An Bord Pleanála

Inspector's Report ABP-307433-20.

Development	Site Sustainability Project.
Location	Carranstown, Duleek, Co. Meath.
Planning Authority	Meath County Council.
Applicant	Indaver (Ireland) Limited.
Type of Application	Application under S37E of PDA 2000 as amended.
Observers	Darren O'Rourke TD John A Woods Cllr Paddy Meade Patrick Shiels.
Dates of Site Inspections	3 March 2021 and 20 December 2021.
Inspector	Mairead Kenny.

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1.0 **Introduction**

1.1. The application relates to the existing Waste to Energy (WtE) facility operated by Indaver since 2011 at the 9.9 ha site at Carranstown, Duleek, Co Meath.

1.2. A 10-year permission is sought for the proposed development, which is described as a Site Sustainability Project.

1.3. The proposed development includes an increase in the intake of waste and residues, a tank farm for aqueous waste, alterations to buildings and other facilities and use of excess electricity in the production of hydrogen.

1.4. The existing facility is licensed by the EPA under register number W0167 – 03 pursuant to the Industrial Emissions Directive. The existing facility accepts 235,000 tonnes per annum (TPA) of household, commercial and industrial non-hazardous waste and up to 10,000 TPA of hazardous waste.

1.5. The proposed changes include an additional 15,000 TPA of waste, which may be hazardous and an increase by 30,000 TPA of intake of flue gas and other residues for pre-treatment prior to export to Northern Ireland. An aqueous waste tank farm is proposed, and a bottom ash storage building would be constructed for the storage of bottom ash generated on site. excess electricity currently generated at the site is to be utilised to generate hydrogen.

1.6. This application has been subject of pre-application consultations under section 37 (B) of the Planning and Development Act 2000 as amended. The Board confirmed the status of the proposed development is strategic infrastructure.

1.7. The Board has engaged the services of a specialist consultant to address the topic of major accidents and hazards. The report of the consultant is attached as Appendix 1.

2.0 **Site Location and Description**

2.1. The proposed development site (PDS) is part of the Indaver Waste to Energy (WtE) facility at Carranstown in north Co Meath. The stated site area of the overall WtE site is 9.9 hectares. The facility has been in operation since 2011.

2.2. The PDS is located 1.8km to the south-west of the M1 and directly north of the R152 from which it takes access. Platin cement works and quarry is to the north and north-east of the PDS and Donore village over 2km to the north-west. The closest village is Duleek which is to the south-west and is also served by the R152. In terms of the primary elements of the road network the site is positioned adjacent and to the north-west of the R152 between Duleek and Junction 8 (Drogheda) of the M1. The R152 also serves Platin. To the south-west of the site is a junction where the R152 and the R150 meet and this is also the access point into Duleek town.

2.3. The character of the overall area would be described as rural, but it is noteworthy also for the presence of large industrial facilities notably the complex which has emerged around the Platin quarry and the Indaver site. The area overall is also noteworthy due to the presence of major infrastructure including power lines and a main railway line as well as the motorway.

2.4. The defined application site comprises the overall 9.9-hectare plot. The internal layout of the site may be considered in two zones, to the north and south of the 110kV exclusion zone which basically bisects the site. This exclusion zone is one of three wayleaves within the site. There is also a 2m wide wayleave along the north-eastern boundary for a 38kV line and a 14m wide wayleave for the high-pressure gas main that cuts through the southern half of the site.

2.5. The northern portion of the site houses the main process building and is the intended location for some of the more significant elements of the proposed development including a waste tank farm and a bottom ash storage building. The tallest structure on site is the process building (41m with an associated 65m high stack). Throughout the remainder of the site the scale of buildings is small, and heights are low – this would include workshop and office spaces.

2.6. The site entrance is positioned in the southern corner of the site. In the southern half of the site is the main entrance and parking and offices. There is a major landscaped berm in the eastern corner beyond which is the closest residential dwellinghouse. This location is intended to house a hydrogen generation unit and additional parking and other development.

2.7. The site topography generally falls towards the west. The site drainage is by way of a stormwater drainage system based on SuDS principles. This includes an open pond in the western site corner adjacent to the vehicular entry point to the process building.

2.8. Photographs of the site and surrounding area which were taken by me during inspection are attached.

3.0 **Proposed Development**

The development is as described in detail in the applicant documentation including the public notices, Environmental Impact Assessment Report and Natura Impact Assessment.

The applicant's original submission was subject of a request for further information which was issued by the Board on April 22

3.1. **Key elements**

The key elements are:

3.1.1. An **increase in the total waste** accepted for treatment in the WtE facility from the permitted 235,000 to 250,000 tonnes per annum (TPA).

3.1.2. This is **to include up to 15,000 TPA of additional hazardous waste** (an increase from the currently permitted 10,000 TPA). The hazardous waste will be a mix of solid and aqueous waste.

3.1.3. Development of an **aqueous waste tank farm** and unloading area for storage and processing of aqueous liquid wastes – this will involve 3 no. new tanks of 300m^3 capacity of which 2 no. will be for the acceptance and storage of liquid waste and one will be used during maintenance for storage of boiler water.

3.1.4. Development of a **hydrogen generation unit** (HGU) – the process will utilise electricity currently generated at the site, which at times is not required by the electricity grid.

3.1.5. Development of an **ash storage building for storage of up to 5,000 tonnes of bottom ash** currently produced on site - this will allow for monthly export over a two-

or three-day period by truck to Drogheda port for export to continental Europe for recovery.

3.1.6. **Increasing the capacity of existing ash pre-treatment** to involve additional waste acceptance capacity and infrastructure for an **additional 30,000 TPA of third-party boiler ash and flue gas cleaning residues and similar residues** – this will bring the site total up to 280,000 TPA. The pre-treated ash would be transported in $1m^3$ flexible intermediate bulk container (FIBC) bags to Northern Ireland for recovery.

3.1.7. **Warehouse, workshop and emergency response team (ERT) /office building** to support existing maintenance activities – this will involve repurposing of the existing warehouse and workshop building (for storage of FIBC bags), relocation of those functions to a new two-storey building which will also include additional office accommodation – the building will be split into three separate areas to accommodate the warehouse, workshop and office/ERT functions.

3.1.8. New **concrete yard and parking for up to 10 trucks, tanks or containers** – this is related to access and vehicular movements in and out of the bottom ash storage building and for deliveries to the warehouse. Part of it will be a contained area for the parking of containers, trailers and tankers associated with aqueous deliveries and transport of residues in containers/trailers off-site.

3.1.9. **Demolition and rebuilding of an existing office building** on site with a slightly increased footprint – this will be a new permanent single-storey office and staff welfare building. The existing modular building which will be replaced was erected for construction/commissioning of the plant and made a permanent feature by way of a permission granted in 2014.

3.1.10. **Other site upgrades** which include relatively small features such as weather canopies, extensions to hardstanding areas, personnel access routes, additional car parking spaces for staff and contractors on site. **Site landscaping includes reconfiguration of berming** adjacent the proposed HGU for the purposes of screening and to reduce the amount of material to be moved off-site and extension of an existing berm adjacent to the main road to match in with the existing berm and provide additional screening.

3.2. Structures and processes

3.2.1. More detail with respect to the main structures and their locations as well as the processes involved is provided below – I refer to the annotation used in Figure 4.4 of the EIAR, a copy of which is attached to this report.

3.2.2. The **aqueous waste tank farm (8)** will be to the north of the main process building and will comprise 3 no. 300m^3 tanks of up to 25.5m height and 4.5m diameter. These will be of mild steel and located in a concrete bund. The aqueous waste tank farm will replace an existing mobile facility presently located to the south of the process building. The **existing tanker unloading area** south of the process building will be upgraded and will contain 3 bays and provide for sampling and if necessary, for short-term storage of unsuitable wastes prior to export. Further detail of the processes involved in the operation of the aqueous waste tank are presented in section 4.5.3/Vol.2/EIAR.

3.2.3. The physical structures required for the **increased intake of third-party boiler ash and flue gas cleaning residues** and similar residue for pre-treatment will comprise 3 no. silos housed within the existing WtE process building and an unloading area outside the main process building. Pre-treatment has been taking place on site since 2018 and involves the mixing of boiler ash, flue gas cleaning residues and water and discharging this into FIBC bags for transport to a saltmine in Carrickfergus for recovery. Currently 25,000 TPA of third-party residues similar to those produced at the site are exported to Germany and Norway.

3.2.4. The **HGU (15)** will be housed in a warehouse style building 33m by 25m in plan and 11m high. This will be located in the southern half of the PDS between the offices and existing earthen berm / eastern site boundary. The detail of the process including the basis for calculation of the energy efficiency is set out in section 4.5.4/Vol.2/EIAR. The process is alkaline water electrolysis – electrical current is supplied by way of two electrodes submerged in an alkaline -water solution. The hydrogen and oxygen formed are diverted to separate cells, the oxygen is discharged to the atmosphere, the hydrogen to a water scrubber and the electrolyte recycled back into the unit. The hydrogen is later compressed and will be held in a 100m^3 capacity storage tank which will be capable of holding 2 tonnes hydrogen at

350 bar. A final polishing step, if required, can be provided and is described. There may also be a need for a water purifier unit which is described.

3.2.5. The stated **efficiency of conversion of electrical energy** into hydrogen is 60%. It is assumed that the unit will run for 1,000 hours per annum and generate 160 tonnes of hydrogen per annum.

3.2.6. The hydrogen generated will either be connected to the natural gas network at a location close to the site boundary at the R152 or will be used as a fuel in vehicles. The application includes a proposed above ground installation (AGI) which will be in the ownership of Gas Networks Ireland (GNI) and will facilitate the feeding of hydrogen into the network in relation to which an application has been made to GNI. The other potential uses are on site storage for fuelling trucks and buses, or tankering off-site for industrial uses or to fuel distribution centres. The proposed development includes a concrete re-fuelling area to facilitate fuelling of trucks, buses and bulk hydrogen transport tankers.

3.2.7. The **bottom ash storage building (1)** is to be located in the northern corner of the site adjacent the existing on-site wastewater treatment system and percolation area. This warehouse style building will be 61m by 25m in plan and with a maximum height of 14.5m.

3.2.8. The **warehouse, workshop and office / ERT building (4/5)** will be 32.3m by 4.5m in plan and up to 10m in height. The office and ERT area will accommodate up to ten additional Indaver staff with facilities for both the Indaver staff and permanent contractors. Foul effluent will drain to the existing on-site system and percolation area.

3.2.9. The **office building to be reconstructed (14)** will accommodate 23 staff which is stated to be one additional staff member over the permitted level and will include a visitor display room, meeting room, gym and a canteen. This will replace the existing modular office building and will have a slightly increased floor area. Foul effluent will be drained to a new on-site treatment and percolation system which is described as being similar to the existing one on site and which is to be located between the office and car park.

3.2.10. To cater for additional staff and to facilitate visitors and contractors to the site **32 additional car parking spaces (18)** are proposed.

3.2.11. **Landscape berm extensions** are proposed along the R152 frontage and a 7m increase in height of the mound in the eastern corner will be undertaken.

3.2.12. The existing temporary trailer park will be repurposed to provide a **dedicated permanent contractor's compound** with a footprint of 5,350m^2 . This is to provide welfare facilities and space for contractor facilities during maintenance and construction works in the future. The 36m^2 toilet block will be retained as a permanent feature with a new dedicated treatment plant which will connect to the existing percolation area servicing the gatehouse.

3.3. Construction and infrastructure

Some of the information provided on construction phasing and engineering services is set out below.

3.3.1. The **development will be carried out in two phases**. Phase 1 has an estimated construction and commissioning duration of 16 months and will involve the aqueous waste tank farm and tanker unloading area, the bottom ash storage building, the warehouse, workshop and ERT building, the new concrete yard and parking area and the development of a permanent contractors compound and access. Phase 2 will have a construction and commissioning duration of 12 months and will consist of construction of the HGU and additional car parking and demolition and replacement of the single-storey office building.

3.3.2. **Fill and crushed stone** in the amount of 2,300 m³ will be imported and surplus material of approximately 31,000 m³ of soil and other materials will be removed.

3.3.3. **Construction phase traffic levels** will give rise to an increase in the order of 1% to 1.3% of traffic on the local road network during peak travel hours.

3.3.4. The **construction period employment** will be up to 120 workers in phase 1 and 100 in phase 2.

3.3.5. **Hours of construction** will be 0700 – 1900 Monday to Friday and 0700 – 1300 Saturday.

3.3.6. The existing plant is designed to **contain firewater within the waste bunker**. The tank farm bund has been sized to cater for different scenarios and includes the option that excess fire water would be directed to the 300m^3 retention tank and to the existing large attenuation pond. In the event of a fire, the firewater will be stored for

removal from site for disposal or for transfer to the tank farm for treatment in the furnace.

3.3.7. There are various arrangements within the site for **collection / disposal of foul effluent** including a secondary treatment system located at the northern boundary which serves the main facility and holding tanks which serve existing offices and portacabins.

3.3.8. **Water supply for the electrolysis units** in the HGU will be from a new supply or alternatively from the existing process water system. When running 2.2m^3 / hour will be needed – compared with a current abstraction rate for the site of 9m^3 / hour. The available groundwater production wells are stated to have a yield of 300m^3 / day.

3.4. Design detail and other consents

Some of the information presented by the applicant relating to detailed design and requirements for further consents is provided below.

3.4.1. In the detailed design phase all required safety measures will be determined through the undertaking of **hazard and operability studies (HAZOP)**. A hazard identification exercise has been carried out for the entire site covering the existing and new risks (Appendix 17.1/EIAR). A comprehensive site emergency plan has been developed and is included as Appendix B of the CEMP (Appendix 5.1/Vol.3/EIAR). A dedicated **Emergency Response Team** has been appointed.

3.4.2. Under the terms of the Industrial Emissions licence Indaver prepares an **Annual Environmental Report (AER)** for the EPA and which is available on the EPA website. The IE licence contains over 200 individual conditions governing all aspects of the operation and control of the facility. An IE licence review will be submitted to the EPA.

3.4.3. The facility also has consents from the **Commission for Regulation of Utilities (CRU) to generate electricity** and consultation with the CRU is underway with respect to future consents / licences for the HGU.

3.4.4. The storage of Hydrogen will require a **licence from Meath County Council.**

3.4.5. A detailed assessment has been undertaken of existing and proposed substances stored on site under the **COMAH Regulations.** The proposed development will not

require a notification to the Health and Safety Authority as the site will be sub threshold for lower tier facilities.

3.4.6. A **transfrontier shipment of waste (TFS)** is in place for the export of treated boiler ash and flue gas cleaning residues between the site and the saltmine in Carrickfergus. A new TFS or a modification will be required to accommodate the increases proposed. If there is no landfill capacity in Ireland bottom ash will be exported to Europe and a TFS will be required.

