

Gasification

Manual of Consenting Procedures



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Sustainable Energy Authority of Ireland

SEAI is Ireland’s national energy authority investing in, and delivering, appropriate, effective and sustainable solutions to help Ireland’s transition to a clean energy future. We work with the public, businesses, communities and the Government to achieve this, through expertise, funding, educational programmes, policy advice, research and the development of new technologies.

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Abbreviations

| Abbreviation | Meaning of Abbreviation |
|------------------|--|
| AA | Appropriate Assessment |
| ABP | An Bord Pleanála |
| ARCs | Activities Requiring Consent |
| BCMS | Building Control Management System |
| BMS | Building Management System |
| CEM | Construction Environmental Management |
| CEMP | Construction and Environmental Management Plan |
| CHP | Combined Heat and Power |
| CO ₂ | Carbon Dioxide |
| COR | Certificate of Registration |
| CRU | Commission for the Regulation of Utilities |
| DAFM | Department of Agriculture, Food and the Marine |
| DUoS | Distribution Use of System Agreement |
| EDEN | Environmental Data Exchange Network |
| EIA | Environmental Impact Assessment |
| EIAR | Environmental Impact Assessment Report |
| EPA | Environmental Protection Agency |
| GNI | Gas Networks Ireland |
| H ₂ S | Hydrogen Sulfide |
| HSA | Health and Safety Authority |
| IE | Industrial Emissions |
| IPC | Integrated Pollution Control |
| IRR | Internal Rate of Return |
| MAPP | Major Accident Prevention Policy |
| NHA | Natural Heritage Area |
| NIS | Natura Impact Statement |
| NPWS | National Parks and Wildlife Service |
| RESS | Renewable Electricity Support Scheme |
| RSA | Road Safety Authority |
| SAC | Special Area of Conservation |
| SEAI | Sustainable Energy Authority of Ireland |
| SEM | Single Electricity Market |
| SI | Statutory Instrument |
| SID | Strategic Infrastructure Development |
| SPA | Special Protection Area |
| syngas | Synthesis gas |
| TPO | Tree Preservation Order |
| TUoS | Transmission Use of System Agreement |

1 Introduction

1.1 Purpose of Guide

SEAI is the Single Point of Contact for guidance on the licensing and permitting requirements for renewable energy projects in Ireland. The initiative aims to simplify the process of identifying the necessary licenses and permits required for each phase of a gasification project.

As part of this initiative, SEAI has produced an online tool. The online Licence and Permit finder tool is located at [Renewable Energy Consenting | Single Point of Contact | SEAI](#). It allows you to search for licences and permits that may be required for a project at relevant stages of development. Supplemental to this are a suite of technology specific consent manuals that outline the consenting process relevant to each renewable energy technology.

It is important to note that SEAI has no decision-making role within the consenting process itself but are available to provide guidance and support in navigating and understanding the consenting process.

1.2 Introduction to Gasification

Gasification is an innovative thermal process that converts carbon-based materials, such as biomass, coal, or waste, into a synthesis gas (syngas) composed primarily of hydrogen and carbon monoxide. This syngas can then be refined and used for various applications, including electricity generation, heating, and as a feedstock for producing chemicals and fuels. As a versatile and efficient technology, gasification plays a vital role in the transition towards renewable energy sources and the reduction of greenhouse gas emissions.

Similar to other renewable energy technologies, gasification projects can vary significantly in scale and output, which necessitates a tailored regulatory and consenting process. Larger commercial gasification facilities may face a more intricate consenting journey compared to smaller installations, yet it is essential that all projects adhere to relevant legislation and regulations to ensure environmental protection and community safety.

Gasification technology stands out for its ability to convert waste materials into valuable energy, thus contributing to waste management solutions while simultaneously generating renewable energy. By harnessing the energy content of waste, gasification can help mitigate the environmental impacts associated with landfilling and incineration, aligning with national and international climate action goals.

The gasification process operates by heating feedstock in a low-oxygen environment, which facilitates the breakdown of organic materials into syngas. This process not only maximises energy recovery but also minimises the release of harmful pollutants compared to traditional combustion methods. The resulting syngas can be utilised in combined heat and power (CHP) systems, where it is combusted to generate electricity and useful heat, or it can be further processed into liquid fuels or chemicals, enhancing energy efficiency and resource utilisation.

Gasification installations can range from small-scale systems designed for localised energy production to large-scale facilities capable of supplying energy to entire communities or industrial operations. This flexibility allows for the integration of diverse feedstocks, including agricultural residues, forestry by-products, and municipal solid waste, making gasification particularly relevant in contexts where resource availability varies.

One of the significant advantages of gasification technology is its potential to reduce reliance on fossil fuels, thereby lowering greenhouse gas emissions and contributing to climate change mitigation efforts. By converting waste and biomass into energy, gasification not only provides a renewable energy source but also promotes energy independence and resilience within local economies. Furthermore, the development of gasification projects can stimulate job creation and economic growth, reinforcing the importance of this technology in achieving sustainable energy goals.

As advancements in gasification technology continue to evolve, its significance in the global energy landscape is increasingly recognised. Governments, industries, and environmental organisations are acknowledging the potential of gasification to deliver reliable, efficient, and less environmentally impactful energy solutions. By diversifying energy sources and optimising resource utilisation, gasification contributes to a more sustainable energy future, enhancing energy security and reducing carbon emissions for the benefit of consumers and the State as a whole.

1.3 Gasification Project Stages

As illustrated in Figure 1-1, the life cycle of a gasification project can be delineated into several key development stages, each critical to ensuring the project's success and compliance with regulatory requirements.

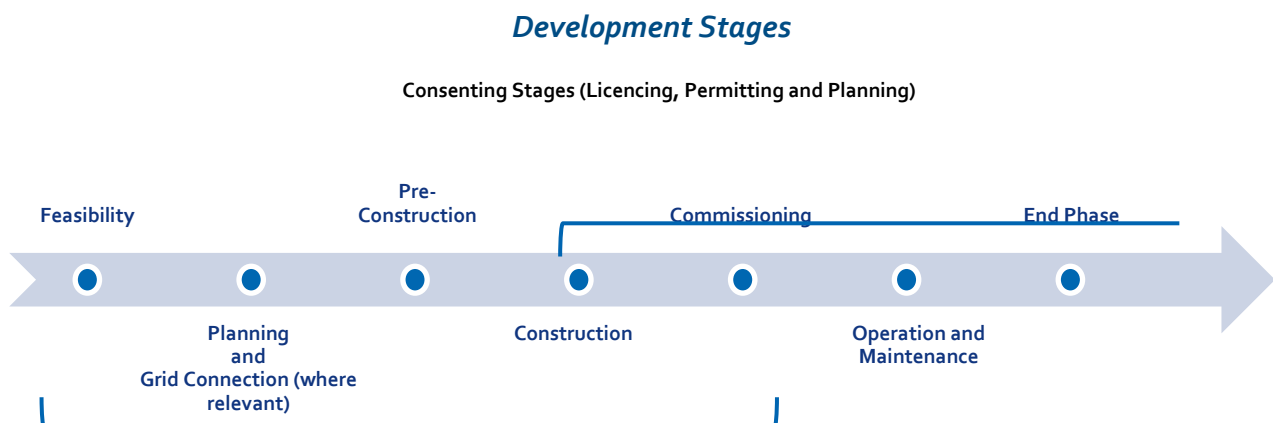


Figure 1-1 Gasification Project - Development Stages

1. **Feasibility Phase:** This initial phase involves comprehensive assessments to evaluate the technical, economic, and environmental viability of the gasification project. During this phase, project developers analyse potential feedstock availability, technology options, and market conditions. Additionally, this phase provides insights into the necessary permits and licenses, which can vary significantly based on the project type, scale, and specific location.
2. **Planning and Permitting Phase:** Following the feasibility assessment, the planning and permitting phase is initiated. This stage is crucial for identifying and securing the required licenses and permits, which may include planning permission, environmental impact assessments, air quality permits, and waste management approvals. These regulatory requirements can often overlap and occur simultaneously, necessitating close coordination with local, regional, and national authorities to ensure compliance with all applicable laws and regulations.
3. **Pre-Construction Phase:** In this phase, final preparations for construction are made, including detailed engineering designs and procurement of necessary materials and equipment. It is also during this stage that any additional permits or approvals required for construction activities are obtained. Engaging with stakeholders and the community is essential at this stage to address any concerns and ensure transparency.
4. **Construction Phase:** Successful completion of the planning and permitting processes leads to the construction phase, where the gasification facility is built according to the approved designs and specifications. This phase involves the installation of gasification technology, infrastructure, and supporting systems. Regular inspections and compliance checks are conducted to ensure that construction adheres to safety and environmental standards.
5. **Commissioning Phase:** Once construction is complete, the project enters the commissioning phase. This critical stage involves final testing and validation of the gasification system to ensure that it operates effectively and efficiently. Performance tests are conducted to verify that the facility meets design specifications and regulatory requirements before it is officially brought online.
6. **Operation Phase:** After successful commissioning, the gasification facility enters the operation phase. During this time, ongoing operations and maintenance activities are conducted to ensure optimal performance and compliance with operational permits.
7. **End-of-Life Phase:** The final phase of a gasification project addresses the end-of-life considerations. Depending on the project's future—whether it will be decommissioned, extended, or re-powered—specific licensing or permitting requirements will apply. This phase involves planning for the safe and environmentally responsible closure of the facility, including the management of any residual materials and site restoration.

