route and junction accommodation works and all ancillary works and apparatus. The Proposed Wind Farm is described in detail in Chapter 4, Section 4.4.1 of this EIAR.
- › Where the 'Proposed Grid Connection' is referred to, this refers to the proposed 110kV onsite substation, underground 110kV cabling and end masts connecting the proposed 110kV substation to the 110kV Castlebar to Cloon overhead line, access tracks and all ancillary works and apparatus. The Proposed Grid Connection Route is described in detail in Chapter 4, Section 4.4.2 of this EIAR.
- › Where the 'Proposed Project' is referred to, this encompasses the entirety of the project (Proposed Wind Farm and Proposed Grid Connection) for the purposes of this EIA in accordance with the EIA Directive. The Proposed Project is described in detail in Chapter 4 of this EIAR.
- › Where 'the Site' is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-2 of the EIAR and encompasses an area of approximately 165 hectares.

A detailed description of the Proposed Project is provided in Chapter 4 Description of the Proposed Project of this EIAR.

15.1

Traffic and Transport

15.1.1 Introduction

15.1.1.1 Background and Objectives

This section of the EIAR assesses the effects on roads, traffic and transport of the traffic movements that will be generated during the construction, operational and decommissioning phases of the Proposed Project.

For developments of this nature, the construction phase is the critical period with respect to the traffic effects experienced on the surrounding road network in terms of both the additional traffic volumes that will be generated on the road network, and the geometric requirements of the abnormally large loads associated with the wind turbine components. The requirements of the additional traffic and abnormal sized loads generated during the construction phase were assessed for the external highway network and at the proposed junctions that will provide access to the Site.

It should be noted that abnormal weight loads are not a feature of the turbine component delivery vehicles, they are abnormal in size only. All construction and delivery vehicles for the Proposed Project will be subject to the standard axle weight requirements set out under Road Traffic Regulations and therefore the loadings from construction traffic will not exceed the relevant standards. Notwithstanding the need to use some specialist vehicles to facilitate turbine delivery, it should be noted that the number of load-bearing axles for any specialist vehicles carrying large loads are designed to ensure that the load on any one axle does not exceed acceptable load bearing statutory limits. In the event that a vehicle type and load with excessive axle loads is proposed for the delivery of materials / components to the site, an assessment of the delivery route proposed will be prepared and submitted to the relevant authorities.

The magnitude of the increase in traffic volumes experienced on the surrounding network is identified during the various stages of the Proposed Project. A Traffic Management Plan is also provided in Appendix 15-2 of this EIAR and summarised in Section 15.1.8 below, aimed at minimising the traffic impact on the local highway network.

15.1.1.2 Statement of Authority

This section of the EIAR has been prepared by Alan Lipscombe of Alan Lipscombe Traffic and Transport Consultants Ltd. Alan is a competent expert in traffic and transport assessments. In 2007 Alan set up a traffic and transportation consultancy providing advice for a range of clients in the private and public sectors. Prior to this Alan was a founding member of Colin Buchanan's Galway office having moved there as the senior transportation engineer for the Galway Land Use and Transportation Study. Since the completion of that study in 1999, Alan has worked throughout Ireland on a range of projects including: major development schemes, the Galway City Outer Bypass, Limerick Planning Land-Use and Transportation Study, Limerick Southern Ring Road Phase II, cost benefit analyses (COBA) and various studies for the University of Galway. Before moving to Galway in 1997, Alan was involved in a wide variety of traffic and transport studies for CBP throughout the UK, Malta and Indonesia. He has particular expertise in the assessment of development related traffic, including many wind farm developments including the following; Ardderroo, Derrinlough, Knocknamork, Shehy More, Cloncreen, Derrykillew, Ballyhorgan, Lettergull, Barnadivane, Cleanrath, Knockalough, Sheskin South and Borrisbeg.

Alan has a BEng (hons) Degree in Transportation Engineering (Napier University, Edinburgh, 1989), is a member of Engineers Ireland and of the Institute of Highways and Transportation and is a TII accredited Road Safety Audit Team Member.

Traffic counts were undertaken by Traffinomics Ltd, which is an Irish traffic survey company with a comprehensive knowledge of traffic data collection methods. The company, established in 2014, is

headed by Simon Wheeler, who has been in the traffic survey data collection business for 35 years. Previously Simon worked with Count On Us Ltd., followed by Abacus Transportation Surveys Ltd., Ireland's first lens-based traffic data collection business. Clients of Traffinomics Ltd. include TII, Local Authorities and many leading retailers.

15.1.1.3 Guidance on Assessment of Effects

This section of the EIAR has been completed in accordance with the EIA guidance set out in Section 1.2 of Chapter 1 Introduction. The assessment uses standard terminology to describe the likely significant effects associated with the Proposed Project. Further information on the classification of effects used in this assessment is presented in Section 1.7.2 Chapter 1 of this EIAR.

15.1.1.4 Scoping and Consultation

Transport Infrastructure Ireland

Transport Infrastructure Ireland (TII) responded to two rounds of scoping via emails dated 14th June 2023 and 16th February 2026, in which it provided a list of recommendations to be followed when preparing the EIAR. All relevant TII guidelines and policies have been adopted in the preparation of this assessment, including the following:

- PE-PDV-02045, Transport Assessment Guidelines, Transport Infrastructure Ireland, May 2014
- PE-PAG-02017, Project Appraisal Guidelines, Unit 5.3, Travel Demand Projections, Transport Infrastructure Ireland, October 2021
- DN-GEO-03060, Geometric Design of junctions, Transport Infrastructure Ireland, May 2023.

