

Shannon Technology and Energy Park (STEP) Power Plant

Environmental Impact Assessment Report – Volume 2

Chapter 11 Traffic and Transport

Shannon LNG Limited

April 2024

Prepared for:

Shannon LNG Limited

Prepared by:

AECOM Ireland Limited
4th Floor
Adelphi Plaza
Georges Street Upper
Dun Laoghaire
Co. Dublin A96 T927

T: +353 1 238 3100
aecom.com

© 2024 AECOM Ireland Limited. All Rights Reserved.

This document has been prepared by AECOM Ireland Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Contents

11.	Traffic and Transport	3
11.1	Introduction	3
11.2	Competent Expert	3
11.3	Study Area Description	4
11.3.1	Land Use Zoning Objectives and Planning History	5
11.3.2	Proposed Development	5
11.3.3	Policy and Guidelines.....	6
11.3.4	Structure of this Chapter	6
11.4	Methodology.....	7
11.4.1	Approach.....	7
11.4.2	Describing Potential Effects	7
11.4.3	Significance of Effects.....	8
11.5	Baseline Environment	9
11.5.1	Road Network	9
11.5.2	Road Safety	12
11.5.3	Walking Infrastructure	12
11.5.4	Cycling Infrastructure	12
11.5.5	Bus / Ferry Travel.....	12
11.6	Transport Characteristics of the Proposed Development	13
11.6.1	Access.....	13
11.6.2	Car Parking	15
11.6.3	Cycle Parking	15
11.6.4	Haulage Routes	16
11.7	Assessment of Impact and Effect	17
11.7.1	Do Nothing Scenario	17
11.7.2	Construction Phase.....	18
11.7.3	Operational Phase	25
11.7.4	Pedestrians and Cyclists.....	31
11.7.5	Public Transport	32
11.8	Cumulative Impact Assessment.....	32
11.8.1	Tarbert Power Station.....	35
11.8.2	L1010 Road Works	35
11.9	Mitigation and Monitoring Measures	36
11.9.1	Construction Phase.....	36
11.9.2	Operational Phase	37
11.10	Residual Impacts and Effects	37
11.11	Decommissioning.....	37
11.12	Summary	37
11.12.1	Predicted Impacts and Effects Summary	38
11.13	References.....	42

Figures

Figure 11.1: Transport Study Area (Kerry County Council).....	4
Figure 11.2: Transport Study Area Local.....	5
Figure 11.3: L1010 Coast Road	10
Figure 11.4: Traffic Survey Locations.....	12
Figure 11.5: Proposed Site Access Arrangements (Drawing: PR452891-ACM-XX-00-DR-CE-00-0001)	13
Figure 11.6: Proposed Site Access Visibility Splay	15
Figure 11.7: AIL Delivery Route	16
Figure 11.8: Proposed HGV Construction Access / Egress Arrangements	17
Figure 11.9: Proposed Construction Traffic Flows at Site Access in PCU	21
Figure 11.10: Proposed Construction Traffic Flows at R551 / L1010 road in PCU	21
Figure 11.11: Proposed Construction Traffic Flows at N67 / N69 / R551 in PCU	22
Figure 11.12: Proposed Construction Traffic Flows at N69 in PCU	22
Figure 11.13: Proposed Operation Traffic Flows at Site Access in PCU	26
Figure 11.14: Proposed Operation Traffic Flows at R551/ L1010 in PCU	27
Figure 11.15: Proposed Operation Traffic Flows at N67/ N69/ R551 in PCU	27
Figure 11.16: Proposed Operation Traffic Flows at N69 in PCU	28

Tables

Table 11.1: Anticipated Construction Schedule	5
Table 11.2: Potential Effect Parameters	8
Table 11.3: L1010 Coast Road ATC Survey Summary	14
Table 11.4: Overall Peak Construction Staff Vehicle AM (September 2027)	19
Table 11.5: Overall Peak Construction Staff Vehicle PM (September 2027) (vehicles).....	20
Table 11.6: Percentage Impact of Construction Phase (2027) (PCU)	23
Table 11.7: Junction 1 Results	24
Table 11.8: Junction 2 Results	24
Table 11.9: Junction 3 Results	24
Table 11.10: Junction 4 Results	25
Table 11.11: Projected Operational Phase Traffic Generation (vehicles).....	26
Table 11.12: Percentage Impact of Operational Phase (2028) (PCU)	28
Table 11.13: Junction 1 Results	29
Table 11.14: Junction 2 Results	30
Table 11.15: Junction 3 Results	30
Table 11.16: Junction 4 Results	31
Table 11.17: Developments Considered for Cumulative Impacts	33
Table 11.18: Cumulative Assessment Application PA08.318540 Tarbert Power Station (PCU)	35
Table 11.19: Predicted Effects.....	38
Table 11.20: Summary	40

11. Traffic and Transport

11.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) assesses the likely significant effects of the Proposed Development on traffic and transport.

This chapter has been prepared with input from the wider Environmental Impact Assessment (EIA) team and from John Sisk and Son Ltd. (herein referred to as “Sisk”), an international contractor. The information provided by Sisk details the likely transport requirements during the construction phase of the Proposed Development.

This chapter describes the transportation impacts and likely significant environmental effects of the Proposed Development during the construction and operation phases in accordance with the requirements of the Environmental Protection Agency (EPA) ‘*Guidelines on the information to be contained in Environmental Impact Assessment Reports*’ (2022). To assist in determining the impact that the Proposed Development has on the surrounding road network reference has been made to Transport Infrastructure Ireland (TII) standard ‘*PE-PDV-02045, Traffic and Transport Assessment Guidelines*’ (2014). This chapter also sets out measures and strategies to mitigate any significant effects.

The Site is located in the townlands of Kilcolgan Lower and Ralappane, between Tarbert and Ballylongford, Co. Kerry. The application Site boundary (‘red line’) encloses an area of approximately 41 hectares (ha) and is entirely owned by the Applicant.

Full details on the background, Site history and the Proposed Development is provided in **Chapter 02** (Description of the Proposed Development) and also the Planning Statement submitted with this planning application.

11.2 Competent Expert

This assessment has been undertaken by Jacqueline Haley, Associate Director and Abby Bennett, Senior Transport Planner, AECOM.

Jacqueline Haley is a Chartered Engineer (BEng, PGDip, MSc, CEng, MIEI, Cert Comp RSA) with over 19 years’ experience covering all stages of transport planning, traffic engineering, highway design and road safety. Jacqueline has experience in consulting with local authorities, elected members, emergency services, key stakeholders and other external organisations. She has also organised public consultations and exhibitions.

Abby Bennett has 10 years’ experience working in the Transport Planning team at AECOM after graduating with a BSc (Hons) in Geography from the University of Southampton in 2012. As a Senior Transport Planner Abby has authored many Transport reports (Transport Assessments, Transport Statement, Travel Plans, Construction Traffic Management Plans (CTMPs)) in support of planning applications for a wide variety of projects in both Ireland and the UK.

11.3 Study Area Description

The Proposed Development will be located on the Shannon Estuary, approximately 4.5 km from Tarbert and 3.5 km from Ballylongford, Co. Kerry and will be accessed off the L1010 Coast Road via a new priority-controlled junction.

Figure 11.1 illustrates the study area for the purposes of this chapter as well as the transport context of this study area, **Figure 11.2** provides a more localised overview of the study area.

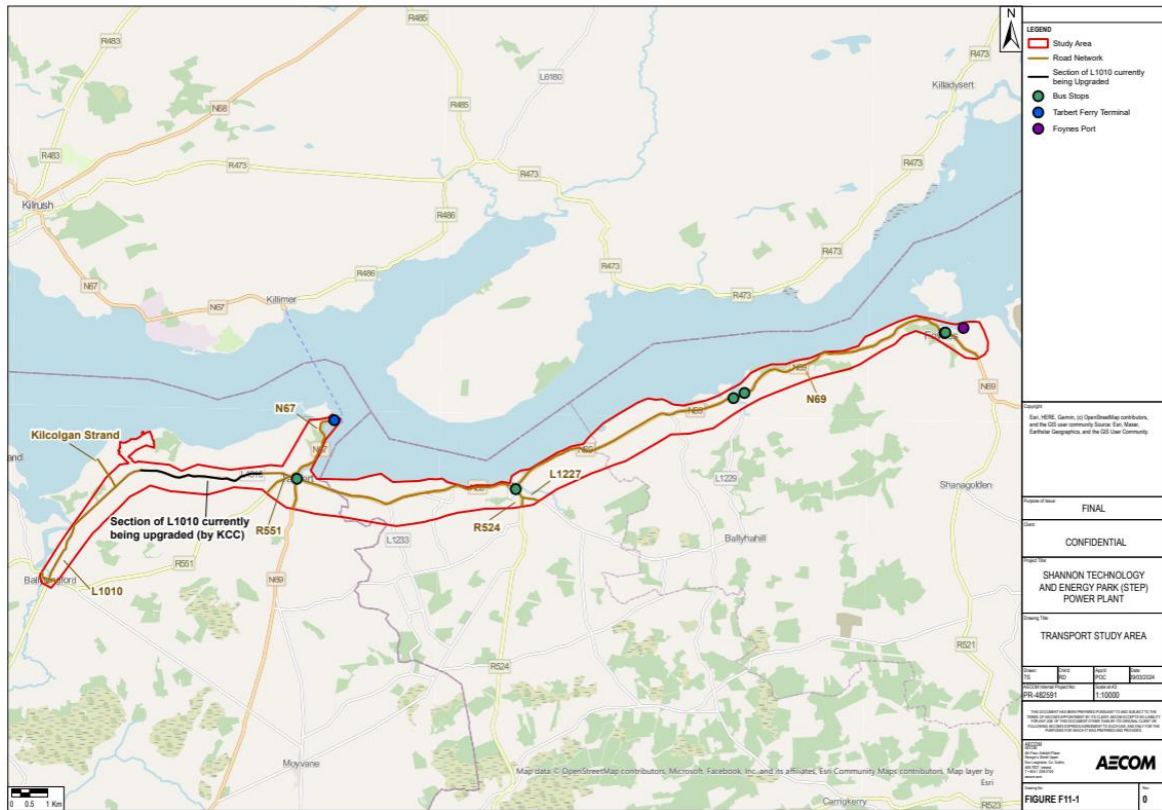


Figure 11.1: Transport Study Area (Kerry County Council)

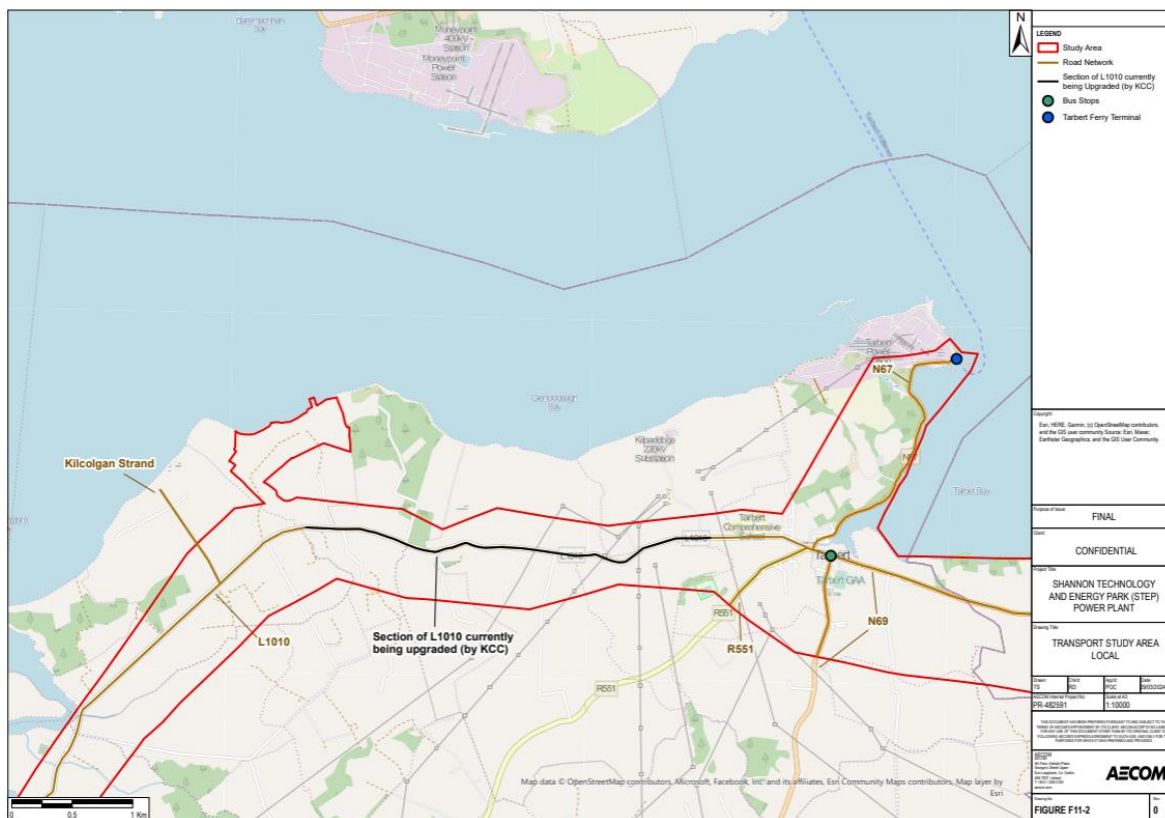


Figure 11.2: Transport Study Area Local

11.3.1 Land Use Zoning Objectives and Planning History

Within the Kerry County Development Plan (CDP) 2022-2028 Land Use Zoning Objectives are identified for the Proposed Development. Shannon LNG lands are zoned for industrial development, recognised for its potential as an energy hub. Additionally, these lands are designated as the ‘Tarbert-Ballylongford Landbank’.