The following sections of this manual will provide a detailed overview of each phase of the gasification project life cycle, along with the relevant permits, licenses, regulatory requirements, and schemes associated with each stage.

2 Design and Construction Stage

In the design and construction stage of a gasification project, it is essential to assemble a professional advisory team capable of conducting a thorough technical appraisal of your energy requirements. This team will assess whether gasification is a feasible solution for meeting your energy needs while ensuring realistic energy savings and environmental benefits. Comprehensive technical and financial feasibility assessments are critical at this stage to evaluate the potential of gasification technology in your specific context.

An experienced advisory team will play a vital role in analysing the various gasification technologies available for your application. Gasification can be implemented using different configurations and feedstock types, including biomass and waste materials.

For smaller gasification applications, this advisory service may be provided by the vendors or installers of the gasification equipment. However, larger or more complex systems will likely require additional independent expertise to ensure that all aspects of the project are thoroughly considered. The advisory team will help you assess the available space and potential locations for the gasification facility, taking into account factors such as feedstock supply availability and logistics, site accessibility, and environmental considerations.

In collaboration with your advisory team, you will need to determine the most suitable gasification technology and scale for your project. This evaluation should consider the specific needs of your business or application, as well as the regulatory landscape and community engagement requirements. Once the appropriate technology and scale have been identified, it is crucial to develop a comprehensive project plan that outlines all the stages necessary to realise your gasification project.

The project plan should include timelines, milestones, and responsibilities for each phase of the design and construction process. It should also address potential risks and mitigation strategies to ensure that the project remains on track and within budget. By carefully planning and executing the design and construction stage, you can lay a solid foundation for the successful implementation of gasification technology, ultimately contributing to a more sustainable energy future.

2.1 Feasibility and Design Phase

2.1.1 Feasibility Studies

The feasibility of any energy-based development project is vital, including gasification, as this will determine if the project should be pursued or not, regardless of whether it is a commercial or community-based endeavour. Financial viability assessments are likely to take place initially in order to assess the investment potential of the project. These studies may be used as a basis to gain the additional funding to carry out any early engineering or environmental surveys that may assist in understanding the technical and environmental feasibility of the project.

A feasibility study will involve looking at various aspects of the project, such as:

- Site potential;
- Capital expenditure;
- Operational expenditure;
- Potential revenue generation;
- Available funding;
- Emissions considerations;
- Syngas demand;
- Syngas refinement opportunities;
- Feedstock availability and logistics;
- Access to infrastructure such as grid connections, appropriate road access, gas network (if required), etc.; and
- Key risks, including consenting risks.

2.1.2 Financial/Commercial Feasibility

The financial feasibility of a gasification project is a critical factor in determining whether to proceed with the initiative, whether it is a commercial venture or a community-based effort. An initial financial assessment should be conducted to compare various gasification system options with other potential technologies, aiming to establish a provisional commercial case for gasification. It is advisable that this assessment covers the entire lifespan of the gasification system, typically projected over a 20-year period. Techniques such as calculating the internal rate of return (IRR) and the simple payback period can be employed to evaluate the project's viability.

The financial feasibility assessment should encompass the following key considerations:

- **Capital Costs:** These costs can be identified through analysis of similar installations, benchmark figures, or discussions with equipment suppliers and contractors. It is essential to account for all initial expenditures, including construction, equipment procurement, and installation.
- **Maintenance Costs:** Ongoing maintenance expenses must be factored in, which include regular servicing, allowances for equipment breakdowns and spare parts, as well as routine tasks such as cleaning, ash removal, and addressing any operational issues.
- **Feedstock Costs:** These costs should be determined through discussions with feedstock suppliers, with quantities estimated based on the site's energy demands and the gasification system's efficiencies. Understanding the pricing structure and availability of feedstock is crucial for accurate budgeting.
- **Savings and Income Streams:** Potential savings and revenue sources should be identified, including:
 - **Feedstock Cost Savings:** Derived from the existing fuel displaced, which can be established from historical fuel invoices.
 - **Government Incentive Payments:** Any applicable subsidies or incentives for renewable energy projects should be considered.
 - **Value of Heat Sales and Electricity Exports:** Revenue generated from selling heat and electricity produced by the gasification system.
 - **Avoided Waste Disposal Costs:** If the gasification system utilises waste materials, it may offset other waste disposal expenses.
 - **Avoided Costs of Conventional Energy Sources:** If applicable, savings from not having to rely on traditional fossil fuel systems.

A sensitivity analysis should be conducted to compare the impacts of various parameters on the feasibility of the gasification installation, particularly with respect to future feedstock prices and energy market fluctuations. It is important to note that while biomass prices have historically shown greater stability compared to fossil fuel prices, recent years have introduced some volatility that should be accounted for in financial projections.

As the chosen gasification design progresses through the planning and detailed design phases, financial assessments will need to be revisited and updated to reflect any changes in project scope, costs, or market conditions. This iterative approach ensures that the financial viability of the gasification project remains robust and aligned with evolving circumstances.

2.1.3 Project Financing (Commercial or Community Projects Only)

There is presently no specific financing supports provided through government schemes for gasification project development directly, however some supports may be useful for a hybrid project which uses both gasification technology to produce syngas, and an electricity producing installation, such as a high-efficiency combined heat and power (HE CHP) system. If your gasification project is planned to use exclusively waste or biomass feedstock, and will utilise the syngas for electricity production through means such as a HE CHP system, please consider reviewing the following supports in place that you may qualify for:

- [Support Scheme for Renewable Heat;](#)

- [Micro-Generation Support Scheme](#);
- [Clean Export Guarantee](#); and
- [Renewable Electricity Support Scheme](#).

2.1.4 Enabling Tasks

After a potential project and site passes feasibility screening, enabling tasks must be undertaken to transition toward the planning and pre-construction phases. These tasks include:

- Land lease options / purchasing, if applicable;
- Options to access the site; and
- Community engagement.

Some of these may take place in conjunction with the planning phase also. It is important to consider the need for community engagement early in the process. The scale of the project will determine the extent of community engagement that may be required. Developments, especially in proximity to residential dwellings, frequently generate concerns from residents for a number of reasons, including concerns about impact on visual amenity, conservation, emissions, etc. The resident concerns may be addressed early in the planning process, which can help to avoid negative community interaction later in the process, as well as fostering community buy-in and including the community before any statutory processes commence. This early engagement has been shown to improve the acceptance of renewable energy developments in the surrounding area. Identifying key public stakeholders and community leaders is an important task to undertake as early as practicable.

2.1.5 Design

Once a preferred technology and site has been identified, a detailed design will need to be produced. This may involve the identification and appointment of suitable contractors or consultants (if there is no capacity for this work internally) to complete the detailed design work and if applicable, prepare the design which will be submitted for planning consent.

The design will identify the main systems components, the technical specification, size and rating of equipment, the location and layout of all facilities, and any new buildings that may be required, including site access and traffic considerations.

If connecting your project to the grid, it will be important to incorporate any grid connection requirements into the project design at an early stage. Consultation with Gas Networks Ireland (GNI) ESB Networks or EirGrid is advised.

If you are applying for any government support incentives it is important to consider any technical requirements that may need to be incorporated into the design. Similarly, it is important to consider any implications of any design changes to existing operational licences, such as any relevant IPC Licence or Green House Gas Permit.

2.1.6 Environmental Assessment Requirements and Supporting Documents

The requirement for environmental assessments will very much depend on the location and scale of the gasification project being considered. Given the scale that is likely required for commercial viability, it is more likely that the project will require planning permission. Please see **Section 2.2** for more information about planning consents. Projects that will require planning permission may require supporting information to be submitted as part of the planning application.

When applying for planning permission for your project, the Planning Authority, or your technical advisors should be able to provide guidance on the assessments that may be required to support your planning application. Assessments or reports may include (depending on the proposed project and receiving site);

- Environmental Statement or Report;
- Planning Report (which can sometimes be coupled with the Environmental Report);
- Appropriate Assessment (AA) Screening Report and / or a Natura Impact Statement (NIS) Report;

- An Ecological Impact Assessment (EIA) Report;
- Air Quality Assessment;
- Noise Impact Assessment;
- Archaeological Impact Assessment Report;
- A Landscape and Visual Impact Assessment;
- Site Specific Flood Risk Assessment Report;
- Traffic Impact Assessment Report; and
- Construction and Environmental Management Plan (CEMP).

Consultation with the Planning Authority and project specific scoping with your technical advisors is strongly recommended.

It is unlikely that a gasification project in isolation will require a full EIA (as defined under the Planning and Development Regulations), as the regulations do not include provisions directly relating to gasification facilities. There are however provisions that relate to installations that could be co-located with a gasification project, such as a thermal energy plant, CHP plant or gas storage. It is important to consider then entire project against the relevant regulations. A project of significant scale may also trigger the need for an EIA.

Recommended Reading:

[Environmental Impact Assessment \(EIA\) Guidance for Consent Authorities regarding Sub-threshold Development Aug 2003.](#)

2.2 Planning Consent Phase

Gasification projects are not dealt with explicitly in planning law or regulations, unlike other renewable energy projects, meaning there are no specific provisions that would exempt the development from needing planning permission. As such, it is very likely that planning permission will be required for a gasification development.

It is likely that planning permission will be sought from the relevant Local Authority. If there is any doubt as to whether a gasification requires planning permission, a Section 5 declaration may be sought from the Local Authority, which will determine whether planning permission is required.