Specific issues raised by TII include the following as set out in Table 15-1 below.

Table 15-1 Issues raised by TII in relation to the Proposed Project and Responses

ID	Comment/Recommendation	Response
1	Consultations should be had with relevant Local Authority / National Roads Design Office, with regards to the locations of existing and future national roads schemes.	Consultation has been undertaken with Mayo County Council as set out below.
2	TII would be specifically concerned as to potential significant impacts the development would have on the national road network (and junctions with national roads), in the proximity of the proposed development, including the potential haul route.	The impacts of the Proposed Project on the construction material and turbine component delivery routes in terms of link flows are set out in Sections 15.1.6.1 of the EIAR, while an assessment of the capacity of the R331 / L1506 junction is set out in Section 15.1.6.4. The swept path analysis undertaken for the abnormally large loads on the Turbine Delivery Route is set out in Section 15.1.9 of the EIAR. The assessment sets out the temporary local measures that will be required on the national, regional and local road networks during the construction of the Proposed Project.

ID	Comment/Recommendation	Response
4	The developer should assess visual impacts from existing national roads.	The visual impacts of the Proposed Project are set out in Chapter 13 Landscape and Visual of this EIAR.
4	The developer should have regard to any EIAR/EIS and all conditions and/or modifications imposed by An Coimisiún Pleanála regarding road schemes in the area. The developer should, in particular, have regard to any potential cumulative impacts.	It is confirmed that all conditions attached to any grant of planning permission for the Proposed Project will be adhered to. The cumulative, traffic related impacts are assessed in Section 15.1.12.7.
5	The developer, in preparing EIAR, should have regard to TII Publications (formerly DMRB and the Manual of Contract Documents for Road Works).	While there are no junctions or alterations proposed on the National Road network, all proposed junctions on the local road network are designed in accordance with TII guidelines.
6	The developer, in preparing EIAR, should have regard to TII's Environmental Assessment and Construction Guidelines, including the Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (National Roads Authority (NRA), 2014).	It is confirmed that the potential effects of the Proposed Project with regards air quality is set out in Chapter 10 Air Quality of this EIAR.
9	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).	It is confirmed that the potential effects of the Proposed Project with regards noise are set out in Chapter 12 Noise and Vibration of this EIAR.
9	It would be important that, where appropriate, subject to meeting the appropriate thresholds and criteria and having regard to best practice, a Traffic and Transport Assessment (TTA) be carried out in accordance with relevant guidelines, noting traffic volumes attending the site and traffic routes to/from the site, with reference to impacts on the National Road Network and junctions of lower category roads, with national roads.	It is confirmed that the assessment presented in Chapter 15 Material Assets of the EIAR is undertaken in accordance with Traffic and Transport Assessment Guidelines, TII (2014).
12	The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required.	A swept path analysis of the proposed turbine delivery route has been undertaken, as set out in Section 15.1.9.

ID	Comment/Recommendation	Response
13	In the interests of maintaining the safety and standard of the National Road Network, the EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the National Road Network.	All construction will be undertaken in accordance with current guidelines including the "Traffic Signs Manual, Section 8 – Temporary Traffic Measures and Signs for Road Works" (DoT now DoTT&S) and "Guidance for the Control and Management of Traffic at Roadworks" (DoTT&S).
14	TII recommends that that 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, whether wind turbine components 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 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.	The proposed haul routes are identified in this Chapter 15 Material Assets of the EIAR. While it is proposed that the delivery stage of the Proposed Project will involve abnormally large loads, the axle loadings will not exceed accepted limits. A program of pre-delivery condition and structural assessment of the route is however proposed, as set out in the Traffic Management Measures, included set out in Section 15.1.8 and Appendix 15-2.
15	The haul route should be assessed to confirm capacity to accommodate abnormal 'length' loads and any temporary works required are identified.	It is confirmed that a geometric assessment was undertaken, as set out in Section 15.1.9 of this EIAR.
16	The National Road Network is managed by a combination of PPP Concessions, Motorway Maintenance and Renewal Contracts (MMaRC) and local road authorities, in association with TII. 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. Where temporary works within any MMaRC Contract Boundary are required, to facilitate the transport of turbine or substation components to site, the applicant/developer shall contact thirdpartyworks@tii.ie in advance, as a works specific Deed of Indemnity will be needed by TII before the works can take place.	The Applicant agrees with this condition.

ID	Comment/Recommendation	Response
	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. Consultation should be undertaken with Mayo County Council to ascertain any relevant national road schemes in the area. Having regard to the foregoing, in TII's opinion, grid connection routing, where it is proposed to utilise the road network must, therefore, demonstrate that the route proposed represents the 'optimal solution'.	The Applicant agrees with this condition. Alternative grid connection routes have been considered in Chapter 3 Consideration of Reasonable Alternatives of this EIAR. The chosen grid connection route is identified as the 'optimal solution' when compared to the other considered routes.
	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 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.	The Proposed Grid Connection underground cabling route alignment will avoid any potential impacts on traffic counters, weather stations, etc. The Proposed Grid Connection will not interact with any section of the National Road Network.