3.4.7. Section 4.11/Vol. 2/EIAR refers to **Best Available Techniques (BAT)** which is stated to be applicable to the proposed development in the context of the BREF's for Waste Treatment and Emissions from Storage. Implementation of the revised BREF which was adopted in 2019 at EU level will be undertaken, which is relevant to the existing facility. BREF's for waste treatment and emissions from storage are stated to be relevant to the tank farm, bottom ash storage building and silos for acceptance of third-party residues. Waste acceptable procedures and related matters are already in place for the aqueous waste treatment. Other design measures relevant are described.

3.5. Decommissioning

3.5.1. Decommissioning activities are provided for under the **Closure, Remediation and Aftercare Management Plan (CRAMP)** that is in place under the IE licence and will be updated and expanded to take account of the proposed development under any review of the IE licence. In the event of decommissioning de-stocking, decontamination and cleaning operations will be carried out in areas designed for unloading, storage and handling of the raw materials.

3.5.2. If no further use can be identified for the site condition 27 of PL17.219721 relating to the demolition of buildings and restoration of the site would be implemented. This would result in removal of 50,000 tonnes of material from the site (2,364 truckloads) over a 5-month period.

3.5.3. Decommissioning would be implemented to the satisfaction of the EPA and under the terms of the CRAMP.

4.0 **Submissions**

4.1. **Chief Executive Report**

4.1.1. The views of the Chief Executive of Meath County Council are set out in a planning report received by the Board on 14 September 2020. The report has regard to the matters specified in section 34(2) PDA.

4.1.2. Sections 1 notes the presentation of this report at the meeting of Meath County Council on 7 September 2020 and summarises the planning history.

4.1.3. Section 2 provides a **description of the site and the proposed development**.

4.1.4. Section 3 of the report describes **relevant policy** including from:

- National Planning Framework
- National Development Plan 2018-2027
- National Hazardous Waste Management Plan 2014-2020
- Regional Spatial Strategy for the Eastern and Midland Region 2019-2031
- Eastern-Midlands Eastern Region Waste Management Plan 2015-2021
- Meath County Development Plan 2013-2019.

4.1.5. **Section 4 reviews the EIAR.**

- It is considered that the EIAR contains the information specified in Schedule 6 of the PDR.
- Regarding **population, human health, and biodiversity** a summary is provided of the contents of relevant chapters. The Environment Section and Heritage Officer have no objections in terms of public health and biodiversity subject to conditions pertaining to CEMP, WMP, dust emissions and noise and excavated material. Information from chapters 5, 6, 10 and 11 is highlighted. Relating to biodiversity the comments of the Council's Heritage Officer are set out and recommendations for conditions are included.

- Regarding **Land, Soil, Water, Air and Climate** the report notes that the Environment Section has provided conditions in respect of potential effects on air quality. The Environment Section has no concerns from a flooding perspective. It is noted that the Water Services Section have no concerns subject to conditions. Information from the relevant chapters is summarised.
- Regarding **material assets, cultural heritage and landscape**, the comments of the Transportation Department which are deemed to be directly applicable are quoted and the recommendation of the Transportation Department provided. Details from the relevant EIAR chapters are presented.
- Regarding **interactions** these are considered in chapter 18 along with cumulative effects and other effects. The EIAR refers to numerous discussions and communications between the various specialists and the design team throughout the design process which helped to identify and minimise the potential for significant interaction of impacts. Measures to minimise impact have been incorporated into the design and included in all of the assessments and the residual impacts have been assessed. The internal reports of the planning authority outline various issues which should be addressed by way of planning conditions relating to biodiversity/ecology, environment, public health, roads and water.

4.1.6. **Section 6 addresses Appropriate Assessment**.

- The Board is the competent authority in relation to Appropriate Assessment.
- Article 6 (3) of the Directive refers.
- Comments of the Heritage Officer of MCC are quoted. It is concluded that there will be no significant effects (direct or indirect) on the qualifying interest of any Natura 2000 sites, either individually or in combination with other plans or projects.

4.1.7. Section 7 notes the **internal reports and provides a planning assessment**.

- The full text of internal reports is contained in Appendix 1.

- Conditions outlined in these reports relate to the management of this site during construction and operation to ensure pollution avoidance and protection of residential amenity.
- It is also considered appropriate to restrict HGV traffic from passing through Duleek village.
- Appropriate landscaping is required to be agreed by condition.
- Regarding planning policy, the lands are not zoned but the facility has been in operation since August 2011 and is licensed under an Industrial Emissions licence by the EPA. The proposal relates to amendments to a permitted and licensed WtE facility.
- It is noted that under the pre-application process the Board identified the need to provide a strong justification for the office building. Policy ED POL 20 to normally permit development for the expansion of existing authorised industrial or business enterprises in the country where the resultant development does not negatively impact on the character and amenity of the area and where it is demonstrated that the proposal would not generate traffic of the type and amount which is inappropriate for the standard of the access roads. Having regard to the Environment and Transportation reports and policy context it is reasonable to assert that the proposed development is acceptable in principle.
- Regarding layout and design, it is noted that the proposal relates to an intensification of use of a permitted and licensed WtE facility. The proposed building work is largely located in the north-east corner of the site away from the R152 and beyond the existing buildings, screen planting and berms, is relatively small in scale and its design incorporates mitigating features relating to colour and finish which will assist in the integration of the proposal and a reduced potential visual impact.

Section 8 concludes -

- Based on the examination of the documentation, in the context of national, regional and local planning, waste, energy and climate change policy and the planning history of the site and where there is an existing WtE facility

in operation with similar type developments it is the view of MCC that the proposed development is acceptable in principle. The reports from the various internal sections/departments support the proposed development subject to a number of planning conditions.

The recommended conditions include:

- A maximum overall capacity intake of 280,000 tpa.
- Construction Stage Traffic Management Plan to be agreed with the planning authority that requires HGV traffic to avoid accessing the site via Duleek village.
- No HGV traffic during the operational stage shall route through Duleek, unless absolutely necessary.
- Construction Environmental Monitoring Plan to be updated and communicated to all site personnel and to include but not be limited to the range of matters set out.
- Waste Management Plan (WMP) for proposed development to be prepared and implemented and to include but not be limited to the range of matters set out.
- Dust emissions at site boundary not to exceed 350 mg/m^2/day.
- Construction works to be in accordance with noise guidance set down under BS 5228 – 1: 2009.
- During construction the noise levels at noise sensitive locations shall not exceed 70 dB (A) between 0700 to 1900 hours Monday to Friday and 0800 to 1400 hours Saturday and 45 dB(A) at any other time. Noise exceedances must be agreed in writing with Meath County Council prior to the activity taking place.
- If it is necessary to import soil and stone or topsoil a certificate of registration or waste facility permit shall be secured in advance.
- All excavated material stored on site shall be set back a minimum of 10 m from any drainage ditches/water courses on site. A silt fence shall be

installed at a minimum of 3 m from any drainage ditches/water courses on site and shall be maintained until vegetation is re-established.

- All refuelling shall take place in a designated refuelling area at least 30 m from water courses, details of which shall be included in the CEMP.
- All hydrocarbons, chemicals, oils etc shall be stored in a dedicated bunded area at least 30 m from water courses and capable of storing 110% of capacity. Adequate supply of spill kits and hydrocarbon absorption pads to be stocked on site.
- In relation to the surface water a number of details shall be agreed with the planning authority prior to commencement of development.
- Trees and hedgerows shall not be removed during nesting season in accordance with the Wildlife Act.
- Complaints Register to be maintained during construction stage.

A **summary of the contributions made by councillors** at the **meeting of Meath County Council of 7 September 2020** meeting in relation to the proposed development is presented and the issues raised include:

- Increase in HGV movements and the impact on traffic on Duleek, Julianstown and the N2.
- Progressive increase in tonnage since the parent permission was granted.
- Cumulative impact of this application and the current SIDS application from Irish Cement needs to be considered.
- Need for a regional EPA office in South Drogheda.
- Need to consider the people living in the area and proximity of the site to schools.
- Self-regulation a concern.
- Need to seek ‘Best Practice’ and not just rely on policy.
- Need to reduce our waste as a society and strive to a carbon neutral environment.

- Some members praised the operator in terms of how the facility has blended into the surrounding environment.

It was agreed by the members to attach the detailed comments as an addendum to the minute of the meeting to be submitted as part of the report to ABP. 11 no. Members are listed as having spoken. Written submissions are attached from 3 no. Members.

4.2. Prescribed Bodies

4.3. Environmental Protection Agency

4.3.1. Indaver Ireland Ltd was issued an industrial emissions licence for the following:

> 11.3 Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants-
>
> (a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour
>
> (b) for hazardous waste with a capacity exceeding 10 tonnes per day.

The licence may need to be reviewed or amended. The proposed hydrogen generation unit may be a licensable activity.

Should a licence review application be received all matters to do with emissions to the environment and all documentation will be considered and assessed.

Should the Agency decide to grant a licence it will incorporate conditions to ensure that appropriate standards and use of Best Available Techniques.

A number of documents are referenced.

4.4. Health Service Executive

The main conclusions of the HSE report are as follows:

- A public consultation process could not be located in the EIAR and meaningful public consultation is recommended.
- An investigation is required into exceedances of faecal coliforms present in the majority of groundwater samples from on-site monitoring boreholes to ensure that all on-site wastewater treatment facilities are correctly operating.

- The proposed new proprietary treatment unit and percolation area associated with the contractors compound and replacement offices requires a site suitability assessment. Minimum separation distances as set out in the Wastewater Treatment Manual for Small Communities must be complied with. The location of the bottom ash storage facility is noted in this respect.
- The proposed additional storm water tanks to increase the attenuation capacity in lieu of expansion of the existing stormwater drainage network is noted. This does not provide a solution for the disposal of the increased volumes of surface water which will be generated. Further clarification is required in respect of the new concrete yard in particular.
- Clarity is required on the cumulative impacts of air emissions from the proposed development and the Irish Cement fossil fuel replacement and alternatives raw materials development. An assessment of total environmental loading is required and not just an assessment against compliance with the parametric value for each specific emission.
- To offset transport emissions the applicant should promote sustainable modes of travel and make efforts to improve the sustainability of the haulage fleet delivering to and from the site and aim towards a low emissions vehicle policy.

4.5. Transport Infrastructure Ireland

Regarding the national road network:

- No details of the assessment of potential impacts to the national roads and associated junctions are provided.
- The M1 is an important strategic link providing critical international connectivity.
- TII recommends that consideration be given to the preparation of a revised TA which would include a full analysis of potential impact to junction 8.
- Any additional works required as a result of the TA should be funded by the developer.

Regarding the Leinster Orbital Route:

- The subject site is within the line of the Leinster Orbital Route (formerly known as the Outer Orbital Route) between Drogheda and Navan as identified in the Leinster Orbital Route feasibility study final report issued by the authority in March 2009, which is on the TII website.
- The proposal to develop an Outer Orbital Route is included in the development plan and is identified for long-term protection in the current RSES for EMR and the NTA's transport strategy for the Greater Dublin Area 2016 – 2035.
- The relationship of the subject site to the LOR does not appear to have been assessed in the documentation submitted in support of the subject application.
- Objective TRAN OBJ 21 of the Meath County development plan 2013 – 2019 refers. It is especially important close to major junctions that the identified corridor be protected from development intrusion.
- TII acknowledges the planning history of the subject site. It is considered that the matter should be addressed by the applicant in consultation with Meath County Council in the interest of demonstrating that the subject application is compatible with the LOR scheme and that the proposed development will not undermine the long-term delivery of the route.
- TII recommends reference to section 2.9 of the DoECLG guidelines in that regard and the policy outlined relating to the protection of alignments for future national road projects.

4.6. **Department of Communications, Climate Action and Environment**

The submission received from Geological Survey of Ireland states that GSI has no specific comments or observations to make on this matter at this time.

4.7. **Third Party Observations**

4.7.1. **Darren O Rourke**

In his capacity as TD for Duleek and Sinn Fein spokesperson on Climate Action, Communications Networks and Transport Mr O'Rourke objects to the proposed

development, insists on the need for an oral hearing in the interest of clarity and transparency and comments as follows:

- Inconsistent with national and EU policy in particular the Programme for Government and the EU Green Deal.
- Failure to address a number of matters which were raised in the Inspector's report under ABP 305252–19 including with respect to potential environmental impacts associated with the increase in overall volume and the specific waste types, traffic and transport, odour and noise and climate. All aspects of energy use and generation need to be assessed as well as the risk of major accidents or disasters including fire safety issues. There needs to be a justification for the offices.
- The land is not appropriately zoned to allow for the proposed development.
- Over intensification of heavy industry in the area would have negative implications for residents.
- Essential need for a regional office of the EPA in Duleek to deliver on commitments relating to air quality in the Programme for Government
- The development should not be considered Strategic Infrastructure.
- Potential very profound impact on water table locally which is already poor or moderate in terms of WFD status.
- Potential impacts have been identified for European sites and for flora and fauna, which is a very serious matter.
- Concerns relating to harmful emissions posing acute and chronic health risks and the inadequate consideration given to cumulative impacts.
- Existing roads infrastructure is deficient to cater for proposed traffic.
- Concerns relating to odours, noise and waste and potential significant impact on sites of archaeological significance.
- NIS fails to assess the development in combination with other plans and developments. For example the landfill and cement works are omitted. The Board cannot carry out an appropriate assessment which would comply with the requirements of the Habitats Directive.

- Hugely negative impact on the ecology/environment in Duleek, Donore, Kentstown, Drogheda and surrounds.
- The proposed development should be opposed and must be considered in the context of the latest policy and legal developments including the Supreme Court judgement in relation to the National Mitigation Plan.

4.7.2. **John A. Woods**

The points made are as follows:

- By the company's own admission some years ago the incinerator is not fit to burn any hazardous material. This matter was also put before the last oral hearing but totally ignored.
- The smoke (black and other colours) is proof enough that the incinerator is not suitable for burning hazardous material, further proven by yet another incident at the incinerator lately.
- The Board has also permitted the Platin cement incinerator. The combined effect would be the burning of almost 1 million tonnes of waste material including toxic and hazardous waste in this area.
- There is a need for major upgrades of roads in the area including a bypass of Duleek to allow for the extra HGV traffic.
- The removal of additional tonnage of ash will lead to more hazardous landfill sites in the area leading to ever greater health problems.
- Milk and other food production could be contaminated in time as a result of this extra tonnage as has happened in other parts of Europe. Before allowing for burning of more waste incinerator companies should be required to put in place proper facilities as required by European law.
- There should be an oral hearing on this application.
- The facilities that are there at present are unfit for purpose. It is urgent that the EPA puts a permanent office in the area with 24-hour and seven day monitoring in the area around the incinerator and up to 3 km away in all directions.