11.3.2 Proposed Development

A full description of the Proposed Development is provided in **Chapter 02** (Description of the Proposed Development). From a transport perspective the Proposed Development, including the potential construction scenario, is summarised in **Table 11.1** and detailed further in **Section 11.4**. All construction materials will be transported to the Proposed Development by road.

Table 11.1: Anticipated Construction Schedule

Description	Start On Site	Duration (months)	Completion	Duration From Start Date (Months)
Enabling, Earthworks & Site Preparation including	Jan 2026	10	Oct 2026	10
220 kV and medium voltage (10 / 20 kV) connections	+ 8 months (August 2026)	14	Sept 2027	21
CCGT - 2 Blocks	+ 10 months (October 2026)	21	June 2028	30
CCGT - 1 Block	+ 15 months (March 2027)	18	Aug 2028	32

During the operational phase the maximum number of people onsite on a day-to-day basis will be 34 No. persons for the Power Plant. Details of shift arrangements are discussed in **Section 11.7.3.1**.

11.3.3 Policy and Guidelines

The following is a list of sources of information consulted for use in this chapter:

- Kerry County Development Plan 2022-2028.
- Kerry County Development Plan Volume 4 Maps, 2022-2028.
- Kerry Co. Co. Local Authority Climate Action Plan 2024 – 2029. (2024).
- Listowel Municipal District Local Area Plan 2020-2026.
- Environmental Protection Agency (EPA) (2022). *Guidelines on the information to be contained in Environmental Impact Assessment Reports*.
- EPA (2003). *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*.
- Department of Transport (2021). *Traffic Signs Manual*.
- TII (May 2014). *PE-PDV-02045, Transport Assessment Guidelines*.
- TII (December 2023). *PE-PAG-02016, Project Appraisal Guidelines for National Roads Unit 5.2 – Data Collection*.
- TII (October 2021). *PE-PAG-02017, Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections*.
- TII (October 2016). *PE-PAG-02039, Project Appraisal Guidelines for National Roads Unit 16.1 – Expansion Factors for Short Period Traffic Counts*.
- TII (May 2023). *DN-GEO-03031, Rural Road Link Design*.
- TII (May 2023). *DN-GEO-03060, Geometric Design of Junctions (Priority junctions, direct accesses, roundabouts, grade separated, and compact grade separated junctions)*.
- Department of Transport, Tourism and Sport (DTTS) (2019). *The Design Manual for Urban Roads and Streets*.
- Department of Public Expenditure and Reform (DPER) (October 2021). *National Development Plan 2021-2030*.

11.3.4 Structure of this Chapter

The remainder of this chapter is divided into the following sections:

- **Section 11.4:** Methodology – this section sets out the methodology in terms of impact significance and magnitude of effects.
- **Section 11.5:** Baseline Environment – a description of the existing and proposed (by others) condition of the transport network within the study area.
- **Section 11.6:** Transport Characteristics of the Proposed Development – this section presents a description of the proposals from a transport perspective relating to appropriate design standards and guidelines.

- **Section 11.7:** Assessment of Impact and Effect – this section identifies the potential travel demands of the Proposed Development during construction and operation and considering all modes for the movement of goods and people. This section also analyses the impact of the Proposed Development for the Do Nothing and Do Something scenarios. The construction and operational traffic flows have been assigned to the surrounding road network having regard to the existing traffic patterns. This section will demonstrate the results of the junction modelling analysis. A cumulative scenario, including the impact of the development alongside the gas pipeline is also included in **Section 11.8**.
- **Section 11.9:** Mitigation and Monitoring Measures – the transport impact of the Proposed Development including any traffic mitigating measures is addressed.
- **Section 11.7.1:** Do-Nothing Scenario – describes the receiving environment if the Proposed Development were not to proceed.
- **Section 11.10:** Residual Impacts and Effects – consideration of the residual impact of construction and operation traffic flows when appropriate mitigation measures have been identified.
- **Section 11.11:** Decommissioning.
- **Section 11.12:** Summary.

This chapter is supported by **Appendix A11.1** (Construction Traffic Management Plan), **Appendix A11.2** (Abnormal Indivisible Loads) and **Appendix A11.3** (Mobility Management Plan), Volume 4.

11.4 Methodology

11.4.1 Approach

AECOM has undertaken both a desktop and onsite review which was carried out on 7th February 2024 to inform this chapter, as well as commissioning traffic surveys which were undertaken in the period Thursday 25th January 2024 to Wednesday 31st January 2024. Kerry Co. Co. have also provided drawings which illustrate the planned upgrades to the L1010 Coast Road.

The study area for the chapter was established based on the anticipated routing to the Site for construction and operational vehicles at points in which traffic could be most intensive, e.g. in proximity to the Site.

11.4.2 Describing Potential Effects

In accordance with the EPA Guidelines (2022), potential effects are characterised by considering parameters presented in Table 3.4 of the guidelines, as shown in **Table 11.2**.

Table 11.2: Potential Effect Parameters

Potential Effect Parameter	Description
'Quality' of Effects	<p>Positive Effects – A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).</p> <p>Neutral Effects – No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.</p> <p>Negative / Adverse Effects – A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).</p>
Significance of Effects	<p>Imperceptible – An effect capable of measurement but without significant consequences.</p> <p>Not significant – An effect which causes noticeable changes in the character of the environment but without significant consequences.</p> <p>Slight Effects – An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.</p> <p>Moderate Effects – An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.</p> <p>Significant Effects – An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.</p> <p>Very Significant – An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.</p> <p>Profound Effects – An effect which obliterates sensitive characteristics.</p>
Extent and Context of Effects	<p>Extent – Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.</p> <p>Context – Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?).</p>
Probability Only Likely (and Significant) effects are assessed in this chapter	<p>Likely Effects – The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.</p> <p>Unlikely Effects – The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.</p>
Duration and Frequency	<p>Momentary Effects – lasting from seconds to minutes.</p> <p>Brief Effects – lasting less than a day.</p> <p>Temporary Effects – lasting less than a year.</p> <p>Short-term Effects – lasting one to seven years.</p> <p>Medium-term Effects – lasting seven to fifteen years.</p> <p>Long-term Effects – lasting fifteen to sixty years.</p> <p>Permanent Effects – lasting over sixty years.</p> <p>Reversible Effects – that can be undone, for example through remediation or restoration.</p> <p>Frequency of Effects – Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).</p>

11.4.3 Significance of Effects

This evaluation uses professional judgement and follows the significance classification in **Table 11.2** in determining the significance of effects. The significance of a predicted effect is based on a combination of the sensitivity or importance of the attribute and the predicted magnitude of any impact.

As outlined in **Chapter 01** (Introduction), once the description of the effect, including magnitude, character, duration etc. has been identified, this can be cross-referenced with the importance of the sensitivity of the receptor to derive the overall significance of effect as per the EPA guidelines (EPA,

2022) and as set out in **Table 11.2**. As documented in the EPA guidelines (2022), significance is determined by a combination of (objective) scientific and subjective (social) concerns. The professional judgement of competent experts plays a key role in the determination of significance, using guidelines and standards to ensure consistency.

11.5 Baseline Environment

This section sets out transport characteristics of the study area. The receiving environment has been categorised under the following headings:

- Road Network.
- Road Safety.
- Walking Infrastructure.
- Cycling Infrastructure.
- Bus / Ferry Transport.

11.5.1 Road Network

Figure 11.1 and **Figure 11.2** above provides an overview of the road network within the study area.

11.5.1.1 L1010 (Coast Road)

The L1010 is a local road, single lane carriageway, from which access to the Proposed Development is proposed. The L1010 road connects with the R551 / N67 in Tarbert Town and the R551 / R552 in Ballylongford Village. The L1010 road is subject to a 50 km/hr speed limit on the approaches to Tarbert and Ballylongford, but this increases to 80 km/hr outside of these areas.

A section of the L1010 road, from Tarbert Town to the Site access, is currently subject to an improvement scheme by Kerry Co. Co. which incorporates widening a 4.36 km long section of the existing road carriageway to 8 m wide, in order to enable access to the Proposed Development. To date approximately 0.89 km of the upgrade works have been undertaken by Kerry Co. Co in the vicinity of Piermount Cross and on the approach to Tarbert Comprehensive School. It is anticipated that these improvements would be complete prior to the commencement of the Proposed Development main construction elements.

The remainder of the existing L1010 road (*i.e.* to the west of the Site access) is approximately 5.5 m wide but this increases to approximately 6 m in the environs of Tarbert and Ballylongford. The road lacks any form of designated footpaths or cycleways and lacks public lighting along the rural carriageway, but lighting and road markings are provided in Tarbert and Ballylongford. The L1010 road facilitates access to a number of residential properties and farms, and on approach to Tarbert Town there is also access to the Tarbert Comprehensive School and The Tullahennel Wind Farm Substation. The L1010 road is not a bus route. **Figure 11.3** illustrates the characteristics of the existing L1010 carriageway.



Figure 11.3: L1010 Coast Road

11.5.1.2 R551 Regional Road

The R551 road is a single lane, regional road. The R551 connects Tarbert Town with Ballylongford Village and further onto Ballybunnion.

Within the study area the carriageway width is approximately 6 m with no existing footpaths, cycle lanes or lighting columns. The R551 road is a bus route which is served by route no. 274 (Tarbert – Tralee), route no. R60 (Moyvane – Listowel), route no. R50 (Moyvane – Tralee). The R551 facilitates access to a number of residential properties and farms. The speed limit along the R551 is 80 km/hr.

11.5.1.3 N67 National Secondary Road

The N67 starts in Tarbert Town and connects Co. Kerry with Co. Clare and Co. Galway (via a ferry), running in a southeast to north-west direction. Between Tarbert Town and the Tarbert Ferry Terminal, a footpath is provided along the western side of the carriageway only which becomes an advisory walkway approximately 750 m from the Tarbert Ferry Terminal. This route includes a ferry crossing across the Shannon Estuary at the Tarbert Ferry Terminal, and details on this ferry crossing are included within **Section 11.5.5** of this chapter.

11.5.1.4 N69 National Secondary Road

The N69 connects Tralee in Co. Kerry with Limerick City running in a north-easterly direction from Tralee to Tarbert and an easterly direction towards Limerick and vice versa. Within the study area the road is approximately 6 m wide. It is a bus route with different services on different sections; the 593 service operates between Ballingarry and Newcastle West and the 595 service operates between Tarbert and Skagh. Outside of the Towns and Villages, within the study area, no footpaths, cycle lanes or lighting columns are provided.

For the larger components required to construct the Proposed Development (classified as abnormal indivisible loads (AILs)) it is proposed that these components will be shipped to Foynes Port, approximately 27 km east of the Site and delivered to the Site via the N69 through Tarbert Town and onto the upgraded L1010 to the Site. A standalone AIL report (refer to **Appendix A11.2**, Volume 4) has been prepared to demonstrate the suitability of this route and where any special mitigating measures may be necessary.

