

MWP

**Chapter 03 Consideration of
Alternatives**
**Newtown Gas Transmission Pipeline and
Associated Above Ground Infrastructure**

Gas Networks Ireland

November 2025

Contents

3.	Consideration of Alternatives	3-1
3.1	Introduction	3-1
3.2	Scope	3-1
3.3	Alternative Development Locations/Route Options	3-1
3.3.1	Option A	3-3
3.3.2	Option B	3-4
3.3.3	Environmental Considerations	3-5
3.4	Alternative Designs	3-6
3.5	Alternative Processes	3-6
3.6	Do-Nothing Scenario	3-7
3.7	Summary	3-7

Tables

Table 3-1: Main Environmental Considerations for Each Pipeline Route Option	3-5
---	-----

Figures

Figure 3-1: Overview of the 2 No. Pipeline Route Options	3-2
Figure 3-2: Potential Pipeline Tie-in Point for Option A	3-3
Figure 3-3: Potential Tie-in Point for Option B	3-4

3. Consideration of Alternatives

3.1 Introduction

This chapter of the EIAR presents a description of the alternatives to the proposed development locations, route options and design that were considered and discusses the rationale for the proposed development option chosen. The chapter sets out a description of the reasonable alternatives considered by the Applicant, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of environmental effects.

The 2014 EIA Directive (2014/52/EU) Art.5 (1)(d) requires that the EIAR prepared by the developer should contain *“a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment.”*

This chapter therefore outlines the main reasonable alternatives considered during the project inception and design process and the principal reasons for proceeding with the current development proposal.

3.2 Scope

The purpose of alternatives analysis is principally to examine the different possibilities for meeting the proposed development's need and objectives and to determine whether or not the proposed development's objectives can be met by different means that avoid, minimise or mitigate potential significant environmental effects.

The alternatives considered included the following:

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

All proposed technologies and processes meet and comply with best industry standards.

3.3 Alternative Development Locations/Route Options

A route selection process was undertaken for the proposed underground transmission pipeline by Fingleton White and NeoDyne, on behalf of GNI. The primary objective of this process was to ensure the pipeline is built to relevant standards, primarily IS 328: 2021 and to achieve an economic route that minimises the impacts on the environment and meets safety requirements.

The initial route selection process identified feasible high level routing corridors for the proposed gas pipeline focusing on a high-level at safety, environmental, constructability, cost and programme. During this process the main constraint was safety / constructability / cost / programme, as a requirement for the pipeline to have permanent above ground pigging facility connection was established. This requirement limited the viable tie-in points because a fenced enclosure, including access, was then required, which in turn was more space intensive. The outcome of this was two routes to the customer site, both starting at the same point because of the most

reasonable tie-in location. These two potential route options were then considered in detail with this requirement known. Both options involve tying into the BGE36 450NB Ballough to Abbotstown pipeline within the Kilshane BV extension.

- **Option A** ties into BGE36 450NB Tx main in Kilshane BV. It then routes north onto Bay Lane where it turns 90 degrees east and runs through the Bay Lane road. The route continues through the L3120 Kilshane Road before entering the proposed Kilshane Energy site; and
- **Option B** also ties into BGE36 450NB Tx main in Kilshane BV. It will cross the Bay Lane and enter fields zoned for general employment to the north of Kilshane BV after exiting the site. The pipeline will then turn 90 degrees east and run parallel with Bay Lane along the edge of the field, before crossing the L3120 Kilshane Road and entering the proposed Kilshane Energy site.

Route Option A and B are shown in **Figure 3-1**.