4.7.3. **Paddy Meade**

As a county councillor for this area, I have received a number of submissions relating to this proposal. The points of my submission are:

- Section 7.4 of the National Policy Framework Alternative Fuels Infrastructure for Transport states that there is no national target for hydrogen.
- It is not possible to quantify the risks associated with the proposal as the quantity of hydrogen is referred to as a volume and without any data for pressure or temperature. Similarly, the figure of 10 MW_e does not define how much hydrogen would be produced in the year. No information is available as to the efficiency of the conversion of thermal to electrical energy. Direct feed of electricity to the grid may be better.
- Incineration of organic fractions of waste is of very low order in terms of generation efficiency and compares poorly to other means. Energy derived from non-renewable fuels such as refuse derived fuels is not renewable.
- Intensification of use and expansion of this facility at this location may not comply with Energy, Waste, Energy Efficiency and Climate related Directives.
- The description of a 10-year permission is not clear.
- The NTS does not quantify the amount of electricity generated simply refers to the quantum is sufficient to power 30,000 homes. It is not clear that it complies with the requirements of the EPA Act as amended in relation to BAT.
- The description of public consultation in section 1.3 of the NTS which refers to the community liaison committee is not a public consultation.
- The NTS does not explain or demonstrate compliance with County or Regional policy, provides no information relating to alternative sites and does not allow for reasons for the conclusions to be drawn.
- The incineration should be undertaken close to the source of the waste and at a location with potential for use of recovered heat in district heating systems.
- The impact on dairy farmers related to contaminated rainfall if there were impairment to air quality is of particular concern.
- The value of the community benefit fund has been eroded by cost increases.

- The NTS relating to population and health is entirely inadequate.
- An oral hearing is requested in order to explore the nature of the proposal as the documents submitted are inadequate to determine how it complies with EU, national, regional and local authority policy and to provide for exploring of possible nuisance on the local community.

4.7.4. **Patrick Shiels**

The main points of this submission are:

- The proposed development appears to differ from that described in the pre-application consultation. The development is not Strategic Infrastructure.
- The NTS does not identify the source of the hazardous waste. Use of resources and energy efficiency questions arise due to the plant location.
- The application does not demonstrate how it aligns with the policy objectives of the EU in terms of 2030 targets and 2050 targets.
- A 10-year permission is inappropriate in the context of the National Hazardous Waste Management Plan 2014 – 2020 and efficiency objectives.
- It is not clear if parts of the permission could be implemented such as the hazardous waste incineration and other parts long fingered.
- The plant on the application form is defined as a waste to energy facility. The extent to which the existing facility is well located and designed to align with current and future thrust of energy policy has not been assessed adequately. This issue is fundamental as to whether the facility should be expanded or have use intensified or whether policy decisions should favour other locations.
- A range of environmental impacts affect the locality and wider area by virtue of the operation of the plant. These impacts include energy consumption related to long haulage and associated emissions.
- The description of the hydrogen generation process in section 4.3 is vague.
- If the waste to energy plant did not have a means of using the waste heat the overall performance of the waste-to-energy plant would be questionable and it

would effectively perform as an incineration facility with very low energy recovery merit.

- Any prospect of tankering hydrogen to market suggests storing on site at considerable density per volume. In other words, substantial tonnage would have to be stored. Hydrogen engages the Seveso Directive in relation to the lower tier requirements at a quantity of just 5 tonnes. In the absence of information from the NTS it is not possible to describe the nature of the proposal as required by Article 5 of the EIA Directive.
- It is clear from reading the NTS that the proposed development fails to meet the requirements of the Directive.
- Page 85 of Project Ireland 2040 NDP refers to a combined approach to waste management and resource efficiency. The plan also sets out objectives for district heating. It is essential that the approach in determining this application is consistent with the objectives of the NDP and with EU waste policy.
- The location of other WtE facilities is not evaluated or the potential to use the recovered heat and energy if the plant operated at a different location or what is the strategic value of this location.
- The value of the community fund has diminished with cost increases and with the growth of the population at Duleek, which has a deficit of appropriate community facilities and suffers disadvantage in attracting higher paying jobs by reason of hosting the WtE plant. Rotation of the membership of the committee would also be appropriate.
- Suitability of Duleek for district heating system should be evaluated as part of the determination in this application and sufficient lands proximate to the plant might be zoned for residential or process heat industry to avail of the heat recovered from the municipal waste.
- The proposal has not been sufficiently described and documented to meet the legal requirements for a valid application and would inform proper consideration. It would be best if the application was withdrawn to allow for submission of a more considered detailed proposal or an alternative site.

- The Board should facilitate a public hearing to allow further questions to be put to the applicant in order that the nature of the proposal can be better understood and to explore in detail the various alternatives.
- It is not possible to see in a transparent manner from the documentation that no substantial risk to human health would arise.

5.0 Planning History

5.1. On Site- Selected Cases

ABP – 302447 – 18

5.1.1. This is an application for permission under section 146B PDA for alterations to the terms of PA0026 to allow annual tonnage of waste accepted for treatment at the facility to be increased from 220,000 TPA **to 235,000 TPA on a permanent basis**. The documentation clarifies that **10,000 tonnes of that waste can be hazardous**. At the time of making the application the plant had been operating to accept a tonnage of 235,000 tonnes since it received the revised IEL in July 2015.

5.1.2. The requested alteration was permitted on 3 April 2019. In its decision there were no conditions attached by the Board relating to the types of waste, or any other matters.

5.1.3. The Board considered that the requested alteration **would not be materially contrary to the provisions of the government's waste policy in respect of the capacity requirement for thermal recovery facilities to 2030** under A Resource Opportunity, Waste Management Policy Ireland (Department of the Environment Community and Local Government, 2012), or the Eastern and Midlands Regional Waste Management Plan 2015-2021 and would accord with the provisions of the Meath County Development Plan 2013-2019 and with the proper planning and sustainable development of the area.

FS16072

5.1.4. Permission was granted by Meath County Council on 12 April 2018 for a single-storey modular office building of stated area of 387m2.

ABP – 300299 – 17

5.1.5. This provided for alterations under section 146B to previously approved permission PA0026. The alterations comprised permanent installation for acceptance of aqueous wastes, increase in overall capacity to 280,000 tonnes per annum in perpetuity. The Board issued a preliminary view on 10 April 2018 that the proposed alterations might be better addressed by way of an application under section 37E. The application was withdrawn.

PM 0007

5.1.6. This is an application for permission under section 146B PDA for alterations to permission granted on 4th of February 2013 under PA0026. The alteration was to include construction of **a pre-treatment process plant** (a solidification plant) to facilitate **the pre-treatment of flue gas and boiler ash residues**. The required alteration for such pre-treatment was described as consisting of the extension of the existing ash residue loading bay and construction of a pre-treatment process plant enclosure. Amongst the matters considered by the Board were the nature and scale and context of the alteration, the revised licence and the potential environmental impacts that might arise. The proposed alteration was permitted by order of 12th of April 2016 subject to completion in accordance with the plans and particulars.

PM 0004

5.1.7. This is an application under section 146B PDA for amendments to the existing development to allow waste to be increased temporarily to 235,000 TPA until 31 December 2019 and thereafter to 220,000 TPA unless a further permission is granted. It is also provided for acceptance of some additional types of waste defined as hazardous and non-hazardous in the European Waste Catalogue.

5.1.8. In its order of 1st August 2014, the Board set out an alteration to condition 3.

> (1) The tonnage of waste accepted for treatment at the facility until the 31st day of December 2019 shall not exceed 235,000 tonnes per annum. Thereafter, the tonnage of waste accepted for treatment at the facility shall not exceed 220,000 tonnes per annum unless a further permission in this respect is granted.
>
> (2) Non-hazardous waste to be accepted at this facility shall primarily be waste generated in the waste region in which it is located. Where non-hazardous waste is accepted from outside that region, it shall only be done in

accordance with the proximity principle and Ministerial Policy as set out in Circular WIR:04/05.

(3) The tonnage of separately collected hazardous waste accepted for treatment at the facility shall not exceed 10,000 tonnes per annum.

5.1.9. The only hazardous waste types to be accepted for treatment shall be in accordance with the **European Waste Catalogue Codes listed in Table 2.1 of the Environmental Impact Statement** submitted to An Bord Pleanála with the application on the 30th day of April 2012, as attached in Appendix 1 of this Order.

5.1.10. The stated reason for the condition is to clarify the nature and scope of the permitted development.

PA0026

5.1.11. This is an application under section 37E PDA for amendments to the existing development to increase the tonnage from 200,000 TPA to 220,000 TPA and allow the acceptance of some additional hazardous and non-hazardous waste types and ancillary development.

5.1.12. It also relates to change in status of some temporary office buildings to permanent and for 22 new car parking spaces associated with a modular office building.

5.1.13. Conditions attached included condition 3:

(a) Non-hazardous waste to be accepted at this facility shall primarily be waste generated in the waste region in which it is located and where non-hazardous waste is accepted from outside the region it shall be done in accordance with the proximity principle in ministerial policy set out in Circular WIR: 04/05.

(b) The tonnage of separately collected hazardous waste accepted for treatment at the facility shall not exceed 10,000 tonnes per annum.

The only hazardous waste types to be accepted for treatment shall be in accordance with the European Waste Catalogue Codes listed in Table 2.1 of the EIS submitted with the application to the Board on 30 April 2012 as attached in Appendix 1 of the Order.

5.1.14. The stated reason for the condition 3 is to clarify the nature and scope of the permitted development.

5.1.15. Condition 5 related to on-site wastewater treatment facilities.

PL 17.219721

5.1.16. This relates to an appeal of the decision of the planning authority (reg ref SA/60050) for a 70MW Waste to Energy facility on the site to **process up to 200,000 TPA** of residual waste. Condition 3 stated that waste acceptance would be confined to waste 'primarily' generated and produced in the North-East region.

PL 17. 126307

5.1.17. This relates to an appeal of the decision of the planning authority (reg ref 01/4014) to grant permission for a **Waste to Energy facility on the site for thermal treatment/recycling of up to 170,000 TPA.** The development was confined to waste generated and produced in the North-East region, to comply with the principles of the Regional Waste Management Plan. Condition 6 required the establishment of a Community Liaison Committee and condition 7 related to the payment of an annual contribution towards the cost of the provision of environmental improvement and recreation/community projects.

5.2. Other Cases

5.2.1. The following are two recently permitted significant developments.

ABP-309812-12 – Poolbeg increase in intake.

5.2.2. This relates to the Poolbeg WtE plant in Dublin city, which has a permitted intake of 600,000 tpa. The application is for an increase of 90,000 TPA. Permission was granted subject to conditions requiring that the waste thermally treated at the facility shall be municipal non-hazardous residual waste generated primarily in the Dublin Waste Management Region as proposed in the application and as permitted under the parent permission for that facility.

PA0050 - Irish Cement Limited - Alternative Fuels and Raw Materials.

5.2.3. This relates to the nearby Platin facility. By 2016 the maximum permitted quantity of alternative fuels (subject of a previous planning permission and EPA licence) in the amount of 120,000 tonnes per annum was being used. With growing demand for

cement the applicant sought permission to expand quantity and range of alternative fuels used in lieu of fossil fuels in the cement works and the introduction of alternative raw materials in the manufacturing of cement. Assuming operation at maximum capacity the achievement of 85% target for fossil fuel replacement would require 480,000 tonnes per annum of alternative fuels/raw materials. A full schedule of the proposed materials and their List of Waste (LOW) was presented.

5.2.4. Further details of permitted developments in the vicinity of the PDS are presented in the EIAR.

6.0 **Policy**

6.1. **European Policy and Legislation**

Waste Framework Directive (Directive 2018/851 amending Directive 2008/98/EC on waste)

6.1.1. The Directive enshrines the waste hierarchy order of prevention, preparing for reuse, recycling, other recovery and disposal. The amended Directive increased targets for the reuse and recycling of waste to avoid methods of waste treatment at the lower levels of the waste hierarchy. Revised targets include 55% recycling of municipal waste by 2025, reduction in landfilling of municipal waste to 10% or less by 2035, increased recycling targets for plastic packaging. The emphasis in the realm of hazardous waste is on minimisation and separate collection.

6.1.2. Recovery operations is defined as any operation where the principal result of which is waste having a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function or waste being prepared to fulfil that function, in the plant or in the wider economy. Recovery operations are described in Annex II. The energy efficiency criteria for energy recovery activities are established by the R1 formula. Where under this formula a level of efficiency meeting or exceeding 0.65 is met by a facility then that activity can be classified as recovery.

6.1.3. Amongst the provisions of this Directive is a requirement for a policy of national self-sufficiency in disposal installations and installations for the recovery of mixed municipal waste to be adopted where this is possible on the grounds of strategic need and to conform with the proximity principle.

Closing the loop - EU Action Plan for the Circular Economy (COM/2015/0614).

6.1.4. This outlines the Commission's proposals towards a more circular economy where the value of products, materials and resources is maintained in the economy for as long as possible and generation of waste is minimised. This approach is deemed to tie in with key EU priorities. The Commission's communication on the matter covers issues as broad as improved product labelling to aid consumers to the use of treated wastewater.

6.1.5. Waste management is addressed in section 3 of the action plan. The waste hierarchy is restated and is described as having the aim of encouraging options that deliver the best overall environmental outcome. It is noted that:

> 'The way we collect and manage our waste can lead either to high rates of recycling and valuable materials finding their way back into the economy, or to an inefficient system where most recyclable waste ends in landfills or is incinerated, with potentially harmful environmental impacts and significant economic losses.'

6.1.6. On the particular issue of waste to energy it is stated:

> 'When waste cannot be prevented or recycled, recovering its energy content is in most cases preferable to landfilling it, in both environmental and economic terms. 'Waste to energy can therefore play a role and create synergies with EU energy and climate policy but guided by the principles of the EU waste hierarchy. The Commission will examine how this role can be optimised, without compromising the achievement of higher reuse and recycling rates, and how the corresponding energy potential can best be exploited.'

European Circular Economy Package (CEP) 2018

6.1.7. Tied in with the EU Action Plan for the Circular Economy is a suite of amending Directives that constitute the Circular Economy Package. These amended directives were adopted in June 2018 and include:

- Directive 2018/850 on the Landfill of Waste,
- Directive 2018/851 on Waste and Directive 2018/852 on Packaging and Packaging Waste

- Directive 2018/849 on End-of-life Vehicles
- Other directives on batteries and accumulators and waste batteries and waste electrical and electronic equipment.

6.1.8. New targets set under the Circular Economy Package are required to be brought into force in Member States including with respect to reuse and recycling of waste and the amounts which may be landfilled.

EU Climate and Energy Framework 2030

6.1.9. Adopted in 2014 this set specific targets for the year 2030 of at least 40% reduction in GHG emissions with at least 32% of all energy generated from renewable energy resources and at least 32.5% improvement in energy efficiency. Annexes 1 and 2 of describe disposal and recovery operations.

European Green Deal 2019

6.1.10. This comprises a set of proposals adopted by the European Commission at the heart of which is the ambitious plan to cut greenhouse gas emissions ensuring net zero by 2050 combined with economic growth which is disconnected from resource use and sharing of benefits. A need to reduce waste generation is identified.

Industrial Emissions Directive (Directive 2010/75/EU on industrial emissions).

6.1.11. This is the primary EU instrument regulating pollution emissions from industrial installations. The stated aim is to achieve a high level of protection of human health and the environment taken as a whole by reducing harmful industrial emissions across the EU in particular through the better application of Best Available Techniques (BAT). Permits for installations listed under Annex I of the IED must take account the whole environmental performance of the plant covering emissions to air, water and land, generation of waste, use of raw materials, energy efficiency, noise, prevention of accidents and site restoration. Permit conditions including emissions limit values must be based on the Best Available Techniques. Monitoring requirements are set in the Directive.

