

MWP

Volume I: Non-Technical Summary **Newtown Transmission Gas Pipeline and Associated Above Ground Infrastructure**

Gas Networks Ireland

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Contents

1.	Introduction	1
1.1	Overview of the Proposed Development	1
1.2	Site Location	2
2.	Relevant Legislative Requirement for Environmental Impact Assessment	2
3.	Description of the Proposed Development	3
3.1	Block Valve (BV) Extension - Tie-in Point & Pigging Compound	4
3.2	Underground Newton Gas Transmission Pipeline	5
3.3	Above Ground Installation (AGI)	6
3.4	Construction Phase	7
3.5	Commissioning Phase	8
3.6	Operational Phase	8
3.7	Cumulative Assessment	9
3.8	Risk of Major Accidents and Disasters	9
3.9	Alternatives Considered	9
4.	Environmental Assessment	10
4.1	Population and Human Health	10
4.1.1	Baseline Environment	10
4.1.2	Potential Effects of the Proposed Development	11
4.1.2.1	Settlement Patterns	11
4.1.2.2	Economic Activity And Employment	12
4.1.2.3	Social And Land Use	12
4.1.2.4	Human Health	12
4.1.2.5	Tourism And Amenity	12
4.1.3	Mitigation and Residual Effects	12
4.1.3.1	Settlement Patterns	12
4.1.3.2	Economic Activity And Employment	13
4.1.3.3	Social And Land Use	13
4.1.3.4	Human Health	13
4.1.3.5	Tourism And Amenity	13
4.2	Biodiversity	13
4.2.1	Baseline Environment	13
4.2.2	Potential Effects of the Proposed Development	14
4.2.2.1	Construction Phase	14
4.2.2.2	Operational Phase	14
4.2.3	Mitigation and Residual Effects (Post Mitigation)	14
4.3	Water	15
4.3.1	Baseline Environment	15
4.3.2	Potential Effects of the Proposed Development	16
4.3.2.1	Construction Phase	16
4.3.2.2	Operational Phase	16
4.3.2.3	Mitigation and Residual Effects (Post Mitigation)	17
4.4	Land and Soils	17
4.4.1	Baseline Environment	17
4.4.2	Potential Effects of the Proposed Development	19
4.4.2.1	Construction Phase	19
4.4.2.2	Operational Phase	20
4.4.3	Mitigation and Residual Effects (Post Mitigation)	20
4.4.3.1	Construction Phase	20
4.4.3.2	Operational Phase	20
4.5	Air Quality	21

4.5.1	Baseline Environment	21
4.5.2	Potential Impacts of the Proposed Development	21
4.5.2.1	Construction Phase	21
4.5.2.2	Operational Phase.....	21
4.5.3	Mitigation and Residual Effects (Post-Mitigation).....	22
4.5.3.1	Construction Phase	22
4.5.3.2	Operational Phase.....	22
4.6	Climate	22
4.6.1	Baseline Environment	22
4.6.2	Potential Impacts of the Proposed Development	23
4.6.2.1	Construction Phase	23
4.6.2.2	Operational Phase.....	23
4.6.3	Mitigation and Residual Effects (Post-Mitigation).....	24
4.6.3.1	Construction Phase	24
4.6.3.2	Operational Phase.....	24
4.7	Noise and Vibration	24
4.7.1	Baseline Environment	24
4.7.2	Potential Impacts of the Proposed Development	25
4.7.2.1	Construction Phase	25
4.7.2.2	Operational Phase.....	26
4.7.3	Cumulative.....	26
4.7.3.1	Construction Phase	26
4.7.3.2	Operational Phase.....	27
4.7.4	Mitigation and Residual Effects (Post-Mitigation).....	27
4.7.4.1	Construction Phase	27
4.7.4.2	Operational Phase.....	27
4.7.5	Monitoring Measures	28
4.7.5.1	Construction Phase	28
4.7.5.2	Operational Phase.....	28
4.8	Archaeological, Architectural and Cultural Heritage	28
4.8.1	Baseline Environment	28
4.8.2	Potential Effects of the Proposed Development	28
4.8.3	Mitigation and Residual Effects	29
4.9	Landscape and Visual.....	29
4.9.1	Baseline Environment	29
4.9.2	Potential Effects of the Proposed Development	30
4.9.2.1	Construction Phase	30
4.9.2.2	Operational Phase.....	30
4.9.3	Mitigation and Residual Effects	31
4.10	Traffic and Transportation	31
4.10.1	Baseline Environment	31
4.10.2	Potential Effects of the Proposed Development	31
4.10.2.1	Construction Phase	31
4.10.2.2	Operational Phase.....	31
4.10.3	Mitigation and Residual Effects (Post Mitigation)	32
4.10.3.1	Construction Phase	32
4.10.3.2	Operational Phase.....	32
4.11	Material Assets – Waste	32
4.11.1	Baseline Environment	32
4.11.2	Potential Impacts of the Proposed Development	32
4.11.2.1	Construction Phase	32
4.11.2.2	Operational Phase.....	32
4.11.3	Mitigation and Residual Effects (Post Mitigation)	33
4.11.3.1	Construction Phase	33
4.11.3.2	Operational Phase.....	33
4.12	Material Assets – Utilities.....	33

4.12.1	Baseline Environment	33
4.12.2	Potential Impacts of the Proposed Development	34
4.12.2.1	Construction Phase	34
4.12.2.2	Operational Phase.....	35
4.12.3	Mitigation and Residual Effects (Post Mitigation)	35
4.12.3.1	Construction Phase	35
4.12.3.2	Operational Phase.....	36
4.13	Interaction of the Foregoing	36

Figures

Figure 1-1:	Site Location	2
Figure 3-1:	Pipeline Route within the Proposed Kilshane Energy Facility to the AGI	6
Figure 3-2:	3D Model of Newtown AGI	7
Figure 3-3:	Existing and Proposed Site Access Points	8
Figure 4-1:	Habitat Map of the Site.....	14
Figure 4-2:	Local Hydrology	16
Figure 4-3:	CORINE Land Use Map	18
Figure 4-4:	Soils Map (Source: Teagasc)	19
Figure 4-5:	Environmental Noise Survey Monitoring Locations and Noise Sensitive Locations	25

Tables

Table 1-1:	Summary of Main Project Elements	1
Table 4-1:	Noise Sensitive Receptors	24
Table 4-2:	Matrix of Impacts	37

1. Introduction

This is the **Non-Technical Summary (NTS)** of an **Environmental Impact Assessment Report (EIAR)** that has been prepared by Malachy Walsh and Partners (MWP) and specialist subconsultants on behalf of Gas Networks Ireland (GNI) herein referred as ‘the Applicant’. The **EIAR** has been prepared to assess the potential environmental effects of the construction and operation of the Newtown Transmission Gas Pipeline, Newtown Above Ground Installation (AGI) compound and Kilshane Block Valve (BV) extension (hereafter referred as the ‘proposed development’) and provide recommendations for mitigating these effects.

This **NTS** is the first volume of the **EIAR** for the proposed development. The other volumes which comprise the **EIAR** are:

- Volume II: Main Environmental Impact Assessment Report;
- Volume III: Appendices; and
- Volume IV: Drawings.

The purpose of this NTS is to provide a concise overview in non-technical terms of the project, environmental effects and mitigation measures highlighted by the Environmental Impact Assessment (EIA) which are presented in detail in the main **EIAR, Volume II**. It is important that the **EIAR** be read in conjunction with the full consent application package, which includes all the necessary information on the proposed development, including technical specifications, plans, and other relevant documents. This will ensure that the reader has a comprehensive understanding of the proposed development and its potential environmental effects and is able to make informed decisions based on the information provided.

1.1 Overview of the Proposed Development

This proposed development comprises the construction and operation of the Newtown Transmission Gas Pipeline (majority of which will run under public roads), associated Newtown Above Ground Installation (AGI) compound and Kilshane Block Valve (BV) extension.

The proposed development is separate from, but related to a proposed 293 MW 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 Kilshane Energy Facility also includes a road realignment project and a planning application for a GIS compound and grid route. The relevant applications for the Kilshane Energy Facility have been separately undertaken by the customer. This proposed development is therefore separate from, but associated with these applications.

Table 1-1 sets out the elements of the project for which development consent is being sought. A full description of the proposed development and development lands of the project is provided in **Chapter 02 Project Description** of **Volume II** of the **EIAR**.

Table 1-1: Summary of Main Project Elements

Proposed Development subject to EIA for which consent is being sought

- 0.715km underground 300mm steel gas pipeline along Bay Lane and Kilshane road;
- Extension to existing Kilshane Block Valve station, including temporary pigging facilities and pipeline tie-in connection; and
- Above Ground Installation (AGI) at the proposed gas-fired power station.

1.2 Site Location

The proposed development is located in the townland of Kilshane, on lands at Kilshane Road, Kilshane, Finglas, Dublin 11. The area of the proposed development within the designated boundary extends to c. 3.14Ha. 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. Refer to **Figure 1-1** for site location.

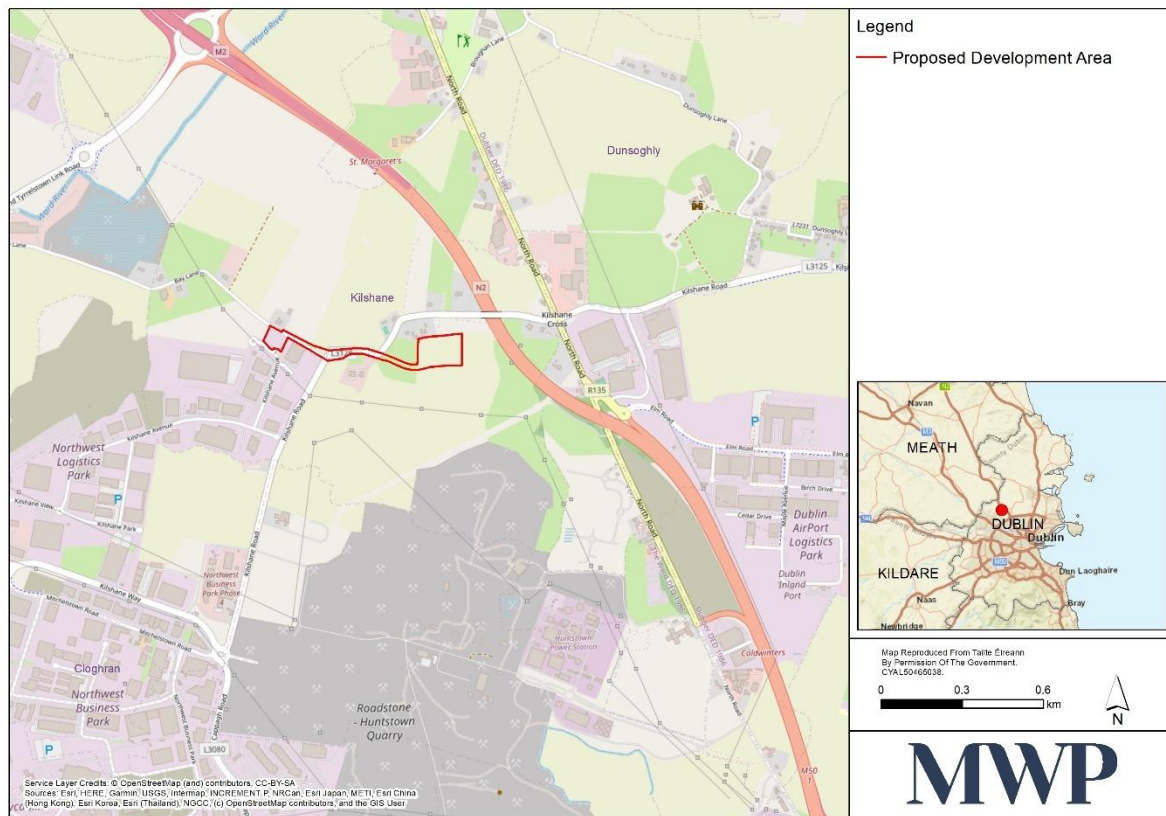


Figure 1-1: Site Location

2. Relevant Legislative Requirement for Environmental Impact Assessment

Environmental Impact Assessment (EIA) is an essential tool in the implementation of EU environmental legislation. According to the *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018)*, the objective of the Directive (Directive 2011/92/EU), as amended by Directive 2014/52/EU, is to ensure a high level of protection of the environment and human health, through the establishment of minimum requirements for EIA, prior to development consent being given, of public and private developments that are likely to have significant effects on the environment.

The requirement for and **EIAR** is set out in the EIA Directive (*Directive 2011/92/EU as amended by 2014/52/EU*). The EIA Directives have been transposed into existing Irish planning consent procedures by the *Planning and Development Act 2000* as amended (the Act) and *Planning and Development Regulations, 2001 as amended (the Regulations)*.

Ireland's type of projects for which an EIA is mandatory is set out in the Schedule 5 Part 1 and Part 2 of the Regulations. The EPA Guidance (2022) requires an assessment beyond the general description of the project and to consider the component parts of the project and/or any processes arising from it.

