

Ballyfeeny Green Energy Project



Environmental Impact Assessment Report Volume III

Appendix 12.1 – Traffic and Transportation Assessment

September 2025

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RECEIVED: 15/09/2025



Stephen Reid Consulting

Traffic and Transportation

*Ballyfeeny Wind Farm Development,
Ballyfeeny, Co Roscommon*

Traffic and Transportation Assessment

Client: Ballyfeeny Green Energy Limited

RECEIVED: 15/09/2025

Rev	Date	Purpose of Issue	Checked	Approved
-	07.07.2025	Initial Draft	SR	
1	20.08.2025	Draft issue to CGEL	SR	SR
2	09.09.2025	Draft Planning Issue	SR	SR
3	11.09.2025	Final Planning Issue	SR	SR

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Contents

1	Introduction	3
1.1	Background	3
2	Non-Technical Summary	6
3	Site Location & Existing Conditions	13
3.1	General	13
3.2	Receiving Environment – Existing Road Network and Accessibility	14
3.3	Existing Road Traffic Collision Data	16
3.4	Existing Traffic Volumes	16
3.5	Existing Road Conditions on the Grid Connection Route	19
3.6	The Turbine Delivery Route	20
3.7	Existing Public Transport Services	21
4	Proposed Development	22
4.1	General	22
4.2	Grid Connection route (GCR) Works	22
4.3	Turbine Delivery Route (TDR) Works	22
4.4	Embedded Mitigation Measures Proposed for the Development	24
4.5	Development Access	26
5	Traffic Generation of Proposal	28
5.1	Trip Generation – Construction, Operational, Decommissioning	28
5.2	Other/Committed Development Traffic Generation	39
6	Impact of Proposed Development	40
6.1	Post Development Traffic Impacts	40
6.2	Discussion of Impacts	40

Appendices

Appendix 1: Traffic Count Survey Data

Appendix 2: Mable Consulting Engineers drawing 23604-900-P2 'Quarry Delivery Routes'

1 INTRODUCTION

1.1 BACKGROUND

Stephen Reid Consulting Traffic and Transportation (SRC) has prepared this Traffic and Transport Assessment (TTA) on behalf of Ballyfeeny Green Energy Limited (BGE) for inclusion with a planning application for a proposed wind farm development project

In summary, the proposed development of the Ballyfeeny Wind Farm Project will consist of the construction of a wind farm comprising of 6 No. wind turbines with a substation, relay tower, internal access tracks and other ancillary development (Full project description in Chapter 2 of the EIAR).

The proposed grid connection comprises of a 38kV underground cable route connecting from the wind farm substation to the Slieve Bawn 110kV Substation (the route is 5.8km in overall length, following the R371 southwards from the wind farm construction access SE1 at the existing Coillte track (using a trenching construction method), and passing under the N5 (using a Horizontal Directional Drilling method).

The key access route to the proposed wind farm Site is via the R371, which connects to the N5 at Scramoge.

The abnormal length loads related to the turbine component deliveries (which are proposed to be delivered in escorted convoy from Galway Port to the Ballyfeeny site via the N6, M6, M17, N17 (to Charlestown), and via the N5 to Scramoge, and onto the R371 to Ballyfeeny). There are two Turbine Delivery Route Options on the N5 section as there is a N5 route improvement project in construction between Ballaghaderreen and Scramoge which will bypass Strokestown and is due for completion in Q3 of 2027.

Roscommon County Development Plan 2022-2028) requires all applications for significant development proposals to be accompanied by a Traffic and Transport Assessment (TTA) carried out by suitably competent persons, in accordance with the TII's Traffic and Transport Assessment Guidelines.

The relevant section of TII PE-PDV-02045 Traffic and Transport Assessment Guidelines considering the threshold criteria Tables 2.2 and 2.3 are as follows:

“Table 2.2 Advisory Thresholds for Traffic and Transport Assessment Where National Roads are Affected

Vehicle Movements	100 trips in / out combined in the peak hours for the proposed development	
	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.	
Size	Retail	1,000m ² Gross Floor Area.
	Leisure facilities including hotels, conference centres and cinemas.	1,000m ² Gross Floor Area.
	Business	2,500m ² Gross Floor Area.
	Industry	5,000m ² Gross Floor Area.
	Distribution and warehousing	10,000m ² Gross Floor Area.
	Hospitals and education facilities	2,500m ² Gross Floor Area.
	Stadia	1,500 person capacity.
	Community Facilities including places of worship, community centres.	1,000m ² Gross Floor Area.
	Housing	50 dwellings within urban areas with a population less than 30,000. 100 dwellings within urban areas with a population equal to or greater than 30,000.
Parking Provided	100 on-site parking spaces.	

2.2. Sub-Thresholds

In some cases, the impact of traffic volumes may not be significant and the thresholds requiring a TTA may not be exceeded. However, the type and volume of generated traffic on National Roads may be of a nature to raise concerns about effects on road safety and road infrastructure. The planning authority should consult the evaluation criteria in Table 2.3. It is recommended that if the proposed development meets two or more of these criteria, then a Transport Assessment should be requested.

Table 2.3 Sub-threshold Criteria for Traffic and Transport Assessment

<i>Vehicle Movements</i>	<i>The character and total number of trips in / out combined per day are such that as to cause concern.</i>
<i>Location</i>	<i>The site is not consistent with national guidance or local plan policy or accessibility criteria contained in the Development Plan.</i>
<i>Other Considerations</i>	<i>The development is part of incremental development that will have significant transport implications.</i>
	<i>The development may generate traffic at peak times in a heavily trafficked/ congested area or near a junction with a main traffic route.</i>
	<i>The development may generate traffic, particularly heavy vehicles in a residential area.</i>
	<i>There are concerns over the development's potential effects on road safety.</i>
	<i>The development is in a tourist area with potential to cause congestion.</i>
	<i>The planning authority considers that the proposal will result in a material change in trips patterns or raises other significant transport implications.</i>

From consideration of the proposed Ballyfeeny Wind Farm Project, it is clear that the Construction Stage and associated works relating to the construction of the Grid Connection Route and temporary works for the mitigation measures to accommodate the Turbine Delivery Route could lead to impacts which would fall into the sub-threshold criteria, in terms of traffic movements, and similarly a future decommissioning of the wind farm could also result in traffic impacts.

Unlike other types of development, when operational, the proposed wind farm is not expected to generate any significant traffic movements during peak hours or per day and would not warrant a TTA for operational 'post development' conditions.

In addition to the TTA Guidelines, this TTA has reference to the following:

- Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections PE-PAG-02017 (October 2021)
- Rural Road Link Design DN-GEO-03031 (May 2023)
- Geometric Design of Junctions DN-GEO-03060 (May 2023)
- Roscommon County Development Plan 2022-2028

The National Government Standard 'Technical Standard Design of Forest Entrances from Public Roads' (July 2019) is based on the TII standard DN-GEO-03060, and this has been referenced in the design of the permanent access track serving the Wind Farm Site.

2 NON-TECHNICAL SUMMARY

Application

The proposed development of the Ballyfeeny Wind Farm Project will consist of the construction of a wind farm comprising of 6 No. wind turbines, a substation, relay tower, internal access tracks and other ancillary development, in the townlands of Ballyfeeny and Tully, Co Roscommon.

There are two proposed Temporary Accesses and 4 permanent accesses as follows:

SE1 – Site Entrance 1: Entrance off the R371 servicing the proposed Turbine T01 during the construction phase. This is an upgrade to an existing Coillte forest track site entrance. This site entrance will accommodate abnormal length deliveries and construction traffic during the construction phase. SE1 will revert back to its original layout and use on completion of the construction phase. During the Operational Phase, this entrance may be [temporarily] re-established in the event that abnormal length deliveries are required as part of Turbine component repair or replacement.

SE6 – Site Entrance 6: Entrance off the L60498 connecting the main wind farm track to SE5 to accommodate a straight run through with turbine component deliveries to T06. Except for abnormal length loads, SE6 will not be used for construction traffic, a removable barrier will be constructed across the entrance to this road to prevent unauthorised use. This site entrance will be removed and the area reinstated on completion of abnormal length deliveries and the construction phase.

The proposed Permanent Accesses are as follows:

SE2 – Site Entrance 2: Entrance off the L6018 servicing the proposed Turbine T01. This is a new site entrance onto the public road;

SE3 – Site Entrance 3: Entrance off the L6018 servicing the substation, Relay Tower, and Turbines T02 to T05, this is a new site entrance onto the public road;

SE4 – Site Entrance 4: Entrance off the L60498 servicing the proposed Turbine T05, this is an upgrade to an existing field entrance onto an unsealed public road;

SE5 – Site Entrance 5: Entrance off the L60498 to proposed Turbine T06, this is a new site entrance onto an unsealed public road.

The primary site access for the Construction Phase of the Project is the Coillte access track (SE1), located 1.95km to the north of the N5/R371 crossroads junction at Scramoge. This will be used for all HGV deliveries to/removals from the Site that are travelling via the R371 (and N5) to the south of the Site. HGV deliveries to/removals from the Site that are travelling via the R371 to the north of the Site will access via the L6018 and use SE2/SE3. This delivery route strategy will minimise additional traffic using the R371 passing the Ballyfeeny National School frontage located to the north of SE1 and south of the L6018) and eliminate Project related haulage traffic from that section of the R371.

The GCR will consist of 5.8km of underground grid connection works with 8 No. joint bays and connection chambers, within the boundaries of the public road infrastructure to the existing Sliabh Bawn 110kV Substation.

This follows the route exiting from the wind farm Site onto the R371 via the Coillte track at SE1 (to the south of Ballyfeeney NS) and southward along the R371 via Scramoge, and from there crosses under the N5 and continues southwards via the R371 to the Sliabh Bawn 110kV Substation.

Current Vehicle Access

There is a Coillte access track on the east side of the R371, to the south of Ballyfeeney National School. There are also frontages on the L6018 and L60498 to areas of the wind farm Site.

Current Uses

The application site comprises undeveloped/agricultural lands to the east of the R371.

Existing Traffic Volumes

Data collection for baseline conditions was undertaken through installation of Automatic Traffic Counters (ATCs) on the R371 in Ballyfeeny in June 2024, and review of the TII Permanent Traffic Counter website for the National Road traffic flows. The traffic data is appended to this Chapter.

The traffic counts on the R371 were undertaken over a period of 7 days in June 2024, for collecting traffic flow and speed data for the purpose of preparing the traffic and transport assessment for this project and to provide baseline traffic for this chapter. The data was collected during school term-time week to ensure it captured commuter and school run traffic using the R371, with particular regard to the proximity of the wind farm Site and the Ballyfeeney National School. The two-way flow on the R371 during the weekday network peak hours are 131 vehicles (08.00-09.00) and 143 vehicles (17.00-18.00).

In accordance with TII Publications Project Appraisal Guidelines (PAG) documents, the collected data was cross-referenced with data from the nearest TII Permanent Traffic Counters on the N5 to check for seasonal fluctuations in traffic on the road network, and to confirm that the R371 count data was representative, as June is not one of the TII defined 'neutral months', but as there are no secondary schools or Third Level Education trip attractors in the local area accessed by the R371, it is considered that the Exam timetables and earlier summer breaks for second and third level education will have no impact on the R371 count data.

Proposed Development Access

SE1 – Site Entrance 1: Entrance off the R371 servicing the proposed Turbine T01 during the construction phase. This is an upgrade to an existing Coillte forest track site entrance. This site entrance will accommodate abnormal length deliveries and construction traffic during the construction phase. SE1 will revert back to its original layout and use on completion of the construction phase.

SE6 – Site Entrance 6: Entrance off the L60498 connecting the main wind farm track to SE5 to accommodate a straight run through with turbine component deliveries to T06. Except for abnormal

length loads, SE6 will not be used for construction traffic, a removable barrier will be constructed across the entrance to this road to prevent unauthorised use. This site entrance will be removed and the area reinstated on completion of abnormal length deliveries and the construction phase.

When completed, the following permeant accesses will service the wind farm:

SE2 – Site Entrance 2: Entrance off the L6018 servicing the proposed Turbine T01. This is a new site entrance onto the public road;

SE3 – Site Entrance 3: Entrance off the L6018 servicing the substation, Relay Tower, and Turbines T02 to T05, this is a new site entrance onto the public road;

SE4 – Site Entrance 4: Entrance off the L60498 servicing the proposed Turbine T05, this is an upgrade to an existing field entrance onto an unsealed public road;

SE5 – Site Entrance 5: Entrance off the L60498 to proposed Turbine T06, this is a new site entrance onto an unsealed public road.

Site Information Signs will be installed at all permanent access points from the public road for the operational life of the wind farm.

Proposed Development Construction Phasing

The 18 month construction programme and phasing are set out in the following Table, with several phases overlapping or running concurrently.

Phase	Activity	Duration
Phase 1	Detailed Design Stage – For Construction - Detailed Civil, Structural and Electrical Design Works - Planning Compliance Works - Environmental Compliance Works - Pre-Construction Surveys	6 months over approximately a 15-month period
Phase 2	Civil Engineering Enabling Works - Setting out site boundaries - Tree felling and hedge cutting - Site entrance works to create access - Temporary Construction Compound Advance drainage works and silt control measures	3 Months
Phase 3	Civil Engineering Main Site Works Upgrade and Widening of Public Road in Vicinity of Site (Pre-Turbine Delivery)	8 months

	- Access Track Construction - Crane Hardstand Construction - Drainage Works - Initial Reinstatement Works (Pre-Turbine Delivery)	2 months
	Final Reinstatement Works (Post-Turbine Delivery)	(Post-Turbine Delivery)
Phase 4	Structural Engineering Works - Wind Turbine Foundation Construction - Relay Tower Foundation Construction - Substation Construction	4 Months
Phase 5	Wind Farm Internal Cabling	4 Months
Phase 6	Turbine Delivery Route Enabling Works	3 months
Phase 7	Turbine Delivery, Erection and Commissioning	6 months
Phase 8	Site Electrical Works - Employer (IPP) Electrical Installations & Commissioning ESB Networks - Electrical Installations & Commissioning	6 Months
Phase 9	Grid Connection Works - Ducting Works - Cable Installation Works Final Connection Works in ESB Substation	5 Months
Phase 10	Final Commissioning of the Development	1 Month
	Total Duration on Site (Some Phases will be carried out in parallel)	18 Months

Table 2.1: Proposed Construction Phases (source: Ballyfeeny Green Energy Limited)

Construction traffic volumes have been based on the proposed construction programme, expected staffing for the project and expected volumes of materials on a typical day and also with consideration of a peak activity day (turbine tower foundation concrete pour).

An anticipated 35 persons will be directly employed during peak activities on the wind farm. There will also be 10 persons directly employed during the grid connection works who will travel first to the main site each day and from there by van to the section of the grid connection route that they are working on.

There will be a similar number of 5 persons directly employed during the temporary works on the turbine delivery route construction and reinstatement, excluding sub-contracted TTM company staff who will operate traffic control measures to manage traffic through areas on the public road where temporary works activities (including grid connection works) are being undertaken.

In terms of day-to-day construction material deliveries to the Ballyfeeny Wind Farm site (i.e. excluding the turbine component delivery), these will peak during Phases 2, 3 and 4 when there will be stone deliveries, then concrete and steel reinforcement deliveries for the crane pads and turbine foundations. Based on the estimated activity periods across the proposed construction programme as set out in Table 2.1 above this is expected to occur during Months 3-6.

Crushed stone to be used as subbase and backfill material is to be sourced from local quarries. There is a quarry located to the north of the wind farm site on the R371 (Ballyfeeney Rock), which could significantly reduce the travel distance by road for deliveries of stone materials by haul trucks to the site if it can be used as a materials source. Mable Consulting Engineers have also prepared a Quarries Delivery Routes map and specific route management for accessing the Site from the R371 to the north or south of the Site (to avoid the Ballyfeeney NS). A copy of this is included with this TTA (at Appendix 2).

There are 6 No. turbine base foundations to be constructed with a requirement for steel reinforcing and concrete. The concrete will be sourced from local quarries with batching plants and delivered ready-mixed to site. On a day of a concrete pour for a turbine foundation, it is expected there would be a total of 109 concrete trucks arriving. delivery rate of approximately 9 concrete trucks per hour over a 12-hour period from early morning to mid-afternoon.

Development Impact

As outlined in the Outline CTMP, there would be no other HGV deliveries scheduled for concrete pour delivery periods, and therefore the max volumes of concrete delivery trucks entering/exiting the access track from the R371 would be 9 per hour (each way).

This would occur on 6 separate days during the Phase of foundation construction and would represent the most intense level of HGV activity on the R371 for the project. As a worst case, it is assumed that all of these will travel to/from the R371 to the south of the proposed wind farm site access SE1 and south passing to the junction with the N5 at Scramoge.

Therefore, the maximum increase in HGV traffic on the R371 to the south of the wind farm site construction access would be 218 concrete trucks on the day of a foundation pour (two-way total of arrivals and departures), but this is only an occasional event which occurs only on 6 separate days during that phase.

During stone/aggregate haulage (for the access road construction within the wind farm Site), there would be a maximum of 5 deliveries per hour across each working day for 1 to 2 weeks.

On other days, during the construction period, the HGV activity would range from 1-2 loads per day to 15 loads per day (excluding the turbine component deliveries).

Only minor temporary works are required at a limited number of junctions where turning points occur along the turbine delivery route, relating to temporary removal of street furniture/signs, cutting back or pruning of foliage, and some temporary surface works to provide a swept path zone within the existing public road areas of landscaping comprising a stone/capping aggregate material to create a suitable load

bearing surface and swept path zone for the turbine delivery vehicles. Stone for these areas will be delivered after each area has been cleared and levelled, and that activity will occur for a short duration of one or two days, depending on the extent of the area to be filled with the temporary road materials and the agreed working hours in the Road Opening Licence conditions.

It is intended that the contractor and TTM crew working on these areas will complete one area and barrier it off to prevent public access, and then move on to the next area, to minimise the overall extent of TTM/roadworks control zones.

Following completion of the turbine delivery activity, the reinstatement will be undertaken in the same way, with the stone material removed and the areas at the side of the public road reinstated, including replacing the soils and roadside boundary features. Again, the works at each temporary widening site will be carried out on one area, and then move to the next, to minimise the impact of TTM/roadworks control on the network and road users.

Spoil (topsoil and subsoil) will be primarily managed on site and suitably stockpiled so that it can be used to profile/landscape the completed areas around the wind farm site and reinstate areas of temporary tracks and compound, therefore the haulage to off-site landfill on the road network will tend towards zero.

The GCR works to the existing Sliabh Bawn 110kV Substation c. 5.8km to the south will have an impact on the R371, from the SE1 temporary access (the Coillte track) southwards. The effect on traffic will be from a combination of both the TTM in place at each section of the GCR works (typically the work will be carried out in 100m-200m length sections, to minimise the impact of shuttle working operations on road users), and traffic generated by the GCR works in terms of deliveries and removals of materials.

From estimated material quantities from the CTMP, it is expected that up to 20 trucks delivering materials, and 12 trucks removing materials, would be generated for each 100-200m of GCR works (i.e. up to 20 trucks delivering and 12 trucks removing materials for a 200m length) and based on an estimated progression of 100m-200m per working day (depending on locations of joint bays and working around existing services), this volume of trucks would occur each working day for the duration of the GCR works, in addition to a low number of construction vehicles accessing the works area delivering plant and workers to the GCR works area.

The GCR works along the section of the R371 between the N5 and the wind farm Site will be programmed to occur at a different time from the Turbine Delivery activity and will not occur on peak days of materials deliveries to the wind farm Site (i.e. concrete pours for Turbine Foundations).

Other Planned/Committed Developments

There are proposed wind farm projects (currently in planning assessment) at Darryadd and Derrane, to the south of the area, near Lanesborough. These are not expected to result in cumulative impacts on the R371 or N5 roads assessed for this project.

It is noted that they will utilise part of the same turbine delivery route from Galway Port (N6 and M6) as the Ballyfeeny project, after which these continue on the M6/N6 to Athlone, while the Ballyfeeny project TDR follows the M17/N17 to Charlestown.

Therefore, the turbine component deliveries to these different projects should be planned and co-ordinated by the relevant Road Authorities (TII and County Councils) and An Garda Síochána to ensure these do not occur at the same time on the section of the TDR from Galway Port to the M17 junction.

Measures to Improve Sustainability

The use of material suppliers (stone and concrete) located within a relatively short travel distance to the construction site will reduce the driven vehicle kilometres of construction traffic on the road network

A Travel Plan for construction staff will be implemented to encourage vehicle sharing for commuter travel to and from the wind farm Site.

3 SITE LOCATION & EXISTING CONDITIONS

3.1 GENERAL

The wind farm Site is located at Ballyfeeny and Tully Co. Roscommon, to the east of the R371 Regional Road.

There are 6 No. site entrances / exits proposed to service the proposed Project; 4 No. permanent entrances and 2 No. temporary entrances.

Of the 4 No. permanent entrances, one of these is an upgrade of an existing field entrance.

Of the 2 No. temporary entrances, one of these is a temporary upgrade to an existing Coillte forest track entrance. The site entrances are detailed in Figure 12-3, reproduced from Volume 4, Figure 2-6 of this EIAR).



Figure 3.1 Wind Farm Site Access Locations, Ballyfeeny, Co Roscommon
(source: Vol 4, Fig-26 of the Ballyfeeny Wind Farm Project EIAR)

3.2 RECEIVING ENVIRONMENT – EXISTING ROAD NETWORK AND ACCESSIBILITY

Existing Road Network

The R371 extends northeasterly from Ballyfeeny passing to the east of Kilglass Lough and eastwards to Roosky where it crosses the River Shannon bridge on the Co Roscommon/Co Leitrim border and intersects with the former N4 route, before turning southwards to connect with the N4 at the Tomisky Roundabout on the southern end of the N4 Roosky Bypass (13km by road from Ballyfeeny).

The R371 also extends 10.7km southeastwards from the N5 crossroads to the N63, just west of Lanesborough on the Co Roscommon / Co Longford border.

The R371 junction with the N5 is 4.3km from Strokestown by following the existing N5 road, and the N5 extends in a generally northwestern direction from Strokestown via Tulsk and Frenchpark, to Castlebar and then Westport in Co Mayo, intersecting with the N17 at the grade separated Ballyglass interchange, to the south of Charlestown in Co Mayo. The distance by road on the N5 from Scramoge to the N17 junction is 58km.

From the Scramoge crossroads junction, the N5 also takes a southeast heading for 9.25km to Termonbarry where it crosses the River Shannon on the border between Co Roscommon and Co Longford, continuing for a further 7km to the N5 Western Bypass of Longford Town, which terminates into the N4 Longford North Bypass.

The N5 junction is a right-left staggered crossroads and has dedicated ghost island hatched right turn lanes for both directions for turning into the R371 north and south arms, with a single traffic lane and a wide hard shoulder in both directions, with the hard shoulder on the approach and exit also acting as deceleration/acceleration lanes for left turning traffic.

The N5 has a national road speed limit of 100kph. The R371 arms of the junction are controlled by a stop line and stop sign and have a channelling island which protects the side road traffic and prevents corner cutting across the staggered crossroads.

There is a crossroads junction at Scramoge on the R371 located 350m north of the N5 junction, where it intersects with two local roads. The L6144 (western arm) connects back into the N5 to the west of Scramoge, and the L1416 (eastern arm) connects eastwards and then south into the N5 at Termonbarry, just west of the River Shannon bridge. The R371 speed limit reduces from 80kph to 50kph on the approaches to the Scramoge crossroads.

St. Anne's Church is located on the northwest corner of the crossroads and Laney's public house is on the southeastern corner. Both side roads have wide splayed corners where they join the R371 and are controlled by stopline road markings (without stop signs). There is a 42-space off-street car park to the west of the crossroads serving the church and graveyard, and an apron parking area serving the pub to the east of the crossroads.

There is limited direct access from individual dwellings and commercial properties on the R371 at Scramoge, with a small housing estate located to the north of the graveyard served by a single shared

access junction onto the R371, and a second housing cul-de-sac to the east of the crossroads, accessed from a shared entrance on the L1416.

