

1 Introduction

1.1 Introduction

Indaver Ireland Limited (Indaver) currently operate a Waste to Energy (WtE) facility (waste incinerator) at its site in Carranstown, Duleek, Co Meath. The existing facility has been in operation since August 2011 and is licensed under an Industrial Emissions Licence (No. W0167-03) by the Environmental Protection Agency (EPA).

Indaver proposes to carry out a new development at its existing WtE facility in Carranstown. The proposed development is collectively referred to as a *Site Sustainability Project* in this Environmental Impact Assessment Report (EIAR) and in the planning application.

In accordance with Section 37E of the Planning and Development Act 2000, as amended, Indaver gives notice of its intention to make an application to An Bord Pleanála for a 10-year planning permission in relation to the proposed Carranstown Site Sustainability Project.

The proposed development (which includes up to 4,033m² of buildings), comprises further development within the existing 9.9 hectare site and includes:

- A. Increase in the amount of hazardous waste accepted at the facility for treatment in the waste to energy plant from the current permitted 10,000 tonnes per annum (tpa) up to a maximum of 25,000 tpa.
- B. Increase the annual total waste accepted at the site for treatment in the waste to energy facility from the currently permitted 235,000 tpa to 250,000 tpa.
- C. Development of an aqueous waste tank farm (up to 625m²) and unloading area (up to 310m²) including: 1 x 20m³ (up to 8m high above ground) and 3 x 300m³ storage tanks (up to 25.5 m high above ground) in a bund (up to 320m²), a single-bay tanker loading area, ancillary equipment area complete with paved areas, gantries, piperacks and stairs; and an upgrade of the existing unloading area to a three-bay tanker unloading area complete with gantries, piperacks and stairs.
- D. Development of a 10MW_e hydrogen generation unit, single storey, up to 810m² and 12.7m high above ground, complete with on-site vehicular access road, tanker loading area (for mobile hydrogen transport applications and other potential uses), 100m³ hydrogen storage tank and connection to the natural gas distribution network.
- E. Development of a bottom ash storage building up to 1,525m² and 14.5m high above ground, for the storage of up to 5,000 tonnes of bottom ash currently produced on site.
- F. Additional waste acceptance capacity and infrastructure (2 x 200m³ & 1 x 100m³ tanks located inside the existing main process building and a concrete area for tanker unloading of up to 300m² located outside) to accept up to 30,000 tpa (bringing the site total to 280,000 tpa) of third

- party boiler ash and flue gas cleaning residues and other similar residues for treatment in the existing ash pre-treatment facility on site.
- G. Development of a single storey warehouse up to 277m² and 10m high above ground, a single storey workshop up to 182m² and 10m high above ground with an office mezzanine level of up to 40m², and a two-storey emergency response team (ERT)/office building up to 127m² (per storey) and 10m high to support existing maintenance activities on the site.
 - H. Development of a new concrete yard (up to 2,200m²), complete with an underground stormwater attenuation tank of up to 146m³, for vehicular access and parking area (up to 530m²) for up to 10 trucks, tankers or containers on the site.
 - I. Demolition and re-building of an existing single storey modular office building on site with a slightly increased footprint totalling up to 615m² and 5m high above ground.
 - J. Other miscellaneous site upgrades including: provision of a weather canopy up to 210m² and 12.5m high adjacent to the existing pre-treatment plant; weather canopy to a truck maintenance bay up to 75m² and 6m high; alterations to the hardstands and approach roads to the tipping hall (up to 1,100m²); provision of a concrete hardstand adjacent to the aero condenser structure (up to 250m²); site road widening in the vicinity of the proposed tanker unloading area to improve vehicle manoeuvring (up to 165m²); extension (increase in length of 25m), reconfiguration (increase in height of up to 7m) and landscaping of two berms on site to improve visual screening characteristics; repurposing of the existing temporary trailer park to a dedicated, permanent contractors compound (up to 5,350m²) complete with fencing (up to 2.5m high), vehicle access, personnel site access & welfare facilities (up to 45m² and 4.5m high) and a new dedicated sewage treatment unit; a permanent personnel access route from the existing main process building to the proposed modular office building, hydrogen generation unit and the contractors compound via footpaths, security turnstile unit and a concrete staircase (up to 75m²); 32 new car parking spaces for staff and contractors in the existing car park area (up to 350m²).