In considering the wider context and the component parts of the proposed development, an **EIAR** has been provided for the proposed development as this will provide a permanent gas supply for the proposed Kilshane Energy Facility (Reference No. FW22A/0204 and SID/03/22), for which an EIAR was prepared as required under section 10 (b) (iv) of Schedule 5 Part 2 of the Regulations.

3. Description of the Proposed Development

This chapter presents the description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development. The scope of this chapter aligns with the relevant legislation and guidance which comprises the following:

- EIA Directive (2011/92/EU), as amended by the 2014 EIA Directive (2014/52/EU) (herein referred to as the EIA Directive);
- European Commission '*Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report*' (2017); and
- EPA '*Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*' (2022) (herein referred to as the EPA EIA Report Guidelines 2022).

The Applicant, Gas Networks Ireland (GNI), is applying to the Commission for Regulation of Utilities (CRU) for S39A¹ consent to construct an underground transmission gas pipeline between the proposed Kilshane Block Valve (BV) Extension to the existing Kilshane BV station, and the proposed AGI, which together make up the proposed development.

GNI will also be seeking planning permission from Fingal County Council for the AGI and BV extension developments. Refer to **Figure** for the layout of the proposed Newtown AGI, Kilshane BV extension and the GNI139 pipeline route. The underground transmission gas pipeline (named Newton Gas Transmission Pipeline) and associated infrastructure in the proposed development will be owned and operated by GNI.

¹ Gas Act 1976 (as amended)

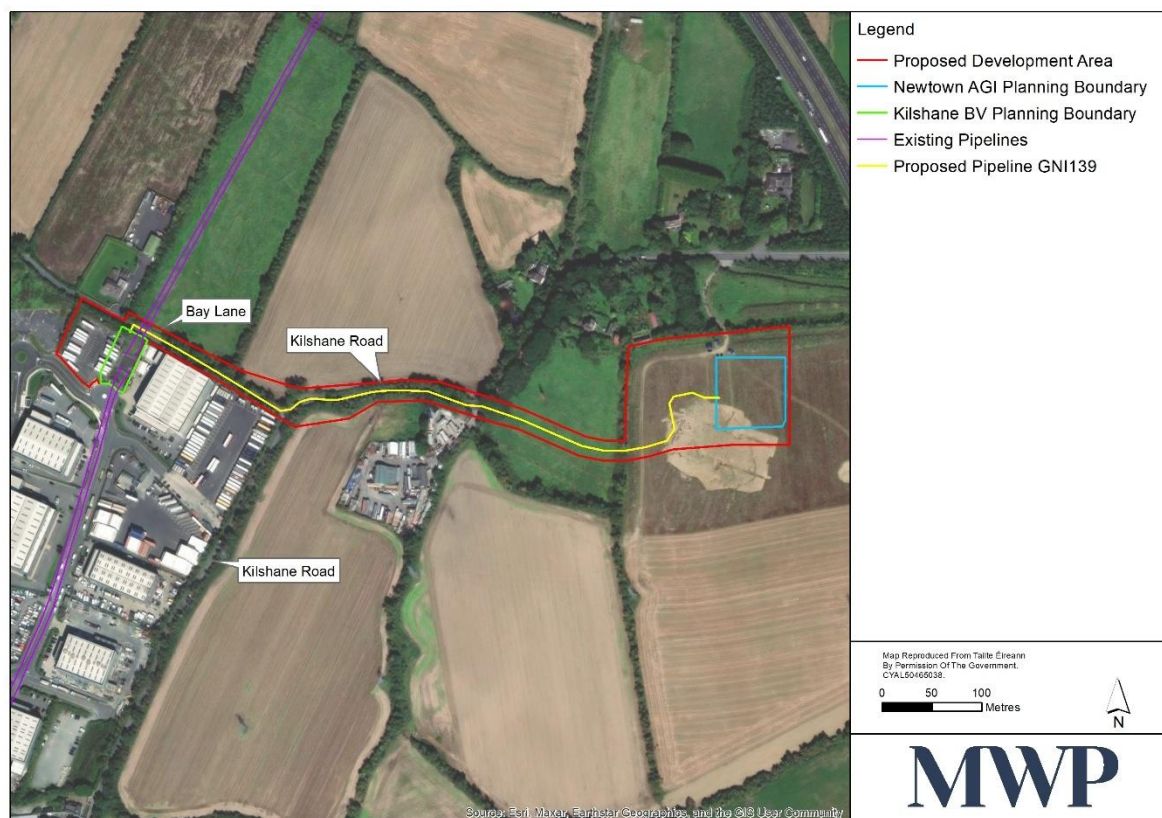


Figure 3-1: Site Layout

3.1 Block Valve (BV) Extension - Tie-in Point & Pigging Compound

The above ground elements considered within this EIAR are subject to an application to Fingal County Council (FCC) as a Section 32 application under the Planning and Development Act 2000, as amended.

It is proposed to extend the existing Kilshane Block Valve to accommodate the tie in point for the planned GNI139 Newtown Pipeline on to the existing gas transmission line, and to facilitate temporary pig launching facilities². The area of the BV site currently measures 16.6m x 16.6m. The new BV site will include a 22.57m x 43.31m x 2.4m high fenced enclosure. The site will have no telemetry requirements and will provide a pipeline isolation valve for GNI139 pipeline. A new access roadway is also required from the Kilshane Avenue roundabout. Kilshane BV site fencing shall be extended north in the direction of Bay Lane into an unused greenfield site, with an additional extension to the west. Refer to **Figure 3-** for the layout of the BV extension area.

² The pig launcher uses fluid pressure to launch a projectile called a pig through the pipe. The export facility contains a device to safely insert pigs into the pipeline, referred to as a pig launcher.

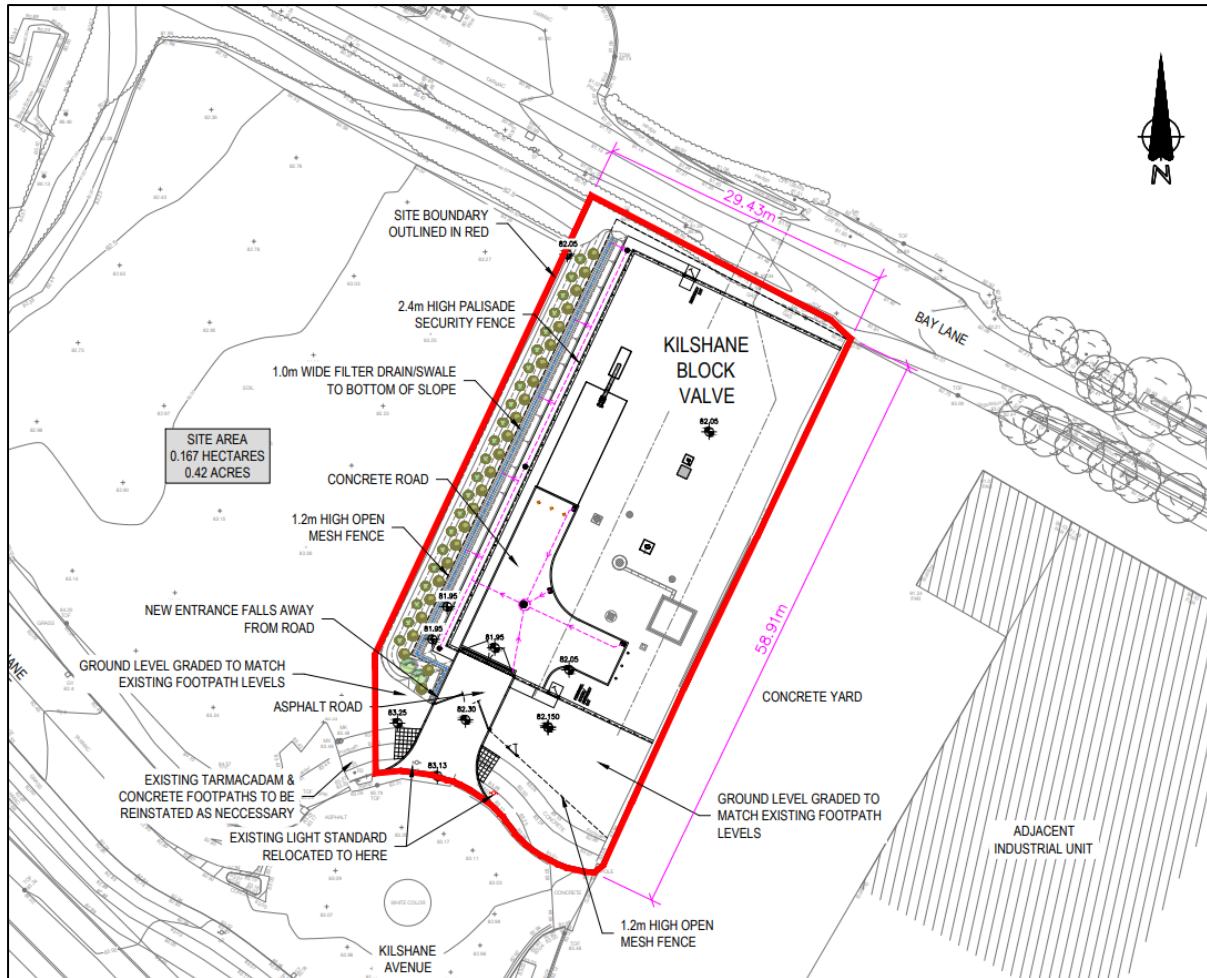


Figure 3-2: Kilshane BV Extension and Tie in Location

3.2 Underground Newton Gas Transmission Pipeline

The pipeline will connect into a 400mm Nominal Bore (NB) branch connecting pipe between BGE36 and BGE72 transmission pipelines running through Kilshane BV. A 3m deep excavation will be undertaken to allow the new pipeline tie into the existing pipeline. A new pipework arrangement will then be placed in the trench. **Figure 3-** illustrates the planned layout around Kilshane BV extension.

The length of the pipeline from Kilshane BV boundary fence to Newtown AGI boundary fence will be approximately 715m. Upon exiting the BV site, the pipeline will continue by means of open-cut excavation for approximately 0.1km through the BV site, before turning 90 degrees onto Bay Lane. From there, it will be laid within the road in Bay Lane for approximately 180m. it will be routed within the road using open-cut method.

The pipeline will cross 2 no. existing gas pipelines, BGE36 (450mm) and BGE72 (900mm) within Bay Lane. The pipeline will then route for approximately 180m through Bay Lane before reaching a T-junction on to Kilshane Road. The proposed gas pipeline must cross T50 telecom cables twice upon entering Kilshane Road. The pipeline will continue on through L3120 Kilshane Road for approximately 200m, staying to the northern lane of the road to avoid the proposed HV cable on the southern side before entering the proposed Kilshane Gas power station site. The pipeline will follow the proposed internal site road before entering the AGI. The main pipeline will be installed by open cut method.

The pipeline will cross the hedgerow into the greenfield site where it will be laid using open-cut method. It will traverse directly across this field to where it will meet a watercourse crossing. This watercourse is a man-made drainage ditch. Upon crossing this and entering the second greenfield site, the pipeline follows the route of the customers proposed site road to the Newtown AGI site. See **Figure 3-1** of the pipe route within the proposed Kilshane Energy Facility site where it will connect in to the AGI.

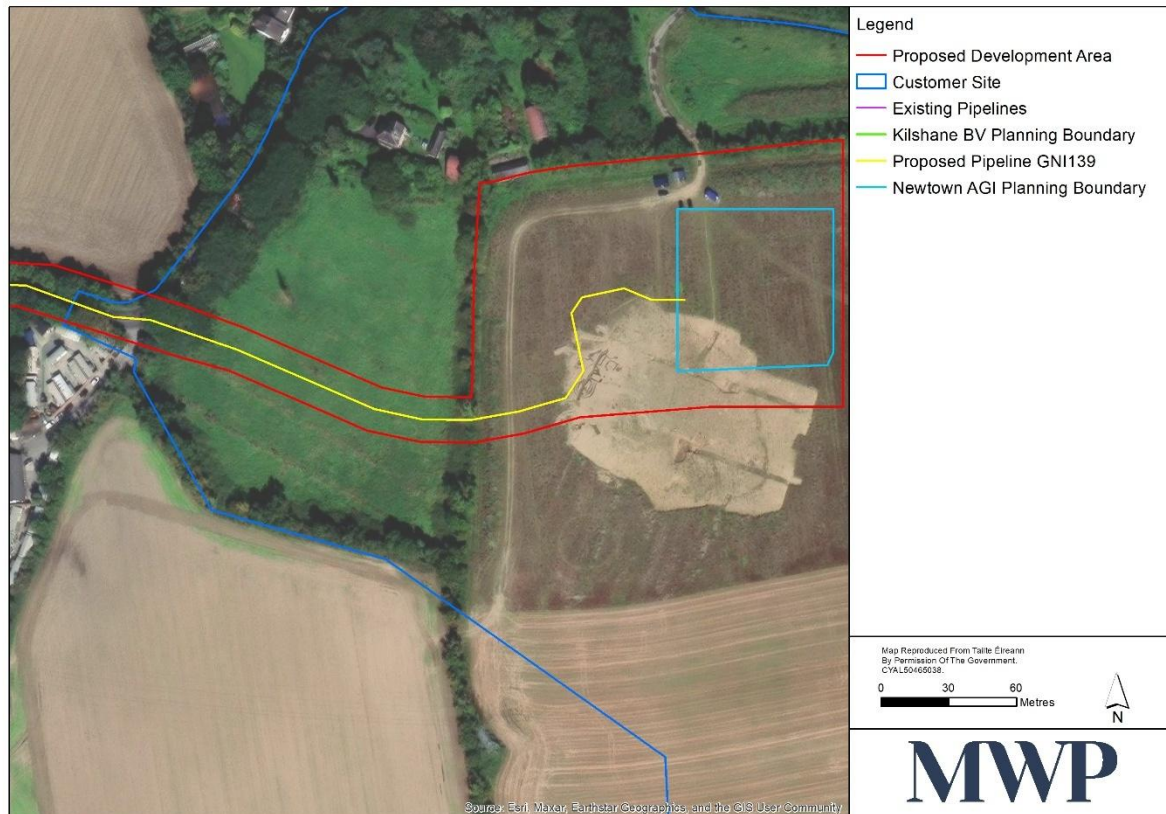


Figure 3-1: Pipeline Route within the Proposed Kilshane Energy Facility to the AGI

3.3 Above Ground Installation (AGI)

The pipeline will terminate at a proposed AGI located within the Kilshane Energy Facility site. The purpose of the AGI is to reduce the pressure of the gas from TX high pressure 70 Barg to 32.8Barg to feed the gas engines. The AGI compound comprises an internal access roadway and local surface water drainage system (to tie into the Kilshane Power station 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. The compound will be secured by means of security fencing. A 3D CAD render of the AGI is shown in **Figure 3-2**.