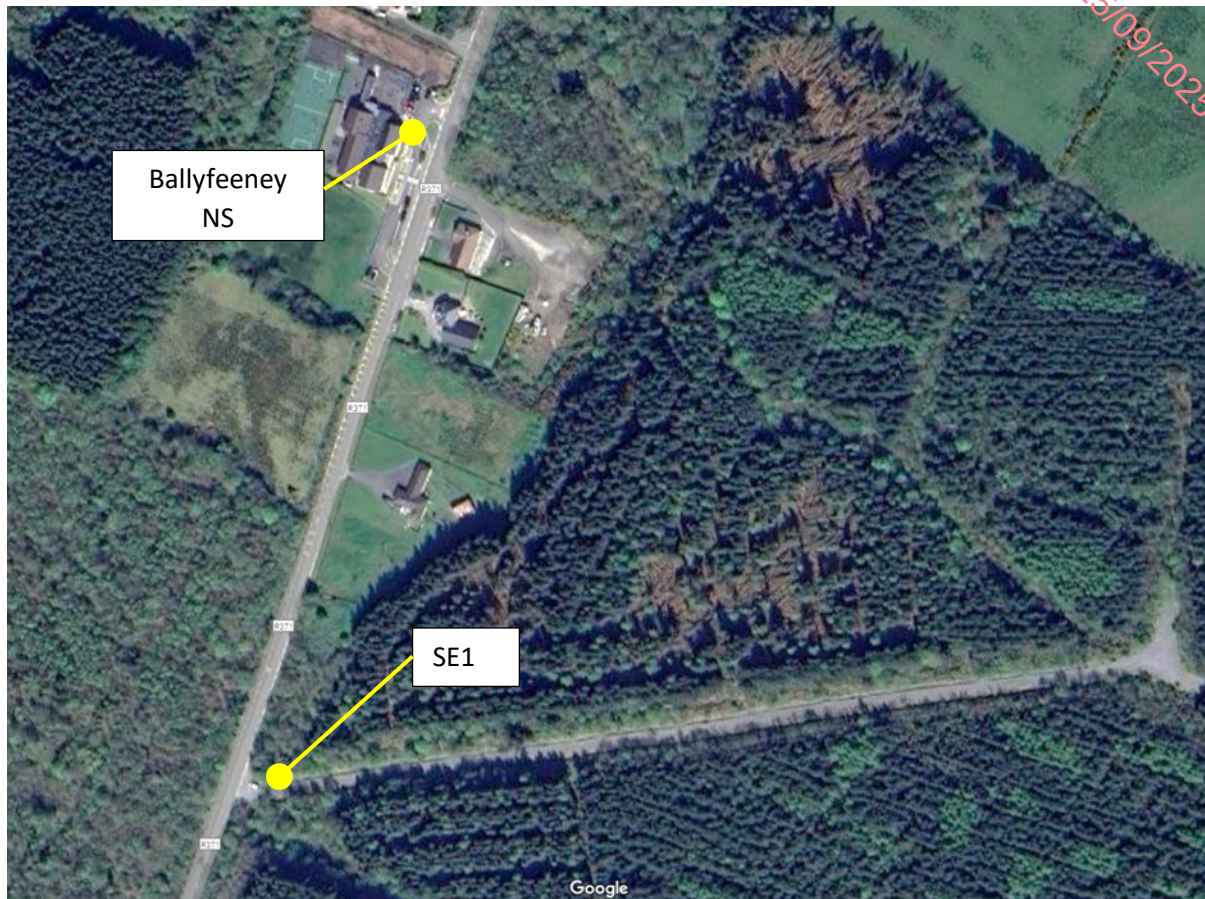


Figure 3.2: Location of Wind Farm SE1 on R371 to South of the Traffic Calming on Approach to Ballyfeeny NS (source: google.ie/,maps, 2025)

Ballyfeeny National School (a primary school) is located on the west side of the R371, some 1.9km north of the crossroads at Scramoge, and 2.2km north of the N5 junction. This has a dedicated parking and set-down area on the west side of the R371, behind a vehicle restraint barrier and pedestrian guardrail, which operates as a one-way system, entering at the northernmost end and exiting from the southernmost end. The car park/set down exit is 240m north of SE1 (Figure 3.2).

There is also a wide gravel margin in front of the dwelling on the opposite side of the R371 which provides further informal set down/parking space for the school.

Each approach to the school has 120m of warning markings (SLOW SCHOOL AHEAD and yellow transverse bar markings) with a radar speed sign at the start of this traffic management measure, using a colour coded speed display that operates during school periods to encourage R371 traffic to pass the school at lower speeds. There is a solid white line marking through this area to identify that no overtaking is permitted and this also means that no parking should take place on the road where there is a solid white line.

It is noted that the school is located in a rural area with no footpaths and therefore travel to the school will be almost exclusively by car or school transport (bus/minibus/taxi).

The R371 has a typical width of 5.5m - 6.0m, with dashed yellow edge of road markings, although there are some vertical alignment constraints on forward visibility with appropriate centreline road markings through cresting sections. The road alignment of the R371 is straight from the N5 junction, to just before the L6018/L6039 skewed crossroad junction (located 660m north of the National School); where there is a slight northbound bend to the right. The L6018 provides access from the R371 to the permanent wind farm SE2 and SE3 accesses).

Further north passing the Ballyfeeney Rock Quarry entrance on the east side of the road, the horizontal alignment becomes more sinuous, with several slight bends to the right and left reducing the forward visibility extents. The L60498 junction is located 540m north of the quarry access on the east side of the R371. The L60498 is an unbound road surface (effectively a single lane farm track) which provides local access to the lands to the north of the quarry. The L60498 will provide access to the permanent SE4 and SE5 accesses, and also a temporary access across the L60498 for the abnormal length loads (turbine delivery) to SE6.

3.3 EXISTING ROAD TRAFFIC COLLISION DATA

The Road Safety Authority (RSA) do not currently provide public access to the Road Traffic Collisions database (this contains collated information on collisions resulting in injury to road users, graded as slight, severe, and fatal). A review online for collisions on the R371 has not identified any reports of collisions on this section.

3.4 EXISTING TRAFFIC VOLUMES

Surveys of traffic volumes and speeds were undertaken in June 2024 to obtain baseline data for the R371, with the Automatic Traffic Counters (ATCs) installed to the north and south of the Ballyfeeney National School outside of the school zone road markings (Figure 3.3).

The southern ATC was installed just north of the Coillte Track – the SE1 access. This access is 240m south of the National School exit on the opposite side of the R371.

The counters were active for a 7-day period from Thursday 20th June 2024 to provide a continuous period of data including 5 schooldays before the summer holiday break.

The key results are set out in following Table.

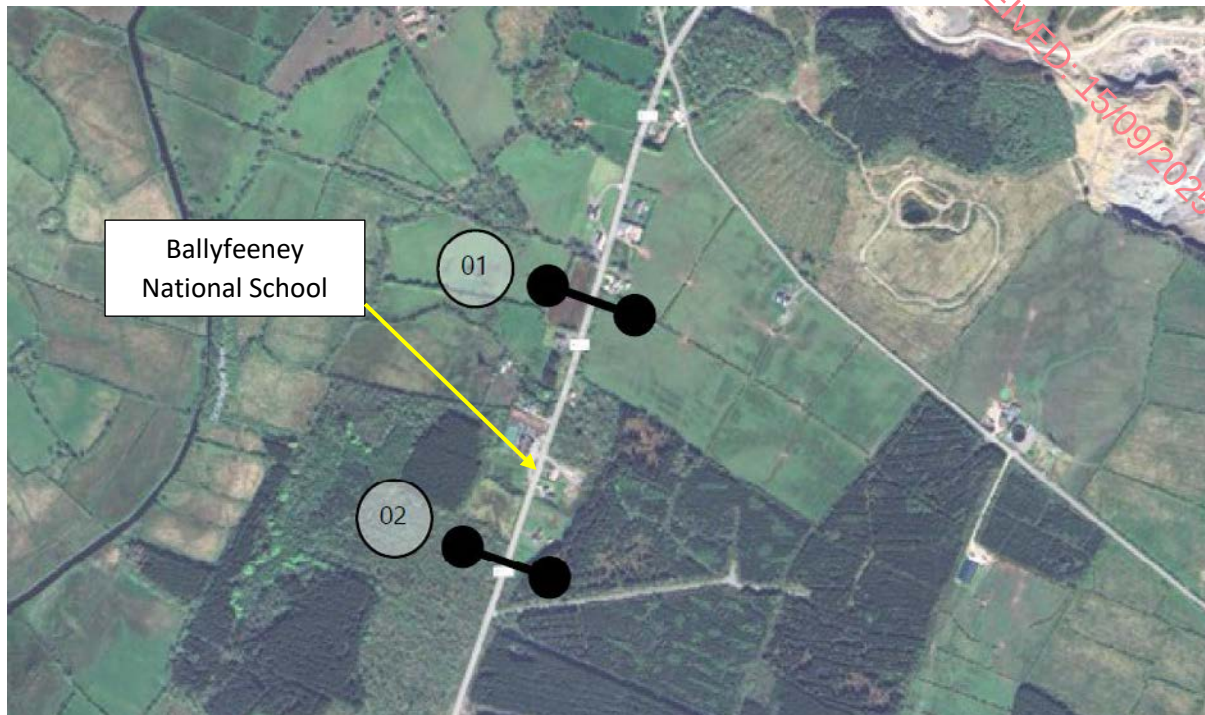


Figure 3.3: Locations of Automatic Traffic Counters Installed on R371 in June 2024
(source: Traffinomics Limited)

Site No.	7 Day Average vehicles/day (%HV)	Weekday Average vehicles/day (%HV)	Northbound 85 th percentile speed (Design Speed)	Southbound 85 th percentile speed (Design Speed)
01 – North of Ballyfeeny NS	1,529 (9.82%)	1,621 (12.02%)	96 kph	93 kph
02 – South of Ballyfeeny NS	1,554 (9.63%)	1,652 (11.78%)	93kph	91.5 kph

Table 3.1: Automatic Traffic Counters on R371 (source Traffinomics for SRC)

The results identify there is a marginally higher volume of traffic flow on the R371 to the south of the National School (i.e. to/from Scramoge), and there is a significant proportion of Heavy Vehicles using the road, particularly on weekdays. It is worth noting that the Ballyfeeny Rock quarry is located 0.8km to the north of the school, and it is expected that a significant proportion of the Heavy Vehicles recorded on the R371 are generated by that operation.

The 85th percentile speeds (also known as the design speed) at the counter locations to the north and south of the school zone are in excess of the 80kph speed limit, in both directions.

There are TII permanent traffic counter sites located along the N5 National route, with the closest site to the R371 junction located to the west of Termonbarry town, which would provide a reasonable traffic volume figure for levels using the N5 at the R371 Scramoge junction (see Figure 3.4).

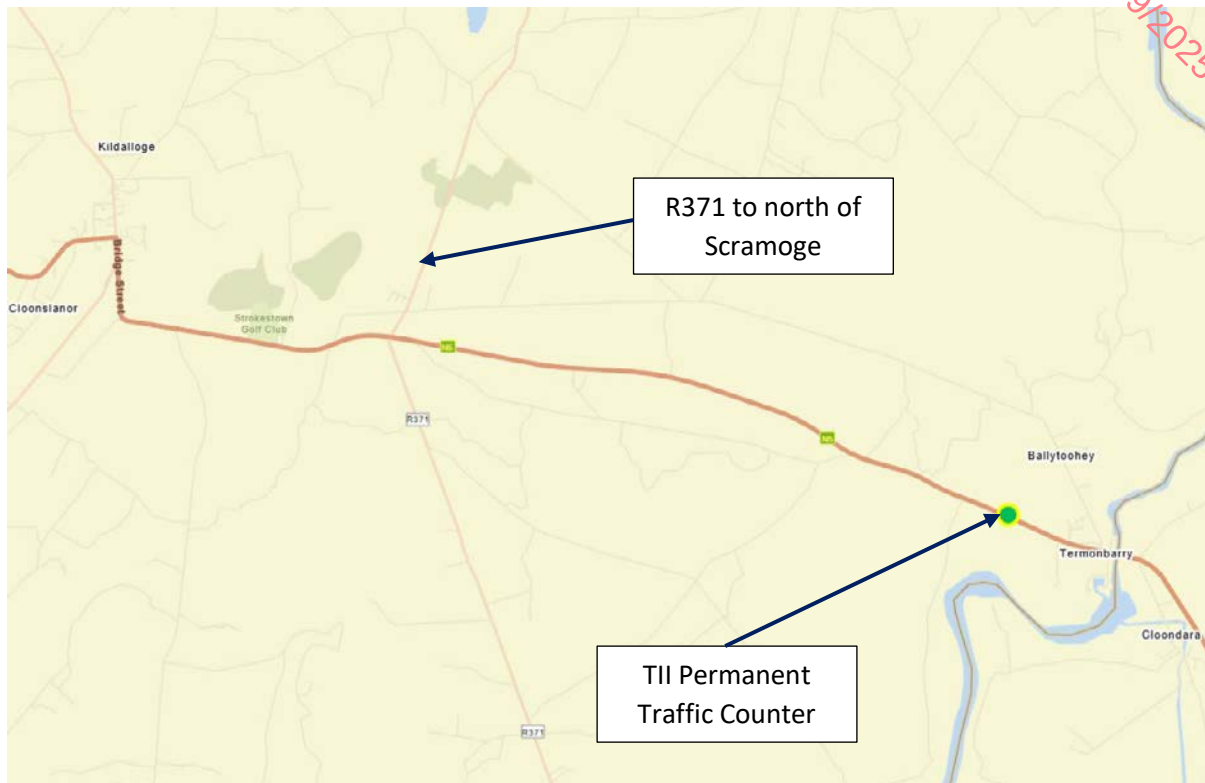


Figure 3.4: Location of TII Permanent Traffic Counter on N5 to the East of R371

(source: <https://trafficdata.tii.ie/publicmultinodemap.asp>)

The counters update to the TII website in real time, and it is noted that the 2024 Average Daily Traffic (ADT) was 5,576 vehicles per day, with a 9.9% Heavy Vehicles content.

The next closest TII permanent traffic counter site on the N5 National route is just southeast of Frenchpark (see Figure 3.5). The 2024 Average Daily Traffic (ADT) was 5,954 vehicles per day, with a 10.7% Heavy Vehicles content.

It is noted that the N5 Ballaghaderreen to Scramoge Road Project will bypass Strokestown and Frenchpark. Construction works are currently underway on the project with a 2-year programme (project information notes a completion in Q3 of 2027) and therefore with consideration of the likely timeframe for the wind farm planning process, including addressing any pre-commencement conditions pursuant to a receipt of a final grant, the road project could be in place before the wind farm project construction commences, or could come online during the period of the wind farm project construction.

The currently active TII counter at Frenchpark on the existing N5 will be bypassed by the new N5 route alignment. There will be a transfer of much of the N5 traffic from that section onto the new route with the existing N5 downgraded in designation and serving local traffic movements only.



Figure 3.5: Location of TII Permanent Traffic Counter on N5 to the South east of Frenchpark
 (source: <https://trafficdata.tii.ie/publicmultinodemap.asp>)

3.5 EXISTING ROAD CONDITIONS ON THE GRID CONNECTION ROUTE

The Grid Connection route (GCR) will consist of 5.8km of underground grid connection works with 8 No. joint bays and connection chambers, within the boundaries of the public road infrastructure to the existing Sliabh Bawn 110kV Substation. The route is illustrated in Figure 3.6.

The GCR follows the route exiting from the wind farm Site onto the R371 via the Coillte track at SE1 (to the south of Ballyfeeney NS) and southward along the R371 via Scramoge, and from there continues southwards via the R371 to the Sliabh Bawn 110kV Substation.

The R371 has a similar profile to the south of the N5, having a straight horizontal alignment with some vertical alignment crests and dips but reasonable forward visibility for the 80kph speed limit. The width is generally 5.0m - 6.0m with a centreline and edge of road dashed yellow markings.

The Sliabh Bawn 110kV Substation access is 1.75km south of the N5 junction. It is controlled by a stop line and stop sign, and the wind farm and substation access road are managed by Coillte and is signed as being a 25kph speed limit.

There are car parking areas and public amenity access in the Sliabh Bawn area which is used for leisure including walking and biking trails around the existing wind farm, so the section of the GCR from the R371 on the Substation access road is also partly on roads accessible to the public.



(source: Rowan Engineering Consultants)

3.6 THE TURBINE DELIVERY ROUTE

This traffic and transport assessment has reviewed the two options for the Turbine Delivery Route (TDR). A full description of the TDR's is provided in the EIAR at Chapter 2 - Project Description, and Appendix 2.1.4 -Traffic Management Plan (TMP).

TDR 1a

If the turbine delivery phase of the wind farm project occurs after the completion of the new N5 Ballaghaderreen to Scramoge Road Project, TDR 1a will be used. This route avoids bringing abnormal length loads through the town of Strokestown. Works required along Nodes for TDR 1a are indicated in the EIAR at Table 2-1 in Chapter 2 – Project Description.

TDR 1b

This option is proposed in the event that the new N5 Road Project has not been completed by the time the proposed wind farm turbine component deliveries are due to commence. An alternative route through Strokestown will be utilised.

Works required along Nodes for TDR 1b are indicated in Table 2-2 in Chapter 2 – Project Description.

Planning Drawings 23604-1000 and 23604-2000 display nodes mapped for the TDR.

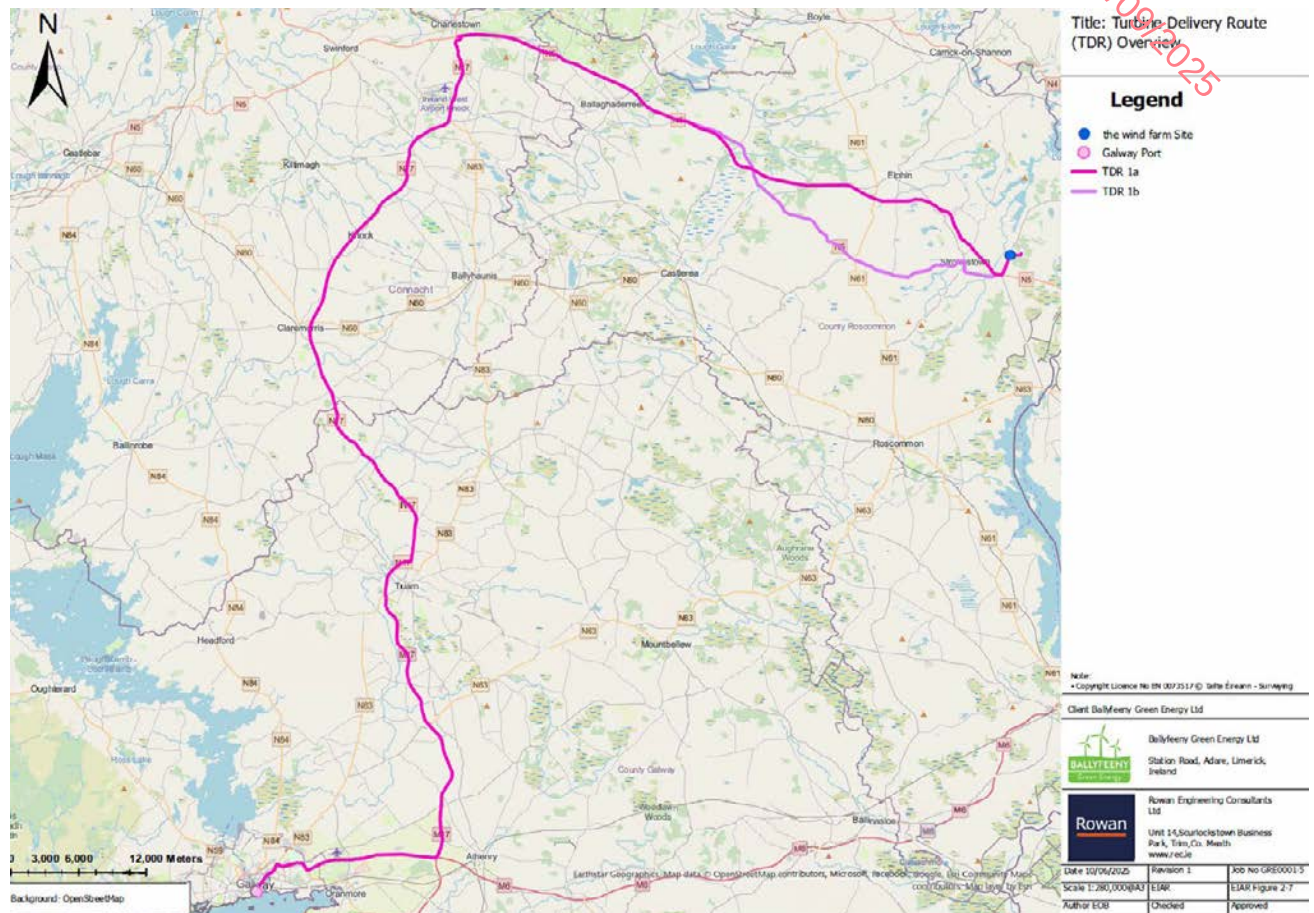


Figure 3.7: Turbine Delivery Route from Galway Port to Ballyfeeny Wind Farm Site
(source: Rowan Engineering Consultants)

3.7 EXISTING PUBLIC TRANSPORT SERVICES

In terms of existing public transport, there are interurban and regional services on the N5, and a Roscommon Local Link service RR06 which stops at Scramoge at 09.30 and 15.30 (Wednesday only), but there are no dedicated bus stops in the area or along the R371 between the N5 and the site access.

4 PROPOSED DEVELOPMENT

4.1 GENERAL

The proposed development of the Ballyfeeny Wind Farm Project will consist of the construction of a wind farm comprising of 6 No. wind turbines, a substation, relay tower, internal access tracks and other ancillary development, in the townlands of Ballyfeeny and Tully, Co Roscommon.

There are two proposed Temporary Accesses and 4 permanent accesses as follows:

Temporary accesses:

- SE1 – Site Entrance 1: Entrance off the R371 servicing the proposed Turbine T01 during the construction phase. This is an upgrade to an existing Coillte forest track site entrance. This site entrance will accommodate abnormal length deliveries and construction traffic during the construction phase. SE1 will revert back to its original layout and use on completion of the construction phase. During the Operational Phase, this entrance may be [temporarily] re-established in the event that abnormal length deliveries are required as part of Turbine component repair or replacement.
- SE6 – Site Entrance 6: Entrance off the L60498 connecting the main wind farm track to SE5 to accommodate a straight run through with turbine component deliveries to T06. Except for abnormal length loads, SE6 will not be used for construction traffic, a removable barrier will be constructed across the entrance to this road to prevent unauthorised use. This site entrance will be removed and the area reinstated on completion of abnormal length deliveries and the construction phase.

The proposed Permanent Accesses are as follows:

- SE2 – Site Entrance 2: Entrance off the L6018 servicing the proposed Turbine T01. This is a new site entrance onto the public road;
- SE3 – Site Entrance 3: Entrance off the L6018 servicing the substation, Relay Tower, and Turbines T02 to T05, this is a new site entrance onto the public road;
- SE4 – Site Entrance 4: Entrance off the L60498 servicing the proposed Turbine T05, this is an upgrade to an existing field entrance onto an unsealed public road;
- SE5 – Site Entrance 5: Entrance off the L60498 to proposed Turbine T06, this is a new site entrance onto an unsealed public road.

4.2 GRID CONNECTION ROUTE (GCR) WORKS

The GCR will consist of 5.8km of underground grid connection works with 8 No. joint bays and connection chambers, within the boundaries of the public road infrastructure to the existing Sliabh Bawn 110kV Substation. This follows the route exiting from the wind farm Site onto the R371 via the Coillte track at SE1 (to the south of Ballyfeeny NS) and southward along the R371 via Scramoge, and from there crosses the N5 and continues southwards via the R371 to the Sliabh Bawn 110kV Substation.

4.3 TURBINE DELIVERY ROUTE (TDR) WORKS

The TDR was identified in the previous chapter and involves transport of the large turbine components by road from Galway Port to the Site at Ballyfeeny, Co Roscommon.