Landfill Directive (2018/850/EU)

6.1.12. This legislation amending Directive 1993/31/EC required a significant reduction in the amount of municipal waste to be landfill and that by 2030 waste suitable for recycling or other recovery will not be permitted to be disposed of to landfill.

Renewable Energy Directive (2009/28/EC) and related

6.1.13. This Directive requires a commitment to produce energy from renewable sources. The submission by Members States of National Renewable Energy Action Plans and Progress Plans to the EC and reduce reliance on landfill as a waste disposal option is incorporated.

6.1.14. **'Clean Energy for all Europeans'** was published in November 2016 and adopted in 2019 and set out a range of measures relating to energy efficiency, governance and renewable energy. In parallel the renewable energy directive was revised and included tighter and binding targets of 32%. As part of the European Green Deal the **'fit for 55 package'** aims to put the EU on the path to climate neutrality by 2050. This will include an update of the Renewable Energy Directive (2018/2001/EU) which will strengthen provisions and set higher minimum targets in the sector of renewable energy for 2030.

EU Hydrogen Strategy – A hydrogen strategy for a climate neutral Europe (COM/2020/301)

6.1.15. This envisages the deployment by 2030 of renewable hydrogen (produced using electricity from renewable sources) at a large-scale as a key means for the EU to achieve a higher climate ambition and reduce greenhouse gas emissions in a cost-effective way. The roadmap set for 2050 at which point the aim is that renewable hydrogen would be developed sets out a stepped approach which takes into account the fact that renewable and low carbon hydrogen are not yet cost competitive compared to fossil-based hydrogen (mainly produced using natural gas or gasification of coal). In the short- and medium-term other forms of low carbon hydrogen are needed.

6.2. National Policy and Legislation

A Resource Opportunity – Waste Management in Ireland

6.2.1. A Resource Opportunity – Waste Management in Ireland published in 2012 confirms Ireland's commitment to implement the waste hierarchy set out in the Waste Framework Directive. In the hierarchy after recycling is 'other recovery' including waste to energy involving recovery of energy including the generation of electricity. A balance must be struck to ensure that material which could be reused or recycled is

not drawn down the hierarchy and that waste generation is not encouraged in order to provide feedstock for recovery processes. Waste is recognised as a resource and there is an opportunity for waste to be used as an indigenous energy source.

A Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020 – 2025

6.2.2. This replaces policy 'A Resource Opportunity – Waste Management in Ireland'. Published in 2020 following a commitment in the Programme for Government to commence implementing a New National Waste Action Plan, this plan will inform future versions of statutory plans and the implementation of targets and objectives to tackle waste and move towards a circular economy including to shift the focus away from waste disposal and treatment.

6.2.3. The primary focus is prevention of waste generation. Delivery of targets in areas such as recycling will be assisted by the streamlining of the end of waste process which in turn will reduce pressure on waste disposal and recovery infrastructure. Noting the absence of powers to keep waste in Ireland for treatment, the possibility that outlets abroad are more competitive and the potential for exposure in the event of external shocks to the export market, policy and regulatory framework should be utilised to support indigenous capacity – this would include improvements in collection, recycling, reuse and repair.

6.2.4. With respect to the waste management infrastructure at a national level the primary objective is stated to be to support the development of adequate and appropriate treatment capacity at indigenous facilities. The move away from disposal and increased use of recovery has helped Ireland in realising our EU targets but there is a need to drive on and move up the waste hierarchy with reducing reliance on recovery over the medium-term.

6.2.5. The existing structure of Regional Waste Management Plans will be replaced by a single amalgamated National Waste Plan for a Circular Economy, which has been through a pre-draft consultation. A draft plan is anticipated by the end of 2021.

6.2.6. The EPA's National Waste Prevention Program is under review – submissions have been invited on the draft plan.

6.2.7. The National Hazardous Waste Management Plan is under review.

National Hazardous Waste Management Plan 2014-2020

6.2.8. The significant objectives of the plan include to strive for increased self-sufficiency in the management of hazardous waste and to minimise hazardous waste export.

6.2.9. The plan sets out 27 key items including a range of policies and actions for industry and for public authorities to ensure hazardous waste generation is minimised and that it is suitably managed. Specific sectors are subject of recommendations including with respect to diesel, farm, electrical and other specific wastes.

6.2.10. Objective 14 relating to infrastructure and self-sufficiency is:

> 14. (i) Keep under review the provision and facilitation of hazardous waste treatment capacity and make recommendations on the appropriate economic or other instruments necessary for such capacity to be provided, either by the private or public sector.
>
> (ii) Develop national policy or guidance to direct the control of hazardous waste shipments in order to facilitate self-sufficiency in hazardous waste treatment where this is technically, economically, strategically and environmentally advisable.

6.2.11. Objective 20 is:

> Seek to establish, with the appropriate Northern Ireland authorities, a north-south co-operative group working on hazardous waste issues.

6.2.12. In 2011 about half (149,037 tonnes) of the total of 287,376 tons hazardous waste managed in Ireland (excluding contaminated soil) was exported. Together the UK, Belgium, Germany and France accepted 92% of these exports.

6.2.13. In relation to solvents in particular the plan notes that over 36,482 tons of waste solvent was exported for incinerator or use as fuel in 2011, indicating that there is a quantity of solvent waste that could be treated commercially in Ireland. Subject to the application of the waste hierarchy the options as described in the plan are recycling, co-incineration and energy recovery in cement kilns or electricity/heat generation facility and thirdly incineration (combustion in dedicated incineration plant with recovery of energy).

6.2.14. Incineration in dedicated facilities is described as (then) currently the most widely used alternative for these wastes. It is a treatment technology that provides flexibility,

and a wide range of hazardous waste can be accepted. It is noted that co-incineration plants will only justifiably seek to burn the best material with the optimal calorific value. The remaining wastes (see table 22) plus solvent waste unsuitable for blending and co-incineration will still require alternative treatment.

6.2.15. It is therefore concluded that in combination with the blending of waste solvent for use in cement kilns and in the absence of alternative techniques capable of treating a wide variety of diverse waste streams incineration will be needed for Ireland to move towards self-sufficiency in the treatment of hazardous waste.

Progress Report on NHWMP 2014-2020, published 2018

6.2.16. The objective of minimising export of hazardous waste is described as being progressed. Nevertheless Ireland faces challenges to achieve self-sufficiency given the range of specialist treatments required and lack of economies of scale.

6.2.17. In terms of waste prevention programs, the progress report notes a reduction in the use of hazardous substances by the bio pharma chem industry and increased generation of hazardous ash from waste to energy plants. The latter waste stream is expected to increase over the coming years. Amongst the conclusions of the progress report is the need for greater focus and increased efforts in action item 14(ii) which relates to increasing Ireland's level of capacity for self-sufficiency with regard to the treatment and management of hazardous waste. In particular it is important that the management of significant quantities of hazardous fly ash from waste to energy plants and the associated infrastructural capacity needs are prioritised. The EPA Progress Report in 2018 notes that waste to energy plants have some capacity for treatment of hazardous wastes.

National Waste Statistics Summary Report for 2019, published 2021

6.2.18. This document published by the EPA presents the most up to date data. The data highlights the growing share of municipal and packaging waste being sent for energy recovery in tandem with falling recycling rates. EPA waste characterisation studies identify significant quantities of recyclable materials in refuse derived fuel incinerated in Ireland and the pledge to introduce a levy on waste recovery will be an important lever to ensure that waste operators are incentivised to extract the maximum amount of recyclable material from residual waste.

6.2.19. Of the 3.1 million tonnes of municipal waste generated in Ireland 46% was used in energy recovery in 2019. This is part of a longer-term trend with the decline in reliance on landfills.

6.2.20. While residual waste in Ireland is generally incinerated for energy recovery or landfill it is estimated that the amount of residual waste could be reduced by approximately 50% with proper segregation of recyclable and organic waste. The broadening of the scope of what can be recycled to include soft plastics will be an important part of the suite of measures which will reverse the decline in Ireland's packaging recycling rates.

6.2.21. Ireland met all current targets in 2019 with the exception of the specific target for collection of WEEE. Recent updates to EU regulations and directives will make the achievement of various targets for more challenging.

6.2.22. The hazardous waste sector has risen by 84% since 2012 and in 2019 65% of hazardous waste was exported for treatment. This reflects the fact that Ireland does not have the range of facilities to deal with all of the hazardous waste generated.

6.2.23. Appendix 1 presents a useful chart in terms of the outlook for future compliance with EU targets. Achieving compliance with the target that under 10% of municipal landfill waste would be disposed to landfill by 2035 was stated to be 'partially on track' and dependent on current and planned measures being implemented and effective. Similar statements are made with respect to the target of over 55% recycling of packaging waste, over 60% recycling of paper and cardboard and over 50% of recycling of metals. Objectives which are stated to be largely not on track include measures related to recycling of plastics and preparation for reuse and recycling of household derived paper and other products.

6.2.24. The **Draft National Hazardous Waste Management Plan 2021-2027 with** reference to the 2014-2020 NHWMP that the areas requiring further attention include increasing Ireland's level of capacity for self-sufficiency with regard to the treatment and management of hazardous waste.

6.2.25. The draft plan notes the steady increase in hazardous waste generated in Ireland and states that the estimated figure for 2019 is 580,977 tonnes. 100,000 tonnes of that waste in 2019 was bottom ash from Dublin WtE which has since been reclassified as non-hazardous. Of the overall figure there was an increase in

treatment of hazardous waste at Irish facilities by 30% on the previous year amounting to 146,309 tonnes. A further 55,282 tonnes were treated at the site of generation, including 1,133 tonnes at WtE facilities. The situation remains that Ireland does not have the facilities or economies of scale required to treat the full range of hazardous wastes it produces and in 2019 65% was exported for treatment in other European countries.

6.2.26. Key recommendations of this draft plan include:

- 9 – Strengthen knowledge of national hazardous waste capacity to inform infrastructure development and contingency planning, in accordance with the application of the proximity principle.

6.2.27. The reference to the proximity principle is expanded in section 6.1 it is noted that the lack of infrastructure in the form of a commercial hazardous waste landfill or hazardous waste incinerator is a risk due to reliance on export markets and represents a lost resource. It is recognised that complete self-sufficiency in terms of hazardous waste is not feasible but there is a need for Ireland to take responsibility and to take reasonable steps to provide appropriate treatment capacity. Amongst the issues requiring action on the path to increasing self-sufficiency is addressing the deficit in capacity for the substantial waste stream current exported for thermal treatment , i.e. co-incineration, use as fuel or incineration. 6.2 addresses treatment processes in more detail and in relation to solvent recovery references use in cement kilns and other industrial process and incineration at on-site incinerators in the pharma-chem sector and the incineration of 10,000 TPA at Carranstown.

6.2.28. 80,000 tonnes of Incinerator Bottom Ash were produced in Ireland in 2019 and the operators of the country's two WtE facilities have satisfied the EPA that this is non-hazardous and can be safely disposed of in a conventional landfill. Boiler ash and flue gas treatment residues continue to be classified as hazardous waste.

National policy framework alternative fuels infrastructure for transport in Ireland 2017 to 2030.

6.2.29. In relation to hydrogen the document notes the future emergence of a market in Ireland in the coming years as hydrogen use in Europe increases. Hydrogen is anticipated to increase its penetration across the entire fleet spectrum after 2030.

6.2.30. The use and benefits of hydrogen and transport is set out in section 5.5.

6.2.31. Section 6.5 states that hydrogen will be available for use in transport by 2020 but is unlikely to enter the mass market in Ireland until the end of the next decade.

6.2.32. Section 7.4 refers to hydrogen targets. Ireland has no immediate plans to establish a hydrogen refuelling network as the cost of the infrastructure is massively disproportionate to current demand. Ireland is willing to support trials.

6.2.33. Section 8.2 refers to measures to be considered by the end of 2020 which include a task force to consider the measure and options available for the purpose of accelerating the deployment of low carbon technologies including hydrogen.

White Paper: Ireland's Transition to a Low Carbon Energy Future, 2015-2030

6.2.34. This is a roadmap to policy and actions relevant to the energy sector up to 2030. It has regard to European and International climate change objectives and agreements. It notes that waste management policy in Ireland recognises the opportunity for waste to be used as an indigenous energy source and that the Waste Management Plans support the development of additional thermal recovery and biological treatment capacity within the state. It is noted also that the REFIT schemes continue to support the use of waste as a renewable energy feedstock.

Climate Action Plan, 2021

6.2.35. This plan seeks to tackle climate breakdown and achieve net zero greenhouse gas emissions by 2050. It identifies that the transition to climate neutrality will require changes across our society and economy including in the waste sector. The document notes Ireland's success in diverting waste from landfill, which contributes significantly to greenhouse gas emissions related to waste treatment. Minimising waste generation and improving segregation, reuse and recycling will lead to less emissions associated with waste transport and treatment.

6.2.36. The promotion of green hydrogen measures is supported. Green hydrogen is defined as usually referring to hydrogen produced by the electrolysis of water using renewable electricity and the only by product is oxygen. Although the plan identifies technological and cost barriers at present, green hydrogen is identified as a possible solution to some of the challenges in the energy sector, including as a back-up for renewables and for use in the transport sector.

National Planning Framework - published in February 2018 under Project Ireland 2040

6.2.37. Section 9.2 deals with resource efficiency and transition to a low carbon economy. National policy objective 56 is to sustainably manage waste generation, invest in different types of waste treatment and support circular economy principles, prioritising prevention, reuse, recycling and recovery, to support a healthy environment, economy and society. It is noted that Ireland has actively improved its waste management systems but that we remain heavily reliant on export markets for the treatment of residual waste, recyclable waste and hazardous waste. Population growth will increase pressure on waste management capacity. The ultimate aim is to decouple consumption from waste generation. In managing our waste needs the NPF support circular economy principles that minimise waste going to landfill and maximise waste as a resource meaning that prevention, preparation for reuse, recycling and recovery are prioritised in that order over the disposal of waste.

6.2.38. National Strategic Outcome 9 includes the following provisions:

- Planning for waste treatment requirements to 2040 will require waste to energy facilities which treat the residual waste that cannot be recycled in a sustainable way delivering benefits such as electricity and heat production.
- District heating networks will be developed, where technically feasible and cost-effective.
- Development of necessary and appropriate hazardous waste management facilities to avoid the need for treatment elsewhere.
- Adequate capacity and systems to manage waste including municipal and C&D waste in an environmentally safe and sustainable manner.

National Development Plan 2021 – 2030

6.2.39. Published in October 2021 this is the 10-year national capital expenditure framework. It constitutes a revised plan with increased emphasis on supporting the transition to a low carbon society. It sets out a major national investment project across all sectors, supporting *inter alia* investment measures necessary to meet climate ambitions and informed by climate and environmental assessment of each of the proposed measures.