In the eventuality that the gasification project is accompanied by other features, such as gas storage or a thermal energy plant, this may fall into the categories set out in Schedule 7 of the *Planning and Development Regulations 2001 (as amended)*, which outlines criteria for Strategic Infrastructure Development (SID), which are projects that can be submitted directly to An Bord Pleanála (ABP), subject to ABP determining that the proposal meets the relevant criteria.

2.2.1 The Planning Process

If your project is not exempted development, as is likely the case for a gasification installation then you will need to apply for planning permission from the relevant Local Authority or ABP. The process of applying for planning permission is outlined briefly below.

2.2.1.1 Pre-Application Consultation Meetings

In advance of making your planning application you may need to have a pre-application consultation meeting with the Planning Authority. This will give you the opportunity to introduce your project and put forward key information and details about your project and seek the Planning Authority's guidance or opinions on certain matters, such as the requirement of environmental assessment or supporting documentation. Indeed, there may be a need for a series of meetings dependent on the complexity of your project.

These meetings will allow you to steer your project and ensure you include sufficient details in your planning application to assist the Planning Authority in assessing your application.

Meetings may include:

- Overall concept and design, consultation to date, etc.;
- EIA Screening (if applicable), or other environmental assessment that may be required;
- The required content of the planning pack;
- The appropriate scale for various drawings; and
- Any other issue where clarity or guidance is required.

2.2.1.2 Planning Application

In order to make a valid planning application you may require the services of a professional team of experts to guide you, particularly for more complex projects. The planning application pack that is submitted as part of the application must contain the following documents at a minimum:

- Completed Planning Application Form and all associated appendices;
- The Planning Application Fee;
- A copy of the Site Notice and the Newspaper Notice; and
- All required drawing, plans, particulars and information. This may include survey reports, technical reports, including any environmental reports and assessments as advised by your professional advisors, and the Planning Authority.

2.2.1.3 Public Consultation

As part of the assessment process, all applications and supporting documentation will be made available for public scrutiny. The public will have a specified period of time (typically 5 weeks for standard Local Authority applications) from the date of publication of the planning application notice to make a submission or observation in relation to the development and the documentation provided by the applicant to the Planning Authority.

2.2.1.4 Request for Additional Information

Where the Planning Authority considers the application (or the EIA Report i.e. the EIAR if included) to be inadequate in identifying or describing significant effects on the environment arising from the proposed development, it must require the applicant to submit further information within a specified period (typically 6 months) to ensure the completeness and quality of the EIAR and to facilitate the reaching of a reasoned conclusion of the significant effects on the environment of the proposed development. If deemed necessary by the Planning Authority, the applicant can also be required to provide a Clarification of Additional / Further Information.

2.2.1.5 Decision of the Planning Authority

The Planning Authority may refuse or grant a planning application with or without conditions (in the case of a grant). Conditions may include agreeing certain details post consent, such as Construction Environmental Management Plans (CEMPs), method statements for particular works, noise limits or restrictions on timeframe permissible for construction works for example. Planning Appeals may also be made. There is also the possibility for a split decision, where a portion of the application is granted, and a portion refused, although this is not common.

2.2.1.6 Oral Hearing

Wherever the consideration of a planning application concerns ABP, the Board can decide to hold an oral hearing with or without a third-party requesting one. The Board normally decides to hold an oral hearing wherever it believes that doing so would be helpful to understand a particularly complex case. Oral hearings can also be held where the Board considers there to be significant national, regional or local issues involved.

An oral hearing is a public meeting to allow relevant issues in a case to be discussed and examined in an open forum. Anyone can attend, but only participants who are taking part in the case can be involved in the discussion. Oral hearings are sometimes held to help a Planning Inspector to gather more information on a planning case from relevant participants.

2.2.1.7 Judicial Review

A judicial review is a mechanism whereby a person can challenge decisions made by public bodies in the exercise of their duties. A judicial review is made through the High Court. A judicial review is not concerned with the merits of a particular decision but rather the lawfulness of how a decision was made. The aim of a judicial review is to ensure that public functions are carried out fairly.

In practical terms, for the project applicant, this means that judicial review may be utilised to challenge a decision, such as the refusal of planning consent, provided there are substantial grounds for such a challenge. A judicial review can also be taken against the grant of permission by a third party. Wherever a judicial review arises, it may lead to delays and project uncertainty until the judicial review process has concluded. Judicial review risks will need to be considered in any consents planning for a project.

Recommended Reading:

<https://www.citizensinformation.ie/en/government-in-ireland/how-government-works/standards-and-accountability/judicial-review-public-decisions/>

2.3 Grid Connection Phase

Outlined in this section is information pertaining to both gas network connection and electricity grid connection.

Depending on the nature of your project, you may not require connection to either network for supplying gas/electricity. Please refer to the relevant connection sections that relate to your specific project.

2.3.1 Gas Networks Ireland

To supply gas to the network, it is necessary to first apply for a Natural Gas Supply Licence using the Commission for the Regulation of Utilities (CRU) [application form](#) (refer to the [guidance document](#) for further information on the process). Information on fees can be found on the [CRU website](#).

Prior to injecting syngas created from gasification into Gas Network Ireland's (GNI) gas network, the gas will first need to be refined to remove any gases (e.g., carbon dioxide (CO₂), ammonia (NH₃), hydrogen sulphide (H₂S), etc.,) other than the target methane produced. Only then may it be injected into the gas distribution network.

To connect to the GNI for any potential gas generation projects contact the GNI at: renewablegas@gasnetworks.ie, and an enquiry form obtained, completed and returned. GNI will then assess the feasibility of the application, over a six-to-eight-week period. After this assessment, if the project is deemed viable the proposer will need to submit a formal application with a planning reference and pay a charge (currently €10,000 + VAT) to get connection to the gas network formally approved.

2.3.2 Distribution Use of System (DUoS) Agreement

For connections directly to the DSO (low to medium voltage connections only), a Distribution Use of System Agreement (DUoS) is required to access and transport electricity to and/or from the generation plant through the distribution system. An application must be made to ESB networks (Section 14(1)(b), (c), (d) or (h) of the Electricity Regulation Act 1999, and Section 34 of the Electricity Regulation Act 1999). Following on from the connection application, an initial payment is required.

It is recommended by the ESB to begin liaising prior to submitting a planning application as it may be determined that additional works or structures are needed which may result in additional consenting and planning requirements.

For further information on the application process, preparations needed, and necessary fees see the ESB [Guide to the Process for Connection of Demand Customers to the Distribution System](#).

2.3.3 Transmission Use of System (TUoS) Agreement

For connections directly to TSO (high voltage connections only), a Transmission Use of System Agreement (TUoS) is required. This is a mandatory agreement that is required to obtain access to TUoS and transport electricity to and/or from the generation plant through the transmission system. This is regulated under Section 14(1)(b), (c), (d) or (h) of the Electricity Regulation Act 1999, and Section 34 of the Electricity Regulation Act 1999, as amended.

An application can only be made after planning permission has been granted. However, it is recommended to begin liaising with the TOS while in the pre-planning stage as there may be specific requirements that result and require planning and consenting approval.

This agreement must be in place before a supplier or generator can participate in the Single Electricity Market (SEM).

For guidance documents and application forms please see [EirGrid: Connection and Use of System Agreements](#).

2.4 Pre-Construction

2.4.1 Planning Permission Amendments and Conditions

Due to the requirement of needing planning permission and a grid connection offer to successfully enter an RESS auction (if applicable to your project, if electricity generation accompanies the gasification facility), followed by securing funding, which can all take an extended period of time, there is a possibility that an amendment may be required to the consented development agreed with the Planning Authority, as the design may have alterations or technological improvements.

Pre-construction, some conditions applied by the Local Authority or An Bord Pleanála must be sufficiently discharged (formal process where details requested by the Planning Authority are provided), where required. This may include the likes of providing more specific details of design, or similar specifications. Failure to discharge planning conditions as specified by condition of a planning permission may result in enforcement action.

2.4.2 Authorisation to Construct

Authorisation to Construct is relevant to a gasification project where it is collocating with an electricity generation element, all within the same overall project.

Permission to construct a generator must also (in most cases) be granted by the Commission for the Regulation of Utilities (CRU).

For generators with an installed capacity of $\leq 1\text{MW}$, no authorisation is required, and construction is authorised under S.I. No. 459 (2022).¹

For generators with an installed capacity between 1MW and 10MW a [Notification of Intention to Construct or Reconstruct, and/or to Generate Electricity, from a Generation Station not exceeding 10 MW](#) is required.

For generators with a greater installed capacity an Authorisation to Construct or Reconstruct a Generation Station is required. There are separate application forms for capacity [<40MW](#) and [>40MW](#).

Before applying for a licence all new applicants or applicants with novel or complex applications should apply for a pre-submission meeting with the CRU. To contact the CRU for a pre-submission meeting use: licensing@cru.ie.

Importantly, there are dual application forms for [<40MW](#) and [>40MW](#) applications where an Authorisation to Construct and a Licence to Generate can be applied for together.

Recommended Reading:

[Guidance Notes: Applying for an Authorisation to Construct or Reconstruct a Generating Station](#).

2.4.3 Licence to Generate

A Licence to Generate is relevant to a gasification project where it is collocating with an electricity generation element, all within the same overall project.