The transport will be by escorted convoys using specialised vehicles to accommodate the abnormal length loads, following a route from Galway Port onto the N6 and M6 to the M17 interchange and from the M17 and N17 north to the N5 at Charlestown, and from the N5 eastwards to Scramoge, turning left onto the R371 and continuing north to the SE1 access.

If the turbine delivery phase of the wind farm project occurs after the completion of the new N5 Ballaghaderreen to Scramoge Road Project, TDR 1a will be used. This route avoids bringing abnormal loads through the town of Strokestown. Works required along the nodes for TDR 1a are indicated in Table 2-1 in Chapter 2 – Project Description and are also listed in Table 4.1 below.

Node No.	Description of Works
2020	- Street furniture to be relocated/removed - Road widening works required
2025	Street furniture to be relocated/removed
2040	Street furniture to be relocated/removed
2055	- Street furniture to be relocated/removed - Works to roundabout required
2060	- Street furniture to be relocated/removed - Works to roundabout required - Works to traffic island required
3020	- Street furniture to be relocated/removed - Works to traffic island required - Works to roundabout required - Hedge cutting required
3025	- Street furniture to be relocated/removed - Hedge cutting required
3030	Works to roundabout required
3050	Works to roundabout required
3080	- Street furniture to be relocated/removed - Works to traffic island required - Hedge cutting required
3085	Site Entrance

Table 4.1: TDR 1a Description of Works

TDR 1b is proposed in the event that the new N5 Road Project has not been completed by the time the proposed wind farm turbine component deliveries are due to commence, and an alternative route through Strokestown will be utilised.

Works required along the nodes which are specific to TDR 1b are indicated in the EIAR at Table 2-2 in Chapter 2 – Project Description . and are also listed in Table 4.2 below.

Node No.	Description of Works
4155	• Street furniture to be relocated/removed • Works to traffic island required • Works to footpath required • Works to roundabout required • Tree cutting required
4160	• Street furniture to be relocated/removed • Tree cutting required
4165	• Street furniture to be relocated/removed • Works to traffic island required • Tree cutting required

Table 4.2: TDR 1b Description of Works

Planning Drawings 23604-1000 and 23604-2000 display nodes mapped for the TDR.

4.4 EMBEDDED MITIGATION MEASURES PROPOSED FOR THE DEVELOPMENT

The hours of construction activity will be limited to avoid unsociable hours, where possible. Construction operations shall generally be restricted to between 07:00hrs and 19:00hrs on weekdays and between 07:00hrs and 14:00hrs on Saturdays.

However, to ensure that optimal use is made of good weather periods or at critical periods within the programme (i.e., concrete pours or to accommodate delivery of large turbine components along public routes), it may be necessary on occasion to work outside of these hours. Any such out of hours working will be agreed in advance with Roscommon County Council.

While ‘out of hours’ operational traffic activity for specialised or infrequent deliveries can result in temporary impacts such as increased construction traffic noise to receptors along the haul delivery road network, there is a key offset by reducing the impact on the overall road network, and particularly on the wider network where daytime temporary closures or diversions on the key National and Regional Roads

forming the turbine delivery route would have a more significant impact on the existing network traffic at times when volumes are higher.

Where practical, large volume/intensive deliveries will be scheduled to avoid coinciding with busier periods for traffic activity on the R371, such as the school run hours on term time weekdays. The haulage routes for HGV deliveries/removals from the wind farm Site will be designated so that project related HGV traffic does not pass in front of Ballyfeeny NS.

Adequate advance public information including advertising and promotion of any temporary works closures or diversions through social media, print media and websites (TII, AA Roadwatch, and Local Authorities) and adequate VMS (variable message signage) on approach routes to the site area and temporary accommodation works areas, and also for the turbine delivery activity will be key to minimising disruption to travel which can lead to queuing and increased vehicle emissions.

Based on information from similar previous projects, it is anticipated that approximately 35 persons will be directly employed during peak construction activities on the wind farm site with 10 persons directly employed during the grid connection works. Therefore, the day-to-day construction staff traffic generated by the main windfarm site during the proposed construction period will not be significant. Where practical, construction staff will be encouraged to vehicle share and car pool travelling to and from work sites.

It is intended that the topsoil and subsoil excavated at the wind farm Site and at temporary accommodation works sites will be stored for reuse in reinstatement and landscaping works, to reduce the volume of waste and other materials transported off-site by road.

Where materials such as construction related waste materials cannot be recycled and reused on site, consideration will be had for removal from site by backloading of delivery haulage vehicles where practical to avoid additional single purpose HGV trips.

A detailed updated CTMP for the construction phase will be agreed with RCC in advance of construction commencing. As set out in the CTMP prepared for the planning application, this will include:

- Appointment of a Traffic Management Coordinator
- Engagement/Liaison with locals
- Pre-condition survey
- Road opening licence for any temporary or permanent works on or adjacent to the public roads (and for Grid connection works)
- Adherence to the CTMP and any Temporary Traffic Management (TTM) measures in place at worksites (including management of construction related vehicles to ensure there is no inappropriate parking or loading/unloading on public roads), and strictly following agreed haulage delivery routes, which will be monitored by the Project Management Team throughout the construction period.
- Reinstatement of the temporary accommodation works areas (where widening or bend overswing areas are required to assist the turbine delivery areas) after these delivery activities are complete will return the road network to the same condition as currently exists in line with the requirements of the Roads Authority for that administrative area.

During the construction stage of the Proposed Development, the following key mitigation measures from the Construction Traffic Management Plan will be implemented.

Pre-construction and post-construction surveys will be carried out to ensure the structural integrity of the proposed haulage route road network. Repairs will be carried out on the public roads, as necessary, during the construction phase, to ensure that the condition does not deteriorate below a standard that could affect the use of the roads, as required.

The appointed contractor will liaise with An Garda Síochána and RCC during the construction phase. The appointed contractor will recognise that other external factors such as severe weather events can affect traffic flow close to the proposed wind farm Site and will endeavour to minimise the effect of the works on traffic in the planning of and programming of the works at construction stage.

A strict protocol will be ensured for HGV drivers to follow the designated haulage routes for access to the proposed wind farm Site and timing restrictions, as detailed.

Advance warning will be given to the local residents, businesses and other users (i.e. school traffic, cyclists and public transport operators) for specific times when large volumes of HGV traffic may occur (such as tower foundation concrete pours), or when there are temporary traffic management measures which could restrict sections of the public road to one-way shuttle working.

All signage relating to the proposed construction traffic routes for construction traffic will be agreed with RCC.

A well planned and executed delivery programme for roadworks avoiding peak traffic on typical days will be ensured (i.e. local school start and finish times).

Adequate parking will be provided on the wind farm construction site for both employees and visitors to ensure parking will not occur on the public road.

The grid connection route works undertaken on the public road will be carried out as a moving block of works advancing along the route with a section limited to approximately 100m-200m at a time (exact length will be flexible to ensure TTM measures do not block access to dwellings, commercial entrances, side road junctions, with steel plates kept at the worksite area and deployed over excavations at entrances if required to provide access) while the short sections which may require shuttle working will minimise the disruption and delay to road users on the R371 public road.

At the locations where the grid connection route crosses the N5 it is proposed to use a horizontal drilling method to maintain two-way traffic flow on the National Road.

A road sweeping vehicle will be provided as required to remove any mud that is deposited on the R371 in the vicinity of the site access or at temporary works/grid connection route trenching works.

Wind turbine loads will be delivered by escorted convoy in consultation with RCC and An Garda Síochána, during off-peak traffic periods.

4.5 DEVELOPMENT ACCESS

Vehicle Access

The project includes 4.4km of 5.5m wide access tracks in a combination of new and upgraded sections.

There are works required at the temporary and permanent Wind Farm site accesses to achieve exit sightlines for vehicles turning out onto the public roads.

These sightlines would be provided for the temporary access SE1 for the construction period and would also be provided and maintained during construction and over the operational life of the Wind Farm for permanent accesses SE2, SE3, SE4 and SE5, as there would be occasional access requirements by the operators/maintenance contractors, etc., using vans or small trucks. Temporary access SE6 is only for delivery of the wind turbine components and will only be used under TTM/banksperson control so exit sightlines will not be required for day-to-day construction activity.

For sightlines it is noted at Roscommon CDP Chapter 12: Development Management Standards that the sightline requirements at Figure 12.4 reflect the TII standards.

The TII standards are the national applicable standards and should be taken as the standard on all roads in rural areas (outside of urban speed limit areas).

For Reference, the following relevant extracts from TII DN-GEO-030360 are set out below:

“5.6.1 Design Speed

Geometric standards for junctions are related to the traffic speed of the major road, and for new roads this is the design speed as defined in DN-GEO-03031.

5.6.2 Visibility

5.6.2.1 General

Traffic from either a minor road or direct access has to join or cross the major road when there are gaps in the major road traffic streams. It is therefore essential that drivers emerging from a minor road or direct access shall have adequate visibility in each direction to see the oncoming major road traffic in sufficient time to permit them to make their manoeuvres safely. The visibility requirement for drivers emerging from a minor road or direct access is to the high object (1.05m) on the major road as defined in DN-GEO-03031. This concept also applies to major road traffic turning right into the minor road or direct access.”.

Mable Consulting Engineers have prepared drawings for the proposed Ballyfeeny Wind Farm access junctions.

For SE1 on the R371, this shows the required sightlines of 160m from a 3.0m setback position to the 1.05m high object height on the main road, for an access on a 80km/h speed limit Regional Road, in accordance with the current applicable TII Standard DN-GEO-03060 (May 2023) and also accords with Fig 12.54 of the Roscommon CDP.

For SE2, SE3, SE4, and SE5 (all located on Local roads) the requirement is based on a rural speed limit of 60km/h, and for simple junctions this is 90m each way for a 2.4m setback in accordance with the TII standard and also with Figure 12.4 of the Roscommon CDP, although it is recognised that there are sections of the L60498 (serving SE4 and SE5 accesses) where the ambient speed/drivable speed on the road is below 60km/h, and a reduced/step down in the sightline distance would be adequate (the next step down is to the 70m sightline distance). Each of these permanent access points will have Site Information Signage installed beside the access gate, visible from the public road, per Mable Consulting Engineers drawing 23604-541-P1.

5 TRAFFIC GENERATION OF PROPOSAL

5.1 TRIP GENERATION – CONSTRUCTION, OPERATIONAL, DECOMMISSIONING

There are two scenarios from a traffic perspective. The 'Do Nothing' scenario is what would occur if the proposed wind farm and grid connection route is not developed. In this scenario there would be no new traffic impacts as no construction activity resulting in construction related traffic would be generated, and no roadworks on the public road network would occur, and similarly no operational wind farm conditions would occur, with a continuation of the existing agricultural use of the Wind Farm site lands, and no works to the public road network (including the temporary TDR works).

The 'Do Something' scenario is assuming the development of the proposed wind farm, and the grid connector route works occur, and there are three parts to that:

- (i) the Construction Stage (which will occur over approximately 18 months),
- (ii) the Operational Stage (which would occur over the longer term dictated by the operational life of the Ballyfeeny Wind Farm), and, as a result of developing the proposed wind farm, there will also be;
- (iii) the future Decommissioning Stage (this will have some parallels to the Construction Stage with removal of the above ground elements of the 6No. turbines, and removal and restoration of some of the hard standing, structure and fencing, while other elements such as the tower foundations, and grid connection route ducting would be left in place, so the traffic impact and decommissioning works would be a lower impact and require less works on the public road than the construction activity – i.e. only temporary works may be required on the public road network to transport the abnormal length loads of the decommissioned turbine components from the site).

The development of the proposed wind farm will generate construction traffic (deliveries and construction staff travel) both at the wind farm Site and in locations of temporary works activities along the Turbine Delivery Route (TDR) and works related to the Grid Connection Route (GCR) which involves trenching in public roads and other areas. This Section sets out the key aspects of the construction and associated delivery traffic volumes generated by each type of activity.

Following completion of construction and commissioning works, there will be occasional access by wind farm maintenance engineers (by van or small truck only) during the operational life of the wind farm.

There may also be an unexpected event such as extreme weather resulting in damage (i.e. requiring blade replacement) during the operational life and this would also require temporary reinstatement of the temporary works along the TDR to accommodate the abnormal length loads for replacement blade delivery, crane delivery to the wind farm site, and removal of the damaged component. These events are infrequent but would require co-ordination, permits and Road Opening Licences as appropriate for the temporary works and the abnormal length transport to and/or from the wind farm site.

A wind farm has a typical operational life of 35 years, based on the current design, specification and materials used. After that time, the wind farm could be decommissioned, or an application made to extend the operational life of the wind farm, if that is appropriate.

The proposed construction programme is set out in the following Table 5.1 and Figure 5.1 Gantt Chart with the duration of each element in months. It should be noted that some phases will run concurrently, and the overall Construction period (on-site) is estimated as 18-months.

Phase	Activity	Duration
Phase 1	Detailed Design Stage – For Construction - Detailed Civil, Structural and Electrical Design Works - Planning Compliance Works - Environmental Compliance Works - Pre-Construction Surveys	6 months over approximately a 15-month period
Phase 2	Civil Engineering Enabling Works - Setting out site boundaries - Tree felling and hedge cutting - Site entrance works to create access - Temporary Construction Compound Advance drainage works and silt control measures	3 Months
Phase 3	Civil Engineering Main Site Works - Upgrade and Widening of Public Road in Vicinity of Site - Access Track Construction - Crane Hardstand Construction - Drainage Works - Initial Reinstatement Works (Pre-Turbine Delivery) - Final Reinstatement Works (Post-Turbine Delivery)	8 months (Pre-Turbine Delivery) 2 months (Post-Turbine Delivery)
Phase 4	Structural Engineering Works - Wind Turbine Foundation Construction - Relay Tower Foundation Construction - Substation Construction	4 Months
Phase 5	Wind Farm Internal Cabling	4 Months
Phase 6	Turbine Delivery Route Enabling Works	3 months
Phase 7	Turbine Delivery, Erection and Commissioning	6 months
Phase 8	Site Electrical Works - Employer (IPP) Electrical Installations & Commissioning ESB Networks - Electrical Installations & Commissioning	6 Months
Phase 9	Grid Connection Works - Ducting Works - Cable Installation Works Final Connection Works in ESB Substation	5 Months
Phase 10	Final Commissioning of the Development	1 Month
	Total Duration on Site (Some Phases will be carried out in parallel)	18 Months

Table 5.1: Proposed Construction Phases (source: Ballyfeeny Green Energy Limited)

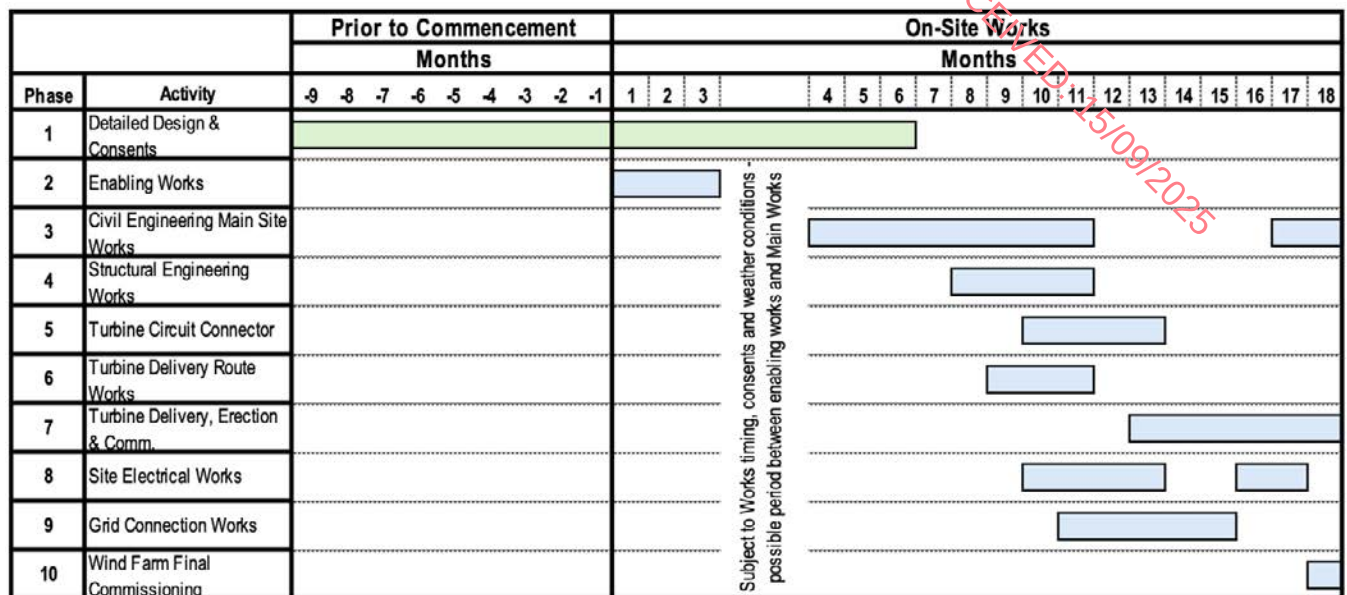


Figure 5.1: Proposed Construction Phasing Gantt Chart (source: Ballyfeeny Green Energy Limited)

Construction traffic volumes have been based on the proposed construction programme, expected staffing for the project and expected volumes of materials on a typical day and also with consideration of a peak activity day (turbine tower foundation concrete pour).

An anticipated 35 persons will be directly employed during peak activities on the wind farm. There will also be 10 persons directly employed during the grid connection works who will travel first to the main site each day and from there by van to the section of the grid connection route that they are working on.

There will be 5 persons directly employed during the temporary works on the turbine delivery route construction and reinstatement, excluding sub-contracted TTM company staff who will operate traffic control measures to manage traffic through areas on the public road where temporary works activities (including grid connection works) are being undertaken.

The quantities of construction materials to be brought to and removed from the Project worksites has been set out in detail in the CEMP, both for the wind farm Site and the GCR works.

These quantities and the resultant number of truck deliveries are set out in the following tables:

- Table 5.2 for material delivered to the wind farm Site;
- Table 5.3 for the material removed from the wind farm Site;
- Table 5.4 for the material delivered to the GCR worksites; and
- Table 5.5 for the material removed from the GCR worksites.

The CEMP also contains the same information on the number of deliveries to and from the Project worksites.

Wind Farm Material Delivered to Site			
Item	Quantity	Unit	No. of Deliveries
Concrete - Consists of Concrete for Turbine, Substation, & Inverter/Transformer Foundations/ Plinths.	7,580	m ³	948
Steel Reinforcement - Consists of Reinforcement for Turbine, Substation, & Inverter /Transformer Foundations/ Plinths.	512	Tonne	25
Stone Aggregates - Consists of aggregate for, engineered fill material, construction of Access tracks, temporary access tracks, road widening works, backfill material for cables.	39,425	m ³	3,943
Crane Deliveries to site, including ballast, booms etc - Cranes of 750 to 1,200 tonnes lifting capacity will be required to erect the Wind Turbines. Ballast is also normally employed for craneage. Smaller cranes of 150 to 200 tonnes lifting capacity will be required to assist with the removal of tower sections from delivery trailers and to operate as "tailing cranes"			60
Substation Deliveries - Blocks, Precast Concrete, Steel Work, Electrical Equipment, Doors, Roofing Materials, DPM Materials, Fencing			55
Internal Cabling - Consists of internal cables connecting Wind Turbines to 38kV Substation.	4,333	m	15
Waste Skips (12 yard) - Timber, Metal, Concrete, Packaging			104
Miscellaneous Materials approximately 10% of overall loads - Consists of materials such as masonry blocks, fencing, geotextile, Storage containers, plant, etc			515
Wind Turbine component delivery - dealt with separately, see Table 5.6			
Total			5,665

Table 5.2: Delivery Traffic Generation from Wind Farm Construction (Material Quantities from CEMP)

In terms of day-to-day construction material deliveries to the Ballyfeeny Wind Farm site (i.e. excluding the turbine component delivery), these will peak during Phases 2, 3 and 4 when there will be stone aggregate deliveries, then concrete and steel reinforcement deliveries for the crane pads, turbine foundations, and transformer/inverter foundations and plinths.

Based on the estimated activity periods across the proposed construction programme as set out in Table 5.1 and Figure 5.1 above this is expected to occur during Months 4-11 of the on-site works.

Crushed stone to be used as subbase and backfill material is to be sourced from local quarries (there is a quarry located at Ballyfeeny to the north of the wind farm site on the R371), which will significantly

reduce the travel distance by road for deliveries of stone materials by haul trucks to the site, and there are a number of other quarries located within a 20-30 minute drive.

The Turbine Foundation will be of circular shape on plan with an anticipated diameter of approximately 25.5m. The Wind Turbine foundation will require approximately 871m³ of poured concrete (excluding blinding concrete, which will be in advance of the main pour) and 110 tonnes of steel reinforcement.

There are 6No. turbine base foundations to be constructed with a requirement for steel reinforcing and concrete. The concrete will be sourced from local quarries with batching plants and delivered ready-mixed to site. On a day of a concrete pour for a tower foundation, it is expected there would be a delivery rate of approximately 9 concrete trucks per hour over a 12-hour period from early morning until mid-afternoon.

As with all development projects, there will be an element of waste removal from the construction site. There will be some materials excavated from the site to form the access tracks and foundation areas which will not be suitable for reuse within the lands and this will have to be removed from the site to a suitable licenced landfill site.

This will occur across the first 12 months of the project, while the standard construction waste (skips of separated material for recycling, hazardous waste, and wastewater) will occur spread over the construction period.

Wind Farm Material Removed from Site			
Element	Quantity	Unit	No. of Removals
Excavated Material (10% contingency)	6,273	m ³	627
Waste Skips (12 yard) - Timber, Metal, Concrete, Packaging	1,040	m ³	105
Hazardous Waste Fuels; Oil / Diesel / Grease	11	m ³	10
Wastewater from Welfare Facilities	540	m ³	135
Total			520

Table 5.3: Removal Traffic Generation from Wind Farm Construction (Material Quantities from CEMP)

The GCR works will be a linear process advancing from the wind farm Site southwards along the R371 to the Slieve Bawn 110kV Substation. It is expected to take 1-2 months to complete (with between 100m and 200m progress per day).

The following quantities of materials delivered and material removed from the GCR works were included in the CEMP.

While the actual volume of construction and waste materials delivered and removed can vary from section to section along the GCR due to localised conditions and the amount of road pavement/surfacing reinstatement required, averaging this out across the overall GCR, it is estimated that each 100m-200m section would require 20 truck deliveries of material and 12 truck removals of stripped/excavated, waste or recycled material.

GCR Material Delivery to Site			
Item	Quantity	Unit	No. of Deliveries
Concrete - Consists of Concrete for Encasing Ducts & Joint bays	1,950	m ³	245
Stone Aggregates - Consists of aggregates to backfill cable trenches, Joint Bays and Comms Chambers	1,655	m ³	166
Bituminous Trench Reinstatement	535	m ³	54
Bituminous Road Surfacing Material - Full width Road Reinstatement	1,390	m ³	139
Precast Chambers - Consists of excavated road make up and subsoil			10
Cabling - Consists of cables connecting from site 38kV to Sliabh Bawn 110kV substation	5,800	m	8
Ducting - Consists of 23.2km of ducting			15
Waste Skips (12 yard) - Timber, Metal, Concrete, Packaging and other miscellaneous waste			5
Miscellaneous Materials/ machinery approximately 10% of overall loads - Consists of items such as, warning tape for cable trenches, temporary traffic management items and machinery such as directional drilling rigs.			62
Total Approximate Deliveries / Loads for GCR Works			678

Table 5.4: Delivery Traffic Generation from GCR Works (Material Quantities from CEMP)

GCR Material Removal from Site			
Item	Quantity	Unit	No. of Removals
Excavated Material Removal - Consists of excavated road make up and subsoil	4,430	m ³	443
Bituminous Trench Material with Subsoil	535	m ³	54
Bituminous Road Surfacing Material - Full width Road Reinstatement	1,390	m ³	139
Waste Skips (12 yard) - Timber, Metal, Concrete, Packaging and other miscellaneous waste	50	m ³	5
Miscellaneous Materials/ machinery approximately 10% of overall loads. - Consists of items such as temporary traffic management items and machinery such as directional drilling rigs.			64
Total Approximate Removals / Loads for GCR Works			705

Table 5.5: Removal Traffic Generation from GCR Works (Material Quantities from CEMP)

Therefore, including the period of construction when there are also grid connection route works, the maximum construction staff traffic accessing the wind farm site from the R371 would be 40 vehicles (cars, vans or light trucks) arriving in the morning between 07.00-08.00 and departing in the evening between 17.30-19.00, with 3-4 vans/small flatbed trucks also travelling from the site to the grid connection route worksite each morning and returning to the site each evening.