6.2.40. Capacity will continue to be built in waste facilities including hazardous waste treatment and waste to energy and other projects. Facilitating the use of alternative fuels and nonrecyclable wastes in cement kilns is outlined.

6.2.41. Targets for waste recycling by 2030 set in the Waste Action Plan for a Circular Economy are restated. It is stated that Ireland has scope for major progress in all key areas of the waste hierarchy and specific objectives include strengthening the regulatory and enforcement frameworks for the waste collection and management system to maximise circular economy principles. An increase in targets for the roll-out of district heating is outlined.

Draft Greater Dublin Area Transport Strategy, November 2021

6.2.42. This updated strategy for the GDA omits the Leinster Orbital Route in favour of online road improvements.

National energy efficiency action plan 4 (NREAP) 2017-2020

6.2.43. This re-states support for the development of the economic potential of high efficiency code generation and efficient district heating and cooling including from waste heat and renewable energy sources.

6.3. Guidance and legislation

Climate Action and Low Carbon Development (Amendment) Act 2021

6.3.1. This was signed into law in July 2020. It establishes national climate objectives that the state shall pursue and achieve by no later than the end of the year 2050 the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. The Act contains a number of objectives for the purpose of achieving that objective including the preparation of an updated Climate Action Plan. The preparation of local authority climate action plans and of sectoral emission ceilings are key elements.

Traffic and Transport Assessment Guidelines 2014

6.3.2. These guidelines were published by the then National Roads Authority and aim to provide guidance in the conducting of studies for traffic and transport assessment and evaluation thereof.

6.3.3. The requirement to carry out a traffic and transport assessment affecting national roads includes where traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive.

Spatial Planning and National Roads Guidelines for Planning Authorities 2012

6.3.4. Section 2.9 of this document refers to the requirement to protect alignments for future national road projects. In planning future routes, the NRA will work with planning authorities. A development plan should identify any land required for future national roads projects including objectives that retain required lands free from development and ensure that adjacent development of sensitive uses is compatible.

EPA technical guidance on municipal solid Waste: pre-treatment and residuals' management

6.3.5. This sets down various requirements relating to management of MSW.

6.4. Regional Policy

Regional Spatial Strategy for the Eastern and Midland Region 2019-2031

6.4.1. This takes on board the outcomes of the NPF and seeks to determine the region's role in the achievement of the National Strategic Outcomes. To this effect certain regional objectives which are of relevance are identified. The requirements of the Eastern Regional Waste Management Plan shall be taken into account in the preparation of development plans.

6.4.2. Regional Strategic Outcome 7 and RPO 10.25 support the principles of the circular economy and greater resource efficiency.

6.4.3. RPO 10.20 supports the development of enhanced electricity and gas supplies and associated networks.

Eastern-Midlands Region Waste Management Plan 2015-2021

6.4.4. Policy E1 – Future authorisations of pre-treatment capacity in the region must take account of the authorised and available capacity in the market while being satisfied the type of processing activity being proposed meets the requirement of policy E2.

6.4.5. Policy E2 – Future authorisation of pre-treatment activities by local authorities over the plan period will be contingent on the operator demonstrating that the treatment is necessary, and the proposed activities will improve the quality and add value to the

output materials generated at the site. Pre-treatment is noted to be vital in extracting and generating high-quality outputs for onward treatment. Consideration of authorised and available capacity may reduce the scale of development of new greenfield sites.

6.4.6. Section 16.4.5 deals with thermal recovery activities where the principal use of the waste is as a fuel to generate energy and it is noted that these sit on the other recovery tier of the waste hierarchy and include incineration (waste to energy), co-incineration (cement kilns), pyrolysis and gasification. These facilities typically operate on a national market basis excepting waste from all parts of Ireland. Progress is made in achieving Ireland's policy to become self-sufficient in relation to the recovery of municipal waste. A significant quantity of residual waste which is being exported is poor use of a valuable resource from a self-sufficiency perspective.

6.4.7. The need for future treatment capacity requires careful consideration and must take into account predicted waste growth, growing recycle rates, future targets and the continued move from landfill and conversion of pending capacity into active treatment. Future thermal recovery facilities will be viewed as national facilities addressing the needs of the state and not defined by regional markets alone.

6.4.8. Policy E15a is to support the development of up to 300,000 tonnes of additional thermal recovery capacity for the treatment of non-hazardous waste nationally to ensure that there is adequate and competitive treatment in the market and the State's self-sufficiency requirements for the recovery of municipal waste are met. This capacity is a national treatment need and is not specific to the region. The extent of capacity determined reflects the predicted need of the residual waste market up to 2030 at the time of preparing the waste plan. Authorisations above this threshold will only be granted if the applicant justifies and verifies the need for the capacity and the authorities are satisfied it complies with national and regional waste policies and does not pose a risk to future recycling rates. All proposed sites for thermal recovery must comply with the environmental protection criteria set out in the Plan.

6.4.9. Policy E15b states that the plan supports the need for thermal recovery capacity to be developed specifically for the on-site treatment of industrial process wastes and were justifiable the treatment of such wastes at merchant thermal recovery facilities.

6.4.10. Policy E16 states that the plan supports the development of up to 50,000 tons of additional thermal recovery capacity for the treatment of hazardous wastes nationally to ensure that there is adequate active and competitive treatment in the market to facilitate self-sufficiency needs. The capacity is a national treatment need and not specific to a region.

6.5. Local Planning Policy

Meath County Development Plan 2021-2027.

6.5.1. This plan came into effect on 3 November 2021. A ministerial directive applies to certain provisions, none of which are relevant to the proposed development or the Duleek area.

6.5.2. Duleek – the vision is to promote the sustainable growth of Duleek consolidating and enhancing its rich, historic town centre and promoting its role as a self-sustaining town and a local service centre. The R150 travels to the town centre resulting in significant volumes of traffic and traffic calming and traffic management proposals have been prepared to improve the public realm in the short term and these will be implemented during the lifetime of the plan. In the longer term there is a need to divert heavy traffic from the town centre with a new bypass link to the south-west a possible option – DUL OBJ 8 is the objective to examine the feasibility and progress the provision of the R150 bypass. DUL OBJ 9 sets out specific local objectives including relating to the provision and upgrading of footpaths and junctions.

6.5.3. INF POL 61 is to facilitate implementation of waste legislation and national and regional waste management policy and the circular economy.

6.5.4. INF POL 63 is to encourage the development of waste infrastructure in appropriate locations as deemed necessary in accordance with the requirements of the Eastern Midlands region waste management plan and the draft waste facility siting guidelines 2016 when finalised.

6.5.5. INF POL 65 is to adopt the waste management hierarchy and implement policy under waste management plans. All prospective development shall take account of the provisions of the regional waste management plan. Account shall also be taken of the proximity principle and the interregional movement of waste.

6.5.6. INF POL 66 as to ensure that hazardous waste is addressed to an integrated approach of prevention, collection and recycling.

6.5.7. INF OBJ 54 is to facilitate the transition from waste management economy to a green circular economy.

6.5.8. INF OBJ 59 is to seek to ensure that waste management facilities are appropriately managed and monitored to maximise efficiencies to protect human health and the natural environment.

6.5.9. INF OBJ 60 relates to high quality sustainable waste recovery and disposal infrastructure including anaerobic digesters.

6.5.10. INF OBJ 71 and 72 relates to air and noise monitoring including the collation of data in support of a regional air quality and greenhouse gas emission inventory.

6.5.11. Chapter 5 sets out transport policies and objectives. Under section 5.8.2 it is noted that the RSES indicates that long-term protection shall remain for the outer orbital route and that the NTA Strategy for the GDA 2016-2035 notes that while this project is not planned for implementation during the period of the strategy, the finalisation of the route corridor and its protection from development intrusion is recommended.

6.5.12. MOV POL 23 is to support the delivery of the Leinster Orbital Route which is considered to comprise important infrastructure development and when finalised to protect the route corridor free from developments which could interfere with the provision of the project.

6.5.13. RPO 8.10 identifies specific projects to be delivered and states that in addition long-term protection shall remain for the Leinster Outer Orbital Route.

6.5.14. MOV OBJ 49 is to support public road infrastructure including bypasses of local towns and villages and national road schemes and where necessary to reserve corridors of any such routes free of development. Table 5.1 sets out a non-exhaustive list of road schemes which includes M1 Junction 8 Duleek and the possible upgrading of this junction to improve capacity and references local bypasses/relief roads identified on map 5.2 which are to be examined in terms of feasibility and to be progressed where appropriate – Duleek is one of a small number of identified for proposed bypass/relief roads.

Meath Climate Action Strategy 2019-2024

6.5.15. Relevant provisions have been incorporated in the adopted development plan.

7.0 **Planning Assessment**

The Planning Assessment is presented under the following headings:

- Policy Framework and Project Need
- Risk of Major Accidents and Disasters
- Roads and Traffic
- Landscape and Visual
- Air and Climate
- Flood Risk and Wastewater
- Other Issues
- Conclusions.

7.1. **The Policy Framework and Project Need**

7.1.1. I propose to consider the project need and the relevant policy context in respect of the significant elements of the proposed development:

- additional thermal recovery capacity of up to 15,000 TPA of hazardous waste (to provide for a total of up to 25,000 TPA hazardous waste intake –10,000 TPA already permitted) and an increase in annual total thermal recovery capacity to 250,000 TPA (from a permitted 235, 000 TPA)
- the development of an aqueous waste tank farm
- the generation and storage of hydrogen at the site
- the development of a bottom ash storage building for the storage of up to 5,000 tonnes of bottom ash produced on site
- additional waste acceptance capacity and infrastructure for the acceptance of up to 30,000 TPA of third-party boiler ash and flue gas cleaning residues and other residues for treatment in the existing ash pre-treatment facility

- development of a warehouse, workshop and emergency response team (ERT)/office building to support existing maintenance activities
- new concrete yard and parking area for up to 10 trucks, tankers or containers
- demolition and rebuilding of the existing singular office modular building.

7.1.2. **Additional thermal recovery capacity of up to 15,000 TPA of hazardous waste with a total intake of up to 250,000 TPA**

7.1.3. It is clearly identified under the description of this aspect of the proposed development in section 4.5.2 of the EIAR that the proposed additional 15,000 TPA and the increase from 235,000 TPA to 250,000 TPA is to provide for an increased intake of hazardous or non-hazardous waste in a manner which provides flexibility and thereby allowing for appropriate management of the facility.

7.1.4. The permission granted under ABP-302447 on 3 April 2019 allowed for intake of up to 235,000 TPA on a permanent basis. The cap on the hazardous waste intake of 10,000 TPA was imposed. Therefore, the proposed development involving an additional 15,000 TPA would facilitate a total intake of up to 25,000 TPA of hazardous waste.

7.1.5. **Proximity Principle** Observers have identified issues relating to the source of the proposed additional 15,000 TPA of hazardous waste, noting that the submissions during the pre-application consultation referenced in particular the Cork Pharma sector. On that basis the selected location is deemed by the observers to be contrary to accepted policy and principles.

7.1.6. The authorised intake of 10,000 TPA of hazardous waste dates originally to 2013 and the permission under PA0026 and later made permanent in 2019. Under PA0026 there were no restrictions in relation to the source of the hazardous waste in contrast to the requirements for intake of non-hazardous waste, which was to be mainly sourced in the region. It was therefore established that a limited amount of hazardous waste (10,000 TPA) sourced from the national market can be treated at this WtE.

7.1.7. In the interim there have been changes to policy and a growing emphasis at international and national level to minimise the generation of waste including hazardous waste. There are policies in place encouraging on-site treatment for

industries. Various Irish policy documents which I have referenced above and provided extracts from support these changes.

7.1.8. Notwithstanding the policy shift to the focus on the circular economy I consider that there remains very strong support for the development of additional capacity for treatment of hazardous wastes, including at the existing WtE facility. I consider that a grant of permission would assist in realising objective 14(ii) of the NHWMP which sets the objective of increasing Ireland's level of self-sufficient with regard to the treatment and management of hazardous waste. The prevailing planning context including the NHWMP establishes that hazardous waste management should be considered on a national and all-Ireland basis in terms of capacity planning and it is therefore reasonable to conclude that the location of the facility is acceptable in principle.

7.1.9. With respect to the focus on waste reduction I note the reporting in policy documents of measures undertaken by industry and others to reduce the generation of waste. This was reiterated in the 2018 Progress Report, which calls for increased efforts in this area. Notwithstanding this requirement and the current thinking on waste which is emanating from the circular economy I consider that there is strong support in policy provisions at a national level for the development of additional hazardous waste capacity in Ireland.

7.1.10. At a regional level there is support for the proposed development under objective E16 of the EMRWMP. This identifies a requirement for the development of up to 50,000 tonnes of additional thermal recovery capacity for the treatment of hazardous wastes nationally to ensure that there is adequate treatment and to facilitate self-sufficiency. The stated capacity is explicitly identified to be a national treatment need and is not specific to the region.

7.1.11. The EMRWMP sets out policy provision relating to new facilities and the regional pattern of facilities as quoted below.

> The spatial distribution of facilities nationally is potentially imbalanced, with all active and pending facilities located in one region. Despite the strong road network linking regional urban centres to the capital, there is a need to consider the spatial distribution of thermal recovery capacity in the state when authorising future facilities.

7.1.12. I take this statement to be relevant to new facilities only and I do not consider that there is any provision in national or regional policy documents which would specifically preclude a relatively minor (15,000 TPA) expansion of the existing WTE facility at this site.

7.1.13. I am satisfied from my review of the planning history and taking into account all the submissions of observers and the applicant that a grant of permission for the additional capacity of hazardous waste intake at this site is fully supported by national and regional policy.

7.1.14. **Non-hazardous waste option** Of the 15,000 TPA maximum hazardous waste and the overall total capacity increase from 235,000 to 250,000 TPA there is the possibility that some of the additional 15,000 TPA capacity increase could be utilised for non-hazardous waste. This justification is set out in the context of the possible drop in the calorific value of the residual municipal waste entering the facility as well as the acceptance of additional aqueous liquid wastes. I consider it reasonable that the operator be facilitated with the flexibility to adjust the overall calorific value of the inputs to the facility to ensure effective and efficient processing. I accept the applicant's submission on this issue. I consider that the main driver for the project relates to the intake of the hazardous waste and in the context of the proper functioning of the plant I am satisfied that the option of additional non-hazardous waste intake should be facilitated.

7.1.15. In terms of policy relating to thermal treatment of non-hazardous waste I note that there is a requirement identified under the EMRWMP 2015-2021 for an additional thermal recovery for 300,000 TPA on a national level. This is to ensure self-sufficiency up to the year 2030. Regarding the 300,000 TPA requirement I would reference the fact that the potential future increase of non-hazardous waste intake as proposed under the current application is not of significant volume. I note the recent grant of permission by the Board for 90,000 TPA increase in intake at Poolbeg WtE. No information has been presented by observers to suggest that the 300,000 TPA need established under policy E15a has been met and my investigation of publicly available information did not uncover anything to support such a conclusion. Furthermore, in the context of my earlier comments relating to the effective operation of the plant and the need for operational flexibility, the proposed increase in the

intake of waste is acceptable for the reasons stated and accords with national and regional policy provisions.