For generators with an installed capacity of $\leq 1\text{MW}$, no authorisation is required, and construction is authorised under

¹ S.I. No. 459/2022 – Electricity Regulation Act 1999 (Section 16 (3A)) Order 2022

S.I. No. 460 (2022).²

For generators with an installed capacity between 1MW and 10MW a [Notification of Intention to Construct or Reconstruct, and/or to Generate Electricity, from a Generation Station not exceeding 10 MW](#) is required. This is the same form as the Authorisation to Construct.

For generators with a greater installed capacity a Licence to Generate Application Form is required. There are separate application forms for capacity [≤40MW](#) and [>40MW](#).

Before applying for a licence all new applicants or applicants with novel or complex applications should apply for a pre-submission meeting with the CRU. To contact the CRU for a pre-submission meeting use: licensing@cru.ie.

Importantly, there are dual application forms for [≤40MW](#) and [>40MW](#) applications where and an Authorisation to Construct and a Licence to Generate can be applied for together.

Recommended Reading:

[Guidance Notes: Applying for a Licence to Generate Electricity.](#)

2.4.4 Licence to Supply

A Licence to Supply is relevant to a gasification project where it is collocating with a generation development, which is subject to the same planning application and construction.

A Licence to Supply is a mandatory licence for anyone wishing to supply electricity to final customers (a final customer is defined as a customer purchasing electricity for their own use³), it is applied for through the CRU, (Section 14(1)(b), (c) or (d) of Electricity Regulation Act 1999, as amended).

The [CRU Supply Licence Application Form](#) is required to ensure financial and business planning requirements have been met and that electricity will be supplied to final customers.

Recommended Reading:

[Guidance Notes for Supply Licence](#)

[CRU – Electricity Supply](#)

2.4.5 Wayleave Consent: Section 48 to Lay Electric Cables

A Wayleave Consent: Section 48 to Lay Electric Cables is relevant to a gasification project where it is collocating with a generation development, which is subject to the same planning application and construction.

Wayleave Consent: Section 48 refers to the power to lay electric cables (Section 48 of Electricity Regulation Act 1999, as amended) is granted to: lay electric cables across or under any street, road, railway or tramway, and the right to break up any street, road, railway or tramway for that purpose. This licence is separate to other agreements such as the Road Opening Licence (**Section** Error! Reference source not found.).

The Section 48 wayleave consent is applied for through the CRU, by submitting a [Section 48 Application Form](#). At present there is no application fee. It should be noted that letters of consent from the landowners in addition to a copy of their connection offer are required as part of the application. If the land that is affected is a tramway or railway consent will also be required from CIÉ. A copy of the route map is also required to be submitted along with the application.

Applications should be submitted at least two months prior to when the applicant intends to use the consent. The CRU will acknowledge only fully completed applications within 10 working days of receiving them. Once the CRU

² S.I. No. 460/2022 – Electricity Regulation Act 1999 (Section 14 (1A)) Order 2022

³ Article 2(3) of the Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market in electricity (recast)

acknowledge an initial application the CRU will review it, contact will be made if the CRU requires clarifications or additional information. For further information or queries related to Section 48 please contact the CRU at: consentapplication@cru.ie.

Recommended Reading:

[Guidance Note on Section 48 & Section 49 Applications](#)

2.4.6 Wayleave Consent: Section 49 to Lay Electric Cables

A Wayleave Consent: Section 49 to Lay Electric Cables is relevant to a gasification project where it is collocating with a generation development, which is subject to the same planning application and construction.

Wayleave Consent: Section 49 refers to the power to lay electric lines (Section 49 of Electricity Regulation Act 1999, as amended), this is granted to lay lines across or under any land not being a street, road, railway, or tramway.

The Section 48 wayleave consent is applied for through the CRU by submitting a [Section 49 Application Form](#). At present, there is no application fee.

Should the electric lines be required to go through private land a yearly agreement has to be reached between the asset owner and the landowner for the duration of the project. It should be noted that letters of consent from the landowners in addition to a copy of their connection offer are required as part of the application. A photocopy of the route map is also required to be submitted along with the application.

Applications should be submitted at least two months prior to when the applicant intends to use the consent. The CRU will acknowledge only fully completed applications within 10 working days of receiving them. Once the CRU acknowledge an initial application the CRU will review it, contact will be made if the CRU requires clarifications or additional information.

For further information or queries related to section 49 please contact the CRU at: consentapplication@cru.ie.

Recommended Reading:

[Guidance Note on Section 48 & Section 49 Applications](#)

2.4.7 Appointment of Construction Contracts

Pre-construction, contractors will need to be appointed to conduct the delivery of the development. There are two broad categories of contracting options:

1. Turnkey contracting, which sees a single company overseeing all turbine, electrical and civil engineering works, or separate contracting, where individual aspects are contracted out to specific companies. Typically, where a gasification development follows the turnkey route, the equipment provider will lead the project.
2. Sub-contract the electrical and civil engineering works to companies that would be deemed appropriate for the installation of their equipment.

Maintenance contracts are also usually agreed at this point, where required.

2.4.8 Certificate of Registration (COR)

Depending on the feedstock for your gasification project, you may require a Certificate of Registration.

A Certificate of Registration is required for waste activities set out in Part II of the Third Schedule of the [Waste Management \(Facility Permit and Registration\) Regulations 2007 \(S.I. No. 821/2007\)](#), as amended. An application must be submitted to the relevant Local Authority. If an AA is required, submissions must also be made with the EPA.

The EPA has literature and guidance on waste disposal and licencing requirements. It is also required to provide guidance on determining the need for permitting and information can be requested via email: licensing@epa.ie.

Recommended reading:

[EPA: Certificate of Registration \(COR\)](#)

2.4.9 Licence for Archaeological Excavation

A Licence for Archaeological Excavation may be required depending on the location proposed for the development of your gasification project.

An excavation licence consent is required before digging at a heritage site can commence. Section 26 of the National Monuments Act 1930 (as amended) requires that excavations for archaeological purposes must be carried out by archaeologists acting under an excavation licence. An Excavation Licence will likely be accompanied by an Excavation Risk Assessment process as construction regulations require contractors to guard against the dangers from a fall or dislodgement of material in an excavation. The Safety, Health and Welfare at Work Act 2005 requires a risk assessment to be performed by contractors before undertaking excavation work.

An excavation licence can only be held by an appropriately experienced and competent Archaeologist who are “*are competent in archaeological excavation techniques, and conversant with Irish archaeology*”.

The National Monuments Service handles licencing and applications are to be sent to: nationalmonuments@housing.gov.ie. Further guidance is available at [NMS: Licence for Archaeological Excavation](#).

2.4.10 Detection Device Consent

The use of metal detection devices is not permitted without consent on archaeological sites or to search for archaeological objects.

The National Monuments Service grants consents and a request for must be submitted to: nationalmonuments@housing.gov.ie. Further guidance is available at [NMS: Detection Device Consent](#).

2.4.11 Consent/Notification of Work at or in Relation to a Monument

Where works may occur at or near a national monument, consent must be granted prior by the Minister for Housing, Local Government and Heritage.

Consents must be requested through the National Monuments Service at: nationalmonuments@housing.gov.ie. Further guidance and forms are available at [NMS: Ministerial Consent – National Monuments](#).

2.4.12 Tree Licencing**2.4.12.1 Felling Licence**

As part of site works, the felling of trees for site clearance, cable installation, access, or maintenance, a Felling Licence may be required. This is administered by the Department of Agriculture, Food and the Marine (DAFM).

Where a project involves a large area of forestry and or felling of several trees, this often triggers the requirement for replacement trees of suitable species or mix thereof to be planted on “*bare plantable lands*” elsewhere via an Afforestation Licence (see **Section 2.4.12.2** for further information).

A valid licence must be obtained before any felling commences unless such works fall under exempted categories.

Exemptions apply to the following common scenarios:

- A tree in an urban area provided it is not under a protection order;
- A tree within 30m of a building but excluding any building built after the trees were planted;
- A tree less than five years of age that came about through natural regeneration and removed from a field as part of the normal maintenance of agricultural land - but not where the tree is standing in a hedgerow;
- A tree uprooted in a nursery for transplantation;

- A tree of the willow or poplar species planted and maintained solely for fuel under a short rotation coppice;
- A tree outside a forest within 10m of a public road and which, in the opinion of the owner is dangerous to persons using the public road because of its age or condition;
- A tree outside a forest of the hawthorn or blackthorn species;
- A tree outside a forest in a hedgerow and felled for the purposes of its trimming, provided that the tree does not exceed 20cms in diameter when measured 1.3m from the ground;
- A tree outside a forest the removal of which is specified in a grant of planning permission;
- A tree outside a forest on an agricultural holding removed by the owner for use on that holding, provided:
 - it does not form part of a decorative avenue or ring of trees;
 - its volume does not exceed 3m³;
 - the removal of trees for use on the farm does not exceed 15m³ in any period of 12 months.

It should be noted that the three above exemptions do not apply in all circumstance, for example when trees are more than 150 years old or are close to certain protected structures, monuments, archaeological sites, specific environmentally sensitive areas. If you live in an urban area, you may need to contact the Local Authority to see if there is a Tree Preservation Order (TPO) on the tree. TPOs may apply to other significant or important trees, so it is important to check. For further detail on these exemptions please refer to: [Tree Felling Guidance Ireland](#).