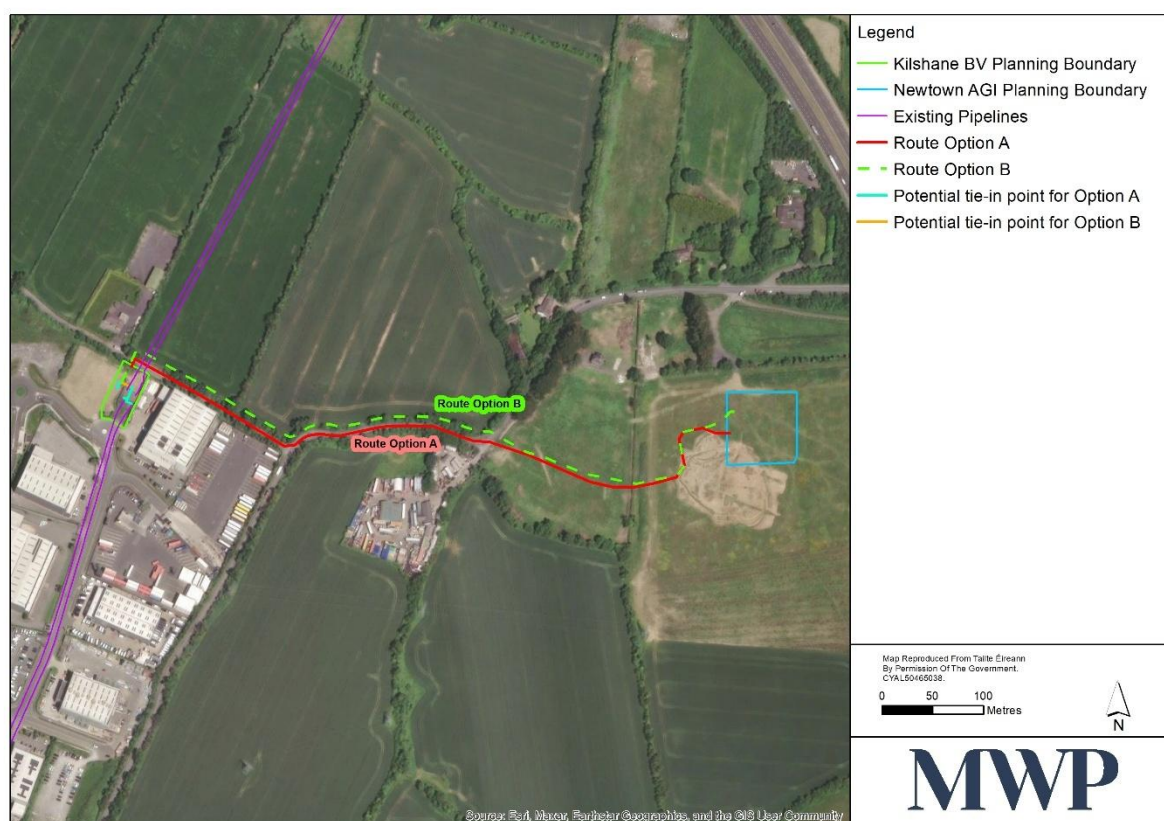


Figure 3-1: Overview of the 2 No. Pipeline Route Options

All proposed pipeline options are within the Fingal County Council (FCC) jurisdiction. The pipeline will be routed across fields in so far as possible to reduce potential third-party interference, traffic disruption and reinstatement requirements. Where road crossing/routing occurs, FCC will be engaged as early as possible to identify any additional requirements.

3.3.1 Option A

The tie-in location for Option A is located within the site of the proposed Kilshane BV extension on the south side of Bay Lane. This tie-in involves tying into the 450NB Ballough to Abbotstown pipeline. Refer to **Figure 3-2** which shows Option A.

