MWP

Chapter 04 Population and Human Health

Newtown Transmission Gas Pipeline and Associated Above Ground Infrastructure

Gas Networks Ireland

November 2025

Contents

Tables

Figures

4. Population and Human Health

4.1 Introduction

This chapter considers any likely effects of the proposed development on population and human health. A full description of the proposed development, development lands and all associated project elements is provided in Chapter 02 Description of the Proposed Development of this EIAR. Focusing primarily on the area local to the site of the proposed development, the human environment in the area is examined in terms of population and settlement, economic activity, employment, land use, tourism and amenities. Included within the chapter is an assessment of the potential effect generated by the proposed development during the operational phase.

The chapter has been prepared having regard to information on the local population and land-use and in consideration of any human health impacts via environmental pathways from aspects such as soil, air, water or changes to material assets. The assessment comprises:

- A description of the existing human environment;
- Prediction and characterisation of impacts;
- Evaluation of impact significance; and
- Consideration of mitigation measures, where appropriate.

Information has been gathered from publicly available sources, including Local Authority Plans (for Fingal County Council), the Central Statistics Office (CSO), Fáilte Ireland and the Met Éireann website.

4.2 Scope of Assessment

This proposed development comprises of the construction and operation of the Newtown Transmission Gas Pipeline, associated Newtown Above Ground Installation (AGI) compound and Kilshane Block Valve (BV) extension. The proposed development is separate from, but associated with a proposed 293MW gas-fired power generation plant and associated Gas Insulated Switchgear (GIS) substation and underground 220kV transmission connection, hereafter referred to as the 'Kilshane Energy Facility' or the 'customer site'. The proposed development assessed in this EIAR provides the infrastructure required for the delivery of natural gas to the proposed Kilshane Energy facility.

The following legislation and published guidance have been consulted in undertaking this assessment:

- EU Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (2011 EIA Directive);
- EU EIA Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (2014 EIA Directive);
- EU (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018);
- Guidelines for Planning Authorities and An Bord Pleanála in carrying out Environmental Effect Assessment (Department of Housing, Planning and Local Government, August 2018); and
- EPA Guidelines on the Information to be Contained in Environmental Impact Reports (EPA, May 2022).

The *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, 2022) state that:

> *'..in an EIAR, the assessment of impacts on population and human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in the EIAR e.g. under the environmental factors of air, water, soil etc.'*

Recital 22 to the EIA Directive provides that:

> "*In order to ensure a high level of protection of the environment and human health, screening procedures and environmental impact assessments should take account of the impact of the whole project in question, including, where relevant, its subsurface and underground, during the construction, operational and, where relevant, demolition phases*".

The 2022 EPA Guidelines recommend considering the following aspects when assessing the potential effects of a proposed development on population and human health:

- Employment;
- Settlement Patterns;
- Land use patterns;
- Baseline population;
- Human health (considered with reference to other headings, such as water and air); and
- Amenity (e.g. effects on amenity uses of a site or of other areas in the vicinity may be addressed under the factor of Landscape).

4.2.1.1 Assessment Criteria

Determination of the significance of an effect will be made in accordance with the terminology outlined in the EPA Guidelines on the Information to be Contained in Environmental Impact Reports (EPA, May 2022), as set out in Table 4-1.

Table 4-1: Impact Assessment Criteria

	Term	Description
Quality of Effects	Positive	A change which improves the quality of the environment.
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative /adverse	A change which reduces the quality of the environment.
Significance of Effects	Imperceptible	An effect capable of measurement but without significant consequence.
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant	An effect which, by its character, magnitude duration or intensity alters a sensitive aspect of the environment.

	Term	Description
	Very Significant	An effect which, by its character, magnitude duration or intensity alters most of a sensitive aspect of the environment.
	Profound	An impact which obliterates sensitive characteristics.
Duration of Effect	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.
	Reversible	Effects than can be undone e.g. through remediation or restoration.
	Frequency	How often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).
Types of Effects	Indirect	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative	The addition of many minor or significant effects, including effects of other projects, to create a larger, more significant effect.
	'Do Nothing'	The environment as it would be in the future should the subject project not be carried out.
	'Worst case'	The effects arising from a project in the case where mitigation measures substantially fail.
	Indeterminable	When the full consequences of a change in the environment cannot be described.
	Irreversible	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
	Residual	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	Synergistic	Where the resultant effect is of greater significance than the sum of its constituents, (e.g. combination of SOx and NOx to produce smog).

Source: EPA Guidelines on Information to be contained in Environmental Impact Assessment Reports (2022).

4.2.2 Methodology

The methodology used for this study included desk-based research of published information and site visits to assemble information on the local receiving environment.

4.2.2.1 Human Health

The European Commission document '*Guidance on the preparation of the Environmental Impact Assessment Report*, 2022; provides that:

> *"Human health is a very broad factor that would be highly Project dependent. The notion of human health should be considered in the context of the other factors in Article 3(1) of the EIA Directive and thus environmentally related health issues (such as health effects caused by the release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by*

changes in disease vectors caused by the Project, changes in living conditions, effects on vulnerable groups, exposure to traffic noise or air pollutants) are obvious aspects to study. In addition, these would concern the commissioning, operation, and decommissioning of a Project in relation to workers on the Project and surrounding population".

Similarly, the EPA *Guidelines on the information to be contained in environmental impact assessment reports* (2022), states that

'*in an EIAR, the assessment of impacts on population & human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in the EIAR e.g. under the environmental factors of air, water, soil, etc'.*

The EPA (2022) guidance also advises that

'*The evaluation of effects on these pathways is carried out by reference to accepted standards of safety in dose, exposure and risk. These standards are in turn based upon medical and scientific investigation of direct effects on health of the individual substances, effect or risk. This practice of reliance upon limits doses and thresholds for environmental pathways such as air water or soil provides a robust and reliable health protection criteria for analysis relating to the environment'.*

Human health, in this chapter of the EIAR, is therefore considered in relation to health effects/issues and environmental hazards arising from the other environmental factors and the assessment is made with regard to the established international health-based guidelines limit value necessary to protect the public.

4.2.2.2 Desk Study

A desk study was undertaken to identify potential effects, either positive or negative, on the human environment that could cause change in the 'quality of life' as a consequence of the construction and operation of the proposed development.

The local human environment is made up of a number of groups. These include those who reside in, work in, visit or use the local road networks in the area. Whilst no single set of persons can be discerned, the local residential population is deemed to be the most sensitive group in terms of those most likely to experience any identified impacts.

The desk study included the following activities:

- Review of the most recent CSO Census of Ireland data to establish settlement demographics and economic context of the study area;
- Review of the Agricultural Census and Forestry data for Ireland;
- Review of Ordnance Survey Mapping and aerial photography to establish existing land use and settlement patterns within the study area;
- Review of local and regional development plans and planning policy in order to identify future development and identify any planning allocations within the study area;
- Review of Fingal County Council's Planning Register to identify relevant development proposals currently under consideration by the Council; and
- Review of the Fingal Development Plan 2023-2029.

Based on a review of the characteristics of the proposed development, any potential negative effects on the local human environment are considered to include the following human health/wellbeing and nuisance concerns:

- Dust emissions from construction activities;
- Noise emissions during construction and operation;
- Public safety during construction activities and operation; and
- Traffic nuisance during construction and operation.

Each of the above issues has been fully assessed and documented in various chapters of this EIAR as set out in Table 4-2. These assessments were reviewed to inform this study. According to the EPA guidance, neighbouring residents and land users are considered potentially vulnerable receptors (i.e. an entity that is vulnerable to the negative effect of a hazardous substance (e.g. human health)). In the case of this proposed development, potential vulnerable receptors are those who may be affected by air emissions, water emissions, traffic and noise during the construction phase. They may also be affected visually. Receptors which are community facilities such as schools, churches, hospitals or provide other social services are also considered potentially vulnerable receptors.

Table 4-2: Potential Nuisance & Health and Safety Issues and Relevant EIAR Chapters

Potential Nuisance / Health & Safety Issue	EIAR Chapter
Public safety during construction activities and operation	Chapter 02 Description of the Proposed Development
Dust emissions from construction activities	Chapter 08 Air Quality
Noise emissions during construction and operation	Chapter 10 Noise and Vibration
Visual impacts during operation	Chapter 12 Landscape and Visual Impact Assessment
Traffic nuisance during construction and operation	Chapter 13 Traffic and Transportation

The following potential positive impacts were also identified during the review:

- Positive impact of creating local construction jobs for duration of the construction phase (8-10 months); and
- Positive impact of planning contribution fees that the local authority will utilise to fund services within the county.

4.2.2.3 Competency of Assessor

This report was prepared by Valerie Heffernan. Valerie Heffernan is an Environmental Scientist with MWP. She holds a B.Sc., M.Sc. in Environmental Science and has worked as an environmental professional since graduating in 2015. She has considerable experience in infrastructure development and has had input in a variety of projects. She has been a contributing author to EIAR's for Galway Wind Park Phase 3, Co. Galway, Drumnahough Wind Farm, Co. Donegal, a residential development in Annabella, Mallow, Co. Cork and Cordal Wind Farm, Co. Kerry.

This assessment has been reviewed by Olivia Holmes. Olivia is a Chartered Engineer and Chartered Environmental Practitioner with over twenty years' experience in Environmental Engineering focusing primarily on Environmental Impact Assessment (EIA), Appropriate Assessment (AA) and planning. She has prepared and reviewed a number of chapters for EIARs over her career for a broad range of projects.