11.5.1.5 Kilcolgan Strand

Kilcolgan Strand is a boreen which facilitates access to Kilcolgan Strand and is approximately 3 m wide with no existing footpaths, cycle lanes or lighting columns and is situated to the west of the Proposed Development. This road leads to an existing parking / turning area from where pedestrians can access the shoreline. This access and turning area is outside the Proposed Development area and therefore will not be developed as part of this application.

11.5.1.6 Base Traffic Surveys

Traffic surveys were carried out by an independent survey company (IDASO) on behalf of Shannon LNG. The results from the traffic surveys have been used to inform this section.

Classified Junction Turning Counts (JTC) were undertaken on a neutral weekday, on Thursday 25th January 2024. The survey recorded data in 15-minute intervals and classified the data into Car, Taxi, Light Goods Vehicle (LGV), Heavy Goods Vehicle (HGV) and Bus. The junction turning counts were undertaken at the following locations (illustrated in **Figure 11.4**):

1. R551 / L1010 (3-Arm Priority Junction).
2. N67 / R551 (3-Arm Priority Junction).
3. N69 / N67 (3-Arm Priority Junction).
4. R551 / R552 / L1010 (4-Arm Junction).

Two Automatic Traffic Count (ATC) surveys were also undertaken along the L1010 Coast Road and Kilcolgan Strand. The ATC surveys were undertaken from Thursday 25th January 2024 to Wednesday 31st January 2024, between 00:00hrs to 24:00hrs. The ATC survey provides traffic flow, by vehicle classification, and speed information.

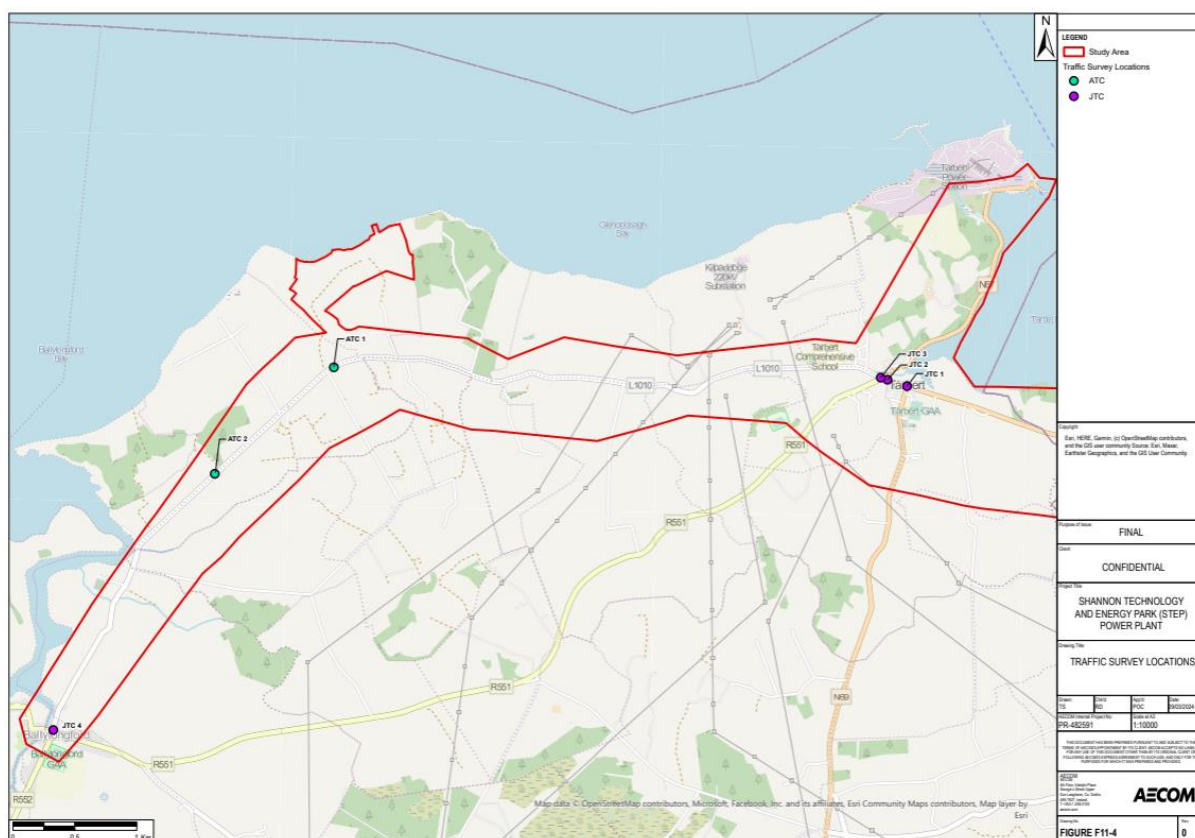


Figure 11.4: Traffic Survey Locations

11.5.2 Road Safety

The Road Safety Authority (RSA) are currently in the process of reviewing road traffic collision data sharing policies and procedures. This review is anticipated to be complete in the coming months, until such a time, information on road statistics in the vicinity of the Site will not be available.

11.5.3 Walking Infrastructure

There are no footways in the vicinity of the Site access or along the L1010 road. Within the extents of the study area, footpaths are located in the urban environs of Tarbert, Ballylongford, Glin, Loghill and Foynes.

11.5.4 Cycling Infrastructure

There are no designated cycling facilities provided within the extent of the study area.

11.5.5 Bus / Ferry Travel

There is a bus stop located in Tarbert Town approximately 4.6 km from the Site, served by the 314 (towards Limerick) or the 595 (towards Skagh). **Figure 11.1** shows the location of the bus stops in relation to the study area.

There is a ferry crossing from Tarbert to Killimer in Co. Clare located at the Tarbert Ferry Terminal, north of Tarbert Town and approximately 6.8 km east of the Site. This ferry crossing takes approximately 20 minutes and runs every hour from 07:00 to 19:00 during the winter and 07:00 to 21:00 during the summer. This service allows people to transport car, coaches, bicycles, motorcycle, and large

commercial vehicles from Killimer in Co. Clare to Tarbert in Co. Kerry. This crossing reduces the need to drive around the Shannon Estuary (137 km route).

11.6 Transport Characteristics of the Proposed Development

11.6.1 Access

Access into the Site will be off the L1010 road, via a new standard priority-controlled junction with a right turn ghost island arrangement provided to facilitate right turns into the Site. This junction will be used by all Proposed Development vehicles during construction and operational phases. The access arrangements are illustrated in **Figure 11.5**.

The Site access priority junction has been designed as per TII guidelines, '*DN-GEO-03060 – Geometric Design of Junctions*', the proposed design geometries are illustrated as follows:

- 10.0 m wide site access road.
- Corner radii of approximately 10 m.
- Provision of a right turn ghost island along the L1010.
- 3.2 m wide right turn lane.
- 60 m long lane.

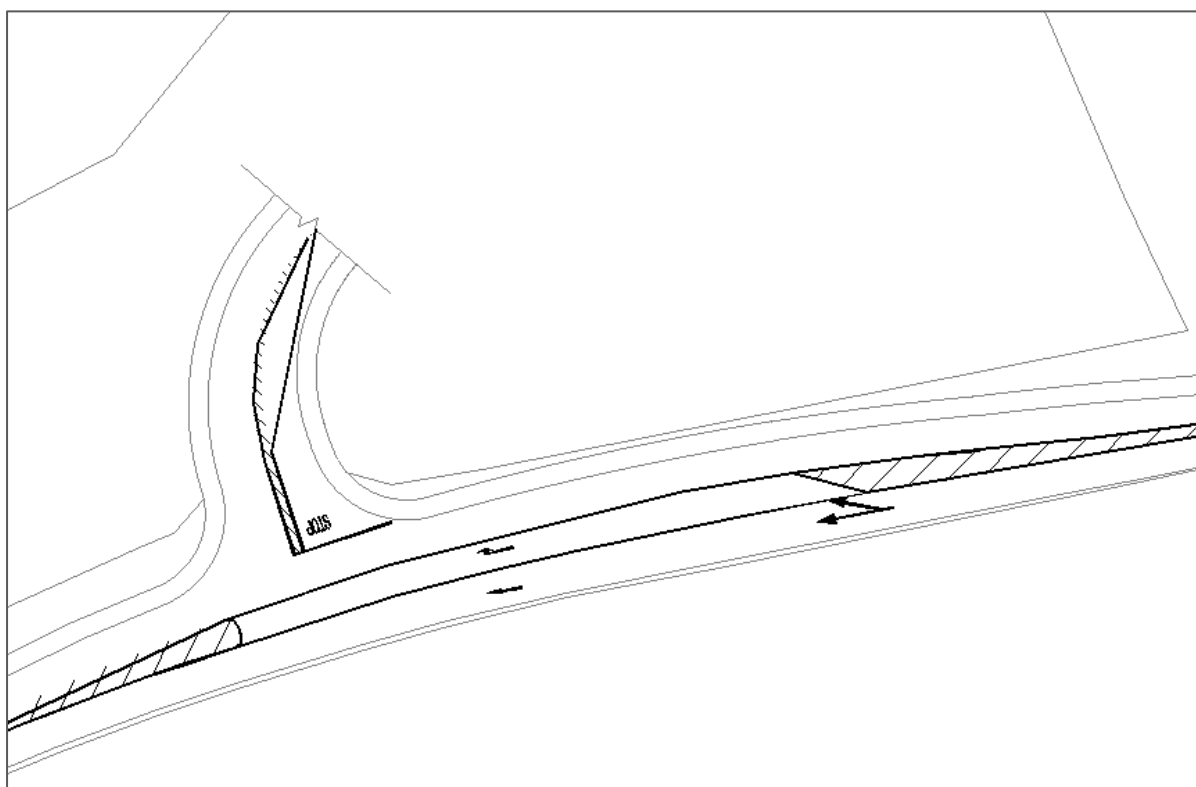


Figure 11.5: Proposed Site Access Arrangements (Drawing: PR452891-ACM-XX-00-DR-CE-00-0001)

11.6.1.1 Swept Path Analysis

An Autotrack analysis has been carried out on the Site access junction to demonstrate its capability to cater for the AILs (refer to **Appendix A11.2**, Volume 4) accessing and egressing the Site. Drawing

60619377-SPA-C-SNLNG-4001 demonstrates that the Site can cater for an abnormal load of an overall length of 38.65 m with overrunning as the vehicle turns right off the L1010 road. The assessment was only conducted for AILs entering the Site as once the loads have been delivered the vehicle and trailers will be separated into smaller sections for the return journey.

11.6.1.2 Visibility Requirements

In order to inform the visibility requirements of the Site access, the outcomes of the ATC survey have been reviewed, in particular relating to existing vehicle speeds. **Table 11.3** provides a summary of the ATC results over the course of the survey period.

Table 11.3: L1010 Coast Road ATC Survey Summary

Direction along L1010	Posted Speed Limit (km/h)	Total Vehicles	Mean Speed (km/hr)	85%ile Speed (km/hr)
Northbound	80	813	58.7	76.8
Southbound	80	825	58.6	74.4
Combined	80	1,638	58.6	75.6

Table 11.3 indicates that the highest 85th percentile speed along the L1010 road was recorded at 76.8 km/h travelling Northbound. TII guidelines recommend a visibility requirement of 120 m based on a 70 km/h design speed and 160 m based on an 85 km/h design speed. **Figure 11.6** illustrates that a visibility splay of 160 m x 3.0 m is achievable from the Site access onto the L1010 Coast Road. It is however a recommendation that construction traffic associated with the Proposed Development will be subject to a reduced speed limit in comparison to the posted speed limit.