This list of the proposed development can be summarised as follows:

1. Increase in the amount of hazardous waste accepted at the facility for treatment in the waste to energy plant from the current permitted 10,000 tonnes per annum (tpa) up to a maximum of 25,000 tpa;
2. It is also proposed to increase the annual total waste accepted at the site for treatment in the waste to energy facility from the currently permitted 235,000 tpa to 250,000 tpa;
3. Development of an aqueous waste tank farm and unloading area for the storage and processing of aqueous liquid wastes currently accepted at the facility;
4. Development of a 10MW_e hydrogen generation unit for connection to the natural gas distribution network and for mobile hydrogen transport applications and other potential uses;

5. Development of a bottom ash storage building for the storage of up to 5,000 tonnes of bottom ash which is currently produced on site;
6. Additional waste acceptance capacity and infrastructure to accept up to 30,000 tpa (bringing the site total to 280,000 tpa) of third party boiler ash and flue gas cleaning residues and other similar residues for treatment in the existing ash pre-treatment facility on site;
7. Development of a warehouse, workshop and emergency response team (ERT)/office building to support existing maintenance activities on the site;
8. Development of a new concrete yard and parking area for up to 10 trucks, tankers or containers on the site;
9. Demolition and re-building of an existing single storey modular office building on site with a slightly increased footprint; and
10. Other miscellaneous site upgrades.

This chapter outlines the background to the project and summarises the applicable planning procedure. This chapter also describes the methodology used to prepare this EIAR, provides details on competent experts and the consultation process that has been carried out to date. For ease of reference, the Site Sustainability Project is referred to as “*proposed development*” in this chapter and throughout the EIAR.

1.2 Proposed Development Location

The existing Waste to Energy (WtE) facility is located in Carranstown, Duleek, Co. Meath. Refer to **Figures 1.1 to 1.3**. The site is owned by Indaver.

The facility is located 1.8km west of the M1, bound to the south by the R152 regional road and surrounded by greenfield on all other sides. A clustering of large-scale industrial activities including Irish Cement Platin is to the immediate north of the site and the rest of the surrounding land is used for industrial, agricultural and residential purposes. Duleek is located to the south of the facility.



Figure 1.1: Location of the existing Indaver Waste-to-Energy Facility in the context of the wider Duleek/Drogheda area. Location indicated by red pin | Not to Scale | Source: Google Maps

1.3 Site History

This facility has successfully operated since 2011 and currently accepts 235,000 tonnes per annum of household, commercial and industrial non-hazardous waste. Each year since 2011, this facility has diverted over 200,000 tonnes of waste annually away from landfills and export, recovering over 6,000 tonnes of ferrous metals, and generated approximately 138 gigawatt hours of electricity.

The production of 138 gigawatt hours is enough to power the equivalent of 30,000 homes per annum, or a town the size of Drogheda and Navan combined.

Like any large-scale industrial facility, the facility in Meath is subject to an extremely rigorous environmental and compliance regime and is licensed by the EPA under register number W0167-03 pursuant to the Industrial Emissions Directive (IED) and relevant national regulations which strengthens the application of Best Available Techniques (BAT). This stringent licensing regime will also apply in the context of the proposed development.

The systems on-site are designed to continuously monitor 14 individual aspects of the Meath facility in order to ensure compliance with licence conditions.

This Waste to Energy facility has successfully integrated into the local area. A Community Liaison Committee was set up in 2008 which ensures that any issues that arise are quickly identified and speedily resolved.