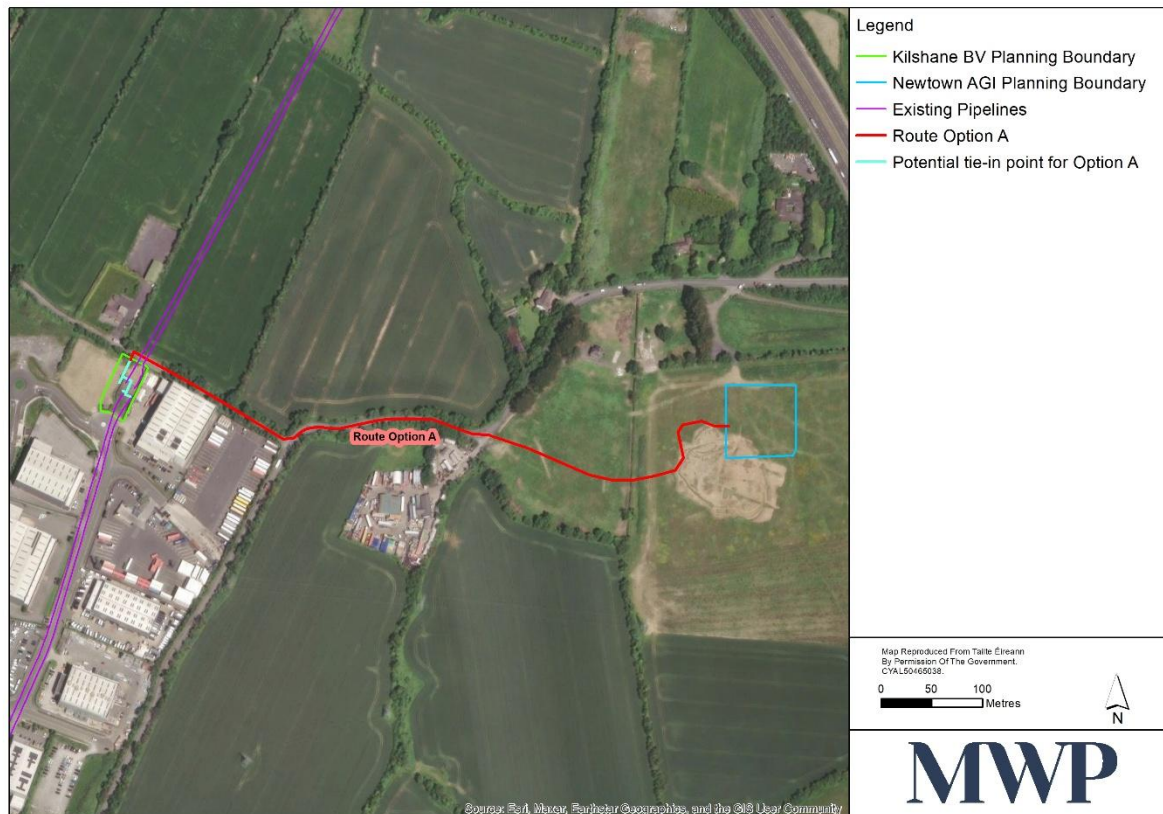


Figure 3-2: Potential Pipeline Tie-in Point for Option A

The most practical design option for Kilshane BV is an extension to the north and west sides of the existing Block Valve Station, as sufficient space is available to accommodate the required above-ground pig launching facility and permanent access to the pipeline isolation. Locating the facility on the south or east side was considered, however, the existing entranceway off the roundabout on that side is too narrow to safely accommodate the additional access and construction requirements.

From the BV Station the pipeline then routes north onto Bay Lane where it turns 90 degrees east and runs through the Bay Lane road for approx. 180m, crossing the BGE36 and BGE72 pipelines. The route continues through the L3120 Kilshane Road for approx. 200m. It is envisaged that open-cut techniques will be used for laying the pipeline through Bay Lane and L3120 Kilshane Road. From here, it is laid within the customer's development site before entering the new Newtown AGI.

A summary of the route's main features are as follows:

- Pipeline length - c. 0.715 km;
- Live pipeline connections – 1;
- Road Crossings – All within public and private road;
- Pipeline within FCC Roads – c. 0.45 km;

- Watercourse crossings – 1; and
- Pipeline Crossings – 2.

3.3.2 Option B

The tie-in location for Option B is the same as the one proposed in Option A, located within the site of the proposed Kilshane BV extension (**Figure 3-3**). This involves tying into the 450NB Ballough to Abbotstown pipeline. The option to tie into the 900NB BGE72 pipeline also exists here.