Department of Transport

A response to each of the two rounds of scoping were received from the Department of Transport (DoT) on 29th June 2023 and 5th March 2026. The response refers to issues relating to the construction of the Proposed Project, in particular the Proposed Grid Connection, and works within the public road network. The issues raised and the Applicant's responses are provided in Table 15-2 as follows:

Table 15-2 Issues raised by DoT in relation to the Proposed Project and Responses

ID	Comment/Recommendation	Response
1	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.	The Proposed Grid Connection is entirely in agricultural lands and will therefore not interact with the public road network. The Proposed Grid Connection proposes to connect the Proposed Wind Farm to the national grid via a combination of an underground cable route and overground connection into the existing

ID	Comment/Recommendation	Response
		overhead 110kV Cloon-Castlebar transmission line.
2	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 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 the HV Cable on legacy roads, roads over peat/bog ramparts.	As set out in Section 4.4.2.5 in Chapter 4 Description of the Proposed Project of the EIAR, the Proposed Grid Connection route is located within private agricultural land and therefore will not interact with any public road.
3	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.	As set out in Section 4.4.2.5 in Chapter 4 Description of the Proposed Project of the EIAR, the Proposed Grid Connection route is located within private agricultural land and therefore will not interact with any public road.
4	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.	As set out in Section 4.4.2.5 in Chapter 4 Description of the Proposed Project of the EIAR, the Proposed Grid Connection route is located within private agricultural land and therefore will not interact with any public road.
5	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.	As set out in Chapter 3 Consideration of Reasonable Alternatives, the chosen route is compared against alternative grid connection routes.
6	Examination of options for connection to the national grid network at a point closer to the wind farm in order to reduce the adverse impact on public roads.	Refer to Chapter 3 Consideration of Reasonable Alternatives. As stated in Section 4.4.2.5 of Chapter 4 Description of the Proposed Project, the Proposed Grid Connection route is 982m in length, located within private agricultural land and therefore will not interact with any public road.

It is confirmed that the above points raised by the DoT have been considered in the route selection and design of the Proposed Grid Connection as set out in Chapter 3 Consideration of Reasonable Alternatives of this EIAR.

The DoT scoping response considers the following should be considered when applying conditions to any approval:

- 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.
- 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.
- Electricity cabling shall be laid off carriageway where feasible.
- 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.
- High/medium voltage transmission underground cables should not be sited on or attached to existing roads structures, masonry bridges/ culverts and the like.
- A condition requiring that the location of the cables would be recorded as exactly as possible, using BIM 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.
- 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.
- 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.

15.1.1.5 Pre-planning Meetings

Mayo County Council

The Applicant engaged with Mayo County Council (MCC) during the 2 no. pre-planning meetings – held on 16th January 2024 and 2nd March 2026. MKO presented the details of the Proposed Project to MCC, including the proposed turbine delivery route and Proposed Grid Connection route. In the second pre-planning meeting, MCC made queried if there were requirements for turbine delivery accommodation areas and the requirement for letters of consent regarding the upgrade to the L15053 Local Road and in third-party lands.

An Coimisiún Pleanála

The Applicant engaged with An Bord Pleanála (now An Coimisiún Pleanála (ACP)) in a pre-app consultation meeting held on 9th May 2024 regarding the Proposed Grid Connection. No feedback or queries were raised by ACP in relation to traffic and transport.

15.1.1.6 Methodology and Section Structure

The report adopts the guidance for such assessments set out by Transport Infrastructure Ireland, or TII, in the document number PE-PDV-02045 *'Traffic and Transport Assessment Guidelines, May 2014'*. The geometric requirements of the transporter vehicles were assessed using AutoCAD and Autotrack.

The Traffic and Transport Section of the EIAR is set out as follows:

- › A review of the existing and future transport infrastructure in the vicinity of the Proposed Project, including the proposed turbine delivery route, an assessment of base 2024 traffic flows and traffic forecasts during an assumed construction year of 2030 (Section 15.1.2 Receiving Environment and 15.1.3 – Existing Traffic Volumes),
- › A description of the nature of the Proposed Project and the traffic volumes that it will generate during the different construction stages and when it is operational (Section 15.1.4 – Proposed Project and Traffic Generation),
- › A description of the abnormally large loads and vehicles that will require access to the Site (Section 15.1.5 Construction Traffic Vehicles),
- › A review of the effects during Proposed Project-generated traffic on links and junctions during construction phase (i.e. 18 months with a precautionary 12 months adopted for the traffic assessment) and when the wind farm is operational (Section 15.1.6 –Traffic Effects During Construction and Operation and Decommissioning of the Proposed Project),
- › An assessment of the effects during the Proposed Grid Connection works (Section 15.1.7 – Effect on Network of the Proposed Grid Connection),
- › Traffic management of large deliveries and a geometric assessment of the routes and their capacity to accommodate the abnormal loads associated with the Proposed Project (Section 15.1.8 – Traffic Management of Large Deliveries and Section 15.1.9– Abnormal Load Route Assessment),
- › A review of the Proposed Wind Farm access junction off the L15053 (Section 15.1.10 –Proposed Wind Farm Access Junction)
- › An assessment of the provision for sustainable modes of travel (in this case primarily with respect to the transport of construction staff) (Section 15.1.11 – Provision for Sustainable Modes of Travel),
- › A description of potential effects of the Proposed Project on Roads and Traffic (Section 15.1.12 – Likely Effects and Associated Mitigation Measures).