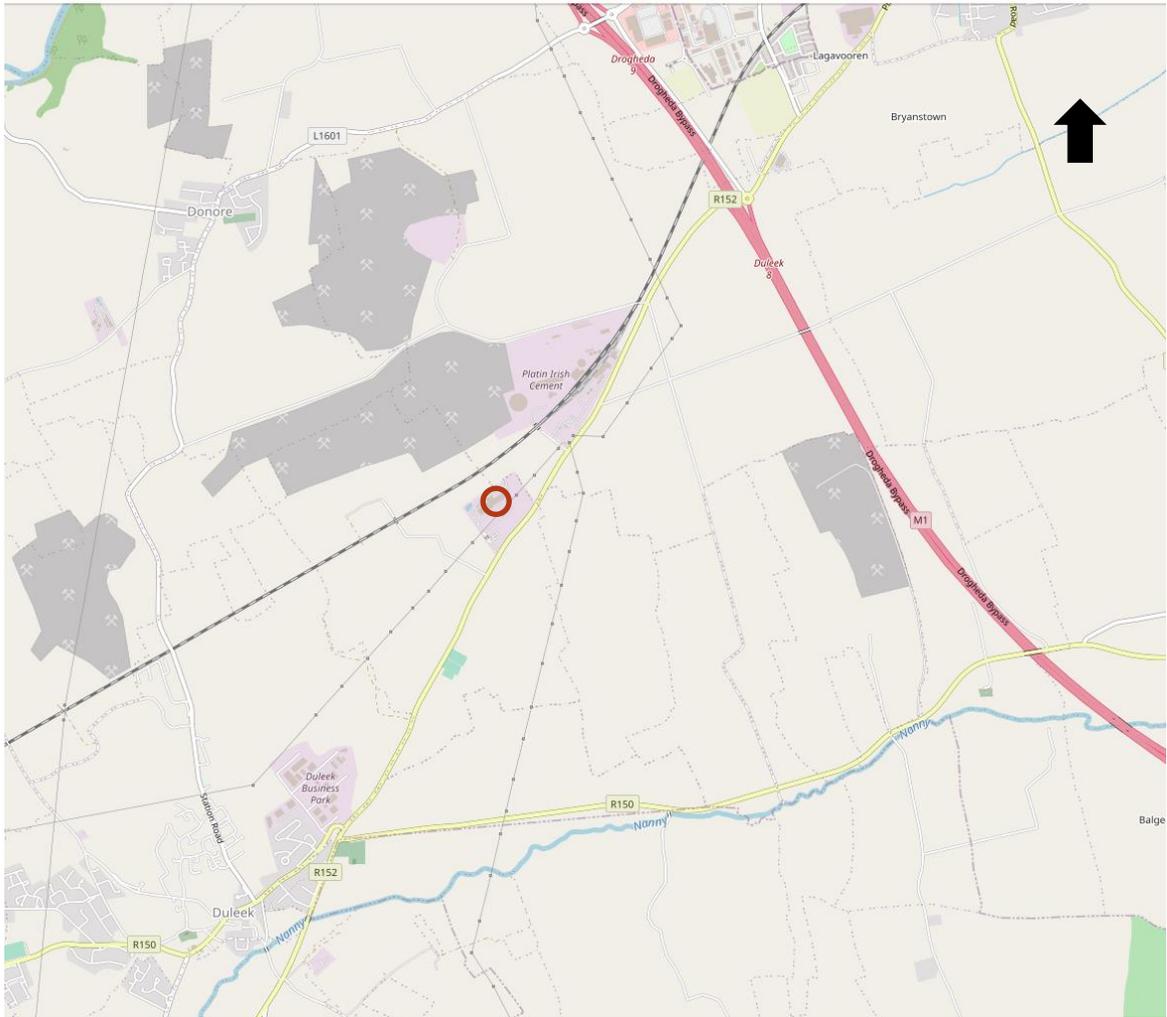


Figure 1.2: Indaver site (red circle showing general location) and wider surrounds | Not to Scale | Source: EPA Envision mapping (<https://gis.epa.ie/EPAMaps/>)



Figure 1.3: Approximate site boundary of the Indaver Waste-to-Energy Facility | Not to Scale | Source: EPA Envision mapping (<https://gis.epa.ie/EPAMaps/>)

1.4 Overview of the Planning History of the site

A brief overview of the planning history for the existing facility is provided below.

- 2006 – Consent granted by Meath County Council (MCC) for the original facility (Ref. SA/60050). Appealed to An Bord Pleanála and permission upheld by ABP in 2007 (Ref. PL 17.219721).
- 2009 - Permission for amendments and alterations granted by MCC in September 2009 (Ref. SA/901467).
- 2013 – Consent granted permission under Strategic Infrastructure Act for increase in tonnage to 220,000 tpa and to include 10,000 tpa hazardous waste (Ref. 17.PA0026).
- 2014 – Consent granted by ABP to amend previous condition on 220,000 to 235,000 for 5 years to end of 2019 (Ref. 17.PM0004).
- 2016 – Consent granted by ABP for alterations for the pre-treatment plant (Ref. 17.PM0007).
- 2017 – Consent granted by Meath County Council to extend the duration of existing permission 17.PA0026 until 2023 to enable construction of pre-treatment plant on site (Ref. LB/171077).