7.1.16. I conclude that the increased intake of up to 250,000 TPA is in accordance with relevant policy.

7.1.17. **Other comments on Waste Types** The waste types set under the conditions of PA0026 were restricted to be in accordance with the European Waste Catalogue Codes as listed in Table 2.1 of the Board's Order. The Board may wish to consider if such a restriction is relevant in this case. Waste is classified as being hazardous when it displays one or more of the hazardous properties listed in the Second Schedule of the Waste Management Act as amended. The applicant's submissions include a broad description of the nature of the hazardous wastes, which will be a mix of solid and aqueous wastes. Having considered the matter and following a review of the planning history, I consider that any limitation on the types of waste is a matter for the IE licence.

7.1.18. I note and accept the statement of the applicant that in terms of the waste hierarchy the classification of the existing facility as an R1 recovery facility will not be affected by the treatment of additional hazardous waste. This is a relevant consideration in terms of the consideration of policy for waste management.

7.1.19. I would further note a key relevant provision in the EPA technical guidance in the management of MSW. This guidance requires that MSW delivered to a waste to energy facility must first have been collected through a source separated system and that mechanical treatment for the extraction of metals and other marketable recyclables must be applied to the bottom ashes that are generated following combustion. All of these requirements for the existing WtE facility ensure that it operates in accordance with relevant policy and the waste hierarchy.

7.1.20. **Conclusion** I conclude that it is appropriate to facilitate the increased 15,000 TPA of waste at the facility bringing the total to 250,000 TPA. The additional capacity (whether utilised to treat hazardous waste thereby avoiding export or as a means to increase operator flexibility) will meet an identified requirement for additional indigenous treatment capacity for the recovery of wastes.

7.1.21. **Aqueous waste tank farm**

7.1.22. A significant component of the proposed development is the tank farm and associated bunding which is planned for the storage and processing of aqueous hazardous wastes. The existing storage of aqueous wastes is in a mobile unit. The capacity of the facility for hazardous aqueous waste is stated to be about 8,000 TPA and the provision of the tank farm will ensure that this can be increased up to 20,000 TPA. That 20,000 TPA would be part of the overall maximum intake of 25,000 TPA of hazardous waste and the overall intake of 250,000 TPA as set out on table 4.4 of the EIAR.

7.1.23. The design of the tank farm as described in the EIAR provides for acceptance, handling and storage systems for hazardous aqueous waste which are considered to be in accordance with the relevant BREF reference documents. Associated elements of the proposed development include upgrades to tanker unloading and better access methods for sampling of intake to ensure its suitability prior to acceptance. The option of direct injection to the furnace will be maintained including for use in periods of maintenance at the tank farm. At all times only two of the three tanks will be used for storage of aqueous waste, the third being retained for use during boiler maintenance.

7.1.24. The proposed aqueous waste tank farm and the associated works would provide enhanced facilities and cater for the potential increased intake of liquid hazardous wastes. The proposed development through the provision of additional thermal recovery capacity for hazardous waste thereby facilitates national and regional objectives. The aqueous waste tank farm and associated unloading are critical aspect of the development in this respect. Its development will contribute significantly to meeting the need for increased indigenous capacity for hazardous waste in accordance with the NHWMP.

7.1.25. **Bottom ash storage and intake of third-party boiler ash and residues**

7.1.26. The EPA Progress Report in 2018 identified the particular importance that the management of significant quantities of hazardous fly ash from waste to energy plants and the associated infrastructural capacity needs are prioritised. The NHWMP specified the need to expand the recovery and treatment capacity for wastes that do not require thermal treatment or landfill.

7.1.27. The proposed development incorporates two elements which meet these objectives:

- a bottom ash storage building
- additional waste acceptance capacity and infrastructure for boiler ash, fly ash and other residues in the existing pre-treatment facility.

7.1.28. The proposed bottom ash storage building will allow for storage of up to 5,000 tonnes of bottom ash which is produced on the site. Pending the development of bottom ash recycling plants in Ireland this material will be exported in approximately 12 shipments through Drogheda. The likely future use on export may be as an aggregate.

7.1.29. The development of infrastructure to enable intake of an additional 30,000 TPA at the existing pre-treatment facility will provide an avenue for recovery of this material. Presently there is significant export (25,000 TPA) of third-party residues to Germany and Norway. The proposed development would require the construction of new silos within the main process building where the residues would be stored prior to processing at the existing pre-treatment plant which has been operational since 2018. Following pre-treatment, the material would be suitable for recovery at an existing facility at a salt mine in Northern Ireland.

7.1.30. I am satisfied that both of these elements of the proposed development are in keeping with the provisions of the NHWMP.

7.1.31. **Generation and Storage of Hydrogen**

7.1.32. As an exporter of electricity from the site the applicant reports periods of constraint during which there is no demand for electricity from the facility. With increased growth in the renewable sector these periods of curtailment are likely to become more frequent. The proposed development would utilise electricity generated during periods of constraints to generate hydrogen.

7.1.33. Observations submitted included a number of comments relating to the policy basis and feasibility of this element of the proposed development. There is reference in particular to the National Policy Framework Alternative Fuels Infrastructure for Transport in Ireland 2017-2030. As the observers state this document outlines that Ireland has no immediate plans to establish a hydrogen refuelling network. Nevertheless, while the document expresses reservations relating to the pace of

progress I note that it does express strong support for the future of hydrogen in the transport section.

7.1.34. Looking to the wider policy provision I note that the NPF and other documents reference WtE facilities as part of a sustainable method for treatment of residual and hazardous wastes noting that they can deliver benefits such as electricity and heat production. Given the location of the existing facility which is remote from a population which would benefit from district heating, I consider that the utilisation of surplus electricity to produce hydrogen is a sustainable option, which is in line with the NPWS and the EMRWMP and is a positive development in the drive to decarbonisation and the move towards a circular economy.

7.1.35. The applicant has proposed a number of options for use of the hydrogen produced on site, including injection into the gas network and refuelling on site.

7.1.36. In the event of use for refuelling the applicant has referenced the potential future fuelling of waste transport vehicles. To the extent that such vehicles would be visiting the site, I consider that this would constitute a suitable option. The Board may wish to consider whether it would be appropriate to limit any refuelling to vehicles such as waste transport vehicles, which would be on site. That would exclude the possibility for example of buses refuelling at the site, which has been identified as a possible option by the applicant in the context of proximity to the M1. If such occurred, it is stated that it would be under contract with specific operators and not open to use by the public. A development of this nature incorporating a worst-case traffic movement of up to 60 vehicles per week has been incorporated in the traffic scenario. Having regard to the limited scale of this element of the proposed development, the capacity of the road network and entrance and the importance at this time of supporting innovation and developing markets in the context of the move towards decarbonisation, I recommend that no restrictions be placed on such activity.

7.1.37. Regarding the ultimate use of hydrogen, the observers have raised a number of issues relating to energy efficiency and sustainability of this element of the development overall. As noted by the applicant there is no likelihood that the hydrogen would ultimately be utilised to generate electricity at a gas turbine generating plant. Instead, if the hydrogen was diverted to the gas network, it would

replace natural gas used by domestic customers. I consider that the observers arguments relating to the energy efficiency of this proposal cannot be sustained. In the context of the reuse of steam which is produced at an existing facility and for which there may otherwise be no value it is reasonable in my opinion to conclude that this aspect of the proposed development is completely in line with current thinking on the circular economy and with emerging national policy.

7.1.38. I note that observers have stated there is a lack of certainty related to the amount of hydrogen which would be produced. I disagree as both the tonnage and pressure are specified. In my opinion there is complete clarity relating to this aspect of the proposed development and I note that the observers' comments appear to be based on consideration of the non-technical summary. I return to this matter later in the context of discussion on major accidents.

7.1.39. To conclude, I am in agreement with the applicant's submission that the proposed development of the HGU and the production on site of hydrogen either to the gas distribution network or for use in transportation constitutes an improvement in the energy efficiency and sustainability of the existing facility and accords with the national and regional policy provisions relating to efficient waste management and climate mitigation including decarbonisation of transportation.

7.1.40. **Other elements of proposed development, including offices.**

7.1.41. The other elements of the proposed development are:

- new concrete yard and parking area for up to 10 trucks, tankers or containers
- a warehouse, workshop and emergency response team (ERT)/office building to support existing maintenance activities
- demolition and rebuilding of the existing office modular building.

7.1.42. For the most part these facilities may be described as ancillary upgrades which do not warrant consideration in terms of the prevailing planning policy. However, objectors state that there has been a failure to justify the office development having regard to the zoning objective. This issue was raised during the pre-application consultation. I consider that the main issue to be determined is that any office uses are necessary for the operation of the proposed development or accord with development plan policy or are otherwise acceptable.

7.1.43. I note that the planning authority considers that there is policy support for this element of the proposed development under ED POL 20, which is to permit development for the expansion of existing authorised industrial or business enterprises in the country where the resultant development does not negatively impact on the character and amenity of the area and subject to consideration of traffic generated. In support of this element of the development the Chief Executive's report references internal reports and the suitability of the road network. I would agree with this interpretation if it is demonstrated that the offices are intended strictly in connection with the existing and proposed authorised WtE.

7.1.44. It is clearly stated that the warehouse, workshop and ERT / office building are to support existing maintenance activities. This element of the development is described in section 4.5.7 of the EIAR and further considered in the applicant's response to further information under section 2.2.2. The need to relocate the existing warehouse and workshop functions in the new building which will also include additional office accommodation for staff on site, ERT equipment and staff facilities is set out. It will include a small office for the warehouse technician, a mezzanine office for the mechanical maintenance team leader and staff. It is stated that the proposed office and ERT area will accommodate up to 10 additional Indaver staff and include offices and meeting room for both the Indaver staff and permanent contractors on site. I consider that it is demonstrated that the ERT / office building is intrinsically connected with the operation of the WtE plant.

7.1.45. In relation to the demolition and rebuilding of the existing modular office building this will have a slightly increased footprint but will accommodate only one additional person (an increase to 23 staff). In the EIAR this element of the development is described as not significant and involving only minimal changes and being in line with the permission granted. I have examined the Inspector's report under PA0026 and note that the main purpose of the offices is described as 'to provide a regular base for contract staff during periods of maintenance and related activities'.

7.1.46. As described in section 4.5.9 of the EIAR the proposed wellness centre, locker room, canteen and meeting facilities are intended for Indaver staff and permanent contractors on site. Furthermore, it is stated that the permitted development provides for 22 visiting staff to be accommodated in the building. I would note the more specific description as quoted above from the Inspector's report which references

visits by contract staff during periods of maintenance and related activities. In table 2.3 of applicant's further information response, it is stated that 9 no. staff are visitors and the remainder are based on site. Table 2.4 describes a lot of the development as the provision of like for like facilities.

7.1.47. The information presented by the applicant is that the use of the modular office building includes key personnel such as the site safety manager and process engineer, which appears to be slightly at odds with the stated use under PA0026. However, having regard to the information submitted I am generally satisfied that the intended use of the modular office building is intrinsically related to the running of the existing facility. Having regard to the development permitted under PA0026 and the submissions on file I recommend that these elements of the proposed development be permitted subject to a condition which clarifies the nature of the use.

7.1.48. **Conclusions**

7.1.49. The assessment above has taken into account each of the individual components of the proposed development with a view to assessing compliance with policy. I am satisfied that all of the individual elements comply with prevailing planning policy.

7.1.50. I am satisfied that the proposed development will:

- Make a significant contribution towards the provision of additional thermal recovery capacity for hazardous waste, which has been identified in the NHWMP and assist in meeting the goal of self-sufficiency.
- Result in the provision of a not significant quantity of municipal non-hazardous waste treatment capacity, which will facilitate the operational requirements of the site and make a contribution towards meeting the identified needs for additional thermal treatment capacity.
- Through the production of hydrogen from electricity which would otherwise be wasted, will assist in the transition to a low carbon economy and improve the efficiency and sustainability of the existing waste to energy facility.
- Assist the operator and third parties to secure more local markets for recovery of bottom ash, fly ash and other residues and reduce the transport emissions and reliance on other markets.

7.1.51. Having regard to the need for significant additional treatment at a national level for hazardous waste and non-hazardous waste and the rationale provided relating to the intake of non-hazardous waste, to the benefits arising from the bottom ash storage building and the intake of third-party waste for pre-treatment and the utilisation of steam to produce hydrogen, I consider that subject to clarification on the nature of the use of the offices that the proposed development is fully in compliance with national, regional and local policy provisions.

7.2. Major Accidents and Disasters

7.2.1. The proposed development includes elements which increase the risk of major accidents and disasters at the site, and which might have implications for the proper planning and sustainable development of the area. The issues addressed in this section are considered under the following headings:

- Whether the site would fall under the COMAH Regulations.
- The significant accident scenarios.
- Proposed mitigation measures.
- Conclusions.

7.2.2. The application has been subject of an independent technical review for the Board by Callaghan Engineering on the topic of Control of Major Accidents Hazards. The report of Callaghan Engineering is attached as Appendix 1. The EIAR contains a wealth of relevant detailed information notably in Chapter 17 and Appendix 17.1.

COMAH Regulations

7.2.3. The relevant elements of the proposed development for the purposes of this section include the proposed HGU and the aqueous tank farm. The increase in total waste for treatment was assessed in section 3.1.3 of the report of Callaghan Engineering who describe the increase in packaging and aqueous waste fractions under the scenarios assessed by the applicant. The report of Callaghan Engineering concludes that the change in yearly treatment capacity does not change the potential for the site for major accidents.

7.2.4. Observers have referred particularly to the HGU element of the proposed development and consider that there is inadequate information presented to

determine the level of risk and whether the proposed development would fall under the COMAH Regulations. The information relied upon as the basis for this claim is the non-technical summary, which is limited in terms of the amount of information, as is appropriate. It is not evident to me that the observers have taken into account the entirety of the EIAR. I consider that there is ample information available to the Board. I note that while the request for further information which was issued included requests relating to some highly technical aspects of the proposed development, there was no need to query the contribution of the proposed development under the COMAH Regulations.

7.2.5. An establishment is designated under the COMAH Regulations depending on the quantity of dangerous substances it contains. Appendix 17.1 of the EIAR presents the specialist report of Byrne O' Cleirigh. This deals specifically with the matter of whether the inventory changes associated with the proposed increase of hazardous waste, the new aqueous waste tank farm and the HGU would result in the facility qualifying as a Seveso III establishment. The review undertaken by the Board's consultants considers the nature of the material which will be on site at a given time.

7.2.6. The total inventory of relevant substances is assessed and is concluded to be below the level to cause the site to qualify as a Seveso establishment. I accept the conclusion of the Board's consultants.

Significant accident scenarios

7.2.7. In its assessment of the nature of the substances on site the Board's consultants note that these fall under the categories of environmental or physical hazards and that none of them would constitute health hazards.