4.3 Existing Environment

As outlined in the Fingal Development Plan 2023-2029 zoning maps, the proposed development is within areas zoned as Heavy Industry (HI) and General Employment (GE). HI areas are described as those that 'facilitate opportunities for industrial uses, activities and processes which may give rise to land use conflict if located within other zonings. Such uses, activities and processes would be likely to produce adverse impacts, for example by way of noise, dust or visual impacts. HI areas provide suitable and accessible locations specifically for heavy industry and shall be reserved solely for such uses'. GE areas are described as those which 'facilitate opportunities for compatible industry and general employment uses, logistics and warehousing activity in a good quality physical environment. General Employment areas should be highly accessible, well designed, permeable and legible'. The CDP zones are shown in **Figure 4-1** below:

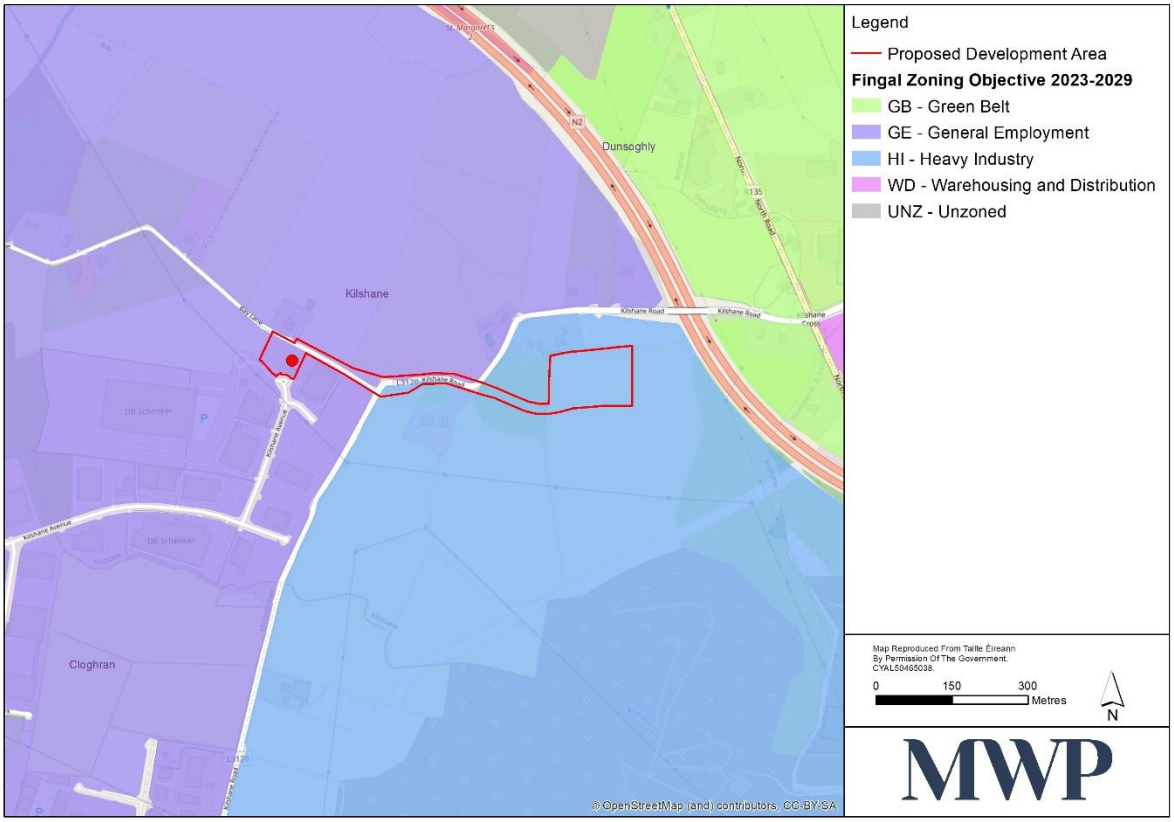

Figure 4-1: Fingal Development Plan - Land Zones

4.3.1 Site Description and Location

The study area for the purpose of this assessment on population and human health primarily focuses on the local receiving human environment in the vicinity of the site. This includes those who reside, work, visit or use the local road networks in the general area.

The development will be on a site area of approximately 3.14 hectares (ha). The proposed development is located northwest of the M50 motorway and on the western side of the N2 national road and the R135 regional road. The surrounding area is characterised by agricultural fields and industrial uses such as logistics, power stations and additional business park operations. Roadstone Huntstown Quarry and Huntstown Power Station are located on lands to the south of the proposed development, and the site is located to the east and north of Ballycoolin and Rosemount Industrial Estates.

4.3.2 Population Centres

The site lies to the south of the N2, northwest of the M50 motorway and approximately 5km west of Dublin Airport as shown in Figure 4-2. Other villages and towns surrounding the proposed development include:

- Blanchardstown – Located approximately 5.4km to the southwest;
- Swords – Located approximately 6km to the northeast; and
- Dunboyne, Co. Meath – Located approximately 9km northwest.

Figure 4-2: Location of Proposed Development

4.3.3 Electoral Divisions and SAPS

Electoral Divisions (EDs) are the smallest legally defined administrative areas in the State for which Small Area Population Statistics (SAPS) are published from the Central Statistics Office (CSO). Therefore, in order to discuss the baseline human environment and other statistics in the vicinity of the site, the Study Area for this assessment has regard to EDs within or located close to the proposed development site. These local statistics are compared against the county and national data to get some perspective on the relative character of the study area as shown in Table 4-3. The proposed development is located within SAPS A267158009/02 which is located within The Ward ED.

The extent of the EDs and SAPS considered for the purposes of this assessment are shown in Figure 4-3 and Figure 4-4.

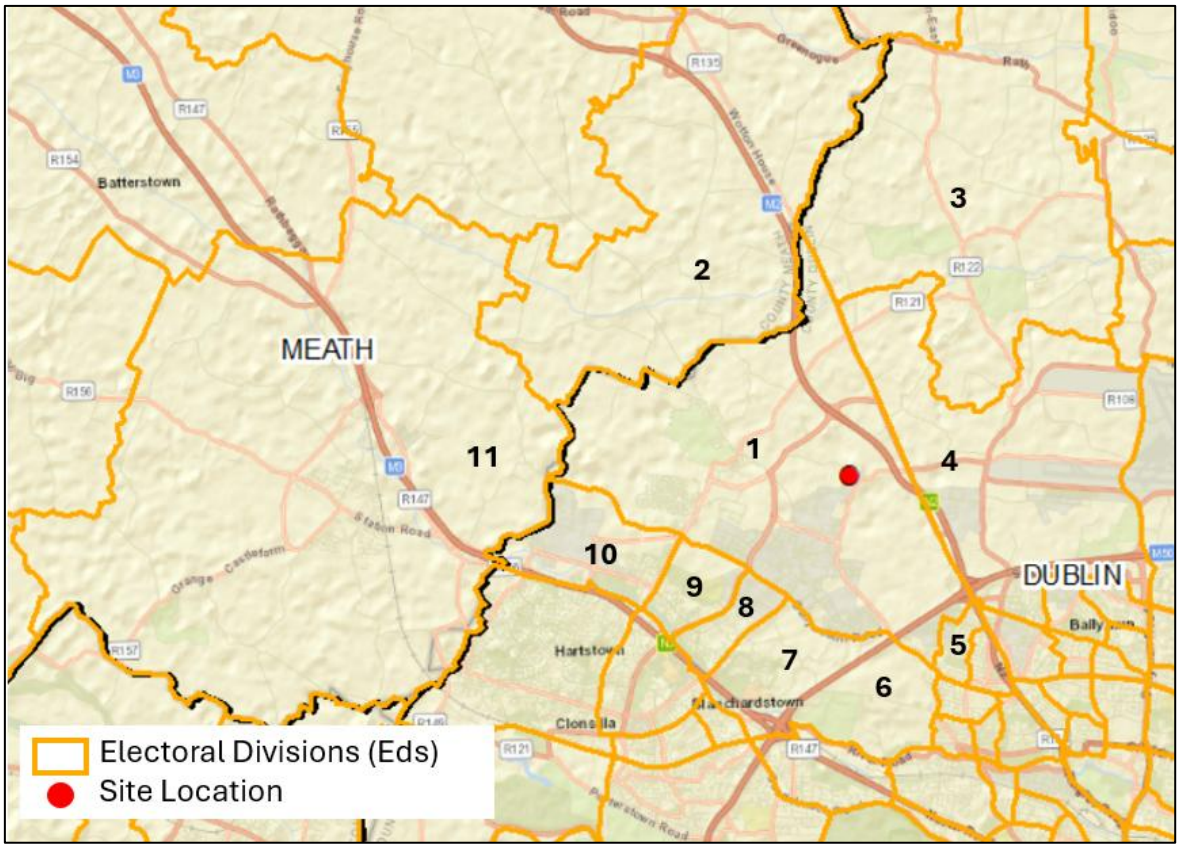

Figure 4-3: Electoral Division Locations

Table 4-3: Electoral Divisions Surrounding Study Area

Map Reference	Electoral Area
1	The Ward
2	Donaghmore
3	Kilsallaghan
4	Dubber
5	Finglas North A
6	Blanchardstown-Abbotstown
7	Blanchardstown-Corduff
8	Blanchardstown-Mulhuddart
9	Blanchardstown-Tyrrelstown
10	Dunboyne