The staff vehicle parking will be accommodated at the Wind Farm site within the construction compound area and there will be no parking of staff vehicles on the public road. Visitors to the site from the Project Design/Project Management Team, and other visitors such as ESB Engineers or RCC staff who may visit to monitor works/meet with the contractor will also be advised that they must park in the compound.

Staff working away from the main wind farm site (on the temporary works for the turbine delivery route, or on the grid connection route works) will travel to the main wind farm site compound and park there, and will then travel to the external sites on the public road in contractor vehicles (i.e. van, small flatbed truck or grab truck), with parking at each worksite for the contractor vehicle defined within the working space zone with suitable TTM measures (cones, barriers, signage, etc.) to ensure these vehicles are not parked on the live public road or blocking passing traffic.

Staff working on any required temporary road works at further distances will be catered for separately with local site accommodation/parking identified by the Contractor as that site is remote from the Ballyfeeny Wind Farm site.

In terms of day-to-day construction material deliveries to the Ballyfeeny Wind Farm Site (i.e. excluding the turbine component delivery), these will peak during Phases 2, 3 and 4 when there will be stone aggregate deliveries and concrete and steel reinforcement deliveries for the crane pads, turbine foundations and the transformer/inverter foundation areas. Based on the estimated activity periods across the proposed 12-month construction programme as set out in Table 13.8, this is expected to occur during Months 4-11.

The preference is that crushed stone to be used as subbase and backfill material is to be sourced from a local quarry, to minimise travel distances by haulage vehicles to the Site.

A number of reasonable assumptions and parameters have been used to determine the volumes of concrete deliveries required for a foundation base pour, as follows:

- Concrete will be ready-mixed and delivered to site from supplier batching plant/s in the region (typically no more than 30 mins drive)
- Only one turbine foundation base will be poured at a time.
- An average 'bottle' load on the concrete truck of 8 cubic metres (noting that depending on the supplier and size of vehicle available, this can range between 6 cubic metres and 10 cubic metres).
- For each foundation a quantity of 871 cubic metres and an average load of 8 cubic metres per truck, the number of concrete delivery trucks = 109 loads per base pour.
- A large concrete pour would typically start early morning and end mid-afternoon to allow floating crew time to finish the poured area.
- Therefore, over the 12-hour delivery period this would equate to approximately 9 concrete trucks arriving per hour, or one truck per 6-7 minutes.

Quarries located within a 60km radius of the wind farm Site are illustrated in Figure 5.2 below, which is from Mable Consulting Engineers drawing 23604-900-P2.

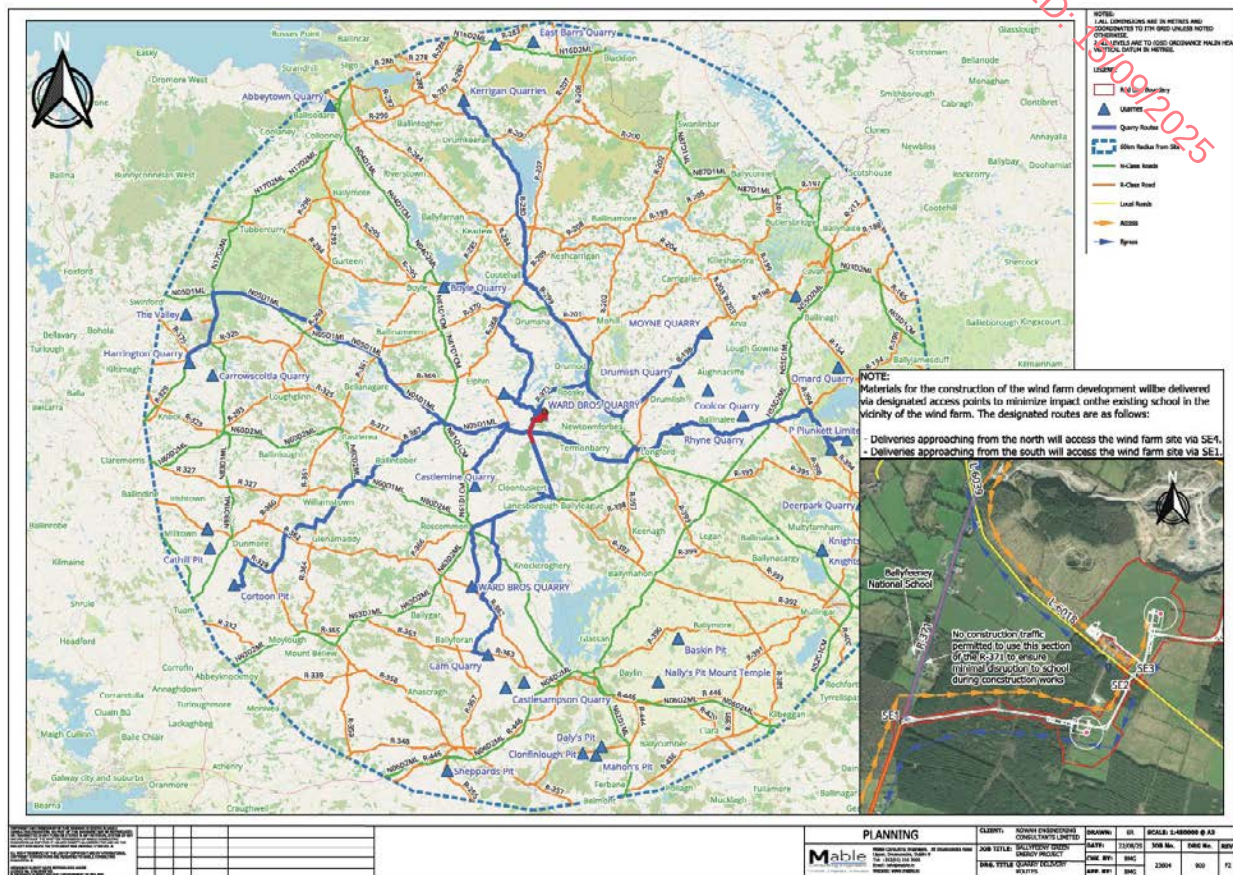


**Figure 5.2: Quarries Located Within 60km of Ballyfeeny Wind Farm Site
(source: Mable Consulting Engineers)**

As set out in the Outline CTMP, there would be no other HGV deliveries scheduled for concrete pour delivery periods, and therefore the max volumes of concrete delivery trucks entering/exiting the access track at SE1 from the R371 would be 9 per hour (each way), with a daily total of 218 concrete delivery trucks (109 laden in and 109 unladen out) over that 12-hour period of the day.

As noted above this would occur on 6 separate days during this Phase and would represent the most intense level of HGV activity on the R371 for the project. As a worst case, it is assumed that all of these will travel to/from the N5 junction at Scramoge to the south of the proposed wind farm site access.

Therefore, the maximum increase in HGV traffic on the R371 to the south of the wind farm site access SE1 would be 218 concrete trucks on the day of a foundation pour, but this is only an occasional event (occurs only on 6 separate days during that phase).

During the peak of stone/aggregate deliveries for access road construction within the wind farm Site area, it is expected that there would be in the order of 5 deliveries per hour for a period of up to 2 weeks.

On other days, during the construction period, the HGV activity would range from 1-2 loads arriving per day to 15 loads per day (excluding the turbine component deliveries).

Only minor temporary works are required at a limited number of junctions where turning points occur along the turbine delivery route, relating to temporary removal of street furniture/signs, cutting back or pruning of foliage, and some temporary surface works to provide a swept path zone within the existing public road areas of landscaping comprising a stone/capping aggregate material to create a suitable load bearing surface and swept path zone for the turbine delivery vehicles.

Stone for these areas will be delivered after each area has been cleared and levelled, and that activity will occur for a short duration of one or two days, depending on the extent of the area to be filled with the temporary road materials and the agreed working hours in the Road Opening Licence conditions.

It is intended that the contractor and TTM crew working on these areas will complete one area and barrier it off to prevent public access, and then move on to the next area, to minimise the overall extent of TTM/roadworks control zones.

Following completion of the turbine delivery activity, the reinstatement will be undertaken in the same way, with the stone material removed and the areas at the side of the public road reinstated, including replacing the soils and roadside boundary features. Again, the works at each temporary widening site will be carried out on one area, and then move to the next, to minimise the impact of TTM/roadworks control on the network and road users.

Spoil (topsoil and subsoil) will be primarily managed on site and suitably stockpiled so that it can be used to profile/landscape the completed areas around the wind farm site and reinstate areas of temporary tracks and compound.

For the GCR, works will be coordinated with the owners/occupiers and any crossings where the trench is on the same side of the road as the access will be carried out in two halves (at larger side roads/commercial accesses) to maintain access, or at narrower width accesses i.e. to individual dwellings or single agricultural gates, the GCR work crew will have steel plates at the working area which can be pulled across the trench to

The grid connection will require a trench excavation and reinstatement which will be undertaken strictly in accordance with the requirements of the RMO Standards and the associated Road Opening Licence and Conditions agreed with RCC.

The delivery of Turbine Components will occur during Phase 7 of the Construction Programme. To establish the Turbine Delivery Route (TDR), a Route Assessment Survey (RAS) for the road transport of the largest engineering design option from Galway Port to the proposed Ballyfeeny Wind Farm Site, Co Roscommon.

Typically, An Garda Síochána would normally permit a convoy of 3 turbine components per delivery (three abnormal/long load 'vehicles' per delivery event).

Therefore, the number of these escorted deliveries via would be as set out in the following Table 5.6:

Turbine Component	Number Per Wind Turbine	Number of Wind Turbines	Weight - typical (tonne)	Number of Abnormal Length Delivery Vehicles
Drive Train	1	6	71	6
Main Bearing Unit	1	6	30	6
Nacelle	1	6	76.8	6
Rotor Hub	1	6	51.6	6
Rotor Blade	3	6	31.8	18
Tower Section 1	1	6	70.4	6
Tower Section 2	1	6	78.3	6
Tower Section 3	1	6	76.9	6
Total Approximate Deliveries / Loads for Wind Turbine Installation Works				60

Table 5.6: Turbine Delivery (Number of Deliveries from TMP)

The 60 delivery vehicles would equate to 20 escorted convoys of 3 abnormal load vehicles per convoy.

None of the measures set out above for the TDR are required to accommodate standard construction deliveries to the Site at Ballyfeeny or for the GCR, which can be made using standard HGVs. i.e. articulated and rigid flatbed trucks (steel, blocks, bagged materials, ducting, pipe and cable), articulated/rigid skip trucks and concrete wagons (for bulk materials such as spoil, stone, or concrete delivery).

Typical construction activities at the Ballyfeeny Wind Farm Site will result in some minor increases in traffic volumes on the key road links accessing the site (the R371 to the south of the SE1 site access, and the N5 to the east and west of the R371 crossroads junction).

As indicated in Table 5.7 on a day-to-day basis, excluding the 6No. individual day events during the project when there are concrete pours for the 6No. tower foundations which will be specially managed and agreed in advance with RCC Roads Department, the levels of traffic increase are expected to be well below the TII Traffic and Transport Assessment Guidelines trigger thresholds of 10% increase during both peak hours and for the daily total, and are not anticipated to result in any detrimental impacts on the operating capacity of the R371.

	<i>Weekday AM Peak (08.00-09.00)</i>	<i>Weekday PM Peak (17.00-18.00)</i>	<i>Weekday Daily total</i>
R371 Existing 2-Way Weekday Link Flow	131	143	1,652
Wind Farm Worker commuting	0	0	+90
GCR crew – daily travel to/from GCR worksite	+4	0	+8
Wind Farm Delivery Traffic (HGV)	+2	+2	+20
<i>Total Increase Due to Project</i>	<i>+6</i>	<i>+2</i>	<i>+86</i>
R371 including wind farm construction traffic	137	145	1,770
Percentage Increase (Impact on R371)	+4.58%	+1.40%	+7.14%

Table 5.7: Typical Day-to-Day Network Peak Hour Traffic Generated and Impact on the R371 at the Wind Farm Access (two-way totals, in vehicles)

Note as follows:

- Existing AM peak hour, PM peak hour and Daily (24hr total) flows on R371 at wind farm site access from June 2024 ATC Data

- Wind Farm construction worker commuting – arrivals occur before 08.00, departures occur from 18.00 (maximum of 45 workers including GCR workers, assume worst-case that all commute to site by own vehicle)
- Grid Connection crew – 10 workers travelling to GCR worksite from wind farm site each morning in a maximum of 4 vehicles, with the reverse movement at the end of the working day (i.e. the 4 vehicles return to the wind farm site after 18.00)
- Wind Farm delivery traffic – these are general deliveries of material (excluding the 6No. tower foundation concrete pours)

From consideration of the minor increase on the R371 at the wind farm Site access, and with recognition that a proportion of the traffic will be using the R371 to the south and some of the construction worker traffic could be commuting via the R371 to the north, it is considered that the volume of development construction-related traffic between the N5 and the proposed wind farm access, will have a negligible impact on the R371 and the impact for traffic turning onto/off the N5 junction will be imperceptible.

On the 6No. days during the construction programme when there is a concrete pour for a turbine foundation, there will be a significant increase in the construction-related traffic flow due to concrete wagons delivering ready-mixed concrete to the wind farm Site. As set out previously in this chapter there are a number of operating quarries with concrete batching plants located within a 30-minute drive and accessed via the N5 or R371.

The 6o. tower foundation pour events are considered to represent the worst-case scenario in terms of HGV traffic generation both in a single day and in a single hour, and an example of the impact on a day when this work activity would occur is set out in Table 5.8 below. There would be no other construction deliveries scheduled for the day of each tower foundation pour to ensure a clear arrangement for access and egress at the R371 access and within the wind farm site area.

It should be noted that this infrequent event (occurs on only 6 days during the tower foundation works in Phase 4) will result in the greatest impact at the SE1 access on the R371, with no greater impacts on the R371 to the south of the site access than in Table 5.8.

	<i>Weekday AM Peak (08.00-09.00)</i>	<i>Weekday PM Peak (17.00-18.00)</i>	<i>Weekday Daily total</i>
R371 Existing 2-Way Weekday Link Flow	131	143	1,652
Wind Farm Worker commuting	0	0	+90
GCR crew – daily travel to/from GCR worksite	+4	0	+8
Wind Farm Delivery Traffic (HGV)	+18	+0	+218
<i>Total Increase Due to Project</i>	<i>+22</i>	<i>+2</i>	<i>+316</i>
R371 including wind farm construction traffic	153	145	1,968
Percentage Increase (Impact on R371)	+16.79%	+1.40%	+19.13%

Table 5.8: Typical Concrete Pour Day Traffic Generated and Impact on the R371 at the Wind Farm Access (two-way totals, in vehicles)

A key element of the embedded mitigation within the project design is that suitable excavated/stripped soils are to be stockpiled on site and reused on site during the restoration and landscaping works.

From the foregoing, it is clear that the Proposed Development will not have any significant traffic impacts on the road network during the weekday peak periods or in terms of daily traffic flow, and the volume of off-peak movements are also at a level which will not result in operational issues for the road network or impact on road user safety and the effects are identified as slight or moderate.

Works to form the permanent access junctions on the L6018 and L60498 and works on the temporary Site access with the R371, including any measures to facilitate the sightline requirements, would be of a short duration and any associated traffic management to facilitate safe working space would be temporary in nature and would not result in any significant impacts on traffic flow along the R371.

5.2 OTHER/COMMITTED DEVELOPMENT TRAFFIC GENERATION

From a review of the planning information available online in RCC planning files, it is noted that while there are other projects planned or proposed (but not commenced), such as the Derryadd and Derrane Wind Farm projects, these are considered to be distant enough and utilising a different part of the strategic road network, with the conclusion that none of these will generate any significant traffic movements that would result in traffic increases on the R371 or the N5 junction.

6 IMPACT OF PROPOSED DEVELOPMENT

6.1 POST DEVELOPMENT TRAFFIC IMPACTS

It should be noted that the impacts during construction and/or decommissioning are temporary impacts which only occur over a relatively short period depending on the Phase of works being considered.

The longer-term development impacts are the operational (post development) impacts.

The TII Guidelines for Transport Assessments state that the thresholds for junction analysis in Transport Assessments are as follows:

- *"Traffic to and from the development exceeds 10% of the existing two-way traffic flow on the adjoining highway."*
- *"Traffic to and from the development exceeds 5% of the existing two-way traffic flow on the adjoining highway, where traffic congestion exists or will exist within the assessment period or in other sensitive locations".*

The typical post development traffic flows relate to only occasional traffic due to routine maintenance access, by one or two vans or small trucks. These movements onto/off the R371 at the permanent access junction will have an insignificant impact

6.2 DISCUSSION OF IMPACTS

It should be noted that while the total link flow increases in each assessment year, the percentage impact diminishes year on year completion year as the background traffic growth increases in the Do-Nothing total flow, while the development trips remain constant for each assessment year in the Do Something operational flows.

From the foregoing, it is clear that the proposed development will not have any significant operational traffic impacts on the road network. In the event of an unplanned or more significant maintenance event (i.e. a blade replacement) TTM will be implemented, and the replacement component (and also the damaged component) will be transported using an abnormal length vehicle with escort outside of the daytime periods – per the TDR.

RECEIVED: 15/09/2025

Appendices

RECEIVED: 15/09/2025

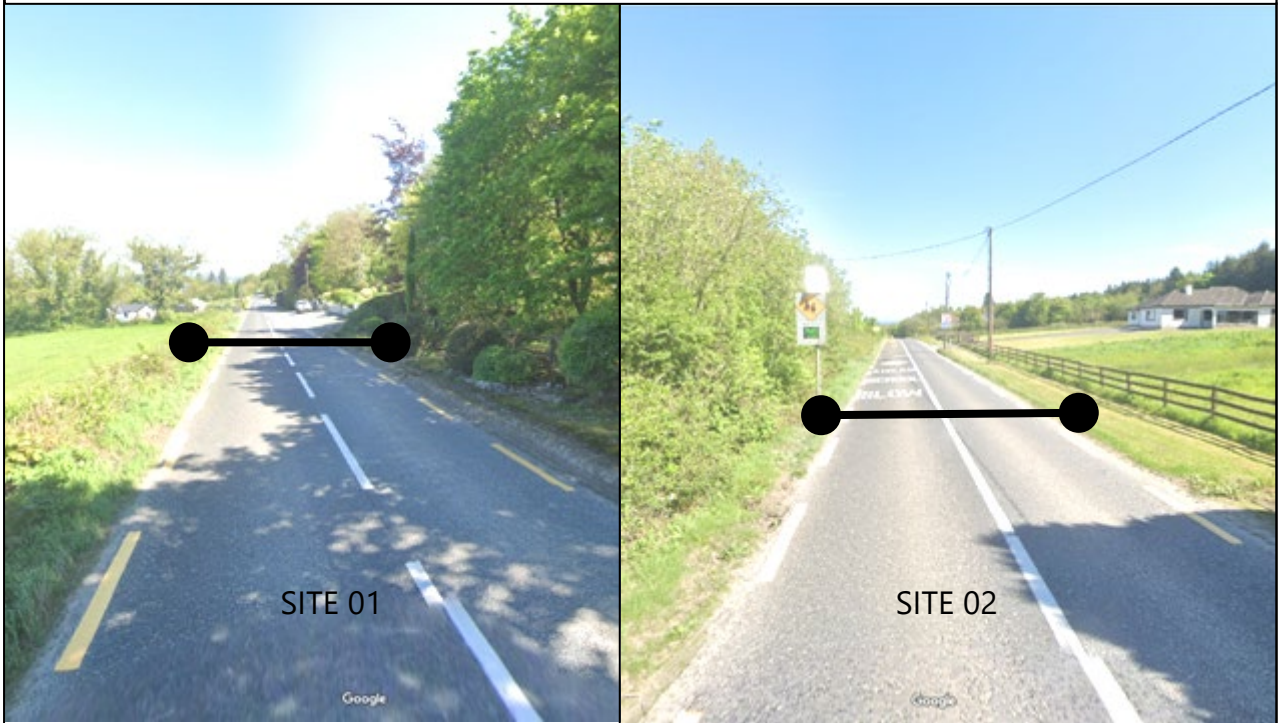
Appendix 1 - Traffic Counter Data on R371

Site Locations

RECEIVED: 15/09/2025



Site Locations



	Job number: TRA/24/101	Job Date: Week Commencing Thursday 20 th June 2024	Drawing No: TRA/24/101-01	
	Client: Mable Consulting		Author: SPW	

BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

SUMMARY

WEEK COMMENCING: Thursday 20 June 2024
TRA/24/101

SITE 01

LOCATION: R371 Ballyfeeney, North of Ballyfeeney National School - (Google Maps Ref: 53.787040, -8.039020)

SPEED SURVEY SUMMARY:

NORTHBOUND 85% Speed = 95.94 km/h, 95% Speed = 104.46 km/h, Median = 82.62 km/h Maximum = 161.6 km/h, Minimum = 16.3 km/h, Mean = 82.4 km/h

SOUTHBOUND 85% Speed = 92.70 km/h, 95% Speed = 102.06 km/h, Median = 78.21 km/h Maximum = 156.6 km/h, Minimum = 7.7 km/h, Mean = 77.5 km/h

VOLUMETRIC VEHICLE COUNTS:

Direction	Time	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	No. Vehicles	7 day Mean
NORTHBOUND	07-19	646	698	595	381	617	593	710	4240	606
SOUTHBOUND	07-19	702	716	521	445	607	637	732	4360	623
NORTHBOUND	00-00	795	865	753	543	760	743	865	5324	761
SOUTHBOUND	00-00	823	847	734	569	758	786	864	5381	769

PEAK FLOW SUMMARY:

Peak	AM	IP	PM
Most Frequent Peak Hour	0900	1400	1700
Average Vehicles per Peak Hour	39	68	78

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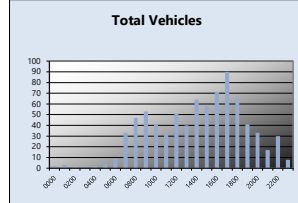
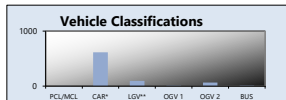
BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTSSITE 01
NORTHBOUNDThursday 20 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

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Thursday 20 June 2024
TRA/24/101SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	2	0	0	0	0	2	2	0000	0	3	1	0	0	0	4	4
0100	0	3	0	0	0	0	3	3	0100	0	2	0	0	0	0	2	2
0200	0	1	0	0	0	0	1	1	0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0300	0	0	0	0	0	0	0	0
0400	0	1	0	0	0	0	1	1	0400	0	4	0	0	0	0	4	4
0500	0	3	1	0	0	0	4	4	0500	0	3	1	0	1	0	5	5
0600	0	6	2	0	1	0	9	10	0600	0	13	2	0	1	0	16	17
0700	0	25	5	0	3	0	33	37	0700	0	37	9	0	8	2	56	68
0800	1	37	6	1	2	0	47	49	0800	1	93	6	3	7	1	111	122
0900	0	36	8	1	6	2	53	63	0900	0	49	4	2	5	0	60	68
1000	0	27	6	0	8	0	41	51	1000	0	31	8	0	4	0	43	48
1100	1	25	1	0	6	0	33	40	1100	0	35	7	1	2	0	45	48
1200	1	35	7	0	7	1	51	60	1200	0	45	7	0	8	0	60	70
1300	0	29	6	0	5	0	40	47	1300	0	36	10	1	2	0	49	52
1400	0	44	10	4	4	2	64	73	1400	0	37	11	1	8	0	57	68
1500	0	42	10	1	5	0	58	65	1500	0	37	7	1	3	1	49	54
1600	2	57	7	0	5	0	71	76	1600	1	38	7	1	9	1	57	69
1700	1	74	6	1	7	1	90	100	1700	0	53	1	0	1	0	55	56
1800	0	55	7	0	3	0	65	69	1800	0	53	4	2	1	0	60	62
1900	0	32	6	0	2	1	41	45	1900	1	35	2	1	0	0	39	39
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2300	0	8	0	0	0	0	8	8	2300	0	6	0	0	0	0	6	6
07-19	6	486	79	8	61	6	646	731	07-19	2	544	81	12	58	5	702	787
06-22	6	567	94	8	64	7	746	835	06-22	3	624	90	14	59	5	795	881
06-00	6	605	94	8	64	7	784	873	06-00	3	635	91	14	60	5	808	896
00-00	6	615	95	8	64	7	795	884	00-00	3	647	93	14	61	5	823	912

