
Chapter 06

Population and Human Health

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6. Population and Human Health

6.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) assesses the likely effects of the proposed development on population and human health. It defines the study area and methodology used for developing the baseline and impact assessment (Section 6.3); provides a description of the baseline environment in relation to population and human health (Section 6.4); and identifies potential impacts and mitigation measures (Section 6.5, Section 6.6 and Section 6.7). This chapter should be read in conjunction with the following Chapters, and their appendices, which present related impacts arising from the proposed development.

- Chapter 4: Description of the Proposed Development;
- Chapter 5: Traffic and Transportation;
- Chapter 9: Hydrology;
- Chapter 10: Hydrogeology;
- Chapter 11: Air Quality;
- Chapter 13: Noise and Vibration;
- Chapter 14: Landscape and Visual Amenity;
- Chapter 17: Material Assets and Land (Non-agricultural Properties); and
- Chapter 20: Interactions and Cumulative Effects.

Impacts on population and human health have potential to arise from various aspects of the proposed development. The chapter provides an assessment of potential impacts on:

- Employment and economic activity;
- Land use and accessibility;
- Amenity; and
- Human health.

For example, land use and accessibility effects draw on the assessment set out in **Chapter 17 – Material Assets (Non-agricultural Properties)**. Amenity effects on land use receptors arise from air quality, noise and vibration, visual, and traffic and transport effects and therefore the assessment draws upon the following EIAR chapters: **Chapter 5 – Traffic and Transportation, Chapter 11 – Air Quality, Chapter 13 – Noise and Vibration, and Chapter 14 – Landscape and Visual Amenity**. Many of the potential human health effects arise from air quality, noise and vibration, visual, water, and traffic and transport. These health effects are therefore drawn from the following EIAR chapters: **Chapter 5 – Traffic and Transportation, Chapter 9 – Hydrology, Chapter 10 – Hydrogeology, Chapter 11 – Air Quality, Chapter 13 – Noise and Vibration, and Chapter 14 – Landscape and Visual Amenity**.

6.2 Legislation, Policy and Guidance

This population and human health chapter has been prepared with reference to the following legislation, in line with TII guidance¹:

¹ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

- EIA Directive 2011/92/EU (as amended)²;
- Planning and Development Act 2000 (as amended)³ and Planning and Development Act 2024⁴; and
- Planning and Development Regulations 2001 (as amended)⁵.

This population and human health chapter has been prepared with reference to the following policy:

- Project Ireland 2040 National Development Plan 2021-2030⁶;
- Project Ireland 2040: National Planning Framework First Revision⁷;
- Project Ireland 2040 National Investment Framework for Transport in Ireland⁸;
- Northern & Western Regional Assembly Regional Spatial and Economic Strategy 2020-2032⁹; and
- County Donegal Development Plan 2024-2030¹⁰.

This chapter has been prepared with reference to the following guidance notes to inform the scope and assessment of population and human health effects:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (EPA, 2022)¹¹ - Provides the primary national framework for assessing population and human health within EIARs in Ireland and informs the structure and content of this chapter;
- Draft Advice Notes for Preparing Environmental Impact Statements (Environmental Protection Agency, 2015¹²) - Provides supplementary guidance on proportionality, significance and presentation of effects;
- Advice Notes on current practice in the preparation of Environmental Impact Statements (EPA, 2003)¹³ - Provides guidance on the preparation, structure, content, and assessment of Environmental Impact Statements to support compliance;

² European Union (2011) Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) Text with EEA relevance. Available at: <https://eur-lex.europa.eu/eli/dir/2011/92/oj/eng> [Accessed: March 2026].

³ Irish Statute Book (2000) Planning and Development Act, 2000. Available at: <https://www.irishstatutebook.ie/eli/2000/act/30/enacted/en/html> [Accessed: March 2026].

⁴ Irish Statute Book (2024) Planning and Development Act, 2024. Available at: <https://www.irishstatutebook.ie/eli/2024/act/34/enacted/en/html> [Accessed: May 2026].

⁵ Irish Statute Book (2001) Planning and Development Regulations, 2001. Available at: <https://www.irishstatutebook.ie/eli/2001/si/600> [Accessed: March 2026].

⁶ Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation (2021) National Development Plan 2021-2030. Available at: <https://www.gov.ie/en/department-of-public-expenditure-infrastructure-public-service-reform-and-digitalisation/publications/national-development-plan-2021-2030/> [Accessed: March 2026].

⁷ Government of Ireland (2025) Project Ireland 2040: National Planning Framework First Revision. Available at: <https://www.npf.ie/wp-content/uploads/National-Planning-Framework-First-Revision-April-2025-1.pdf> [Accessed: May 2026].

⁸ Department of Transport (2021) National Investment Framework for Transport in Ireland. Available at: <https://www.gov.ie/en/department-of-transport/publications/national-investment-framework-for-transport-in-ireland-nifti/> [Accessed: March 2026].

⁹ Northern & Western Regional Assembly (2020) Regional Spatial and Economic Strategy 2020-2032. Available at: <https://www.nwra.ie/pdfs/NWRA-RSES-2020-2032.pdf> [Accessed: March 2026].

¹⁰ Donegal County Council (2025) County Donegal Development Plan 2024-2030. Available at: <https://www.donegaldevplan.ie/> [Accessed: March 2026].

¹¹ Environmental Protection Agency (EPA) (2022), 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'. Available at: https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf [Last Accessed: March 2026].

¹² EPA (2015), Draft Advice Notes for Preparing Environmental Impact Statements'. Available at: <https://www.epa.ie/publications/> [Last Accessed: March 2026].

¹³ EPA (2003) Advice Notes on Current Practice (in the preparation of Environmental Impact Statements). Available at: https://www.epa.ie/publications/monitoring--assessment/assessment/EPA_Advice_Notes-on_Current-Practice-on-prep-EIS_2003.pdf [Accessed: May 2026].

- Guidance on Preparation of the Environmental Impact Assessment Report 2017 (European Commission, 2017)¹⁴ - Provides EU-level guidance on the consideration of population and human health within Environmental Impact Assessments (EIAs);
- Guide to Effective Scoping of Human Health in Environmental Impact Assessment (Institute of Environmental Management and Assessment (IEMA), 2022)¹⁵ - Informs the scoping and proportional approach adopted for this assessment;
- Guide to Determining Significance for Human Health in Environmental Impact Assessment (IEMA, 2022)¹⁶ - Informs the approach to assessment;
- Design Manual for Roads and Bridges (DMRB) LA 112: Population and human health (Standards for Highways, 2020)¹⁷ - While DMRB is UK guidance, it provides a well-established and widely applied methodology for assessing population and human health effects arising from infrastructure projects. As there is no directly equivalent Irish assessment criteria, professional judgement has been applied to ensure its relevance within the Irish context;
- Human health: Ensuring a high level of protection (International Association for Impact Assessment (IAIA) and European Public Health Association (EUPHA), 2020)¹⁸ - Provides international best practice guidance on integrating human health into EIA;
- Health Impact Assessment Guidance: A Manual (Institute of Public Health (IPH), 2021)¹⁹ - Informs the identification of health determinants and pathways relevant to the Proposed Development; and
- Population and Human Health Assessment of Proposed National Roads – Standard (Transport Infrastructure Ireland (TII), 2025)²⁰ - Provides a proportionate assessment framework applicable to linear transport projects, including greenways.

6.3 Methodology

6.3.1 Study Area

The proposed development site location is described in Section 4.2 of **Chapter 4 - Description of the Proposed Development**.

In line with TII guidance²¹, the Study Area has been defined based on the area of land that may be affected by the proposed development, as set out below.

¹⁴ European Commission (2017), 'Guidance on Preparation of the Environmental Impact Assessment Report 2017'. Available at: https://circabc.europa.eu/ui/group/3b48eff1-b955-423f-9086-0d85ad1c5879/library/94b9394e-cc9e-4859-94ca-95cceb43422?p=1&n=-1&sort=name_ASC [Last Accessed: March 2026].

¹⁵ Institute of Environmental Management and Assessment (IEMA) (2022), 'Effective Scoping of Human Health in EIA'. Available at: <https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf> [Last Accessed: March 2026].

¹⁶ Institute of Environmental Management and Assessment (IEMA) (2022), 'Determining Significance for Human Health in EIA'. Available at: <https://www.iema.net/media/ylib2nbs/iema-eia-guide-to-determining-significance-for-human-health-nov-2022.pdf> [Accessed: March 2026].

¹⁷ Standards for Highways (2020) Design Manual for Roads and Bridges. LA 112: Population and human health. Available at: <https://www.standardsforhighways.co.uk/tses/attachments/1e13d6ac-755e-4d60-9735-f976bf64580a> [Accessed: March 2026].

¹⁸ International Association for Impact Assessment (IAIA) and European Public Health Association (EUPHA) (2020), Human health: Ensuring a high level of protection. Available at: <https://iaia.org/wp-content/uploads/2025/03/Human-Health-Ensuring-a-High-Level-of-Protection.pdf> [Last accessed: March 2026].

¹⁹ Institute of Public Health (IPA). Health Impact Assessment Guidance: A Manual. Available at: https://www.publichealth.ie/sites/default/files/resources/guidance_2.pdf [Accessed: March 2026].

²⁰ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-01.pdf> <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

²¹ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

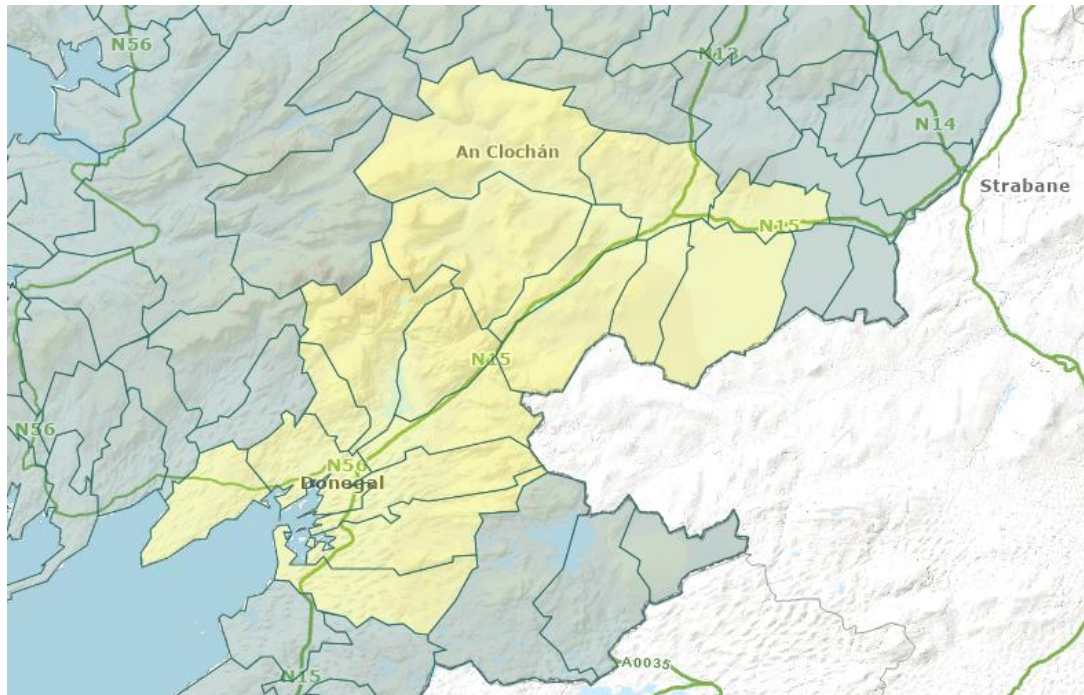


Figure 6-1 - Electoral divisions baseline conditions Study Area ²²²³

For the baseline conditions, the Study Area comprises the following 17 electoral divisions (EDs), as shown in Figure 6-1 and Drawing 60701883-ACM-EGN-SW_ZZ_ZZ_ZZ-DR-EN-0601 in Volume 3: Altnapaste, Ballintra, Cloghan, Clogher, Donegal, Dooish, Gleneely, Goland, Haugh, Killygordon, Knock, Laghy, Lough Eask, Stranorlar, Tantallon, Tawnawully and Tullynaught. This Study Area is where the majority of population and human health effects are likely to occur. Comparator areas have also been considered for the baseline conditions, including:

- Donegal County Council;
- The Border Regional Authority (NUTS3)^{24,25}; and
- The Republic of Ireland.

Data is not available for all comparator areas for all datasets within the baseline conditions. In these cases, data is shown only for those geographic areas that are available.

The study areas for the assessment of effects have been defined in accordance with TII guidance²⁶ and professional judgement.

The study area for the assessment of employment and economic activity effects comprises the 17 EDs outlined above. It is considered likely that the majority of employment and economic activity effects will occur within this study area, in line with professional judgement.

A study area of 500m from the proposed development boundary is considered appropriate for the land use and accessibility and amenity assessments which consider receptors that could be directly affected by land use and accessibility and amenity effects respectively from the

²² Central Statistics Office (CSO) (2022), 'Census Interactive Map'. Available at: <https://visual.cso.ie/> [Last Accessed: March 2026].

²³ Note: Yellow electoral divisions comprise the Study Area for the baseline conditions.

²⁴ The Nomenclature of Territorial Units for Statistics (NUTS), developed by the EU, is a standard of subdivision used to divide Europe's economic territory into regions at three different levels, NUTS1, NUTS2 and NUTS3 (where NUTS1 is the largest territorial unit). The Republic of Ireland is divided into eight NUTS3 divisions, defined by CSO as Regional Authorities.

²⁵ Central Statistics Office (2016) Information Note for Data Users: revision to the Irish NUTS2 and NUTS3 Regions. Available at: <https://www.cso.ie/en/methods/informationnotefordatausersrevisiontotheirishnuts2andnuts3regions/> [Accessed: March 2026].

²⁶ <https://www.standardsforhighways.co.uk/tses/attachments/1e13d6ac-755e-4d60-9735-f976bf64580a> Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

proposed development, including residential properties, commercial premises, community land, community facilities, and recreational routes.

The study areas for the determinants of human health have been informed by the relevant chapters during the assessment stage of the EIAR, including: **Chapter 5 - Traffic and Transportation**, **Chapter 9 – Hydrology**, **Chapter 10 – Hydrogeology**, **Chapter 11 - Air Quality**, **Chapter 13 - Noise and Vibration**, and **Chapter 14 - Landscape and Visual Amenity**.

6.3.2 Baseline Methodology

In order to assess the associated potential effects of the proposed development, it is necessary to determine the baseline conditions, resources and receptors in the Study Area. The baseline conditions are not necessarily the same as those that exist at the current time as they reflect the conditions that will exist at the time that the proposed development is expected to start. The identification of the baseline conditions therefore involves predicting changes that are likely to happen in the intervening period, for reasons unrelated to the proposed development. The intervening period refers to the timeframe between two stages of the project, in this case, construction and operation.

The baseline section of this chapter includes a description of land use receptors in the local area relevant to the land use and accessibility and amenity effects assessments, including:

- Private residential buildings;
- Commercial premises;
- Community land (e.g. common land, village greens, open green space, allotments, sports pitches); and
- Community facilities (e.g. village halls, healthcare facilities, education facilities, religious buildings).

The land use and accessibility assessment also considers the effects on Non-Motorised Users (NMUs), defined as anyone using a road, path, or infrastructure who does not rely on a motorised vehicle, including pedestrians, cyclists, equestrians, and wheelchair users.

The baseline section also includes a description of local communities within the Study Area and a profile of the people which reside within these communities, relevant to the human health assessment. This profile comprises an analysis of population and population growth, age, demographics and health determinants, drawing on information from the following sources:

- A review of relevant local policy documents including the County Donegal Development Plan 2024-2030²⁷ and Donegal Local Economic & Community Plan 2016-2022²⁸;
- Primary data sources including those available from the Central Statistical Office (CSO) relating to the 2022 Census (CSO, 2023);
- A review of secondary sources including the Regional Spatial and Economic Strategy (RSES) for the Northern and Western Region 2020-2032²⁹ (includes the Border region);
- The 2022 Pobal HP Deprivation Index; and
- Publicly available mapping resources.

²⁷ Donegal County Council (2025) County Donegal Development Plan 2024-2030. Available at: <https://www.donegaldevplan.ie/> [Accessed: March 2026].

²⁸ Donegal County Council (2016) The Donegal Local Economic & Community Plan 2016-2022, Volume 1 Strategy, Priority Goals & High Level Objectives. Available at: <https://www.donegalcoco.ie/media/jibnd0vc/volume-1-lecp-2015-revised-february-2016.pdf> [Accessed: March 2026].