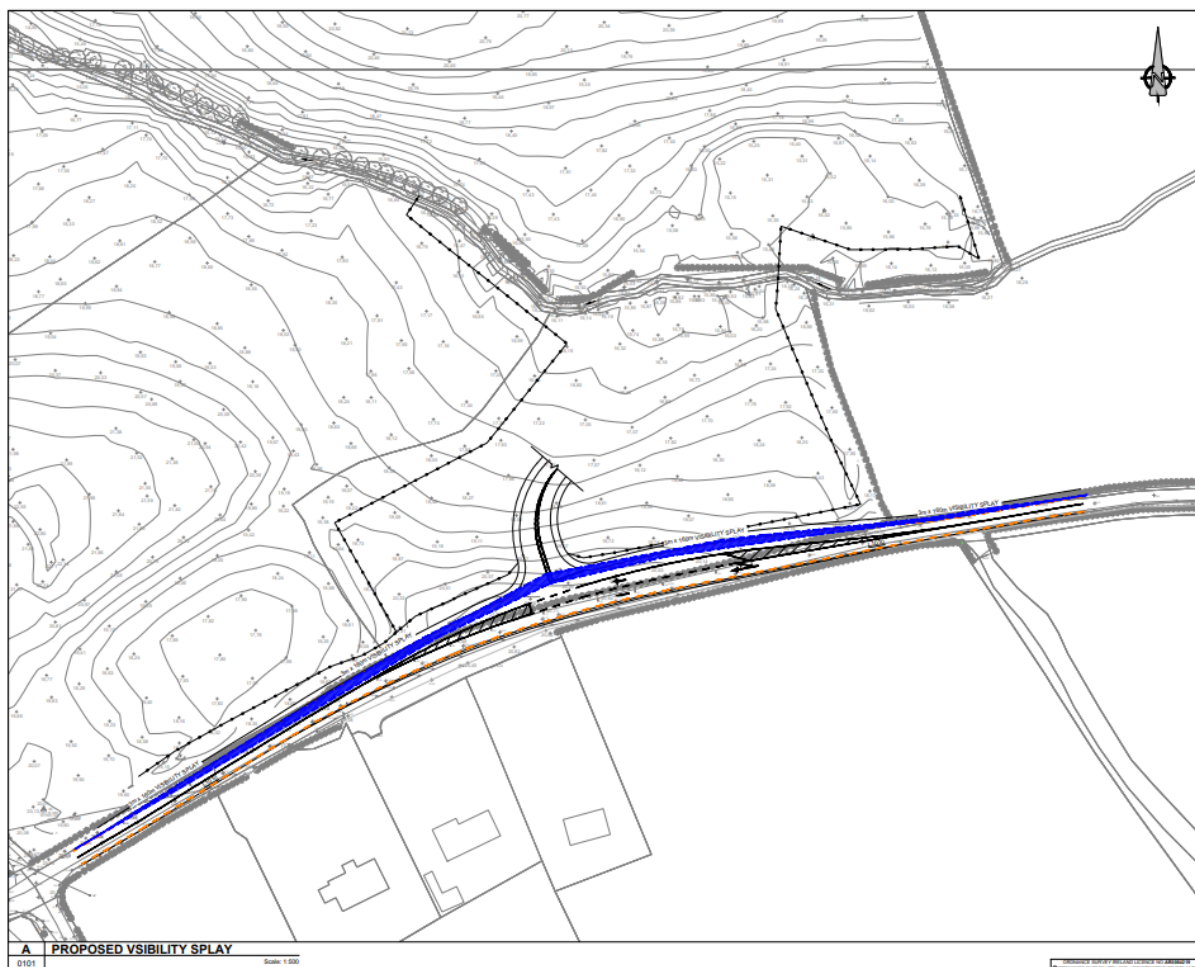


Figure 11.6: Proposed Site Access Visibility Splay

11.6.2 Car Parking

The Proposed Development has been reviewed against the Kerry CDP 2022-2028 'Car Parking Standards'. Please note, there are no specific parking standards within the Kerry CDP for the Proposed Development type. As part of the operational phase, it is proposed to provide a total of 42 No. spaces across the Site with any overflow car parking being accommodated via the overflow car park situated west of the Power Plant.

11.6.2.1 Mobility Impaired Parking Spaces

The Kerry CDP 2022-2028 does not provide guidance in relation to mobility impaired parking.

It is proposed to provide a minimum of two mobility spaces within the Site when the Proposed Development becomes operational.

11.6.2.2 Electric Vehicles

It is proposed to provide a minimum of two electric vehicle charging points at the Site when the Proposed Development becomes operational.

11.6.3 Cycle Parking

It is proposed to provide a minimum of 40 no. cycle parking spaces within the Site both during construction and when the Site becomes operational.

11.6.4 Haulage Routes

As part of the CTMP, Sisk have indicated that all construction traffic associated with the Proposed Development (heavy haul, general delivery and site operatives) will arrive via the N69 and the N67 with the AILs being delivered to Foynes Port then along the N69 to the Site, which has been illustrated in **Figure 11.8**. Further detail on AILs is provided in **Appendix A11.2**, Volume 4.



Figure 11.7: AIL Delivery Route

11.6.4.1 Access / Egress Locations

The construction period of the Proposed Development will be approximately 32 months with the routes for access shown in **Figure 11.8**. Construction traffic will access and egress the Site via a new priority junction and right turn ghost island along the upgraded L1010 Coast Road. This vehicular entrance will serve all traffic arriving to the Site. All HGV construction traffic will only be allowed to travel from the N69 / N67, through Tarbert Town and along the upgraded L1010 road to the Site. No HGV traffic will be permitted to travel to / from the Ballylongford Village direction to the Site or along the R551. Refer to **Figure 11.9**.

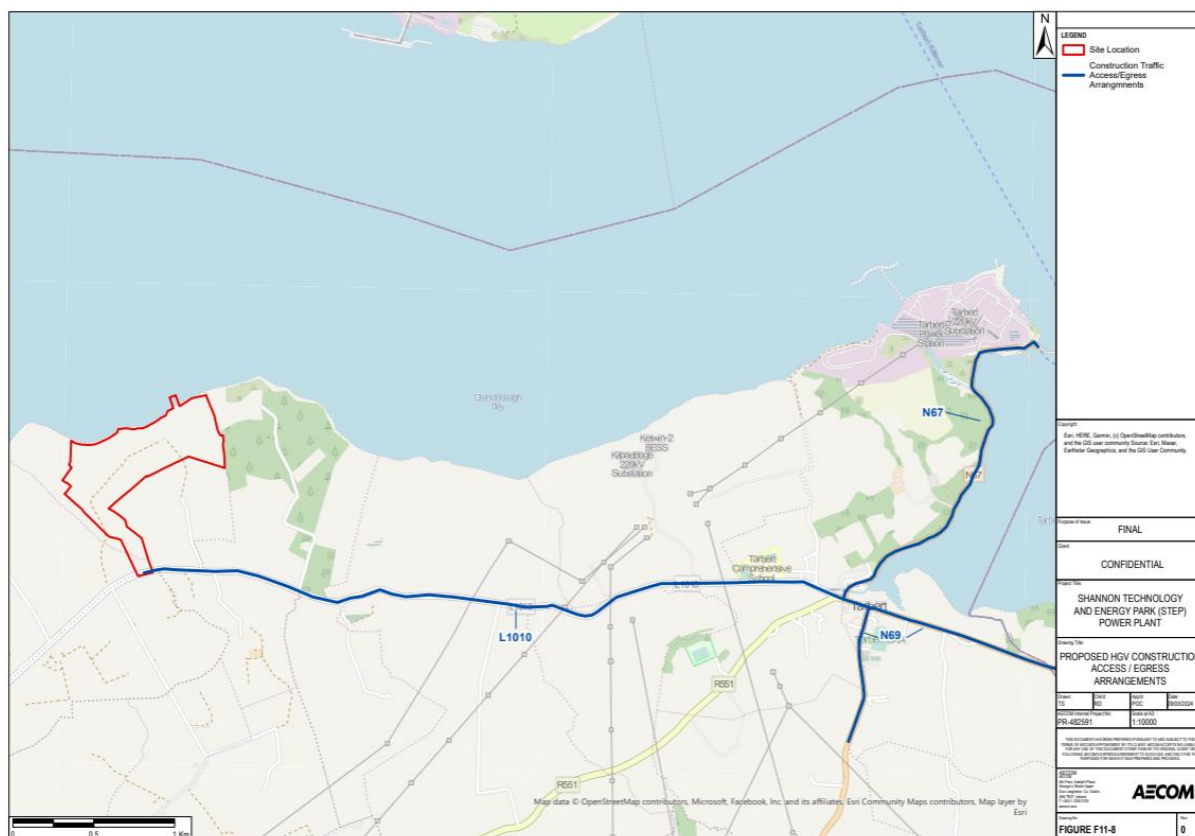


Figure 11.8: Proposed HGV Construction Access / Egress Arrangements

An Autotrack analysis has also been undertaken across the corridor from Foynes Port to the Site to simulate the Heat Recovery Steam Generator (HRSG) Module and Steam Turbine loaded on to a modular trailer arrangement (38.65m x 3.00 m). Two major pinch points were identified within Foynes but these may be avoided by accessing the N69 from further south, refer to **Appendix A11.2**, Volume 4.

11.7 Assessment of Impact and Effect

The Proposed Development has been assessed in terms of the following scenarios:

- Do Nothing Scenario.
- Construction Phase.
- Operational Phase.

The above three scenarios have been detailed with respect to the vehicle generation and traffic distribution in the following subsections.

11.7.1 Do Nothing Scenario

The Do Nothing scenario will discuss the receiving environment as it would be if the Proposed Development was not realised.

Should the Proposed Development not take place, the surrounding road network would remain in the current conditions. Background traffic growth is anticipated on the surrounding road network at a rate of 1.11% per annum from 2016 to 2030 which reduces to 0.11% per annum from 2030 to 2040, as

indicated with the TII Travel Demand Projections (Unit 5.3) for Kerry. These rates have been determined based on current industry practice and do not consider the short, medium- or long-term potential impacts of Covid-19 on traffic. The rates have been applied to the baseline traffic flows and are summarised below:

- 4.51% uplift from 2024 to 2028 (Opening Year).
- 6.00% uplift from 2024 to 2033 (Opening Year + 5).
- 6.67% uplift from 2024 to 2043 (Opening Year +15).

11.7.2 Construction Phase

The construction phase scenario will outline the impact that the Proposed Development may have on the receiving environment. An CTMP has been prepared, refer to **Appendix A11.1**, Volume 4.

The CTMP sets out the proposed methodology during the construction phase in terms of duration of construction phase, access arrangements, routing and impacts. The impact of traffic flows associated with the construction period is assessed upon the receiving environment.

Construction Phase Scenario:

- Construction will start on two Combined Cycle Gas Turbines (CCGTs) followed by construction of the third CCGT and substation in parallel to the first two CCGTs.
- Construction is anticipated to commence in January 2026 with completion by August 2028, a total duration of approximately 32 months.

This chapter also only assesses the impacts of general construction traffic, AILs are addressed in **Appendix A11.2**, Volume 4.

11.7.2.1.1 Trip Generation and Assumptions

The CTMP gives a detailed breakdown of the trips associated with the development for the construction programme. For the purposes of this assessment the peak month for construction *i.e.* the month with the greatest number of construction vehicles, has been considered only as this results in the greatest impact on the road network. The peak month for construction is anticipated to be September 2027, construction vehicles will be as follows:

- 1070-onsite construction workers at peak times (594 vehicles)¹.
- 80 LGV deliveries per day.
- 40 HGV deliveries per day.

Sisk have provided the following assumptions in regard to onsite operatives and delivery vehicles, which detail the mode of travel and arrival and departure profile, again these assumptions are intended to provide a robust case. For the LGVs and HGVs it has been assumed that these vehicles would arrive and depart at a uniform rate throughout the day. **Table 11.4** and **Table 11.5** details the proposed traffic generation during the morning and evening peak construction period for vehicles arriving to and departing from the Site. Please note that these values are in vehicles and will be converted to Passenger Car Units (PCU) for the traffic analysis.

¹ Construction of Power Plant

Morning Peak Period

- 100% of on-site construction workers would travel by car.
- Car occupancy would be 1.8 persons per vehicle.
- Based on the information provided by Sisk, the construction traffic times will be agreed with Kerry Co. Co. in advance to avoid coinciding with the peak time associated with Tarbert Comprehensive School.
- 53% of on-site construction workers would arrive between 06:30 to 07:30.
- 27% of on-site construction workers would arrive between 07:30 to 08:30.
- 20% of on-site construction workers would arrive between 09:15 to 10:00.
- 9 HGVs would arrive and depart during each hourly period.
- 16 LGVs would arrive and depart during each hourly period.

Table 11.4: Overall Peak Construction Staff Vehicle AM (September 2027)

Time Period	Construction Staff Vehicles (Cars)		
	Personnel	Supervision and Management	Total
06:30 to 07:30	279	35	314
07:30 to 08:30	120	42	162
08:30 to 09:15	0	0	0
09:15 to 10:00	54	66	120
Total Daily Inbound	453	143	596

Evening Peak Period

- 100% of on-site construction workers would travel by car.
- Car occupancy would be 1.8 persons per vehicle.
- Based on the information provided by Sisk, the construction traffic times will be agreed with Kerry Co. Co. in advance to avoid coinciding with the peak time associated with Tarbert Comprehensive School.
- 7% of on-site construction workers would depart between 14:00 to 15:45.
- 53% of on-site construction workers would depart between 16:15 to 17:30.
- 35% of on-site construction workers would depart between 17:30 to 18:30.
- 5% of on-site construction workers would depart post 18:30.
- 4 HGVs would arrive and depart during each hourly period.
- 9 LGVs would arrive and depart during each hourly period.