Peaks	Time	Vehicles	PCU's
AM	0900	53	63.3
IP	1400	64	73.2
PM	1700	90	99.8

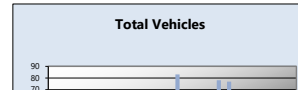


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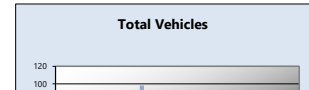
BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTSSITE 01
NORTHBOUNDFriday 21 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTSSITE 01
SOUTHBOUND

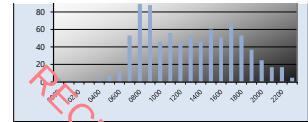
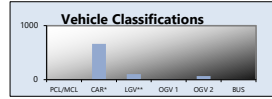
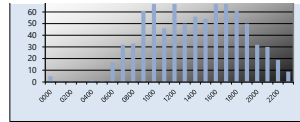
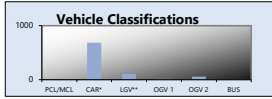
TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	5	0	0	0	0	5	5	0000	0	4	0	0	0	0	4	4
0100	0	1	0	0	0	0	1	1	0100	0	2	0	0	0	0	2	2
0200	0	1	0	0	0	0	1	1	0200	0	0	1	0	0	0	1	1
0300	0	0	0	0	0	0	0	0	0300	0	0	0	0	0	0	0	0
0400	0	2	0	0	0	0	2	2	0400	0	4	0	0	0	0	4	4
0500	0	0	0	1	0	0	1	2	0500	0	4	3	0	0	0	7	7
0600	0	13	3	1	0	0	17	18	0600	0	9	3	0	0	0	12	12
0700	0	27	4	0	1	0	32	33	0700	0	42	7	0	4	0	53	58
0800	0	24	4	2	3	0	33	38	0800	2	77	10	0	6	3	98	107
0900	0	44	9	2	5	1	61	70	0900	0	66	12	4	6	0	88	98
1000	1	55	6	0	5	0	67	73	1000	0	29	10	0	7	0	46	55
1100	0	36	7	0	3	0	46	50	1100	0	43	4	1	8	0	56	67
1200	0	64	12	2	4	1	83	90	1200	0	39	3	1	3	0	46	50
1300	0	34	8	0	8	0	50	60	1300	0	36	11	0	6	0	53	61
1400	0	42	9	2	3	0	56	61	1400	0	34	5	0	7	0	46	55
1500	0	39	9	0	5	1	54	62	1500	0	51	4	0	5	0	60	67
1600	0	58	9	3	8	0	78	90	1600	0	36	8	2	4	1	51	58
1700	0	65	6	0	6	0	77	85	1700	0	57	6	0	3	0	66	70
1800	0	50	6	2	3	0	61	66	1800	0	44	7	0	2	0	53	56
1900	0	43	4	1	2	0	50	53	1900	0	33	3	0	1	0	37	38
2000	0	28	4	0	0	0	32	32	2000	0	19	3	0	3	0	25	29
2100	0	24	4	1	1	0	30	32	2100	0	15	2	0	0	0	17	17
2200	0	18	1	0	0	0	19	19	2200	0	15	2	0	0	0	17	17
2300	0	8	1	0	0	0	9	9	2300	0	5	0	0	0	0	5	5
07-19	1	538	89	13	54	3	698	777	07-19	2	554	87	8	61	4	716	802
06-22	1	646	104	16	57	3	827	911	06-22	2	630	98	8	65	4	807	898
06-00	1	672	106	16	57	3	855	939	06-00	2	650	100	8	65	4	829	920
00-00	1	681	106	17	57	3	865	950	00-00	2	664	104	8	65	4	847	938

Peaks	Time	Vehicles	PCU's
AM	0900	61	69.5
IP	1200	83	90.2
PM	1600	78	89.9



Peaks	Time	Vehicles	PCU's
AM	0800	98	107.2
IP	1300	53	60.8
PM	1700	66	69.9





TRAFFINOMICS LIMITED

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BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Saturday 22 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

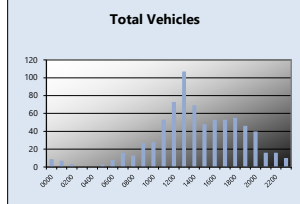
Saturday 22 June 2024
TRA/24/101

SITE 01
NORTHBOUND

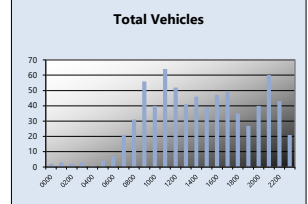
SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	9	0	0	0	0	9	9	0000	0	2	0	0	0	0	2	2
0100	0	6	1	0	0	0	7	7	0100	0	3	0	0	0	0	3	3
0200	0	3	0	0	0	0	3	3	0200	0	2	0	0	0	0	2	2
0300	0	0	0	0	0	0	0	0	0300	0	3	0	0	0	0	3	3
0400	0	0	0	0	0	0	0	0	0400	0	0	0	1	0	0	1	2
0500	0	3	0	0	0	0	3	3	0500	0	4	0	0	0	0	4	4
0600	0	4	4	0	0	0	8	8	0600	0	4	3	0	0	0	7	7
0700	0	13	1	0	2	0	16	19	0700	0	18	2	0	1	0	21	22
0800	0	11	1	0	1	0	13	14	0800	0	27	1	0	3	0	31	35
0900	1	22	1	1	1	1	27	29	0900	0	48	6	1	1	0	56	58
1000	1	23	2	0	2	0	28	30	1000	1	33	5	0	1	0	40	41
1100	2	44	4	1	2	0	53	55	1100	0	50	7	2	5	0	64	72
1200	0	62	3	2	6	0	73	82	1200	0	45	6	0	1	0	52	53
1300	3	91	9	1	3	0	107	109	1300	0	35	4	0	2	0	41	44
1400	0	63	5	0	1	0	69	70	1400	0	41	3	0	2	0	46	49
1500	0	41	4	0	3	0	48	52	1500	1	34	2	1	1	0	39	40
1600	1	46	6	0	0	0	53	52	1600	1	39	6	0	1	0	47	48
1700	0	48	3	1	1	0	53	55	1700	0	43	5	0	1	0	49	50
1800	0	52	2	0	1	0	55	56	1800	0	32	3	0	0	0	35	35
1900	1	41	3	1	0	0	46	46	1900	1	22	4	0	0	0	27	26
2000	0	34	4	0	2	0	40	43	2000	0	34	3	0	3	0	40	44
2100	0	16	0	0	0	0	16	16	2100	0	56	2	0	1	1	60	62
2200	0	14	1	0	1	0	16	17	2200	0	40	2	1	0	0	43	44
2300	0	10	0	0	0	0	10	10	2300	0	20	0	0	1	0	21	22
07-19	8	516	41	6	23	1	595	623	07-19	3	445	50	4	19	0	521	545
06-22	9	611	52	7	25	1	705	735	06-22	4	561	62	4	23	1	655	685
06-00	9	635	53	7	26	1	731	762	06-00	4	621	64	5	24	1	719	751
00-00	9	656	54	7	26	1	753	784	00-00	4	635	64	6	24	1	734	766

Peaks	Time	Vehicles	PCU's
AM	0900	27	29
IP	1300	107	109
PM	1800	55	56.3



Peaks	Time	Vehicles	PCU's
AM	0900	56	57.8
IP	1200	52	53.3
PM	1700	49	50.3



TRAFFINOMICS LIMITED

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BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Sunday 23 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

Sunday 23 June 2024
TRA/24/101

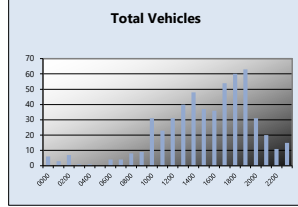
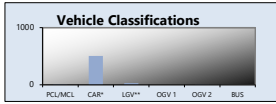
SITE 01
NORTHBOUND

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	6	0	0	0	0	6	6	0000	0	4	2	0	0	0	6	6
0100	0	2	1	0	0	0	3	3	0100	0	6	0	0	0	0	6	6
0200	0	6	1	0	0	0	7	7	0200	0	5	1	0	0	0	6	6
0300	0	1	0	0	0	0	1	1	0300	0	1	0	0	0	0	1	1
0400	0	1	0	0	0	0	1	1	0400	0	1	0	0	0	0	1	1
0500	0	0	0	0	0	0	0	0	0500	0	1	0	0	0	0	1	1
0600	0	4	0	0	0	0	4	4	0600	0	2	0	0	0	0	2	2
0700	0	3	1	0	0	0	4	4	0700	0	6	1	0	0	0	7	7
0800	0	8	0	0	0	0	8	8	0800	0	21	0	0	0	0	21	21
0900	0	8	1	0	0	0	9	9	0900	0	22	0	1	0	0	23	24
1000	2	27	2	0	0	0	31	29	1000	1	32	4	0	0	0	37	36
1100	1	22	0	0	0	0	23	22	1100	2	38	4	1	1	0	46	46
1200	0	27	4	0	0	0	31	31	1200	2	45	3	0	0	0	50	48
1300	0	37	3	0	0	0	40	40	1300	0	66	2	0	0	0	68	68
1400	1	44	2	0	1	0	48	49	1400	1	42	3	0	0	0	46	45
1500	1	35	1	0	0	0	37	36	1500	2	36	3	0	0	0	41	39
1600	1	33	2	0	0	0	36	35	1600	0	31	1	0	0	0	32	32
1700	0	53	1	0	0	0	54	54	1700	0	33	2	1	1	0	37	39
1800	0	57	3	0	0	0	60	60	1800	0	33	3	1	0	0	37	38
1900	2	60	1	0	0	0	63	61	1900	0	33	1	0	1	0	35	36
2000	0	29	1	0	1	0	31	32	2000	0	24	1	0	1	0	26	27
2100	0	19	0	0	1	0	20	21	2100	0	23	0	0	0	0	23	23
2200	0	9	2	0	0	0	11	11	2200	0	9	2	0	0	0	11	11
2300	0	14	1	0	0	0	15	15	2300	0	5	0	0	1	0	6	7
07-19	6	354	20	0	1	0	381	378	07-19	8	405	26	4	2	0	445	443
06-22	8	466	22	0	3	0	499	497	06-22	8	487	28	4	4	0	531	532
06-00	8	489	25	0	3	0	525	523	06-00	8	501	30	4	5	0	548	550

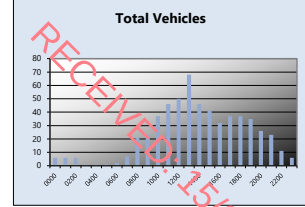
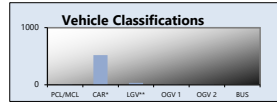
00-00	8	505	27	0	3	0	543	541	00-00	8	519	33	4	5	0	569	571
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Peaks	Time	Vehicles	PCU's
AM	0900	9	9
IP	1400	48	48.5
PM	1800	60	60



TRAFFINOMICS LIMITED

Peaks	Time	Vehicles	PCU's
AM	0900	23	23.5
IP	1300	68	68
PM	1700	37	38.8



TRAFFINOMICS LIMITED

BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Monday 24 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

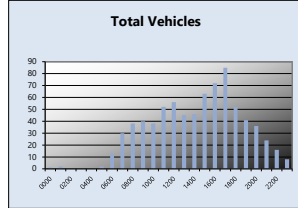
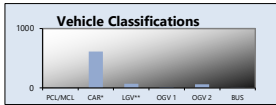
Monday 24 June 2024
TRA/24/101

SITE 01
NORTHBOUND

SITE 01
SOUTHBOUND

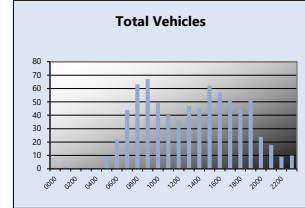
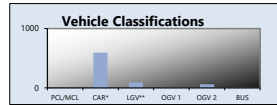
TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	1	0	0	0	0	1	1	0000	0	1	0	0	0	0	1	1
0100	0	2	0	0	0	0	2	2	0100	0	2	0	0	0	0	2	2
0200	0	0	0	0	0	0	0	0	0200	0	1	0	0	0	0	1	1
0300	0	0	0	0	0	0	0	0	0300	0	2	0	0	0	0	2	2
0400	0	0	0	0	0	0	0	0	0400	0	2	0	0	0	0	2	2
0500	0	2	0	0	0	0	2	2	0500	0	4	3	0	2	0	9	12
0600	0	9	2	0	2	0	13	16	0600	0	17	4	0	1	0	22	23
0700	1	24	4	0	1	0	30	31	0700	0	36	7	0	1	0	44	45
0800	0	29	4	2	3	0	38	43	0800	0	51	8	0	4	0	63	68
0900	0	31	3	2	3	1	40	46	0900	0	48	13	0	5	1	67	75
1000	0	29	2	0	7	0	38	47	1000	0	37	4	0	8	0	49	59
1100	0	39	6	2	5	0	52	60	1100	0	31	4	1	4	0	40	46
1200	0	44	6	2	4	0	56	62	1200	0	28	4	0	4	0	36	41
1300	0	36	3	0	5	1	45	53	1300	0	39	5	0	3	0	47	51
1400	0	31	8	2	5	0	46	54	1400	0	27	7	1	10	0	45	59
1500	0	48	7	1	6	1	63	72	1500	2	47	8	0	4	1	62	67
1600	0	57	6	0	9	0	72	84	1600	0	38	8	3	6	2	57	68
1700	0	72	5	0	8	0	85	95	1700	0	43	6	0	2	1	52	56
1800	0	46	5	0	1	0	52	53	1800	0	37	5	0	3	0	45	49
1900	0	36	2	2	1	0	41	43	1900	0	47	2	0	1	1	51	53
2000	0	35	1	0	0	0	36	36	2000	0	23	1	0	0	0	24	24
2100	0	21	2	0	1	0	24	25	2100	0	16	1	0	1	0	18	19
2200	0	15	1	0	0	0	16	16	2200	0	5	2	0	2	0	9	12
2300	0	5	3	0	0	0	8	8	2300	0	10	0	0	0	0	10	10
07-19	1	486	59	11	57	3	617	699	07-19	2	462	79	5	54	5	607	683
06-22	1	587	66	13	61	3	731	819	06-22	2	565	87	5	57	6	722	803
06-00	1	607	70	13	61	3	755	843	06-00	2	580	89	5	59	6	741	825
00-00	1	612	70	13	61	3	760	848	00-00	2	592	92	5	61	6	758	844

Peaks	Time	Vehicles	PCU's
AM	0900	40	45.9
IP	1200	56	62.2
PM	1700	85	95.4



TRAFFINOMICS LIMITED

Peaks	Time	Vehicles	PCU's
AM	0900	67	74.5
IP	1300	47	58.5
PM	1600	57	68.3



TRAFFINOMICS LIMITED

BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Tuesday 25 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

Tuesday 25 June 2024
TRA/24/101

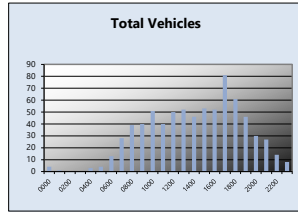
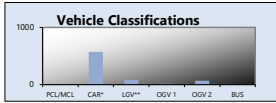
SITE 01
NORTHBOUND

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	4	0	0	0	0	4	4	0000	0	3	0	0	0	0	3	3
0100	0	1	0	0	0	0	1	1	0100	0	1	0	1	0	0	2	3
0200	0	0	0	0	0	0	0	0	0200	0	1	0	0	0	0	1	1
0300	0	0	0	0	0	0	0	0	0300	0	2	0	0	0	0	2	2
0400	0	3	0	0	0	0	3	3	0400	0	2	0	0	0	0	2	2
0500	0	2	2	0	0	0	4	4	0500	0	6	2	0	1	0	9	10
0600	0	8	1	2	2	0	13	17	0600	0	13	3	1	1	0	18	20
0700	0	21	7	0	0	0	28	28	0700	0	39	8	0	4	0	51	56
0800	1	29	5	1	3	0	39	43	0800	0	62	8	1	10	0	81	95
0900	0	27	3	2	7	1	40	51	0900	0	55	5	2	4	3	69	78
1000	0	34	6	3	8	0	51	63	1000	0	39	5	1	3	0	48	52
1100	0	32	2	1	5	0	40	47	1100	0	39	2	2	7	0	50	60
1200	0	39	4	2	4	1	50	57	1200	0	31	11	0	3	0	45	49
1300	0	36	8	1	7	0	52	62	1300	0	33	3	1	4	1	42	49
1400	0	35	5	1	4	1	46	53	1400	0	36	10	0	5	0	51	58
1500	0	36	8	0	7	2	53	64	1500	0	36	10	1	4	0	51	57
1600	1	39	8	1	3	0	52	56	1600	0	30	8	2	7	2	49	61
1700	0	70	4	1	5	1	81	89	1700	0	44	8	0	1	0	53	54
1800	0	52	6	0	3	0	61	65	1800	2	38	6	0	1	0	47	47
1900	0	38	6	0	2	0	46	49	1900	0	30	5	0	4	0	39	44
2000	0	26	2	0	2	0	30	33	2000	0	20	3	0	0	0	23	23

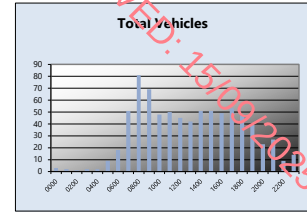
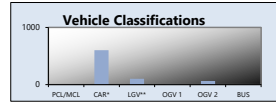
2100	0	24	1	0	2	0	27	30	2100	0	27	0	0	0	0	27	27
2200	0	10	3	1	0	0	14	15	2200	0	4	2	0	3	0	9	13
2300	0	5	1	0	2	0	8	11	2300	0	13	1	0	0	0	14	14
07-19	2	450	66	13	56	6	593	677	07-19	2	482	84	10	53	6	637	715
06-22	2	546	76	15	64	6	709	804	06-22	2	572	95	11	58	6	744	829
06-00	2	561	80	16	66	6	731	829	06-00	2	589	98	11	61	6	767	856
00-00	2	571	82	16	66	6	743	841	00-00	2	604	100	12	62	6	786	877

Peaks	Time	Vehicles	PCU's
AM	0900	40	51.1
IP	1300	52	61.6
PM	1700	81	89



TRAFFINOMICS LIMITED

Peaks	Time	Vehicles	PCU's
AM	0800	81	94.5
IP	1400	51	57.5
PM	1700	53	61.1



TRAFFINOMICS LIMITED

BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Wednesday 26 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

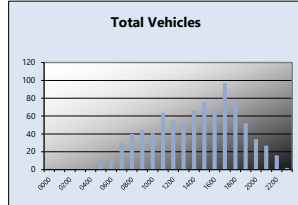
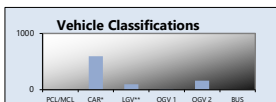
Wednesday 26 June 2024
TRA/24/101

SITE 01
NORTHBOUND

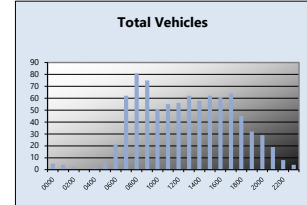
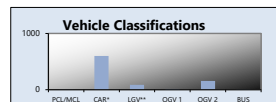
SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	2	0	0	0	0	2	2	0000	0	4	0	0	1	0	5	6
0100	0	0	0	0	0	0	0	0	0100	0	2	1	0	1	0	4	5
0200	0	0	0	0	0	0	0	0	0200	0	1	1	0	0	0	2	2
0300	0	2	0	0	0	0	2	2	0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	1	0	1	2	0400	0	2	0	0	0	0	2	2
0500	0	5	0	1	1	0	7	9	0500	0	3	0	1	2	0	6	9
0600	0	9	3	0	0	0	12	12	0600	0	15	5	0	0	1	21	22
0700	0	22	4	0	4	0	30	35	0700	1	54	4	0	3	0	62	65
0800	0	26	5	1	8	0	40	51	0800	0	68	4	2	7	0	81	91
0900	1	28	6	0	10	0	45	57	0900	0	52	10	2	10	1	75	90
1000	0	23	4	0	14	0	41	59	1000	0	33	3	3	12	0	51	68
1100	0	38	7	1	18	0	64	88	1100	0	33	1	0	21	0	55	82
1200	0	37	2	1	15	0	55	75	1200	0	35	4	1	15	1	56	77
1300	0	35	8	0	10	0	53	66	1300	1	41	8	0	12	0	62	77
1400	0	46	2	1	17	0	66	89	1400	0	25	15	0	17	1	58	81
1500	0	42	11	0	23	0	76	106	1500	1	41	4	0	16	0	62	82
1600	0	38	9	2	18	0	67	91	1600	0	37	8	0	16	0	61	82
1700	0	70	12	2	13	0	97	115	1700	0	39	11	0	14	0	64	82
1800	0	63	11	0	2	0	76	79	1800	0	40	2	0	3	0	45	49
1900	0	43	5	0	4	0	52	57	1900	0	27	2	1	2	0	32	35
2000	1	26	4	2	1	0	34	36	2000	0	25	2	1	1	0	29	31
2100	0	22	3	1	1	0	27	29	2100	0	15	3	0	1	0	19	20
2200	0	15	1	0	0	0	16	16	2200	0	6	0	0	2	0	8	11
2300	0	2	0	0	0	0	2	2	2300	0	2	1	1	0	0	4	5
07-19	1	468	81	8	152	0	710	911	07-19	3	498	74	8	146	3	732	926
06-22	2	568	96	11	158	0	835	1044	06-22	3	580	86	10	150	4	833	1035
06-00	2	585	97	11	158	0	853	1062	06-00	3	588	87	11	152	4	845	1050
00-00	2	594	97	12	160	0	865	1077	00-00	3	600	89	12	156	4	864	1074

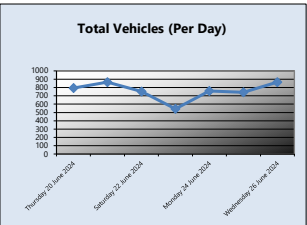
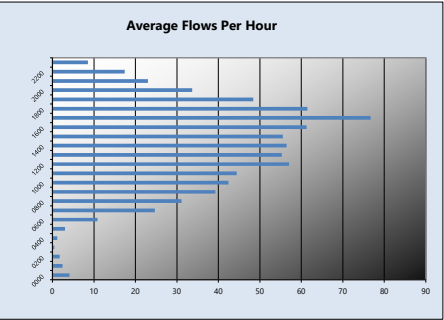
Peaks	Time	Vehicles	PCU's
AM	0900	45	57.2
IP	1400	66	88.6
PM	1700	97	114.9