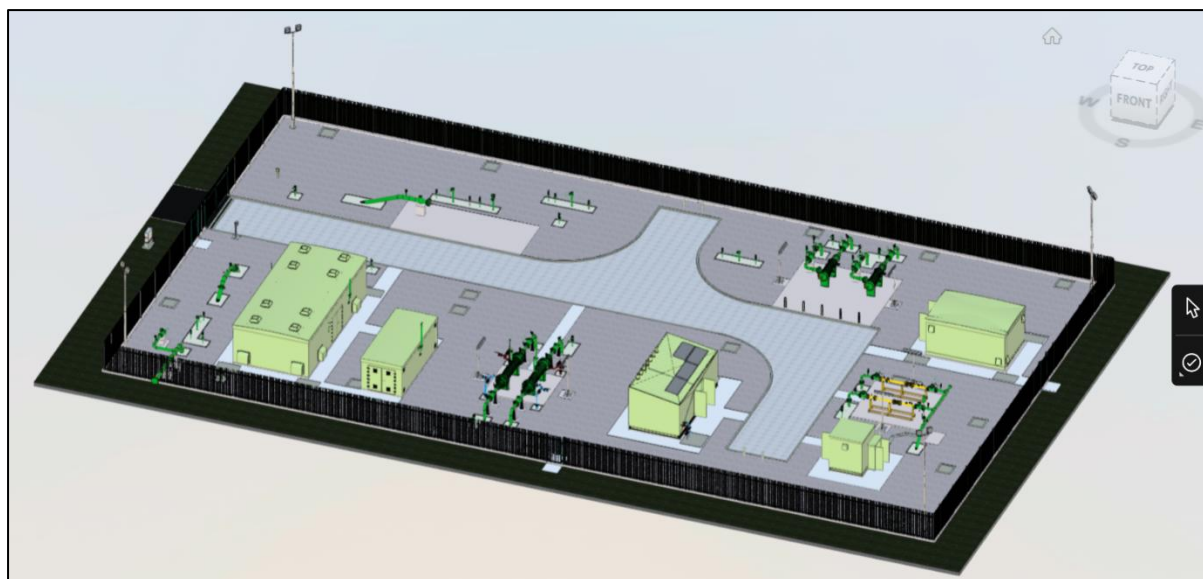


Figure 3-2: 3D Model of Newtown AGI

3.4 Construction Phase

The proposed development assessed in this **EIAR** will be constructed following the completion of site set up and mass excavation works for the Kilshane Energy power station project (approximately 20 months).

It is anticipated that construction for the proposed development will commence in Q2 2026. The overall start-to-finish duration is estimated to be 8-10 months. Typically, construction will occur within the hours 7.00am – 7.00pm, Monday to Friday and 7.00am to 2.00pm on Saturdays, which will be confirmed with the Local Authority. However, it is possible that the contractor may wish to carry out certain operations outside these hours i.e., Sunday or evening hours during long summer days, etc. Such occurrences will be kept to a minimum and take place over a short timeframe and as such are unlikely to cause excessive disturbance.

There will be a construction crew for each element of the proposed development (BV, pipeline and AGI). Some of the construction activities for these elements will run concurrently. It is estimated that there will initially be 3-40 site personnel on site on a typical day, however during peak construction periods (where elements are being constructed simultaneously) this is expected to fluctuate up to a maximum of 70 site personnel and contractors on site per day. Site personnel will include management, engineers, construction crews, supervisors, environment health and safety personal, and pipeline specialist contractors.

The construction Contractor will prepare a detailed **Construction Environmental Management Plan (CEMP)** that will include all mitigation measures set out within this **EIAR** and any subsequent planning conditions relevant to the proposed development and set out further detail of the overarching vision of how the construction Contractor of the proposed development manage the Site in a safe and organised manner.

A new access roadway is also required from the Kilshane Avenue roundabout to the BV extension. The existing site access for the proposed AGI is to the northern boundary just west via the N2 overpass within the Kilshane Energy Facility site. It is proposed to retain the existing access point to the customer's site to allow access to the adjacent lands for construction phase entry to the site. It is further proposed to create a new site access point for the construction stage beside the proposed roundabout access to the site. The proposed construction access point is located on the route of the proposed road realignment into the proposed development, which can be seen in **Figure 3-1**.

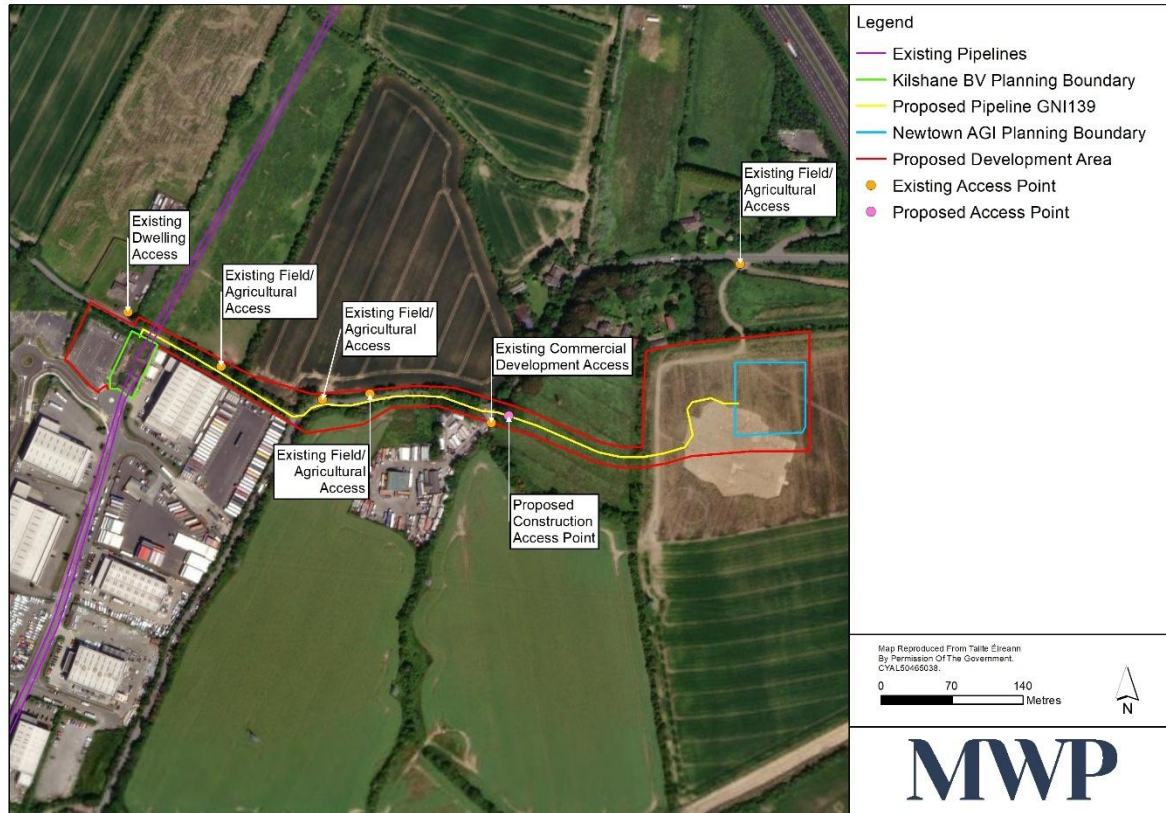


Figure 3-3: Existing and Proposed Site Access Points

There will be two temporary works areas / construction compounds required for the proposed development. There will be one located near the proposed Newtown AGI and one located near the proposed Kilshane BV extension. There will be no parking permitted on the surrounding road network or estate roads by the contractor or site operatives. All plant, machinery and equipment will be stored on site within the works area or within the temporary construction. Oils and fuels will not be stored on site and will be stored in an appropriate bunded area within the temporary storage compound.

A site drainage system will be constructed on the site so as to attenuate run-off, guard against soil erosion and safeguard downstream water quality.

3.5 Commissioning Phase

Once the construction of the proposed development is completed, Gas Networks Ireland will mobilise to complete the commissioning. Commissioning will be carried out over a 1 to 2 months and is included within the construction timelines in **Section 3.4** above.

Commissioning works primarily involve suitably qualified individuals connecting the proposed gas pipeline at the tie-in point to the existing 400NB interconnecting pipework between BGE36 and BGE72. Following this, pressurisation of the Gas Line can take place.

3.6 Operational Phase

GNI will own and operate this asset with the purpose of supplying a gas connection to the proposed Kilshane Energy Facility which requires this to operate. GNI will operate the underground transmission gas pipeline and

carry out routine maintenance for the lifetime of the asset. The operation of the proposed development means that the proposed Kilshane Energy Facility can proceed.

During operation, GNI or a service company will carry out regular monitoring and maintenance of the gas infrastructure. Routine inspection and preventive maintenance visits will be necessary to ensure the smooth and efficient running of the gas pipeline. At the end of the estimated 30 year lifespan of the project, GNI will make the decision whether to repower or decommission the development and this will likely be subject to a new planning permission application.

3.7 Cumulative Assessment

A review of planning applications in close proximity to the proposed development area using the an An Coimisiún Pleanála (ACP) and Fingal County Council (FCC) online planning search tools (November 2025) was undertaken covering the five years prior to the date of assessment, in order to assess if any developments were likely to act cumulatively with the proposed development.

The most relevant applications (being undertaken by the customer) for the Kilshane energy facility include:

- FW22A/0204 Kilshane Energy Facility – for the construction of a new Gas Turbine Power Generation Station with an output of up to 293 Megawatts (approved by An Coimisiún Pleanála); and
- ABP-314894-22 Kilshane Energy Ltd - provision of a 220 kV Gas Insulated Switchgear (GIS) substation, associated Air Insulated Switchgear (AIS) compound, and an underground 220 kV transmission line connection from the proposed GIS substation to the existing Cruiserath 220 kV GIS substation.

The potential cumulative impact of the proposed development with these applications and smaller applications identified through the planning search has been assessed in accordance with Annex IV of the EIA Directive as amended. As per the requirements of the Directive, the **EIAR** contains a description of the likely significant effects of the project on the environment resulting from the cumulation of effects with other existing and/or approved projects.

The 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.

3.8 Risk of Major Accidents and Disasters

The pipeline has been designed and will be constructed in accordance with established standards and comprehensive safety procedures to ensure the highest levels of safety, reliability, and long-term performance. Robust protocols will be in place during both construction and operation to prevent incidents and to ensure the pipeline functions without posing a risk to the environment or nearby communities. As a result, the likelihood of a significant accident occurring is regarded as negligible.

3.9 Alternatives Considered

The consideration of Alternatives is a mandatory part of the EIA process. The legal requirements of the 2014 EIA Directive, relating to the assessment of Alternatives, are set out in Article 5(1)(d) and Annex IV point 2 of the Directive.

During the project design process, alternative pipeline routes were considered in order to find the optimum route with the least level of environmental impact. The Alternatives chapter therefore outlines the site selection process, the process of design evolution for the proposed development, the reasonable alternatives considered during the project inception and design process including a comparison of the environmental effects and the principal reasons for proceeding with the current planning application. The following elements are considered further in this chapter:

- Alternative Development Locations/Route Options;
- Alternative Design;
- Alternative Processes; and
- Do-Nothing Scenario.

The proposed development has been designed to minimise potential environmental impacts and has been designed following a step by step EIA process which informed and identified the preferred pipeline route. More details on the project design and evolution can be read in **Chapter 03 Alternatives of Volume II of the EIAR**.