- 2019 – Alteration to remove 5 year life of 235,000 tpa granted under 17.PM0004 into perpetuity (Ref. ABP-302447-18).

In August 2019, Indaver submitted an application to An Bord Pleanála to enter into pre-application consultations under Section 37(B) of the Planning and Development Act 2000, as amended.

A pre-application consultation meeting was held with An Bord Pleanála on 11th December 2020. A request was made by Indaver that a Notice of Pre-application Consultation Opinion be issued pursuant to section 37(B)(4)(a) of the Act on 14th April 2020 and confirming that an application for permission for the proposed development must be made to An Bord Pleanála.

An Bord Pleanála, in a letter to Indaver on 11th June 2020, confirmed that the proposed development may be regarded as strategic infrastructure for the purposes of the Planning and Development Act 2000, as amended (Letter is presented in **Appendix 1.1**) and directed Indaver to submit an application to An Bord Pleanála (ABP) under Section 37E of the Planning and Development Act 2000, as amended.

1.5 EIA Legislation, Guidance and EIAR Structure

1.5.1 EIA Guidance

In preparing the EIAR, regard has been had to the following overarching EIA related guidance:

- Department of Housing, Planning and Local Government (2018) Circular PL 05/2018 -Transposition into Planning Law of Directive 2014/52/EU amending Directive 2011/92/EU on the effects of certain public and private projects on the environment (the EIA Directive) And Revised Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment;
- Department of Housing, Planning, Community and Local Government (2017) Key Issues Consultation Paper on the Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems;
- Department of Housing, Planning, Community and Local Government (2017) Circular PL 1/2017 - Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on the Administrative Provisions in Advance of Transposition;
- Department of the Environment, Community and Local Government (2013) Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment;
- Environmental Protection Agency (2017) Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports (Draft August 2017);
- Environmental Protection Agency (2003) Advice Notes on Current Practice in the preparation of EIS;

- European Commission (2017) Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report;
- European Commission (2012) Interpretation suggested by the Commission as regards the application of the EIA Directive to ancillary/associated works;
- European Commission (1999) Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions;
- European Union (2013) Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment;
- Government of Ireland (2018) Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018).

Additional topic-specific guidance utilised to undertake assessments is identified in the individual topic chapters where appropriate.

1.5.2 EIA Legislation

A European Directive for EIA has been in force since 1985 since the adoption of Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment.

The EIA Directive of 1985 has been amended three times by Council Directives 97/11/EC, 2003/35/EC and 2009/31/EC. It was ultimately codified and repealed by Council Directive 2011/92/EU on 13 December 2011. Directive 2011/92/EU has now been amended in 2014 by Directive 2014/52/EU.

In Ireland, the requirements for EIA in relation to planning consents are specified in Part X of the Planning and Development Act, 2000, as amended and in Part 10 of the Planning and Development Regulations, 2001, as amended. The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018) transpose the requirements of the 2014 EIA Directive into existing planning consent procedures.

The definition of EIA provides for a clear distinction between the process of environmental impact assessment to be carried out by the competent authority and the preparation by the developer of an Environmental Impact Assessment Report (EIAR). This EIAR accompanies the application for the proposed development which has been submitted to An Bord Pleanála. The EIA for the purposes of planning consent will be undertaken by An Bord Pleanála.

A key objective of the 2014 amendments to the EIA Directive has been to improve the quality of EIA, including with respect to the collection and assessment of environmental information and to the EIA Report's (EIAR) content. The key changes include:

- The coverage of environmental issues required in the EIAR is extended as new requirements related to climate change, biodiversity, risk of major accidents and/or disasters are introduced.

- In this EIAR, climate change is discussed in **Chapter 9 *Climate*** and **Chapter 2 *Planning and Policy Framework and Need for Scheme*** (in relation to climate policy).
- Biodiversity is presented in **Chapter 11 *Biodiversity***. In addition, an Appropriate Assessment Screening Report (AA) and Natura Impact Statement (NIS) has been submitted as part of this planning application to An Bord Pleanála.
- Risks of major accidents and/or disasters are presented in **Chapter 17 *Major Accidents and Disasters***.
- The assessment of reasonable Alternatives is broadened: Alternatives studied by the Developer e.g. Alternatives to Project design, technologies, location, size, and scale, must be described in the EIAR and an indication of the main reasons for the option chosen must be given. In this EIAR, Alternatives are addressed in **Chapter 3 *Alternatives***.
- Provisions related to the completeness and quality of EIARs have been introduced. In this EIAR, the details of the competent experts who were responsible for the preparation of the specialist reports is presented in **Appendix 1.2**.