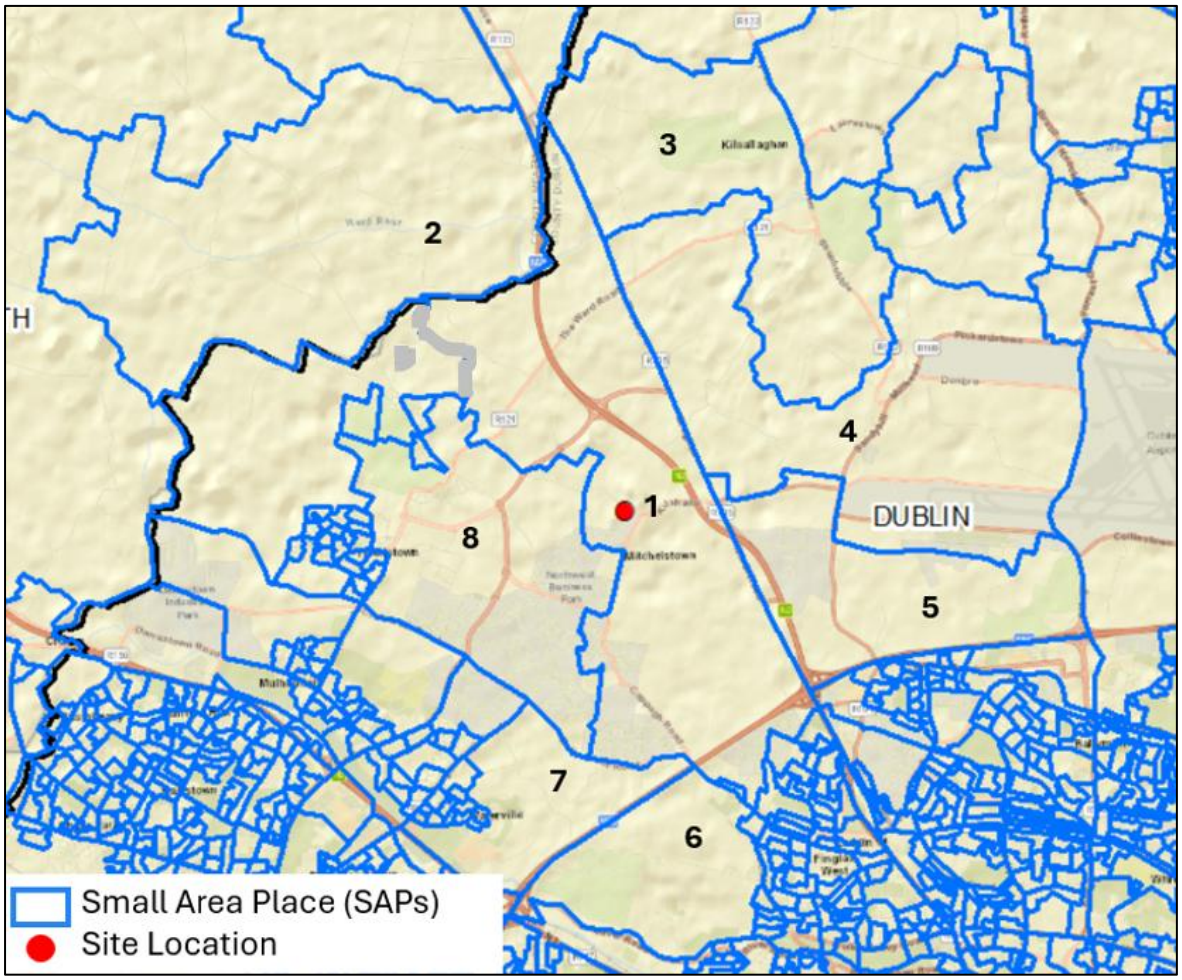

Figure 4-4: Small Area Population (SAP) Locations

Table 4-4: Study Area SAPS

Area Reference	Statistical Small Area	Electoral Division
1	A267158009/02	The Ward
2	A167025001/03	Donaghmore
3	A267098001/01	Kilsallaghan
4	A267066001	Dubber
5	A267066016	Dubber
6	A267027002	Blanchardstown-Abbotstown
7	A267027016/2	Blanchardstown-Abbotstown
8	A267158012/7	The Ward

4.3.4 Settlement Patterns

The proposed development site is located in the townland of Kilshane located to the north of Dublin City and Suburbs, as shown in Figure 4-5. Settlement patterns in the area surrounding the proposed development are

typical of a suburban area and primarily consists of agricultural fields and Industrial uses such as logistics, power stations, and additional business park operations.

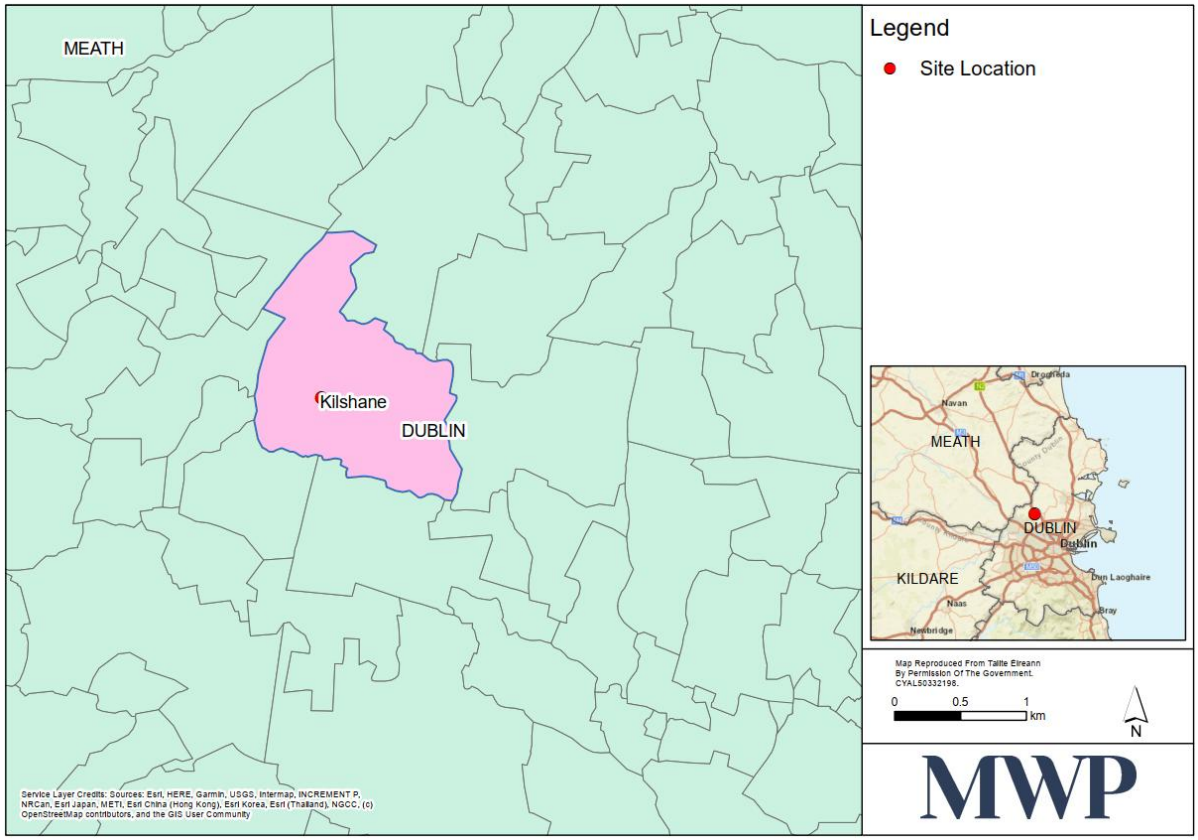

Figure 4-5: Site Locations Townlands

There are no hospitals within 2km of the site. The closest school (Tyrrelstown Educate Together National School) is located approximately 2.7km west of the proposed development site, as shown in **Figure 4-6**. Other schools in the vicinity of the site include:

- Scoil Naomh Lucais;
- St Margarets N S;
- St Joseph's G N S;
- St Kevins B N S;
- St. Patrick's Junior N S;
- St Patricks Senior School;
- Ladyswell N S;
- St Canices B N S;
- St Canices G N S;
- Powerstown Educate Together National School; and
- Gaelscoil An Chuilinn.