Table 11.5 details the proposed traffic generation for staff during the peak construction period. Please note that these values are in vehicles and have been converted to Passenger Car Units (PCUs) for the traffic analysis.

Table 11.5: Overall Peak Construction Staff Vehicle PM (September 2027) (vehicles)

Time Period	Construction Staff Vehicles (Cars)		
	Personnel	Supervision and Management	Total
13:00 to 14:00	0	0	0
14:00 to 15:45	30	11	41
15:45 to 16:15	0	0	0
16:15 to 17:30	230	82	312
17:30 to 18:30	165	44	209
Post 18:30	27	5	32
Total Daily Outbound	452	142	594

11.7.2.1.2 Traffic Distribution

The anticipated distribution of construction traffic has been based on the CTMP provided by Sisk. The following assumptions have been made in regard to both deliveries and site operative vehicle trips arriving to and departing the Site:

100% of HGV traffic would arrive from the N69 of which:

- 80% of traffic would arrive from the N69, Limerick direction.
- 20% of traffic would arrive from the N69, Listowel direction.

100% of General Delivery (LGV) traffic would arrive from Tarbert of which:

- 4% of traffic would arrive from the N67 direction via the Tarbert ferry crossing.
- 70% of traffic would arrive from the N69, Limerick direction.
- 26% of traffic would arrive from the N69, Listowel direction.

100% of site operatives (cars) would arrive from the Tarbert Town direction as follows:

- 5% of traffic would arrive from the N67 direction via the Tarbert ferry crossing.
- 70% of traffic would arrive from the N69, Limerick direction.
- 25% of traffic would arrive from the N69, Listowel direction.

11.7.2.1.3 Network Flow Diagram

The peaks for the construction phase have been identified as 07:00 - 08:00 and 16:30 - 17:30, considering the network flows and the schedule for deliveries. The Proposed Development construction trips have been distributed at the junctions within the study area on the basis of the information provided within the CTMP. The resulting flows (in Passenger Car Units (PCUs)) at each junction are illustrated on **Figure 11.9** to **Figure 11.12**.

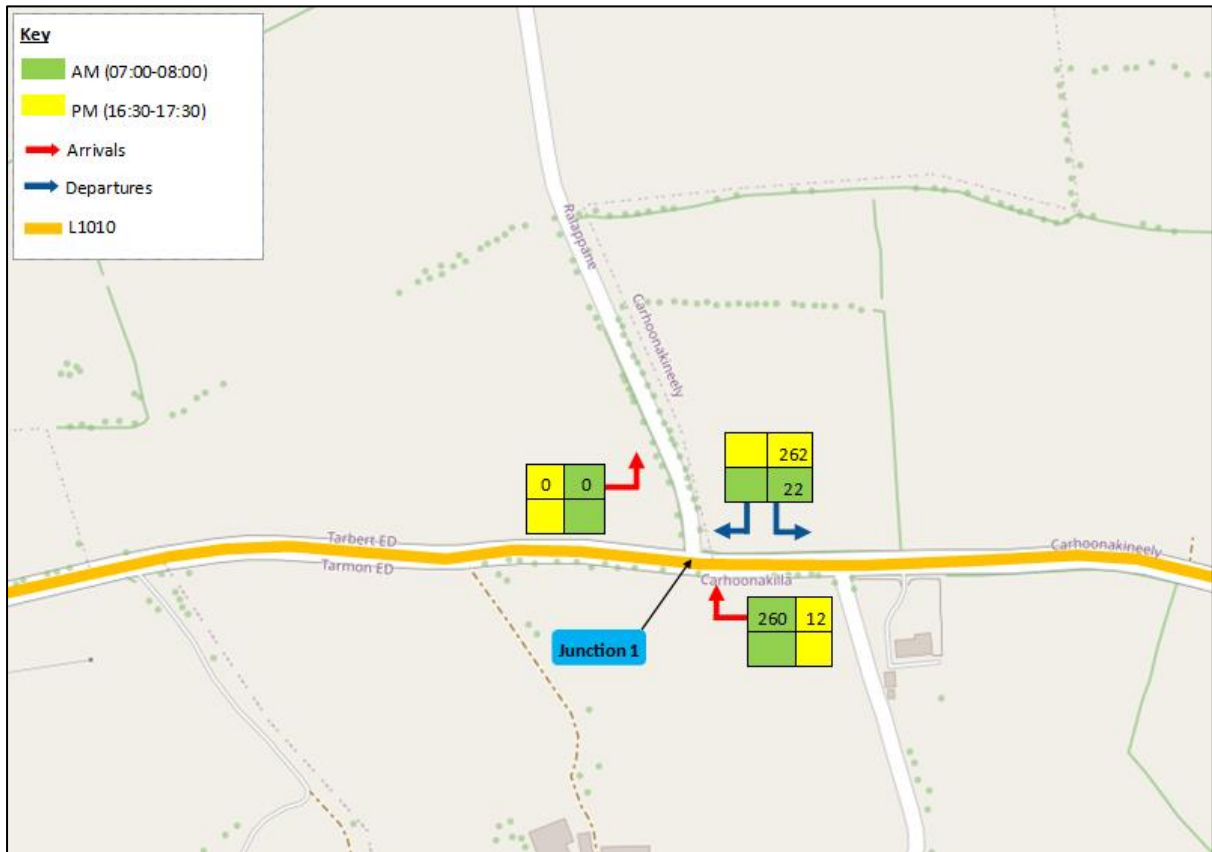


Figure 11.9: Proposed Construction Traffic Flows at Site Access in PCU

Note: any discrepancies due to rounding

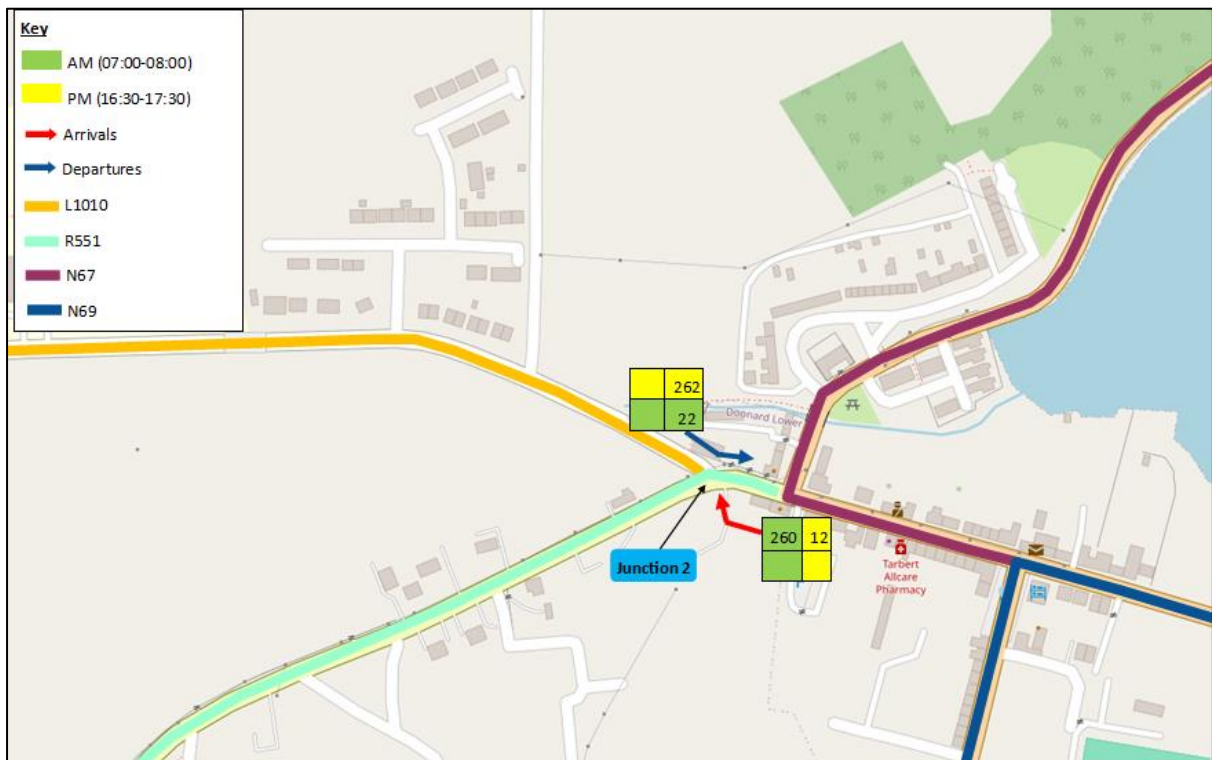


Figure 11.10: Proposed Construction Traffic Flows at R551 / L1010 road in PCU

Note: any discrepancies due to rounding

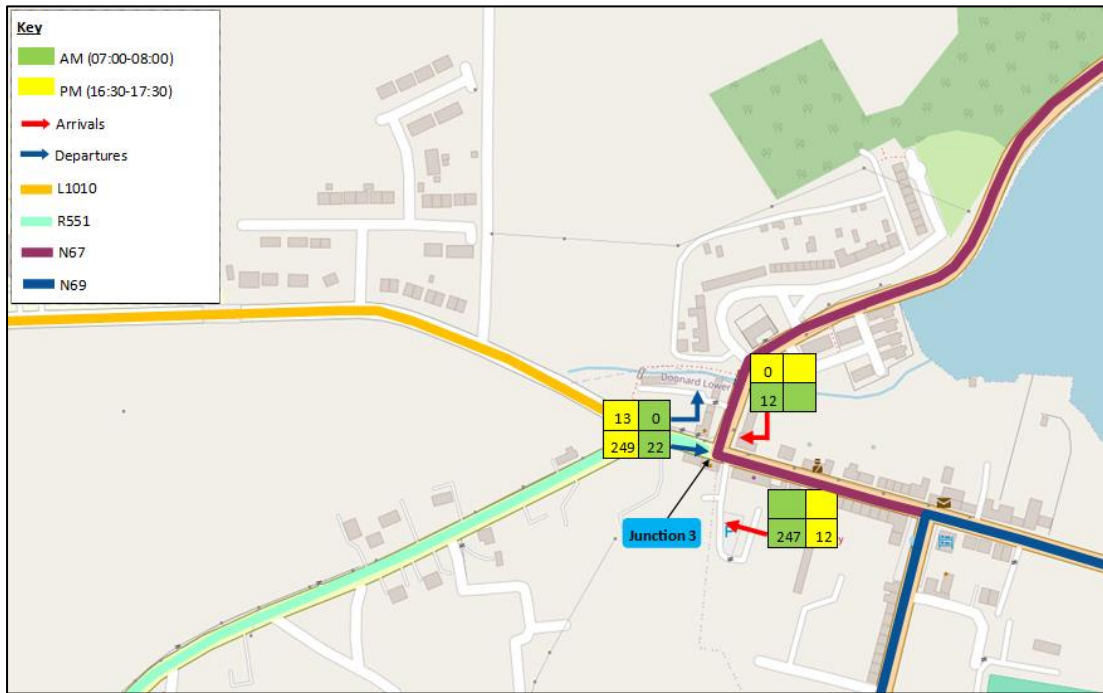


Figure 11.11: Proposed Construction Traffic Flows at N67 / N69 / R551 in PCU

Note: any discrepancies due to rounding



Figure 11.12: Proposed Construction Traffic Flows at N69 in PCU

Note: any discrepancies due to rounding

11.7.2.1.4 Proposed Development Impacts

Applying the construction flows from the Proposed Development onto the surrounding junctions in the study area a percentage impact analysis has been undertaken in accordance with the TII Travel Demand Projections (Unit 5.3)² for the peak year of construction (2027). The 2024 base traffic flows have been factored to 2027:

- 3.37% uplift from 2024 to 2027 (Peak year of construction).