1.5.3 Structure of the Environmental Impact Assessment Report

This Environmental Impact Assessment Report (EIAR) has been prepared to provide information on the likely significant effects of the proposed development on the environment as per the Planning and Development Regulations 2001 (as amended by Schedule 6 of the European Union (Planning and development) (Environmental Impact Assessment) Regulations 2018, (S.I. No. 296 of 2018) and includes the following information specified in the Regulations:

1. A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development;
2. A description of the likely significant effects on the environment of the proposed development;
3. A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment of the development;
4. A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment;
5. A Non-technical summary of the information referred to in the above four points.

In relation to likely significant effects on the environment:

1. The EIA must identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors:
 - (a) population and human health;
 - (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
 - (c) land, soil, water, air and climate;
 - (d) material assets, cultural heritage and the landscape;
 - (e) the interaction between the factors referred to in points (a) to (d).
2. The effects referred to above on the factors set out therein must include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned.

This EIAR has been prepared on behalf of Indaver by a multi-disciplinary consultancy team of competent experts led by Arup with input from specialist sub-consultants. The format used in the EIAR is the grouped format, in which each topic is addressed in a separate section. This is designed to allow readers to access the issues of interest to them as easily as possible. However, there is overlap of some topics.

For example, effects on water are addressed in **Chapter 14 *Land and Soils*** (under the heading of Hydrogeology) and **Chapter 15 *Water*** (Hydrology).

Effects on human beings are addressed in several chapters including **Chapter 6 *Population and Human Health***, **Chapter 13 *Landscape and Visual*** **Chapter 8 *Air Quality***, **Chapter 9 *Climate***, **Chapter 10 *Noise and Vibration*** whilst water quality and supply is addressed in **Chapter 14 *Land and Soils*** and **Chapter 15 *Water***.

Effects on land are addressed in **Chapter 13 *Landscape and Visual***, **Chapter 16 *Material Assets*** (Land take/land use) and **Chapter 14 *Land and Soils*** (Soils and Geology).

The effects on the environment from the vulnerability of the proposed development to risks of major accidents and/or disasters are presented in **Chapter 17 *Major Accidents and Disasters***.

Waste management in the context of residues produced during the operational phase is addressed in **Chapter 16 *Material Assets*** whilst construction waste management is addressed in **Chapter 5 *Construction Activities*** and in **Appendix 5.1 *Construction Environment Management Plan***.

Issues not directly addressed in individual chapters and interactions between environmental factors are described in **Chapter 18 *Cumulative Effects, Other Effects and Interactions*** of this EIAR. Each of the environmental assessment chapters (**Chapters 6-17**), consider the potential for cumulative effects. **Chapter 18** contains an overall concluding summary as to the potential for cumulative effects from the proposed development acting in combination with other planned and permitted developments.

Each of the environmental assessment chapters includes a description of the receiving environment, methodology, the likely significant effects of the proposed development specific to the specialist environmental topic, the baseline (Do-Nothing) scenario, the features and measures to mitigate adverse significant effects and residual effects.

For clarity, the Do-Nothing Scenario (i.e. a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline thereof without implementation of the proposed development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge) is provided in each of the chapters which describe relevant environmental aspects and likely significant effects. Refer to **Chapters 6-17** and also **18** of this EIAR for further details.

The Do-Nothing scenario in the context of a “Do-Nothing Alternative” is discussed in **Chapter 3 Alternatives**.

The EIAR comprises the following volumes:

- **Volume 1** provides the non-technical summary. This summarises the findings of the EIAR in a clear, accessible format that uses non-technical language and supporting graphics. The non-technical summary describes the proposed development, existing environment, effects and mitigation measures and relevant aspects of the EIAR in a manner that can be easily understood by the general public or lay person;
- **Volume 2** encompasses the main EIAR including introductory chapters in addition to ‘assessment’ chapters for each environmental aspect in accordance with Article IV of the EIA Directive. The front end chapters (Chapters 1 – 5) provide the relevant project context whilst the assessment chapters (Chapters 6 -17) provide a description of the relevant environmental aspects and likely significant effects with summary chapters provided thereafter (Chapters 18 and 19). Figures are also included;
- **Volume 3** provides the technical appendices that support and are cross-referenced with Volume 2. This may include other relevant drawings, modelling outputs, background reports and/or supporting documents.