²⁹ Northern & Western Regional Assembly (2020) Regional Spatial and Economic Strategy 2020-2032 (RSES). Available at: <https://www.nwra.ie/rses/> [Accessed: March 2026].

The presence of any vulnerable sub-populations which could be disproportionately affected by the health effects of the proposed development are also identified in the baseline.

6.3.3 Determination of Sensitive Receptors

The sensitivity of the receiving environment identifies the ability of the various receptors to respond to potential effects. Receptors in the population and human health assessment include residential, commercial, community facilities, and community land receptors, as well as members of the local and wider community who have potential to be impacted by any of the effects described. The methodology for defining the sensitivity of receptors for each type of potential effect identified is set out below, as informed by relevant guidance.

In accordance with TII guidance³⁰, the assessment will, where relevant, consider the sensitivity of both the general population as well as vulnerable sub-populations to health effects. Vulnerable sub-populations may be more sensitive to environmental change and may have a reduced capacity to adapt to disruption. As such, they are likely to be assigned a higher sensitivity than the general population.

6.3.3.1 Employment and Economic Activity

The assessment of potential employment and economic activity effects uses expert judgement to assess the scale and nature of the effects of the proposed development against baseline conditions. There is no accepted definition of what constitutes a significant (or not significant) employment and economic activity effect. It is however recognised that 'significance' reflects the relationship between the magnitude of the effect and the sensitivity of the affected resource or receptor. As such, the employment and economic activity effects have been assessed based on the scale of effects which considers the size of the effect on people and/or local businesses in the context of the area in which the effect will be experienced.

Sensitivity in the context of employment and economic activity has been taken to comprise the capacity of the receptor in question to deal with change, with specific reference to issues such as adaptability, exposure to change and levels of other existing changes. The qualities addressed in terms of adverse effects include robustness, acceptability, tolerability, and threat levels, as well as adaptability, capability, and vulnerability. The sensitivity criteria for this factor are set out in Table 6-1.

Table 6-1 - Sensitivity of Employment and Economic activity

Sensitivity Level	Criteria
High	Receptor has very limited capacity to avoid, adapt to, accommodate, or recover from the anticipated impact.
Medium	Receptor has limited capacity to avoid, adapt to, accommodate, or recover from the anticipated impact.
Low	Receptor has some tolerance to avoid, adapt to, accommodate, or recover from the anticipated impact.
Negligible	Receptor is generally tolerant of and can accommodate or recover from the anticipated impact, if applicable.

6.3.3.2 Land Use and Accessibility

The following guidance has been used to inform the scope and context of the assessment and to assist the identification and mitigation of likely significant effects.

³⁰ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

- TII Population and Human Health Assessment of Proposed National Roads – Standard³¹ guidance in relation to effects on land use and accessibility; and
- DMRB LA 112: Population and health³² guidance has been used in the assessment of effects on NMUs.

Table 6-2 summarises the sensitivity values for land use and accessibility receptors. Receptors are assigned a value for sensitivity based on professional judgement, taking into consideration the importance of receptors to the community and scale of use (local, regional and national).

Table 6-2 - Sensitivity Criteria of Land Use and Accessibility Source: DMRB³³ and TII³⁴

Sensitivity Value	Description
Very high	Private property and housing: • Existing private property or land allocated for housing located in a local authority area where the number of households are expected to increase by >25% by 2041 (ONS data); and/or • Existing housing and land allocated for housing (e.g. strategic housing sites) covering >5ha and/or >150 houses. Community land and assets where there is a combination of the following: • Complete severance between communities and their land/assets, with little/no accessibility provision; • Alternatives are only available outside the local planning authority area; • The level of use is very frequent (daily); and • The land and assets are used by the majority (>=50%) of the community. Businesses: • Existing employment sites (excluding agriculture) and land allocated for employment (e.g. strategic employment sites) covering >5ha. NMU: • National trails and routes likely to be used for both commuting and recreation that record frequent (daily) use. Such routes connect communities with employment land uses and other services with a direct and convenient NMU route. Little / no potential for substitution. • Routes regularly used by vulnerable travellers such as the elderly, school children and people with disabilities, who could be disproportionately affected by small changes in the baseline due to potentially different needs. • Routes for NMU crossing roads at grade with >16,000 vehicles per day.
High	Private property and housing: • Private property or land allocated for housing located in a local planning authority area where the number of households are expected to increase by 16-25% by 2041 (ONS data); and/or • Existing housing and land allocated for housing (e.g. strategic housing sites) covering >1-5ha and/or >30-150 houses. Community land and assets where there is a combination of the following: • There is substantial severance between community and assets, with limited accessibility provision; • Alternative facilities are only available in the wider local planning authority area; • The level of use is frequent (weekly); and

³¹ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

³² Standards for Highways (2020) Design Manual for Roads and Bridges. LA 112: Population and human health. Available at: <https://www.standardsforhighways.co.uk/tses/attachments/1e13d6ac-755e-4d60-9735-f976bf64580a> [Accessed: March 2026].

³³ DMRB (2020) 'Land Use' and 'Pedestrians, Cyclists, Equestrians and Community Effects'. Available at: <https://www.thenbs.com/publicationindex/documents/details?Pub=HE&DocId=328527> [Last Accessed: March 2026].

³⁴ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

Sensitivity Value	Description
	- The land and assets are used by the majority ($\geq 50\%$) of the community. Businesses: - Existing employment sites (excluding agriculture) and land allocated for employment (e.g. strategic employment sites) covering $>1 - 5$ha. NMU: - Regional trails and routes (e.g. promoted circular walks) likely to be used for recreation and to a lesser extent commuting, that record frequent (daily) use. Limited potential for substitution; and/or - Routes for NMU crossing roads at grade with $>8,000 - 16,000$ vehicles per day.
Medium	Private property and housing: - Houses or land allocated for housing located in a local authority area where the number of households are expected to increase by $>6-15\%$ by 2041 (ONS data); and/or - Existing housing and land allocated for housing (e.g. strategic housing sites) covering <1ha and/or <30 houses. Community land and assets where there is a combination of the following: - There is severance between communities and their land/assets but with existing accessibility provision; - Limited alternative facilities are available at a local level within adjacent communities; - The level of use is reasonably frequent (monthly); and - The land and assets are used by the majority ($\geq 50\%$) of the community. Businesses: - Existing employment sites (excluding agriculture) and land allocated for employment (e.g. strategic employment sites) covering <1ha NMU: - Public rights of way and other routes close to communities which are used for recreational purposes (e.g. dog walking), but for which alternative routes can be taken. These routes are likely to link to a wider network of routes to provide options for longer, recreational journeys, and / or - Routes for NMU crossing roads at grade with $>4000 - 8000$ vehicles per day.
Low	Private property and housing: - The Scheme on unallocated sites providing housing with planning permission/in the planning process. Community land and assets where there is a combination of the following: - Limited existing severance between community and assets, with existing full Disability Discrimination Act (DDA) compliant accessibility provision; - Alternative facilities are available at a local level within the wider community; - The level of use is infrequent (monthly or less frequent); and - The land and assets are used by the minority ($\geq 50\%$) of the community. Businesses: - The Scheme on unallocated sites providing employment with planning permission/in the planning process. NMU: - Routes which have fallen into disuse through past severance or which are scarcely used because they do not currently offer a meaningful route for either utility or recreational purposes, and/or - NMU crossing roads at grade with <4000 vehicles per day.
Negligible	Private property and housing: - N/A. Community land and assets where there is a combination of the following: - No or limited severance or accessibility issues;

Sensitivity Value	Description
	- Alternative facilities are available within the same community; - The level of use is very infrequent (a few occasions yearly); and 4) the land and assets are used by the minority (>=50%) of the community. Businesses: - N/A. NMU: - N/A.

6.3.3.3 Amenity

The sensitivity criteria for amenity effects are summarised in Table 6-3.

Table 6-3 - Amenity Sensitivity Criteria

Sensitivity Value	Description
High	Receptor has very limited capacity to avoid, adapt to, accommodate, or recover from the anticipated impact.
Medium	Receptor has limited capacity to avoid, adapt to, accommodate, or recover from the anticipated impact.
Low	Receptor has some tolerance to avoid, adapt to, accommodate, or recover from the anticipated impact.
Negligible	Receptor is generally tolerant of and can accommodate or recover from the anticipated impact, if applicable.

6.3.3.4 Human Health

Sensitivity of population health and wellbeing is driven by a number of factors which are set out in Table 6-4 and are based on IEMA³⁵ and TII³⁶ guidance

Table 6-4 - Human Health Sensitivity Criteria Source: IEMA³⁷ and TII³⁸

Sensitivity Level	Criteria
High	High levels of deprivation (including pockets of deprivation); reliance on shared resources (between the population and the Proposed Project); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependants; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt.
Low	Low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose

³⁵ Institute of Environmental Management and Assessment (IEMA) (2022), 'Effective Scoping of Human Health in EIA'. Available at: <https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf> [Accessed: March 2026].

³⁶ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [March 2026].

³⁷ Institute of Environmental Management and Assessment (IEMA) (2022), 'Effective Scoping of Human Health in EIA'. Available at: <https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf> [Accessed: March 2026].

³⁸ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

Sensitivity Level	Criteria
	outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt.
Very Low	Very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependent); people with good health status; and/or people with a very high capacity to adapt.

6.3.4 Determining Magnitude of Impact

6.3.4.1 Employment and Economic Activity

The magnitude of impact factors related to employment and economic activity considers the scale of change (impact) that might take place, as outlined in Table 6-5.

Table 6-5 - Employment and Economic Activity Magnitude Criteria

Magnitude of Impact	Criteria
High	For negative impacts: Loss of resource, but not affecting integrity of the resource; partial loss of or damage to key characteristics, features or elements (adverse). Permanent / irreplaceable change, which is likely to occur. For positive impacts: Improvement to, or addition of, key characteristics, features or elements of the resource; improvement of attribute quality (beneficial).
Medium	For negative impacts: Minor loss of, or alteration to, one (or maybe more) key characteristics, features or elements; measurable change in attributes, quality, or vulnerability (adverse). Long-term though reversible change, which is likely to occur. For positive impacts: Minor improvement to, or addition of, one (maybe more) key characteristics, features or elements of the resource; a minor improvement to attribute quality (beneficial).
Low	For negative impacts: Very minor loss of, or alteration to, one (or maybe more) key characteristics, features or elements; measurable change in attributes, quality, or vulnerability (adverse). Short to medium-term though reversible change, which is likely to occur. For positive impacts: Very minor improvement to, or addition of, one (maybe more) key characteristics, features or elements of the resource; very minor improvement to attribute quality (beneficial).
Negligible	For negative impacts: Temporary or intermittent very minor loss of, or alteration to, one (or maybe more) characteristic, feature, or element; possible change in attributes, quality or vulnerability (adverse). Short-term, intermittent, and reversible change, which is unlikely to occur. For positive impacts: Possible very minor improvement to, or addition of, one (maybe more) characteristic or element; possible improvement to attribute quality (beneficial).

6.3.4.2 Land Use and Accessibility

The thresholds for the magnitude of impact, as set out in Table 6-6, have regard to latest DMRB guidance.

Table 6-6 - Land Use and Accessibility Magnitude Criteria Source: DMRB^{39,40}

Magnitude of impact	Description
High	Private property and housing, community land and assets, and businesses: - Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements. e.g. direct acquisition and demolition of buildings and direct development of land to accommodate highway assets; and/or - Introduction (adverse) or removal (beneficial) of complete severance with no/full accessibility provision. NMU: >500m increase (adverse) / decrease (beneficial) in NMU journey length.
Medium	Private property and housing, community land and assets, and businesses: - Partial loss of/damage to key characteristics, features or elements, e.g. partial removal or substantial amendment to access or acquisition of land compromising viability of property, businesses, community assets; and/or - Introduction (adverse) or removal (beneficial) of severe severance with limited / moderate accessibility provision. NMU: >250m - 500m increase (adverse) or decrease (beneficial) in NMU journey length.
Low	Private property and housing, community land and assets, and businesses: - A discernible change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements, e.g. amendment to access or acquisition of land resulting in changes to operating conditions that do not compromise overall viability of property, businesses, community assets; and/or - Introduction (adverse) or removal (beneficial) of severance with adequate accessibility provision. NMU: >50m - 250m increase (adverse) or decrease (beneficial) in NMU journey length.
Negligible	Private property and housing, community land and assets, and businesses: - Very minor loss or detrimental alteration to one or more characteristics, features or elements. e.g. acquisition of non-operational land or buildings not directly affecting the viability of property, businesses, community assets; and/or - Very minor introduction (adverse) or removal (beneficial) of severance with ample accessibility provision. NMU: <50m increase (adverse) or decrease (beneficial) in NMU journey length.
No change	No loss or alteration of characteristics, features, elements or accessibility; no observable impact in either direction.

6.3.4.3 Amenity

The magnitude of impact criteria of amenity effects on land use receptors is summarised in Table 6-7. In line with professional judgement and other submitted planning applications, the assessment becomes applicable where two or more significant visual, noise, or vibration effects have been identified on a receptor.

³⁹ DMRB (2020) 'Land Use' and 'Pedestrians, Cyclists, Equestrians and Community Effects'. Available at: <https://www.thenbs.com/publicationindex/documents/details?Pub=HE&DocId=328527> [Accessed: March 2026].

⁴⁰ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

Table 6-7 - Amenity Magnitude Criteria

Magnitude of impact	Description
High	An impact that is expected to have considerable adverse or beneficial effects on receptors. Such impacts will typically affect large numbers of residents, users, businesses or workers. High magnitude impacts will typically be long-term in nature, resulting in the permanent change of the study area.
Medium	An impact that is expected to have a moderate effect on receptors. Such impacts will typically have a noticeable effect on a limited number of residents, users, businesses or workers, and will lead to a permanent (but not drastic) change to the study area.
Low	An impact that is expected to affect a small number of residents, users, businesses or workers. Or an impact that may affect a larger number of receptors but without materially changing the study area. Such impacts are likely to be temporary in nature.
Negligible	An impact that is likely to be temporary in nature, or which is anticipated to have a slight effect on the residents, users, businesses or workers.

6.3.4.4 Human Health

For human health, magnitude of impact is driven by a number of factors which are set out in Table 6-8 and are based on guidance set out by IEMA and TII.

Table 6-8 - Human Health Magnitude Criteria Source: IEMA⁴¹ ⁴²

Magnitude Level	Criteria
High	High exposure or scale; long-term duration; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) or very severe illness/injury outcomes; majority of population affected; permanent change; substantial service quality implications
Medium	Low exposure or medium scale; medium-term duration; frequent events; severity predominantly related to moderate changes in morbidity or moderate change in quality of life; large minority of population affected; gradual reversal; small service quality implications
Low	Very low exposure or small scale; short-term duration; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality of life; small minority of population affected; rapid reversal; slight service quality implications
Negligible	Negligible exposure or small scale; very short-term duration; one off frequency; severity predominantly relates to minor change in quality of life; very few people affected; immediate reversal once activity complete; no service quality implications

6.3.5 Significance of Effect

The assessment of significance is informed by TII guidance and is based on professional judgement considering the magnitude of impact on a population resource or health determinant, and the sensitivity of the receptor. A set of generic significance criteria is set out

⁴¹ Institute of Environmental Management and Assessment (IEMA) (2022), 'Effective Scoping of Human Health in EIA'. Available at: <https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf> [Accessed: March 2026].

⁴² Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

in **Chapter 2 – EIA Process and Methodology**. In accordance with EPA⁴³ and TII⁴⁴ guidance, the assessment will consider the following factors:

- Magnitude and spatial extent of the effects;
- Nature of the effects;
- Transboundary nature of the effects;
- Probability of the effects;
- Expected onset, duration, frequency and reversibility of the effects;
- Cumulation of the effects with the effects of other existing and/or approved projects; and
- Possibility of effectively reducing the effects.

Figure 6-2 outlines how the sensitivity of a receptor and the magnitude of impact determine overall significance as per these guidelines. Given the flexibility within the matrix, professional judgement is used to determine significance in these instances.