Certain bodies are exempted from the requirement for a felling licence, these include but are not limited to:

- Bord Gáis (Section 27, Gas Act, 1976);
- Aer Rianta (Section 46, Air Navigation and Transport (Amendment) Act, 1998);
- CIÉ or any other railway undertaking (Section 49, Transport (Railway Infrastructure) Act, 2001);
- CIÉ (Section 15, Transport (Dublin Light Rail) Act, 1996);
- Any telephone/mobile network operator (Section 58, Communications Regulation Act, 2002);
- The ESB (Section 45, Electricity Regulation Act, 1999);
- National Parks and Wildlife Service (NPWS) (Section 72, Wildlife (Amendment) Act, 2000);
- Minister for Defence (Section 7, Defence (Amendment) Act, 1987); and
- Inland Fisheries Act (Section 59, Inland Fisheries Act, 2010).

At the time of writing, each felling licence application costs €20. A tree felling licence once granted is valid for a period of ten years and can be extended up to five further years.

Applications are to be sent alongside accompanying maps to the Forestry Division of the DAFM by email: felling.forests@agriculture.gov.ie.

See below sections on the specific examples of licencing works and how to apply. Further guidance, application templates, and information can be found at [DAFM Tree Felling Licences](#).

Where a developer intends to construct a gasification facility within a forested area, or partially within a forest, or that will affect a forest environmentally or that will require tree felling, it is extremely important that the developer consults the [Forestry Division](#) at the earliest possible stage of the project. This may help to develop a collaborative

approach that will ensure that all forestry issues are identified and mitigated at the earliest opportunity. All those involved in tree felling must ensure that a felling licence has been issued before any felling is carried out, unless they are satisfied that the felling is exempted. It is the responsibility of the landowner and or the person felling the tree to ensure that an exemption applies.

The required felling licences should be applied for as early as possible. This will minimise delays by giving the Forest Service timely notice of the full felling requirements. It also lessens the risk of commitments being made by the developer before felling licences are granted. However, it should be noted that under the Forestry Act, 1946 (as amended), the validity of a LFL is currently limited to two years. As soon as planning permission is granted for the development by the Local Authority or An Bord Pleanála, a copy of the full planning permission should be submitted to support the felling licence application(s).

Licences must be secured before felling can take place. It should be noted that it can take up to 12 months to secure the necessary approvals from the forest service. The Forestry Division's [Tree felling and management](#) website contains the most up-to-date information, including the felling licence application form and guidance notes.

[Teagasc](#) also has additional useful information on the legal requirements for felling as well as guidance and sample applications.

Recommended Reading:

[DAFM: Forestry Standards Manual](#)

[Teagasc: Legal requirements for afforestation](#)

2.4.12.2 Afforestation Licence

An Afforestation Licence “provides the permission to plant all or part of the areas specified, and the areas planted meet scheme requirements”^{vi}. This is necessary for all afforestation projects where the area involved is greater than 0.1 hectare (approx. 0.25 acres). Afforestation is defined in the Forestry Act 2014 as, “the conversion of land to a forest with a minimum area of 0.1 hectares and tree crown cover of more than 20 per cent of the total area, or the potential to achieve this cover at maturity”. Forest land is defined as land under trees with a minimum area of 0.1 hectare and tree crown cover of more than 20% of the total area (or the potential to achieve this cover at maturity).

This licence is necessary when a developer seeks to replant trees which were felled during a site development. As part of a Felling Licence application, afforestation plans can also be set out and therefore requests for both licences can be made together. For the proposed afforestation of alternative lands, approval must be obtained before the associated felling licence can be granted. Proposed alternative land should be submitted for afforestation approval as early as possible, ideally at the same time as the felling licence application is submitted.

All afforestation projects (whether availing of a grant or not) must obtain prior written approval from the Department of Agriculture, Food, and the Marine (DAFM) termed 'Technical Approval'. A technical approval confirms that the proposed forest detailed in the application complies with the silvicultural (control of the growth, quality and needs of the forest, of particular importance for timber production) and environmental requirements. This approval provides permission to plant all, or part of the areas specified in the application. Grant aided projects require a supplementary 'Financial approval' in conjunction with technical approval. This financial approval must be obtained before work can commence.

- Applications are to be sent alongside accompanying maps to the Forestry Division of the DAFM by email: felling.forests@agriculture.gov.ie.

See below sections on the specific examples of licencing works and how to apply. Further guidance, application templates, and information can be found at [DAFM Tree Felling Licences](#).

Recommended Reading:

[Teagasc: Felling and Reforestation Policy](#)

2.4.13 Activities Requiring Consent (ARCs) & Natural Heritage Areas (NHAs)

Activities Requiring Consent (ARCs) are specific activities which have the potential to damage a Special Area of Conservation (SAC) or Special Protection Area (SPA). SACs and SPAs are collectively termed 'European sites' or

'Natura 2000' sites.

While ARCs are not prohibited activities, consent must be granted by the Minister for Housing, Local Government and Heritage or by another relevant public authority before works commence.

Prior to designating a new site as an SAC or SPA, information on the ARC(s) (if any) attached to the site will be communicated to the landowner (and where known, the relevant occupier or user of the land) in the form of a 'site pack' along with a public notification. SACs and SPAs are afforded protection from the time of public notification of the intention to designate the site.

For Natural Heritage Areas (NHA), certain works will require consent. Permission to carry out these works on an NHA is required (under Regulation 19 of the Wildlife (Amendment) Act 2000). The works which require the consent of the Minister are found at Schedule 2 of the statutory instrument (SI) designating the relevant NHA.

For further information, guidance, and application forms, see [NPWS Activities Requiring Consent](#).

2.4.14 Licence To Photograph or Film a Protected Wild Animal or Bird

In general, a licence is not required for photography/filming of protected wild animals or birds if there will be no risk of disturbance to the breeding place of any animal, a nest containing eggs or unflown young of any bird. However, if you intend to photograph a protected wild animal or bird on or near the breeding place of such an animal or bird, you should apply for this licence.

For a person to take or make photographic, video, or other pictures of a protected wild animal of a species specified in the licence, on or near the breeding place of such an animal, a licence may be issued by the Minister (Under Section 23 (6)(b) of the Wildlife Act, 1976 (as amended)).

For a person to take or make photographic, video, or other pictures of a protected bird of a species specified in the licence, or a wild bird of a species specified in the licence on or near a nest containing eggs or unflown young, a licence may be issued by the Minister (Section 22 (9)(f) of the Wildlife Act, 1976 (as amended)).

Licencing is managed by the National Parks and Wildlife Service (NPWS) and applications must be sent to: wildlifelicence@npws.gov.ie. Further guidance and application forms can be found at [NPWS: Licence to Photograph or Film a Protected Wild Animal or Bird](#).

Animal species protected under the Wildlife Act are listed in Error! Reference source not found..

Table 2-1: Current list of protected animal species in Ireland

| Mammals | | | Amphibians | Reptiles | Fish | Invertebrates |
|------------------|--------------|----------------------|-----------------|--------------------|---------------|-------------------------|
| All Bat Species | Otter | All Seal species | Natterjack Toad | Common Lizard | Basking Shark | Freshwater crayfish |
| Badger | Pine Marten | All Whale species | Common Frog | Leatherback turtle | | Freshwater pearl mussel |
| All Deer Species | Red Squirrel | All Dolphin species | Common Newt | | | Kerry slug |
| All Hare Species | Pygmy Shrew | All Porpoise species | | | | |
| Hedgehog | Stoat | | | | | |

2.4.15 Capture/Kill Protected Wild Animals for Education or Scientific Purposes Licence

A Capture/Kill Protected Wild Animals for Education or Scientific Purposes Licence is required for all survey and monitoring of all protected species, *even where animals will not be handled* (under Section 23 and Section 34 of the Wildlife Act 1976 (as amended)).

Although the application form/licence refers to 'capture or killing of protected wild animals', licences are required to

investigate sites where protected species are found. Due to the various protected species' status as threatened and or in poor condition, it is only in exceptional cases that handling, or movement of animals is licenced. Licences will only be granted if the licenced activity will result in no significant adverse impact on the conservation of the species. For example, if the freshwater pearl mussel is suspected to occur in an aquatic habitat impacted by a development, this licence would be required to potentially translocate this species to an appropriate location. The decision for granting the licence will be made by the wildlife licence unit through the NPWS.

Licencing is managed by the National Parks and Wildlife Service (NPWS) and applications must be sent to: wildlifelicence@npws.gov.ie. Further guidance and application forms can be found at [NPWS: Capture/Kill Protected Wild Animals for Educational or Scientific Purposes](#).

2.4.16 Licence to Take or Interfere with Protected Plant Species for Scientific, Educational, or Other Such Purposes (Flora (Protection) Order)

As per the Flora (Protection) Order (2022), If any protected plant species is known/found/noted to be present in an area that is proposed to be developed, a licence to interfere with these species is required Under Section 21 of the Wildlife Act. Under Section 21, it is an offence for a person to cut, pick, uproot or otherwise take, purchase, sell or be in possession of any plant whether whole or part, of a species mentioned in the Order, or wilfully to alter, damage, destroy or interfere with the habitat of such a species, except under licence of the Minister, and then, strictly for scientific, educational, or other such purposes.

A licence to take or interfere with protected plant species for scientific, educational, or other such purposes can be applied for through the granting authority, NPWS. In the absence of any viable alternative, licences are granted where no significant damage will be caused to the conservation status of the species and where the adverse impact on the local population of species is kept to a minimum. Applications will only be considered if a licence is required for scientific, educational, or other such purposes.