Reference should also be had to the full set of planning drawings accompanying the planning application and a summary set of drawings in A3 format included as an appendix to **Chapter 5 Construction Activities**, presented in **Appendix 5.2 of Volume 3**.

In addition, an Appropriate Assessment Screening Report (AA) and Natura Impact Statement (NIS) have been prepared by Dixon-Brosnan on behalf of Indaver and submitted as part of this planning application to An Bord Pleanála. The conclusion of the NIS, in summary, is that the proposed development (with the implementation of mitigation measures) does not pose a risk of adversely affecting (either directly or indirectly) the integrity any European site, either alone or in combination with other plans or projects. Refer to the AA Screening Report and NIS for further details.

1.6 Details of Competent Experts

This EIAR has been prepared on behalf of Indaver by a multi-disciplinary consultancy team of competent experts led by Arup with input from specialist sub-consultants. Arup has been awarded an EIA Quality Mark by the Institute of Environmental Management and Assessment in recognition of its excellence in EIA activities.

Further, all technical leads are deemed to be qualified and competent experts in their fields in accordance with Article 5(3) of the EIA Directive, given their academic qualifications, professional affiliations and demonstrable and professional experience on other EIAs for major infrastructure projects. Refer to **Appendix 1.2** for further detail on the competent experts that have prepared this EIAR.

1.7 Consultation Undertaken

A pre-application consultation meeting was held with An Bord Pleanála on 11th December 2020. A request was made by Indaver that a Notice of Pre-application Consultation Opinion be issued pursuant to section 37(B)(4)(a) of the Act on 14th April 2020 and confirming that an application for permission for the proposed development must be made to An Bord Pleanála.

ABP, in a letter to Indaver on 11th June 2020, confirmed that the proposed development may be regarded as strategic infrastructure for the purposes of the Planning and Development Act and the relevant application for permission for the proposed development be made to An Bord Pleanála (Refer to **Appendix 1.1**).

The following pre-application consultations were also undertaken:

- Health and Safety Authority – 14th January 2020
- Meath County Council - 13th February 2020
- Environmental Protection Agency - 13th February 2020
- Commission for Regulation of Utilities (via letter on 10th April 2020 & by conference call on May 15th), and
- Eastern-Midlands Waste Regional Office – 5th February 2020.

Indaver has also consulted the public and interested parties regarding its plans for the proposed development. This has been carried out through the Indaver Community Liaison Committee (ICLC) during various stages of the development of this project and was more recently presented at an ICLC meeting on 6th February 2020.

Indaver also met with representatives from the Irish Cement, Platin facility on December 13th, 2019 to explain details of the proposed development. In addition, an application was made to Gas Networks Ireland (GNI) in July 2019 for connection of the Hydrogen Generation Unit to the natural gas grid.

Information relating to the project is also available on the Department of Housing, Planning and Local Government's EIA Portal (Portal ID number 2020093).

The EIA Portal provides information on applications for development consent subject to EIA and submitted to relevant competent authorities since 16 May 2017. The EIA Portal identifies, on a map, the location of each application for development consent accompanied by an EIAR. It also lists the name of the applicant, the type of development proposed and the competent authority to which the application is made.

A copy of the confirmation notice from the EIA Portal is provided in **Appendix 1.3**. A link to the newspaper notice relating to the application is also provided on the portal.

The portal can be accessed at:

<https://www.housing.gov.ie/planning/environmental-assessment/environmental-impact-assessment-eia/eia-portal>. The newspaper notice and site notice have been prepared as per the requirements of the Planning and Development Regulations 2001 (as amended). The newspaper notice was published on 22nd June 2020 and the site notice was erected on site on 22nd June 2020. Details of the public notices are included in **Appendix 1.4**.

Full details of the application including all of the associated drawings and documents can be readily accessed on the dedicated website established for this application to the Board at www.carranstownssp.ie.

1.8 Difficulties Encountered During the Assessment

No difficulties were encountered during the preparation of this EIAR that were considered to have a material impact on this EIAR.