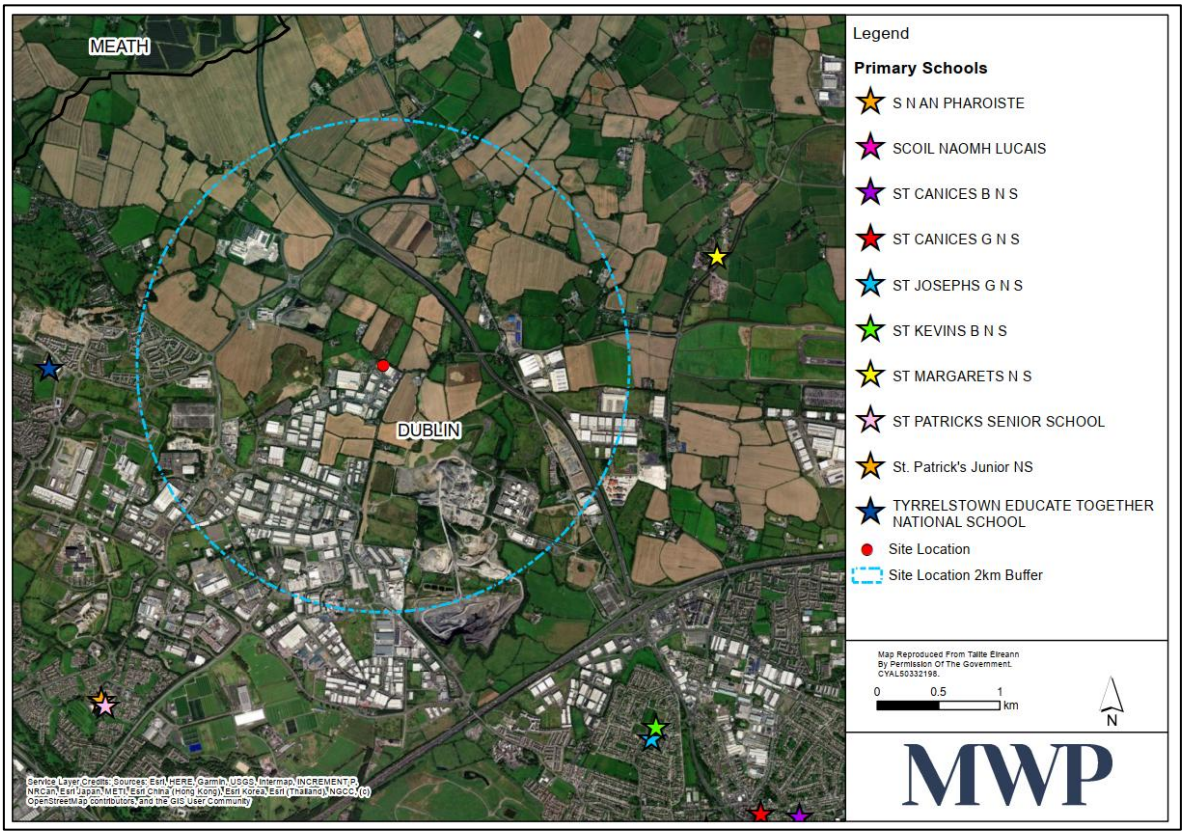

Figure 4-6: Sensitive Receptors (Schools) in the Vicinity of the Site

4.3.5 Population Trends

Population statistics were acquired from the 2011, 2016 and 2022 Census of Population for Ireland, Fingal County as well as the EDs and SAPS identified for the study area (refer to **Table 4-5**). Both the overall population of the Republic of Ireland and Fingal County have shown an increase in population size between the 2011 and 2016 Census and the 2016 Census and the 2022 results.

Fingal has had a significant increase in population between 2011 and 2016 of 38.40% as shown in **Table 4-5.** The Ward ED (in which the proposed development is located) has increased its population between 2011 and 2016 by 6.95% and again by 20.91% between 20216 and 2022. The Ward consists of two small areas, namely A267158009/02 and A267158012/7. A review of the population statistics has shown that small area A267158009/02 (in which the proposed development is located) experienced a population increase of 5.30% and A267158012/07 decreased in population by 26.86% between 2016 and 2022, see **Table 4-5**.

Table 4-5: Population Change from 2011, 2016 and 2022 (CSO)

Location	2011	2016	% Change (2011 to 2016)	2022	% Change (2016 to 2022)
Republic of Ireland	4,574,900	4,739,600	8.11	5,149,139	11.14
Fingal	273,991	296,214	16.51	329,218	38.40
Electoral Divisions (EDs)					
The Ward	8,241	9,602	6.95	13,289	20.91
Donaghmore	10,994	11,758	2.63	14,217	6.32
Kilsallaghan	2,205	2,263	15.93	2,406	21.15
Dubber	6,359	7,372	2.85	8,931	-3.43
Finglas North A	3,227	3,319	27.21	3,205	5.75
Blanchardstown-Abbotstown	4,870	6,195	2.19	6,551	-4.70
Blanchardstown-Corduff	3,788	3,871	6.65	3,689	2.33
Blanchardstown-Mulhuddart	3,866	4,123	54.21	4,219	2.64
Blanchardstown-Tyrrelstown	2,112	3,257	5.39	3,343	5.98
Dunboyne	9,578	10,094	26.28	10,698	-31.47
Small Area Population Statistics (SAPS)					
A267158009/02	468	591	-4.68	405	5.30
A167025001/03	534	509	8.11	536	11.14
A267098001/01	341	349	2.35	362	3.72
A267066001	288	298	3.47	329	10.40
A267066016	387	372	-3.88	661	77.69
A267027002	489	589	20.45	849	44.14
A267027016/02	573	969	69.11	1,002	3.41
A267158012/07	257	484	88.33	354	-26.86

4.3.6 Economic Activity and Employment

The current Fingal Development Plan states:

> *'A key strategy for the future economic development in Fingal includes appropriately locating intensive employment uses adjacent to public transport networks and where appropriate, residential developments, encouraging existing economic clusters and developing new clustering opportunities and rejuvenating existing business and industrial parks, land and buildings. The need to transition to a low carbon society and provide support for the circular and green economy is central to the County's economic strategy'.*

The eastern section of the proposed development is located in lands zoned as General Employment (GE) in the Fingal Development Plan. These areas are described as those which '*facilitate opportunities for compatible industry and general employment uses, logistics and warehousing activity in a good quality physical environment. General Employment areas should be highly accessible, well designed, permeable and legible'*

4.3.6.1 Employment Statistics

The labour force consists of those who are able to work, i.e., those who are aged 15+, out of full-time education and not performing duties that prevent them from working. According to the 2022 Census Small Area Population Statistics, for the proposed development, the workforce in the region is employed in a diverse range of industries/sectors as shown in **Table 4-6.** The statistics show that the majority of the local population in the project area did not indicate their employment industry (31.28%) during the census. However, 12.56% of the local population have indicated that they are employed in skilled trade occupations and 12.32% are employed in professional occupations.

Table 4-6: Employment Statistics by Industry

Industry	CSO Area Code		Total No. of Persons	%
	A267158009/02	A267158012/7		
Managers, Directors and Senior Officials	19	2	21	5.17
Professional Occupations	34	16	50	12.32
Associate Professional and Technical Occupations	20	12	32	7.88
Administrative and Secretarial Occupations	17	8	25	6.16
Skilled Trades Occupations	38	13	51	12.56
Caring, Leisure and Other Service Occupations	14	5	19	4.68
Sales and Customer Service Occupations	7	5	12	2.96
Process, Plant and Machine Operatives	20	14	34	8.37
Elementary Occupations	12	23	35	8.62
Not stated	52	75	127	31.28
Total	**233**	**173**	**406**	**100**

4.3.7 Social and Land Use

The surrounding area is characterised by agricultural fields and industrial uses such as logistics, power stations, and additional business park operations. Roadstone Huntstown Quarry and Huntstown Power Station are located on lands to the south of the proposed development and the site is located to the east and north of Ballycoolin and Rosemount Industrial Estates. According to the CORINE Land-use classification system (**Figure 4-7**), the following land uses are applicable to the proposed development site:

- Non-irrigated arable land;
- Pastures; and
- Industrial or Commercial units.

In the wider area, land use also includes road and rail network and associated land and mineral extraction sites.

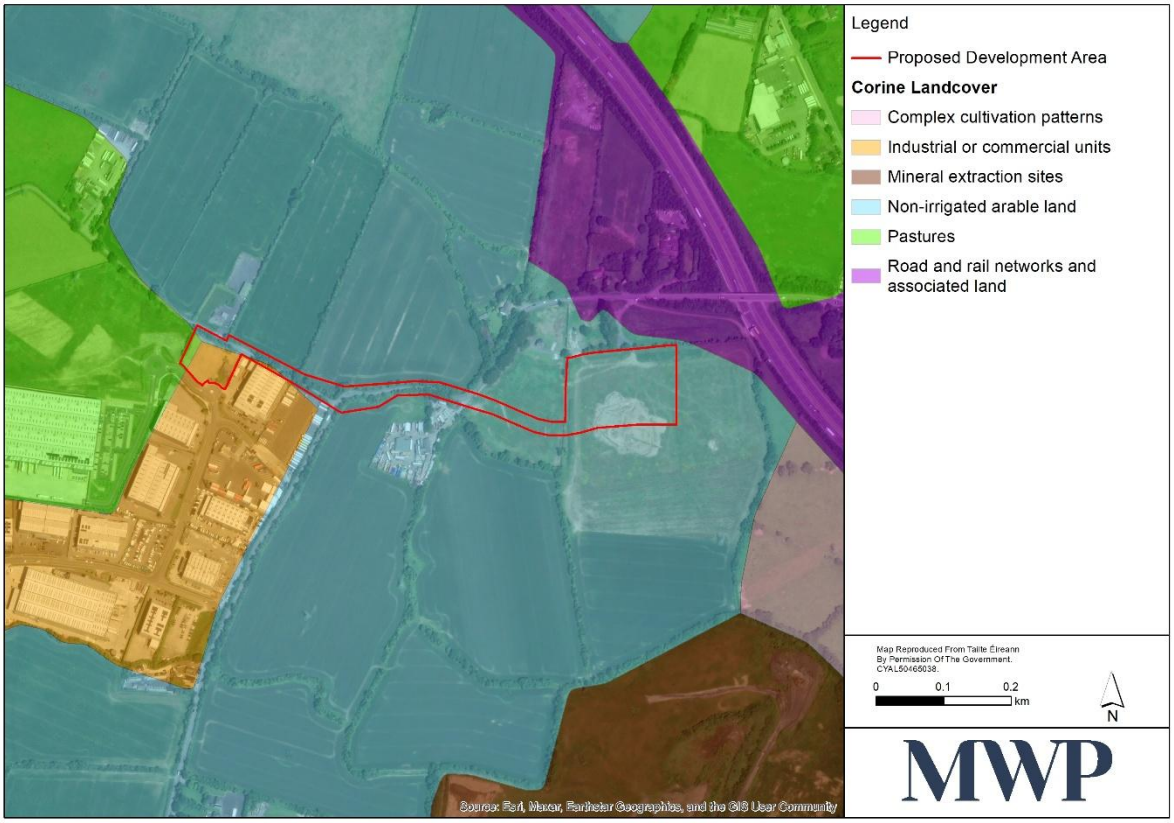

Figure 4-7: CORINE Land Cover

A review of Fingal Development Plan 2023-2029 has indicated the proposed development is within land zoned as Heavy Industry (HI) and General Employment (GE) as discussed in Section 4.3 above.

An examination of the 2020 Agricultural Census data for the study area by County indicates that the standard median value of agricultural output was between €15,001 and €20,000 per annum/Ha as shown in Figure 4-8. This is a moderate level of output compared to other counties in Ireland.