Licencing is managed by the National Parks and Wildlife Service (NPWS) and applications must be sent to: wildlifelicence@npws.gov.ie. Further guidance and the application form can be found at [NPWS: Licence to Take or Interfere with Protected Plant Species for Scientific, Educational, or Other Such Purposes](#).

2.4.17 Removal of Invasive Alien Species

Under the EC birds and Natural Habitats Regulations 2001 SI 477 of 2011, it is an offence to release or allow to disperse or escape, to breed, propagate, import, transport, sell or advertise species listed on Schedule 3 of the regulations without a Licence. The regulations that deal specifically with this scheduled list of species are:

- Regulation 49: Prohibition of introduction and dispersal of certain listed species; and,
- Regulation 50: Makes it an offence to or to intend to import, buy, sell, breed, transport and distribute listed animal or plant species or vector material; and
- Regulation 74: Which sets out transitional provisions related to the commencement of Regulations 49 and 50.

The following activities are expressly prohibited:

- Dumping invasive species cuttings in the countryside;
- Planting or otherwise causing to grow in the wild (hence the landowner should be careful not to cause further spread);
- Disposing of invasive species at a landfill site without first informing the landfill site that the waste contains invasive species material (this action requires an appropriate licence); and,
- Moving soil which contains specific invasive species in the Republic of Ireland unless under a licence from NPWS.

At any stage of a project, where invasive alien plant species are encountered, a licence for the removal/movement of invasive species from the site is required. A request for licencing must be sent to: wildlifelicence@npws.gov.ie. If

herbicides or pesticides have been used, the contaminated materials may be classed as a hazardous waste or non-hazardous waste and will be required to be appropriately disposed of at an appropriately licenced facility, check with the relevant local authority on available facilities.

When submitting your application for a licence, it should include:

- Detailed methods of removal, transportation and treatment of the species;
- Information on the bio-security measures;
- Management plan; and
- Timeframe for carrying out the work.

Recommended Reading:

[National Biodiversity Data Centre: Invasive Alien Species in Ireland](#)

[NPWS: EU Regulation on Invasive Alien Species](#)

2.5 Construction

2.5.1 Outline of Construction

The construction of a gasification facility begins with the preparation of site access roads and any necessary upgrades to public roads to accommodate the transport of large equipment and materials, should this be required. Once access is established, site preparation activities commence, which include clearing the land and grading the area for the facility. Following this, the construction of foundations for the gasification units and associated infrastructure, such as storage silos and control rooms, takes place. During this phase, contractors also focus on the installation of feedstock handling systems and gas cleaning equipment, ensuring that all components are positioned according to the facility's design specifications.

Simultaneously, the necessary utility connections, including water, electricity, and gas lines, are installed to support the operational needs of the facility. These utility works are often coordinated with the construction of the gasification units to streamline the process. As the civil works progress, the gasification equipment is transported from the manufacturer to the site, where it is assembled and integrated into the facility.

Throughout the construction phase, various specialists monitor the project to ensure compliance with safety standards and environmental regulations. This team may include environmental consultants, safety officers, and engineers who oversee the construction to confirm that it adheres to the approved plans and permits. Once all construction activities are completed, the facility transitions into the commissioning phase, where systems are tested and fine-tuned to ensure optimal performance before becoming fully operational.

2.5.2 Commencement Notice / 7-Day Notice

In accordance with the Building Control Regulations, it is required to submit notice before commencing construction to ensure compliance with building regulations.

A Commencement Notice with Compliance Documentation is required where works require a Fire Safety Certificate (which must be granted before this).

A 7-Day Notice allows work to commence before a valid Fire Safety Certificate is granted. However, an application must have already been submitted.

A Commencement Notice or a 7-Day Notice Application Form with a Seven Day Statutory Declaration prior to commencement of the development to Building Control Section of the Local Planning Authority, giving notice of the intention to start work.

A Commencement Notice must be received by the Building Control Authority not less than 14 days and not more than 28 days before you wish to commence.

Additional documentation may be required to be submitted with the completed Commencement Notice / 7-Day Notice; and this should be completed on-line on the [National Building Control Management System \(BCMS\)](#). The online BCMS also contains detailed information about specific exemptions, requirements, and outlines the steps of the application process.

It is recommended, although not required, to ensure that any additional relevant licencing is secured in advance of a Commencement Notice / 7-Day Notice.

The fees relating to a 7-Day notice are set out in Error! Reference source not found..

Table 2-2: Breakdown of the current rates and fees for a 7-Day notice application

| Submission of a 7-Day Notice in Respect of: | |
|--|---|
| a) Work in connection with the construction or extension of a building | €250, or €5.80 for each square metre of floor area being provided, whichever is the greater |
| (b) Work in connection with - | |
| (i) the material alteration of the interior of a building | €250, or €5.80 for each square metre of relevant floor area, whichever is the greater |
| (ii) the material alteration of the external surfaces of a building | €250 |
| (iii) a combination of (i) and (ii) above | €250, or €5.80 for each square metre of relevant floor area, whichever is the greater |
| (c) A building in which a material change of use takes place | €250, or €5.80 for each square metre of relevant floor area, whichever is the greater |
| (d) Works on a building, where the building concerned will be used as an agricultural building | €130, or €1.60 for each square metre in excess of 300 square metres of - |
| | (i) gross floor area being provided, |
| | Or |
| | (ii) relevant floor area |
| | As the case may be, whichever is the greater |

2.5.3 Road Opening / Closing Licence

For any works in a public area, to dig up a public road, footpath or grass verge, an Application for a T2-T3 Road Opening Licence is required. Works could relate to:

- Water/Sewer Connections;
- Lowering of footpaths;
- Footpath reconstruction; and
- Pipelaying.

Applications for Road Opening Licences can be applied through [MapRoad Licencing](#), the national system for the management and processing of roadworks applications. To apply for access to the MapRoad Licencing system, a [Registration Form](#) must first be submitted to the [Road Management Office](#).

If works relate to more than 1 road/street or involve a length >200m or are complex by involving rail crossings, bridges, or sites of engineering difficulty, an accompanying T1 Notification of Intent to Perform Large or Complex Road Works is required.

At times, a temporary road closure is needed in conjunction with a road opening licence, or for other works. To comply with statutory requirements, an Application for a Temporary Road Closure should be submitted in advance to the relevant Local Authority. Local Authorities vary in the amount of advanced time an application should be submitted prior to works commencing. Check with the relevant authority to ensure the application is submitted

within the required timeframe.

In conjunction with the above licences the following licences should also be applied for where works take place on or near public roads or pathways: a Hoarding/Scaffolding Licence and a Signage licence. A hoarding/scaffolding licence is required to facilitate building works and to ensure safety for the public. Completed application forms must be submitted to the relevant local authority. A Signage licence is also required to authorise the use of advertisement signs/structures on public roads, (e.g., Directional Signs). Completed application forms must be submitted for assessment.

It will be necessary to check with the relevant local authority what the current fees are for the different permit applications.

Recommended Reading:

[MapRoad Licencing User Tutorials](#)

[MapRoad Licencing FAQs](#)

2.5.4 Abnormal Loads Permit (Permit for Specialised Vehicles)

A special permit (often referred to as an Abnormal Load Permit) is required for any haulage vehicles which are considered to be either: Wide, Long or Heavy and travelling on the roads within the relevant Local Authority administrative area. These vehicles may be required when transporting larger components by road. **Completed application forms must be submitted seven days prior to commencement of the journey.**

It will be necessary to check with the relevant Local Authority what the current fees are for the different permit applications.

Some abnormal loads may not require an application to be submitted to the Local Authority, only requiring application to An Garda Síochána, however permits obtained through Local Authorities require the applicant to notify An Garda Síochána in all cases.

Table 2-3 outlines the specifications that determine which body issues the permit.

Table 2-3: Abnormal loads permit application thresholds

| Dimensions | Vehicle and Load | Type of Permit Needed |
|------------|---|---|
| Height | • Over 4.65 m | • Local Authority Permit |
| | • Over 4.65 m – agricultural baled* produce only | • No permit required |
| Length | • 27.4 m or less | • An Garda Síochána permit for designated routes only. Local Authority permit needed for non- designated routes. |
| | • Over 27.4 m | • Local Authority Permit |
| Width | • 4.3m or less | • An Garda Síochána permit for designated routes only. Local Authority permit needed for non- designated routes. |
| | • Over 4.3m | • Local Authority Permit |
| Weight | • Exceeds maximum weights outline in the regulations ⁴ | • Local Authority Permit |

*There is no height limit on agricultural baled produce e.g., hay, straw, etc.

⁴ Road Safety Authority (RSA) Maximum Weight Guidelines: https://www.rsa.ie/docs/default-source/road-safety/r1.5-professional-drivers/weights-and-dimensions-leaflet---november-2023.pdf?sfvrsn=93f12248_11

More information regarding the required permits for transporting abnormal loads can be found summarised on the [RSA website](#).

2.5.5 Section 50 Licence for the Construction, Replacement or Alteration of Bridges and Culverts

A Section 50 licence is required when applying for consent to replace or alter a bridge or culvert is applied for through the Office of Public Works (OPW).

Section 50 of the Arterial Drainage Act, 1945 requires that:

'No local authority, no railway company, canal company or other similar body, and no industrial concern shall construct any new bridge or alter, reconstruct, or restore any existing bridge over any watercourse without the consent of the Commissioners or otherwise than in accordance with plans previously approved of by the Commissioners.'

The OPW is responsible for the implementation of the regulations in the Arterial Drainage Act, 1945, including Section 50.