The final pipeline route was determined based on multi-discipline inputs and consideration of topography, biodiversity, land and soils, hydrology, landscape and engineering constraints and assessments. The development as proposed is the preferred option as it results in the least effects on resources and receptors while meeting the project objectives, ensuring efficient construction, cost-effectiveness and minimal disruption to the surrounding environment.

4. Environmental Assessment

The **EIAR** has been carried out in accordance with the relevant legislative requirements and guidelines, including the Environmental Protection Agency (EPA) – ‘*Guidelines on Information to be Contained in an Environmental Impact Assessment Reports, 2022*’. Specialist guidance as required for each of the environmental topics has also been used where appropriate.

A summary of each prescribed environmental factor considered in this **EIAR** is outlined in the following sections.

4.1 Population and Human Health

This chapter considers any likely effects of the proposed development on population and human health. 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 construction and 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.

4.1.1 Baseline Environment

The proposed development site is located in the townland of Kilshane located to the north of Dublin City and Suburbs. 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.

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. The proposed development is located within SAPS A267158009/02 which is located within The Ward ED.

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. 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. 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 70 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.

Fingal has had a significant increase in population between 2011 and 2016 of 38.40%. 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 2016 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.

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. 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. 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. During the operational phase, the proposed development is likely to have minimal effect on employment.

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.

The 2022 Census also provides information on the general health profile of the population for each Electoral Division. The statistics show that, in total (a sum of all of the applicable EDs), the local population has indicated that their 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.

4.1.2 Potential Effects of the Proposed Development

4.1.2.1 Settlement Patterns

As it is expected that the majority of the 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 70 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.

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.

4.1.2.2 Economic Activity And Employment

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.

During the operational phase, the proposed development is likely to have minimal effect on employment.

4.1.2.3 Social And Land Use

New development proposals have the potential to affect 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.

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 effect of construction traffic is expected to be temporary but negative to the area immediately in and around the development site. The development will have no full-time operational staff and will generate only minimal traffic from periodic inspection and maintenance.

The proposed development will have no long-term effect on the land uses in the proximity of the proposed site.

4.1.2.4 Human Health

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.

4.1.2.5 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.

4.1.3 Mitigation and Residual Effects

4.1.3.1 Settlement Patterns

Residents and affected parties will receive advance notice of any planned utility diversions or service disruptions. Clear and timely communication will be provided to allow for necessary preparations. Ongoing engagement with the local community will ensure any concerns are addressed promptly.

4.1.3.2 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.

4.1.3.3 Social And 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.

4.1.3.4 Human Health

The health and safety mitigation measures provided in the water, air emissions, noise and traffic Chapters (numbers 6, 8, 10 and 13) will be complied with. The CEMP and Health and Safety plans which comply with the relevant health and safety standards and protocols will be developed prior to commencement of the project.

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.

4.1.3.5 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.

4.2 Biodiversity

This chapter of the **EIAR** assesses and evaluates the likely significant effects of the proposed development on the biodiversity aspects of the site and surrounding area. In assessing likely potential and predicted effects, account is taken of both the importance of the attributes and the predicted scale and duration of the likely effects.

4.2.1 Baseline Environment

The site comprises artificial surfaces and intensively managed crop systems, framed by hedgerows and treelines. The site is neighboured by other agricultural lands, various industrial estates, a quarry and road networks. Taking account of publicly available information and the results of the surveys undertaken, the site does not contain any particularly sensitive, rare or protected habitats. Refer to **Figure 4-1** for the habitats associated with the proposed development.

The site is not subject to any nature conservation designations and does not occur adjacent to any designated conservation area. A drainage ditch connects the site to the Huntstown_08 Stream located less than 400m south of the proposed development site. This stream is hydrologically connected to Malahide Estuary SAC and Malahide Estuary SPA. With regard to European Sites, the Appropriate Assessment Screening report concluded that the proposed development will not adversely affect (either directly or indirectly) the integrity of any Natura 2000 sites.

There were no notable rare or protected species recorded on-site during the field survey or the desk study. Species records within the proposed development site were composed of mainly common Irish faunal and floral species and are also found in the wider environs extending away from the development site.

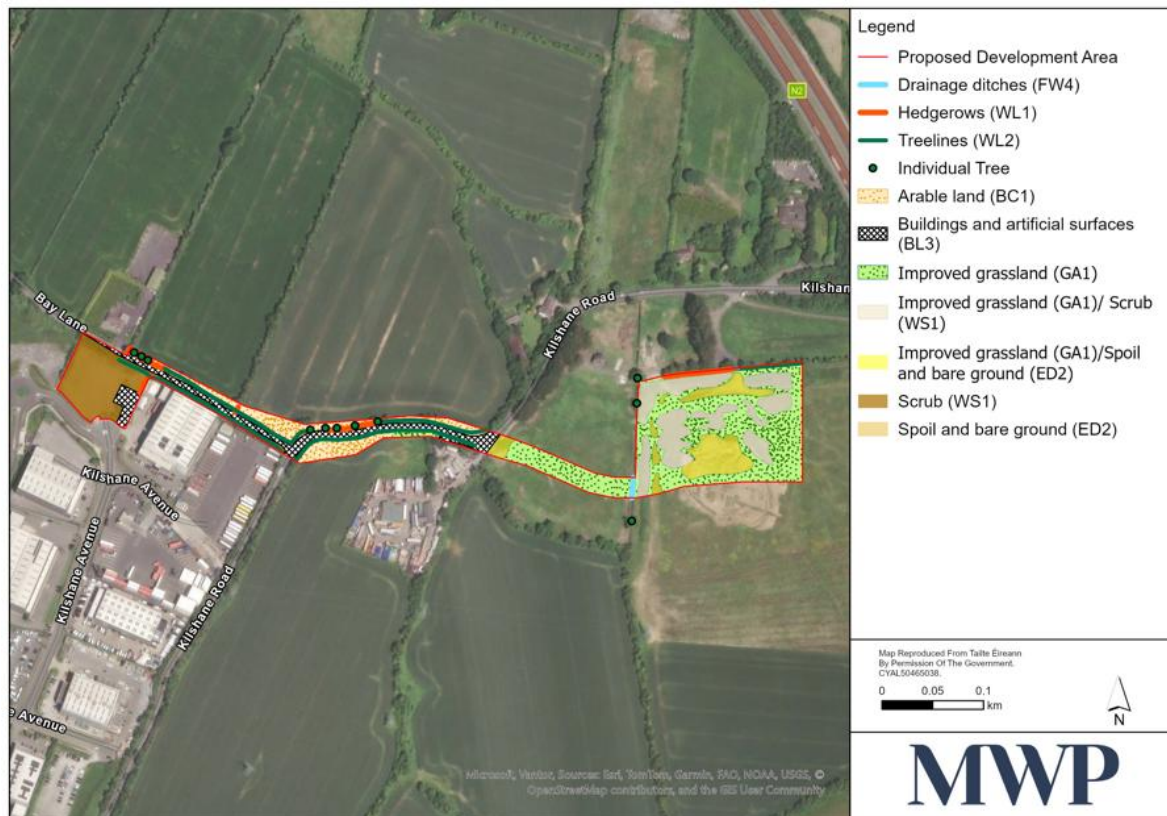


Figure 4-1: Habitat Map of the Site

4.2.2 Potential Effects of the Proposed Development

4.2.2.1 Construction Phase

In absence of mitigation measures, the construction phase would present potential effects on the following

- Habitat loss;
- Habitat disturbance;
- Aquatic habitats; and
- Fauna.

4.2.2.2 Operational Phase

In absence of mitigation measures, the operational phase would present potential effects on the following Important Ecological Features:

- Bats (due to increased lighting); and
- Faunal Species (excluding bats).

4.2.3 Mitigation and Residual Effects (Post Mitigation)

In order to reduce impacts on biodiversity, a number of mitigation measures will be adopted as part of the construction works on site. These include:

- Protection of water quality;

- Biosecurity; and
- Multiple measures to protect fauna;

4.3 Water

This chapter of the **EIAR** assesses and evaluates the likely significant effects of the proposed development on the hydrological and geohydrological aspects of the site and surrounding area. In assessing likely potential and predicted effects, account is taken of both the importance of the attributes and the predicted scale and duration of the likely effects.

4.3.1 Baseline Environment

From analysis of GSI National data, the bedrock aquifer underlying the proposed development site is a Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones. The Groundwater Body (GWB) underlying the site is the Swords Groundwater Body (GWB) (EU code: IE_EA_G_011). The current WFD risk score of this water body is 'Not at Risk' meaning the GWB has achieved its objectives and has either no significant trends or improving trends. The Swords GWB which underlies the proposed development site has been given a classification status of "Good" for the last WFD cycle (2016-2021).

Aquifer vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated. The GSI Map currently displays varied aquifer vulnerability across the region. The majority of the proposed development site is classified as 'Moderate' vulnerability with a small section on the east side of the proposed development site near the proposed AGI classified as 'High' vulnerability. According to the GSI, there are no wells or springs located within the proposed development area or within the immediate vicinity.

The proposed development site is located within the Nanny-Delvin Catchment (Hydrometric Area 08) and the Broadmeadow sub-catchment (Sub catchment ID 08_3). The current EPA watercourse mapping does not include any existing streams within the subject site boundaries, and a review of the historical mapping records provided within the GeoHive website do not indicate any watercourses within the site.

The site where the AGI is proposed is currently a greenfield site. The topographic survey completed as part of the EIAR for Kilshane Power Station (Environmental Impact Services, 2023) and the site walk over undertaken by MWP in April 2024 has confirmed that the field boundary hedgerows contain drainage ditches (refer to **Figure 4-2**) which convey run off to the Huntstown Stream (to the south), during heavier rainfall events. There is a drainage ditch located to east and west of the proposed Newtown AGI site. The pipeline will cross the drainage ditch to the west of the proposed Newtown AGI location. The open cut crossing will be carried out as quickly as possible (typically 3-4 days) to minimise the potential environmental impact.

The Huntstown Stream is a tributary of the Ward_030 WFD surface water body, which currently, the EPA classifies as 'Moderate' and is 'At risk of not achieving good status'. This moderate status is related to the nitrogen (nitrate, specifically) and orthophosphate conditions measured in the Ward River.

A Flood Risk Assessment was undertaken by MWP in October 2025. This assessment also concluded that the site is located within Flood Zone C as defined in the Flood Risk Management Guidelines and is appropriate for the proposed development. It was further demonstrated that the proposed development will not have a negative effect on flooding elsewhere and that the risk to occupants of the site will be low.

According to the NPWS Designations Viewer (2025), there are no Natura 2000 sites on or in the vicinity of the subject site. The proposed development site has an indirect hydrological pathway or connection with the

Malahide Estuary SPA/SAC/pNHA through the local drainage network, the Huntstown Stream and the Ward River. The Malahide Estuary is located c. 10.2km northeast of the site.

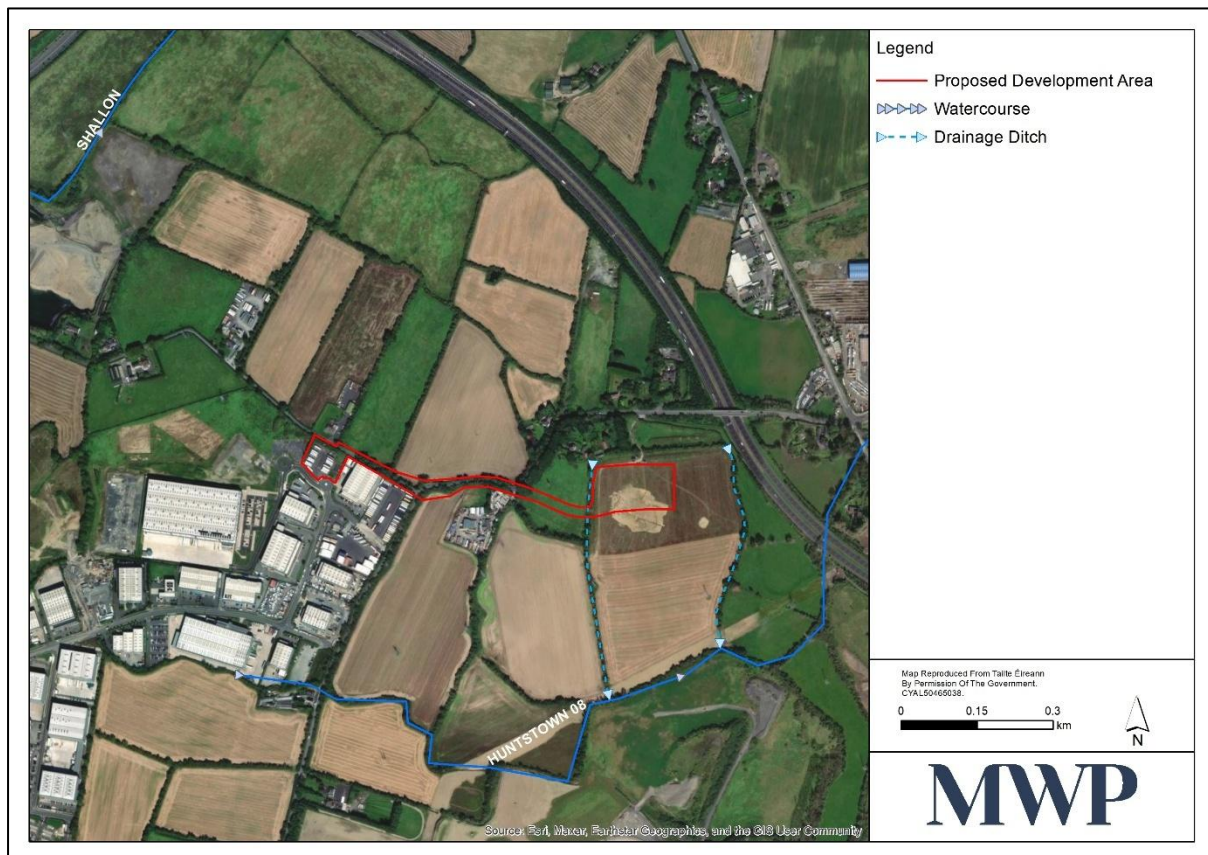


Figure 4-2: Local Hydrology

4.3.2 Potential Effects of the Proposed Development

4.3.2.1 Construction Phase

In absence of mitigation measures, the construction phase would present potential effects associated to the following activities:

- Increased sediment loading in run-off;
- Uncontrolled discharges, fuel and other accidental spills;
- Changes to the hydrological flow regime; and
- Potential effects on the water framework directive status.