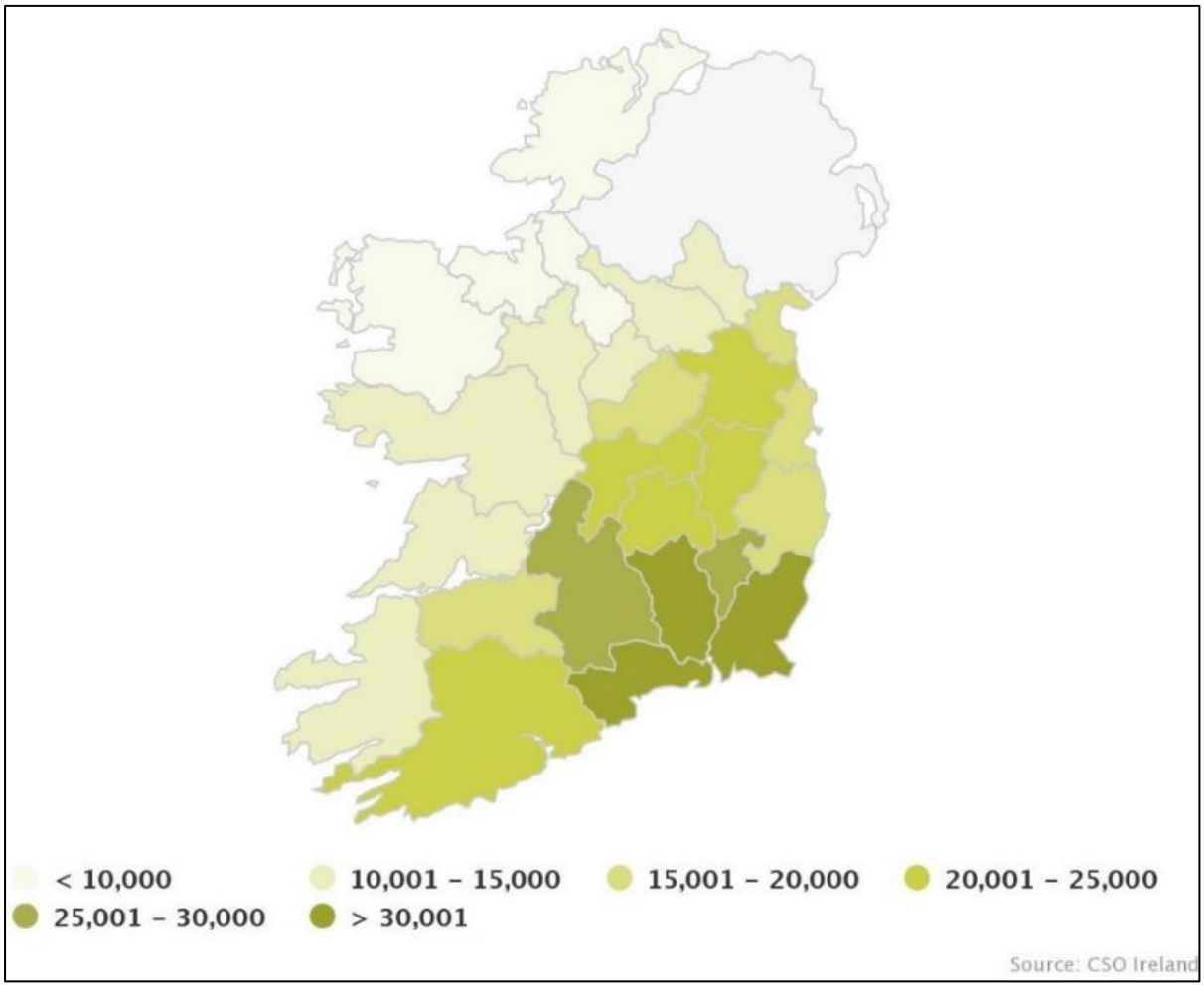

Figure 4-8: Standard Median Agricultural Output per County in 2020 (CSO Agricultural Census)

4.3.8 Human Health

The 2022 Census also provides information on the general health profile of the population for each Electoral Division. The available data for the EDs applicable to the proposed development is presented in Table 4-7. The statistics show that, in total (a sum of all of the applicable EDs), the local population has indicated that there health status is very good (52.49%) to good (29.12%) with only 1.22% of the proportion of the population in the Study Area reporting to have 'bad' and 0.29% to have 'very bad' health as shown in Table 4-7 below.

Table 4-7: Health Status in Electoral Divisions

Electoral Division	Very Good	Good	Fair	Bad	Very Bad	Not Stated
The Ward	7,325	3,638	738	87	20	1,481
Donaghmore	8,207	4,384	960	160	30	476
Kilsallaghan	1,157	697	205	34	12	301
Dubber	4,178	2,500	452	86	13	1,702
Finglas North A	1,236	961	400	77	28	503
Blanchardstown-Abbotstown	3,348	1,794	490	95	29	795
Blanchardstown-Corduff	1,529	1,195	392	84	24	465
Blanchardstown-Mulhuddart	2,081	1,332	397	71	16	322

Electoral Division	Very Good	Good	Fair	Bad	Very Bad	Not Stated
Blanchardstown-Tyrrelstown	1,549	1,077	327	65	18	307
Dunboyne	6,420	2,968	648	101	18	543
Total	37,030	20,546	5,009	860	208	6,895
Percentage total of all electoral divisions (%)	52.49	29.12	7.10	1.22	0.29	9.77

4.3.9 Tourism and Amenity

Tourism is one of the major contributors to the National economy and is a significant source of full time and seasonal employment. Fáilte Ireland strategic challenge statement for the Dublin Regional Tourism Development Strategy 2023-2027 states the following in.

> *'..our strategic challenge for Dublin relates to how we continue to evolve and activate a relevant and motivating city destination that will attract both high-yield international and domestic visitors by effectively mobilising and aligning stakeholders behind a singular coherent vision and visitor experience offering that extends stay all year round',*

The proposed development is located to the northwest of Dublin city and there are no tourist attractions or amenities in immediate vicinity of the site. The nearest amenities to the project include the National Botanical Gardens (~8.2km southeast), Dublin Zoo (~8.2km south) and Skyview Tower (~9.8km south) (Figure 4-9). The National Botanic Gardens in Dublin are located in Glasnevin, just three kilometres from Dublin City Centre, and ~11.3km southeast of the proposed development. The National Botanic Gardens of Ireland are operated and managed by the Office of Public Works.

Dublin Zoo's is twenty eight (28) hectares and attracts over one million visitors a year. It is located approximately 16km south of the proposed development.

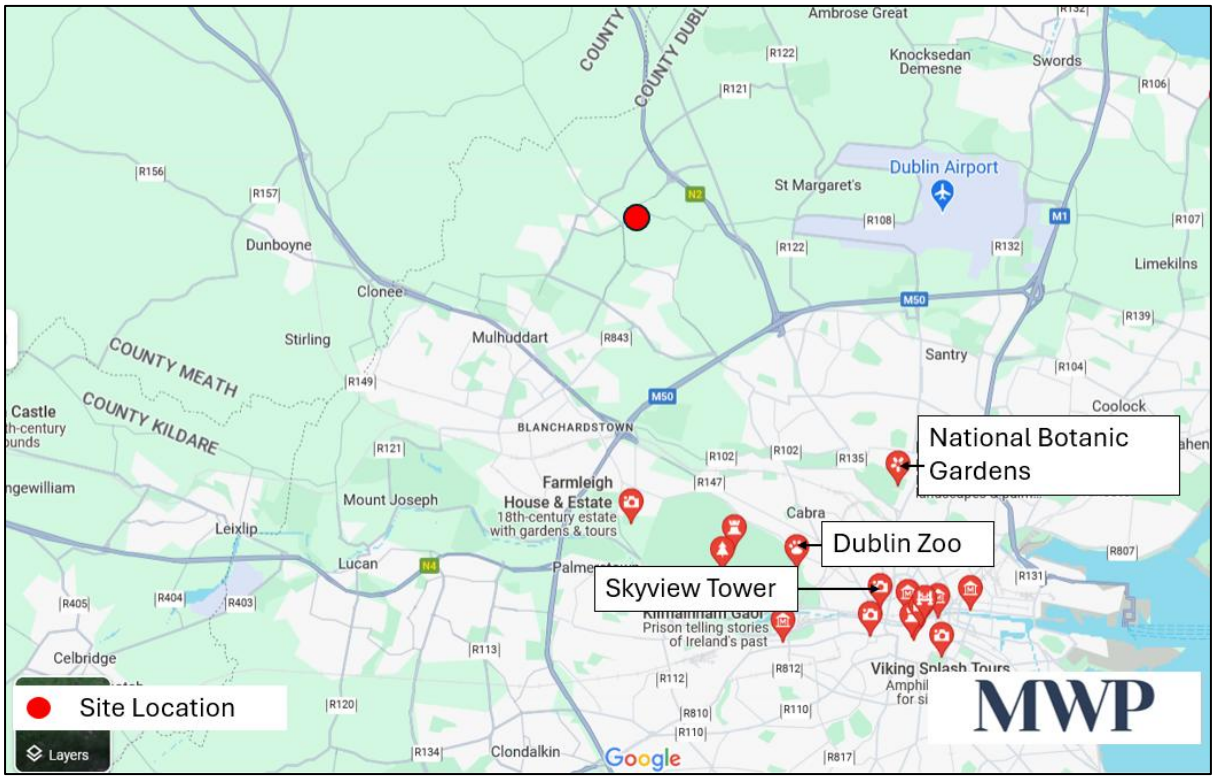

Figure 4-9: Local Tourism and Amenity Resources

4.4 Assessment of Effects

This section discusses the likely effects and key issues of the proposed development in relation to the human environment. The impact assessment is qualitative in that the assessment focuses upon whether the effects on human beings would be positive or negative.