The EPA Guidelines do not provide specific guidance in relation to the criteria for junction assessments. On this basis and from other schemes AECOM have prepared, the guidelines which are included within the TII Traffic and Transport Assessment Guidelines have been used to identify the thresholds for junction analysis, which are as follows:

- *'Traffic to and from the development exceeds 10% of the existing two-way traffic flow on the adjoining highway'*; and
- *'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.'*

It should be noted that the impact presented below from the construction phase will be temporary for the peak months of construction. The projected percentage impact of construction traffic within the study area during the peak year of construction (2027) is set out in **Table 11.6**.

Table 11.6: Percentage Impact of Construction Phase (2027) (PCU)

Junction	Time Period (Weekday)	Existing Flows	Development Flows	Revised Flows	Percentage Increase
J1: Site Access	AM	6	282	288	4410%
	PM	27	274	301	995%
J2: R551/ L1010	AM	169	282	451	167%
	PM	310	274	584	88%
J3: N67/ N69/ R551	AM	263	282	545	107%
	PM	421	274	695	65%
J4: N69	AM	358	269	627	75%
	PM	575	261	836	45%
J5: R551/ R552/ L1010	AM	171	0	171	0%
	PM	321	0	321	0%

It should be noted that the significant increase in traffic anticipated at Junction 1 is due to the relatively low levels of traffic on the existing network at present. As a result of this percentage impact analysis, it is deemed that all junctions, except for Junction 5, require junction modelling in line with the Traffic and Transport Assessment Guidelines for the construction phase.

² Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections PE-PAG-02017, October 2021

11.7.2.1.5 Network Analysis

Junction modelling has been undertaken using the Transport Research Laboratory (TRL) computer package Junctions 10 for priority-controlled junctions. When considering priority-controlled junctions, a Ratio of Flow to Capacity (RFC) of greater than 85% (0.85) will indicate a junction to be approaching capacity, as operation above this RFC value is poor and deteriorates quickly.

The results for the junction analysis for the peak month of construction (September 2027) at the four junctions within the study area are shown in **Table 11.7** to **Table 11.10**.

Table 11.7: Junction 1 Results

Assessment Year	Arm	AM		PM	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Baseline	Site Access	0.0	0.0	0.0	0.0
	L1010 (Eastern Arm)	0.0	0.0	0.0	0.0
2027 Without Construction Traffic	Site Access	0.0	0.0	0.0	0.0
	L1010 (Eastern Arm)	0.0	0.0	0.0	0.0
2027 With Construction Traffic	Site Access	0.1	0.03	0.6	0.38
	L1010 (Eastern Arm)	0.7	0.39	0.0	0.02

Table 11.8: Junction 2 Results

Assessment Year	Arm	AM		PM	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Baseline	L1010	0.0	0.04	0.1	0.10
	R551 (Eastern Arm)	0.0	0.01	0.2	0.12
2027 Without Construction Traffic	L1010	0.0	0.05	0.1	0.10
	R551 (Eastern Arm)	0.0	0.01	0.2	0.13
2027 With Construction Traffic	L1010	0.1	0.08	1.2	0.54
	R551 (Eastern Arm)	1.1	0.51	0.3	0.15

Table 11.9: Junction 3 Results

Assessment Year	Arm	AM		PM	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Baseline	N67	0.1	0.05	0.2	0.16
	Bridewell Street	0.1	0.12	0.1	0.08
2027 Without Construction Traffic	N67	0.1	0.06	0.2	0.16
	Bridewell Street	0.2	0.12	0.1	0.08
2027 With Construction Traffic	N67	0.1	0.09	0.2	0.19
	Bridewell Street	0.3	0.14	0.2	0.09

Table 11.10: Junction 4 Results

Assessment Year	Arm	AM		PM	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Baseline	N69 (Southern Arm)	0.3	0.24	0.3	0.24
	Bridewell Street (Western Arm)	0.1	0.05	0.2	0.15
2027 Without Construction Traffic	N69 (Southern Arm)	0.3	0.25	0.3	0.25
	Bridewell Street (Western Arm)	0.1	0.06	0.2	0.16
2027 With Construction Traffic	N69 (Southern Arm)	0.6	0.37	0.4	0.27
	Bridewell Street (Western Arm)	0.1	0.07	0.7	0.32

From the network analysis at each of the junctions it is noted that there is a notable increase in the RFC value of Junction 2 (R551/ L1010) from 0.01 (1%) in the morning peak ('2027 Without Construction') to 0.51 (51%) in the '2027 With Construction' scenario, with a corresponding increase in queues of 1.1 PCU on the R551 Eastern Arm. In the afternoon peak the RFC increases from 0.10 (10%) to 0.54 (54%) with a corresponding increase in queues of 1.1 PCU on the L1010 arm of the junction. At Junction 1, with the addition of the construction traffic the RFC increases from zero to 0.39 on the L1010 arm in the AM peak and from zero to 0.38 at the site access in the PM peak. All junctions are predicted to operate well within capacity with minimal queuing in the '2027 With Construction' scenario.

In terms of junction capacity due to the increased volume of construction traffic on the network as a result of the Proposed Development this will indicate that there will be a **Slight** effect on junction capacity, but this will be a **Temporary** effect. Similarly, the increased construction traffic will lead to an increase in queuing at the junctions, but the effect will be **Not Significant** and **Temporary** in nature.

The analysis undertaken shows that the junctions will remain within capacity for the duration of the construction phase and as a result none of the junctions require mitigation measures. Overall, the effects of the construction phase will be **Not Significant**. As the above analysis has considered the peak month of the construction phase, which is anticipated to last for one month, the remaining months of the construction phase will experience a lower volume of construction traffic. Upon completion of construction, the junctions would return to pre-development levels with the addition of the operational traffic.

11.7.3 Operational Phase

The Operational Phase scenario outlines the impact that the Proposed Development may have on the receiving environment, as detailed in **Section 11.3**. The schedule has yet to be finalised; however, it is anticipated that the staff numbers and shift schedule will be as follows:

11.7.3.1 Power Plant

- The Power Plant will have 26-day staff (08:30 - 17:30).
- Additional 24 hr shift staff. Consisting of three shifts of 8 No. employees (08:00 - 16:00; 16:00 - 00:00; 00:00 - 08:00).
- One delivery outside of the peak hour and two within the peak hour are assumed.

Table 11.11 below details the proposed traffic generation during the peak operational period for vehicles arriving to and departing from the Site. Please note that these values are in vehicles and will be converted to PCUs for the traffic analysis.

Table 11.11: Projected Operational Phase Traffic Generation (vehicles)

	Morning Peak			Evening Peak		
	07:00 – 08:00	08:00 – 09:00	09:00 – 10:00	16:00 – 17:00	17:00 – 18:00	18:00 – 19:00
Arriving	9	28	1	1	2	1
Departing	1	10	1	9	28	1
Total	10	38	2	10	30	2

11.7.3.1.1 Traffic Distribution

For the purposes of this assessment, it has been assumed that the same trip distribution used for construction staff would be used for the operational phase of the Proposed Development.

11.7.3.1.2 Network Flow Diagram

The Proposed Development operational trips have been distributed at the junctions within the study area on the same basis as the construction trips, with the peak hours for operation being the network peak hours of 08:00 - 09:00 and 17:00 - 18:00. The resulting flows PCUs) at each junction are illustrated on **Figure 11.13** to **Figure 11.16**.



Figure 11.13: Proposed Operation Traffic Flows at Site Access in PCU

Note: any discrepancies due to rounding



Figure 11.14: Proposed Operation Traffic Flows at R551/ L1010 in PCU

Note: any discrepancies due to rounding

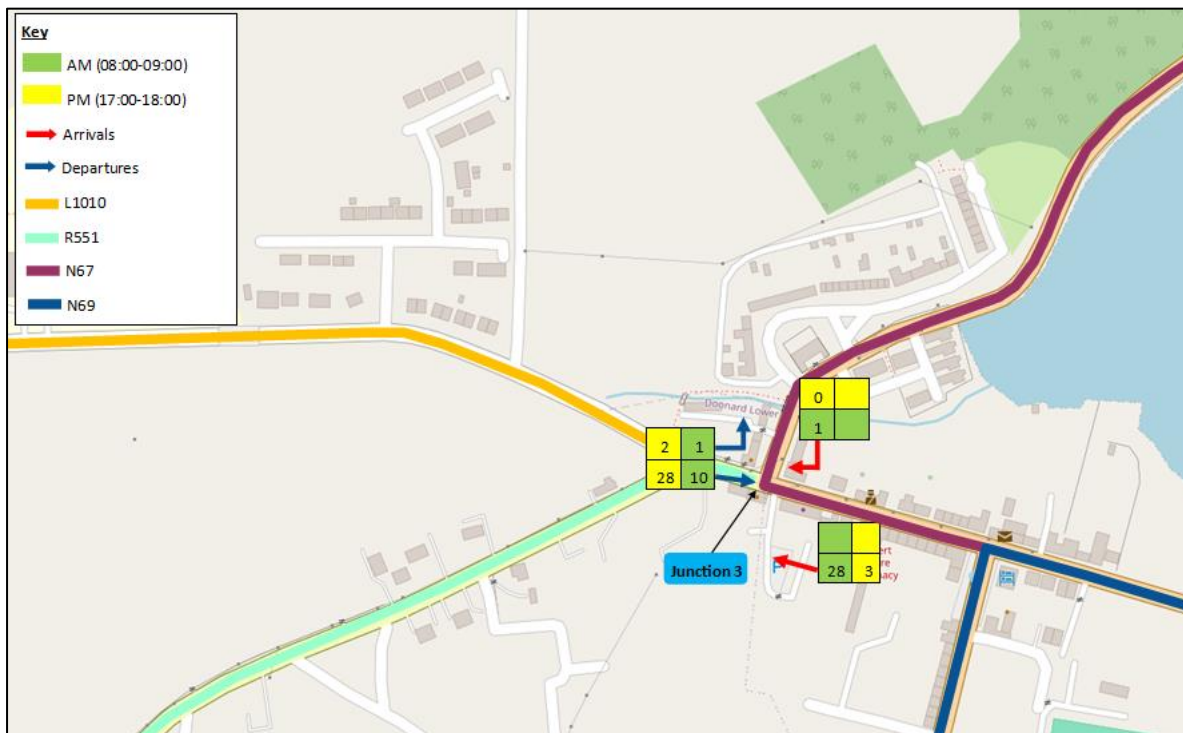


Figure 11.15: Proposed Operation Traffic Flows at N67/ N69/ R551 in PCU

Note: any discrepancies due to rounding



Figure 11.16: Proposed Operation Traffic Flows at N69 in PCU

Note: any discrepancies due to rounding

11.7.3.1.3 Proposed Development Impacts

This section presents the potential impacts associated with the Proposed Development during its operational phase. The 2024 base traffic flows have been factored to the 2028 (Opening Year), 2033 (+5 Year Future Scenario) and 2043 (+15 Year Future Scenario) using the following growth factors from the TII Travel Demand Projections (Unit 5.3) for Kerry:

- 4.51% uplift from 2024 to 2028 (Opening Year).
- 6.00% uplift from 2024 to 2033 (Opening Year + 5).
- 6.67% uplift from 2024 to 2043 (Opening Year +15).

The projected percentage impact of operational traffic in the study area in the year of operation (2028), which represents the worst case, is set out in **Table 11.12**.

Table 11.12: Percentage Impact of Operational Phase (2028) (PCU)

Junction	Time Period (Weekday)	Existing Flows	Development Flows	Revised Flows	Percentage Increase
J1: Site Access	AM	13	40	53	318.9%
	PM	26	32	58	122.1%
J2: R551/ L1010	AM	359	40	399	11.1%

Junction	Time Period (Weekday)	Existing Flows	Development Flows	Revised Flows	Percentage Increase
J3: N67 / N69 / R551	PM	285	32	317	11.2%
	AM	390	40	430	10.3%
	PM	392	33	425	8.3%
J4: N69	AM	467	38	505	8.1%
	PM	569	31	600	5.5%
J5: R551 / R552 / L1010	AM	237	0	237	0.0%
	PM	338	0	338	0.0%

It should be noted that the significant increase noted at the Site access (Junction 1) is due to the relatively low levels of traffic on L1010 Coast Road. As a result of the percentage impact analysis, it was determined that Junctions 1, 2, 3 and 4 require junction modelling. Analysis of Junction 5 is not required as there is no impact at this junction.

11.7.3.1.4 Network Analysis

Junction modelling has been undertaken using the TRL computer package Junctions 10 for priority-controlled junctions. When considering priority-controlled junctions, an RFC of greater than 85% (0.85) would indicate a junction to be approaching capacity, as operation above this RFC value is poor and deteriorates quickly.