Please refer to the [OPW Guide to Applying for Consent under Section 50 of the Arterial Drainage Act, 1945](#) for further information on the requirements and considerations for making the application.

The construction of a gasification project may necessitate this licence subject to the works involved, and this should be assessed on case-by-case basis depending on your specific project.

Recommended Reading:

[Consent Requirements – Construction/Alteration of Watercourse Infrastructure](#)

2.5.6 Section 254 Licence (Items on Public Roads)

Depending on the exact details of your gasification project, you may require a Section 254 Licence.

You will need to apply to the relevant Local Planning Authority to place on, under, over or along a public road the following items or equipment:

- A town or landscape map for indicating directions or places;
- A fence, scaffold or hoarding;
- An advertisement structure;
- A cable, wire or pipeline;
- Over ground electronic communications infrastructure and any associated physical infrastructure such as A telephone pole or cabinet;
- A telephone kiosk or pedestal; and
- Any other appliance, apparatus or structure specified in regulations made by the Minister for Housing, Planning and Local Government or by an Act of the Oireachtas that requires a licence.

To apply for a Licence, you will need to complete the application form and submit to the planning authority along with:

- A Site Location Map – 1:2,500 scale;
- A Site Layout Plan showing location of proposed appliance(s)/apparatus(s)/structure(s);
- Drawing(s) to scale of proposed appliance(s)/apparatus(s)/structure(s);

- The appropriate Licence Fee;
- Copy of Insurance Confirmation indemnifying the relevant County Council against claims arising out of any accidents to persons or property;
- Written legal consent of the landowner; and
- Copy of site notice.

2.5.7 Waste Disposal Licence/Permit

Depending on the feedstock for your gasification project, you may require a waste disposal licence/permit, particularly if the feedstock uses waste organic matter/biomass.

Waste disposal and recovery activities in Ireland require authorisation in accordance with the Waste Management Act 1996, as amended. A waste licence is a single licence which deals with emissions from an activity and the environmental management of the facility. Waste licences are issued through the Environmental Protection Agency (EPA). It is also required to provide guidance on determining the need for permitting and information can be requested via email: licensing@epa.ie.

Recommended reading:

[EPA - Determining who needs a waste licence](#)

[EPA – How to apply for a licence](#)

2.5.8 Fire Safety Certificate

A Fire Safety Certificate is required where the applicant proposes a new building, a new building extension, material alterations to an existing building or a change of use of an existing building. The application is made through the National Building Control and Market Surveillance Office's (NBCO) [Building Control Management System \(BCMS\)](#). If the building or works complies with the requirements of Part B of the Second Schedule of the Building Regulations 1997, the NBCO will issue a Fire Safety certificate.

A Fire Safety Certificate application should be made by a Fire Safety Consultant, Architect or Engineer who is familiar with the Building Regulations and the procedure for applying for a Fire Safety Certificate. The fees for the application vary based on the type of application required (normal, 7-day notice or regularisation application).

A valid Fire Safety Certificate application must include:

- A completed application form;
- Relevant fire safety drawings in duplicate;
- A fire safety report in duplicate;
- Site location maps in duplicate; and
- The appropriate fee.

Please refer to Part II of the [Building Control Regulations](#) for further information and exemptions. Additional documentation may be required to be submitted with the completed Commencement Notice / 7-Day Notice; and this should be completed on-line on the [National Building Control Management System \(BCMS\)](#). The online BCMS also contains detailed information about specific exemptions, requirements, and outlines the steps of the application process.

2.5.9 Disability Access Certificate

A Disability Access Certificate is required in specific types of development set out in [Building Control \(Amendment\)](#)

[Regulations \(S.I. No. 526/2018\)](#) Article 20D, Part 4.

It is best practice to apply for your Disability Access Certificate at the same time you are applying for your Fire Safety Certificate (see **Section 2.5.8**). If both applications are prepared at the same time by the same person, the drawings can be co-ordinated prior to submission. A Disability Access Certificate application should be made by an appropriate consultant, architect or engineer who is familiar with the Building Regulations and the procedure for applying for a disability access certificate. The application is made through the National Building Control and Market Surveillance Office's (NBCO) [Building Control Management System \(BCMS\)](#).

A valid Disability Access Certificate application must include:

- A completed application form;
- Relevant fire safety drawings in duplicate;
- A disability access report in duplicate;
- Site location maps in duplicate; and
- The appropriate fee as determined by Fifth Schedule of the principal regulations.

To determine if your project may be exempt from the necessity of obtaining a Disability Access Certificate please refer to the [Manual for the Reuse of Existing Buildings](#).

2.5.10 Derogation Licence – Protected Habitats and Species

Derogation licences are licences to disturb or interfere with protected plant and animal species. If a protected species is suspected to occur in an area to be developed, a derogation licence may be required. Within limited circumstances derogation licences permit holders to disturb or interfere with protected plant and animal species. Several plant and animal species are legally protected in Ireland. Some of these species are included in a system of Strict Protection pursuant to the requirements of Articles 12, 13 and 16 of the Habitats Directive (92/43/EEC) and are sometimes referred to as Annex IV species. The list of Annex IV species which are present in Ireland and its waters is set out in

The National Parks and Wildlife Service (NPWS) is the responsible body for administering Annex IV protection for Ireland. Applications must be submitted directly to the NPWS and require an accompanying ecologist's report. Application forms can be found at [NPWS: Application for Derogation Licence](#) and should be submitted to: wildlifelicence@npws.gov.ie.

Recommended Reading:

[Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland](#)

[Guidance on the Strict Protection of Animal Species](#)

[Notifiable Actions for Listed Habitats and Species](#)

Table 2-4: Annex IV Species

| Annex IV Species | |
|------------------------|-----------------|
| Animals | Plants |
| All bat species | Killarney Fern |
| Otter | Slender Naiad |
| Natterjack Toad | Marsh Saxifrage |
| Kerry Slug | |
| Dolphins and Porpoises | |
| Whales | |

Annex IV Species

Marine Turtles

2.5.10.1 Derogation Licence to Disturb Bats or their Breeding or Resting Places

Presently, there are nine confirmed resident bat species in Ireland. All bats are listed in Annex IV of the EU Habitats Directive. Under the Irish law that implements this directive, both the bats themselves and their roosts are protected, as such it is an offence to disturb or interfere with them without an appropriate licence. If any bat species is suspected of inhabiting a structure (e.g., trees, bat boxes, buildings, stone bridges etc.) in any area proposed for development, a derogation licence to disturb bats, their breeding or resting places may be required by the granting authority⁵.

Even when planning permission is granted, the wildlife legislation applies. Works which would capture or kill them, damage, or destroy their roosts or disturb them at important parts of their life cycle cannot take place without obtaining a second derogation licence. This licence is issued when planning permission is given under Regulation 54 of the Regulations, and strict criteria must be met before such a licence can be approved. [Bat Mitigation Guidelines for Ireland](#) should also be referred to when carrying out works which may disturb them.

2.5.10.2 Derogation Licence to Disturb Annex IV Species or their Breeding or Resting Places

The list of Annex IV species which occur in Ireland and its waters are set out in **Table 2-4** above.

If any Annex IV species is suspected/found to occur in an area to be developed, a derogation licence may be required. A derogation licence to disturb Annex IV species or their breeding or resting places may be required by the granting authority, NPWS, under European Commission (Birds and Natural Habitats) Regulations 2011-2021. For example, otters are listed on Annex IV of the EU Habitats Directive. The Irish law that implements this directive gives strict protection to individual otters and their breeding and resting places.

Even when planning permission is given, the wildlife legislation applies. Works which would capture or kill them, damage, or destroy their breeding or resting places, or disturb them at important parts of their life cycle cannot take place without obtaining a second derogation licence. This licence is issued when planning permission is given under Regulation 54 of the Regulations, and strict criteria must be met before such a licence can be approved.

2.5.11 Planning Permission Conditions

Upon a grant of planning permission, there will almost certainly be planning conditions imposed by the local authority, which may cover a range of matters. These could include specific conditions on working hours, or other conditions in relation to noise from construction, dust generated, wheel washing, etc. These conditions must be strictly adhered to, as if a project is found to be in breach of conditions, a Local Authority may initiate enforcement proceedings.

The Local Authority may deploy site Inspectors to ensure compliance with planning conditions, and other site matters under which the Local Authority has jurisdiction.

⁵ NPWS, under EC (Birds and Natural Habitats) Regulations 2011-2021.

3 Operations and Maintenance Stage

3.1 Licences

3.1.1 Integrated Pollution Control (IPC) Licence

An Integrated Pollution Licence may be required for your development, depending on the specifications and nature of the feedstock and use of the syngas generated. Please consult as appropriate with the Environmental Protection Agency for more detailed information.

An Integrated Pollution Control (IPC) Licence is a single integrated licence required for the operation of specified activities or facilities, it covers all emissions from the facility and its environmental management (see applicable industries listed in **Table 3-1**). IPC Licence requirements come into effect as a result of the Environmental Protection Agency Act 1992, as amended, to meet the European Union Industrial Emissions Directive 2010/75/EU. Although an IPC Licence is an operational licence it is typically applied for in tandem with planning permission.