4.4.1 Do-Nothing

In the Do-Nothing Scenario, the existing roads, residents and businesses will not be affected by any construction activities and adjacent lands will continue to be utilised for agricultural and commercial/industrial purposes with no changes in the baseline at the proposed site. The opportunities for local employment and additional economical spend from the proposed development will not be realised.

4.4.2 Population and Settlement Patterns

The project is unlikely to have an effect on the population and settlement patterns of the area.

As it is expected that construction personnel will be locally sourced, there will be no impact to the overall population figures during the construction phase and no mass in-migration. It is envisaged that up to 70 No. jobs will be created during the peak construction phase of the project. A minor number of key employees involved in the construction may decide to re-locate in the short-medium term or rent accommodation. Consequently, the proposed development is unlikely to have long-term effect on the population or settlement patterns in the locality. It is also not anticipated that the proposed project will have any detrimental effect on the local property values.

The proposed development is likely to have a **neutral, imperceptible, localised, likely, short-term effect** on population numbers and settlement patterns during the construction phase.

During the operational phase, it is envisaged that any operators and maintenance personnel will be sourced locally. There will be no mass in-migration associated with the proposed development during this phase. Throughout operation, it is expected that the development will have a **neutral, imperceptible, localised, likely, long-term** effect on population and settlement patterns.

4.4.3 Economic Activity and Employment

Construction and development projects create both direct and indirect employment opportunities. The indirect opportunities are associated with the increase in demand for goods and services from local businesses. This multiplier effect generates additional jobs beyond the direct employment provided by the project, enhancing the overall economic benefit and increasing employment and income generating opportunities.

The proposed project is anticipated to yield several positive effects on the local economy. The injection of funds in the form of salaries and wages during the construction phase has the potential to stimulate household spending and generate increased demand for local goods and services, which will help to support the local economy during the construction phase. This is considered a **positive, slight, likely,** and **temporary** effect on the local and regional economy.

During the operational phase, the proposed development is likely to have minimal effect on employment. The effect during the operational phase on employment will therefore be **neutral, imperceptible, unlikely,** and **long term**.

4.4.4 Land Use

The current land use at the proposed development site is industrial at the proposed BV extension area and agricultural at the proposed Newtown AGI location. The proposed Kilshane Energy Facility will be developed across the majority of an agricultural field with the AGI being on a localised section of it within the proposed energy facility.

Construction working hours along the local road will be 7.00 a.m. to 7.00 p.m., Monday to Friday, and 8.00 a.m. to 2.00 p.m. on Saturdays. The construction effects on land use are expected to be negative, slight, likely, and temporary to the area immediately in and around the development site.

New development proposals have the potential to effect the local human environment by introducing a new incompatible land use activity, conflicting land use policy for the area, or resulting in significant land-use impact. It is considered that the proposed development would not constitute significant negative effects in terms of land-use considerations for the following reasons:

- The proposed development will be in areas zoned as Heavy Industry (HI) and General Employment (GE) as outlined in the Fingal Development Plan 2023-2029.
- There will there be no severance, loss of rights of way or amenities as a result of the proposed development;
- In terms of impacts to neighbouring lands and land-uses, it is considered that the proposed development does not pose a significant risk to either existing or future land-uses. All existing land-use practices can co-exist with the proposed development;

- The project is unlikely to have an effect on population numbers of the area. The proposed development will have no significant negative effect on the quality of life of neighbouring residents that may cause residents to move. There is unlikely to be any in-migration associated with the development. Therefore, the proposed development is considered to have a negligible impact on population numbers; and
- Land and property value may be economic or amenity in nature. The potential for the proposed development to devalue land and residential property in its vicinity is essentially dependent upon public perception of the development and perceived associated impacts. Personal disposition regarding visual intrusion is the only likely implication with regard to land value. The proposed development will not cause any material damage and does not pose any polluting or hazardous threat that would result in the devaluation of neighbouring properties. The development is thus deemed to have a neutral impact on land and property value.

The proposed development will have no long-term effect on the land uses in the proximity of the proposed site. During the operational phase (long-term), the proposed development is therefore likely to have a **neutral**, **imperceptible, likely**, **long-term** effect on land use.

4.4.5 Human Health and Safety

Effects on Health and Safety have been assessed under the following headings: Public safety, Traffic and Road, Noise, Air quality, Water, Waste Generation and Visual Impacts.

4.4.5.1 Public Safety

While there is the potential for construction-related hazards, serious risks to human health and safety are not envisaged. During construction, the site will be managed in accordance with the following safety and health regulations and guidelines which will ensure a high standard of safety both for workers on site and the general public:

- Safety, Health & Welfare at Work (Construction) Regulations 2006;
- Safety, Health & Welfare at Work Act 2005; and
- Safety, Health & Welfare at Work (General Applications) Regulations 1993 to 2003.

A Safety and Health Plan covering all aspects of the construction process will be prepared in advance of construction and will comprehensively deal with safety and health related issues**.** On the basis of the EPA EIAR Guidelines, the construction impact of the proposed development will be **negative, slight, likely** and **temporary.**

The proposed development will have no full-time operational staff and will generate negligible operational traffic volumes. Occasional traffic will be generated by routine inspection and maintenance.

On the basis of the EPA EIAR Guidelines, the operational impact of the proposed development will be **neutral**, **imperceptible** and **long term.**

4.4.5.2 Traffic and Road

Potential impacts on the surrounding road network will arise principally during the construction phase, with peak traffic occurring during the 8–10 month construction programme. Impacts will therefore be limited and temporary in nature. During the proposed pipeline construction works within the existing public roads, it is envisaged that the works will be split into two phases. Phase 1 will consist of the closure of Bay Lane to through traffic to facilitate this section of the approximate 180 meters of pipeline installation, with local access via the east end of Bay Lane at its roundabout junction with the Cherryhound Tyrrelstown Link Road.

For Phase 2, a full road closure is also anticipated due to the complexity of the work and the installation of multiple services in this area. This is subject to approval from Fingal County Council. It is anticipated that the Phase 1 and Phase 2 works will not run concurrently to minimise disruption to traffic. The contractor will liaise with Fingal County Council to coordinate the road works and implement a suitable traffic management plan.

The existence of additional traffic associated with the construction phase has the potential for local residents and users of these roadways to experience minor disturbances and/or be inconvenienced on encountering site related traffic. The traffic and transportation assessment is included in **Chapter 13 Traffic and Transportation** of this **EIAR.** On the basis of the EPA EIAR Guidelines, the construction impact of the proposed development will be **negative**, **moderate, likely** and **temporary**.

The proposed development will have no full-time operational staff and will generate negligible operational traffic volumes. Occasional traffic will be generated by routine inspection and maintenance.

On the basis of the EPA EIAR Guidelines, the operational impact of the proposed development will be **negative**, **imperceptible, likely** and **long term**.

4.4.5.3 Noise

Gas Pipeline

The construction phase has the potential to generate noise emissions which could cause disturbance to local noise sensitive receptors. The construction noise impact assessment is included in **Chapter 10 Noise and Vibration** of this **EIAR**. A variety of plant machinery will be in use for the purposes of site preparation, construction and other site works. There will be vehicular movements to and from the proposed development that will make use of existing roads. Assumed construction hours are weekdays 07:00 – 19:00hrs and 08:00 to 14:00hrs on Saturday. Due to the nature of these activities, there is potential for generation of noise.

During the construction phase measures will be adopted from best practice described in BS5228-1&2+A1 2014 Code of Practice for the Control of Noise and Vibration on Construction and Open Sites. It will include a nominated community liaison officer tasked with responding in a prompt manner to any noise and vibration complaints. These are detailed in the **Outline Construction Environmental Management Plan** (**OCEMP**) prepared for the project (Refer to **Appendix 2-1, Volume III**). The construction traffic noise effects are **likely** to be **negative**, **not significant**, **long term**, **localised** and **direct**. Refer to **Chapter 10 Noise and Vibration** of the EIAR for further details.

The transmission gas pipeline route is underground therefore there will be no operational noise and vibration impacts associated with the proposed development during the operational phase. The operational phase noise effects from the proposed development are **likely** to be **negative, imperceptible, long term, localised** and **direct**.

Block Valve Extension

Construction of the Block Valve (BV) extension works are predicted to be 77 dB at the nearest residential receptor (NSL2) and are predicted to exceed 70 dB $L_{Aeq,1hr}$ within 55m. When noise from sheet piling is combined with general construction noise, the total predicted noise level is 78 dB $L_{Aeq,T}$ at NSL2. Overall, construction noise levels from the construction stage of the BV extension works are **likely** to result in a **negative**, **not significant**, **temporary**, **local** and **direct** effect, in the absence of mitigation.

During operation the BV extension will consist of a pipeline isolation valve and therefore a partial section of gas pipe will be above ground. With regular maintenance of the BV Extension, there is no significant noise from components of the BV Extension predicted.

Above Ground Installation (AGI)

The construction plant items for the AGI will be the same as the BV Extensions works items. There will be 1 No. construction crew working on the AGI element. For the purposes of this assessment, it has been assumed that construction works associated with the Kilshane Energy power plant will occur concurrently with the construction of the AGI.

At NSL9, the nearest residential NSL to the AGI works area, c.142m to the north east, the noise levels from AGI works are predicted to be 62 dB $L_{Aeq,T,}$ which is 8 dB below the adopted construction noise limit of 70 dB $L_{Aeq,1hr.}$ Therefore the construction noise from AGI works will **likely** result in a **negative**, **not significant, temporary, local,** and **direct** effect**,** in the absence of mitigation.