Peaks	Time	Vehicles	PCU's
AM	0800	81	91.1
IP	1300	62	81.1
PM	1700	64	82.2



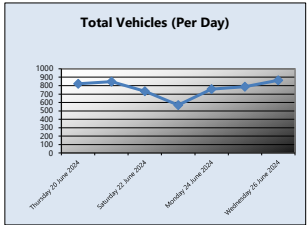
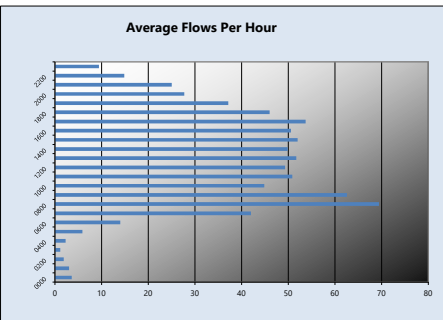
TIME PERIOD	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	Average
0000	2	5	9	6	1	4	2	4
0100	3	1	7	3	2	1	0	2
0200	1	1	3	7	0	0	0	2
0300	0	0	0	1	0	0	2	0
0400	1	2	0	1	0	3	1	1
0500	4	1	3	0	2	4	7	3
0600	9	17	8	4	13	13	12	11
0700	33	32	16	4	30	28	30	25
0800	47	33	13	8	38	39	40	31
0900	53	61	27	9	40	40	45	39
1000	41	67	28	31	38	51	41	42
1100	33	46	53	23	52	40	64	44
1200	51	83	73	31	56	50	55	57
1300	40	50	107	40	45	52	53	55
1400	64	56	69	48	46	46	66	56
1500	58	54	48	37	63	53	76	56
1600	71	78	53	36	72	52	67	61
1700	90	77	53	54	85	81	97	77
1800	65	61	55	60	52	61	76	61
1900	41	50	46	63	41	46	52	48
2000	33	32	40	31	36	30	34	34
2100	17	30	16	20	24	27	27	23
2200	30	19	16	11	16	14	16	17
2300	8	9	10	15	8	8	2	9
07-19	646	698	595	381	617	593	710	606
06-22	746	827	705	499	731	709	835	722
06-00	784	855	731	525	755	731	853	748
00-00	795	865	753	543	760	743	865	761



Peak Time & Volumetric Count Data

	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	Mode/Average
AM								
Time	0900	0900	0900	0900	0900	0900	0900	0900
Vehicles	53	61	27	9	40	40	45	39
IP								
Time	1400	1200	1300	1400	1200	1300	1400	1400
Vehicles	64	83	107	48	56	52	66	68
PM								
Time	1700	1600	1800	1800	1700	1700	1700	1700
Vehicles	90	78	55	60	85	81	97	78

TIME PERIOD	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	Average
0000	4	4	2	6	1	3	5	4
0100	2	2	3	6	2	2	4	3
0200	0	1	2	6	1	1	2	2
0300	0	0	3	1	2	2	0	1
0400	4	4	1	1	2	2	2	2
0500	5	7	4	1	9	9	6	6
0600	16	12	7	2	22	18	21	14
0700	56	53	21	7	44	51	62	42
0800	111	98	31	21	63	81	81	69
0900	60	88	56	23	67	69	75	63
1000	43	46	40	37	49	48	51	45
1100	45	56	64	46	40	50	55	51
1200	60	46	52	50	36	45	56	49
1300	49	53	41	68	47	42	62	52
1400	57	46	46	46	45	51	58	50
1500	49	60	39	41	62	51	62	52
1600	57	51	47	32	57	49	61	51
1700	55	66	49	37	52	53	64	54
1800	60	53	35	37	45	47	45	46
1900	39	37	27	35	51	39	32	37
2000	27	25	40	26	24	23	29	28
2100	11	17	60	23	18	27	19	25
2200	7	17	43	11	9	9	8	15
2300	6	5	21	6	10	14	4	9
07-19	702	716	521	445	607	637	732	623
06-22	795	807	655	531	722	744	833	727
06-00	808	829	719	548	741	767	845	751
00-00	823	847	734	569	758	786	864	769



Peak Time & Volumetric Count Data

	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	Mode/Average
AM								
Time	0800	0800	0900	0900	0900	0800	0800	0800
Vehicles	111	98	111	23	67	81	81	82
IP								
Time	1200	1300	1200	1300	1300	1400	1300	1300
Vehicles	60	53	52	68	47	51	62	56
PM								
Time	1800	1700	1700	1700	1600	1700	1700	1700
Vehicles	60	66	49	37	57	53	64	55

SITE 01
NORTHBOUND

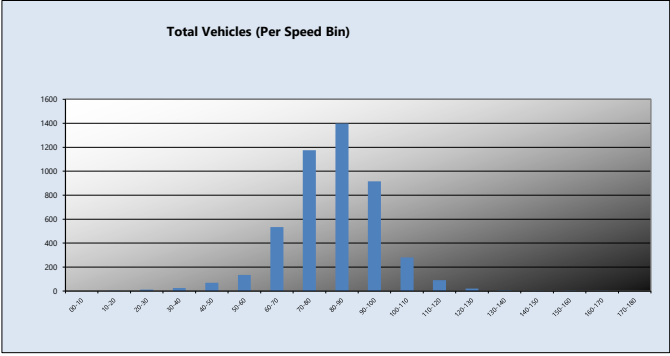
Profile:

Filter time: 00:00 20th June 2024 => 23:59 26th June 2024
Speed range: 0 - 200 km/h.
Separation: Greater than 4.00 seconds. - (Headway)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)

Vehicles = 4666
Maximum = 161.6 km/h, Minimum = 16.3 km/h, Mean = 82.4 km/h
85% Speed = 95.94 km/h, 95% Speed = 104.46 km/h, Median = 82.62 km/h
20 km/h Pace = 73 - 93, Number in Pace = 2656 (56.92%)
Variance = 208.75, Standard Deviation = 14.45 km/h

Speed Bins:

Speed	Bin	
KPH	No.	%
00-10	0	0.0
10-20	2	0.0
20-30	12	0.3
30-40	26	0.6
40-50	69	1.5
50-60	135	2.9
60-70	533	11.4
70-80	1175	25.2
80-90	1397	29.9
90-100	915	19.6
100-110	280	6.0
110-120	90	1.9
120-130	21	0.5
130-140	6	0.1
140-150	2	0.0
150-160	2	0.0
160-170	1	0.0
170-180	0	0.0



SITE 01
SOUTHBOUND

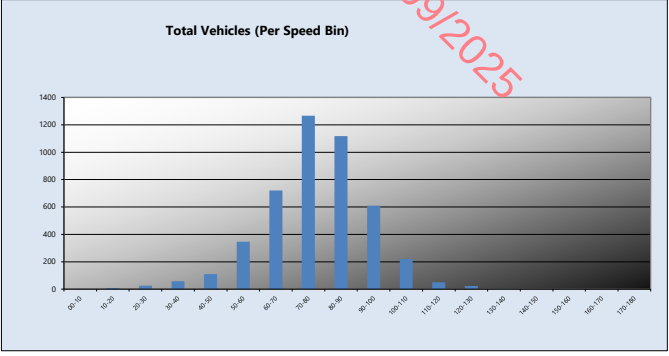
Profile:

Filter time: 00:00 20th June 2024 => 23:59 26th June 2024
Speed range: 0 - 200 km/h.
Separation: Greater than 4.00 seconds. - (Headway)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)

Vehicles = 4360
Maximum = 150.6 km/h, Minimum = 7.7 km/h, Mean = 77.5 km/h
85% Speed = 92.70 km/h, 95% Speed = 102.06 km/h, Median = 78.21 km/h
20 km/h Pace = 69 - 89, Number in Pace = 2395 (52.52%)
Variance = 249.86, Standard Deviation = 15.81 km/h

Speed Bins:

Speed	Bin	
KPH	No.	%
00-10	1	0.0
10-20	9	0.2
20-30	25	0.5
30-40	58	1.3
40-50	110	2.4
50-60	347	7.6
60-70	721	15.8
70-80	1266	27.8
80-90	1117	24.5
90-100	609	13.4
100-110	220	4.8
110-120	51	1.1
120-130	24	0.5
130-140	1	0.0
140-150	0	0.0
150-160	1	0.0
160-170	0	0.0
170-180	0	0.0



CLASSIFICATION SCHEMES:

Scheme F Classification Scheme (Non-metric)

Scheme F is an attempt to implement the FWHA's visual classification scheme as an axle-based classification scheme. This is one of several interpretations.

RECEIVED: 15/02/2023

Vehicle Class	Class	Vehicle Type	No. of Axles	Axle spacing in feet				
				Axle 1 to 2	Axle 2 to 3	Axle 3 to 4	Axle 4 to 5	Axle 5 to 6
PCL/MCL	1	motorcycle	2	<6.0				
CAR*	2	passenger car	2	6.0 - 10.0				
		car + 1 axle trailer	3	<10.0	10.0 - 18.0			
		car + 2 axle trailer	4	<10.0		<3.5		
LGV**	3	pickup	2	10.0 - 15.0				
		pickup + 1 axle trailer	3	10.0 - 15.0	10.0 - 18.0			
		pickup + 2 axle trailer	4	10.0 - 15.0		<3.5		
		pickup + 3 axle trailer	5	9.9 - 15.0			<3.5	
BUS	4	bus	2	>20.0				
		bus	3	>19.0				
OGV 1	5	single unit truck - dual rear axle	2	14.9 - 20.0			<3.5	
	6	3 axle truck	3		<18.0			
OGV 2	7	4 axle truck	4					
	8	2S1	3		>18.0			
		2S2	4		>5.0	>3.5		
		3S1	4		<5.0	>10.0		
	9	3S2	5		<6.1		3.5 - 8.0	
		5 axle combination	5					
	10	6 axle combination	6			3.5 - 5.0		
		3S3	6					
	11	2S1-2	5		>6.0			
	12	3S1-2	6					>10.0
	13	truck	7 or more					

Car* Cars and LGV based cars

LGV** Light Goods Vehicles with the exception of LGV based on cars

TRAFFINOMICS LIMITED

BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS AUTOMATIC TRAFFIC COUNTS

SUMMARY

WEEK COMMENCING: Thursday 20 June 2024
TRA/24/101

SITE 02

LOCATION: R371 Ballyfeeney, South of Ballyfeeney National School - (Google Maps Ref: 53.783163, -8.041123)

SPEED SURVEY SUMMARY:

NORTHBOUND 85% Speed = 93.42 km/h, 95% Speed = 101.93 km/h, Median = 80.46 km/h Maximum = 158.2 km/h, Minimum = 22.0 km/h, Mean = 80.3 km/h

SOUTHBOUND 85% Speed = 91.53 km/h, 95% Speed = 100.53 km/h, Median = 76.50 km/h Maximum = 138.1 km/h, Minimum = 14.1 km/h, Mean = 76.3 km/h

VOLUMETRIC VEHICLE COUNTS:

Direction	Time	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	No. Vehicles	7 day Mean
NORTHBOUND	07-19	694	740	597	385	608	586	710	4320	617
SOUTHBOUND	07-19	741	755	528	450	602	637	734	4447	635
NORTHBOUND	00-00	840	905	756	548	756	736	864	5405	772
SOUTHBOUND	00-00	870	885	740	577	757	783	864	5476	782

PEAK FLOW SUMMARY:

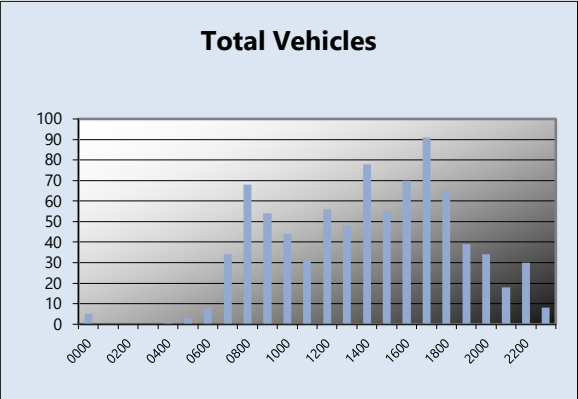
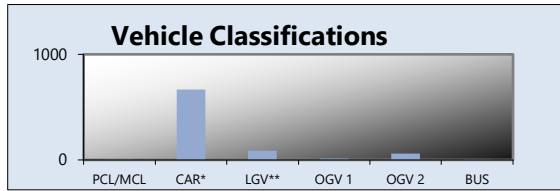
Peak	AM	IP	PM
Most Frequent Peak Hour	0900	1400	1700
Average Vehicles per Peak Hour	41	69	79

SITE 02
NORTHBOUND

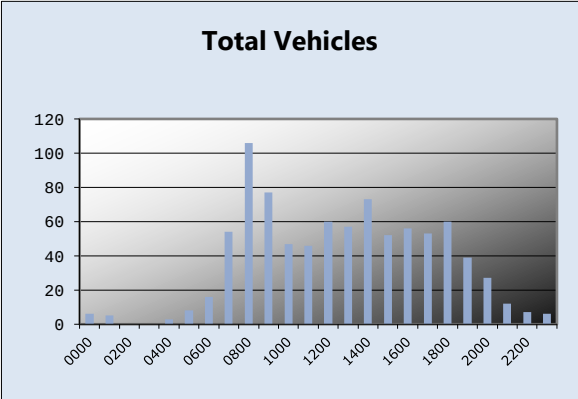
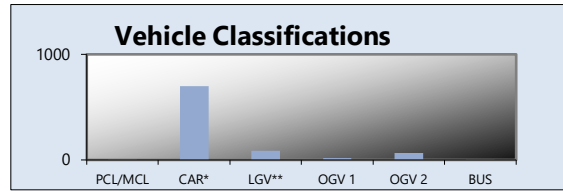
SITE 02
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	3	2	0	0	0	5	5	0000	0	5	1	0	0	0	6	6
0100	0	0	0	0	0	0	0	0	0100	0	3	2	0	0	0	5	5
0200	0	0	0	0	0	0	0	0	0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0300	0	0	0	0	0	0	0	0
0400	0	1	0	0	0	0	1	1	0400	0	3	0	0	0	0	3	3
0500	0	3	0	0	0	0	3	3	0500	0	4	2	1	0	1	8	10
0600	0	5	2	0	1	0	8	9	0600	0	13	1	0	2	0	16	19
0700	0	26	5	0	3	0	34	38	0700	0	36	7	2	9	0	54	67
0800	1	56	7	1	3	0	68	72	0800	1	89	7	3	6	0	106	115
0900	0	37	7	3	6	1	54	64	0900	0	67	3	2	5	0	77	85
1000	0	29	8	0	7	0	44	53	1000	0	34	7	1	4	1	47	54
1100	1	22	1	1	6	0	31	39	1100	0	34	8	0	4	0	46	51
1200	1	40	5	1	8	1	56	67	1200	0	48	3	1	8	0	60	71
1300	0	38	6	0	4	0	48	53	1300	0	45	10	0	2	0	57	60
1400	0	58	12	4	3	1	78	85	1400	0	52	12	1	8	0	73	84
1500	0	42	6	1	6	0	55	63	1500	0	41	6	2	3	0	52	57
1600	1	58	6	0	5	0	70	76	1600	0	40	5	1	10	0	56	70
1700	1	77	5	1	7	0	91	100	1700	0	52	0	0	1	0	53	54
1800	0	57	5	0	3	0	65	69	1800	0	52	6	1	1	0	60	62
1900	0	33	4	0	1	1	39	41	1900	1	35	2	1	0	0	39	39
2000	0	29	5	0	0	0	34	34	2000	0	21	5	1	0	0	27	28
2100	0	17	1	0	0	0	18	18	2100	0	12	0	0	0	0	12	12
2200	0	30	0	0	0	0	30	30	2200	0	5	1	0	1	0	7	8
2300	0	8	0	0	0	0	8	8	2300	0	6	0	0	0	0	6	6
07-19	5	540	73	12	61	3	694	778	07-19	1	590	74	14	61	1	741	828
06-22	5	624	85	12	63	4	793	881	06-22	2	671	82	16	63	1	835	924
06-00	5	662	85	12	63	4	831	919	06-00	2	682	83	16	64	1	848	939
00-00	5	669	87	12	63	4	840	928	00-00	2	697	88	17	64	2	870	962

Peaks	Time	Vehicles	PCU's
AM	0800	68	71.6
IP	1400	78	84.9
PM	1700	91	99.8



Peaks	Time	Vehicles	PCU's
AM	0800	106	114.5
IP	1400	73	83.9
PM	1800	60	69.5



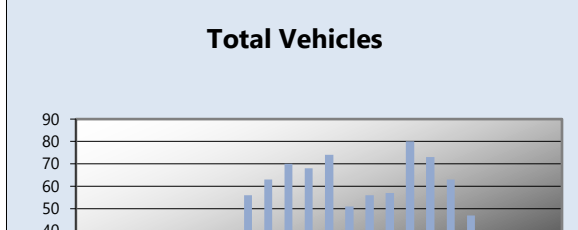
SITE 02
NORTHBOUND

SITE 02
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	5	0	0	0	0	5	5	0000	0	4	0	0	0	0	4	4
0100	0	1	0	0	0	0	1	1	0100	0	2	0	0	0	0	2	2
0200	0	1	0	0	0	0	1	1	0200	0	0	1	0	0	0	1	1
0300	0	0	0	0	0	0	0	0	0300	0	0	0	0	0	0	0	0
0400	0	2	0	0	0	0	2	2	0400	0	4	0	0	0	0	4	4
0500	0	0	0	1	0	0	1	2	0500	0	4	3	0	0	0	7	7
0600	0	14	2	1	0	0	17	18	0600	0	9	3	0	0	0	12	12
0700	0	25	3	0	1	0	29	30	0700	0	41	6	0	5	0	52	59
0800	0	47	4	1	3	1	56	61	0800	2	83	10	2	6	1	104	112
0900	0	46	9	2	5	1	63	72	0900	0	76	12	3	6	0	97	106
1000	1	58	6	0	5	0	70	76	1000	0	31	8	0	6	0	45	53
1100	0	58	7	0	3	0	68	72	1100	0	34	3	0	8	0	45	55
1200	0	54	12	2	5	1	74	83	1200	0	69	4	2	3	0	78	83
1300	0	37	6	0	8	0	51	61	1300	0	45	9	1	5	0	60	67
1400	0	42	9	2	3	0	56	61	1400	0	33	5	1	7	0	46	56
1500	0	43	9	0	4	1	57	63	1500	0	51	5	0	5	0	61	68
1600	0	60	8	2	9	1	80	94	1600	0	38	8	1	4	1	52	59
1700	0	62	4	1	6	0	73	81	1700	0	54	5	0	4	0	63	68
1800	0	53	6	1	3	0	63	67	1800	0	44	6	0	2	0	52	55
1900	0	40	4	1	2	0	47	50	1900	0	29	2	0	2	0	33	36
2000	0	28	2	0	0	0	30	30	2000	0	20	2	0	2	0	24	27
2100	0	28	3	0	1	0	32	33	2100	0	18	2	0	0	0	20	20
2200	0	19	1	0	0	0	20	20	2200	0	17	1	0	0	0	18	18
2300	0	8	1	0	0	0	9	9	2300	0	5	0	0	0	0	5	5
07-19	1	585	83	11	55	5	740	821	07-19	2	599	81	10	61	2	755	840
06-22	1	695	94	13	58	5	866	952	06-22	2	675	90	10	65	2	844	934
06-00	1	722	96	13	58	5	895	981	06-00	2	697	91	10	65	2	867	957
00-00	1	731	96	14	58	5	905	992	00-00	2	711	95	10	65	2	885	975

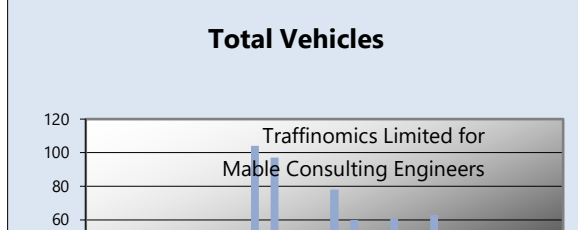
Peaks	Time	Vehicles	PCU's
AM	0900	63	71.5
IP	1200	74	82.5
PM	1600	80	93.7

TRA~24~101 Ballyfeeney ATC Site 02



Peaks	Time	Vehicles	PCU's
AM	0800	104	112.2
IP	1200	78	82.9
PM	1700	63	68.2

TRA~24~101 Ballyfeeney ATC Site 02





TRAFFINOMICS LIMITED

TRAFFINOMICS LIMITED

BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Saturday 22 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

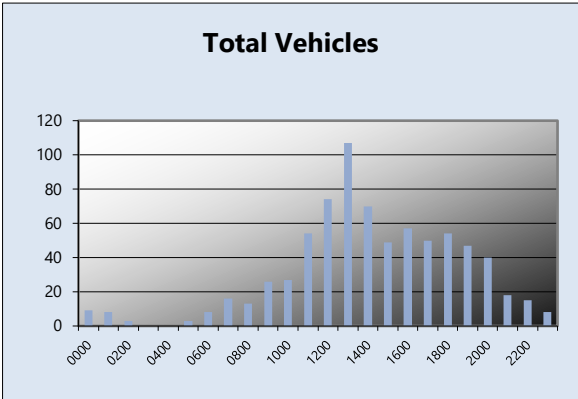
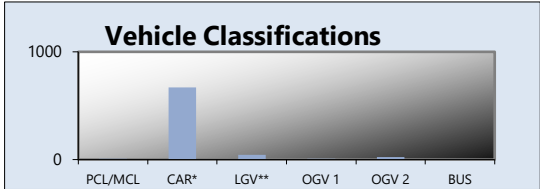
Saturday 22 June 2024
TRA/24/101

SITE 02
NORTHBOUND

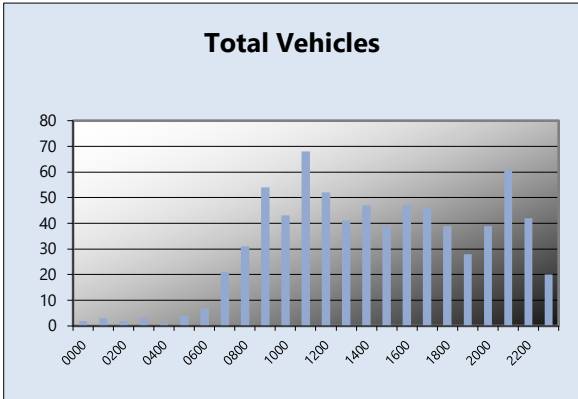
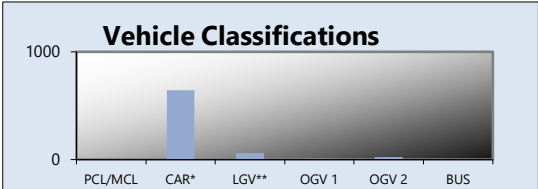
SITE 02
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	9	0	0	0	0	9	9	0000	0	2	0	0	0	0	2	2
0100	0	7	1	0	0	0	8	8	0100	0	3	0	0	0	0	3	3
0200	0	3	0	0	0	0	3	3	0200	0	2	0	0	0	0	2	2
0300	0	0	0	0	0	0	0	0	0300	0	3	0	0	0	0	3	3
0400	0	0	0	0	0	0	0	0	0400	0	0	0	1	0	0	1	2
0500	0	3	0	0	0	0	3	3	0500	0	4	0	0	0	0	4	4
0600	0	5	3	0	0	0	8	8	0600	0	4	3	0	0	0	7	7
0700	0	13	1	0	2	0	16	19	0700	0	18	1	0	2	0	21	24
0800	0	11	1	0	1	0	13	14	0800	0	27	2	0	2	0	31	34
0900	1	20	1	1	2	1	26	29	0900	0	47	4	1	2	0	54	57
1000	1	23	1	0	2	0	27	29	1000	1	36	5	0	1	0	43	44
1100	2	47	3	1	1	0	54	54	1100	1	53	6	3	5	0	68	75
1200	0	64	3	2	5	0	74	82	1200	0	46	4	1	1	0	52	54
1300	3	95	5	2	2	0	107	108	1300	0	36	3	0	2	0	41	44
1400	0	66	3	0	1	0	70	71	1400	0	42	2	0	3	0	47	51
1500	0	43	3	0	3	0	49	53	1500	1	34	2	1	1	0	39	40
1600	1	50	6	0	0	0	57	56	1600	1	40	5	0	1	0	47	48
1700	0	45	3	1	1	0	50	52	1700	0	41	4	0	1	0	46	47
1800	0	51	2	0	1	0	54	55	1800	0	34	5	0	0	0	39	39
1900	1	42	3	1	0	0	47	47	1900	1	23	4	0	0	0	28	27
2000	0	35	3	0	2	0	40	43	2000	0	33	3	0	3	0	39	43
2100	0	17	0	1	0	0	18	19	2100	0	57	3	0	0	1	61	62
2200	0	13	1	0	1	0	15	16	2200	0	40	1	1	0	0	42	43
2300	0	8	0	0	0	0	8	8	2300	0	18	1	0	1	0	20	21
07-19	8	528	32	7	21	1	597	622	07-19	4	454	43	6	21	0	528	555
06-22	9	627	41	9	23	1	710	738	06-22	5	571	56	6	24	1	663	694
06-00	9	648	42	9	24	1	733	763	06-00	5	629	58	7	25	1	725	758
00-00	9	670	43	9	24	1	756	786	00-00	5	643	58	8	25	1	740	774