7.2.8. As noted in the report of Callaghan Engineering for the Board the EIAR relies on modelling which concluded that any accident associated with the project has no potential for significant consequences off-site. In Chapter 17 of the EIAR the applicant sets out a number of credible accident scenarios. Those which were subject to detailed consideration related to a bunker fire, loss of containment of aqueous ammonia, a fire at the proposed aqueous waste tank farm and a fire/explosion at the proposed HGU. It is the latter two scenarios relating to the proposed aqueous waste tank farm and the HGU which are identified as comprising the worst-case conceivable events.

7.2.9. The accident scenario involving a full bund fire at the proposed aqueous waste tank farm would give rise to high levels of thermal radiation but there would be no impacts off-site. In the event of catastrophic failure of the hydrogen storage vessel there is potential for overpressures to the surrounding area which have been modelled and which do not present a risk to people off-site. The Board's consultants accept the applicant's submissions in this respect and accordingly I accept the expert opinions available.

Mitigation measures

7.2.10. In addition to the consultant's report which validates the technical conclusions presented by the applicant, I refer to the adoption of the CEMP which will ensure that the interaction of different activities at the site is managed safely so as not to present unacceptable risks. I note the CEMP will incorporate an Incident Response Plan which will take into account relevant best practice including for the construction period (Section 8/Appendix 5.1/Vol. 3/EIAR). These measures are relevant to ensure that construction activities will not act as an initiator to an accident scenario. Having regard to the above I conclude that the proposed development would not result in accidents which would give rise to consequences for the resident population in the vicinity or the environment by reason of any activities in the construction phase. I am satisfied as a result of the conclusions drawn regarding the modelling undertaken for the credible accident scenarios that the operation of the proposed development would not have any consequences for human beings or the environment in the vicinity and that there are no consequences for land-use planning.

7.2.11. The HAZID Report contained within the EIAR sets out measures to prevent incidences and reduce their consequences enabling rapid detection of accidents and protection against risks to human health and the environment. The aim of that assessment by the applicant relates to the reduction of the likelihood of a major accident taking place on site. The report of the Board's consultants notes that the original measures set out were comprehensive. To obtain full assurance that the detailed design will be executed in accordance with current safety legislation however, the consultant recommended further information on technical details. The applicant's response, which was received on 31 May 2021 was deemed to be sufficient to ensure that the risk at the site is controlled to acceptable levels. The

Board's consultants note that the methodology employed in the EIAR provides a great level of assurance that the plant will be safe to operate and that the risk scenarios which may have potential to cause fatalities (with very low probability) within the plant will be adequately addressed.

Conclusion

7.2.12. I consider that there is ample information available for the Board to conclude that the proposed development would not give rise to any significant accident scenarios with consequences off site.

7.2.13. I recommend two topics for the purposes of planning conditions. The first emanates from the report of Callaghan Engineering and relates to a technical detail of the aqueous tank farm, which I consider is reasonable to adopt. The second matter relates to the recommendation contained in Appendix 4 of the report of Byrne O Cleirigh. In all 6 no. Recommendations of the HAZID taken are presented, including that a fire water retention study be undertaken. I consider it reasonable and appropriate that these recommendations be adopted unless otherwise agreed with the planning authority and pending any revision to the IE licence.

7.2.14. I conclude that the development is acceptable with respect to the risk of major accidents and disasters.

7.3. Roads and Traffic

7.3.1. Amongst the key concerns expressed in observations is the impact on traffic levels in the area and in particular in the village of Duleek. TII has raised issues relating to the M1 and the planned Leinster Orbital Route.

7.3.2. I address Roads and Traffic under the following headings:

- Construction and operation phase trip generation and distribution.
- Leinster Orbital Route.

7.3.3. **Construction and operation phase trip generation and distribution - Impact on the M1, on regional roads and on Duleek.**

7.3.4. The relevant road network comprises:

- Junction 8 of the M1 to the north-east which has an off-ramp from the south which would provide access to the site and to south Drogheda by the R152.
- The R152 south-west of Junction 8 - this passes in a south-westerly direction by the entrance to Platin Cement and forms the southern site boundary.
- Travelling in the other direction – to the north-east - the R152 connects the site with Drogheda south - joining the R132 in the town centre at Shop Street. This junction is relevant to the export of bottom ash.
- South of the site the R152 connects with the R150 at a staggered cross known as New Lanes Cross.
- The western leg of New Lanes Cross - the R150 passes into Duleek, forms the main street of Duleek and provides an onward route to the N2 and Navan.
- The eastern leg of New Lanes Cross - the R150 passes under the M1 to Julianstown.
- Operational HGV deliveries to and from the site are required to avoid traversing through the village of Duleek and this restriction will operate in the construction period. Car traffic is not subject to this requirement.
- The R152 at the site entrance widens to 10m and contains a ghost island for vehicles turning right and a deceleration land for vehicles turning left.

7.3.5. In the EIA section of this report, I refer to the traffic assessment findings. I consider that the submitted information substantiates the conclusions presented and constitute a suitable basis for the Board's decision.

7.3.6. The peak construction period will occur in phase 2 at which time phase 1 will be operational. The assessment of this period takes into account the combination of operational HGV and personnel traffic as well as existing and permitted development and sets out assumptions for the flows of HGVs and the arrival and departure times of workers. The assessment for the AM and PM peaks for the opening year of phase 1 is that collectively there would be a negligible impact on the local road network with typical increases of 0.3% to 1.3%. The latter figure excludes the construction workers whose arrival would be outside peak traffic hours. Table 7.14 of the EIAR refers. Increased traffic levels at the site entrance are considerably higher but the site entrance has been demonstrated to have considerable spare capacity. Outside

of the AM and PM peaks there will be locally significant increases in traffic volume in the order of 7% (related to construction workers) and this is considered acceptable as traffic levels at those times will be low.

7.3.7. The analysis undertaken for the opening year +5 scenario and also for 2037 is that the additional operational HGVs and vehicles associated with the completed development would collectively have a negligible impact on the local road network.

7.3.8. The capacity of one particular junction warrants particular focus, that is New Lanes Cross junction. The analysis shows that in 2022 and 2027 the junction has sufficient reserve capacity during all relevant time periods with minimal queueing. By 2037 the New Lanes Cross junction is predicted to be experiencing capacity issues on a number of arms but predominantly on the entry arm on the R150 from Duleek in the morning and evening peak and the southbound arm on the R152 in the evening. The applicant's statement is that these results are indicative of a tidal flow pattern which is related to accessing the motorway. As such the factors are external and not directly related to the proposed development. Having regard to the information presented relating to the absolute numbers of vehicles resulting from the proposed development and the distribution of that traffic over the network and during the day, I accept this conclusion.

7.3.9. I note that the EIAR has separated out the traffic related to the export of bottom ash to Drogheda port, which would take place every month for a two-day period and would involve additional HGV movements in a town centre location at the junction of two regional roads. The analysis undertaken involved development of a separate model for the signalised junction at the R132 and Shop Street which concluded that the impact is minimal. I consider that the information presented substantiates this conclusion.

7.3.10. TII in their submission recommends that consideration be given to the preparation of a revised TA including a full analysis of potential impact to junction 8 and the recommendations arising be incorporated as an amendment to the application or as conditions of the permission. In the response to further information the applicant notes that the TII AADT data shows average daily flows of 36,595 and assuming that all 110 daily two-way traffic movements to and from the site came from this direction there would be a negligible increase in daily traffic flow of 0.3%. Furthermore,

assuming that all of the additional 34 two-way vehicular movements to and from the site during the AM and PM peak periods routed by way of the M1 there would be a 1.2% maximum increase. Even in these unlikely scenarios therefore it is the applicant's position that the proposed development would have a negligible impact on the M1. I consider that the applicant's analysis of this matter is robust. It is clear that even in the highly unlikely scenarios described, the increased traffic at the M1 junctions would not come close to the 5% threshold set in the 2014 guidance to trigger a requirement for assessment. For this reason, I consider that there is no requirement for a revised transport assessment. I also am satisfied that given the relatively low levels of traffic increases there would be no significant impact on the M1 and that its function as an important strategic link would not be undermined.

7.3.11. Observers have expressed concern relating to the impact on the village of Duleek in the absence of a bypass. The need to divert heavy traffic from the town centre is identified in the recently adopted Meath County Development Plan wherein a new bypass linked to the south-west is described as a possible option. There is also the specific objective to examine the feasibility of and to progress the provision of the R150 bypass. I note that the impact of the proposed development on the village is limited to additional movement of cars and other small vehicles as companies are instructed to avoid Duleek village and this requirement would also apply in the construction phase. The applicant acknowledges that from time to time there is a requirement for rerouting of HGV traffic for specific reasons. It is appropriate that the proposed Construction Traffic Management Plan would incorporate the requirement that HGV traffic generally avoid the village and I have address this below in a recommended planning condition.

7.3.12. I consider that the levels of traffic generated by the development is acceptable and apart from the avoidance of Duleek village and the adoption of the CTMP there is no requirement for any other conditions.

7.3.13. **Leinster Orbital Route**

7.3.14. The subject site is within the line of the Leinster Orbital Route, previously known as the Outer Orbital Route, planned between Drogheda and Navan. Details of the feasibility study final report issued by the authority in March 2009 are on the TII website. The route is identified for protection in the current RSES for the EMR and

included in the NTA Transport Strategy for the Greater Dublin Area 2016 – 2035. The recently adopted development plan for Meath states that this comprises an important infrastructural development whose delivery is supported and sets the objective of protecting the route. The submission of TII notes section 2.9 of the DoECLG guidelines which establish a requirement to protect the alignments of future national road projects. It follows that the protection of the route is an important consideration in this case.

7.3.15. TII states that the relationship of the subject site to the LOR may not have been assessed in the documentation and that it is especially important close to major junctions that the identified corridor be protected from development intrusion. However, the most up-to-date information on the likely future progression of this route is as set out by the National Transport Authority in the draft Greater Dublin Area Transport Strategy 2020 – 2042 wherein it is stated in section 13.3.5 that the LOR project will not be progressed in its existing form. Instead, it is proposed to provide online or mainly online improvements to the existing road network to cater for orbital demands along these corridors. I would stress that this document is at draft stage and that the first round of consultation only closed on 17 December 2021. Although a clear intention is signalled the project is not yet formally abandoned and the formally adopted policy and the TII submission supports the LOR.

7.3.16. I have examined the Orbital Route Feasibility Study Final Report March 2009 and note that 6.3 refers to the identification of a route corridor noting that in the area between Drogheda and Navan there are major constraints including cultural heritage, topography and landscape constraints. There is specific mention of several constraints to the south-west of Drogheda formed by 'the Platin cement works and associated quarries, and other industrial sites', which I assume is a reference to the existing WtE facility. No detailed drawings are provided.

7.3.17. Regarding the proposed development I note that the site layout incorporates a similar layout to the existing, comprising a largely built-up plot of land with a central reservation line which contains electricity and gas infrastructure. The submission of TII acknowledges the planning history of the overall site. The applicant's response is contained in the RFI document simply states that the proposed development will have no impact on the protection of a route for the LOR. Having regard to the site layout and the nature of the proposed development as well as the existing

development, I am satisfied that the proposed development would not undermine the development plan objective. I recommend that the Board's Order reference the emerging policy context.

7.3.18. In conclusion I consider that the development is acceptable in terms of impacts on roads and traffic.

7.4. Air and Climate

7.4.1. Air

7.4.2. This section concerns the potential air quality and climate impacts associated with the proposed development and addresses observers' comments. Some further detail is contained in the EIA section of this report. The proposed development providing for an increase in the overall waste intake and potentially a higher proportion of hazardous waste and the associated traffic generated is assessed below in terms of the potential for increased air impacts, including cumulative impacts. The climate impacts are separately considered including with respect to the overall plant efficiency and the generation of hydrogen.

7.4.3. In terms of the potential for **operational phase air quality impacts**, this is amongst the concerns raised by third parties. As set out in the EIAR the facility results in very small ambient concentration variations over the ambient air quality standards. In the preparation of the air quality assessment the applicant has utilised the high-quality baseline information which is available at this licensed site. I am satisfied that the modelling reported in the EIAR is suitable and sufficient. I accept the applicant's submission that the existing facility operates in accordance with its licence requirements and does not give rise to significant ambient air quality impacts.

7.4.4. The submitted evidence in the EIAR is that the processing of additional waste at the facility as proposed will not result in significant air quality impacts. The basis for this assessment is an updated version of the AERMOD dispersion model, up-to-date data and which incorporates the building structures associated with the proposed development. The assessment for the purposes of this application is based on an earlier iteration of the modelling. Having considered the information presented and taking into account the observers comments including with respect to the nature of

the waste intake, I find absolutely no reason to doubt the veracity of the conclusions presented by the applicant.

7.4.5. I note that the HSE has raised issues with respect to cumulative impacts and in response the applicant refers to section 8.7.1 of Chapter 8. The latter refers specifically to the potential for cumulative dust emissions associated with the Irish Cement Flue Dust Portland Cement Silo and that cumulative dust effects could also arise as a result of construction of the Irish Cement Alternative Fuels project. The HSE specifically refers to the total environmental loading and there is a need for this to be assessed rather than undertaking an assessment of the individual compounds in the assessment of the proposed development. I note that the concerns of the HSE were not shared by the conclusions drawn in the Chief Executive's report and that the recommended conditions incorporate standard requirements. The report of the Environment Section of Meath Council addresses each of the individual elements of the proposed development and has no objection to any of the elements. Having regard to the limited potential additional air quality effects which would be associated with the proposed development, to the permissions and licences regulating existing facilities and the proposed facilities and the assessment of baseline/background and cumulative effects, I am satisfied with the applicant's approach and the conclusions drawn.

7.4.6. I note the associated call for the establishment of an office by the EPA in the region. I do not consider that this matter is relevant to the Board's determination in this case.

7.4.7. On the issue of transport related emissions in both the construction and operational phases I consider that the applicant has presented sufficient information to demonstrate that the requirement for detailed assessment under DMRB does not arise in this case. Having regard to the existing traffic load and taking into account the pattern of development including the nearby sensitive receptors and the adjacent regional road, as well as the traffic volumes to be generated, I agree with the applicant that there are no likely significant air quality impacts related to the additional trips.

7.4.8. I conclude that the proposed development would not give rise to exceedances of air quality standards including with respect to dust, traffic emissions and licensed parameters and taking into account the cumulative impacts. The development would

meet the relevant air quality standards and on that basis it may be concluded that there would be no significant impacts on the environment and on nearby receptors.

7.4.9. **Climate**

7.4.10. In terms of the **climate impacts** the applicant's assessment presented in Chapter 9 of the EIAR includes quantification of the potential greenhouse gas emissions from the facility noting the contribution from the waste to energy facility. I have examined above the principle of expansion of the waste processing capacity of the WtE to cater in particular for additional hazardous waste. I have clearly set out above that this development is strongly supported in principle. In terms of the climate impacts I would note that the avoidance of export not only promotes Ireland's sustainability but also reduces transport related emissions. I consider that these benefits are significant. I note that the additional waste intake is shown in the EIAR to give rise to an increased contribution to the national greenhouse gas emissions, but I would again refer to the likely avoidance of such emissions occurring on continental Europe in the event of continuation of export of that waste. I also consider that this increase would not be described as significant.