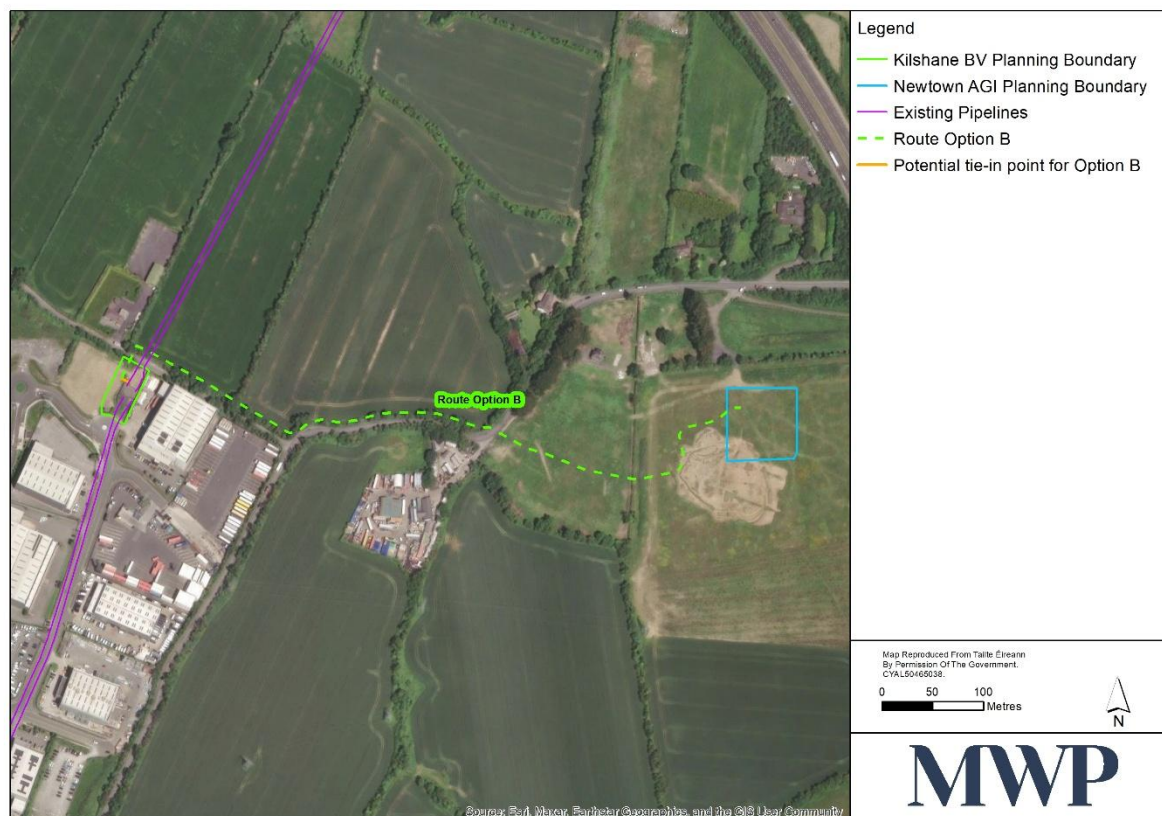


Figure 3-3: Potential Tie-in Point for Option B

The pipeline ties into the BGE36 450NB Ballough to Abbotstown pipeline at Tie-in outlined in **Section 3.3**. The pipeline routes north towards Bay Lane where it will then cross the Bay Lane road and enter fields zoned for general employment. The pipeline will then turn 90 degrees east and run parallel with Bay Lane and L3210 Kilshane Road along the edge of the field for approximately 380m, crossing the BGE36 and BGE72 pipelines, before crossing the modified L3120 Kilshane Road and entering the customer’s site. It is envisaged that the crossing of Bay Lane and Kilshane Road will be carried out using open-cut techniques. The construction works for the crossing of L3120 Kilshane Road is expected to coincide the works for the proposed modification of the L3120 by the customer. The excavation technique and details will be determined at a later design stage. From here it is laid within the customers development site for approximately 300m before entering the new Newtown AGI.

A summary of the route’s main features are as follows:

- Pipeline length - c. 0.73 km;
- Live pipeline connections – 1;

- Road Crossings – 2;
- Watercourse crossings – 1; and
- Pipeline Crossings – 2.

3.3.3 Environmental Considerations

The route selection process reviewed the proposed routes to account for the following environmental considerations:

- Proximity to Sensitive Receptors;
- Proximity to Protected Areas (Nature reserve, Ramsar Site, (p)NHA, SAC or SPA);
- River crossings required;
- Proximity to watercourses;
- Flood Zone;
- Proximity to Site of Archaeological Potential;
- Air, Noise and Traffic Emissions;

The route selection process included a comparative assessment of the two routes to determine the preferred option, based on all of the above criteria. The results of the assessment are presented in **Table 3-1**.

Table 3-1: Main Environmental Considerations for Each Pipeline Route Option

Assessment Criteria	Is there an Impact?		Reference Source
	Option A	Option B	
Receptors			
Sensitive Receptors nearby? (<250m)	No	No	OS Map, Google Earth, Google Streetview
Flora & Fauna			
Nature Reserve (<1km*)	No	No	www.npws.ie
Ramsar Sites (<1km*)	No	No	www.ramsar.wetlands.org
National Heritage Area (<1km*)	No	No	www.npws.ie www.myplan.ie
Is pipeline located in Special Area of Conservation	No	No	www.npws.ie www.myplan.ie
Is there a pathway to a Special Area of Conservation	No	No	https://gis.epa.ie/EPAMaps/Water
Is pipeline located in Special Protection Area	No	No	www.npws.ie www.myplan.ie
Is there a pathway to a Special Protection Area	No	No	https://gis.epa.ie/EPAMaps/Water
Water			
Proximity (<250m from water**)	Yes - stream not crossing route.	Yes - stream not crossing route.	http://gis.epa.ie OSI Mapping
River Crossings	No	No	http://gis.epa.ie OSI Mapping