Table 3-1: Types of Industries that might require an Integrated Pollution Control Licence.

| Minerals and Other Materials | |
|------------------------------|---|
| Metals | Fossil Fuels |
| Minerals Fibres and Glass | Cement |
| Chemicals | Waste (Class 11.1) |
| Food and Drink | Surface Coatings |
| Textiles and leather | Other Activities (includes testing of engines, manufacture of printed circuit boards, production of lime, the manufacture of ceramics). |

Before a licence is granted, you must satisfy the Environmental Protection Agency (EPA) that emissions from the activity will not cause a significant adverse environmental impact. If you are conducting IPC activities, you can ask the EPA to make a declaration as to whether an IPC Licence is required via the Environmental Data Exchange Network (EDEN) online portal (<https://www.edenireland.ie/>).

The requirement for a licence can be determined using the EDEN portal within 15 working days. However, the licencing process through the EPA takes eight weeks from application to determination and an EIA (Environmental Impact Assessment) may be required, followed by 28 days allowed for objections before a final decision can be made, which may then be subject to Judicial Review within eight weeks of the decision.

Some activities only require an EPA Licence when they exceed specified thresholds. If you are carrying out an activity that is below a threshold you must ensure that you do not exceed that threshold without having an IPC Licence. Currently IPC licencing is limited to thermal plants. For all queries in relation to IPC licencing and to arrange a pre-application meeting contact the EPA at licensing@epa.ie.

If your project is part of an existing already licensed activity amendments may need to be made to your licence. Consultation with the EPA is advised.

3.1.2 Industrial Emissions Licence

Installations where the total rated thermal input capacity of all combustion plant on site is 50 MW or more are required to hold an Industrial Emissions (IE) Licence under Class 2.1 of the EPA Act (as amended). The EPA in Ireland is responsible for issuing and enforcing IE licences. These licences are required for certain industrial and agricultural activities to ensure they operate in a manner that protects the environment from pollution.

An IE Licence may be required for larger scale projects, or by virtue of increasing the installed capacity of combustion equipment on site, if combustion of syngas whether refined or otherwise is taking place. Consultation with the EPA is advised, the EPA will assist you in determining whether you require an IPC Licence or an Industrial Emissions licence, in some cases it may be deemed that an operation is predominantly a waste activity requiring a waste licence. However, only one licence will be required which will regulate all emissions from your facility.

Recommended Reading:

<https://www.epa.ie/our-services/licensing/industrial/industrial-emissions-licensing-ied/>

3.1.3 Seveso III Directive

Depending on what substances are present/stored on the site of your gasification project, you may have obligations under the Seveso III Directive.

Industrial activities where dangerous substances are present on site in sufficiently large quantities may fall under the requirements of the Seveso Directive. The Seveso Directive⁶, aims to control and limit the effects of major accident hazards involving dangerous substances, especially chemicals. In Ireland, the requirements of the Seveso III Directive (2012/18/EU) are implemented through the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015). These regulations transpose the directive into Irish law and outline the responsibilities of operators and authorities to prevent major accidents and limit their consequences.

An activity may fall under the requirements of the Seveso Directive if the following hazardous or dangerous substances are present on site above or equal to the following thresholds;

- Toxic Substances: 5 tonnes
- Flammable Liquids: 2,500 tonnes
- Explosives: 10 tonnes
- Petroleum Products: 2,500 tonnes
- Ammonium Nitrate: 350 tonnes

Compliance with the Seveso Directive is not a licence per se, however for qualifying activities it will require the approval of certain documentation prior to operations, such as;

- Major Accident Prevention Policy (MAPP), and/or
- Safety Report and internal and external emergency plans (depending on the quantity of dangerous material that may be present on site).

A gasification project in isolation may fall under the requirements of Seveso, particularly if there is storage of syngas onsite in sufficient quantities, or if the project is in combination with another onsite activity that may change a sites Seveso status.

In Ireland, the Health and Safety Authority (HSA) is the designated Central Competent Authority responsible for ensuring compliance with the Seveso Directive (also known as the Control of Major Accident Hazards Directive).

3.1.4 Waste Disposal Licence/Permit

While Waste Disposal Licences/Permits do not expire after a set period of time, the EPA may review a licence within 3 years under provisions of the Waste Management Act 1996 (as amended). The licensee must ensure they are operating within the parameters of any licence held where required. Any changes to the nature of operations may require an amendment to be made to the terms of the licence, and this should be applied for to the EPA.

3.1.5 Other Licences/Permits

Depending on what licences/permits have previously been required or applied for relating to your gasification project, the need may arise to reapply for certain consents as they may expire or need to be updated periodically. It is

⁶ Please refer to: [Seveso III Directive– Seveso III On the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC \(Text with EEA relevance\)](#), Annex I for a list of Dangerous Substances considered under the Seveso directive.

important for the owner/operator of the gasification facility to ensure that all licences and permits are up-to-date and in compliance with any governing legislation. The issuing body for any particular consent held already will be able to advise on any further actions required throughout the operational lifespan of a gasification facility.

4 Project End Stage

4.1 Decommissioning

Decommissioning refers to the cessation of the gasification process and the dismantling and removal of associated equipment and infrastructure. Some gasification installations may be decommissioned or taken out of service with minimal works, larger projects may require significant more works to decommissioning and return the site to a suitable condition.

4.1.1 Planning

Before embarking on decommissioning of a gasification project, please check all relevant planning permission documents from previous applications, to determine if planning permission is required for decommissioning activities. There may be conditions applied that are relevant to the decommissioning process. If it is intended to remove equipment and demolish any structures, and/or change the use of the site, further planning consents may be required.

If there are any outstanding concerns whether decommissioning of a gasification facility will require planning consent, the owner/operator may seek a Section 5 Declaration from the Local Authority for clarification.

4.1.2 Licences

The decommissioning phase of a project may require reapplication for licences applied for during the pre-construction phase along with additional licences. Please consider the licenses that were required for the construction of the facility, whether they may be required for its decommissioning.

4.1.2.1 Notice to Close and Application to Terminate Connection Agreement

If your gasification facility is collocated with an electricity generation element, you may require a Notice to Close and Application to Terminate Connection Agreement. This is only relevant to projects with a connection to supply electricity.

Notice of intention to stop/change electricity generation is a mandatory requirement as part of grid connection agreement.

The requested termination date must be in line with Grid Code requirements. For generators less than 50 MW the date must be at least two years after the deemed complete application date. For, generators greater than 50 MW installed capacity, the date must be at least three years after the deemed complete application date.

For further information on the steps required for a valid notice to close and application to termination connection agreement please refer to the EirGrid Group Plant Closure Process.

4.1.2.2 Consent Required for Degassing of Pipeline

The decommissioning may involve the degassing of a pipeline, depending on the exact specifications of your facility. In accordance with the EU Environmental Impact Assessment Directive and the Habitats Directive, the project may be assessed for potential significant environmental impacts. It will be necessary to get consent from the CRU and notify the GNI to degas a pipeline. The CRU is the competent authority that issues a Section 39A (of the Gas Act 1976, as amended) approval for this activity. Gas lines were once deemed to have a lifetime of 40 years, but now (due to the advancements in materials in use), the GNI analyses pipelines to assess pipes to see if it can continue beyond this timeframe.

In order to decommission a pipeline, you need to degas it. To do that you must decant the gas in that pipeline into a lower pressure section of the network. Ultimately, that surplus gas is then flared and purged with nitrogen. Should you then need to dig up that degasified gas pipeline, the impact on the local environment is similar to the impact of putting the pipe in situ in the first place. An alternative to this step in the degasifying process is to fill the degassed pipeline with grout and leave in situ, as this has the least impact on the environment. The approach taken will vary depending on the surrounding environment and existing site constraints.

4.1.2.3 Other Licence(s)

In addition to the above licence other licences may apply such as Abnormal Load or Road Closure licenses if the site is

to be fully decommissioned – these licences will be subject to the conditions laid out under planning consents.

4.2 Lifespan Extension

Gasification technology, as with any other infrastructure, have a lifespan which has been determined to be the maximum allowable period of operation for the equipment. Generally, manufacturers of the subject equipment will specify an operational lifespan of the equipment. This means the period after which the manufacturer recommends it be decommissioned or replaced. Unless specified by a statutory body, it is up to the owner/operator to determine the lifespan of the installation ultimately, however, it is recommended to have due regard to the manufacturer's instructions. For the lifetime of the site the equipment should be maintained and operated safely and in accordance with manufactures guidance and best practise.

The lifespan extension of a gasification project may simply involve the extending the operational life stated, subject to inspection and ongoing maintenance, or replacement of some aging elements of the facility. Any works required should be considered regarding the impacts this may have on licencing and consents.

4.2.1 Planning

For smaller scale projects, including those that were exempted development and those that required planning permission at installation, there will likely not be any specific conditions in relation to the lifespan of the installation. For installations that required planning permission for construction, there may be a condition attached in relation to the lifespan of the installation. If there is, this must be complied with, however, if not, the applicant may leave the installation in place according to their own wishes.

Regarding larger scale projects lifespan extension may be dealt with by means of a condition. Typically, a condition attached to the grant of permission will set out the lifespan of the permitted development and any extension to this will be by means of another, separate planning application. If there is no specific condition, you may not require planning permission. If you have any doubts whether planning permission is required, you may contact your Local Authority and request a Section 5 Declaration, in which it will be determined if your works are exempt from planning permission or not.

4.2.2 Licences

An extension in the lifespan of a project may necessitate the extension of existing or procuring of new licences (due to timescales/permits/conditions involved) for various licences. Please refer back to **Section 3** (Operation and Maintenance Stage) for more information in relation to potential licences that might be required.

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