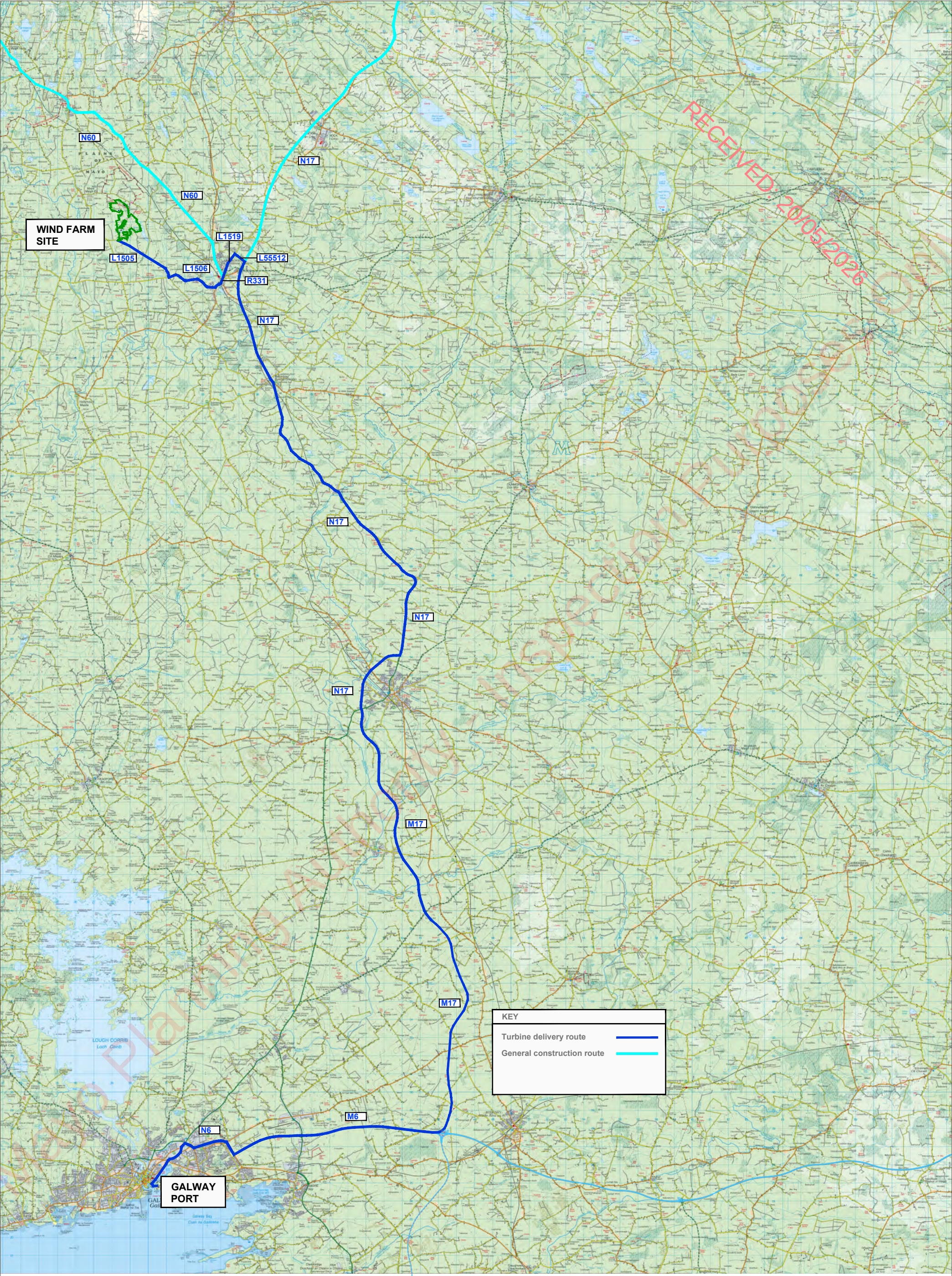
15.1.2 Receiving Environment

15.1.2.1 Site Location

The Proposed Project is located in County Mayo in the townlands listed in Table 1-1 of Chapter 1 of this EIAR and is shown in Figure 15-1a.

The Site is located within a rural setting in south Co. Mayo, approximately 5.8km northwest of the town of Claremorris. The town of Castlebar is located approximately 16km north-west of the Site. The N60 National Road runs north-south approximately 2km to the east. The R331 Regional Road runs northeast-southwest, approximately 5km from the southern boundary of the site. Existing access is via the L1505 and L15053 local roads to the south and the L5536 to the north.

The Proposed Grid Connection consists of c.982m of 110kV underground electrical cabling which will run in a north-eastward direction from the proposed onsite 110kV substation through agricultural land to the existing overhead 110kV Cloon-Castlebar transmission line. The existing overhead line will be broken by 2 no. end masts (lattice type towers) to facilitate the connection to the Proposed Wind Farm. The entirety of the Proposed Grid Connection is in the townland of Cloonbaul.



NOTES:
PLANNING DRAWING ONLY - NOT FOR CONSTRUCTION PURPOSES

Figure 15-1a Site location, turbine delivery route, general construction traffic routes

PROJECT: Cunlaghfadda Green Energy Project		
CLIENT: Cunlaghfadda Green Energy Ltd		SCALE: NTS
PROJECT NO: 11100	DATE: 12.05.26	DRAWN BY: AL