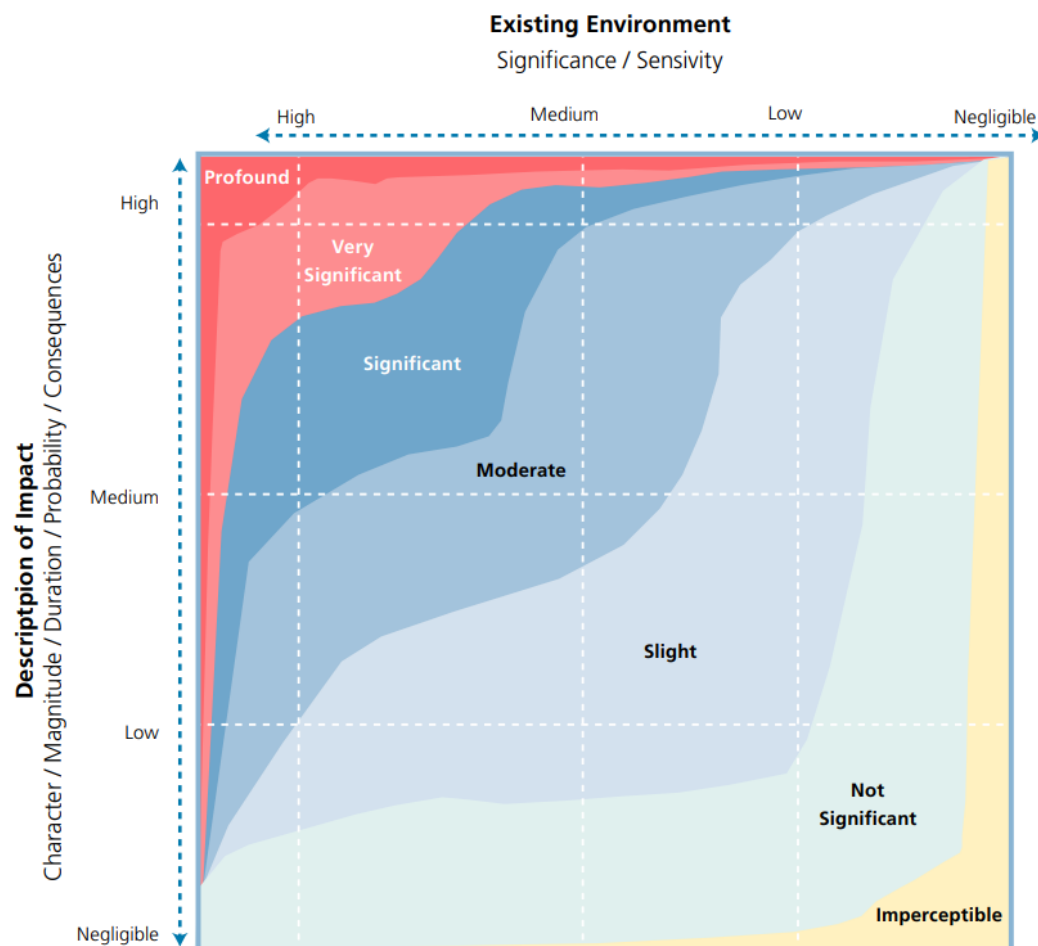


Figure 6-2 - Significance of effect matrix Source: EPA (2022)⁴⁵

⁴³ Environmental Protection Agency (EPA) (2022), 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'. Available at: https://www.epa.ie/publications/monitoring-assessment/assessment/EIAR_Guidelines_2022_Web.pdf [Accessed: March 2026].

⁴⁴ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

⁴⁵ Environmental Protection Agency (EPA) (2022), 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'. Available at: https://www.epa.ie/publications/monitoring-assessment/assessment/EIAR_Guidelines_2022_Web.pdf [Accessed: March 2026].

EPA guidance⁴⁶ sets out the following significance of effect definitions:

- Profound: An effect which obliterates sensitive characteristics;
- Very significant: An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the receptor;
- Significant: An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the receptor;
- Moderate: An effect that alters the character of the receptor in a manner that is consistent with existing and emerging baseline trends;
- Slight: An effect which causes noticeable changes in the character of the receptor without affecting its sensitivities;
- Not significant: An effect which causes noticeable changes in the character of the environment but without significant consequences; and
- Imperceptible: An effect capable of measurement but without significant consequences.

For the purposes of this assessment, 'imperceptible', 'not significant', and 'slight' effects are considered to be not significant, whereas 'significant', 'very significant' and 'profound' effects are considered to be significant. Moderate effects require professional judgement and consideration of the duration, frequency and probability and will be identified as significant or not significant where applicable.

In terms of the duration of effect, the assessment follows EPA guidance⁴⁷, as per the following:

- Momentary: Effects lasting from seconds to minutes;
- Brief: Effects lasting less than a day;
- Temporary: Effects lasting less than a year;
- Short-term: Effects lasting one to seven years;
- Medium-term: Effects lasting seven to fifteen years;
- Long-term: Effects lasting fifteen to sixty years;
- Permanent: Effects lasting over sixty years; and
- Reversible: Effects that can be undone.

6.3.6 Assumptions

This population and human health assessment is based on professional judgement and considers both the positive and negative impacts of the proposed development.

As outlined, the assessment draws upon other technical chapters' inputs to aid the assessment of the effect of the proposed development on population and human health receptors. The assumptions and limitations set out in those technical chapters therefore inherently apply within this chapter.

For example, **Chapter 14 – Landscape and Visual Amenity** identifies a series of representative viewpoints to assess visual effects, rather than assessing effects at individual receptors. These viewpoints are selected to be representative of typical views experienced. As such, for the purposes of this assessment, a precautionary (worst-case) approach has been adopted, whereby the visual effects identified at representative viewpoints are assumed to be applicable to nearby receptors within the corresponding settlement or area.

⁴⁶ Environmental Protection Agency (EPA) (2022), 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'. Available at: https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf [Accessed: March 2026].

⁴⁷ Environmental Protection Agency (EPA) (2022), 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'. Available at: https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf [Accessed: March 2026].

Receptors such as community resources are mentioned expressly in the environmental baseline only where they contribute to the local context or where they may be affected by the proposed development. Consequently, not all receptors within the Study Area are mentioned.

Information in the baseline related to demographics and the health profile of the population in the Study Area uses statistics from the most recent Census. One limitation of the baseline analysis is the unavailability of labour force participation and unemployment rate data at the Study Area level. As a result, the assessment relies on data available for broader geographical units, namely Donegal County, the Border region, and Ireland.

6.4 Receiving Environment

6.4.1.1 Overview of the Proposed Development

The proposed development is a greenway, a two-way shared walking, wheeling and cycling route connecting Donegal Town and the 'twin towns' of Ballybofey and Stranorlar. This encompasses a mainline (approximately 30km), with a further 7.5km of spurs and loops, comprising of a loop around Lough Eske Demesne and approximately 5 spurs. The greenway begins at Donegal Town and will predominantly run along the former West Donegal railway line through Barnesmore Gap, a scenic glacial valley located within the Bluestack Mountains, before terminating at the existing Bus Éireann Depot at the twin towns. Once completed, the route will form part of the EuroVelo Atlantic Coast Route, a 10,650km transnational cycling route connecting Portugal, Spain, France, Ireland, the UK and Norway.

It is anticipated that the provision of the proposed development will attract visitors to Donegal Town, Ballybofey-Stranorlar, County Donegal and the Border region both locally and internationally. The proposed development is also anticipated to provide an alternative route for utility trips by pedestrians, cyclists, and people with impaired mobility. Improved connectivity between Donegal Town and Ballybofey-Stranorlar could support rural economies and may contribute to improvements in the health and general wellbeing of its users.

There are two locations offering commercial premises, community facilities, and community land at either end of the proposed development: Donegal Town and Ballybofey-Stranorlar. In addition, isolated settlements, individual dwellings, and individual commercial premises are located along the proposed development.

The town of Donegal is situated at the start of the proposed development. The town is located at the mouth of the River Eske, Donegal Bay and has a population of 2,749⁴⁸ according to data from the 2022 Census. Donegal Town is identified as a Tier 2 'Strategic Support Town' in the County Donegal Development Plan 2012-2018 settlement hierarchy⁴⁹. A settlement hierarchy is a spatial expression of sustainable population distribution, settlement hierarchy and settlement role. It provides a strategic direction to the appropriate management of growth, investment and resources. Donegal Town acts as the key commercial, social and recreational centre for the southern area of the county, attracting seasonal tourists.

The twin towns of Ballybofey and Stranorlar are situated at the end of the proposed development. Ballybofey-Stranorlar are located within the province of Ulster, on the south bank of the River Finn which flows between the towns. Ballybofey-Stranorlar is identified as a Tier 2 'Strategic Support Town' in the settlement hierarchy⁵⁰ and has a population of 5,406⁵¹,

⁴⁸ Central Statistics Office (2022) Population Density and Area Size. Available at: <https://data.cso.ie/> [Accessed: March 2026].

⁴⁹ Donegal County Council (2012) County Donegal Development Plan 2012-2018, Appendix A Settlement Framework. Available at: <https://www.donegalcoco.ie/media/umkn3hy3/appendix-a-settlement-frameworks-text-document.pdf> [Accessed: March 2026].

⁵⁰ Donegal County Council (2012) County Donegal Development Plan 2012-2018, Appendix A Settlement Framework. Available at: <https://www.donegalcoco.ie/media/umkn3hy3/appendix-a-settlement-frameworks-text-document.pdf> [Accessed: March 2026].

⁵¹ Central Statistics Office (2022) Population Density and Area Size. Available at: <https://data.cso.ie/> [Accessed: March 2026].

according to the 2022 Census, acting as the key retail, commercial, social and recreational centre for the Finn Valley and beyond⁵².

The proposed development passes through regions that include Gaeltacht areas, which are officially designated as Irish-speaking regions. These areas, where the Irish language remains a key element of community identity and daily life, present a unique cultural and linguistic landscape. The Gaeltacht is a vital part of Ireland's heritage and also plays a crucial role in the preservation and promotion of the Irish language.

Data from the 2022 Census for the 17 EDs comprising the Study Area has been analysed to inform the baseline. Receptors within these EDs are most likely to experience effects from the proposed development. The Study Area has a population of 22,341⁵³, as per the 2022 Census.

6.4.1.2 Public Engagement

As outlined in **Chapter 1 – Introduction**, four non-statutory consultations have been held for the proposed development, from February 2023 to June 2025. The purpose of the consultations was to obtain people's views on the proposed development, inform the public on key features of the project, and gather any comments or observations to better inform the decision-making process. The public consultation information was available online on the DCC website with the public having the option to submit their observations online, or through the completion of feedback forms at the two information evenings.

The First Public Consultation (PC1) ran from 17th February to 10th March 2023. The PC1 aimed to inform the public of the proposed development and invited feedback on the current Study Area and the identified constraints. Two in-person public consultation events were held in Donegal Town and Ballybofey in February 2023. A brochure containing project information was prepared, including a questionnaire which could also be completed online.

The Second Public Consultation (PC2) ran from 16th June to 7th July 2023. The PC2 aimed to inform the public and gather feedback on the Phase 2 Options Selection stage of the proposed development, including the development and assessment of shortlisted Options to determine a Preferred Option. Shortlisted Options were identified following PC1. Two in-person public consultation events were held in Donegal and Ballybofey in June 2023. A brochure containing information on the proposed development was prepared, including a questionnaire which could also be completed online.

The Third Public Consultation (PC3) ran from 17th November to 8th December 2023⁵⁴. The PC3 aimed to inform the public of the option selection process and to invite feedback on the Emerging Preferred Route Corridor. At the time of the consultation, the proposed development was nearing the completion of the Phase 2 (Option Selection) process, and the Emerging Preferred Route Corridor was identified. The potential route corridors subject to Stage 1 – Project Appraisal Matrix were presented, considering feedback from previous consultations. These options were subject to further detailed assessments in accordance with the TII Project Manager's Manual for Greenway Projects, TII Project Appraisal Guidelines and the Department of Transport's Transport Appraisal Framework. Two in-person public consultation events were held in Donegal and Ballybofey in November 2023 to facilitate this process. A brochure containing project information was prepared, including a questionnaire which could also be completed online.

The Fourth Public Consultation (PC4) ran from 6th June to 27th June 2025. The public consultation event informed the public about the Preferred Route and feedback was encouraged. Two in-person public consultation events were held in Donegal and Ballybofey in June 2025 to facilitate this process. Feedback was facilitated through an online feedback

⁵² Donegal County Council (2012) County Donegal Development Plan 2012-2018, Appendix A Settlement Framework. Available at: <https://www.donegalcoco.ie/media/umkn3hy3/appendix-a-settlement-frameworks-text-document.pdf> [Accessed: March 2026].

⁵³ Central Statistics Office (2022) Population Density and Area Size. Available at: <https://data.cso.ie/> [Accessed: March 2026].

⁵⁴ Barnesmore Gap Greenway (2023) Public Consultation 1-4. Available at: <https://barnesmoregapgreenway.ie/public-consultation-1/> [Accessed: March 2026].

portal and physical feedback forms. An email and phone facility were provided to accommodate queries.

Consultation was also undertaken with relevant public bodies including the Health and Safety Authority. Issues raised during consultation relevant to population and human health included concerns regarding community safety and impacts on private land in relation to access, severance, and security. Engagement with private landowners was ongoing throughout the design process. Consultation feedback also highlighted support for the proposed development relevant to population and health, including improved connectivity between Donegal Town and Ballybofey-Stranorlar, the provision of safer active travel routes, and enhanced access to local facilities.

6.4.1.3 Population and Demography

This section describes information on population, age profile, social class, employment and deprivation in the Study Area, and is primarily based on data from the latest Census in 2022.

6.4.1.3.1 Population

Table 6-9 shows population and population change in the Study Area and its comparator areas between 2011 and 2022, as reported in the Census. The statistics reflect that the Study Area is primarily a rural area with a relatively small population, which has remained relatively steady in recent years. There were 22,341 people residing in the Study Area in 2022, which is a 5.6% increase from 2011. During the same period, the population of Donegal County increased by 5.0% (from 161,137 to 167,084) and the population in Ireland increased by 12.2% (from 4.59 million to 5.15 million). The population in the Border region experienced a significant decrease of 18.0% between 2011 and 2022 (from 514,891 to 422,394).

Table 6-9 - Population and Population Change in the Study Area from 2011 to 2022
Source: CSO, Census 2022

Area	2022	2016	2011	Change between 2011-2016 (%)	Change between 2011-2022 (%)
Study Area	22,341	21,208	21,167	0.2	5.6
Donegal County	167,084	159,192	161,137	-1.2	5.0
Border	422,200	394,300	514,891	-23.4	-18.0
Ireland	5,149,139	4,762,000	4,588,000	3.8	12.2

Table 6-10 shows the age profiles of the population of the Study Area and its comparator areas in 2022. The age profile is representative of the available labour force and demand for the different types of community facilities in the local area. The Study Area has a population size by age band in line with its comparator areas, with a similar percentage of its population in working age (61.8%) to Donegal County (61.9%) and Border (62.2%), compared to Ireland which has a greater proportion of working age population (65.3%). Working age population can be defined as the share of the population between the ages 15 and 64. In addition, the Study Area, Donegal County and Border region have a similar proportion of young people, with 20.7%, 20.4% and 20.7% respectively being aged 14 or under, with a slightly lower proportion (19.6%) in Ireland.

Table 6-10 - The Proportion of the Total Population in Each Age Bracket for the Study Area and its Comparator Areas **Source: CSO, Census 2022**

	% of population by age band						
Area	0-4	5-14	15-24	25-34	35-44	45-64	65+
Study Area	6.0	14.7	11.8	9.6	14.0	26.4	17.5
Donegal County	5.9	14.5	11.8	9.9	13.8	26.3	17.7

Area	% of population by age band						
	0-4	5-14	15-24	25-34	35-44	45-64	65+
Border	6.1	14.6	11.9	10.1	14.3	25.9	17.2
Ireland	5.8	13.9	12.5	12.2	15.5	25.1	15.1

6.4.1.4 Employment and Economic Activity

6.4.1.4.1 Local Market Indicators

The labour force participation and unemployment rate data were not available for the Study Area, therefore is presented at the county, regional and national level, as shown in Table 6-11. As reported in the Census 2022, the labour force participation rate in Donegal County (57.2%) was slightly lower than the rate in Border (58.8%) and significantly lower than Ireland (71.9%). The labour force participation rate represents the economically active population (ages 15 to 64 years). Labour force participation has remained steady in Donegal County and Border, decreasing by 0.01% and 0.3% respectively between 2016 and 2022. In comparison, Ireland experienced an increase of 1.6% over the same period.

The unemployment rate in Donegal County (10.6%) is higher than in Border (9.2%) and Ireland (9.5%). Unemployment decreased across all comparator areas between 2016 and 2022, by 7.4% in Donegal County, 5.8% in Border and 5.5% in Ireland.