During operation, the AGI will consist of above ground components of the proposed development. The AGI compound comprises an internal access roadway and local surface water drainage system, PIG Trap (launch and receiving point for inspection and maintenance modules), heat exchangers, meters and boilers, regulators & instrument housing, and all ancillary service connections. Significant noise is not predicted from the above ground gas pipeline infrastructure at the AGI works area, once regular maintenance is carried out. As outlined in Gas Networks Ireland Policy, noise level from AGI is limited to 55dB(A) daytime and 45dB(A) at night-time to the nearest local noise sensitive property. The instruments, boilers and control equipment will all be enclosed in housing and therefore no significant noise is anticipated from these areas.

The operational phase noise and vibration effects from the proposed development are are **likely** to be **negative, imperceptible, temporary, localised** and **direct**.

4.4.5.4 Air Quality

With the appropriate standard construction practices implemented at the construction stage including appropriate training, PPE and appropriate licences there will be no significant human health effects during the construction phase. In the Air Quality and Climate assessment of this **EIAR** (Refer to **Chapter 08 Air Quality** and **Chapter 09 Climate**), best practice mitigation measures associated with a low risk of temporary human health effects are proposed for the construction phase of the proposed development. These will focus on the proactive control of dust and other air pollutants to minimise generation of fugitive emissions at source. Therefore, the effect of the construction of the proposed development is likely to be **negative, imperceptible to slight, temporary, local** and **direct** with respect to human health.

During operation, the Newtown transmission gas pipeline will be buried underground and therefore there will be no emissions to the atmosphere during the operational phase from this component.

Provided regular maintenance is carried out at AGI and BV extension works areas, no significance sources of emissions at the AGI and BV extension works are anticipated.

The operational phase will therefore likely have a **neutral**, **imperceptible**, **local**, **temporary** (occurring occasionally) and direct impact on air quality.

4.4.5.5 Water Services

An assessment of the water impact has been included in **Chapter 06 Water** of the **EIAR**. During the construction phase, there is potential for an increase in run-off due to the introduction of impermeable surfaces and the compaction of soils. This will reduce the infiltration capacity and increase the rate and volume of direct surface run-off. The potential effect of this is a possible increase in surface water run-off and sediment loading which could potentially impact the man-made drainage ditches in the agricultural fields conveying water to the Huntstown Stream. There will not be any discharge of untreated, silty, or contaminated water from the works to any watercourse. There will be localised pumping of surface run-off and rainfall from the excavations during and

after heavy rainfall events to ensure that the excavation is kept dry. The discharge of surface water or discharge of hydrostatic testing water from the site will be managed and controlled for the duration of the construction works.

The potential effects during the construction phase on water resources as a result of contaminated increased run off and sediment loading are **negative**, **moderate**, **likely** and **temporary**.

During the operational phase, there will be no generation of foul waste water.

SuDS measures to manage rainwater runoff will be incorporated into the landscaping of the BV extension site. The filter drain/swale will comprise a 1.0m wide filter drain at the bottom of the slope along the length of the shelterbelt present at the western boundary.

4.4.5.6 Waste Generation

An assessment of material assets and waste has been undertaken and is included in **Chapter 14 Material Assets - Waste** of the **EIAR**. The proposed development will generate a range of non-hazardous and hazardous waste materials during site excavation and construction. General housekeeping and packaging will also generate waste materials, as well as typical municipal wastes generated by construction employees, including food waste. Waste materials will be required to be temporarily stored in the construction site compound or adjacent to it, on-site, pending collection by a waste contractor. If waste material is not managed and stored correctly, it is likely to lead to litter or pollution issues at the development site and in adjacent areas. The indirect effect of litter issues is the presence of vermin in areas affected. In the absence of mitigation, the effect on the local and regional environment is likely to be **short-term, significant** and **negative**.

There are no potential impacts from the operational phase of the proposed development in respect of Waste Management.

4.4.5.7 Visual Impacts

An assessment of the visual and landscape impact of the proposed development, including photomontages, has been undertaken and is presented in **Chapter 12 Landscape and Visual Impact Assessment** of this **EIAR**. Disturbed road surface / agricultural grassland will be reinstated along the pipeline corridor once construction has been completed. The BV will be operated in an existing built-up area, there will be little evidence of the proposed Pipeline, and the AGI will be constructed within the proposed Kilshane Energy Facility within a fenced off area.

Physical construction stage works are considered to be relatively modest as it mostly relates to soil stripping and excavation of a relatively narrow trench. Construction related activity and its effect on landscape character will be temporary in duration and will be heavily localised. For these reasons, the magnitude of landscape impacts during the construction stage is deemed to be Low within the immediate surrounds of the site, however, this quickly reduces to Low-Negligible and Negligible in the wider surrounds of the study area where visibility of construction activity is likely to be very limited as a result of the surrounding dense intervening hedgerow networks.

In combination with the low landscape sensitivity designation, the significance of construction stage impacts is deemed to be **negative**, **temporary**, **likely** and **slight** within the immediate surrounds of the site and **negative, not significant** and **temporary** within the wider study area where construction activities will be barely discernible.

Once the landscape in the surrounds of the proposed pipeline corridor has fully reinstated, there will be little, if any, evidence that the pipeline corridor exists. The only real potential for residual visual impacts relates to the proposed permanent BV extension and Newtown AGI, which will be enclosed by a high fence and surrounding hedgerow planting. Visibility of this infrastructure will be limited to the immediate surroundings and will have

little notable effect on surrounding local visual receptors. Thus, the magnitude of visual impact is deemed no greater than negligible in the immediate surrounds of the BV, AGI and in the surrounds of the reinstated pipeline corridor. The significance of visual impact at surrounding receptors is deemed to be **negative**, **slight** and **long term** and **negative**, **not significant** and **long term** and within the wider study area.

4.4.6 Tourism and Amenity

Given that there are currently no tourist attractions or amenities specifically pertaining to the site, there are no effects associated with the construction or operational phases of the development on tourism or amenities in the area.

As discussed in the site description and location, Dublin Airport is located approximately 5km east of the proposed development. It is not anticipated that the development will have any effects on Dublin Airport.

During operation, there are **no effects** anticipated on tourism and amenities in the vicinity.

4.5 Mitigation and Monitoring Measures

Mitigation measures have been outlined below to reduce or eliminate potential effects on the receiving environment.

4.5.1 Population and Settlement Patterns

Residents and affected parties will be informed in advance of any planned utility diversions or potential disruptions. Clear and timely notifications will be issued to ensure residents are well-informed and can make necessary preparations. Ongoing and transparent communication with the local community will be maintained to address any concerns related to utility service interruptions or diversions.

4.5.2 Economic Activity and Employment

The client will prioritise the recruiting of local people wherever they meet the job requirements. The Main Contractor will be encouraged to subcontract portions of the project to local businesses and contractors, thereby creating additional employment opportunities for the local workforce.

4.5.3 Land use

Residents and affected parties will be informed in advance of any planned utility diversions or potential disruptions. Clear and timely notifications will be issued to ensure residents are well-informed and can make necessary preparations. Ongoing and transparent communication with the local community will be maintained to address any concerns related to utility service interruptions or diversions.

4.5.4 Human Health and Safety

The health and safety mitigation measures outlined in **EIAR Chapters 6, 8, 10,** and **13** (covering water, air emissions, noise, and traffic) will be fully implemented.

Public Safety

The **OCEMP** and Health and Safety plans which comply with the relevant health and safety standards and protocols will be developed prior to initiation of the project. The Appointed Contractor(s) will prepare their own site-specific CEMP using the **OCEMP (Appendix 2-1)** as a framework.

All those employed on the project must be inducted in the relevant health and safety standards and protocols in these management plans before starting work on this project. Compliance with the health and safety standards must be monitored and enforced by management.

Traffic and Road

As outlined in **Chapter 13 Traffic and Transportation**, to minimise potential traffic impacts, the phasing of the Phase 1 Bay Lane and Phase 2 Kilshane Road pipeline works will not run concurrently. All traffic management and road signage will be in accordance with the Department of Transport: Traffic Signs Manual – Chapter 8: Temporary Traffic Measures and Signs for Road Works and in agreement with Fingal County Council.

The **Construction Traffic Management Plan** will be updated, as appropriate, following the proposed project detailed design/tendering stage, and submitted for the approval of Fingal County Council, prior to construction. All road permanent reinstatement works will be in accordance with the requirements of Fingal County Council.

During operational phase the proposed development will not generate regular operational traffic and therefore no additional mitigation is warranted.

Noise

The contract documents shall specify that the Contractor undertaking the construction of the works will be obliged to take specific noise abatement measures when deemed necessary to comply with recommendations of BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise, these have been listed in **Chapter 10 Noise and Vibration**.

To reduce the effects of construction noise from the proposed development BV Extension works, screening will be implemented using standard site hoarding or using mobile/demountable screens around noisy items of plant or works, as will be the case with the gas pipeline works. A 10 dB reduction in noise levels due to the effect of a solid hoarding along the works boundary has been assumed. This hoarding/screening will be erected where the proposed works in close proximity to houses and commercial properties.

With the mitigation in place, the predicted construction noise from the BV Extension Works at NSL2 will be 2 dB below the adopted construction noise limit of 70 dB $L_{Aeq,1hr}$ for residential properties. Predicted construction noise at NSL3 will be 4 dB below the adopted construction noise limit of 75 dB $L_{Aeq,\ 1hr}$ for commercial properties, and therefore no significant effects are predicted with mitigation in place.

Effects during the operational phase are **imperceptible** at NSLs therefore mitigation measures are not required.

Air Quality

As outlined in **Chapter 8 Air Quality**, a full **Traffic Management Plan** and **Dust Management Plan** will be incorporated into the **Outline Construction Environmental Management Plan (OCEMP)** to minimise such emissions as a result of the construction phase of the development. This will be generated specifically for the proposed development when detailed design is completed.