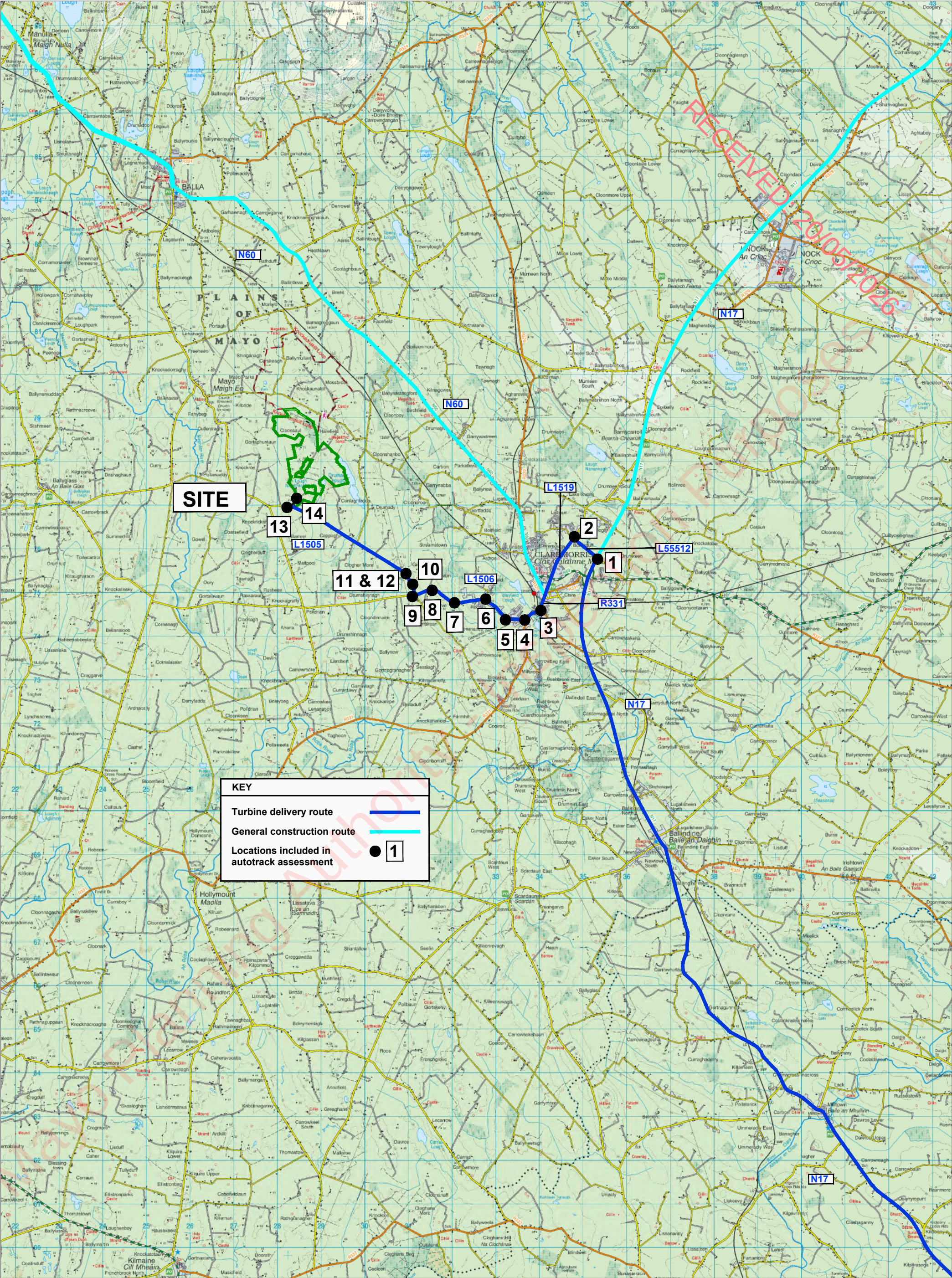
15.1.2.2 Proposed Turbine Delivery Route

The proposed point of arrival for the wind farm plant is the port of Galway in Galway city. The turbine delivery route is as follows;

- › The Turbine Delivery Route (TDR) will travel northeast through Galway City along the L5056 and L5048 Local Roads, followed by the R339 Regional Road. It will then travel along the L5034 before reaching the R336.
- › The TDR route will then enter the N6 National Road at the Bothar na dTreabh/Tuam Road junction (c.3.3 km).
- › The delivery vehicles transporting the abnormally sized loads will continue east along the N6/M6 Motorway for approximately 15km, before merging onto the M17 at the M6/M17/M18 intersection.
- › From here, the delivery vehicles will continue north on the M17 and N17 Tuam bypass and the N17 for approximately 55 km before turning west off the N17 to the north of Claremorris onto the L55512.
- › The route then travels northwest on the L55512 for approximately 0.7 km to the junction with the L1519 when the route then travels south on the L1519 and the R331 for approximately 2.2km
- › At this point the route heads west on the L1506 for approximately 2.8 km before continuing northwest on the L1505 for approximately 3.6 km.
- › At this point the route turns right into the Site via the temporary construction site entrance and on to the L15053 and continues northeast for approximately 0.2 km before turning left onto the L15053.

The total length of the turbine delivery route is approximately 83km.

A detailed assessment of the proposed haul route for the abnormally sized loads was made from Port of Galway to the proposed temporary construction and turbine component entrance in Knockroe. The TDR is discussed in detail in Section 15.1.8 with the locations included in the detailed autotrack assessment shown in Figure 15-1b.



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Figure 15-1b Locations on turbine delivery route for included in autotrack assessment

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15.1.2.3 Proposed Construction Traffic Haul Route

All concrete required for each turbine foundation will be delivered to the Site in one day per foundation for a total of 7 days. The concrete (and some crushed stone) required for the turbine foundations will be sourced from the proposed onsite borrow pit as described in Section 4.4.1.6 of Chapter 4. It is intended to obtain materials (approx. 16,000m³) for the construction of the Proposed Project from the proposed on-site borrow pit (with the remaining 61,200m³ to come from local licenced quarries).