Table 6-11 - Labour Force and Unemployment Rates Source: CSO, Census 2016⁵⁵ and CSO, Census 2022

Indicator	Donegal County (%)		Border (%)		Ireland (%)	
	2016	2022	2016	2022	2016	2022
Labour Force Participation Rate	57.3	57.2	59.1	58.8	70.3	71.9
Unemployment Rate	18.0	10.6	14.9	9.2	15.0	9.5

Table 6-12 outlines the proportion of the population working within each industry. The largest proportion of residents in the Study Area are employed in professional services (24.5%), in line with Donegal County (26.5%), Border (25.3%) and Ireland (24.5%). The agriculture, forestry and fishing industry comprise 6.0% of employment in the Study Area; this is notably higher than Ireland (3.5%) but in line with Donegal County (5.7%) and Border (6.8%). The proportion of employment within the transport and communications industry within the Study Area (6.0%) is lower than Ireland (9.2%) but in line with Donegal County (6.6%) and Border (5.8%).

Table 6-12 - Industry of Employment Source: CSO, Census 2022

	Study area (%)	Donegal County (%)	Border (%)	Ireland (%)
Agriculture, forestry and fishing	6.0	5.7	6.8	3.5
Building and construction	6.5	6.9	7.0	5.8
Manufacturing industries	10.9	9.8	13.0	11.8
Commerce and trade	21.9	20.2	19.9	23.8
Transport and communications	6.0	6.6	5.8	9.2
Public administration	7.9	7.2	7.0	5.7
Professional services	24.5	26.5	25.3	24.5

⁵⁵ Central Statistics Office (2017), 'Census 2016'. Source: <https://www.cso.ie/en/census/census2016reports/>. [Accessed: March 2026].

	Study area (%)	Donegal County (%)	Border (%)	Ireland (%)
Other	16.5	17.2	15.2	15.8

Working-age residents within the Study Area are generally more likely to complete primary and secondary education than the comparator geographies, as shown in Table 6-13. However, the Study Area has the lowest proportion of residents with an honours bachelor's degree (10.7%), postgraduate diploma or degree (7.7%), or doctorate (PhD) (0.5%); this is especially stark when compared to Ireland, with 13.3%, 11.2% and 1.1% respectively. The proportion of residents of the Study Area that have completed a technical or vocational qualification (8.2%) is in line with the Border region (8.2%), slightly greater than Ireland (7.5%), and greater than Donegal County (4.8%). The proportion of residents with no formal education in the Study Area (3.3%) is in line with Donegal County and Border, 3.9% and 3.5% respectively, but higher than Ireland as a whole (2.4%).

Table 6-13 - Highest Level of Education Completed Source: CSO, Census 2022

	Study Area (%)	Donegal County (%)	Border (%)	Ireland (%)
No formal education	3.3	3.9	3.5	2.4
Primary education	11.4	12.3	10.2	7.4
Lower secondary	16.6	16.5	15.8	13.2
Upper secondary	19.4	17.9	18.3	18.1
Technical or vocational qualification	8.2	7.5	8.2	7.5
Advanced certificate / Completed apprenticeship	5.3	4.8	5.9	5.6
Higher certificate	5.4	5.7	5.9	5.5
Ordinary bachelor's degree	7.4	7.2	7.5	8.1
Honours bachelor's degree	10.7	10.7	11.0	13.3
Postgraduate diploma or degree	7.7	7.9	7.8	11.2
Doctorate (PhD)	0.5	0.6	0.6	1.1
Not stated	4.1	5.1	5.3	6.5

The Census 2022 provides a breakdown of the total population by 'social class', as shown in Table 6-14. These groupings are based on the level of skill and education attainment of their occupation. The data shows that the population of the Study Area has a higher percentage of residents employed in occupations which require greater skill levels than its comparator areas.

The greatest proportion of the Study Area population lie within the Managerial / Technical social class (29.1%), in line with Donegal County (28.3%), Border (28.5%) and Ireland (30.7%). There is a lower proportion of the Study Area population (6.3%) within the Professional social class compared to Ireland (9.3%); however, the Study Area is in line with Donegal County (6.3%) and Border (6.9%).

The Study Area has a higher proportion of the population within Skilled (15.5%) and Semi-Skilled (13.6%) social classes compared to Ireland, 12.9% and 11.2% respectively, but in line with Donegal County (15.2% Skilled and 13.9% Semi-skilled) and Border (15.4% Skilled and 13.3% Semi-skilled). People in these social classes are likely to be in manual occupations, including manufacturing. The proportion of the population classed as 'Unskilled' is slightly lower in the Study Area (3.4%) than in Donegal County (4.1%) but comparable to Border (3.7%) and Ireland (3.1%).

Table 6-14 - The Proportion of the Total Population in Each Social Class for the Study Area and its Comparator Areas. Source: CSO, Census 2022

Area	Professional	Managerial/ Technical	Non- Manual	Skilled	Semi- skilled	Un- skilled	Other
Study Area	6.3	29.1	17.9	15.5	13.6	3.4	14.3
Donegal County	6.3	28.3	16.4	15.2	13.9	4.1	15.8
Border	6.9	28.5	16.7	15.4	13.3	3.7	15.4
Ireland	9.3	30.7	16.2	12.9	11.2	3.1	16.6

6.4.1.4.2 Deprivation

According to the latest data from the Pobal HP Deprivation Index⁵⁶ in 2022, Donegal County is classified as 'marginally below average' with a relative score of -5.6. The 17 EDs that comprise the Study Area are predominantly classified as 'marginally below average' (14 EDs, comprising Altnapaste, Ballintra, Caghan, Donegal, Dooish, Gleneely, Golland, Haugh, Killygordon, Knock, Laghy, Stranorlar, Tantallon and Tullynaught). The remaining three EDs, Clogher, Lough Eask and Tawnawully, are classified as 'marginally above average'. Killygordon is the most deprived ED, with a relative score of -9.92, and Lough Eask the least deprived, with a relative score of 5.85.

6.4.1.5 Land Use

The Study Area is primarily rural, and the primary land use is agricultural land. The land use receptors relevant to the population and human health assessment are identified below.

6.4.1.5.1 Residential Properties

Residential properties are concentrated in the towns of Donegal and Ballybofey-Stranorlar. A small number of small villages and isolated residential properties are located along the proposed development, particularly to the south of Lough Eske and in the suburbs of Donegal and Ballybofey-Stranorlar.

6.4.1.5.2 Commercial Premises

Commercial premises are concentrated around The Diamond, the main square in Donegal Town, including fast food outlets, cafes, a bank, accommodation, retail stores, pubs and convenience stores amongst other offerings in line with a standard provision expected in towns. There are numerous offerings for tourists ranging from numerous shops, dining, cultural and heritage attractions, bars and entertainment suitable for all ages⁵⁷.

A small number of commercial properties are located between the towns, including Biddy's O'Barnes, Barnesmore Retreats, Lough Eske Hotel, Scottish Renewables, and Daytona Heavy Haulage Ltd.

In Ballybofey-Stranorlar, commercial facilities are primarily located along the N15 road which connects Donegal to the twin towns. Commercial facilities include Lafferty Bus Hire, fast food outlets, cafes, retail stores, pubs, petrol stations, convenience stores and a department store amongst other offerings in line with a standard provision expected in towns.

6.4.1.5.3 Community Facilities

In the Study Area, community facilities are primarily located in the towns of Donegal and Ballybofey-Stranorlar.

Community facilities in Donegal Town include two primary schools (Scoil Aodh Rua & Nuala and The Glebe National School), a secondary school (Abbey Vocational School), Donegal Community Hospital, and Donegal Cooperative Mart. St John Bosco Community Centre

⁵⁶ Pobal (2023), 'Pobal HP Deprivation Index'. Available at: <https://www.pobal.ie/pobal-hp-deprivation-index/>. [Accessed: March 2026].

⁵⁷ Go Visit Donegal (2023) Donegal Town – Historic Town. Available at: <https://www.govisitdonegal.com/things-to-do/places-to-see/donegal-town-historic-town> [Accessed: March 2026].

provides sports and leisure facilities (e.g. sports hall, squash court, boxing club, sport classes), rooms for hire and entertainment including bingo, a pantomime and social dances⁵⁸. Donegal Town Football Club is located within the town, with the Four Masters Gaelic Athletic Association (GAA) located to the west. There are several churches located within the town including Donegal Presbyterian Church, Donegal Town Methodist Church, Donegal Town Church of Ireland, St Patrick's Roman Catholic Church and Church of the Four Masters.

Community assets in Ballybofey-Stranorlar include two primary schools (Robertson National School and St Marys National School), two secondary schools (St Columba's College and Scoil Seiseadh Ui Neill), a Further Education and Training Centre, St Josephs Hospital, and Ballybofey & Stranorlar Cooperative Mart. Finn Valley Centre provides sports and leisure facilities (e.g. swimming pool, sports and art classes, football pitches and sports hall), rooms for hire and a restaurant⁵⁹. MacCumhaill Park, a GAA stadium in Ballybofey, is also a notable local sporting venue. There are several churches located within the towns including The Church of Mary Immaculate, Stranorlar Presbyterian Church, Stranorlar Reformed Presbyterian Church and St Mary's Church of Ireland.

6.4.1.5.4 Community Land

In the Study Area, community land is primarily located in the towns of Donegal and Ballybofey-Stranorlar.

Community land in Donegal Town includes the Michael Conney Memorial Park, located adjacent to the start of the proposed development. Donegal Union Workhouse Graveyard is located approximately 320m to the south of the proposed development. In addition, Sessiaghoneill Church graveyard is located approximately 70m to the north of the proposed development in Sessiaghoneill.

Community land in Ballybofey-Stranorlar includes Finn Park, located 450 m to the west of the proposed development.

6.4.1.5.5 Recreation, Recreational Routes and NMU

Donegal town is promoted for its rich local culture, including Donegal Castle located in the town centre, the Irish Language and its natural beauty located at the mouth of the River Eske in Donegal Bay with a backdrop of the Bluestack Mountains. Donegal Town is on the Wild Atlantic Way, a tourism trail of the west coast (and parts of the north and south coasts) of Ireland, and many visitors use the town as a base to explore the wider region. Whilst the towns of Ballybofey-Stranorlar are not noted for their tourism, there is excellent fishing, cycling and hiking available, with the Bluestack Mountains in close proximity.

The following recreational routes used by NMU are located within the Study Area⁶⁰:

- Bluestack Way;
- Donegal Cycle Route;
- Drumboe trails;
- EuroVelo 1 Ireland – Atlantic Coast Route; and
- North Western Trail.

As shown in Figure 6-3, Bluestack Way is part of the National Trails Register in County Donegal, a 65km walking route traversing the Bluestack Mountains connecting Donegal town with the town of Ardara and passing to the west of Lough Eske.

Donegal Cycle Route is part of the National Cycle Network and Euro Velo Route 1, starting in Donegal and heading west. The route intersects the Study Area in Donegal town.

⁵⁸ Parent Hub Donegal (2023) St John Bosco Centre, Donegal Town. Available at: <https://parenthubdonegal.ie/services/listing/st-john-bosco-centre/> [Accessed: March 2026].

⁵⁹ Go Visit Donegal (2023) Finn Valley Centre. Available at: <https://www.govisitdonegal.com/things-to-do/activities/finn-valley-centre> [Accessed: March 2026].

⁶⁰ Sport Ireland. Find Your Trails Map. Available at: <https://www.sportireland.ie/outdoors/find-your-trails> [Accessed: March 2026].

The Drumboe trails comprise of a series of short walking routes in and around Drumboe Woods, to the north of Ballybofey-Stranorlar.

EuroVelo 1 Ireland – Atlantic Coast Route is a 2,300 km cycle network along the Atlantic Coast of Ireland, passing through the counties of Donegal, Sligo, Mayo, Galway, Clare, Limerick, Kerry, Cork, Waterford, and Wexford. As shown in Figure 6-3, the proposed development will intersect with the international EuroVelo Route 1 at Donegal Town.

The North West Trail is a 126km cycling route in counties of Donegal, Fermanagh, Leitrim, Sligo, and Tyrone. As shown in Figure 6-3, the North West Trail runs in close proximity to, and intersects at several points along the proposed development. Figure 6-3 is also shown in Drawing 60701883-ACM-EGN-SW_ZZ_ZZ_ZZ-DR-EN-0602 in Volume 3.

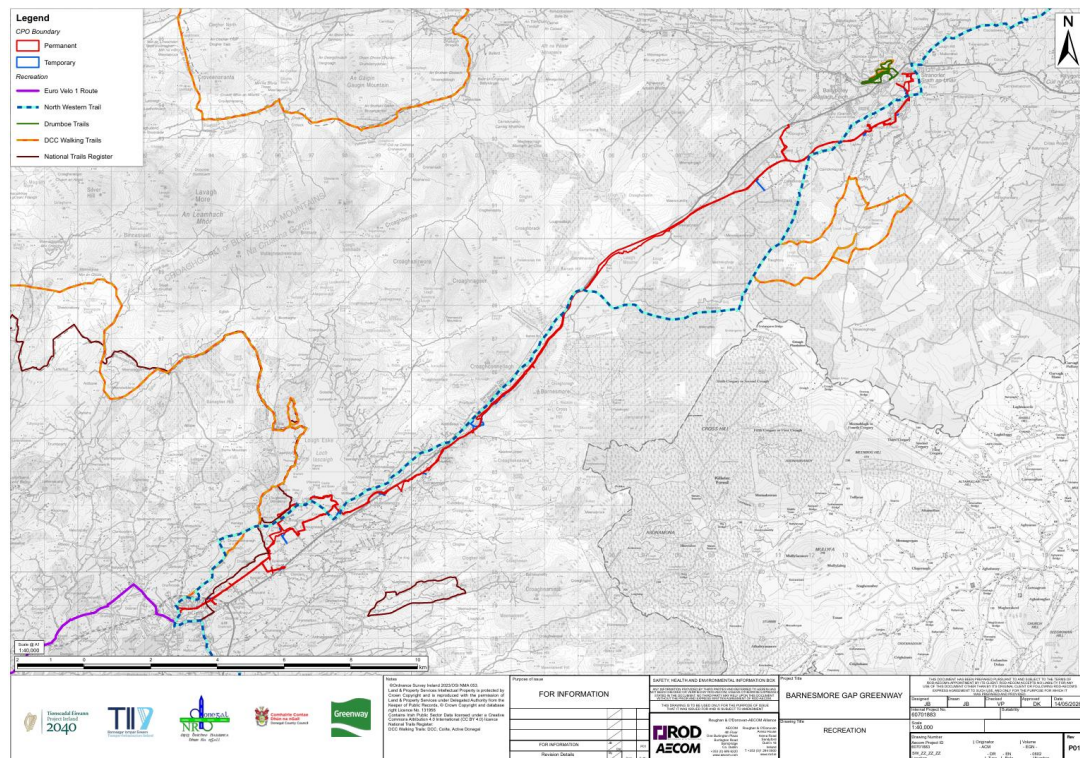


Figure 6-3 - Recreational Routes

6.4.1.6 Travel Patterns and Existing Transport Network

6.4.1.6.1 The Existing Transport Network

Chapter 5 - Traffic and Transportation presents a description of the local transport network in the Study Area. This is summarised below to provide context on the existing transport infrastructure used by the local community to travel within both the local and wider area.

The N15 is a national primary road from Lifford, County Donegal to Sligo. The N15 is a part of the proposed Wild Atlantic Corridor route and runs to the border with Northern Ireland. In Stranorlar, the N15 turns southwest to cross the River Finn to enter Ballybofey, then continuing southwest through the Barnesmore, passing southeast of the Bluestack Mountains and toward Donegal Town. The N15 runs around the north of Donegal Town, turning to the south to bypass the eastern side towards Ballintra to the west. As the primary road through the centre of the Study Area, the N15 is likely to be used regularly by commuters and residents within the Study Area.

6.4.1.6.2 Travel Patterns

Table 6-15 shows the travel time to work, school, or college for residents of the Study Area and its comparator areas in 2022. Notably, 44.4% of residents within the Study Area have a journey time to work, school or college which is under 15 minutes. This is higher than its comparator geographies, particularly Ireland (29.4%) as well as Donegal County (40.9%) and Border (38.3%). According to the Census 2022, 68.8% of residents within the Study Area

have a journey time which is less than 30 minutes. This is slightly higher than Donegal County (67.6%) and Border (65.6%), and notably higher than Ireland (57.5%). Table 6-15 shows that 6.0% of residents within the Study Area travel over one hour to their destination, similar to those in Donegal County (5.6%) but lower than Border (7.3%) and Ireland (8.6%).