4.3.2.2 Operational Phase

In absence of mitigation measures, the operational phase would present potential effects associated to the following activities:

- Increased sediment loading in run-off:

- The new hardstanding at the Newtown AGI and BV extension sites will result in increased runoff which could have increased sediment. The operational phase of the proposed development will include the BV extension within an already built up industrial area with runoff draining to a swale, the underground transmission pipeline along Bay Lane and Kilshane Road (L3120) which have their own existing stormwater systems and the Newtown AGI which will connect into the drainage system within the proposed Kilshane Energy Facility site.
- Uncontrolled discharges, fuel and other accidental spills:
 - There will be no uncontrolled discharges or spills resulting from the underground transmission pipeline during the operational phase of the proposed development. There is a potential for localised leaks and spillages from vehicles along access roads and in parking areas at the BV extension and the Newtown AGI which could lead to contamination of groundwater via infiltration or surface water resources via run-off.
- Changes to the hydrological flow regime:
 - During the operational phase of the proposed development, there will be no additional changes to the hydrological flow regimes. The BV extension will be located in an industrial area, the pipeline will be underground and the Newtown AGI will be located within the Kilshane Energy Facility. Areas of new hardstanding will be small in area.
- Potential effects on the water framework directive status:
 - There is no potential for negative effects on the Huntstown Stream (a tributary of the Ward River) or Swords GWB during the operational phase. the potential effect on Water Framework.

4.3.2.3 Mitigation and Residual Effects (Post Mitigation)

In order to reduce impacts on the hydrological environment, a number of mitigation measures will be adopted as part of the construction works on site. These include:

- Surface water management during construction;
- Fuel and chemical handling; and
- Soil removal and compaction.

4.4 Land and Soils

This chapter of the **EIAR** evaluates the likely significant effects, if any, which the proposed development will have on Land, Soils and Geology. The chapter initially provides a description of the receiving environment of the site and the potential impacts of the development. When assessing the potential impacts, this assessment considers the significance of the environmental attributes, and the predicted scale, and duration of the likely effects.

4.4.1 Baseline Environment

Land use surrounding the overall site is characterised by a mixture of primarily agricultural use and industrial function. Land to the north and northeast is dominated by farmland and scattered houses with associated farming use with the exception of Bay Lane Quarry. Dublin Airport is located approximately 3.1km to the northeast. Huntstown Quarry and adjacent Huntstown Powerplant are located a short distance to the south, while Dublin Airport Logistics Park and Northwest Business Park are found to the east and west of the site, respectively. Further south are more greenfield lands and the M50 motorway. The land use at the site has been mapped as shown in

Figure 4-3.

The proposed development site is dominated by land mapped as *Industrial and commercial units* (proposed BV extension), with the proposed gas pipeline route and Newtown AGI sites mapped as *Non-irrigated arable land* (CORINE Land Cover 2018 – EPA).

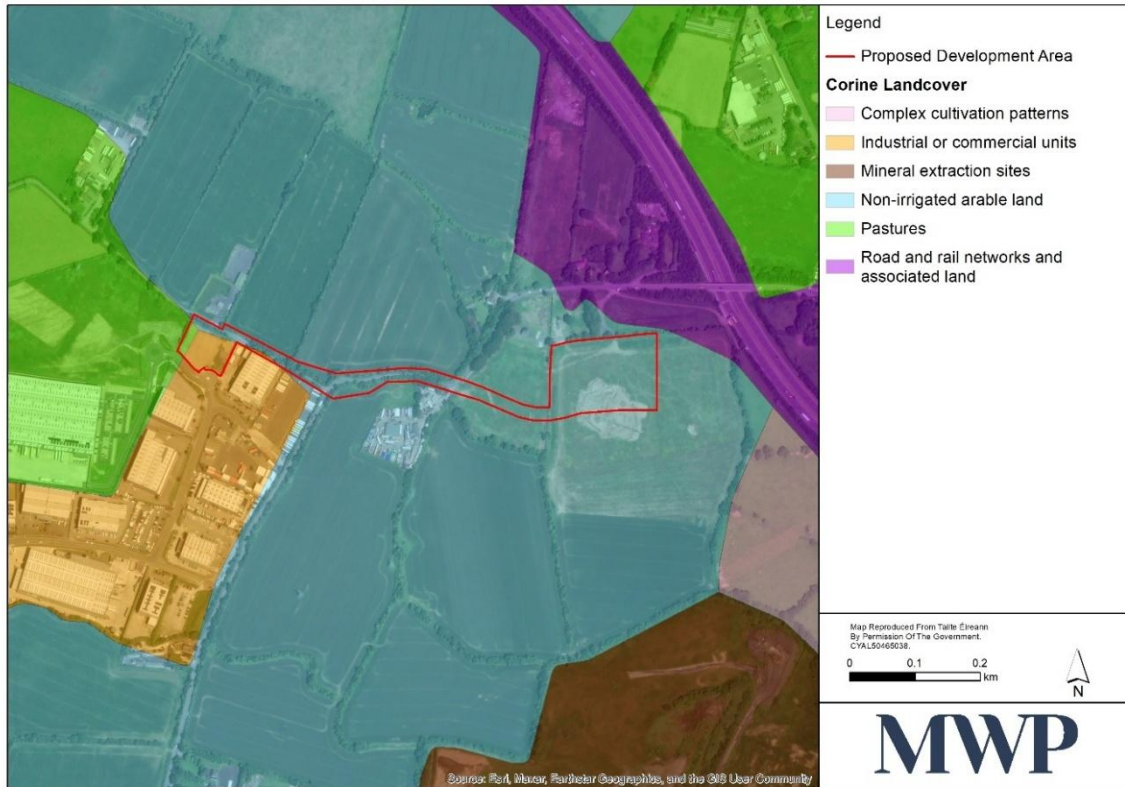


Figure 4-3: CORINE Land Use Map

Site Investigations at the BV extension site were undertaken by Causeway Geotech between 01/04/2025 and 28/04/2025. Topsoil (typically 200–400 mm thick) overlies made ground of reworked sandy gravelly clay with concrete and brick fragments, extending to a maximum depth of 2.65 m, above glacial till of sandy gravelly clay, occasionally containing cobbles, stiff in upper layers and very stiff at depth.

Samples were analysed for landfill disposal and hazardous waste classification. Results show all determinands at low concentrations, well below hazardous thresholds. Minor levels of TPH and associated aromatics were detected, while heavy metals, PAHs and PCBs were generally below or near detection limits. Soils are therefore non-hazardous and suitable for disposal under non-hazardous WAC.

The main topographical features within the study relative to the pipeline are the L3120 Kilshane Road; Bay Lane, two agricultural fields on the proposed Kilshane Power Station site and the temporary car park next to existing Kilshane BV station. This car park is raised approximately 5 feet above the current level of Kilshane BV. The topography between Newtown AGI and Kilshane BV is generally flat, with some minor variations in ground level.

The bedrock geology of the proposed development site and the surrounding area is dominated by Calcareous shale and limestone conglomerates referred to as part of the Tober Colleen Formation

The GSI/EPA/Teagasc mapping shows that the soil type beneath the local area is composed predominantly of *BminDW - Grey Brown Podzolics/Brown Earths Basic* coupled with *BminPD - Surface water Gleys/Ground water Gleys Basic* areas in the north section of the BV extension site, as well as the north east section of the AGI site, as

presented in **Figure 4-4**. The EPA soil mapping indicates that the soils comprise primarily of Carboniferous limestone diamictons (tills). This till is made up of glacial CLAYs which are less permeable than alluvium subsoils.

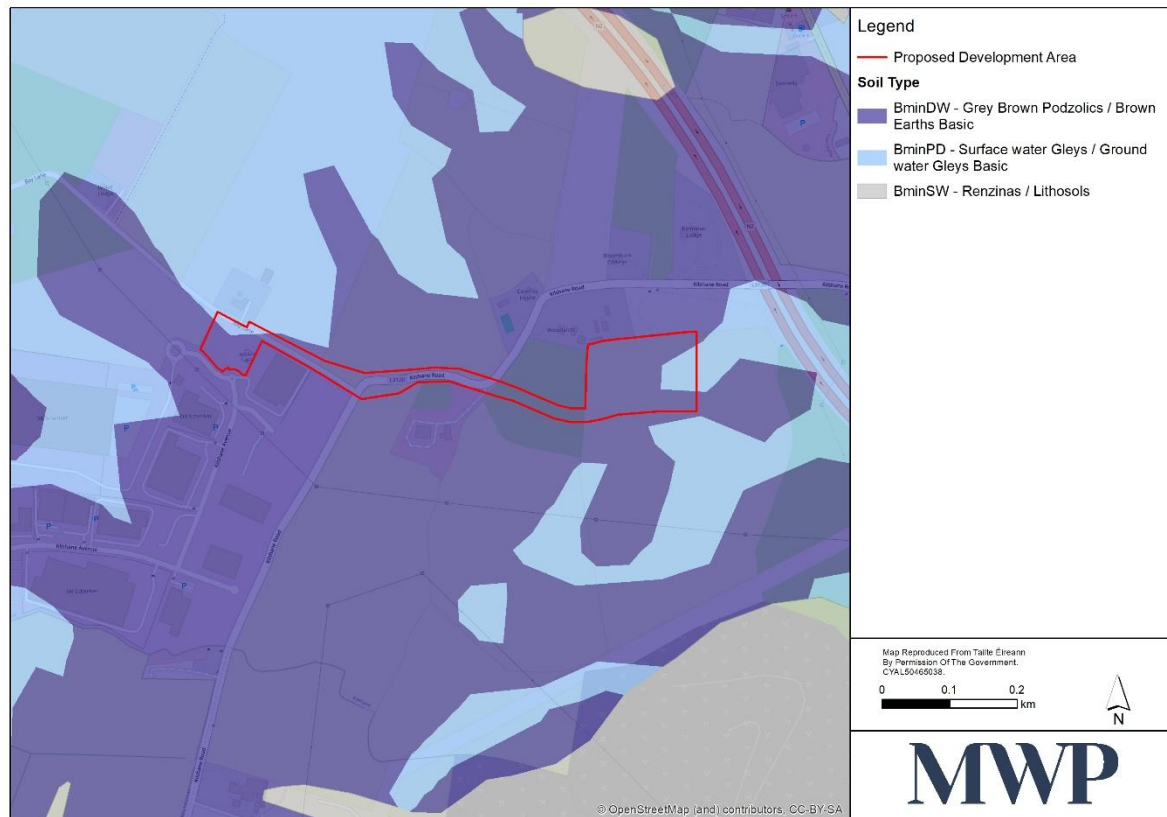


Figure 4-4: Soils Map (Source: Teagasc)

The proposed development site is located in a Low Radon Area where it is estimated that less than 1% of dwellings within the given area will exceed the relevant reference level.

Huntstown quarry is located approximately 0.3km south of the proposed Newtown AGI. There are no other active quarries or pits located in the vicinity of the proposed development site.

According to the GSI-mapping, there are few mineral and non-mineral locations recorded in the area, but none of these are within the proposed development site. The closest is non-metallic mineral – Huntstown limestone quarry which used to produce aggregate and concrete products.

The GSI Map Viewer was reviewed to identify sites of geological heritage for the site and surrounding area. The Huntstown Quarry is the closest audited site located approximately 0.3km south of the proposed development site. The proposed development site is not in an area susceptible to landslides.

4.4.2 Potential Effects of the Proposed Development

4.4.2.1 Construction Phase

In absence of mitigation measures, the construction phase would present potential impacts associated to the following activities:

- Excavation and Infilling;

- Accidental Spills and Leaks; and
- Loss of Agricultural Land.

4.4.2.2 Operational Phase

Once operational and reinstatement has occurred, the underground gas transmission pipeline will not alter the existing hardstanding areas that it will run beneath and will not result in any additional hardstanding.