As outlined in Section 4.4.4.4 in Chapter 4 Description of the Proposed Project, approximately 54,000m³ of material will be required for the Proposed Wind Farm footprint, and approximately 23,200m³ of material is required for the Proposed Grid Connection footprint, taking account that approximately 16,000m³ will be sourced from the on-site borrow pit, approximately 61,200m³ will be required to be imported to the Site which is to come from local licenced quarries within 20km of the Site.

All concrete and stone deliveries provided by local quarries will access the Site via the temporary site entrance off the L1505, as shown in Figure 15-6.

A review of the location of the local quarries indicates that in addition to the TDR which approaches Claremorris on the N17 from the south, deliveries from quarries may also be made via the N17 from the northeast in the direction of Knock, and via the N60 from the direction of Castlebar to the northwest. These additional routes are also therefore included in the traffic assessment included in this Chapter of the EIAR.

15.1.2.4 Proposed Grid Connection

The Proposed Grid Connection includes a 110kV underground cabling connecting the proposed 110kV onsite substation to the existing overhead 110kV Cloon-Castlebar transmission line, via a 'loop-in/loop-out' located in the townland of Cloonbaul. The Proposed Grid Connection measures approximately 982m and is located primarily within private agricultural land. The Proposed Grid Connection and associated traffic related impacts are discussed in Section 15.1.7.

15.1.3 Existing Traffic Volumes

Traffic volumes are discussed in terms of either vehicle numbers, or Passenger Car equivalent Units (PCUs), where each vehicle is expressed in terms of its demand on the network relative to the equivalent number of cars. For example, an articulated Heavy Goods Vehicle (HGV) was given a factor of 2.4 PCUs (as per TII Project Appraisal Guidelines for National Roads Unit 5.2), while one of the extended loaders required to transport the wind turbine equipment was assigned a value of 10.

15.1.3.1 Background Traffic Flows

A total of 7 no. locations on the TDR and general construction routes are included in the link flow assessment, with the locations shown in Figure 15-2. The source of the traffic data is set out in Table 15-3.

Base year traffic volumes as observed in the year 2024 for the 7 no. link locations shown in Figure 15-2, range from a maximum of 10,719 vehicles per day on the N17 south of Claremorris, down to a minimum of 370 vehicles per day observed on the L1505 travelling towards the Site, as set out in Table 15-4.

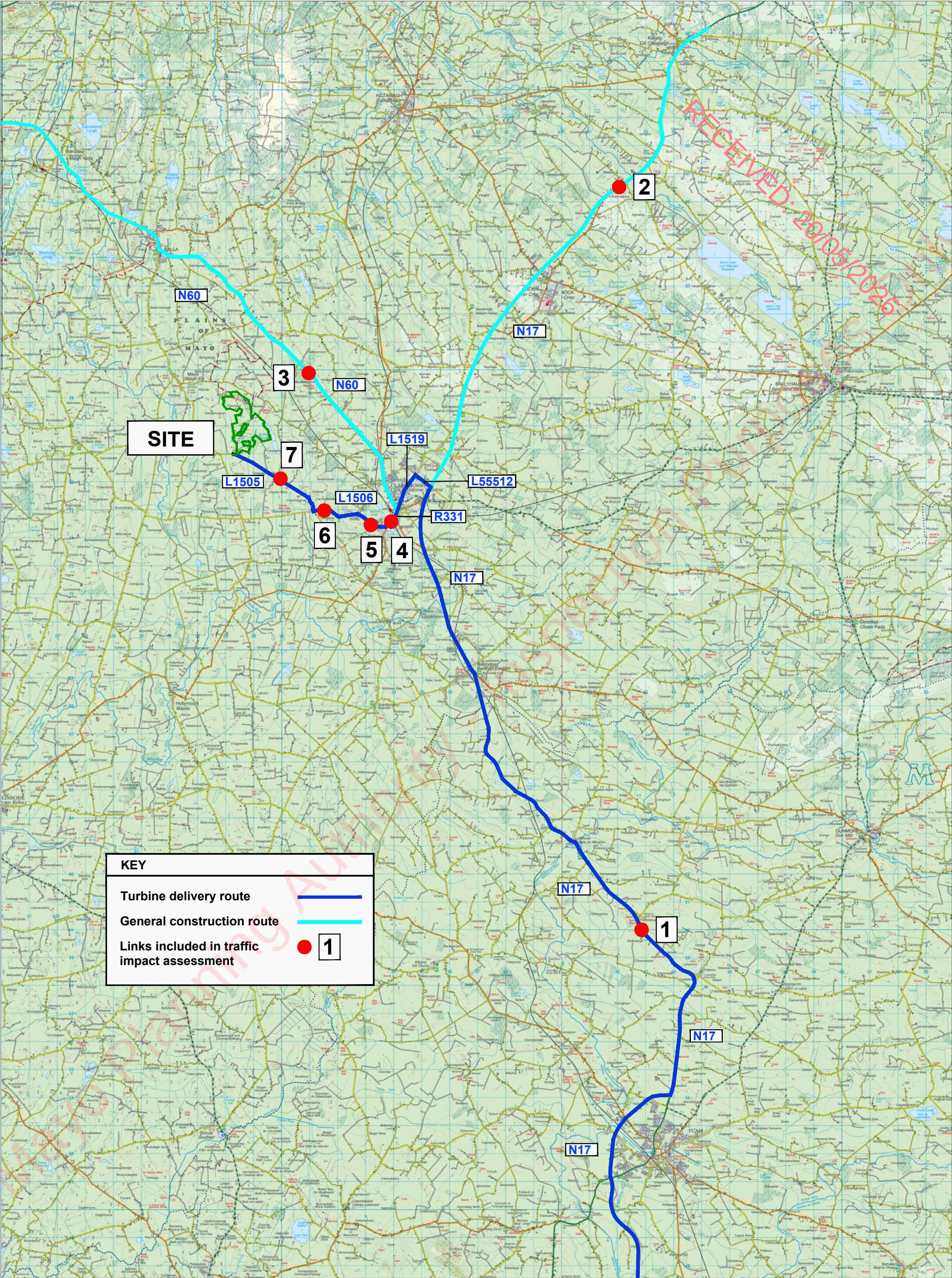
A full listing of the traffic counts data is included as Appendix 15-1.