Table 6-15 - Travel Time to Work, School, or College Source: CSO, Census 2022

	Under 15 mins (%)	15-29 mins (%)	30-44 mins (%)	45-60 mins (%)	1-1.5 hours (%)	>1.5 hours (%)	Not stated (%)
Study Area	44.4	24.3	12.9	4.4	4.2	1.8	8.0
Donegal County	40.9	26.6	13.4	4.2	3.7	1.9	9.3
Border	38.3	27.2	13.7	4.1	4.3	3.1	9.4
Ireland	29.4	28.1	17.3	5.9	6.1	2.5	10.7

As shown in Table 6-16, a higher proportion of residents in the Study Area travel to work, school or college via car/van (71.8%; car/van driver and car passenger) than Donegal County (68.4%), Border (68.6%) and Ireland (57.9%). A lower proportion of residents in the Study Area use public transport (9.7%; bus or coach and train) than Donegal County (10.7%) and Ireland (11.4%) but a slightly higher proportion than Border (9.5%). Ireland also has a higher proportion of its population travelling via foot (12.6%) and bicycle (2.7%) than the Study Area, 6.2% and 0.4% respectively.

This is representative of the location of the Study Area and Donegal County as predominantly rural areas. In the Study Area, schools and employment opportunities are predominantly located in the towns of Donegal and Ballybofey-Stranorlar. Therefore, for populations located outside these towns, few public transport options require ownership of a car/van to access the surrounding towns and community facilities.

Table 6-16 - Travel Mode to Work, School, or College Source: CSO, Census 2022

Area	Foot (%)	Bicycle (%)	Bus or Coach (%)	Train (%)	Car/ Van Driver (%)	Car Passenger (%)	Other (%)
Study Area	6.2	0.4	9.6	0.1	45.8	25.8	12.1
Donegal County	6.8	0.4	10.6	0.1	44.3	24.2	13.7
Border	8.3	0.6	9.2	0.2	44.9	23.7	13.1
Ireland	12.6	2.7	9.0	2.4	38.8	19.1	15.4

6.4.1.7 Human Health

This section provides an overview of the health profile of residents in the Study Area using the best available data. Data on general health and the prevalence of disabilities has been taken from a self-assessment on health carried out as part of the 2022 Census. This data is available by ED and presented via the same areas as in the rest of the baseline. Data on prevalence of physical activity and condition of mental health has been taken from the Irish Health Survey (published in 2024). The Irish Health Survey is based on self-reported data from persons aged 15 years and over and gathers their view on key components of their health. This data is only available at a regional level and so it has been reported as such in this section. The Study Area is located within the Health Service Executive (HSE) West and North West region.

6.4.1.7.1 General Health

As shown in Table 6-17, 84.1% of the population of the Study Area identified themselves as having either 'Very Good' or 'Good' health. This is slightly higher than recorded in Donegal County (82.8%), Border (83.5%) and Ireland (82.9%). A higher proportion of the Study Area

population identified themselves as having 'Bad' or 'Very Bad' health (1.9%) compared to Border (1.8%) and Ireland (1.7%) but lower than Donegal County (2.0%).

Table 6-17 - Proportion of the Population by General Health for the Study Area and its Comparators Source: CSO, Census 2022

	Very good (%)	Good (%)	Fair (%)	Bad (%)	Very Bad (%)	Not Stated (%)
Study Area	52.0	32.2	10.3	1.6	0.4	3.7
Donegal County	51.7	31.0	10.6	1.6	0.4	4.6
Border	53.0	30.5	9.8	1.5	0.4	4.9
Ireland	53.2	29.7	8.6	1.4	0.3	6.8

Note: The dataset is self-reported and therefore may not be an accurate representation of general health conditions.

6.4.1.7.2 Disability

Table 6-18 shows the proportion of the population with a disability in the Study Area and its comparator areas from the 2022 Census. A disability has been defined as a long-lasting condition or difficulty and may be physical or mental. The proportion of the Study Area population identifying as having a disability (23.0%) is slightly higher than Donegal County (22.9%), Border (21.5%) and Ireland (21.5%).

Table 6-18 - Proportion of the Population with a Disability Source: CSO, Census 2022

Area	Proportion of population with a disability (%)
Study Area	23.0
Donegal County	22.9
Border	21.5
Ireland	21.5

6.4.1.7.3 Physical Health

Table 6-19 shows the proportion of residents aged 18 years and over which undertake different types of physical activity for the HSE West and North West region and Ireland, according to the Irish Health Survey. In 2024, residents of the West and North West region were undertaking comparatively less physical activity for all activities than Ireland. The majority of the population of West and North West undertake 'walking to get to and from places' (85.4%), with cycling 'to get to and from places' being the least common (7.6%).

Table 6-19 - Proportion of Residents Undertaking Types of Physical Activity by Region Source: CSO, The Irish Health Survey 2024⁶¹

Type of physical activity undertaken	HSE West and North West (%)	Ireland (All HSE regions) (%)
Walking to get to and from places	85.4	89.1
Cycle to get to and from places	7.6	10.2
Sports, fitness or recreational physical activities	65.8	66.9
Muscle strengthening activities	44.0	44.7

6.4.1.7.4 Mental Health

Table 6-20 shows the mental health status of residents for the West and North West region and Ireland (aged 18 years and over) according to the Irish Health Survey. In 2024, a higher

⁶¹ Central Statistics Office (2020), 'Irish Health Survey 2024. Source: <https://www.cso.ie/en/statistics/health/irishhealthsurvey/>. [Accessed: March 2026].

proportion of residents of the West and North West region (67.7%) have 'none to minimal depression' than Ireland (63.3%). A greater proportion of the population of Ireland suffer from mild (20.9%), moderate (9.3%) and moderately severe or severe depression (6.5%) than the population of the West and North West region (19.0%, 7.4% and 5.9% respectively).

Table 6-20 - Proportion of Population (age 15 years and over) by Mental Health Status
Source: CSO, The Irish Health Survey 2024⁶²

Mental Health Indicator	HSE West and North West (%)	Ireland (all HSE regions) (%)
None to minimal depression	67.7	63.3
Mild depression	19.0	20.9
Moderate depression	7.4	9.3
Moderately severe or severe depression	5.9	6.5

6.4.1.8 Vulnerable Sub-Populations

As discussed, the assessment will consider vulnerable sub-populations relevant to each assessment, including the following:

- Older residents – 17.5% of the Study Area are aged over 65;
- People with disabilities and long-term physical and mental conditions – 23.0% of the Study Area have a disability, and 13.3% in HSE and North West have moderate or moderately severe to severe depression;
- Children and young people – 32.5% of the Study Area are aged under 25;
- People in poor health – 1.9% of the Study Area are in 'Bad' or 'Very Bad' general health; and
- People that travel by modes other than private vehicles – 16.3% of the Study Area travel to work, school, or college by modes other than private vehicle.

6.5 Embedded Mitigation

Chapter 4 – Description of Proposed Development states the embedded mitigation measures incorporated into the design of the proposed development. TII guidance⁶³ defines embedded mitigation measures as generalised, 'good practice' measures, such as the construction of the proposed development in compliance with **Appendix 4.1: Construction and Environmental Management Plan** (CEMP) and **Appendix H: Construction Traffic Management Plan** (CTMP).

Embedded mitigation measures set out in **Appendix 4.1 – Construction and Environmental Management Plan** that are relevant to population and human health include:

- Communication with the local community, Donegal County Council, and other relevant stakeholders shall be undertaken at an appropriate level and frequency throughout construction, including ensuring stakeholders are informed in advance of any construction activities that may affect them;
- Implementation of traffic management measures, including temporary two-way traffic lights and appropriate signage where construction vehicles cross public roads, to ensure the safety of road users and pedestrians;

⁶² Central Statistics Office (2020), 'Irish Health Survey 2024. Source: <https://www.cso.ie/en/statistics/health/irishhealthsurvey/>. [Accessed: March 2026].

⁶³ Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108. Available at: <https://cdn.tii.ie/publications/PE-ENV-01108-02.pdf> [Accessed: March 2026].

- Dust, noise and vibration management measures during construction to reduce disturbance to sensitive receptors;
- Landscape management measures, including minimising vegetation clearance, to protect visual amenity;
- Installation of temporary and/or permanent fencing where required to ensure public; and
- Water quality protection measures, including the identification and implementation of erosion and sediment control measures prior to construction, to prevent contamination of nearby watercourses.

The CTMP will consider emergency service access, and a plan will be developed to ensure emergency vehicles will not be negatively impacted by the works. It will be developed by the contractor in discussion with TII and Donegal County Council.

The embedded mitigation measures set out within the following chapters are also relevant to population and human health and have been considered in the assessment of effects: **Chapter 5 – Traffic and Transportation, Chapter 9 – Hydrology, Chapter 10 – Hydrogeology, Chapter 11 – Air Quality, Chapter 13 – Noise and Vibration, and Chapter 14 – Landscape and Visual Amenity.**

6.6 Assessment of Impacts and Effects

This section details the potential effects, and the significance of such effects, resulting from the proposed development. This considers effects in the 'Do Nothing' scenario, as well as both the construction and the operational phase.

6.6.1 The 'Do Nothing' Scenario

In the Do Nothing scenario, the population and human health conditions are likely to remain as per the baseline and will change in accordance with trends within the wider area. No material changes to population and human health are likely to occur. However, this scenario would result in a lost opportunity in the provision of the proposed development to support human health and wellbeing in the surroundings and wider community.

6.6.2 Potential Construction Impacts

For this assessment, a construction period of 24 months (104 weeks) has been assumed, as set out in **Chapter 4 – Description of the Proposed Development.**

6.6.2.1 Employment and Economic Activity

The proposed development will generate temporary direct construction jobs during the construction phase. These are expected to support the current supply chain leading to the creation of additional (indirect and induced) jobs. It is estimated that the proposed development will generate an average of 65 gross direct full time equivalent (FTE) construction jobs per annum.

Given the scale of construction employment for the proposed development in relation to the local economy, the magnitude of effect is assessed to be low. The sensitivity of the labour market to employment and economic activity is assessed to be medium, given unemployment rate in Donegal County is higher than in Border and Ireland, and the likelihood of construction employment being able to respond quickly to demand for labour.

Therefore, the overall impact of construction employment and economic activity is considered short-term **slight beneficial (not significant).**

6.6.2.2 Land Use and Accessibility

6.6.2.2.1 Residential Properties

Chapter 17 – Material Land and Assets, considers land use effects resulting from land take. **Chapter 17 – Material Land and Assets** assess significant residual effects on five residential properties (refer to Table 17-7). The land use impacts on residential properties are therefore not reassessed here and the focus of the assessment is on accessibility.

To assess the accessibility effects of the proposed development during the construction phase, a review of the proposed development design and its interaction with private residential access routes and the local road network was undertaken. This review indicated that access to the majority of residential properties will not be impacted by the proposed development, apart from potential effects on the access to three residential properties located in Clarlougheask, along L-65351-0⁶⁴. However, the contractor will be required to maintain and/or manage access through engagement with the affected residential properties and the provision of temporary diversions if necessary. This will include agreement on short, controlled periods during which construction activities can occur.

Where temporary road closures are required, diversions will be available via the local road network. These diversions are expected to be minor in nature and accommodated within the existing road network and are therefore not anticipated to materially increase journey lengths or delay. Temporary traffic management measures will be implemented where required through the Construction Traffic Management Plan (CTMP), as set out in **Appendix H** of the CEMP.

In addition, as set out in **Chapter 5 – Traffic and Transport**, construction traffic including Heavy Goods Vehicles (HGVs) will be managed through the implementation of a Construction Traffic Management Plan (CTMP). As outlined in **Chapter 5 – Traffic and Transport**, all construction traffic effects are therefore assessed to be temporary, short-term in duration, and not significant.

Residential properties are considered to be of high sensitivity. The majority of residential properties in the study area are not affected from an accessibility perspective. For those affected, mitigation is in place to minimise impacts. On that basis, the magnitude of impact on residential properties is assessed as negligible.

Overall, the effect of the proposed development on residential properties, in terms of accessibility during the construction phase, is assessed as short-term **slight adverse (not significant)**.

6.6.2.2.2 Commercial Premises

Chapter 17 – Material Land and Assets assesses the land use effects as a result of land take. **Chapter 17 – Material Land and Assets** assesses significant residual effects on one commercial property, Lafferty Bus Hire in Stranorlar, (refer to Table 17-7). The effects on land use are therefore not reassessed here and the focus of the assessment is on accessibility.

Access to all commercial receptors will be maintained during the construction phase. As outlined above, where temporary road closures are required, diversions will be available via the local road network. These diversions are expected to be minor in nature and accommodated within the existing road network and are therefore not anticipated to materially increase journey lengths or delay. Temporary traffic management measures will be implemented where required through the CTMP, as set out in **Appendix H** of the CEMP. As set out in **Chapter 5 – Traffic and Transport**, all construction traffic effects are assessed to be temporary, short-term in duration, and not significant.

Commercial premises are considered to be of medium to high sensitivity. Given the mitigation in place, access impacts on commercial premises will be minimal. On that basis, the magnitude of impact on residential properties is assessed as negligible.

⁶⁴ Donegal County Council (2026) Donegal Roads Transportation Network. Available at: <https://donegal.maps.arcgis.com/apps/inspector/basic/index.html?appid=f376571a29254355ab2ab78a2f9f9e08> [Accessed: 23/04/26].

Overall, the effect of the proposed development on commercial properties, in terms of accessibility during the construction phase, is assessed as short-term **not significant to slight adverse (not significant)**.

6.6.2.2.3 Community Facilities and Community Land

Chapter 17 – Material Land and Assets assesses the land use effects as a result of land take. **Chapter 17 – Material Land and Assets** concludes no significant residual effects on community facilities or community land.

Access to all community facility and land receptors will be maintained during the construction phase and where temporary road closures are required, diversions will be available via the local road network. These diversions are expected to be minor in nature and accommodated within the existing road network and are therefore not anticipated to materially increase journey lengths or delay. Temporary traffic management measures will be implemented where required through the CTMP, as set out in **Appendix H** of the CEMP. As set out in **Chapter 5 – Traffic and Transport**, all construction traffic effects are assessed to be temporary, short-term in duration, and not significant.

Community facilities and community land are considered to be of medium to high sensitivity. Given the mitigation in place, access impacts on these receptors will be minimal. On that basis, the magnitude of impact is assessed as negligible.

Overall, the effect of the proposed development on community facilities and community land, in terms of land use and accessibility during the construction phase, is assessed as short-term **not significant to slight adverse (not significant)**.

6.6.2.2.4 Non-Motorised Users

As set out in the baseline, a number of existing recreational routes are intersected by the proposed development. The sensitivity of these recreational routes is assessed to be medium to high, based on their importance for recreation locally and nationally.

Given no interaction with the proposed development has been identified, no effects are anticipated on EuroVelo1 Ireland, Donegal Cycle Route, and the Drumboe Trails.

The Bluestack Way, a National Waymarked Trail through the Bluestack Mountains, intersects the proposed development at Mill Lane and Lough Eske Demesne. At Mill Lane, construction activities are limited to signage and road markings at the greenway crossing, requiring less than one day of temporary traffic management, with local access maintained throughout this period. At Lough Eske Demesne, construction activities involve upgrading the existing path, requiring full closure of this section of the route for an approximate period of less than two months. However, a diversion of approximately 1 km will be provided via the local road network.

The North Western Trail, a recreational cycling route, also interacts with the proposed development at several locations, including Tirchonnail Street (Donegal), four points along the L19453 at Lough Eske, the L19752, Navenny Street (Navenny), and Millbrae (Stranorlar), as outlined in Table 6-21. During the construction phase, access will be maintained for NMUs at Tirchonnail Street, L19453 540 Eske Loop, L19453 6120, L19752 6720, Navenny Street, and Millbrae. Temporary closures will be required at L19453 1350 Eske Lough and 1650–1700 Eske Loop. At these locations, a diversion of approximately 3.6 km will be provided via the local road network for a maximum duration of less than two weeks.

Table 6-21 sets out details of the temporary closures and diversions for the recreational routes, as outlined in the CTMP (**Appendix H** of the CEMP).