There will be additional localised areas of hardstanding at the Newtown AGI and BV extension sites.

There is limited potential for leaks or spills of petroleum hydrocarbons from vehicles during site maintenance activities during the operation of the development. Unmitigated leaks or spills may lead to contamination of soil. Soils that are contaminated by petroleum hydrocarbons can affect soil health. However, it is noted that during the operational phase any accidental discharge will more likely impact stormwater drainage due to the hardstand and drainage infrastructure proposed and any releases to drainage will be mitigated through petrol interceptors.

Therefore, there are no potential impacts during the operational phase on land and soils as results of the proposed development.

4.4.3 Mitigation and Residual Effects (Post Mitigation)

4.4.3.1 Construction Phase

In order to reduce impacts on the soils, geological and hydrogeological environment, a number of mitigation measures will be adopted as part of the construction works on site.

- Implementation of a Construction & Environmental Management Plan (CEMP);
- Management of excavations, stockpiled materials and suspended solids;
- Management and disposal of accumulated rainfall/surface water/hydrostatic testing water;
- Management of hydrocarbons and other construction chemicals;
- Management of domestic wastewater;
- Regular inspection of surface water run-off and sediment controls;
- Soil sampling; and
- Regular inspection on activities, such as refuelling and pouring concrete to ensure there are no unintentional leaks to ground.

The implementation of the mitigation and monitoring measures detailed in **Section 7.6.1** and **7.6.2** in **Chapter 07 Land and Soils** of this **EIAR** will ensure that the potential impacts on land, soils and geology during the construction phase are adequately mitigated.

4.4.3.2 Operational Phase

There are no potential impacts during the operational phase on land and soils as results of the proposed development therefore to mitigation measures are proposed.

4.5 Air Quality

This chapter describes and evaluates the effect which the proposed development may have on air quality as defined in the Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022).

The chapter provides a description to the baseline air quality and identification of the sensitivity of the surrounding environment. It then goes on to identify and assess the potential effects on air quality associated with the construction and operational phases of the proposed development. The chapter also includes the mitigation measures to reduce or eliminate potential significant air quality effects.

The chapter concludes with the residual air quality effects, which remain after applying mitigation measures.

4.5.1 Baseline Environment

Air quality monitoring programs have been undertaken in recent years by the EPA. The most recent annual report on air quality in Ireland is “Air Quality in Ireland 2024” (EPA, 2025). In terms of air monitoring and assessment, the proposed development site is located within Zone A (Dublin). The long term data has been used to determine the background concentrations accounts for all non-traffic derived emissions (e.g. natural sources, industry, home heating, etc). Long term baseline monitoring results for Zone A show some baseline exceedances of NO_x limits in Zone A, for all other monitored pollutants, existing baseline levels were well below ambient air quality limit values in the vicinity of the proposed development.

4.5.2 Potential Impacts of the Proposed Development

4.5.2.1 Construction Phase

Dust emissions are considered the main impact to air quality during the construction phase. In order to determine the level of impact from dust during the construction phase, an assessment of potential dust impacts as a result of construction phase was carried out. The assessment was carried out in accordance with UK Institute of Air Quality Management (IAQM) guidance.

The assessment involves categorising the site sensitivity as high, medium or low in regards sensitivity of area to dust soiling, human health and ecological impacts from dust emissions arising during the construction phase.

The sensitivity is then combined with dust magnitude for the three distinct categories (earthworks, construction and trackout) in order to assign a risk of potential dust effects (high, medium, low). Mitigation measures are then prescribed based on the risk of potential dust impacts.

The assessment found that the sensitivity of the proposed development area was medium in regards dust soiling and low in regards human health impacts. There are no Natura 2000 sites located within 50 to 250m of the proposed development and therefore the risk of dust emissions effecting ecological sites was scoped out from further assessment.

The dust assessment concluded that, in the absence of mitigation, there is a medium risk of dust soiling effects during earthworks and low risk of human health effects. There is a low to negligible risk of dust soiling and human health effects during remaining construction activities (construction and trackout).

4.5.2.2 Operational Phase

During the operational phase, the frequency and number of maintenance vehicle visits will be occasional which will likely have an imperceptible effect on air quality.

Once the proposed development is fully operational, there will be no emissions direct from the operating facility, when adequate maintenance is carried out.

As part of the initial commissioning of the gas pipeline, gas venting or purging will be required which will be carried out in line with IGE/SR/22. Methane will be the primary component of the released gas. However, this gas venting during commissioning will be a once off event and will not involve the release of significant quantities of methane to atmosphere. Due to the small amount of gas to be released and the once-off, short duration of the event, this is not predicted to have a significant effect on air quality.

During the operational phase, the system will be closed and there will be no emissions of gas to the ambient environment under typical operational conditions.

Dust emissions are not considered risk during the operational phase of the proposed development and therefore no dust assessment was required for this stage of proposed development.

4.5.3 Mitigation and Residual Effects (Post-Mitigation)

4.5.3.1 Construction Phase

Detailed dust mitigation measures are included in **Section 8.5.1 of Chapter 08 Air Quality**. Once these measures are implemented, effects from dust emissions to air quality at dust sensitive receptors are predicted to be imperceptible.

4.5.3.2 Operational Phase

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

4.6 Climate

This chapter considers the potential effects on climate arising from the proposed development, as well as considering the effects of climate change on the proposed development, as defined in the Environmental Protection Agency (EPA) documents 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (2022).

The nature and probability of effects on climate arising from the overall project has been assessed.

Mitigation measures have been provided to prevent significant effects and climate related residual effects associated with the proposed development are also summarised.

4.6.1 Baseline Environment

The EPA published "Ireland's Provisional Greenhouse Gas Emissions 1990–2024" (EPA, 2025), providing early estimates ahead of final submissions to the EU and UN in 2026. Ireland's total GHG emissions (excluding Land Use, Land Use Change and Forestry (LULUCF)) were 53.75 Mt CO₂eq in 2024, a 2.0% drop from 2023 and the second consecutive year below the 1990 levels. Most sectors reduced emissions, with the Energy Industries sector showing the largest decline due to less coal, oil and peat use. However, the reductions remain insufficient to achieve the 51% cut targeted by 2030.

Baseline information on climate was based on trends in the climate of Ireland. Changes in Ireland's climate are expected to evolve over time in line with global trends including increasing temperatures, changes in precipitation

patterns, and changes in the variability and intensity of storms. This has resulted in flooding events, sea level rise and sea surging events.

4.6.2 Potential Impacts of the Proposed Development

4.6.2.1 Construction Phase

During the construction phase, there will be carbon emissions associated with use of materials such as steel and concrete, as well as energy sources such as electricity for powering machinery and therefore there will be potential for GHG emissions during the construction stage of the proposed development.

The predicted concentrations of CO₂ for the construction phase predicted to be a small fraction of the latest available Ireland annual GHG emissions of 53.75 Mt CO₂eq and Ireland's Industrial sector 2030 emissions ceiling.

The effects of GHG emissions during the construction stage are likely to be not significant and temporary.

Potential for changes to long-term seasonal averages as a result of climate is not considered to be as significant by the construction years (Q2 2026 and be completed by Q1 2027).

Consideration will still be given to the project's vulnerability to climate impacts during the construction phase and the contractor will manage the risk of climate change effects such as flooding, warm/cold weather events, storms and include management strategies in risk assessments and method statements.

In the absence of mitigation, the effects of climate change on the proposed development during the construction stage are therefore likely to be not significant and temporary.

4.6.2.2 Operational Phase

During the operational phase there will be only occasional traffic that visits the site to carry out maintenance works and therefore traffic emissions will be minimal. Therefore, traffic will not be of magnitude to cause a significant impact on climate.

As part of the initial commissioning of the gas pipeline, gas venting or purging will be required which will be carried out in line with Safety (SR Series) standard IGEM/SR/22. Methane will be the primary component of the released gas. Methane gas has the potential to impact climate as it is a greenhouse gas with a global warming potential (GWP100) of 28 times that of carbon dioxide (CO₂). However, this gas venting during commissioning will be a once off event and will not involve the release of significant quantities of methane to atmosphere. Due to the small amount of gas to be released and the once-off, short duration of the event this is not predicted to have a significant impact on climate.

During the operational phase, the system will be closed and there will be no emissions of gas to the ambient environment under typical operational conditions.

A risk assessment has been conducted for potentially significant impacts on the proposed development associated with climate change. The risk assessment focused on the proposed development's ability to adapt to climate change. The main areas of climate change which could potentially impact the proposed development site were identified as increased temperatures and flood risk. These were assessed and risk to the proposed development was found to be not significant.

Taking the above into account, the effects of climate change on the proposed development are likely to be negative but not significant.

4.6.3 Mitigation and Residual Effects (Post-Mitigation)

4.6.3.1 Construction Phase

Best practice mitigation measures have been prescribed in **Section 9.5.1.1** of **Chapter 09 Climate** of this **EIAR** for the construction phase of the proposed development.

There are no significant effects to climate during the proposed development construction phase however the proposed development is committing to reducing climate impacts where feasible.

4.6.3.2 Operational Phase

During the operational phase, there are no significant climate effects and therefore no mitigation measures are required.

4.7 Noise and Vibration

This chapter considers the potential effects on noise and vibration sensitive receptors arising from the proposed development.

This chapter includes a description of the receiving ambient noise climate in the vicinity of the subject site and an assessment of the potential noise and vibration impact associated with the proposed development, during both the temporary construction phase and the long-term operational phase, on its surrounding environment. The assessment of direct, indirect and cumulative noise and vibration impacts on the surrounding environment have been considered as part of the assessment.

Mitigation measures are included, where relevant, to ensure the proposed development is constructed and operated in an environmentally sustainable manner in order to ensure minimal impact on the receiving environment.

4.7.1 Baseline Environment

The nearest noise sensitive locations are identified as residential and commercial units, refer to **Figure 4-5** and **Table 4-1**. Baseline monitoring was previously carried out as part of the Kilshane Power Station EIAR at NML1 and NML2 and this was used to characterise the soundscape of environment.

There will be no evening or night-time works. For the construction phase of the development, the adopted daytime threshold limits were as follows:

- 70dB $L_{Aeq, 1hr}$ at noise sensitive locations; and
- 75dB $L_{Aeq, 1hr}$ at commercial locations.

For the operational phase of the proposed development, the adopted threshold limits were set out as follows:

- Daytime 55dB $L_{Ar,T}$;
- Evening 50 dB $L_{Ar,T}$; and
- Night-Time 45 dB $L_{Ar,T}$.

Table 4-1: Noise Sensitive Receptors

NSL Reference	Receiver Description
NSL 1	Residential
NSL 2	Residential

NSL Reference	Receiver Description
NSL 3	Commercial
NSL 4	Commercial
NSL 5	Commercial
NSL 6	Commercial
NSL 7	Commercial
NSL 8	Residential
NSL 9	Residential
NSL10	Residential

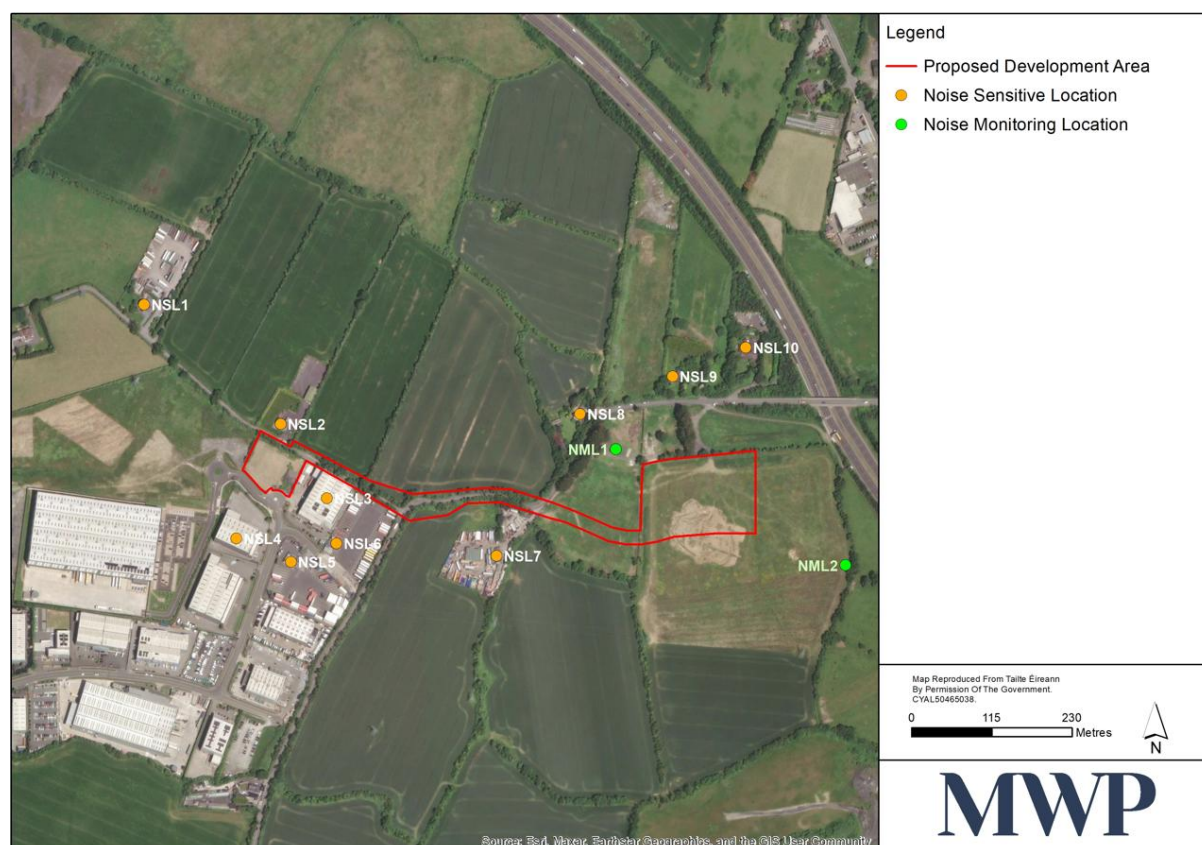


Figure 4-5: Environmental Noise Survey Monitoring Locations and Noise Sensitive Locations

4.7.2 Potential Impacts of the Proposed Development

4.7.2.1 Construction Phase

Noise calculations were carried out to predict noise levels at NSLs from the proposed development works including AGI, gas pipeline BV Extension. The associated noise levels have been sourced from BS 5228 *Noise and Vibration from open and construction sites*, totalled, and extrapolated to the nearest noise sensitive location.