Table 15-3 Count locations and data source

Link	Data source
1 – N17 – South of Claremorris	Automatic traffic count (TII) – year 2024
2 – N17 – Northeast of Claremorris	Automatic traffic count (TII) – year 2024
3 – N60 – Northwest of Claremorris	Automatic traffic count (TII) – year 2024
4 – R331 – Claremorris	Classified turning count - (Traffinomics) – year 2024
5 – L1506 – East	Classified turning count - (Traffinomics) – year 2024
6 – L1506 – West	Classified turning count - (Traffinomics) – year 2024
7 – L1505	Classified turning count - (Traffinomics) – year 2024

Table 15-4 All day traffic flows by location, years 2024 (2-way vehicles)

Link	2024
1 – N17 – South of Claremorris	10,719
2 – N17 – Northeast of Claremorris	6,783
3 – N60 – Northwest of Claremorris	6,199
4 – R331 – Claremorris	7,587
5 – L1506 – East	2,480
6 – L1506 – West	1,249
7 – L1505	370



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Figure 15-2 Location of links included in traffic impact assessment

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15.1.3.2 Background Traffic Volumes for the Assumed Construction Year 2030

This section describes the process adopted to produce background traffic forecasts for an assumed construction year of 2030.

Revised guidelines for forecasting annual growth in traffic volumes were produced by TII in October 2021, as set out by county in the 'Project Appraisal Guidelines for National Roads (Unit 5.3)'. The annual growth rates for light vehicles for the County, and factors for the years relevant to this study, are shown in Table 15-5 and Table 15-6. Based on a medium growth scenario, traffic volumes are forecast to increase during the period from 2024 to 2030 by 6.8%. All day traffic flows on the study area network are compared for the years 2024 and 2030 in Table 15-7.

It should be noted that while the assumed construction year of 2030 may vary slightly, this will not alter the forecast outcomes and effects presented in this section of the EIAR. This is due to the annual growth rate for background traffic being just 0.28% (as shown as 1.0028 in Table 15-5) and the traffic volumes generated by the Proposed Project will remain unchanged regardless of construction year, as presented subsequently in Section 15.1.4.

Table 15-5 TII traffic growth forecasts, growth per annum and cumulative, County Mayo

Year	Light Vehicles – Annual Factor			Light Vehicles – Cumulative Factor		
	Low	Medium	High	Low	Medium	High
2024	1.0111	1.0127	1.0161	1.000	1.000	1.000
2025	1.0111	1.0127	1.0161	1.011	1.013	1.016
2026	1.0111	1.0127	1.0161	1.022	1.026	1.032
2027	1.0111	1.0127	1.0161	1.034	1.039	1.049
2028	1.0111	1.0127	1.0161	1.045	1.052	1.066
2029	1.0111	1.0127	1.0161	1.057	1.065	1.083
2030	1.0009	1.0028	1.0063	1.058	1.068	1.090
2031	1.0009	1.0028	1.0063	1.059	1.071	1.097
2032	1.0009	1.0028	1.0063	1.060	1.074	1.104

Table 15-6 TII traffic growth rates by growth scenario

Period	New Factors		
	Low	Medium	High
2024 – 2030	1.058	1.068	1.090

Table 15-7 All day traffic flows by location and year (2-way vehicles)

Link	Observed 2024	Forecast 2030
1 – N17 – South of Claremorris	10,719	11,448

2 - N17 - Northeast of Claremorris	6,783	7,244
3 - N60 - Northwest of Claremorris	6,199	6,621
4 - R331 - Claremorris	7,587	8,103
5 - L1506 - East	2,480	2,649
6 - L1506 - West	1,249	1,334
7 - L1505	370	395

The traffic count data recorded at each location was also used to determine the existing percentage of HGVs on the delivery routes, as set out in Table 15-8. The figures show that the percentage of HGVs varies from a minimum of 2.2% observed on the L1505 approaching the site to a maximum of 5.8% observed on the N17 to the northeast of Claremorris.

The construction year 2030 traffic flows discussed up to this point in terms of vehicles are split into vehicle type (HGVs and Cars/lgvs) and also presented in terms of PCUs in Table 15-8.

Table 15-8 All day flows, percentage HGVs and flows by vehicle type, year 2030.