Table 6-21 - Temporary closures of recreational routes

Route/Road	Chainage	Construction Works	Type of TTM	Duration of TTM
NW Cycling Trail – Tirchonnail Street	0	Upgrade of footpath adjacent to trailhead Installation of raised crossing	Lane narrowing – Access maintained Short term road closure (cyclist access maintained)	< 2 months 1-2 days
Bluestack Way - Mill Lane	870	Greenway crossing – signage and road markings	Local Access Maintained	<1 day
Appalachian Trail – L65251	3240 460 Clar Link	Greenway crossing – signage and road markings	Two way lights/Stop-Go boards – Access Maintained	<1 day
NW Cycling Trail – L19453	540 Eske Loop	Greenway crossing – signage and road markings	Two way lights/Stop-Go boards – Access Maintained	<1 day
Bluestack Way / Appalachian Trail (Lough Eske Demesne)	670 - 1080 Eske Loop	Upgrade of existing path	Full Closure – diversion for pedestrians along L19453 (c.1km)	< 2 months
NW Cycling Trail – L19453	1350 Eske Loop	Realignment of L19453	Lane closures & two way lights (Access maintained). Some short term full closures required – diversion for cyclists along L-6525-1, L-6535-1 and N15 (3.6km).	< 2 months <1 week
NW Cycling Trail – L19453	1650 - 1700 Eske Loop	Active travel section added to existing road bridge	Full closures required – diversion for cyclists along L- 6525-1, L-6535-1 and N15 (3.6km).	< 2 weeks
NW Cycling Trail – L19453	6120	Greenway crossing – signage and road markings	Two way lights/ Stop-Go boards – Access Maintained	<1 day
NW Cycling Trail – L19752	6720	Greenway crossing – signage and road markings	Two way lights/ Stop-Go boards – Access Maintained	<1 day
NW Cycling Trail – Navenny Street	29300	Active travel section and greenway crossing Installation of raised crossing	Lane closures & two way lights (Access maintained). Short term road closure (cyclist access maintained)	<2 weeks 1-2 days
NW Cycling Trail – Millbrae	30300 - 30400	Active travel section, narrowing of road cross section	Lane closures & two way lights (Access maintained). Short term road closure (cyclist access maintained)	<4 weeks 1-2 days

As the North Western Trail and Bluestack Way are primarily used for recreational purposes rather than access, the provision of temporary diversions is not anticipated to materially affect accessibility although it is recognised there will be a minor increase in journey length on certain sections of each route whilst these diversions are in place.

Taking into account the temporary and short-term nature of the identified impacts, the provision of suitable diversions, and the recreational function of the affected routes, the magnitude of impact on NMUs is assessed as medium.

Overall, the effects on NMU during the construction phase are assessed to be temporary **moderate adverse (not significant)**.

6.6.2.3 Amenity

This section provides an assessment of amenity effects on residential receptors, commercial premises, and community facilities in Donegal, Clardrumnarrem and Clardrumbarren, and Stranorlar. These receptors are assessed to have a medium to high sensitivity to amenity effects, depending on receptor type. For example, all residential receptors are assessed as having a high sensitivity, with sensitive community facilities such as schools also assessed as high sensitivity. Commercial premises have typically been assessed on a case-by-case basis but are generally assumed to have a medium sensitivity to amenity effects.

As outlined in **Chapter 11 – Air Quality** and **Chapter 5 – Traffic and Transport**, it is not anticipated that there would be any significant effects on air quality or traffic during the construction phase of the proposed development. Therefore, these amenity effects are scoped out of this assessment. The assessment becomes applicable where two or more significant visual, noise, or vibration effects have been identified on a receptor.

6.6.2.3.1 Donegal

In Donegal, 35 residential properties, Railway Heritage Centre (museum) and Railway Lodge (guest house) and St John's Bosco Centre have been identified as having overlapping and significant visual and vibration effects for earthworks/pavement construction works during the construction phase. The overlapping significant effects are anticipated to last for a maximum of 1 week. Given this, the magnitude of effect from an amenity perspective is assessed to be low. Overall, the amenity effects during the construction phase is assessed to be **slight to moderate adverse (not significant)** depending on the type of receptor affected.

6.6.2.3.2 Clardrumnarrem and Clardrumbarren

In Clardrumnarrem and Clardrumbarren, three residential receptors have been identified as having significant overlapping vibration effects for compounds/site access and earthworks/pavement construction works and significant noise effects along the Lough Eske link during the construction phase. The overlap of these effects is anticipated to occur for a maximum of 1 month. Given this, the magnitude of effect is assessed to be low. Overall, the amenity effects during the construction phase is assessed to be **moderate adverse (not significant)** for the three residential receptors.

6.6.2.3.3 Stranorlar

In Stranorlar, 36 residential properties, 15 commercial premises, and 6 community facilities have been identified as having significant visual and vibration effects during the construction phase. The impacted community facilities include The BASE Enterprise Centre, Finn Valley A.C., Finn Valley Leisure Centre, Finn Harps FC, and Stranorlar Library. The commercial premises include a veterinary clinic, food shop, bar, bus depot, and professional services. Sensitivity is assessed as medium to high based on type of receptor. All of these receptors are anticipated to be impacted by earthworks/pavement construction activities. In addition, some of these receptors (28 residential, 11 commercial premises, and 3 community facilities (The BASE Enterprise Centre, Finn Harps FC, and Stranorlar Library) are also anticipated to be affected by compounds/site access construction works. The maximum overlap of significant visual and vibration effects is limited to 1 month and for some receptors this overlap will only occur for 1 week. Given this, the magnitude of effect is assessed to be low. Overall, the amenity effects during the construction phase is assessed to be **slight adverse to moderate (not significant)** for these receptors in Stranorlar.

6.6.2.4 Human Health

This section assesses the effect of the proposed development on the following human health and wellbeing determinants in the construction phase. The following IEMA determinants of health⁶⁵ are considered:

- Employment and income;
- Education and training;
- Transport modes, access and connections;
- Community safety;
- Air quality;
- Noise and vibration;
- Water environment;
- Health and social care services;
- Open space, leisure and play; and
- Community identity, culture, resilience and influence.

6.6.2.4.1 Employment and Income

During the construction phase, the proposed development is expected to generate direct construction employment and associated Gross Value Added (GVA). These employment opportunities will provide a beneficial health impact to the workers. There is evidence that employment matters to health, not only from an economic perspective, but also in terms of quality of life and mental health. Good quality work protects against social exclusion through the provision of income, social interaction, identity, and purpose, and ultimately resulting in improved local mental health. Therefore, employment generation in the construction sector has the potential to support key regional and national health policies, including the Healthy Ireland Strategic Action Plan 2021-2025, which aims to reduce health inequalities and protect the public from threats to health and well-being.

As set out in the baseline, in Donegal County, there are lower than average labour force participation rates and higher unemployment rates compared to the Border region and Ireland. Therefore, the sensitivity of the general population to employment effects is assessed to be medium. Vulnerable sub-populations, including unemployed people, are assessed to have a high sensitivity.

It is estimated that the proposed development will generate an average of 65 gross direct FTE construction jobs per annum throughout the construction period. Therefore, the magnitude of impact is considered to be low, relative to the local labour market.

Overall, the effect on human health arising from impacts on employment and income during the construction phase is considered temporary, short-term in duration, and **slight beneficial (not significant)** for both the general population and vulnerable sub-populations.

6.6.2.4.2 Education and Training

During the construction phase, there is potential for the jobs generated by the proposed development to provide associated education and training opportunities for the construction workforce.

As shown in the baseline, working-age residents within the Study Area are more likely to complete primary and secondary education, but less likely to complete higher education, than its comparator geographies. The proportion of residents of the Study Area that have completed a technical or vocational qualification (8.16%) is in line with the Border region (8.24%), slightly higher than Ireland (7.50%), and higher than Donegal County (4.81%). The sensitivity of the general population is therefore assessed as medium, with vulnerable sub-

⁶⁵ IEMA (2022) Guide to Effective Scoping of Human Health in Environmental Impact Assessment. Available at: <https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf> [Accessed: March 2026].

populations such as people with no qualifications and low skills assessed as having a high sensitivity.

Given the limited scale of employment opportunities generated by the construction period, it is also anticipated that the associated education and training opportunities would be limited. Therefore, the magnitude of effect is assessed to be low.

Overall, the effect on human health arising from impacts on education and training during the construction phase is considered temporary, short-term in duration, and **slight beneficial (not significant)** for both the general population and vulnerable sub-populations.

6.6.2.4.3 Transport Modes, Access, and Connections

During the construction phase, the proposed development has the potential to impact the availability, accessibility, and safety of the road network and active travel networks. The local population are likely to use the same road network as construction traffic associated with the proposed development. Increased traffic flows and severance effects may inhibit the ability of local residence to access facilities, and construction activities may intersect or otherwise impact the accessibility or safety of roads and active travel networks. These changes have the potential to influence health outcomes through altered access to facilities, as well as through effects on physical activity levels, journey stress, and perceptions of safety.

As shown in the baseline, residents in the Study Area experience relatively strong local accessibility but a high reliance on private vehicles when compared with comparator geographies. Journey times are generally short, with a notably higher proportion of residents travelling under 15 minutes to work, school, or college (44.4%) than across Donegal County (40.9%), the Border region (38.3%), and Ireland (29.4%). However, 71.8% of these journeys are undertaken by car or van in the Study Area (71.8%), which exceeds all comparator areas (Donegal County: 68.4%, Border: 68.6%, Ireland: 57.9%). On this basis, the general population is considered to have a medium sensitivity to changes in transport modes, access, and connections. Vulnerable sub-populations include those without access to a private vehicle, the elderly, younger people, lower-income groups, and people with disabilities, and are assessed to have a high sensitivity.

Chapter 5 – Traffic and Transport has set out an estimate of the number of HGV journeys and car/van movements for the construction staff over the construction period. At its peak (Month 4, Year 1), there is forecast to be a total of 262 daily two-way weekday construction vehicles, comprising 182 car/van movements and 80 HGV movements. Under a worst-case scenario, the assessment concluded that the potential impact of the additional demand associated with the construction phase on the road network is negative, temporary to short-term and not significant.

Chapter 5 – Traffic and Transport also identified that 24-hour working will be required for the construction of three underpasses under the N15/N56 national roads, each requiring 1-2 weekends (excluding bank holiday weekends) while the national road is closed. The N15 is the predominant National Road located within the Study Area, linking Lifford (Derry, Strabane and Letterkenny) to Sligo, including from Donegal Town to Ballbofey-Stranorlar. The Study Area also includes the N56 national road at the southern end providing a bypass of Donegal Town. Two local roads will be realigned, requiring short-term road closures at Railway Road (Donegal) and L19543 Lough Eske. Local access will be retained as far as possible, with alternative access required via the local road network and close liaison with local residents. Short-term road and lane closures will also be required at five locations on the local road network (Tirchonail Street, L19543 Lough Eske Bridge, Navenny Street, Railway Road and Millbrae (Stranorlar), and L65441 Goland). Suitable diversions will be provided using the local and regional road network, with requirements for suitable diversions set out in **Appendix H: Construction Traffic Management Plan**.

In addition, **Appendix H: Construction Traffic Management Plan** requires the development of Traffic Management proposals to ensure the safety of all road users, including vulnerable road users, and the workforce. It requires the contractor to safely manage cyclist movements throughout the works in its temporary traffic management. Existing routes shall be maintained or diverted where required, provide appropriate segregation from the works (e.g. hoarding/fencing) and the contractor shall not remove any existing routes without providing suitable alternatives for cyclists, pedestrians, and wheelchair users.

By adopting the mitigation measures set out in **Appendix H: Construction Traffic Management Plan**, the magnitude of effect is considered medium.

Overall, the effect on human health arising from impacts on transport modes, access, and connections during the construction phase is considered temporary, short-term in duration, and **slight adverse (not significant)** for the general population **moderate adverse (not significant)** for vulnerable sub-populations.

6.6.2.4.4 Community Safety

Community safety considers how the proposed development has the potential to influence crime, including actual crime and the fear of crime, injury risk, and emergency services⁶⁶. Therefore, impacts on community safety has the potential to impact physical and mental health.

As noted in the baseline, general health conditions in the Study Area (84.1% of the population identifying as in 'Very Good' or 'Good' health) are slightly higher than Donegal County, Border and Ireland, at 82.8%, 83.5% and 82.9% respectively. The sensitivity of the general population is therefore considered to be medium. Vulnerable sub-populations including the elderly, younger people, people with disabilities, and people poor health conditions are assessed as having a high sensitivity.

Given the small number of construction workers required for the proposed development, it is not anticipated that there will be a significant change in the population size or make up of the local area. Therefore, it is not anticipated that the proposed development would result in changes to the local crime rate. As outlined in Section 6.4.1.2, ongoing public engagement has occurred with the local communities to inform the design of the proposed development. It is considered that this ongoing public engagement with local stakeholders would mitigate any significant impacts on the fear of crime and community safety.

As outlined in **Chapter 4 – Proposed Development**, the majority of the construction works will take place away from public roads and access points, with sufficient mitigation measures in place to prevent access, and therefore there is not considered to be any risk of injury to the local population. During construction, the traffic management plan will be developed by the contractor in discussions with TII and Donegal County Council to ensure emergency services access and to avoid adverse impacts arising from the construction works.

Therefore, the magnitude of impact on human health arising from impacts on community safety is assessed to be low.

The overall effect has been assessed to be temporary, short-term in duration, and **slight adverse (not significant)** for the general population and vulnerable sub-populations.

6.6.2.4.5 Air Quality

An assessment of the likely significant effects on air quality as a result of the proposed development has been presented in **Chapter 11 - Air Quality**. The construction activities associated with the proposed development have the potential to reduce air quality, which could potentially lead to adverse health effects on local communities. Air quality impacts have the potential to affect health and wellbeing through respiratory irritation and exacerbation of existing conditions (i.e. asthma), cardiovascular effects, and stress and anxiety related to perceived air quality risks.

As set out in the baseline, a higher proportion of the population within the Study Area (84.1%) were considered to be in 'Very Good' or 'Good' health than its comparator geographies (Donegal 82.8%, 83.5% Border and 82.9% Ireland). The sensitivity of the general population is therefore assessed as low. Vulnerable sub-populations include young people and children, the elderly, and people with health conditions. These vulnerable sub-populations are assessed to have a medium sensitivity to air quality effects.

As outlined in **Chapter 11 – Air Quality**, no significant construction stage effects of traffic on air quality are predicted and was therefore scoped out of the assessment. In addition, the

⁶⁶ IEMA (2022) Guide to: Effective Scoping of Human Health in Environmental Impact Assessment. Available at: [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf](https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf) [Accessed: March 2026].

residual air quality effects on human health during the construction phase is assessed to be short-term, localised, and not significant with the implementation of best practice measures, including the proactive control of dust and other air pollutants to minimise generation of emissions at the source. The magnitude of impact on human health arising from air quality is therefore assessed to be low.

Overall, the temporary effect on human health and wellbeing resulting from impacts on air quality during the construction phase is assessed as short-term **slight adverse (not significant)** for both the general population and vulnerable sub-populations.

6.6.2.4.6 Noise and Vibration

Noise pollution and vibration can have detrimental impacts on health resulting in annoyance, sleep disturbance, cardiovascular and psycho-physiological effects. Sleep disturbance is a key pathway, influencing recovery, mental health and overall quality of life. Vibration may also contribute to discomfort and disturbance.

As set out in the baseline, a higher proportion of the population within the Study Area (84.1%) were considered to be in 'Very Good' or 'Good' health than its comparator geographies (Donegal 82.8%, 83.5% Border and 82.9% Ireland). The sensitivity of the general population is therefore assessed as low. Vulnerable sub-populations include the elderly, children, unemployed residents, night shift workers, and people with health conditions or disabilities. These vulnerable sub-populations are assessed to have a medium sensitivity to noise and vibration effects.

Chapter 13 – Noise and Vibration identifies potential construction impacts on noise as a result of static and non-static construction activities, including at compounds and temporary construction areas, drainage, culvert and swale installation, car parks and trailheads, bridges, the River Eske and River Finn Viaducts, underpasses, and over watercourses. The assessment concludes significant residual noise effects as a result of the increase in construction traffic associated with the proposed development along the Lough Eske link. Significant residual noise effects along the Lough Eske link are estimated to occur at 12 residential receptors, Lough Eske Church of Ireland, and Saint Francis National School. However, **Chapter 13 – Noise and Vibration** notes that this effect is short-term, with noise effects expected to occur for less than one week in total as a result of all construction activities. Therefore, these effects are temporary and not anticipated to persist for the full duration of the construction phase. In addition, the predicted construction traffic noise levels remain below TII's maximum permissible construction noise limits.