Assessment Criteria	Is there an Impact?		Reference Source
	Option A	Option B	
Flooding	Yes***	Yes***	https://www.floodinfo.ie/
Archaeology & Material Assets			
Record of Monuments & Places (<1km to RMP Site)	Yes	Yes	http://www.archaeology.ie www.myplan.ie
Is pipeline routed within a Zone of Notification	No	No	http://www.archaeology.ie www.myplan.ie
Air, Noise & Traffic			
Emissions	Yes	Yes	
*Given the nature and location of the proposed pipeline, a 'zone of impact' radius of 1km is deemed more than adequate. **Given that the proposed plan does not involve any effect or extra loading on wastewater, water systems or erosion of habitats, a radius of 250m is deemed sufficient. ***The Tolka Flood Alleviation Scheme was initiated in 2002 following a major tidal flooding event in February of that year and a major fluvial flooding event in November 2002, these had estimated return periods of 68 and 100 years. Emergency construction started immediately following the November 2002 event with the majority of the works completed between 2003 and 2009. Construction was undertaken within three local authority areas Meath, Fingal and Dublin City. Within Fingal the scheme was constructed in Mulhuddart and comprises flood defence walls, embankments and a pumping station. When combined these works provide protection against a 100-Year flood (1% Annual Exceedance Probability) for 18 properties ****There is a partial zone of exclusion around the monument that is already being accounted for in the cell above this (Reference No. DU014-048). Unclear what this partial zone indicates. Current tie-in location for Option A is close to but isn't in the zone of notification.			

As can be seen in **Table 3-1**, although environmental effects from the two route options were considered, there was no significant difference between the proposed routes in regards to the assessed criteria. Route A was selected as the more favourable route as it satisfied the criteria while taking environmental effects into account and because it avoided a CPO.

3.4 Alternative Designs

The proposed underground transmission gas pipeline design is based on IS328: 2021 and other relevant standards. Design constraints such as the requirement for an above ground pigging facility largely dictated and limited available feasible options to GNI. Therefore, from an alternative 'design' point of view, the flexibility to select an alternative underground transmission gas pipeline design to serve the proposed Kilshane Energy Facility is not available to the Applicant.

3.5 Alternative Processes

The underground transmission gas pipeline will become an integral part of the national transmission network which is currently operated by GNI. As such the underground transmission gas pipeline must meet IS328: 2021 and GNI's own strict specifications to ensure it will be seamlessly absorbed into the national infrastructure and can provide a reliable gas supply to the proposed Kilshane Energy Facility. Therefore, from an alternative 'process design' point of view, the flexibility to select alternative processes for integrating into the current national gas network is not available.

As appropriate, alternative processes are considered on an ongoing basis by GNI as a part of each of their operations based on many factors including technical feasibility, environmental impact, efficiency, security, reliability and cost.

3.6 Do-Nothing Scenario

The proposed development comprises the installation of an underground transmission gas pipeline which will provide a gas connection to the proposed 293 MW_e Kilshane Energy Facility located at Kilshane Road, Kilshane, Finglas, Dublin 11.

The Kilshane Energy Facility development on its own will serve no function, without a gas supply from the gas network, therefore the Kilshane Energy Facility requires the proposed development to provide the required gas in order for it to operate. Consequently, the do-nothing scenario would result in both the proposed development and the proposed Kilshane Energy Facility not proceeding at this time. The do-nothing scenario would mean that the direct effects associated with both developments such as, visual, noise, and emissions to air would not arise.

3.7 Summary

Reasonable alternative options were considered, with the potential environmental effects taken into account. The assessment showed that the two route options were broadly comparable in terms of environmental impact and overall performance. The final selection of Route A was therefore informed primarily by engineering and construction considerations, including cost efficiency and the ability to avoid a compulsory purchase order (CPO).

The chosen design has been developed in line with GNI's standard specifications for connection to the national gas network. It is considered that the proposed route, layout and construction methodology provide the most suitable solution to deliver the infrastructure required to meet the gas supply needs of the proposed Kilshane Energy Facility.