Peaks	Time	Vehicles	PCU's
AM	0900	26	29.3
IP	1300	107	108.2
PM	1600	57	56.2



Peaks	Time	Vehicles	PCU's
AM	0900	54	57.1
IP	1200	52	53.8
PM	1600	47	47.5



TRAFFINOMICS LIMITED

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BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Sunday 23 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

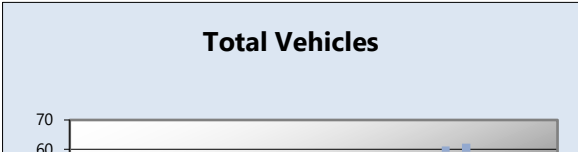
Sunday 23 June 2024
TRA/24/101

SITE 02
NORTHBOUND

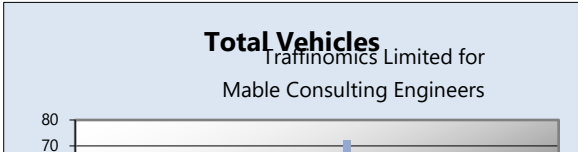
SITE 02
SOUTHBOUND

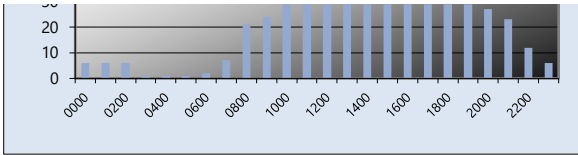
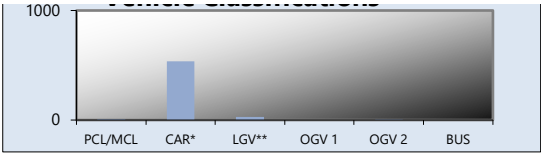
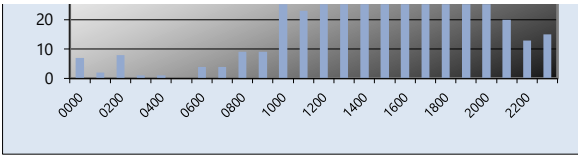
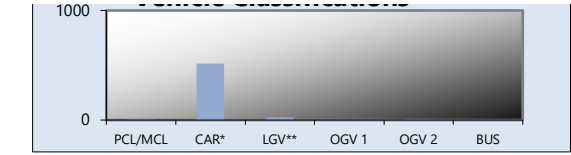
TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	7	0	0	0	0	7	7	0000	0	4	2	0	0	0	6	6
0100	0	2	0	0	0	0	2	2	0100	0	6	0	0	0	0	6	6
0200	0	7	1	0	0	0	8	8	0200	0	5	1	0	0	0	6	6
0300	0	1	0	0	0	0	1	1	0300	0	1	0	0	0	0	1	1
0400	0	1	0	0	0	0	1	1	0400	0	1	0	0	0	0	1	1
0500	0	0	0	0	0	0	0	0	0500	0	1	0	0	0	0	1	1
0600	0	4	0	0	0	0	4	4	0600	0	2	0	0	0	0	2	2
0700	0	4	0	0	0	0	4	4	0700	0	6	1	0	0	0	7	7
0800	0	9	0	0	0	0	9	9	0800	0	21	0	0	0	0	21	21
0900	0	8	0	0	1	0	9	10	0900	0	24	0	0	0	0	24	24
1000	2	24	2	0	0	0	28	26	1000	1	33	3	0	0	0	37	36
1100	1	22	0	0	0	0	23	22	1100	2	38	3	0	1	0	44	44
1200	0	29	3	0	0	0	32	32	1200	2	47	1	0	0	0	50	48
1300	0	38	3	0	0	0	41	41	1300	0	70	2	0	0	0	72	72
1400	1	45	2	0	1	0	49	50	1400	1	42	2	0	0	0	45	44
1500	1	36	1	0	0	0	38	37	1500	2	39	2	0	0	0	43	41
1600	1	34	2	0	0	0	37	36	1600	0	30	1	0	0	0	31	31
1700	0	53	1	0	0	0	54	54	1700	0	34	4	0	1	0	39	40
1800	0	58	3	0	0	0	61	61	1800	0	35	2	0	0	0	37	37
1900	2	59	1	0	0	0	62	60	1900	0	34	2	0	0	0	36	36
2000	0	29	1	0	0	0	30	30	2000	0	25	1	0	1	0	27	28
2100	0	19	0	0	1	0	20	21	2100	0	23	0	0	0	0	23	23
2200	0	11	2	0	0	0	13	13	2200	0	10	2	0	0	0	12	12
2300	0	14	1	0	0	0	15	15	2300	0	5	0	0	1	0	6	7
07-19	6	360	17	0	2	0	385	383	07-19	8	419	21	0	2	0	450	446
06-22	8	471	19	0	3	0	501	499	06-22	8	503	24	0	3	0	538	536
06-00	8	496	22	0	3	0	529	527	06-00	8	518	26	0	4	0	556	555
00-00	8	514	23	0	3	0	548	546	00-00	8	536	29	0	4	0	577	576

Peaks	Time	Vehicles	PCU's
AM	0800	9	10.3
IP	1300	49	49.5
PM	1800	61	61



Peaks	Time	Vehicles	PCU's
AM	0900	24	24
IP	1300	72	72
PM	1700	39	40.3





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BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Monday 24 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

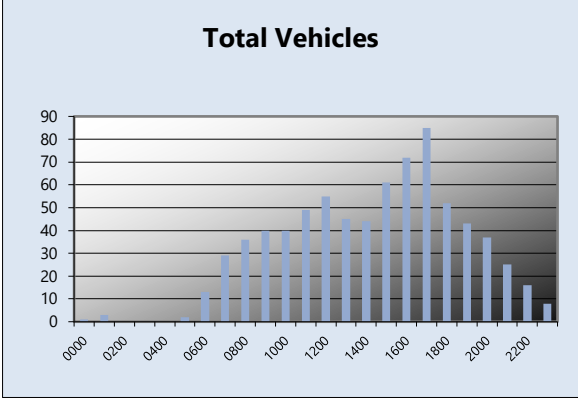
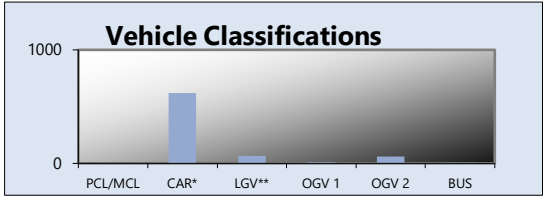
Monday 24 June 2024
TRA/24/101

SITE 02
NORTHBOUND

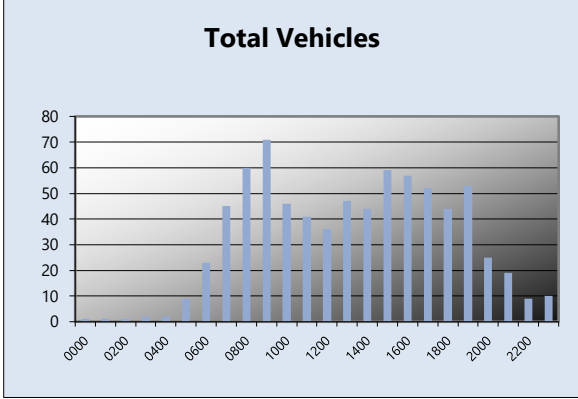
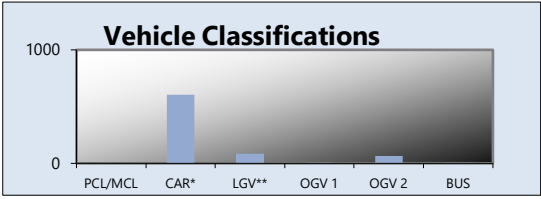
SITE 02
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	1	0	0	0	0	1	1	0000	0	1	0	0	0	0	1	1
0100	0	3	0	0	0	0	3	3	0100	0	1	0	0	0	0	1	1
0200	0	0	0	0	0	0	0	0	0200	0	1	0	0	0	0	1	1
0300	0	0	0	0	0	0	0	0	0300	0	2	0	0	0	0	2	2
0400	0	0	0	0	0	0	0	0	0400	0	2	0	0	0	0	2	2
0500	0	2	0	0	0	0	2	2	0500	0	4	3	0	2	0	9	12
0600	0	9	2	0	2	0	13	16	0600	0	20	3	0	0	0	23	23
0700	0	24	4	0	1	0	29	30	0700	0	39	5	0	1	0	45	46
0800	0	27	4	2	3	0	36	41	0800	0	52	5	0	3	0	60	64
0900	0	31	3	2	3	1	40	46	0900	0	52	12	0	6	1	71	80
1000	0	29	3	1	7	0	40	50	1000	0	34	4	0	8	0	46	56
1100	0	39	5	0	5	0	49	56	1100	0	31	4	1	5	0	41	48
1200	0	46	3	2	4	0	55	61	1200	0	28	4	0	4	0	36	41
1300	0	37	3	0	4	1	45	51	1300	0	38	5	0	4	0	47	52
1400	0	31	6	3	4	0	44	51	1400	0	27	6	1	10	0	44	58
1500	0	47	8	0	6	0	61	69	1500	0	44	8	0	6	1	59	68
1600	0	58	5	0	9	0	72	84	1600	0	40	8	2	6	1	57	67
1700	0	72	5	0	8	0	85	95	1700	0	44	5	1	2	0	52	55
1800	0	49	2	0	1	0	52	53	1800	0	35	5	0	4	0	44	49
1900	0	38	2	2	1	0	43	45	1900	0	50	2	0	1	0	53	54
2000	0	36	1	0	0	0	37	37	2000	0	24	1	0	0	0	25	25
2100	0	21	3	0	1	0	25	26	2100	0	17	1	0	1	0	19	20
2200	0	15	1	0	0	0	16	16	2200	0	6	2	0	1	0	9	10
2300	0	5	3	0	0	0	8	8	2300	0	10	0	0	0	0	10	10
07-19	0	490	51	10	55	2	608	687	07-19	0	464	71	5	59	3	602	684
06-22	0	594	59	12	59	2	726	811	06-22	0	575	78	5	61	3	722	807
06-00	0	614	63	12	59	2	750	835	06-00	0	591	80	5	62	3	741	827
00-00	0	620	63	12	59	2	756	841	00-00	0	602	83	5	64	3	757	846

Peaks	Time	Vehicles	PCU's
AM	0900	40	45.9
IP	1200	55	61.2
PM	1700	85	95.4



Peaks	Time	Vehicles	PCU's
AM	0900	71	79.8
IP	1300	47	57.5
PM	1600	57	66.8



TRAFFINOMICS LIMITED

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BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

Tuesday 25 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

Tuesday 25 June 2024
TRA/24/101

SITE 02
NORTHBOUND

SITE 02
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	4	0	0	0	0	4	4	0000	0	3	0	0	0	0	3	3
0100	0	2	0	0	0	0	2	2	0100	0	1	0	1	0	0	2	3
0200	0	0	0	0	0	0	0	0	0200	0	1	0	0	0	0	1	1
0300	0	0	0	0	0	0	0	0	0300	0	2	0	0	0	0	2	2
0400	0	3	0	0	0	0	3	3	0400	0	2	0	0	0	0	2	2
0500	0	2	1	0	0	0	3	3	0500	0	4	2	0	2	0	8	11
0600	0	8	1	2	2	0	13	17	0600	0	13	3	1	1	0	18	20
0700	0	19	8	0	0	0	27	27	0700	0	38	9	0	4	0	51	56
0800	1	28	5	1	3	0	38	42	0800	0	65	5	1	9	0	80	92
0900	0	23	4	4	7	1	39	51	0900	0	56	5	2	4	3	70	79
1000	0	30	7	4	9	0	50	64	1000	0	40	4	1	4	0	49	55
1100	0	30	1	1	5	0	37	44	1100	0	36	2	1	9	0	48	60
1200	0	41	4	2	4	1	52	59	1200	0	30	11	1	4	0	46	52
1300	0	33	8	2	7	0	50	60	1300	0	34	3	1	4	1	43	50
1400	0	35	5	1	4	1	46	53	1400	0	38	6	0	6	0	50	58
1500	0	38	7	0	6	2	53	63	1500	0	37	8	2	5	0	52	60
1600	1	42	6	1	3	0	53	57	1600	0	30	9	2	6	2	49	60
1700	1	72	4	1	5	1	84	91	1700	0	46	7	0	1	0	54	55
1800	0	47	7	0	3	0	57	61	1800	2	37	5	0	1	0	45	45
1900	0	38	6	0	2	0	46	49	1900	0	31	3	0	3	0	37	41
2000	0	25	3	0	2	0	30	33	2000	1	21	2	0	0	0	24	23
2100	0	24	2	0	1	0	27	28	2100	0	25	0	0	0	0	25	25
2200	0	12	2	0	0	0	14	14	2200	0	5	2	0	3	0	10	14
2300	0	5	1	0	2	0	8	11	2300	0	13	1	0	0	0	14	14
07-19	3	438	66	17	56	6	586	671	07-19	2	487	74	11	57	6	637	721
06-22	3	533	78	19	63	6	702	797	06-22	3	577	82	12	61	6	741	830
06-00	3	550	81	19	65	6	724	822	06-00	3	595	85	12	64	6	765	858
00-00	3	561	82	19	65	6	736	834	00-00	3	608	87	13	66	6	783	879

Peaks	Time	Vehicles	PCU's
AM	0900	39	51.1
IP	1200	52	60.1



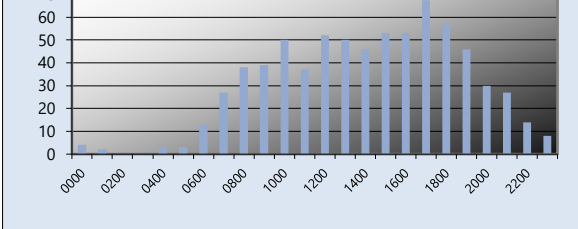
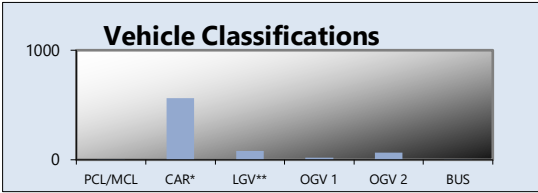
Peaks	Time	Vehicles	PCU's
AM	0800	80	92.2
IP	1400	50	57.8



Traffinomics Limited for

Mable Consulting Engineers

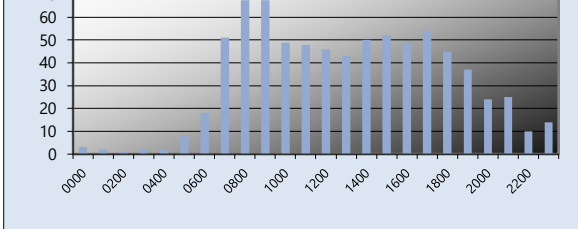
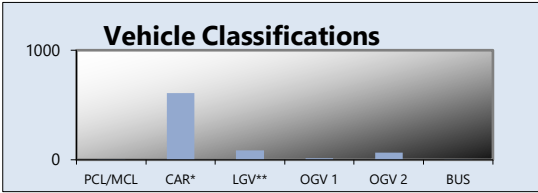
Total Vehicles



TRAFFINOMICS LIMITED

BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
AUTOMATIC TRAFFIC COUNTS

SITE 02
NORTHBOUND



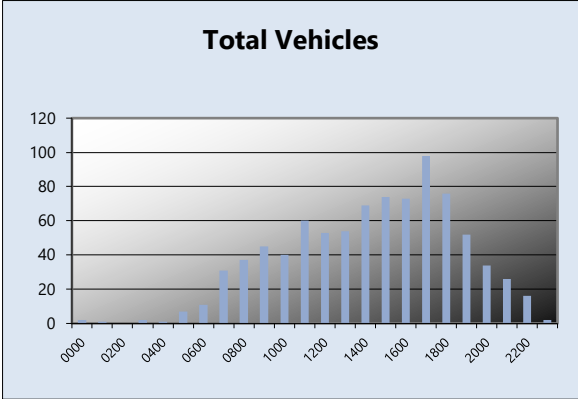
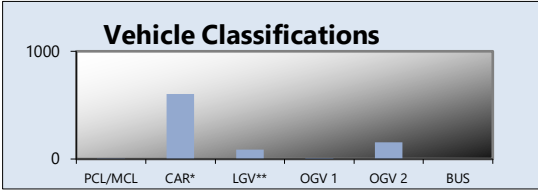
TRAFFINOMICS LIMITED

Wednesday 26 June 2024 BALLYFEENEY WIND FARM TRAFFIC COUNT/SPEED SURVEYS
TRA/24/101 AUTOMATIC TRAFFIC COUNTS

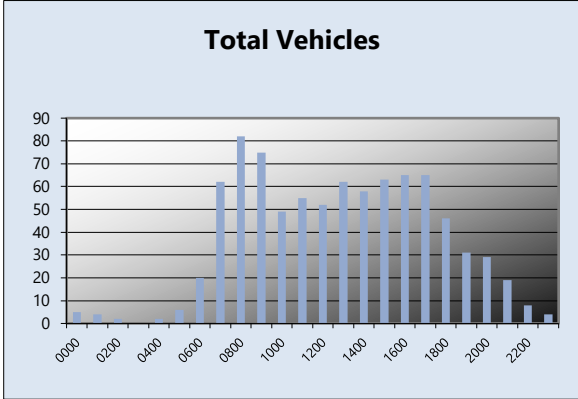
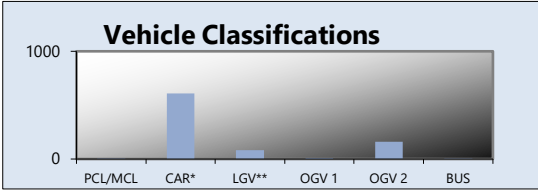
SITE 02
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU	TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	2	0	0	0	0	2	2	0000	0	4	0	0	1	0	5	6
0100	0	1	0	0	0	0	1	1	0100	0	3	0	0	1	0	4	5
0200	0	0	0	0	0	0	0	0	0200	0	1	1	0	0	0	2	2
0300	0	2	0	0	0	0	2	2	0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	1	0	1	2	0400	0	2	0	0	0	0	2	2
0500	0	5	0	1	1	0	7	9	0500	0	3	0	1	2	0	6	9
0600	0	8	3	0	0	0	11	11	0600	0	14	4	0	1	1	20	22
0700	0	24	3	0	4	0	31	36	0700	1	54	4	0	3	0	62	65
0800	0	25	3	1	8	0	37	48	0800	0	71	2	1	8	0	82	93
0900	1	27	7	0	10	0	45	57	0900	0	53	10	2	10	0	75	89
1000	0	22	4	0	14	0	40	58	1000	0	30	4	3	12	0	49	66
1100	0	34	7	1	18	0	60	84	1100	0	29	2	0	24	0	55	86
1200	0	34	3	1	15	0	53	73	1200	0	32	4	2	14	0	52	71
1300	0	37	7	0	10	0	54	67	1300	0	39	8	0	15	0	62	82
1400	0	48	3	1	17	0	69	92	1400	0	31	11	0	15	1	58	79
1500	0	42	10	0	22	0	74	103	1500	2	42	3	0	16	0	63	82
1600	0	46	8	1	18	0	73	97	1600	0	41	8	0	16	0	65	86
1700	0	77	8	1	12	0	98	114	1700	0	43	10	0	12	0	65	81
1800	0	64	11	0	1	0	76	77	1800	0	39	3	0	4	0	46	51
1900	0	43	5	0	4	0	52	57	1900	0	28	2	0	1	0	31	32
2000	1	27	3	2	1	0	34	36	2000	0	26	2	1	0	0	29	30
2100	0	21	3	1	1	0	26	28	2100	0	16	2	0	1	0	19	20
2200	0	15	1	0	0	0	16	16	2200	0	6	0	0	2	0	8	11
2300	0	2	0	0	0	0	2	2	2300	0	3	1	0	0	0	4	4
07-19	1	480	74	6	149	0	710	906	07-19	3	504	69	8	149	1	734	930
06-22	2	579	88	9	155	0	833	1037	06-22	3	588	79	9	152	2	833	1035
06-00	2	596	89	9	155	0	851	1055	06-00	3	597	80	9	154	2	845	1049
00-00	2	606	89	10	157	0	864	1072	00-00	3	610	81	10	158	2	864	1074

Peaks	Time	Vehicles	PCU's
AM	0900	45	57.2
IP	1400	69	91.6
PM	1700	98	114.1

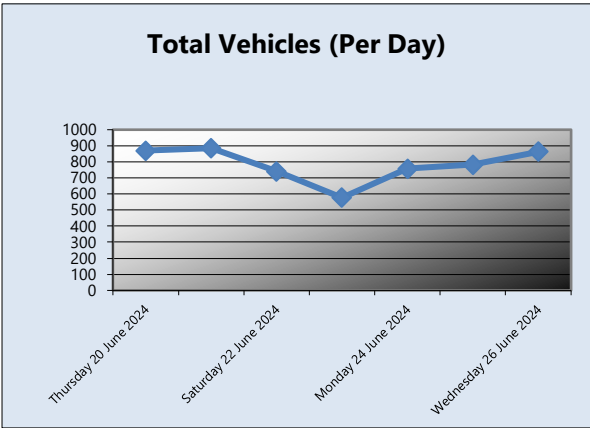
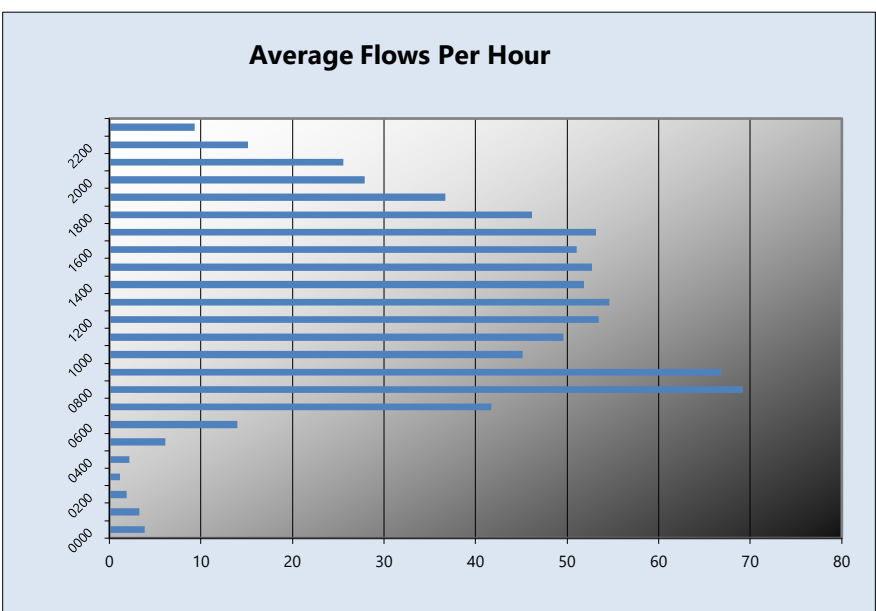
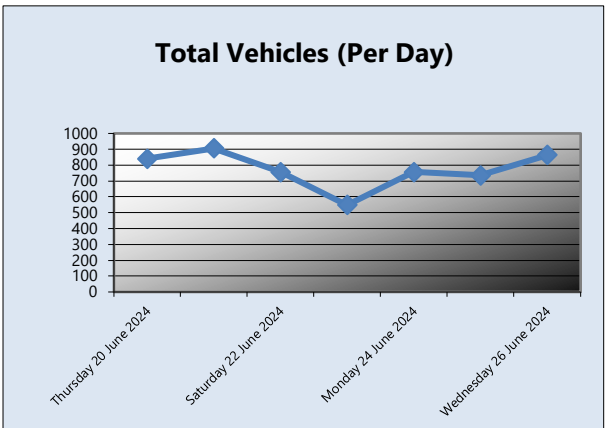
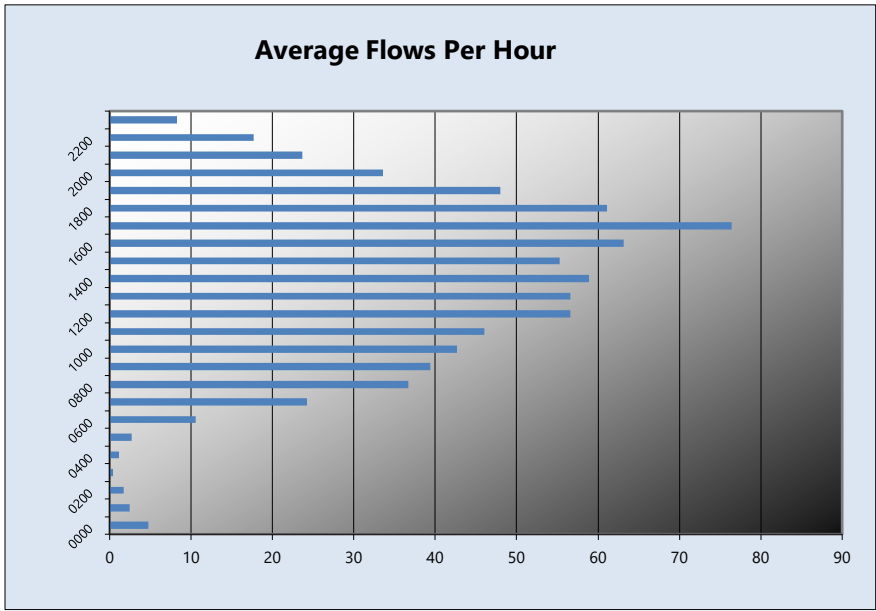