In addition, **Chapter 13 – Noise and Vibration** identifies potential vibration impacts from construction activities, including temporary site facilities (compounds and access and working areas), earthworks, and pavements. The assessment concludes significant residual vibration effects on receptors within 36 m of vibratory activities, including at 29 residential receptors and 16 commercial receptors as a result of compound and site access construction activities, and 182 residential receptors and 45 commercial receptors as a result of earthworks and pavement activities. At a maximum, it is anticipated that these significant effects would occur for 1 month for compounds and access activities, and 1 week for earthworks and pavement activities for any one receptor. The assessment concludes that at the highest predicted vibration levels, it is likely that vibration in residential environments will cause complaint, but the vibration levels are expected to be tolerated if prior warning and explanation is provided to residents.

The magnitude of impact on human health and wellbeing arising from construction noise and vibration overall is therefore assessed to be medium. Therefore, the overall effect of temporary construction noise and vibration is assessed to be short-term **slight adverse (not significant)** for the general population and **moderate adverse (not significant)** for the vulnerable sub-population.

6.6.2.4.7 Water Environment

Potential effects on human health as a result of impacts on the surface water environment include changes to water quality, water levels, and flows. Construction activity could pose risks to human health where watercourses or waterbodies are used for recreation or support downstream drinking water supplies. This includes impacts on groundwater quality due to the

migration of sediments, chemicals, or wastewater through uncontrolled site runoff or accidental spillage.

As outlined in the baseline, the Study Area is considered to be in good physical and mental health, with a higher proportion in 'Very Good' or 'Good' health. Therefore, the sensitivity of the general population to water effects are assessed to be low. Potentially vulnerable sub-populations include people with poor health and existing health conditions, in which sensitivity is assessed to be medium.

As outlined in **Chapter 9 – Hydrology** the proposed development could impact the surface water environment during construction in terms of changes to water quality, water levels and flows. However, following mitigation, impacts on the water environment are assessed to be negligible for all sources and therefore not significant. In addition, **Chapter 10 – Hydrogeology** does not identify any significant effects associated with uncontrolled site runoff and accidental spillages and leaks during the construction phase.

Therefore, the magnitude of impact of the water environment on human health is assessed to be low.

Overall, the effect on human health and wellbeing arising from temporary impacts to the water environment in the construction phase is assessed as short-term **slight adverse (not significant)** for the general population and vulnerable sub-populations.

6.6.2.4.8 Health and Social Care Services

The construction phase of the proposed development has the potential to affect health and social care services through temporary increases in population and therefore demand from the construction workforce, potentially reducing access to health and social care services for the local population. This has the potential to adversely impact both physical and mental health.

As set out in the baseline, the majority of EDs comprising the Study Area (14 out of 17) are considered 'marginally below average' in terms of deprivation, with the remaining three EDs 'marginally above average'. In general, the population of the Study Area is considered to be in good physical and mental health, with a higher proportion in 'Very Good' or 'Good' health as well as a higher proportion with 'none to minimal depression' compared to Donegal County, Border and Ireland. Therefore, the sensitivity of the general population to health and social care services is assessed as medium. For vulnerable sub-populations including elderly residents and those with specific health and social care needs, sensitivity is assessed as high.

As outlined above, it is anticipated that the construction phase will generate direct employment of 65 FTE jobs per annum. It is anticipated that the majority of the construction workers will live within the local area and therefore would not place additional pressure on health and social care services. However, assuming a worst-case scenario where all construction workers reside outside the Study Area, the limited number of construction workers means it is not anticipated that any additional pressure on health and social care services would be significant.

As outlined in Section 6.6.2.2, there is not anticipated to be any significant severance effects on community receptors (including health and social care receptors) associated with the proposed development. Given this, the magnitude of effect is assessed to be low.

Overall, the effect on human health and wellbeing arising from temporary impacts to health and social care services in the construction phase is assessed as short-term **slight adverse (not significant)** for the general population and vulnerable sub-populations.

6.6.2.4.9 Open Space, Leisure and Play

Construction activities have the potential to impact the open space, leisure, and play as a result of land take, closures, severance effects, or an increased demand for users of open

space. Impacts on open space could affect opportunities for physical activity and social⁶⁸ adversely impacting mental health⁶⁸.

As shown in the baseline, the population of the Study Area is be considered to be in good physical and mental health, with a higher proportion in 'Very Good' or 'Good' health as well as a higher proportion with 'none to minimal depression' compared to Donegal County, Border and Ireland. Given the predominantly rural nature of the Study Area, local residents are likely to have access to alternative outdoor spaces for open space, leisure, and play. Therefore, the sensitivity of the general population is assessed as low. For vulnerable sub-populations such as families with young children, the sensitivity is assessed as medium.

As outlined in Section 6.6.2.2, there is not anticipated to be any adverse impacts on open space, leisure and play in terms of land take or accessibility and severance.

As outlined above, it is anticipated that the construction phase will generate direct employment of 65 FTE jobs per annum. It is anticipated that the majority of the construction workers will live within the local area and therefore would not place additional pressure on open space, leisure, and play assets. However, assuming a worst-case scenario where all construction workers reside outside the Study Area, the limited number of construction workers means it is not anticipated that any additional demand on open space, leisure, and play would be significant. Therefore, the magnitude of effect is assessed as low.

Overall, the effect on human health and wellbeing arising from temporary impacts to open space, leisure and play in the construction phase is considered short-term **slight adverse (not significant)** for the general population and vulnerable sub-populations.

6.6.2.4.10 Community Identity, Culture, Resilience and Influence

Community identity, culture, resilience and influence are key determinants of health and wellbeing, reflecting the strength of social networks, place attachment, and opportunities for participation in shared community life. These factors support mental wellbeing and collective resilience, whilst disruption to familiar environments, routines, and social interaction spaces can adversely affect perceived wellbeing and social cohesion.

Given the small settlement context of Donegal and Ballybofey–Stranorlar and the low population growth in the area as set out in the baseline, it is considered that local communities are likely to exhibit relatively strong place attachment, established social networks, and high levels of community cohesion. Therefore, the sensitivity of the general population is considered low. Vulnerable sub-populations, including the elderly and single parents may have fewer alternative social resources, and are therefore assessed as having medium sensitivity.

During the construction phase, temporary works include vegetation clearance, earthworks, construction compounds, temporary fencing, and associated construction activity along the route corridor. These activities may affect elements of place experience, belonging, and community identity. As outlined in **Chapter 14 – Landscape and Visual Impact Assessment**, significant residual landscape effects are likely during the construction phase on the Bluestack Landscape Character Area (LCA), Lough Eske LCA, Cashelnavern Border and Uplands LCA, Croaghnameal Border and Uplands LCA, and Urban Fringes Local Townscape Character Area (LTCA). However, these effects are anticipated to be temporary and reversible upon completion of the construction activities.

As outlined, given the small number of construction workers required for the proposed development, it is not anticipated that there will be a significant change in the population size or make up of the local area.

In addition, there is anticipated that there will be no significant effect on land take (as set out in **Chapter 17 – Material Assets and Land**), severance (Section 6.6.2.2) and amenity (Section 6.6.2.3) of community facilities such as St John Bosco Community Centre in Donegal

⁶⁸ IEMA (2022) Guide to: Effective Scoping of Human Health in Environmental Impact Assessment. Available at: [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf](https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf) [Accessed: March 2026].

Town and the Finn Valley Centre in Stranorlar, as set out in Section 6.6.2.2 and Section 6.6.2.3.

Therefore, while significant landscape and visual effects are identified during construction in surrounding character areas, these effects are not considered to materially undermine community cohesion or cultural continuity at a settlement scale, given their temporary nature and the continued ability of communities to access key services and social infrastructure.

Given this, the magnitude of impact on community identity, culture, resilience and influence is assessed as medium.

Overall, the likely effect on human health and wellbeing resulting from temporary impacts on community identity, culture, resilience and influence during the construction phase is assessed as short-term **slight adverse (not significant)** for the general population and **moderate adverse (not significant)** for vulnerable sub-populations.

6.6.3 Potential Operational Impacts

6.6.3.1 Employment and Economic Activity

As stated above, the sensitivity of the labour market to employment and economic activity is assessed to be medium, given unemployment rate in Donegal County is higher than in Border and Ireland, and the likelihood of construction employment being able to respond quickly to demand for labour.

During the operational phase, the proposed development is anticipated to generate 2-3 FTE direct jobs per annum associated with routine maintenance, including emptying of bins and toilet cleaning at trailheads. This is likely to generate additional indirect and induced jobs in the local economy. The generation of employment and income has the potential to support regional and national health objectives, such as those identified in the Health Ireland Strategic Action Plan 2021-2025 which aims to reduce inequalities. However, given the scale of direct employment, it is anticipated this would be limited.

However, it is anticipated that the proposed development will further develop the untapped tourism potential within the region by integrating the greenway with attractions and activities in the Study Area, encouraging tourism and creating a positive impact upon rural economies. The greenway is estimated to accommodate an annual average of 982 daily users (walking and cycling), increasing to a summer average of 2,236 users per day. This therefore presents an opportunity to develop the historical and educational significance of the local area, whilst promoting its scenic nature. By integrating the proposed development into local attractions and activities, for example Lough Eske Castle, there is the potential to attract overnight visitors and facilitate multi-day excursions around the local area, boosting the local economy.

For example, a new track will be constructed from the 'Loop' to reach the north of the Demesne and provide connectivity to Lough Eske Castle, Harvey's Point Hotel and the local road leading to Lough Eske Angling Centre. Spurs will also be provided to Biddy's O'Barnes, a gastropub at the centre of the proposed development, and from Golland to Cappry to meet the proposed TEN-T Active Travel facility, adjacent to the Roadhouse Bar and Restaurant. The proposed development will terminate at the existing Bus Depot in Stranorlar, encouraging greenway users to visit the local area.

In addition, the BASE Enterprise Centre is located at the end of the greenway in Stranorlar, a centre providing mentoring and networking to help start-ups and small businesses grow. The greenway therefore has potential to increase connectivity which may provide economic benefits to local businesses and the wider community.

Although the proposed development would be expected to have a positive impact on tourism and the local economy, it is important to distinguish between the direct impact of operational employment and income and the indirect economic benefits from tourism. Therefore, given the potential for the operation of the proposed development to benefit local tourism and businesses, the magnitude of impact is considered medium.

Overall, the effect on human health and wellbeing arising from impacts to employment and economic activity in the operation phase is assessed as permanent **moderate beneficial (not significant)**.

6.6.3.2 Land Use and Accessibility

6.6.3.2.1 Residential Properties

As outlined in Section 6.6.2.2, residential properties are of high sensitivity to accessibility effects. During the operational phase, the proposed development is anticipated to provide a high-quality greenway for walkers, cyclists, and wheelchair users, improve the connectivity and accessibility between communities along the length of the route, including residential properties in Donegal town, Ballybofey-Stranorlar, and the rural communities between them. Therefore, the proposed development will result in considerable improvement in accessibility for residents for both recreational and daily functional journeys. For example, a new spur is proposed to provide a 4km long safe route for pedestrians and cyclists from the residential community at Clar to Donegal Town that will bypass the busy roundabout at Drumlonagher.

On this basis, the magnitude of effect is assessed to be high. Overall, the effect of accessibility as a result of the proposed development on residential receptors during operation is assessed to be permanent **very significant beneficial (significant)**.

6.6.3.2.2 Commercial Premises

Commercial premises are considered to be of medium to high sensitivity. During the operational phase, the proposed development is anticipated to provide a high-quality greenway for walkers, cyclists, and wheelchair users, improve the connectivity and accessibility to commercial premises as outlined above. For example, the BASE Enterprise Centre is located at the end of the greenway in Stranorlar, a centre providing mentoring and networking to help start-ups and small businesses grow. In addition, the greenway is likely to provide improved connectivity to Biddy O'Barnes, a gastropub located at the centre of the proposed development. The greenway therefore has potential to increase connectivity and footfall to local businesses along the route.

On this basis, the magnitude of effect is assessed to be high. Overall, the effect of accessibility as a result of proposed development on commercial premises during operation is assessed to be permanent **very significant beneficial (significant)**.

6.6.3.2.3 Community Facilities and Community Land

Community facilities and community land are assessed to be of high sensitivity. During the operational phase, the proposed development is anticipated to improve connectivity to receptors such as St Francis National School, Sessiaghoneill National School and St Mary's National School, providing additional, safe and active routes for local residents. In addition, as St John Bosco Community Centre in Donegal Town and the Finn Valley Centre and Twin Towns Community Library in Stranorlar are located at each end of the proposed development and therefore benefit from the improved accessibility to these facilities.

On this basis, the magnitude of effect is assessed to be high. Overall, the effect of accessibility as a result of proposed development on community facilities and community land during operation is assessed to be permanent **very significant beneficial (significant)**.

6.6.3.2.4 Non-Motorised Users (NMU)

As a result of the proposed development, a new 31km mainline greenway alongside a further 6.5km of links, which provide additional connectivity and integration to surrounding amenities and active travel routes, will be provided for walkers, wheelers and cyclists.

The sensitivity of these receptors is assessed as high, given the importance of recreational routes for NMU in the local area. The proposed development will provide both short and long-distance recreational users and commuters with safe, convenient opportunities to travel between areas along the route.

There is no existing segregated cycle infrastructure between Donegal Town and Ballybofey-Stranorlar. Therefore, the introduction of a greenway can bring many benefits to a local population, including increased access to community facilities, improved safety whilst

travelling, encouragement to take part in recreational activity and increased opportunity to travel using sustainable transport modes. As outlined above, it is estimated that the greenway would accommodate an annual average of 982 daily users (walking and cycling), increasing to a summer average of 2,236 users per day.

The proposed development route and facilities have been designed in accordance with TII's Rural Cycleway Design, including access and inclusivity for mobility impaired. Facilities at trailheads have been designed to be accessible to persons with disabilities, including dropped kerb access, tactile paving crossings, accessible parking, and wider doors to access toilet blocks. Where the proposed development crosses existing recreational routes, at grade greenway priority crossings will be established to ensure safety to NMUs. In some cases, the proposed development will interact with existing recreational routes, including along the Bluestack Way (e.g. near Lough Eske) and Northwestern Trail (e.g. at Ballybofey-Stranorlar), alongside associated greenway improvements. This integration of recreational routes is likely to improve connectivity within the area for both local residents and visitors, improving opportunities for active travel and recreation. As a result of the benefits provided by the proposed development, the magnitude of impact is determined to be high.

Therefore, the operational phase of the proposed development on NMu is assessed as be permanent **very significant beneficial (significant)**.

6.6.3.3 Amenity

During the operational phase, the amenity assessment considers the combined effects of significant traffic, air quality, noise, vibration, and visual effects on any one receptor. As outlined in **Chapter 5 – Traffic and Transport, Chapter 11 – Air Quality, Chapter 13 – Noise and Vibration**, and **Chapter 14 – Landscape and Visual Amenity**, there is not assessed to be any significant effects for any of these effects during the operational phase. Therefore, it is not anticipated to be any significant amenity effects on any receptors during the operational phase.

6.6.3.4 Human Health

This section assesses the effect of the proposed development on the following human health and wellbeing determinants in the operational phase:

- Employment and income;
- Education and training;
- Transport modes, access and connections;
- Community safety;
- Air quality;
- Noise and vibration;
- Water environment;
- Health and social care services;
- Open space, leisure and play; and
- Community identity, culture, resilience and influence.

6.6.3.4.1 Employment and Income

During the operational phase, the proposed development is expected to generate direct employment and associated GVA. As outlined, these employment opportunities will provide a beneficial health impact to the workers.

As set out in the baseline, in Donegal County, there are lower than average labour force participation rates and higher unemployment rates compared to the Border region and Ireland. Therefore, the sensitivity of the general population to employment effects is assessed to be medium. Vulnerable sub-populations, including unemployed people, are assessed to have a high sensitivity.

It is estimated that the proposed development will generate limited employment opportunities, approximately 2-3 FTE jobs per annum. However, there is likely to be indirect benefits to the wider economy, particularly through tourism, resulting in multiplier effects on employment. As there will be limited direct employment opportunities generated by the operational phase of the proposed development, the magnitude of impact on human health is assessed as low.

Overall, the impact on human health arising from employment and income is permanent **slight beneficial (not significant)** for the general population and vulnerable sub-populations.