In the absence of mitigation, NSL2 may exceed the 70 dB $L_{Aeq,1hr}$ residential construction noise limit by 3 dB during the pipeline works. The predicted noise level from works along the main gas pipeline at the nearest commercial receptor, NSL3, is 84 dB $L_{Aeq,T}$, which is 9 dB above the 75 dB $L_{Aeq,1hr}$ commercial limit. All residential properties are

located at a sufficient distance from potential sheet piling activities along the main gas pipeline and therefore are not expected to experience any increase on the general construction noise.

In the absence of mitigation, the construction works for the BV Extension are expected to exceed the construction noise limit of 70 dB $L_{Aeq,1hr}$ for residential properties at NSL2 and the construction noise limit of 75 dB $L_{Aeq,1hr}$ for commercial properties at NSL3.

Noise from the AGI works is predicted to exceed 70 dB $L_{Aeq,1hr}$ within 50 m of the site. At NSL9, the nearest residential receptor, predicted noise is 62 dB $L_{Aeq,T}$, which is 8 dB below the 70 dB $L_{Aeq,1hr}$ residential limit. Noise at more distant residential and commercial receptors is also expected to remain below the respective 70 dB and 75 dB $L_{Aeq,1hr}$ limits.

Construction Traffic at the L3120 road will not cause significant noise. In order to increase traffic noise levels by 1 dB traffic volumes would need to increase by the order of 25% along the local road network and this level of traffic increase is not anticipated.

The movement of construction vehicles to each of the proposed works areas will be via the existing road network. The resultant vibration levels will be no greater than is currently experienced when HGVs pass along the road network.

The main potential source of vibration during the construction programme is associated with from piling. No significant vibrations are predicted from remaining construction works.

4.7.2.2 Operational Phase

The Kilshane Gas Pipeline will be underground and therefore there will be no operational noise and vibration impacts associated with this aspect of the proposed development.

The AGI and BV Extension are the above ground components of the proposed development.

The BV extension consists 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.

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. As is the case with the BV Extension, significant noise is not predicted from the above ground gas pipeline infrastructure at the AGI works area, once regular maintenance is carried out.

4.7.3 Cumulative

4.7.3.1 Construction Phase

The construction programme for the AGI, block valve (BV) and pipeline works will be determined by the client's phased delivery of works around the roadway network and power station site. Given the uncertainty associated with project sequencing, this EIA assumes that all works, including the 220 kV Transmission Line connection, the proposed gas pipeline, the Kilshane Power Station, the 220 kV GIS Substation and AGI, will be constructed concurrently.

The nearest NSLs to the Kilshane Power Station are NSL8 and NSL9.

The cumulative noise will not exceed the adopted construction noise limit of 70 dB $L_{Aeq,1hr}$ at NSL9. It is worth noting that the predictions are conservative and based on a worst-case scenario where all construction plant is operating simultaneously. In reality, works from each project will be phased accordingly to reduce noise levels.

With hoarding in place at the boundary of the AGI works, a 10dB reduction is predicted and therefore no significant noise impacts are predicted.

4.7.3.2 Operational Phase

The AGI operational area will be adjacent to the permitted Kilshane Power Station as well as the proposed Kilshane GIS and Grid Connection.

As part of the Kilshane Power Station EIA, the effects of operational phase noise was assessed. The predicted noise from operation was predicted to be slight to imperceptible for the NSLs.

There will be no noise from the Kilshane Energy Grid Connection and therefore no cumulative noise impacts are predicted as a result of this element of infrastructure in operation alongside the proposed development. The environmental report carried out for the GIS and Grid Connection for Kilshane Energy considered that noise the substation was not predicted to be an issue off site given the distance of 150m between substation and nearest noise NSL.

As the operational noise effects from this proposed development are predicted to be imperceptible, no cumulative effects are predicted from the operation phase of the above developments in combination with this proposed development.

4.7.4 Mitigation and Residual Effects (Post-Mitigation)

4.7.4.1 Construction Phase

Mitigation is outlined as best practice measures as outlined in **Section 10.5.1, Volume II**, of this **EIAR**, to reduce noise effects of construction phase. Mitigation measures include erection of hoarding to screen noise during construction. Where required, the use of temporary hoarding or mobile screens will be used to aid in reducing noise levels from potential high levels of construction activity. Screening will be erected around the AGI and BV Extension Areas and also where gas pipeline works are within 50m of a residential NSL and 25m of a commercial NSL. Where piling is required, hoarding should be installed within 70m of the nearest NSL. This will be implemented using standard site hoarding or using mobile/demountable screens around noisy items of plant or works.

Vibration levels should not exceed those described in BS5228 –1&2:2009 + A1 2014, Code of Practice for the Control of Noise and Vibration on Construction and Open Sites and this chapter. The contractor undertaking the construction works will be responsible for construction phase noise mitigation.

With mitigation in place, no significant noise and vibration effects are predicted during the construction phase of the proposed development.

4.7.4.2 Operational Phase

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

4.7.5 Monitoring Measures

4.7.5.1 Construction Phase

It is required that the appointed contractor monitor levels of noise during critical periods and at the nearest noise sensitive locations during the construction phase.

4.7.5.2 Operational Phase

There are no noise and vibration monitoring requirements during the operational phase.

4.8 Archaeological, Architectural and Cultural Heritage

4.8.1 Baseline Environment

An archaeological, architectural and cultural heritage assessment was undertaken in relation to the proposed Gas to Kilshane Energy Pipeline, Above Ground Installation (AGI) compound and Kilshane Block Valve (BV) extension located in Kilshane townland, Finglas, Co. Dublin (ITM 710390, 742630). This was to identify and describe known and potential cultural heritage constraints within the proposed development area and its environs and to propose mitigation measures to offset such potential effects. The western extent of the site is within the existing Kilshane BV and the footprint of Kilshane Road and Bay Lane, while the eastern extent traverses two green fields.

The site contains no known monuments, as listed within the Record of Monuments and Places or Sites and Monuments Record for County Dublin. There are also no Protected Structures, as listed in the *Fingal Development Plan 2023–2029*, or any other known architectural or cultural heritage sites or features. The proposed Kilshane BV extension will have no effect on the archaeological, architectural and cultural environment as it is on a previously developed area of ground within an area of the existing Kilshane BV.

The site does, however, lie within an archaeological sensitive area, with previously unknown monuments and features of archaeological significance identified during several previous investigations. The eastern portion of the site was subject to a geophysical survey carried out under licence no. 22R0092, and subsequently, test trenching and excavation under licence no. 22E0348, with monuments and features of archaeological significance identified and excavated. This includes an irregular-shaped enclosure complex with associated internal and external features. The fields adjacent to and north of Bay Lane were also previously subject to a number of archaeological investigations, including monitoring of a gas pipeline (E00440) as early as 1988, with subsequent excavation identifying an extensive burial ground (DU014-048----). More recently, the fields adjacent to the current site were subject to further assessments, including geophysical surveys (22R0059, 22R0201, 23R0112 and 22R0269) with subsequent test trenching and monitoring (22E0536). This work confirming the presence of three major enclosing ditches. The area to the south of Bay Lane was also subject to a geophysical survey (21R0134), which suggested the presence of several enclosures, and this was confirmed by subsequent test trenching and excavation (21E0398; 21E0580; 22E0045). These included a rectilinear enclosure (Site A), a D-shaped enclosure and a sub-circular enclosure (Site B), a second larger rectilinear enclosure (Site C), and two additional sites represented by a ditch with a charcoal-rich fill and a burnt pit, representing a former field system (Site D), and a linear ditch, two possible curvilinear ditches, a pit and a post-hole (Site E). Pits, gullies and disturbed areas of burning were also preserved by record.

4.8.2 Potential Effects of the Proposed Development

The predicted effects on the known archaeological heritage in relation to the proposed development are regarded as being none. No effects on the recorded archaeological resource (SMR, RMP, National Monuments) were

identified, and no indirect or visual effects on the nearest recorded monument outside the proposed development site boundary was noted.

There is, however, a potential effect on the unknown archaeological resource, which lies in the uncovering of sub-surface archaeological features during topsoil stripping and groundworks associated with the construction phase of the proposed development. These may be located within the undisturbed areas of the site, between previously excavated test trenches and in the footprint of the existing roads at depths that were not previously exposed, and it is possible that undisturbed ground might also exist in the latter area. This potential is due to the existence of several archaeological features, including enclosures and a burial ground, within the site and surrounding area and because some portions of the site were not previously subject to archaeological investigations. Should archaeological features be present, the proposed development will have a negative, permanent and profound effect on such remains.

4.8.3 Mitigation and Residual Effects

The following mitigation measures are required to offset the impact on any unknown archaeological features if present. This will be carried out subject to the approval of the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH) and further mitigation may be sought by the NMS.

- Monitoring of all groundworks, including topsoil stripping, during the construction phase will be carried out to establish whether previously unknown archaeological features or deposits are present. If features of archaeological significance are exposed, then further mitigation measures will be implemented following consultation with the National Monuments Service. This will be carried out by experienced, licence-eligible archaeologists working under licence from the Department of Housing, Local Government and Heritage;
- Adequate time and resources will be provided by the developer for the resolution of any archaeology identified within the development site and which will be directly impacted by groundworks. Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following any archaeological excavation that takes place; and
- A report is required to be compiled on completion of any archaeological excavation and will be submitted to the relevant authorities.

The residual effects are likely to be neutral and imperceptible if the recommended mitigation measures are implemented. Furthermore, although there are several existing and proposed developments within the surrounding area, there will be no cumulative effects as suitable mitigation measures have already or will be employed.

4.9 Landscape and Visual

This chapter of the **EIAR** was prepared having regard to the methodologies provided in the EPA '*Guidelines on the Information to be contained in Environmental Impact Assessment Reports*' (2022) and the Landscape Institute '*Guidelines for Landscape and Visual Impact Assessment*' (2013).

4.9.1 Baseline Environment

The proposed development is located within the Low Lying Agricultural Landscape Character Type. This Landscape Character Type has an open character combined with large field patterns, few tree belts and low roadside hedges. The main settlements located within the area include Oldtown, Ballyboghil and Lusk and parts of Malahide and

Donabate. Dublin Airport is located in this area. This low-lying area is dominated by agriculture and a number of settlements. The area is categorised as having a modest value. It contains pockets of important value areas requiring particular attention such as important archaeological monuments and demesnes and also the Feltrim Hill and Santry Demesne proposed Natural Heritage Areas.

The local landscape character comprises 'urban and urban fringe' because it is now largely surrounded by industrial, infrastructural and commercial development. This is reflected in the zoning objective of these lands as HI - Heavy Industry - Provide for heavy industry and GE -General Employment.

Landscape Sensitivity can be defined as the extent to which a landscape can accommodate change without unacceptable loss of existing character or interference with values.

The location of the proposed development in an area of low sensitivity based on the County Development Plan interactive map. The land context and setting are not within or adjacent to any key scenic views or prospects.

4.9.2 Potential Effects of the Proposed Development

4.9.2.1 Construction Phase

Increased activity will occur at the proposed development site during the construction phase of the project. Construction phase effects on the landscape are considered to be 'temporary' and will occur over an 8-10 month period.

In combination with the low landscape sensitivity designation, the significance of construction stage effects is on the landscape is deemed to be slight within the immediate surrounds of the site not significant in the wider study area where construction activities will be barely discernible.

The significance of construction stage visual effects in the immediate vicinity of the site is deemed negative, and temporary, but will reduce considerably beyond 500m from the site, where the proposed development will not be easily seen.