Peaks	Time	Vehicles	PCU's
AM	0800	82	92.9
IP	1300	62	81.5
PM	1600	65	85.8



TIME PERIOD	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	Average
0000	5	5	9	7	1	4	2	5
0100	0	1	8	2	3	2	1	2
0200	0	1	3	8	0	0	0	2
0300	0	0	0	1	0	0	2	0
0400	1	2	0	1	0	3	1	1
0500	3	1	3	0	2	3	7	3
0600	8	17	8	4	13	13	11	11
0700	34	29	16	4	29	27	31	24
0800	68	56	13	9	36	38	37	37
0900	54	63	26	9	40	39	45	39
1000	44	70	27	28	40	50	40	43
1100	31	68	54	23	49	37	60	46
1200	56	74	74	32	55	52	53	57
1300	48	51	107	41	45	50	54	57
1400	78	56	70	49	44	46	69	59
1500	55	57	49	38	61	53	74	55
1600	70	80	57	37	72	53	73	63
1700	91	73	50	54	85	84	98	76
1800	65	63	54	61	52	57	76	61
1900	39	47	47	62	43	46	52	48
2000	34	30	40	30	37	30	34	34
2100	18	32	18	20	25	27	26	24
2200	30	20	15	13	16	14	16	18
2300	8	9	8	15	8	8	2	8
07-19	694	740	597	385	608	586	710	617
06-22	793	866	710	501	726	702	833	733
06-00	831	895	733	529	750	724	851	759
00-00	840	905	756	548	756	736	864	772

TIME PERIOD	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	Average
0000	6	4	2	6	1	3	5	4
0100	5	2	3	6	1	2	4	3
0200	0	1	2	6	1	1	2	2
0300	0	0	3	1	2	2	0	1
0400	3	4	1	1	2	2	2	2
0500	8	7	4	1	9	8	3	6
0600	16	12	7	2	23	18	20	14
0700	54	52	21	7	45	51	62	42
0800	106	104	31	21	60	80	82	69
0900	77	97	54	24	71	70	75	67
1000	47	45	43	37	46	49	49	45
1100	46	45	68	44	41	48	55	50
1200	60	78	52	50	36	46	52	53
1300	57	60	41	72	47	43	62	55
1400	73	46	47	45	44	50	58	52
1500	52	61	39	43	59	52	63	53
1600	56	52	47	31	57	49	65	51
1700	53	63	46	39	52	54	65	53
1800	60	52	39	37	44	45	46	46
1900	39	33	28	36	53	37	31	37
2000	27	24	39	27	25	24	29	28
2100	12	20	61	23	19	25	19	26
2200	7	18	42	12	9	10	8	15
2300	6	5	20	6	10	14	4	9
07-19	741	755	528	450	602	637	734	635
06-22	835	844	663	538	722	741	833	739
06-00	848	867	725	556	741	765	845	764
00-00	870	885	740	577	757	783	864	782



Peak Time & Volumetric Count Data

	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	Mode/Average
AM								
Time	0800	0900	0900	0800	0900	0900	0900	0900
Vehicles	68	63	26	9	40	39	45	41
IP								
Time	1400	1200	1300	1400	1200	1200	1400	1400
Vehicles	78	74	107	49	55	52	69	69
PM								
Time	1700	1600	1600	1800	1700	1700	1700	1700
Vehicles	91	80	57	61	85	84	98	79

Peak Time & Volumetric Count Data

	Thursday 20 June 2024	Friday 21 June 2024	Saturday 22 June 2024	Sunday 23 June 2024	Monday 24 June 2024	Tuesday 25 June 2024	Wednesday 26 June 2024	Mode/Average
AM								
Time	0800	0800	0900	0900	0900	0800	0800	0800
Vehicles	106	104	106	24	71	80	82	82
IP								
Time	1400	1200	1200	1300	1300	1400	1300	1300
Vehicles	73	78	52	72	47	50	62	62
PM								
Time	1800	1700	1600	1700	1600	1700	1600	1700
Vehicles	60	63	47	39	57	54	65	55

SITE 02
NORTHBOUND

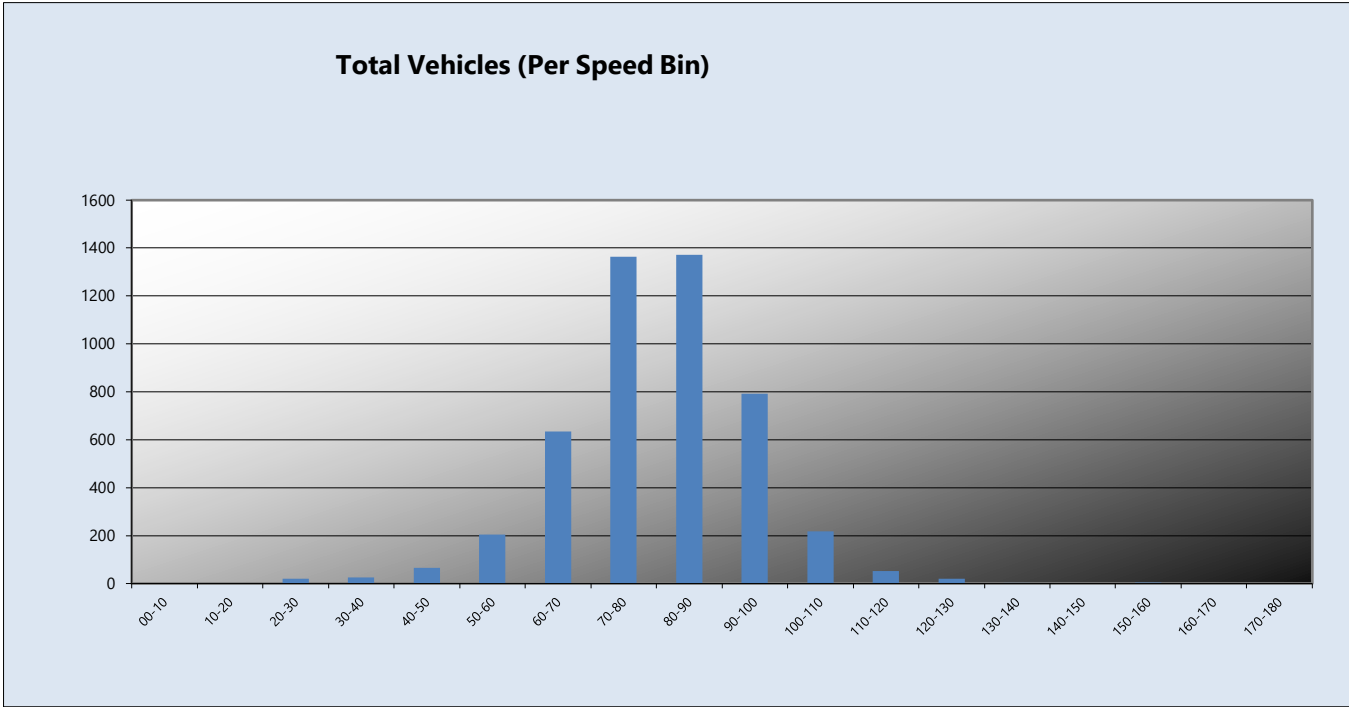
Profile:

Filter time: 00:00 20th June 2024 => 23:59 26th June 2024
Speed range: 0 - 200 km/h.
Separation: Greater than 4.00 seconds. - (Headway)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)

Vehicles = 4774
Maximum = 158.2 km/h, Minimum = 22.0 km/h, Mean = 80.3 km/h
85% Speed = 93.42 km/h, 95% Speed = 101.93 km/h, Median = 80.46 km/h
20 km/h Pace = 71 - 91, Number in Pace = 2768 (57.98%)
Variance = 199.18, Standard Deviation = 14.11 km/h

Speed Bins:

Speed KPH	Bin	
	No.	%
00-10	0	0.0
10-20	0	0.0
20-30	19	0.4
30-40	25	0.5
40-50	65	1.4
50-60	205	4.3
60-70	635	13.3
70-80	1364	28.6
80-90	1372	28.7
90-100	791	16.6
100-110	219	4.6
110-120	51	1.1
120-130	21	0.4
130-140	2	0.0
140-150	0	0.0
150-160	5	0.1
160-170	0	0.0
170-180	0	0.0



SITE 02
SOUTHBOUND

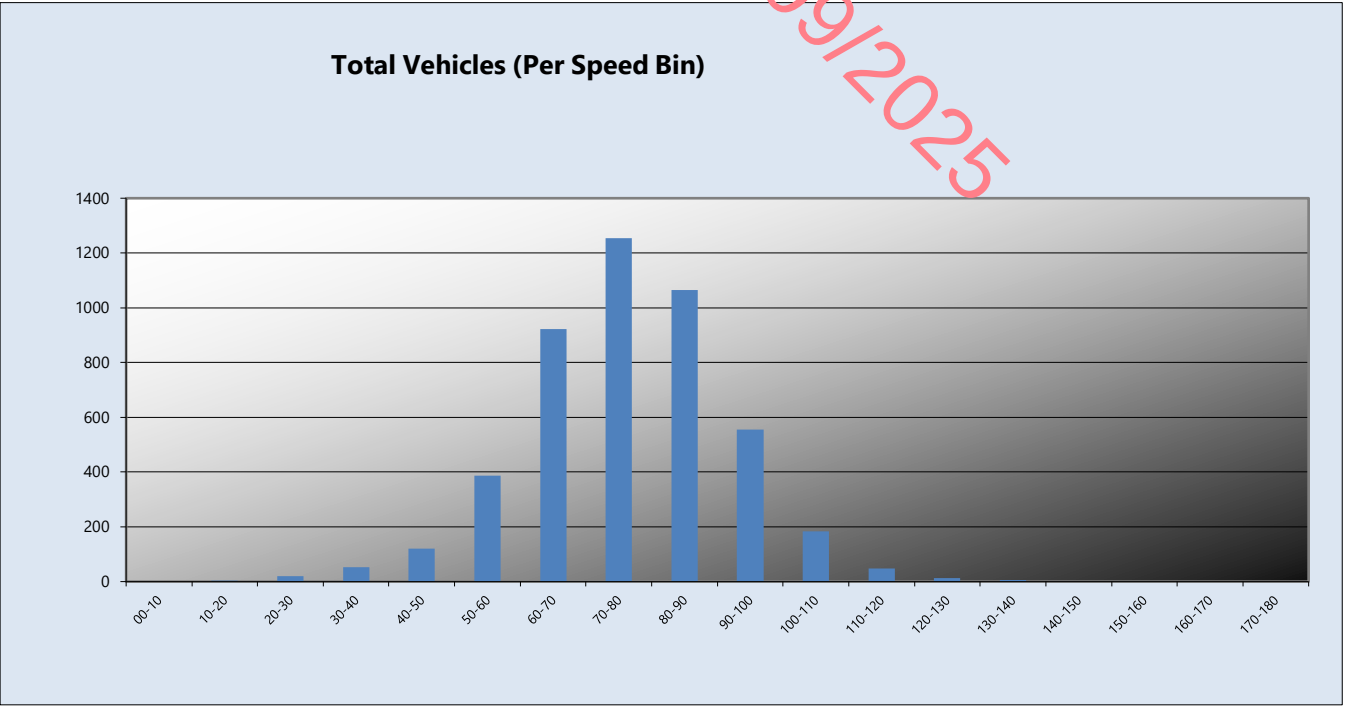
Profile:

Filter time: 00:00 20th June 2024 => 23:59 26th June 2024
Speed range: 0 - 200 km/h.
Separation: Greater than 4.00 seconds. - (Headway)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)

Vehicles = 4625
Maximum = 138.1 km/h, Minimum = 14.1 km/h, Mean = 76.3 km/h
85% Speed = 91.53 km/h, 95% Speed = 100.53 km/h, Median = 76.50 km/h
20 km/h Pace = 66 - 86, Number in Pace = 2367 (51.18%)
Variance = 234.02, Standard Deviation = 15.30 km/h

Speed Bins:

Speed KPH	Bin	
	No.	%
00-10	0	0.0
10-20	4	0.1
20-30	19	0.4
30-40	53	1.1
40-50	120	2.6
50-60	386	8.3
60-70	922	19.9
70-80	1253	27.1
80-90	1064	23.0
90-100	555	12.0
100-110	184	4.0
110-120	47	1.0
120-130	12	0.3
130-140	6	0.1
140-150	0	0.0
150-160	0	0.0
160-170	0	0.0
170-180	0	0.0



CLASSIFICATION SCHEMES:

Scheme F Classification Scheme (Non-metric)

Scheme F is an attempt to implement the FWHA's visual classification scheme as an axle-based classification scheme. This is one of several interpretations.

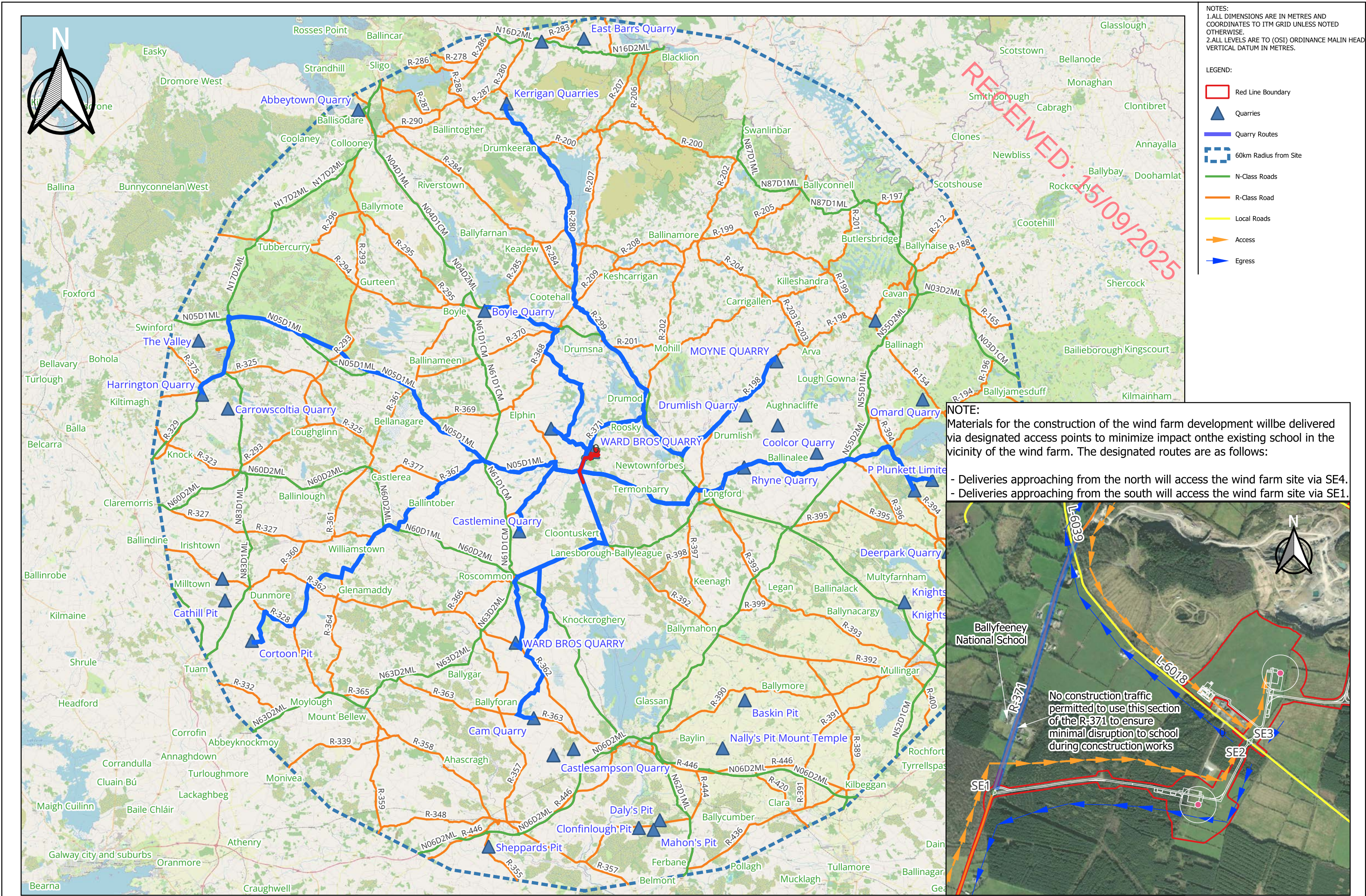
Vehicle Class	Class	Vehicle Type	No. of Axles	Axle spacing in feet				
				Axle 1 to 2	Axle 2 to 3	Axle 3 to 4	Axle 4 to 5	Axle 5 to 6
PCL/MCL	1	motorcycle	2	<6.0				
CAR*	2	passenger car	2	6.0 - 10.0				
		car + 1 axle trailer	3	<10.0	10.0 - 18.0			
		car + 2 axle trailer	4	<10.0		<3.5		
LGV**	3	pickup	2	10.0 - 15.0				
		pickup + 1 axle trailer	3	10.0 - 15.0	10.0 - 18.0			
		pickup + 2 axle trailer	4	10.0 - 15.0		<3.5		
		pickup + 3 axle trailer	5	9.9 - 15.0			<3.5	
BUS	4	bus	2	>20.0				
		bus	3	>19.0				
OGV 1	5	single unit truck - dual rear axle	2	14.9 - 20.0			<3.5	
	6	3 axle truck	3		<18.0			
OGV 2	7	4 axle truck	4					
	8	2S1	3		>18.0			
		2S2	4		>5.0	>3.5		
		3S1	4		<5.0	>10.0		
	9	3S2	5		<6.1		3.5 - 8.0	
		5 axle combination	5					
	10	6 axle combination	6			3.5 - 5.0		
		3S3	6					
	11	2S1-2	5		>6.0			
	12	3S1-2	6					>10.0
	13	truck	7 or more					

Car* Cars and LGV based cars

LGV** Light Goods Vehicles with the exception of LGV based on cars

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Appendix 2 -Quarry Routes to Wind farm Site

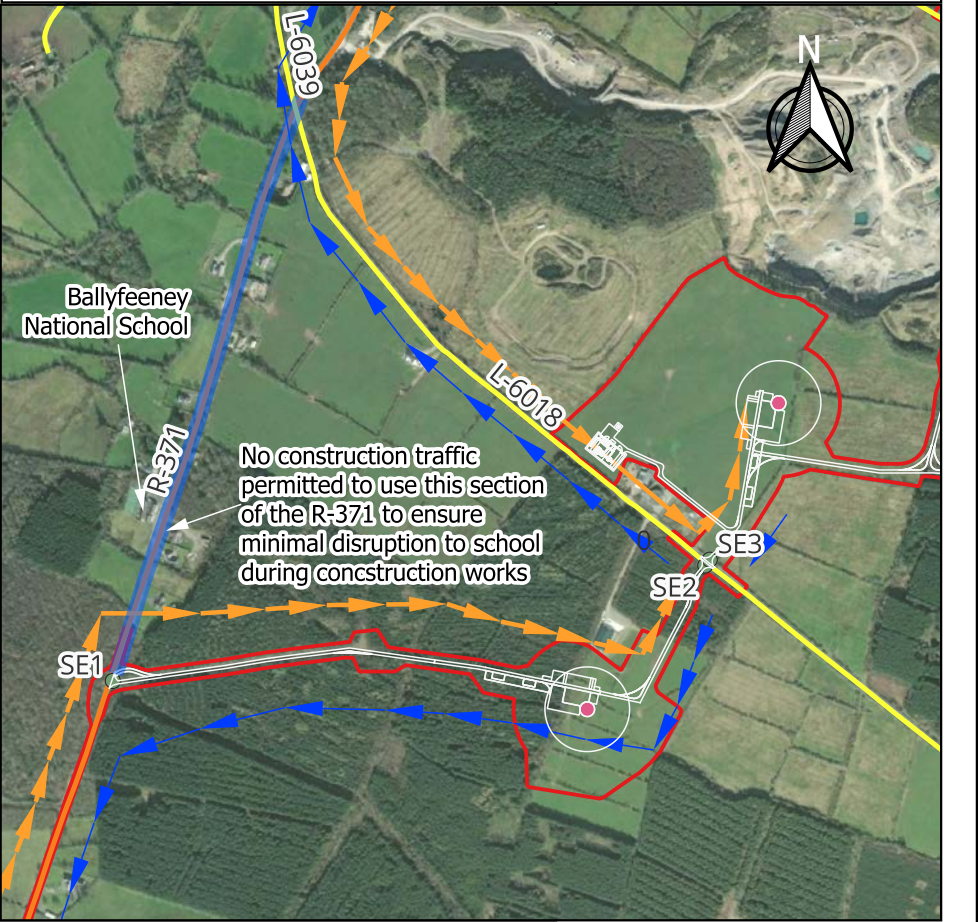


NOTES:
1. ALL DIMENSIONS ARE IN METRES AND COORDINATES TO ITM GRID UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE TO (OSI) ORDINANCE MALIN HEAD VERTICAL DATUM IN METRES.

- LEGEND:
- Red Line Boundary
 - Quarries
 - Quarry Routes
 - 60km Radius from Site
 - N-Class Roads
 - R-Class Road
 - Local Roads
 - Access
 - Egress

NOTE:
Materials for the construction of the wind farm development will be delivered via designated access points to minimize impact on the existing school in the vicinity of the wind farm. The designated routes are as follows:

- Deliveries approaching from the north will access the wind farm site via SE4.
- Deliveries approaching from the south will access the wind farm site via SE1.



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PLANNING

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JOB TITLE:	BALLYFEENEY GREEN ENERGY PROJECT	DATE:	22/08/25	JOB No.	23604
DRG. TITLE	QUARRY DELIVERY ROUTES	CHK. BY:	BMG	DRG No.	900
		APP. BY:	BMG		P2