Air quality effects during the operational phase are predicted to be imperceptible therefore no mitigation measures are required.

Water Services

The appointed contractor will be obliged to put best practice measures to ensure that there are no interruptions to services from the existing watermain and sewer. Any planned interruptions will be agreed in advance with the utility's suppliers. Strict quality control measures will be undertaken while laying pipes to minimise or eradicate infiltration and ex-filtration.

There are no potential negative impacts during the operational phase in respect of water infrastructure and therefore residual effects on material assets during the operational phase will be **neutral**, **imperceptible** and **long-term**.

Waste Generation

As outlined in **Chapter 14 Material Assets – Waste**, a project specific **Resource Waste Management Plan (RWMP)** (**Appendix 14-1, Volume III** of the **EIAR**) has been prepared in line with the requirements of the requirements of the EPA, *'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects'* (2021).

During construction, on-site waste collection and disposal facilities will be provided, encouraging responsible waste disposal practices among visitors. Educational and awareness programs may also be instituted to promote recycling and discourage the use of single-use plastics.

Scheduled clean-up and waste collection routines will be established to promptly address any littering concerns. These measures will ensure that the site remains clean and devoid of environmental hazards associated with improperly managed waste.

Waste materials that cannot be prevented or reused will be diligently sorted, recycled, or disposed of in strict compliance with local regulations and industry best practices. Licensed waste management contractors will be engaged to ensure responsible handling and disposal of construction waste. These mitigation measures will ensure that the waste arising from the construction phase of the proposed development is dealt with in compliance with the provisions of the Waste Management Act 1996, as amended, associated Regulations and the Litter Pollution Act 1997, the EMR Waste Management Plan 2015 – 2021 and the draft NWMPCE (2023). It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved and will promote more sustainable consumption of resources.

As described in **Chapter 14 Material Assets – Waste**, there will be no predicted impacts during the operational phase as no operational waste will be generated.

Visual Impacts

As outlined in **Chapter 12 Landscape and Visual Impact Assessment**, Visual impact during the construction phase will be mitigated through appropriate site management measures and work practices to ensure the site is kept tidy, dust is kept to a minimum, and that public areas are kept free from building material and site rubbish.

Site hoarding and fencing will be appropriately scaled, finished and maintained for the period of construction of each section of the works as appropriate. To reduce the potential negative impacts during the construction phase, good site management and housekeeping practices will be adhered to. The visual impact of the site compound and scaffolding visible during the construction phase are of a **temporary** nature only and therefore require no further remedial action other than as stated above.

The BV extension will be located at the existing BV within an already built-up area and the AGI is proposed to be located within the proposed Kilshane Energy Facility. The key mitigation measures to landscape and visual impacts are landscape screening during construction and reinstatement planting.

4.6 Residual Impacts and Effects

Residual effects section outlines the degree of environmental change that will occur after the proposed mitigation measures have taken effect. Refer to Table 4-8 below.

Table 4-8: Residual Impacts

Impact	Effect (Pre-Mitigation)	Mitigation Measures	Residual Effect (Post-Mitigation)
Construction Phase			
Population and Settlement Patterns	Neutral, imperceptible, localised, likely and short-term	See Section 4.5.1	Neutral, imperceptible, localised, likely and short-term
Economic Activity and Employment	Positive, slight, likely and temporary	See Section 4.5.2	Positive, slight, likely and temporary effect
Land use	Negative, likely, temporary and slight	See Section 4.5.3	Negative, likely, temporary and imperceptible
Health and Safety- Public Safety	Negative, slight, likely and temporary	See Section 4.5.4	Negative, imperceptible, likely and temporary
Health and Safety- Traffic and Road	Negative, moderate, likely and temporary	See Section 4.5.4	Negative, imperceptible, likely and short term
Health and Safety- Noise (Gas Pipeline)	Negative, likely, not significant and temporary,	See Section 4.5.4	Negative, imperceptible, likely and temporary
Health and Safety – Noise (Block Valve Extension)	Negative, likely, not significant and temporary,	See Section 4.5.4	Negative, likely, imperceptible and temporary,
Health and Safety – Noise (Above Ground Installation)	Negative, not significant, likely and temporary	See Section 4.5.4	Negative, likely, imperceptible and temporary,
Health and Safety- Air Quality	Negative, temporary, likely and imperceptible-slight	See Section 4.5.4	Negative, temporary, likely and imperceptible
Health and Safety – Water Services	Negative, moderate, likely and temporary	See Section 4.5.4	Negative, imperceptible, unlikely and temporary
Health and Safety- Waste Generation	Negative, significant, likely and short-term	See Section 4.5.4	Negative, Imperceptible, likely and short term
Health and Safety- Visual Impacts	Negative, slight, temporary and likely in immediate surrounds Negative, not significant, likely and temporary in the wider area.	See Section 4.5.4	Negative, slight, temporary and likely in immediate surrounds Negative, imperceptible, unlikely and temporary in the wider area
Tourism and Amenity	Negative, slight, short-term and likely	See Section 4.5.5	Negative, imperceptible, short-term and likely
Operational Phase			
Population and Settlement Patterns	Neutral, imperceptible, localised, likely and long-term	See Section 4.5.1	Neutral, imperceptible, long term and localised
Economic Activity and Employment	Neutral, imperceptible, unlikely and long term	See Section 4.5.2	Neutral, imperceptible, long term and localised
Land use	Neutral, imperceptible, likely and long-term	See Section 4.5.3	Neutral, imperceptible and long term
Health and Safety- Public Safety	Neutral, imperceptible, likely and long term	See Section 4.5.4	Neutral, imperceptible, unlikely and long term
Health and Safety- Traffic and Road	Negative, imperceptible, likely and long term	No additional mitigation required	Negative, imperceptible, likely and long term

Impact	Effect (Pre-Mitigation)	Mitigation Measures	Residual Effect (Post-Mitigation)
Health and Safety- Noise Gas Pipeline	Negative, imperceptible, likely and long term	No additional mitigation required	Negative, imperceptible, likely and long term
Health and Safety- Noise (Block Valve Extension)	No effect	No additional mitigation required	No effect
Health and Safety- Noise (Above Ground Installation)	Negative, imperceptible, likely and long term	No additional mitigation required	Negative, imperceptible, unlikely and long term
Health and Safety- Air Quality	Neutral, imperceptible, likely and temporary	No additional mitigation required	Neutral, imperceptible, unlikely and temporary
Health and Safety – Water Services	No effect	See Section 4.5.4	No effect
Health and Safety- Waste Generation	No effect	No additional mitigation required	No effect
Health and Safety- Visual Impacts	Negative, slight, likely and long term	See Section 4.5.4	Negative, imperceptible, likely and long term
Tourism and Amenity	No effect	No mitigation required	No effect

4.7 Cumulative Impacts and Effects

Section 1.6 of EIAR Chapter 01 Introduction identifies the developments considered in the cumulative assessment of the project. Those projects deemed directly relevant and requiring closer examination are detailed in Table 1-3 of the same chapter. This assessment is also cognisant of the proposed changes to the permitted 220kV Gas Insulated Switchgear (GIS) substation and its associated underground 220kV transmission line connecting to the existing Cruiserath 220kV substation. A review of these modifications confirms that they do not affect the conclusions of the cumulative assessment.

The cumulative effects of the proposed development with the proposed Kilshane Energy Facility, Proposed 220kV Gas Insulated Switchgear (GIS) Substation and Underground 220kV Transmission Line Connection to the Existing Cruiserath 220kv Substation are discussed further in the following sections. Given the uncertainty associated with project sequencing, this EIAR assumes that all works, including the 220 kV Transmission Line connection, the proposed gas pipeline, the Kilshane Power Station, and the 220 kV GIS Substation and AGI, will be constructed concurrently.

Construction of the proposed development will result in short-term and temporary increased traffic on the local road network, noise emissions from construction vehicles and equipment and air quality impacts from fugitive dust resulting from ground-disturbance activities.

In considering cumulative effects with other planned or approved projects, construction effects will have a cumulative impact on the receiving environment, only if other reasonably foreseeable proposals are constructed in close vicinity to the proposed developments construction and at the same time.

Cumulative noise, traffic and air quality impacts have the potential to arise locally when construction activities associated with the proposed development take place at the same time as other developments in a specific location. Kilshane Energy Ltd plan to construct a Fast Start Peaking Gas Turbine Power Generation Station with a with a maximum of 293 MW output and all necessary components and infrastructure to facilitate the development and further contribute to the area. The overall development is considered to be in compliance with its HI – Heavy Industry land use zoning, an objective of which is to accommodate for Utility Installations.

The proposed 220Kv Gas Insulated Switchgear (GIS) substation will be located on lands at Kilshane Road, Kilshane, Finglas, Dublin 11. A review of Kilshane Power Station CEMP estimates that it will take 20 months to achieve overall completion and commissioning of the power station.

Any cumulative noise effects/impacts will be due to construction works associated with possible developments would be temporary and short-term. Overall, it is considered unlikely that any cumulative effects with other projects due to both the construction phase and the operational phase would result in long term, significant effects on Population and Human Health.

Any cumulative traffic effects/impacts on the local road networks due to construction works associated with possible developments would be temporary and short-term. Overall, it is considered unlikely that any cumulative effects with other projects due to both the construction phase and the operational phase would result in long term, significant effects on Population and Human Health.

Any cumulative air quality effects/impacts due to construction works associated with possible developments would be temporary and short-term. Overall, it is considered unlikely that any cumulative effects with other projects due to both the construction phase and the operational phase would result in long term, significant effects on Population and Human Health.

4.8 References

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