4.9.2.2 Operational Phase

During the operational phase, the proposed BV extension will be integrated with the existing BV in an already built-up area. A landscaping plan has been prepared for the BV site to enhance biodiversity and in addition, native hedgerow is proposed along the site boundary (subject to agreement with Fingal County Council) to offset the small area of scrub that must be removed. The road surface / agricultural grassland that may be disturbed by the pipeline will be reinstated along the pipeline corridor once construction has been completed. This will result in little evidence of the proposed pipeline during the operation phase of the project. The AGI will be constructed in a fenced off area within the proposed Kilshane Energy Facility site with appropriate landscaping undertaken around the entire Kilshane Energy Facility site.

Operational stage effects mainly relate to the maintenance works for the pipeline corridor, which will be infrequent and will be brief in nature. Maintenance operations will be much less intensive than the activity at the construction stage.

The extension to the BV and the AGI will integrate into the existing and proposed industrial facilities respectively. Visibility of this infrastructure will be limited to the immediate surroundings and will have little notable effect on surrounding local visual receptors.

4.9.3 Mitigation and Residual Effects

The remedial measures proposed relate to the implementation of appropriate site management procedures. These procedures include the control of site lighting, storage of materials, placement of compounds, delivery of materials, car parking, etc. Visual impact during the construction phase will be mitigated somewhat 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.

Construction will be guided by an **OCEMP** and the works areas will be protected by secure fencing. Existing trees and vegetation to be retained will be protected. Construction works will be monitored throughout its duration and all areas will be reinstated on completion of the works.

During the operational phase, the pipeline will be located underground. Therefore landscape and visual impacts are mitigated by design. The key mitigation relevant to landscape and visual, as well as many of the other environmental factors, was to place the pipeline underground. The BV extension will be located at the existing BV within an already built up industrial area and the AGI is proposed to be located within the proposed Kilshane Energy Facility. No additional mitigation measures are required for the operation phase.

In overall terms, the landscape and visual environment is of low sensitivity and the change arising from of the construction phase of the proposed development is of low magnitude.

4.10 Traffic and Transportation

The proposed development will provide the gas supply for the proposed Kilshane Energy Facility, via an underground gas pipeline and associated works. The proposed development will not require significant regular staffing.

4.10.1 Baseline Environment

The proposed development will be located within greenfield lands, within the Kilshane Road and Bay Lane public roads, and within an existing site in the Northwest Logistics Park.

4.10.2 Potential Effects of the Proposed Development

4.10.2.1 Construction Phase

The predicted typical and peak construction daily staff construction vehicles would be 27 vehicles and 47 vehicles, respectively, both to and from site. Peak construction daily delivery vehicle volumes would be up to 10 heavy vehicles, both to and from site, during the one to two weeks' site preparation phase. Otherwise, construction daily delivery vehicle volumes would be two to four heavy vehicles, both to and from site. The proposed peak construction would increase peak hour and daily traffic volumes on Kilshane Road, but the increases would be relatively low.

The temporary closure of Bay Lane for eight to 10 days would result in the temporary local diversion of traffic, including local traffic to/from the east end of Bay Lane, but diverted traffic volumes would be relatively low. 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.

4.10.2.2 Operational Phase

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.

4.10.3 Mitigation and Residual Effects (Post Mitigation)

4.10.3.1 Construction Phase

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.

For the construction of the proposed gas pipeline within the road, it is envisaged that the works will be split into two phases. Phase 1 of gas pipeline construction works will focus on Bay Lane, and Phase 2 on Kilshane Road. It is anticipated that Phase 1 and Phase 2 works will not run concurrently to minimise disruption to traffic in this area.

All road permanent reinstatement works will be in accordance with the requirements of Fingal County Council.

4.10.3.2 Operational Phase

The proposed development will not generate regular operational traffic, and no mitigation measures are required.

4.11 Material Assets – Waste

MWP undertook the waste management assessment. The receiving environment is largely defined by Fingal County Council (FCC) as the local authority responsible for setting and administering waste management activities in the area through regional and development zone specific policies and regulations.

4.11.1 Baseline Environment

There is currently no waste generated at the proposed development site. There are a number of waste permitted and licensed facilities located in the local Waste Region for management of waste from the construction industry as well as from municipal sources. These include soil recovery facilities, inert construction and demolition waste facilities, municipal waste landfills, material recovery facilities and waste transfer stations.

4.11.2 Potential Impacts of the Proposed Development

4.11.2.1 Construction Phase

During the construction phase, the mismanagement of waste, including the inadequate storage of waste, inadequate handling of hazardous waste, the use of inappropriate or insufficient segregation techniques, and the use of non-permitted waste contractors, could lead to negative impacts such as waste unnecessarily being diverted to landfill, litter pollution which may lead to vermin, runoff pollution from waste, fly tipping and illegal dumping of waste.

4.11.2.2 Operational Phase

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

4.11.3 Mitigation and Residual Effects (Post Mitigation)

4.11.3.1 Construction Phase

During the construction phase, typical construction waste materials will be generated which will be source segregated on-site into appropriate skips/containers, within designated waste storage areas and removed from site by suitably permitted waste contractors as required, to authorised waste facilities, by appropriately licensed waste contractors. While the accurate keeping of waste records will be undertaken. All waste leaving the site will be recorded and copies of relevant documentation maintained.

This will all be overseen by the main contractor, who will appoint a construction phase Resource Manager to ensure effective management of waste during the excavation and construction works. All construction staff will be provided with training regarding the waste management procedures on site.

A carefully planned approach to waste management and adherence to the site-specific **Resource and Waste Management Plan (Appendix 14-1)** and **Chapter 14** of the **EIAR** during the construction phase.

4.11.3.2 Operational Phase

There will be no mitigation measures required for the operational phase of this development as no operational waste will be generated.

4.12 Material Assets – Utilities

This chapter assesses ownership and access, built services and infrastructure, which have not already been addressed elsewhere in this **EIAR**. The associated built services and infrastructure in the vicinity of the site are summarised in the following sections; further detail is provided within the planning application documentation.

4.12.1 Baseline Environment

The proposed development site is located on lands at Kilshane Road, Kilshane, Finglas, Dublin 11. The area of the proposed development site assessed as part of this **EIAR** extends to c. 3.14Ha. The surrounding area is characterised by agricultural fields and Industrial uses such as logistics, power stations, and additional business park operations.

The surrounding area mostly of green fields which are bounded by established hedgerows and trees. Most of the proposed transmission gas line connection will run under public roads with a short section in the proposed Kilshane Energy owned power station site and minor sections in third party lands.

The gas pipeline route will be accessed via Bay Lane and Kilshane Road for the duration of the construction works and during operational phase if maintenance or repair work is required.

The BV site will be accessed via the existing Northwest Logistics Park Internal access road during the construction and operational phases.

The existing site access to the AGI is to the northern boundary just west of the N2 overpass. The site access is via a shared lay-by which also serves as separate access point to adjacent lands under separate ownership.

The proposed development site intersects medium / low voltage overhead lines and underground cables that cross the route on Bay Lane and Kilshane Road. The proposed pipeline will stay to the northern lane of Kilshane Road to avoid the high voltage electrical cable proposed as part of the Gas Insulated Substation and Grid Connection for Kilshane Energy.

On the west side of the proposed development site directly south of the entrance to the existing BV station, a storm network was located during the Utility Surveys which collects surface water from gullies present in the area. Other storm networks were located on the east side of the proposed development site running along parts of Kilshane Road and the junction between Bay Lane and Kilshane Road. A foul sewer network was located on the west side of the proposed development.

There is no connection to any public surface water infrastructure proposed during the construction phase.

The proposed development will not generate foul wastewater when operational or require connections to a wastewater network.

The proposed development will lead to new hardstanding at the BV and AGI. Surface water at the BV site will drain via soakaways. Surface water drainage from the AGI site will be connected to the proposed surface water infrastructure at the proposed Kilshane Energy Facility with consent from the developer.

During construction, water will be required for welfare facilities. It is anticipated that due to the short duration of works and low water requirements that water supply will be provided by tanker to the site. When operational, the proposed development will not require a potable water supply.

The proposed gas pipeline will cross telecom cables twice upon entering Kilshane Road. Eir, Virgin, BT, Enet and Aurora lines were located and traced across the site running through various chambers during the utilities survey.

Telecommunications including fibre required during the construction phase will be provided via a mobile connection.

When operational, the BV and gas pipeline sites do not require a telecommunications connection. The AGI site will require a telecommunications connection and will connect to existing telecommunications infrastructure in the area with consent from the relevant Telecommunications provider.

The proposed gas pipeline will cross under the 2 no. existing buried pipelines within Bay Lane. During construction, there will be no requirement for a temporary gas connection. The nature of the proposed development ensures that rather than utilising gas, the proposed development will connect existing infrastructure to the proposed Kilshane Energy Facility.

See **Appendix 14-1** for details of other utilities identified at the proposed development site during the Utilities survey.

4.12.2 Potential Impacts of the Proposed Development

4.12.2.1 Construction Phase

There are potential short-term nuisances such as dust, noise, as well as the potential for pollution of groundwater or the existing ditch crossings associated with the construction phase.

The power requirements for the construction phase will be relatively minor, no connection to the public network will be made.

There is potential for an increase in run-off due to the introduction of impermeable surfaces and the compaction of soils. The potential impact of this is a possible increase in surface water run-off and sediment loading which could potentially impact the Bay Lane and Kilshane road stormwater systems. There will not be any discharge of untreated, silty, or contaminated water from the works to any watercourse. 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. 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.

Excess surface water during the construction phase is expected to result in a slight, negative and temporary impact on the existing surface water infrastructure. The potential impact on foul drainage for the construction phase is imperceptible.

The water requirements for the site will be minimal and facilitated through road tanker delivery. This will serve the construction compound, welfare facilities and any other construction activities for the duration of construction works on the proposed development.

There are no potential impacts associated with telecommunications for the proposed development during the construction phase.

There are no potential impacts associated with the natural gas network or telecommunications for the proposed development during the construction phase.

4.12.2.2 Operational Phase

As the transmission gas pipeline will be located below ground, the only permanent loss of agricultural land will be the 1140 m² of new hardstanding at the BV and AGI sites.

There is a requirement for an electrical connection for the AGI site only. This will be agreed in advance with ESB Networks and/or local electricity providers.

Surface water at the BV site will be managed by creating a bioswale at the base of the slope on the western boundary. Surface water drainage from the AGI site will be connected to the proposed surface water infrastructure at the proposed Kilshane Energy Facility.

There will be no connection to any public surface water or foul water infrastructure and therefore no potential impacts on these material assets.

There will be no consumption of potable water. There will be no connection to any potable water infrastructure and therefore no potential impacts on these material assets.

There will be a requirement for a telecommunications connection for the AGI site only. This will be agreed in advance with local telecommunications providers.

The proposed development itself does not have any operational gas requirements therefore there are no predicted impacts on the natural gas network.

4.12.3 Mitigation and Residual Effects (Post Mitigation)

4.12.3.1 Construction Phase

Ongoing consultation with Uisce Éireann, EirGrid, ESB Networks, and other relevant service providers within the locality and compliance with any requirements or guidelines they may have will ensure a smooth construction schedule without disruption to local and business community. The works contractor will be obliged to put best practice measures in place to ensure that there are no interruptions to these utilities, unless this has been agreed in advance. The mitigation measures set out in this **EIAR** and **OCEMP (Appendix 2-1)** will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager and Ecological Clerk of Works where relevant.

All applicable standards, guidelines and codes of practice will be adhered to regarding both installation of the gas transmission pipeline and working in the vicinity of existing services, in particular the GNI Guidelines for Designers and Builders – Industrial and Commercial (Non-Domestic) Sites (2018) and the Health & Safety Authority (HSA) Code of Practice for Avoiding Danger from Underground Services (2016).

All plant, machinery and equipment will be stored within the temporary construction compound or within the works area. Oils and fuels will not be stored on site and will be stored in an appropriate bunded area within the temporary storage compound.

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

4.12.3.2 Operational Phase

There are no potential adverse impacts during the operational phase in respect of material assets - utilities and therefore no mitigation measures are proposed. Where new services are required, the Contractor will apply to the relevant utility company for a connection permit where appropriate, and will adhere to their requirements.

4.13 Interaction of the Foregoing

There is potential for interactions between one aspect of the environment and another which can result in direct or indirect effects, and which may be positive or adverse. A matrix has been generated to summarise the relevant interactions and interdependencies between specific environmental aspects (Refer to **Table 4-2**). It contains each of the environmental topics, which were considered as part of this environmental impact assessment.

Table 4-2: Matrix of Impacts

	Population and Human Health	Traffic and Transport	Biodiversity	Water	Land and Soils	Air and Climate	Noise and Vibration	Landscape and Visual	Cultural Heritage	Material Assets
Population and Human Health		C		C	C	C/O	C/O	C		C
Traffic and Transport	C		C		C	C	C	C		
Biodiversity		C		C	C		C/O	C		C
Water	C	C	C		C					C
Land and Soils	C	C	C	C		C	C	C		C
Air and Climate	C/O	C			C					
Noise and Vibration	C/O	C	C/O		C					
Landscape and Visual	C	C	C		C					
Cultural Heritage										
Material Assets	C		C	C	C					

	Major Interaction
	Minor Interaction
	No Interaction

C	Construction Phase Impact
O	Operation Phase Impact