Link	All day flow (vehs)	% HGV's	Vehicles		PCUs		
			HGVs	Cars /lgvs	HGVs	Cars /lgvs	Total
1 - N17 - South of Claremorris	11,448	4.8%	549	10,898	1,319	10,898	12,217
2 - N17 - Northeast of Claremorris	7,244	5.8%	420	6,824	1,008	6,824	7,832
3 - N60 - Northwest of Claremorris	6,621	3.0%	199	6,422	477	6,422	6,899
4 - R331 - Claremorris	8,103	5.2%	421	7,682	1,011	7,682	8,693
5 - L1506 - East	2,649	3.0%	79	2,569	191	2,569	2,760
6 - L1506 - West	1,334	3.8%	51	1,283	122	1,283	1,405
7 - L1505	395	2.2%	9	386	21	386	407

15.1.4 Proposed Project and Traffic Generation

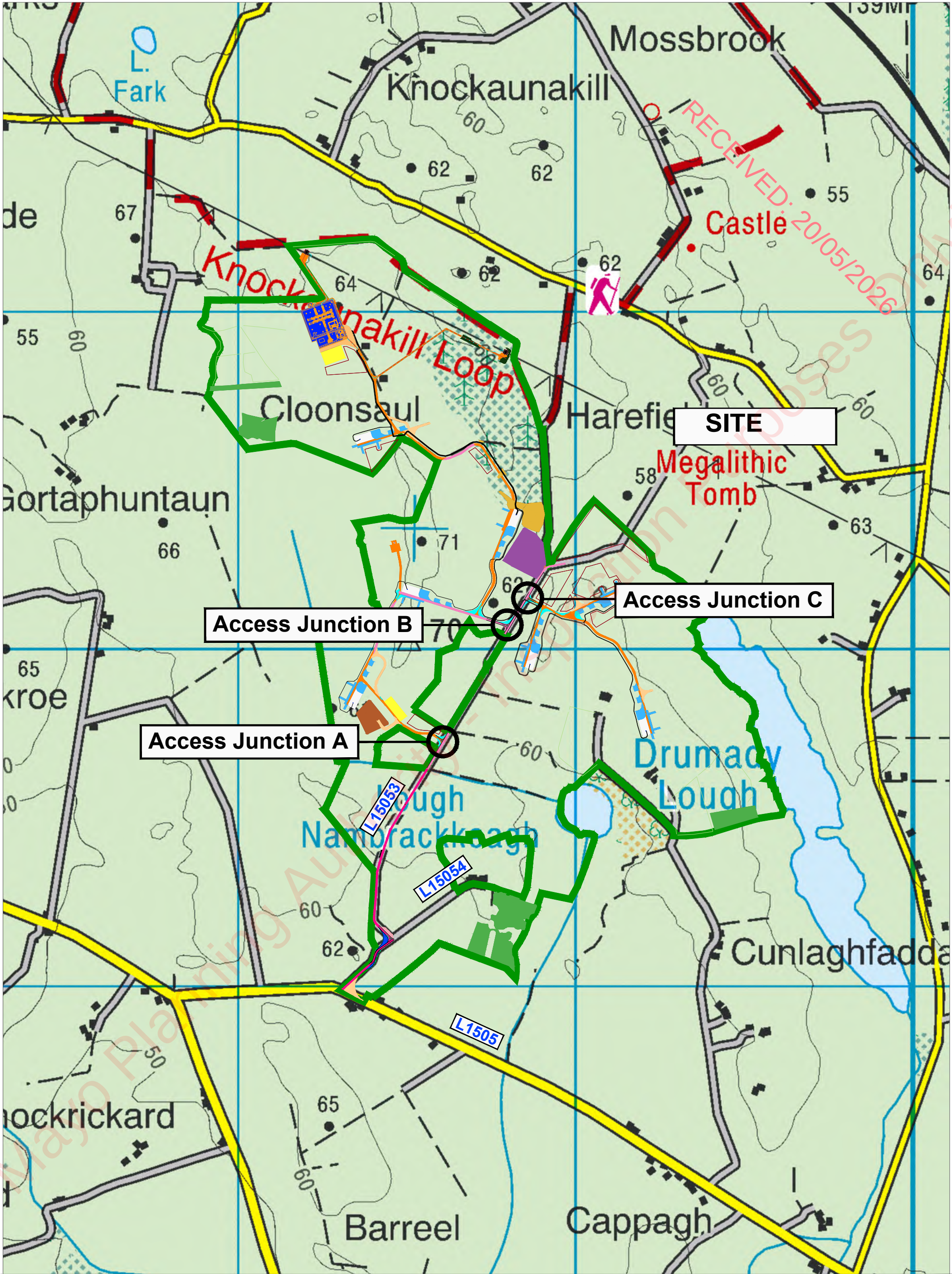
15.1.4.1 Proposed Access Junction

While the design of the junctions that will provide access to the Proposed Project is discussed in Section 15.1.9, a summary of the proposed access junctions are provided below. The location of the proposed access junctions that will provide access to the Proposed Project are shown in Figure 15-3.

Proposed Wind Farm Access Junctions

The location of the 3 site access junctions are shown in Figure 15-3. While these are discussed further in Section 15.1.9, they are summarised as follows;

- › **Access Junction A** – This Junction is located off the north side of an existing track which is a continuation of the L15053 approximately 650m north of the existing junction between the L15053 and the L15054. This junction will provide for all construction traffic and operational traffic for all 7 turbines.
- › **Access Junction B** – This junction is located off the northside of the existing track, approximately 400m north of Access Junction A. This junction will provide for construction traffic and operational traffic for 3 turbines.
- › **Access Junction C** – This junction is located off the southern side of the access track approximately 100m to the east of Access Junction C. This junction will also provide for construction traffic and operational traffic for 3 turbines.



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Figure 15-3 Location of access junctions

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