The results for the junction analysis for the opening years (2028), opening year + 5 (2033) and opening year + 15 (2043) for Junctions 1, 2 3 and 4 are shown in **Table 11.13** to **Table 11.16**.

Table 11.13: Junction 1 Results

Assessment Year	Arm	AM		PM	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Baseline	Site Access	0.0	0.0	0.0	0.0
	L1010 (Eastern Arm)	0.0	0.0	0.0	0.0
2028 Without Dev	Site Access	0.0	0.0	0.0	0.0
	L1010 (Eastern Arm)	0.0	0.0	0.0	0.0
2028 With Dev	Site Access	0.0	0.2	0.0	0.04
	L1010 (Eastern Arm)	0.0	0.04	0.0	0.0
2033 Without Dev	Site Access	0.0	0.0	0.0	0.0
	L1010 (Eastern Arm)	0.0	0.0	0.0	0.0
2033 With Dev	Site Access	0.0	0.02	0.0	0.04
	L1010 (Eastern Arm)	0.0	0.04	0.0	0.0
2043 Without Dev	Site Access	0.0	0.0	0.0	0.0
	L1010 (Eastern Arm)	0.0	0.0	0.0	0.0
2043 With Dev	Site Access	0.0	0.02	0.0	0.04
	L1010 (Eastern Arm)	0.0	0.04	0.0	0.0

Table 11.14: Junction 2 Results

Assessment Year	Arm	AM		PM	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Baseline	L1010	0.2	0.17	0.1	0.11
	R551 (Eastern Arm)	0.3	0.22	0.1	0.10
2028 Without Dev	L1010	0.2	0.18	0.1	0.11
	R551 (Eastern Arm)	0.3	0.23	0.2	0.11
2028 With Dev	L1010	0.3	0.20	0.2	0.16
	R551 (Eastern Arm)	0.4	0.28	0.2	0.11
2033 Without Dev	L1010	0.2	0.18	0.1	0.11
	R551 (Eastern Arm)	0.3	0.23	0.2	0.11
2033 With Dev	L1010	0.3	0.20	0.2	0.16
	R551 (Eastern Arm)	0.4	0.29	0.2	0.12
2043 Without Dev	L1010	0.2	0.19	0.1	0.11
	R551 (Eastern Arm)	0.3	0.23	0.2	0.11
2043 With Dev	L1010	0.3	0.21	0.2	0.16
	R551 (Eastern Arm)	0.4	0.29	0.2	0.12

Table 11.15: Junction 3 Results

Assessment Year	Arm	AM		PM	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Baseline	N67	0.1	0.06	0.2	0.16
	Bridewell Street	0.2	0.12	0.1	0.07
2028 Without Dev	N67	0.1	0.06	0.2	0.16
	Bridewell Street	0.5	0.29	0.1	0.08
2028 With Dev	N67	0.1	0.06	0.2	0.17
	Bridewell Street	0.6	0.35	0.1	0.08
2033 Without Dev	N67	0.1	0.06	0.2	0.17
	Bridewell Street	0.2	0.13	0.1	0.08
2033 With Dev	N67	0.1	0.06	0.2	0.17
	Bridewell Street	0.2	0.14	0.1	0.08
2043 Without Dev	N67	0.1	0.06	0.2	0.17
	Bridewell Street	0.2	0.13	0.1	0.08
2043 With Dev	N67	0.1	0.06	0.2	0.17
	Bridewell Street	0.2	0.14	0.1	0.08

Table 11.16: Junction 4 Results

Assessment Year	Arm	AM		PM	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Baseline	N69 (Southern Arm)	0.4	0.29	0.3	0.22
	Bridewell Street (Western Arm)	0.2	0.12	0.2	0.14
2028 Without Dev	N69 (Southern Arm)	0.5	0.30	0.3	0.23
	Bridewell Street (Western Arm)	0.1	0.13	0.2	0.15
2028 With Dev	N69 (Southern Arm)	0.5	0.32	0.3	0.23
	Bridewell Street (Western Arm)	0.2	0.14	0.2	0.17
2033 Without Dev	N69 (Southern Arm)	0.5	0.31	0.3	0.23
	Bridewell Street (Western Arm)	0.2	0.13	0.2	0.15
2033 With Dev	N69 (Southern Arm)	0.5	0.32	0.3	0.24
	Bridewell Street (Western Arm)	0.2	0.14	0.3	0.17
2043 Without Dev	N69 (Southern Arm)	0.5	0.31	0.3	0.23
	Bridewell Street (Western Arm)	0.2	0.13	0.2	0.15
2043 With Dev	N69 (Southern Arm)	0.5	0.32	0.3	0.24
	Bridewell Street (Western Arm)	0.2	0.14	0.3	0.17

From the network analysis at each of the junctions it is noted that the proposed development results in minor increases to queuing and RFCs value for each junction. All of the junctions are predicted to operate well within capacity.

In terms of junction capacity due to the increased volume of operational traffic on the network as a result of the Proposed Development this would indicate that the effect is considered to be **Not Significant** on junction capacity, but this will be a **Long-Term** effect. Similarly, the increased operational traffic will lead to an increase in queuing at the junctions, but the effect will be **Imperceptible** and **Long-Term** in nature. Overall, from the analysis undertaken this suggests that the junctions will remain within capacity for the duration of the operational phase and as a result no mitigation would be required at any of the junctions. The impacts and their effects described, will be a **Neutral** effect but **Long-Term** to the surrounding environment.

11.7.4 Pedestrians and Cyclists

As set out in **Section 11.5**, the Site is not well connected by foot or by cycle, with no designated footways or cycle provision.

In terms of construction effects, it is considered that the Proposed Development will not have a significant effect on walking and cycling as although the increase in construction traffic results in a **Slight** effect on junction capacity, the effect is considered to be **Not Significant**. There could be an impact to pedestrian amenity and / or delay associated with the construction traffic routing through Tarbert, however this is likely to be a **Slight** effect due to the level of traffic involved and will be **Temporary** during the peak construction months.

In terms of operational effects, it is considered that the Proposed Development will have a **Not Significant** effect on walking and cycling as the increase in traffic is low and therefore there are unlikely to be impacts associated with severance, pedestrian / cyclist amenity and / or delay.

11.7.5 Public Transport

As set out in **Section 11.5** the Proposed Development is not well connected by public transport, with the nearest bus stop located within Tarbert. Any impacts on public transport would be associated with an increase in traffic within Tarbert e.g. delay, however as the increase in traffic is considered to be not significant in both the construction and operational scenarios, any impact on public transport is also considered to be **Not Significant**.

11.8 Cumulative Impact Assessment

AECOM undertook a planning search of granted and pending planning applications made within the vicinity of the Site, which is presented in **Appendix A1.2**, Volume 4.

AECOM have reviewed the above list and **Table 11.17** presents a summary of the most relevant applications that may overlap with the Proposed Development's construction and / or operational traffic perspective.

Table 11.17: Developments Considered for Cumulative Impacts

Kerry Co. Co. / Location ABP Ref. No.	Received Date	Decision Date	Decision	Description	Traffic and Transport Context	
PL08.GA0003	26 km pipeline from Shannon LNG to Foynes Port	14.08.2008	17.02.2009	Granted	Construction of an approximate 26 km below ground pipeline from Shannon LNG to Foynes Port.	This scheme was consented in 2009 and follows the completion of the Shannon Technology and Energy Park. It is anticipated that the pipeline would take approximately nine months to build, starting in January 2026, with a peak staff of 200. The scheme will be constructed outside of the peak construction period associated with the Proposed Development. This report has found that during peak construction the impact on the local road network is minimal. Taking into consideration that the pipeline construction would not coincide with the peak months of construction associated with the Proposed Development, it is envisioned that this would not pose a significant impact on the surrounding road network.
PC08.319245	Townlands of Kilcolgan Lower and Ralappane, Ballylongford, Co. Kerry	08.03.2024	TBC	TBC	Pre-Application Consultation. Proposed development of a strategic gas emergency reserve facility, and associated development works.	It is envisioned that, if approved, the Strategic Gas Reserve Facility will be constructed outside of the peak construction periods associated with the Proposed Development and therefore this would not pose a significant impact on the surrounding road network.
EE08.315838	Tarbert Power Station, Tarbert, in the townland of Tarbert Island, Co. Kerry	17.02.2023	14.04.2023	Decision of the Minister to approve the proposed development under Section 7 subsection (1)(c) of the Development (Emergency Electricity Generation) Act 2022.	The installation and operation of temporary emergency electricity generating plant, to a limit of 500 hours per annum, at the existing Tarbert Power Station.	This project is under construction, due for completion in Summer 2024. Construction will therefore be concluded prior to the start of construction for the Power Plant and there will be no overlap. In terms of operation, the plant will generate five staff trips in the day and two at night, seven days a week. This level of operational traffic is not anticipated to have a significant effect on the local highway network.
PA08.318540	Tarbert Power Station, Tarbert Island, Tarbert, Co. Kerry	28.11.2023	Decision due 05.06.2024	Awaiting determination	10-year planning permission for the proposed Open Cycle Gas Turbine (OCGT) power plant fuelled by Hydrotreated Vegetable Oil (HVO) and associated site works.	This application is still in the planning process. If it were to be granted planning, it would likely result in an increase in traffic flow through Tarbert and along the N69 and N67. Based on the 'Planning Environmental Considerations Report' submitted for the development, there would be a maximum of 322 traffic movements each day associated with construction, although most of these would take place outside of the peak

Kerry Co. Co. / Location ABP Ref. No.	Received Date	Decision Date	Decision	Description	Traffic and Transport Context
N/A	L1010 Co. Kerry			L1010 widening works being undertaken by Kerry County Council.	hours. This traffic has been assessed alongside the Proposed Development peak traffic later in this section. Based on a high-level assessment, the road widening works would be anticipated to generate approximately 96 two-way construction vehicle movements per day and 24 two-way staff trips, as a worst-case. The works are anticipated to take place during the enabling works for the Proposed Development and will therefore be outside of the peak construction period. It is therefore envisioned that this would not pose a significant impact on the surrounding road network. Further detail is provided below.
N/A	High Voltage 220 kV and Medium Voltage (10 / 20 kV) Power Transmission Networks			Grid connection for the Proposed Development Power Plant. The current proposal is that the connection point will be the ESBN / EirGrid Kilpaddocke 220 kV substation which is located approximately 5 km east of the Site with connection provided via a 220 kV cable(s) under the L1010 road. This will be considered under a separate planning application.	The 220 kV and medium voltage connections have been included in the construction phase assessment of this EIAR, as works are expected to take place in parallel. The assessment indicates that the construction phase is expected to have no significant impact on the surrounding road network.

11.8.1 Tarbert Power Station

As noted in **Table 11.17**, application PA08.318540 Tarbert Power Station, if approved, could potentially have an overlapping construction period with the Proposed Development. Application PA08.318540 states that there would be a maximum of 322 two-way vehicular trips per day (266 staff, 12 LGVs and 44 HGVs). A two-way flow of four HGVs and one LGV are anticipated per hour between normal 07:00 - 19:00 construction weekday working hours. Staff trips (133 two-way trips) are expected to arrive before 07:00 and after 19:00. The application states that construction traffic will arrive and depart the site using the N69 and N67.

The impact of the additional trips in the AM and PM peak hours has therefore been assessed at Junctions 3 and 4 (of this assessment) in **Table 11.18**.

Table 11.18: Cumulative Assessment Application PA08.318540 Tarbert Power Station (PCU)

Junction		2027 + Construction Traffic	% Impact	2027 + Construction Traffic + Cumulative Traffic	% Impact
Junction 3: N67 / N69 / R551	AM	545	107%	556	111%
	PM	695	65%	706	67%
Junction 4: N69	AM	627	75%	638	78%
	PM	836	45%	847	47%

This shows a minimal impact in terms of the percentage increase at the junctions in the AM and PM peak hours. It is therefore considered that this potential overlap in trips is not expected to result in a significant impact and that the junctions will have capacity to deal with the additional traffic.

The operational phase assessment for application PA08.318540 has been considered as part of the EIAR for the Proposed Development. However, it has been determined that as there will be only 13 no. staff at the site per day, it will generate minimal operational traffic, and it is not expected to impact on the operation of the local highway network. Accordingly, it will not have any likely significant effects.