6.6.3.4.2 Education and Training

As outlined in the baseline, working-age residents within the Study Area are more likely to complete primary and secondary education, but less likely to complete higher education, than its comparator geographies. The proportion of residents of the Study Area that have completed a technical or vocational qualification (8.1%) is in line with the Border region (8.24%), slightly higher than Ireland (7.5%), and higher than Donegal County (4.8%). The sensitivity of the general population is therefore assessed as medium, with vulnerable sub-populations such as people with no qualifications and low skills assessed as having a high sensitivity.

During the operational phase, there is limited potential for the jobs generated by the proposed development to provide associated education and training opportunities for the operational workforce. However, the proposed development improves connectivity to St Francis National School, Sessiaghoneill National School and St Mary's National School, providing additional routes to accessing the schools for local residents.

Given this, the magnitude of impact on human health is assessed as low. Therefore, the effect on human health arising from access to education and training is permanent **slight beneficial (not significant)** for both the general population and vulnerable sub-populations.

6.6.3.4.3 Transport Modes, Access, and Connections

During the operational phase, the proposed development has the potential to impact the availability, accessibility, and safety of the road network and active travel routes, with potential health effects related to impacts on physical activity levels, journey stress, perceptions of safety, and transport mode.

As shown in the baseline, residents in the Study Area experience relatively strong local accessibility but a high reliance on private vehicles when compared with comparator geographies. Journey times are generally short, with a notably higher proportion of residents travelling under 15 minutes to work, school, or college (44.4%) than across Donegal County (40.9%), the Border region (38.3%), and Ireland (29.4%). However, 71.8% of these journeys are undertaken by car or van in the Study Area (71.8%), which exceeds all comparator areas (Donegal County: 68.4%, Border: 68.6%, Ireland: 57.9%). On this basis, the general population is considered to have a medium sensitivity to changes in transport modes, access, and connections. Vulnerable sub-populations include those without access to a private vehicle, the elderly, younger people, lower-income groups, and people with disabilities, and are assessed to have a high sensitivity.

The addition of the proposed development will provide segregated walking, cycling, and wheeling infrastructure between Donegal Town and Ballybofey-Stranorlar, improving the safety of the existing provision. As identified in **Chapter 5 – Traffic and Transportation**, the primary transport impacts associated with the operation would be the movement of cars accessing the trailheads. The assessment concluded the impact of additional demand during the operation phase on the road network is not significant.

However, the proposed development is likely to encourage and facilitate increased active travel both along the greenway and within the wider area. For example, the proposed development at Donegal Town will connect with the international EuroVelo Route 1 which also forms part of the proposed National Cycle Network across Ireland. The greenway also connects schools, including Francis National School, Sessiaghoneill National School and St Mary's National School, providing additional, safe and active routes for local residents. The proposed development also terminates at the Bus Depot in Stranorlar, encouraging onward connections via public transport. The proposed development therefore may encourage a modal shift from private vehicles to active travel and public transport. Therefore, the proposed

development not only provides improved recreational facilities, but improved accessibility and connections for daily commutes.

Therefore, the magnitude of impact is assessed to be high.

Overall, the effect on human health and wellbeing arising from impacts to traffic and transport during the operational phase of development is assessed to be permanent **moderate beneficial (not significant)** for the general population and **significant beneficial (significant)** for vulnerable sub-populations.

6.6.3.4.4 Community Safety

As noted in the baseline, general health conditions in the Study Area (84.1% of the population identifying as in 'Very Good' or 'Good' health) are slightly higher than Donegal County, Border and Ireland, at 82.8%, 83.5% and 82.9% respectively. The sensitivity of the general population is therefore considered to be medium. Vulnerable sub-populations including the elderly, younger people, people with disabilities, and people poor health conditions are assessed as having a high sensitivity.

The operation of the proposed development is expected to improve safety levels for users of the greenway, providing walkers, cyclists, and wheelchair users with an alternative route to travel that is safer than existing main roads, including the N15. As set out in **Chapter 4 – Proposed Development**, the greenway has been designed to maximise safety benefits, in accordance with the Code of Best Practice for National and Regional Greenways. Measures include post and rail fencing along sections of the route to provide edge protection.

Design principles for road safety at points of interaction with the public road network are also outlined in **Chapter 4 – Proposed Development**. Crossings of local roads will be at-grade, vehicle-priority junctions, with greenway users encouraged to yield through signage, road markings, and access controls. Crossings are designed to meet roads at right angles to maximise visibility, with jug-handle approaches implemented where required. Visibility requirements for both greenway users and vehicular traffic have been incorporated. At private accesses, priority will be given to greenway users, requiring vehicles to yield. The alignment and gradient of the route have been designed to avoid excessive undulation and support safe stopping distances.

Lighting will be provided in the trailheads at Donegal Town and Stranorlar, as well as along lengths of greenway closest to these settlements. Lighting will also be provided at underpasses to maintain user safety. Lighting at minor side road crossings will be assessed on a case-by-case basis. These measures are likely to improve both actual and perceived safety, with associated benefits for physical and mental wellbeing.

Although there will be no vehicular access to the proposed development from public access points, at all at grade crossings, chicanes will be installed which are removable only for emergency services and maintenance access. Therefore, there is anticipated to be no adverse effects on emergency services.

The proposed development is not expected to result in changes to the size or composition of the local population and is therefore not anticipated to influence crime levels.

Given that the proposed development provides a purpose-built route for NMUs, segregated from vehicular traffic for the most part, alongside enhanced lighting and safety features, the magnitude of impact is assessed as medium.

Overall, the effects of the proposed development on community safety are permanent **moderate beneficial (not significant)** for the general population and **significant beneficial (significant)** for the vulnerable sub-populations.

6.6.3.4.5 Air Quality

As set out in the baseline, a higher proportion of the population within the Study Area (84.1%) were considered to be in 'Very Good' or 'Good' health than its comparator geographies (Donegal 82.8%, 83.5% Border and 82.9% Ireland). The sensitivity of the general population is therefore assessed as low. Vulnerable sub-populations include young people and children, the elderly, and people with health conditions. These vulnerable sub-populations are assessed to have a medium sensitivity to air quality effects.

Chapter 11 – Air Quality sets out that the proposed development aims to encourage modal shift away from private vehicles and towards active travel, representing a beneficial effect in terms of reducing emissions from private vehicles. Therefore, the operational phase traffic assessment in **Chapter 11 – Air Quality** incorporates both the traffic generated and avoided via active travel, where operational vehicles accessing the site during the due to maintenance purposes will emit pollutants that may impact human health. However, the increased number of vehicles associated with the proposed development will not cause a significant change in air pollutant emissions in the locality. Therefore, a detailed air quality assessment was scoped out of the operational stage of the proposed development and no significant residual effects are predicted. Given this, the magnitude of impact is assessed to be negligible.

Overall, the effects of the proposed development on air quality are permanent **imperceptible beneficial (not significant)** for the general population and vulnerable sub-populations.

6.6.3.4.6 Noise and Vibration

Given the baseline health conditions, the sensitivity of the general population to health effects from noise and vibration is assessed as medium. Groups vulnerable to noise and vibration impacts include night shift workers, elderly residents, unemployed residents, and those with health conditions or disabilities limiting daily activities. These vulnerable sub-populations are assessed to have a high sensitivity, given a greater proportion of time typically spent at home, higher risk of sleep disturbance, reduced ability to adapt to environmental change, and an increased susceptibility to stress from environmental change.

As outlined in **Chapter 13 – Noise and Vibration**, the proposed development is not expected to generate significant noise or vibration impacts during the operation phase, and the magnitude of impact is assessed to be negligible.

Overall, the effects of the proposed development on noise and vibration are permanent **imperceptible adverse (not significant)** for the general population and vulnerable sub-populations.

6.6.3.4.7 Water Environment

As outlined in the baseline, the Study Area is considered to be in good physical and mental health, with a higher proportion in 'Very Good' or 'Good' health. Therefore, the sensitivity of the general population to water effects are assessed to be low. Potentially vulnerable sub-populations include people with poor health and existing health conditions, in which sensitivity is assessed to be medium.

As outlined in **Chapter 9 – Hydrology**, the proposed development has been selected, as far as practicable, to utilise existing infrastructure and to minimise impacts on surface hydrological features. It is not anticipated that the operational phase would result in significant impacts on the hydrological regime or water quality of the area. In addition, **Chapter 10 – Hydrogeology** outlines that it is not anticipated that operation will result in significant residual effects as a result of changes in the hydrological regime or the water quality of the area.

Therefore, the magnitude of impact is assessed to be negligible.

Overall, the effects of the proposed development on the water environment are permanent **imperceptible adverse (not significant)** for the general population and vulnerable sub-populations.

6.6.3.4.8 Health and Social Care Services

As set out in the baseline, the majority of EDs comprising the Study Area (14 out of 17) are considered 'marginally below average' in terms of deprivation, with the remaining three EDs 'marginally above average'. In general, the population of the Study Area is considered to be in good physical and mental health, with a higher proportion in 'Very Good' or 'Good' health as well as a higher proportion with 'none to minimal depression' compared to Donegal County, Border and Ireland. Therefore, the sensitivity of the general population to health and social care services is assessed as medium. For vulnerable sub-populations including elderly residents and those with specific health and social care needs, sensitivity is assessed as high.

As set out above, during the operational phase, the proposed development is expected to generate very limited employment opportunities and therefore any demand for additional

health and social care services will be limited. It is also expected that the proposed development will improve connectivity to health and social care services for the local population. Therefore, the magnitude of effect on human health and wellbeing are assessed as low.

Overall, the effect on health of the proposed development on health and social care services in the operational phase is considered permanent **slight beneficial (not significant) effect** for both the general population and vulnerable sub-populations.

6.6.3.4.9 Open Space, Leisure and Play

As shown in the baseline, the population of the Study Area is be considered to be in good physical and mental health, with a higher proportion in 'Very Good' or 'Good' health as well as a higher proportion with 'none to minimal depression' compared to Donegal County, Border and Ireland. Given the predominantly rural nature of the Study Area, local residents are likely to have access to alternative outdoor spaces for open space, leisure, and play. Therefore, the sensitivity of the general population is assessed as low. For vulnerable sub-populations such as families with young children, the sensitivity is assessed as medium.

The proposed development will deliver a continuous, high-quality greenway with a series of four trailheads that function as new areas of publicly accessible open space. As described in **Chapter 14 – Landscape and Visual Impact Assessment**, the trailheads are designed as multifunctional public realm spaces incorporating seating, wayfinding, cycle parking, cafés, toilet facilities and Changing Places, and landscaped areas. These spaces will support informal recreation, rest, social interaction, and orientation, particularly at Donegal Town and Ballybofey–Stranorlar, where the trailheads are integrated into the urban fringe and existing community infrastructure.

At the greenway's termination at the existing Bus Depot in Ballybofey–Stranorlar, an onward travel connection is proposed for connectivity to the Finn Valley Leisure Centre. This is likely to increase connectivity to community leisure facilities for residents in Ballybofey–Stranorlar and users of the greenway. A spur will also be provided from Golland to Cappry to meet the proposed TEN-T Active Travel facility. At Donegal Town, the proposed development will connect with the international EuroVelo Route 1 which also forms part of the proposed National Cycle Network across Ireland. Therefore, connectivity with other recreational routes is likely to enhance leisure activities. The potential increase in pedestrian and cyclist activity suggests that the operational phase of the development may enhance access to open space and facilitate active leisure and recreational opportunities. This increase in active transportation provides substantial health benefits, particularly in terms of improving physical activity levels, reducing sedentary behaviour and therefore mitigating the risks of poor mental health. As a result of the benefits provided by the proposed development, the magnitude of impact is considered to be high.

Overall, the operational phase of the proposed development on open space, leisure and play is assessed as permanent **moderate beneficial (not significant)** for the general population and **significant beneficial (significant)** for the vulnerable sub-populations.

6.6.3.4.10 Community Identity, Culture, Resilience and Influence

Given the small settlement context of Donegal and Ballybofey–Stranorlar and the low population growth in the area as set out in the baseline, it is considered that local communities are likely to exhibit relatively strong place attachment, established social networks, and high levels of community cohesion. Therefore, the sensitivity of the general population is considered low. Vulnerable sub-populations, including the elderly and single parents may have fewer alternative social resources, and are therefore assessed as having medium sensitivity.

During the operational phase, it is anticipated that the proposed development will improve accessibility to community facilities between and within the towns of Donegal and Ballybofey–Stranorlar, including John Bosco Community Centre and the Finn Valley Centre. In addition, the new trailheads will provide additional areas for social interaction and sense of community, as described above.

The proposed development passes through or near Gaeltacht areas, where Irish language and cultural traditions are deeply rooted in community identity. Whilst the proposed

development is unlikely to have a significant direct effect on the Irish language or cultural practices, the presence of the greenway could provide opportunities for increased awareness and appreciation of the region's cultural heritage. This includes the potential to promote Irish language visibility through signage and public engagement activities, contributing to a more resilient cultural identity.

As set out in **Chapter 14 – Landscape and Visual**, operational phase mitigation and enhancement measures will screen and soften views of the route, particularly in sensitive or exposed locations. The planting strategy has been designed to reinforce existing landscape character and therefore is in line with community identity. A landscape management plan will ensure that mitigation measures contribute positively to the character and visual quality of the greenway. Furthermore, **Chapter 14 – Landscape and Visual** identifies that by Year 15, significant beneficial effects are anticipated at the Donegal Town Trailhead (John Bosco Centre) and Stranorlar Enterprise Centre. By Year 15, these urban fringe areas will benefit from regeneration and the introduction of new civic spaces, improving visual cohesion and community amenity. This will contribute positively to sense of place.

Therefore, the magnitude of effect is assessed as high. Overall, the operational phase of the proposed development on community identity, culture, resilience, and influence is assessed as permanent **moderate beneficial (not significant)** for the general population and **significant beneficial (significant)** for the vulnerable sub-populations.

6.7 Mitigation Measures

No further mitigation measures have been identified as there are no adverse significant effects concluded in this assessment.

6.8 Residual Effects

The assessment of effects included a consideration of the relevant chapters' residual effects assessments. No significant adverse effects were identified during the construction or operational phases. Therefore, all effects reported in the assessment are residual.

6.9 References

- An Bord Pleanála (ABP) (2024). An Bord Pleanála Case Search.
- Barnesmore Gap Greenway (2023-5) Public Consultations.
- Central Statistics Office (CSO) (2020) Irish Health Survey 2019.
- Central Statistics Office (CSO) (2023) Census 2022.
- Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation (2021) National Development Plan 2021-2030.
- Department of Transport (2021) National Investment Framework for Transport in Ireland.
- Design Manual for Roads and Bridges (DMRB) (2020) 'Land Use' and 'Pedestrians, Cyclists, Equestrians and Community Effects'.
- Donegal County Council (2012) County Donegal Development Plan 2012-2018.
- Donegal County Council (2016) The Donegal Local Economic & Community Plan 2016-2022. Volume 1 Strategy, Priority Goals & High Level Objectives.
- Donegal County Council (2025) County Donegal Development Plan 2024-2030.
- Environmental Protection Agency (EPA) (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment Reports.

European Commission (2017) Environmental Impact Assessment of Projects – Guidance on Preparation of the Environmental Impact Assessment Report.

European Union (2001) Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.

Government of Ireland (2018) Project Ireland 2040: National Planning Framework.

Government of Ireland (2021) Heathy Ireland Strategic Action Plan 2021-2025

Institute of Environmental Management and Assessment (IEMA) (2022) Determining Significance for Human Health in EIA.

Institute of Environmental Management and Assessment (IEMA) (2022). Effective Scoping of Human Health in EIA.

Institute of Public Health (IPH) (2021). Health Impact Assessment Guidance: Technical Guidance.

International Association for Impact Assessment (IAIA) and European Public Health Association (EUPHA) (2019). Addressing Human Health in EIA.

Irish Statute Book (2000) Planning and Development Act, 2000.

Irish Statute Book (2001) Planning and Development Regulations, 2001.

Northern and Western Regional Assembly (SRA) (2020). Regional Spatial and Economic Strategy (RSES) for the Northern and Western Region.

Pobal Maps (2023). The 2022 Pobal HP Deprivation Index.

Standards for Highways (2020) Design Manual for Roads and Bridges. LA 112: Population and human health.

Sport Ireland (n.d.) Find Your Trails: Explore Ireland's Trails.

The Journal (2018) Breakdown: Average number of public patients per GPs across the country.

Transport Infrastructure Ireland (2025) Population and Human Health Assessment of Proposed National Roads – Standard. PE-ENV-01108.