11.8.2 L1010 Road Works

Kerry Co. Co. are undertaking a widening scheme of the L1010 road which is to be completed prior to the start of the main construction elements but may overlap with the enabling works. It is therefore assumed that the L1010 works would be completed by Month 8 of the construction schedule, when work starts on the 220 kV substation. A high-level assessment of potential construction vehicles indicates that for the L1010 works there could be a maximum of eight two-way construction vehicle movements per hour, which is equivalent to approximately 96 two-way vehicles per day (over 12 hours). Staff trips are anticipated to be approximately 24 two-way trips and would arrive/depart outside of the peak hours.

The scheme will be constructed during the enabling works (the first seven months), which is outside of the peak construction period associated with the Proposed Development. This report has found that during peak construction the impact on the local road network is minimal. Taking into consideration that the L1010 works would not coincide with the peak months of construction associated with the Proposed

Development, it is envisioned that this would not pose a significant impact on the surrounding road network.

In order to mitigate any impacts, Kerry Co. Co. will be responsible for developing and implementing a Traffic Management Plan (TMP) for the works.

11.9 Mitigation and Monitoring Measures

11.9.1 Construction Phase

Should consent be granted, mitigating measures would need to be agreed with Kerry Co. Co. and relevant stakeholders prior to any works being undertaken. The following list of measures would be adopted to minimise the impacts associated with the construction phase upon the peak periods on the surrounding road network:

- Logistics manager will be put in place.
- Traffic control will be in place for all vehicles entering and exiting the Site.
- Parking will be allowed only in designated parking areas onsite.
- Segregated pedestrian walkways will be introduced.
- Public pedestrian access will be restricted throughout the proposed works.
- Access to the Site will be strictly controlled with all personnel being required to have a Safe Pass and to have undergone a specific Sisk Site Safety Induction before being allowed into the site.
- Traffic on the Site will remain on hardcore areas wherever possible. Where this is unavoidable, traffic exiting the Site would go through a wheel wash.
- All plant and equipment will be fitted with flashing amber warning lamps and hazard lights and will be required to have reversing alarms for operations within the work site.
- The need for reversing vehicles, will be reduced by introduction of one-way system.
- Speed limit of 15 km/h will be put in place on the construction site.
- Safe working procedures will be followed by plant and vehicles required to enter and leave the construction site into trafficked lanes.
- All workers will be required to wear high visibility reflective protective clothing.
- Site foreman and supervisors will be in two-way communication with each other and the traffic controllers for the duration of the work shift.
- The Construction Health and Safety Plan will set out how health and safety is to be managed during the construction phase.
- Site equipment within the work area that have an impact on any emergency services requiring access to an incident will be cleared from the area as quickly as necessary.
- HGV trips will arrive and depart the site at a uniform rate throughout the day, to avoid pressure on the morning and evening peak hour periods. Further to this it is proposed that as per the previous application *'No HGV traffic will be allowed pass the existing school on the Coast Road*

at Tarbert for 20 minutes before and 10 minutes after the opening and closing times of the school. The elimination of passing HGV traffic during these time periods will ensure the continued safe delivery and collection of children at the school.'

11.9.2 Operational Phase

Based on the network analysis it was found that the effect that the operational traffic has on the road network is negligible and as such no mitigation measures would be required to accommodate the operational traffic. Despite this a Mobility Management Plan (MMP) has been prepared by AECOM to assist with promoting the use of more sustainable modes of transport to staff at the Proposed Development. This MMP has been included in **Appendix A11.3**, Volume 4.

11.10 Residual Impacts and Effects

Once the identified mitigation and monitoring measures, appropriate design standards and operational management plans are adhered to it is considered that any impacts from the Proposed Development on the traffic and transport surrounding the Site will result in **Slight** and **Short-Term** effects during the construction phase with any impacts during the operational phase resulting in **Imperceptible** and **Long-Term** effects. See **Table 11.19** for further detail on the pre and post mitigation impacts.

11.11 Decommissioning

As outlined in **Chapter 02** (Description of the Proposed Development), in the event of decommissioning, measures will be undertaken by the Applicant to ensure that there would be no significant, negative environmental effects during the decommissioning phase. Examples of the measures that would be implemented are outlined in Section 2.11, **Chapter 02**. As a result, additional potential impacts and associated effects arising during the decommissioning phase are not anticipated above and beyond those already assessed during the construction phase.

11.12 Summary

This chapter of the EIAR has assessed the potential transport impacts and effects of the Proposed Development on the surrounding environment.

The receiving environment has been assessed in terms of walking, cycling, public transport and road infrastructure. Prior to the construction phase, a section of L1010 road is to be upgraded by Kerry Co. Co. with the site to be accessed by way of a new vehicular priority junction off the L1010. The proposed Site access has been designed to accommodate AILs.

As part of the assessment, the Proposed Development has been assessed with respect to the EPA Guidelines (2022) and the TII Traffic and Transport Assessment Guidelines. Junction modelling was undertaken using Junctions 10 software and it was found that during both the construction and operational phases that the junctions would continue to operate within capacity for the peak month of construction (September 2027) and the opening year of the development, opening + 5 and opening + 15 assessment years.

A CTMP has been prepared by Sisk indicating the potential construction traffic routing, staff numbers, construction scenarios and measures that could be implemented to minimise the impact on the

surrounding road network, which will be subject to agreement with Kerry Co. Co. Roads Department. Once these measures are implemented and managed in accordance with the CTMP it is considered that any traffic impacts associated with the construction phase will result in **Slight** and **Short-Term** effects on the existing road network and for the operational phase they will be **Imperceptible** and **Long-Term**.

It is considered that there will be **No Significant** traffic related effects within the study area during the construction and operation of the Proposed Development.

11.12.1 Predicted Impacts and Effects Summary

A summary of the predicted impacts and effects associated with the Proposed Development during both the construction and operational phases are detailed in **Table 11.19** and a summary in **Table 11.20**.

Table 11.19: Predicted Effects

Mode	Impact	Effect Significance	Mitigation	Residual Effect Significance	Quality of Effects	Duration of Effect
Construction Traffic						
Traffic	Increased Construction Traffic Flows on the road network resulting in a reduction of the junction capacity and increase to queuing at the junctions.	Slight	A Construction Traffic Management Plan will be prepared by the appointed contractor and agreed in writing with Kerry Co. Co. roads department.	Slight	Negative	Short-Term
Walking	Pedestrian delay and reduced amenity from increase in construction traffic.	Slight	A Construction Traffic Management Plan will be prepared by the appointed contractor and agreed in writing with Kerry Co. Co. roads department.	Slight	Negative	Short-Term
Cycling	Cyclist delay and reduced amenity from increase in construction traffic.	Slight	A Construction Traffic Management Plan will be prepared by the appointed contractor and agreed in writing with Kerry Co. Co. roads department.	Slight	Negative	Short-Term
Public Transport	Delay to public transport from increase in construction traffic.	Slight	A Construction Traffic Management Plan will be prepared by the appointed contractor and agreed in writing with Kerry Co. Co. roads department.	Slight	Negative	Short-Term
Operational Traffic						
Traffic	Increased Operational Traffic Flows on the road network resulting in a reduction of the junction capacity and increase to queuing at the junctions.	Not significant	Junction Analysis undertaken demonstrating existing network has ample capacity for Proposed Development.	Imperceptible	Neutral	Long-Term
Car Parking	Potential overspill of car park.	Not significant	42 No. car parking spaces provided for the proposed development will be as agreed with Kerry Co. Co.	Imperceptible	Neutral	Long-Term
Public Transport	Increased public transport patronage associated with the Proposed Development.	Imperceptible	None	Imperceptible	Neutral	Long-Term

Mode	Impact	Effect Significance	Mitigation	Residual Effect Significance	Quality of Effects	Duration of Effect
Walking	Increased pedestrian movement on the local road network.	Imperceptible	None	Imperceptible	Neutral	Long-Term
Cycling	Increased cycle movement on local road network.	Imperceptible	None	Imperceptible	Neutral	Long-Term

Table 11.20: Summary

Proposed Development Phase	Aspect / Impact Assessed	Existing Environment / Receptor Sensitivity	Effect / Magnitude	Significance (Prior to Mitigation)	Mitigation and Monitoring Measures (the Proposed Development design embedded environmental controls and all mitigation and monitoring measures detailed herein are included in the CEMP)	Residual Impact Significance
Construction	Increased Construction Traffic Flows on the road network resulting in a reduction of the junction capacity and increase to queuing at the junctions.	Low	Negative	Slight	<p>Prior to the construction phase, a section of L1010 is to be upgraded by Kerry Co. Co. with the only access to the site to be by way of a new vehicular priority junction off the L1010.</p> <p>The main construction works will start after the L1010 upgrades have been completed.</p> <p>A Construction Traffic Management Plan (CTMP) will be prepared by the appointed contractor and agreed in writing with Kerry Co. Co. roads department.</p> <p>Based on the information provided by Sisk, the construction traffic times will be agreed with Kerry Co. Co. in advance to avoid coinciding with the peak time associated with Tarbert Comprehensive School.</p>	Slight
Construction	Pedestrian delay and reduced amenity from increase in construction traffic.	Low	Negative	Slight	<p>A CTMP will be prepared by the appointed contractor and agreed in writing with Kerry Co. Co. roads department.</p> <p>Based on the information provided by Sisk, the construction traffic times will be agreed with Kerry Co. Co. in advance to avoid coinciding with the peak time associated with Tarbert Comprehensive School.</p>	Slight
Construction	Cyclist delay and reduced amenity from increase in construction traffic.	Low	Negative	Slight	<p>Based on the information provided by Sisk, the construction traffic times will be agreed with Kerry Co. Co. in advance to avoid coinciding with the peak time associated with Tarbert Comprehensive School.</p>	Slight
Construction	Delay to public transport from increase in construction traffic.	Low	Negative	Slight		Slight
Operational	Increased Operational Traffic Flows on the road network resulting in a reduction of the junction capacity and increase to queuing at the junctions.	Low	Neutral	Not Significant	Junction Analysis undertaken demonstrating existing network has ample capacity for Proposed Development.	Imperceptible
Operational	Potential overspill of car park.	Low	Neutral	Not Significant	Car parking provided for the proposed land uses in agreement with Kerry Co. Co.	Imperceptible
Operational	Increased public transport patronage associated with the Proposed Development.	Low	Neutral	Imperceptible	None	Imperceptible

Proposed Development Phase	Aspect / Impact Assessed	Existing Environment / Receptor Sensitivity	Effect / Magnitude	Significance (Prior to Mitigation)	Mitigation and Monitoring Measures (the Proposed Development design embedded environmental controls and all mitigation and monitoring measures detailed herein are included in the CEMP)	Residual Impact Significance
Operational	Increased pedestrian movement on the local road network.	Low	Neutral	Imperceptible	None	Imperceptible
Operational	Increased cycle movement on local road network.	Low	Neutral	Imperceptible	None	Imperceptible

11.13 References

Department of Public Expenditure and Reform (DPER) (2021). *National Development Plan 2021-2030*.

Department of Transport (DT) (2021). *Traffic Signs Manual*.

Department of Transport, Tourism and Sport (DTTS) (2019). *The Design Manual for Urban Roads and Streets*.

Environmental Protection Agency (EPA) (2003). *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*.

Environmental Protection Agency (EPA) (2022). *Guidelines on the information to be contained in Environmental Impact Assessment Reports*.

Kerry County Council (2020). *Listowel Municipal District Local Area Plan 2020-2026*.

Kerry County Council (2022). *Kerry County Development Plan (CDP) 2022-2028*.

Kerry County Council (2022). *Kerry County Development Plan Volume 4 Maps, 2022-2028*.

Transport Infrastructure Ireland (TII) (2014). *PE-PDV-02045, Traffic and Transport Assessment Guidelines*.

Transport Infrastructure Ireland (TII) (2016). *PE-PAG-02039, Project Appraisal Guidelines for National Roads Unit 16.1 – Expansion Factors for Short Period Traffic Counts*.

Transport Infrastructure Ireland (TII) (2021). *PE-PAG-02017, Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections*.

Transport Infrastructure Ireland (TII) (2023). *DN-GEO-03031, Rural Road Link Design*.

Transport Infrastructure Ireland (TII) (2023). *DN-GEO-03060, Geometric Design of Junctions (Priority junctions, direct accesses, roundabouts, grade separated, and compact grade separated junctions)*.

Transport Infrastructure Ireland (TII) (2023). *PE-PAG-02016, Project Appraisal Guidelines for National Roads Unit 5.2 – Data Collection*.