7.4.11. With respect to the source of the waste and the observers' comments relating to emissions avoidance if waste was recovered within the region, I would refer to policy supports for an all-Ireland approach and I reiterate my opinion that the avoidance of export is hugely significant including with respect to greenhouse gas emissions avoidance.

7.4.12. HSE requests that the applicant promotes sustainable modes of travel to offset transport emissions. Notwithstanding that the use of hydrogen in transport is an emerging technology, I consider that this aspect of the proposed development complies with the spirit of the HSE submission. In addition, I have had regard to this issue in the consideration of the use of the proposed offices. My recommendation to restrict the nature of the office use is relevant in this respect as it aims to discourage unnecessary and unsustainable patterns of commuter traffic.

7.4.13. Observers have raised issues with respect to the efficiency of the facility and its position on the waste hierarchy. I have noted earlier that the facility will retain its status as a recovery facility.

7.4.14. In relation to the generation of hydrogen in particular and the efficiency of this aspect of the development I note the applicant's comment that there is no likelihood that the hydrogen generated would be utilised in a gas-powered electricity generator as described.

7.4.15. I consider that the utilisation of excess electricity for the purposes of generating hydrogen constitutes innovative practice which will contribute to the emerging technology and the growth of markets.

7.4.16. I conclude that it may be concluded based on the information presented that the overall climate effects would not be significant.

7.5. Landscape and visual impact

7.5.1. The subject site is located generally within an area of gently rolling topography between 35 m and 70 m OD. The site itself is of relatively even gradient with a high point in excess of 39 m OD at the eastern corner. In the wider area but close to the site is the M1 motorway which runs 2 km east of the site and the Platin quarry and plant. The Platin quarry site is extensive in area and the cement works contains vertical structures which are prominent visual features. The existing Carranstown WtE facility has an industrial character and a large scale and buildings largely occupy the lower parts of the site. The site has been subject of extensive screen planting which was provided as visual mitigation for the main facility. The mature planting in particular is effective in screening views from the R152 and nearby vantage points. In terms of their height and mass the significant buildings are towards the rear of the site.

7.5.2. I agree with the applicant's submission that the construction phase would not give rise to significant landscape in visual impacts and that the main potential sources of impact would be those resulting from the height, scale and mass of the proposed structures.

7.5.3. The proposed development includes some buildings which in themselves are significant in terms of height and mass, notably the ash storage building. However, the siting of the larger structures proximate to the main cluster of buildings on the site ensures minimal impact. In addition to the screening provided by existing structures, the location selected for the proposed buildings is behind the existing tree planted berms thereby ensuring screening from the regional road and nearby

houses. There are proposals to further increase the site screening at the relevant borders, which I consider will enhance the site landscaping and improve the visual amenities of the area.

7.5.4. I concur with the overall conclusion that the impacts on landscape and visual amenity are unlikely to be significant given the small scale of the proposed development in the context of the existing facility and also the presence of the nearby cement works. In this context I note also that notwithstanding the proximity of the site to a number of residential receptors, the observation submitted do not indicate significant concern relating to the proposed development in this regard.

7.5.5. Regarding the location of the site in a landscape, which is designated under the development plan as being of 'high-value' I consider that assessment of the proposed development in this respect has to take into account the context of the Platin site and the existing WtE in this regard I do not consider that the landscape designation would be materially affected.

7.5.6. To conclude, I am satisfied that the proposed development is acceptable in terms of landscape and visual effects.

7.6. Flood Risk and Wastewater

7.6.1. For the purposes of this Planning Assessment, I consider that the only other substantive issues of relevance relate to Flood Risk Assessment and wastewater treatment.

7.6.2. A site-specific Flood Risk Assessment has been undertaken (Appendix 15.1/Vol.3/EIAR). The FRA identifies a risk of pluvial flooding, which is very low, and which affects only very small pockets of the site but no risk of related damage. I consider that the flood risk map for the Cruicerath Stream supports the FRA conclusion that there is no risk of fluvial damage. The groundwater level is 30m below existing ground and there is no risk of groundwater flooding. The site infrastructure includes a drainage network and an existing attenuation pond. A flow control device limits surface water discharge from the site as specified under the IE licence. The site drainage is designed to be self-cleaning and therefore prevents potential flooding relating to blockage. Having regard to all of these factors, I consider that there is no significant risk of flooding.

7.6.3. Concerns were raised by HSE relating to the layout of a proposed percolation area near the bottom ash storage building. Referring to the EPA Wastewater Treatment Manual for Small Communities the applicant references Table 4, which sets out recommended minimum distances to be used as a guide in order to avoid odour and nuisance. I accept the applicant's submission relating to the infrequent occupation of the relevant building. In addition, the applicant has confirmed that the detailed design will be undertaken by an appropriate specialist. I accept the applicant's proposals in relation to the arrangements for wastewater treatment at this location and in general. I consider that sufficient information has been presented by the applicant and I do not consider that there is a need for a specific planning condition.

7.6.4. As a follow on from the above I reference the comments of HSE relating to faecal coliforms levels recorded in groundwater. The applicant's response to further information presents the results of long-term monitoring. This shows that there was a once off and significant spike in results but that the groundwater monitoring down gradient of existing on-site facilities do not indicate any cause for concern. I accept the applicant's explanation for the origin of this event.

7.7. Other Issues

7.7.1. The adequacy of the community gain fund has been raised by observers who state that the amount has devalued. The relevant conditions governing the amount of the fund and the administration of the fund by the Community Liaison Committee relate to the original permission for the WtE facility. The amount payable is related to the tonnage of waste intake. In the circumstances I do not recommend any change in this respect. My recommendation below refers has taken into account the conditions of the parent permission. This would ensure that the increased intake would be reflected in the community gain fund.

7.7.2. Regarding the request for an oral hearing which was made by a majority of the observers, the Board decided based on my recommendation that there was no requirement for an oral hearing in this case.

7.7.3. I consider that a ten-year permission is acceptable having regard to the nature and scale of the proposed development.

7.7.4. I note the recommendation in the report of the Chief Executive of Meath County Council which sets out detailed requirements relating to the measures to be

contained in the CEMP. I consider that the detailed agreement with the planning authority on these matters is appropriate.

7.8. Conclusion

7.8.1. I conclude that the proposed development which is strongly supported by policy provisions at national and regional levels, and which would not give rise to significant land use impacts is in accordance with the proper planning and sustainable development of the area.

8.0 Environmental Impact Assessment

8.1. Introduction

8.1.1. The application submissions include an Environmental Impact Assessment Report entitled *Site Sustainability Project – Environmental Impact Assessment Report.*

8.1.2. This section of the report comprises an assessment of the likely significant effects of the proposed development. It addresses compliance with legislation, describes and assesses the likely significant direct and indirect effects of the development against the factors set out under Article 3(1) of the EIA Directive 2014/52/EU. It considers cumulative effects and interactions and the vulnerability of the proposed development to major accidents and disasters.

8.1.3. Except where otherwise explicitly stated all of the statements below reflect my own conclusion which were reached following consideration of all documentation with particular reliance on the EIAR and all submissions.

8.2. Compliance with Legislation

8.2.1. The legislation relevant for the purpose of considering whether the information contained in the EIAR is adequate is A94 of the Planning and Development Regulations 2001, as amended, and the provisions of A5 of the EIA Directive 2014.

8.2.2. The EIAR is in three volumes. Volume 1 comprises the non-technical summary. Volume 2 is the EIAR (Main Text). Volume 3 comprises the appendices.

8.2.3. Following examination of these documents I consider that the EIAR identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following environmental 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

and equally considers the interaction between factors referred to in points (a) to (d).

8.2.4. In accordance with article 5 and Annex IV, the EIAR provides a description of the project comprising information on the site, design, size, characteristics and other relevant features. It also provides a description of the likely significant effects of the project on the environment and a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.

8.2.5. The EIAR provides a description of the evidence used to identify and assess the significant effects on the environment and the guidance which has been taken into account in its preparation. The EIAR provides an adequate description of baseline information used to identify and assess the significant effects on the environment. I consider that the documents presented are suitable and that the submitted detail of information in relation to the nature of the proposed works and the manner in which the development will be constructed and operated provides a good basis for understanding and for assessment of likely significant impacts. Any difficulties which were encountered in compiling the required information are identified.

8.2.6. I note that an observer states that the environmental impact procedures have been undermined including by reason that the documentation presented is insufficiently detailed and fails to assess relevant issues with respect to the principal of the development and energy efficiency. The observer's submission however primarily references the non-technical summary and appears to have relied significantly on that document and does not provide any detailed examples to support the alleged deficiencies.

8.2.7. Regarding the adequacy of the EIAR I consider that it is based on high-quality data and relies on and uses recognised guidance and assessment methodologies. I am satisfied that the EIAR has been prepared by competent experts (Appendix 1.2/Vol.3/EIAR). I consider that the EIAR complies with legislative requirements and is sufficiently comprehensive and is up to date.

8.2.8. My assessment below is based on the information provided by the applicant, including the EIAR and the submissions made in the course of the application. The response to the requested further information has also been considered. The Board's consultants have reported on the specific matter of risk of major accidents and disasters and the full report is attached to this report as Appendix 1.

8.2.9. I am satisfied that the information provided in the EIAR is adequate for the purposes of the Environmental Impact Assessment to be undertaken.

8.3. **Alternatives**

8.3.1. There is a requirement under the 2014 EIA Directive that an EIAR include a description of alternatives studied by the developer and an indication of the main reasons for the selected option must be given. In the submitted EIAR alternatives are addressed in Chapter 3. A do-nothing scenario is provided in each of the chapters which describe relevant environmental impacts and likely significant effects.

8.3.2. With respect to the selection of the site observers state that the extent to which the existing facility is well located and designed to align with current and future thrust of energy policy has not been assessed adequately including with reference to the source of waste and options for use of excess energy. I note the applicant's submissions relating to the nature of the proposed development, the planning history, the existing waste management processes and the availability of excess electricity and economic considerations. I have addressed these matters earlier under the planning assessment.

8.3.3. An overview of the site selection criteria considered in the EIAR is in section 3.3.4 which addresses the environmental rationale, technical criteria and infrastructure and economic criteria. I would have regard to the existing licensed facility, the capacity at the site including the existing workforce and established regulatory processes. In addition, the applicant references the fact that an extension of activities at the site provides an economy of scale that cannot be replicated at an alternative site, which

appears to me to be reasonable. I have addressed matters related to the nature and sourcing of waste and to the options for use of excess electricity under the planning assessment. I accept the overarching conclusion set out in the EIAR that there are no reasonable alternatives to the existent Carranstown site.

8.3.4. An observer states that costs should not be an obstacle to relocation of the facility and this option should be assessed. It is however a fundamental element of the national policy provisions that the waste market be economically efficient. I therefore reject the observer's suggestion. With respect to the suggestion to investigate the suitability of a district heating system in Duleek this has been addressed by the applicant who considers that it is not feasible.

8.3.5. With respect to alternative locations within the site for the three main elements namely the tank farm, the HGU and the ash storage building, as set out in chapter 3 these were subject to an assessment of available locations within the site taking into account likely potential environmental effects. I consider that this matter has been adequately considered in the EIAR.

8.3.6. With respect to alternative processes these are described in section 3.4 of the EIAR. It stated in the EIAR that the use of existing processes is the optimum method to efficiently treat up to 25,000 tonnes of hazardous waste annually and that there is no reasonable alternative for hazardous waste treatment in this context. An observer states that the applicant previously described the facility as being unsuitable for hazardous wastes and states that this matter was raised in a previous case but was ignored. I have reviewed the previous Inspector's report and note that the types of waste including hazardous wastes to be accepted were outlined. The Board accepted the suitability of the facility for that purpose and the EPA licensing facilitates and regulates hazardous waste treatment. I consider that the principle of treatment of hazardous wastes at this facility has been established and I accept the applicant's submission that processes utilised in the treatment of hazardous and aqueous waste are deemed to be safe and efficient.

8.3.7. Regarding additional intake of 30,000 TPA pre-treatment of boiler ash and flue gas residues the only required works is the addition of two storage silos within the main process building and a small unloading area. The processes are stated to be suitable in relation to treatment of boiler ash and flue gas cleaning residues generated on

site. I consider that no substantive case has been made to undermine this statement. Regarding flue gas residues it is noted in the EIAR that there is presently no market for aggregate which could be produced and that end of waste status would also be required, which is not presently in place.

8.3.8. Regarding alternatives explored for utilisation of waste stream or the resultant waste electricity the options investigated over a period of 5 to 7 years are listed in the EIAR. With the exception of hydrogen generation, the applicant states that no options provided a viable technical or economic case for further investigation. Regarding storage of waste electricity on the site the applicant states that it cannot be released back onto the electricity grid when grid restrictions are released due to constraints in the export line.

8.3.9. A number of observers have raised the issues relating to the use of steam in a district heating system for example and on this basis consider that the intensification of use of this site is inappropriate. Allied with this observers have made comments opposing the generation of hydrogen on the basis of inefficiency and policy. The applicant acknowledges the environmental advantages and energy efficiency associated with direct use of steam instead of its conversion into electricity. All parties would agree that there is not enough local heat demand for a district heating system. Nevertheless, I do not agree with the observers that this fact undermines any case for an intensification of use of this site. I submit that there is likely to remain a demand for electricity from this facility for the foreseeable future and I am also of the opinion that the use of excess electricity for hydrogen production is appropriate, feasible and in line with policy provisions.

8.3.10. As a follow up to the above conclusion I note that the applicant references the method of hydrogen production and acknowledges that the energy efficiency associated with an alkaline electrolysis unit is lower than storage solutions which are described. Nevertheless, there is a strong case for this clean non-carbon-based fuel in the context of climate change. Alkaline electrolysis is 60% efficient at converting the electricity input into a hydrogen fuel and is technically possible and feasible. I accept the applicant's submission that the selected process is reasonable and that the matter of alternatives has been sufficiently considered.

8.3.11. Regarding an alternative to bottom ash storage for off-site treatment the applicant states that the only alternative that could be considered is full treatment to recover remaining residual metals and produce an aggregate material. I accept the applicant submission that this would not be a reasonable alternative for the 40,000 tpa bottom ash produced in view of the space requirements and scale of investment. It appears to me to be reasonable that this activity take place at facility already established.

8.3.12. Regarding alternative designs consideration was given in the EIAR particularly two the aqueous waste storage tanks in terms of the type and size of tanks. These alternatives are stated to be in accordance with applicable BAT guidelines. The decision to use tall and thin tanks, which increased potential for visual impact was related to the desirability of fabrication on site and space requirements.

8.3.13. In terms of the principal of development of additional hazardous waste treatment at the site, it is clear that the state will continue to rely on export of aqueous waste and hazardous ash to mainland Europe. I also consider that the applicant has made a reasonable case relating to the development of the HGU to avoid energy loss. In the absence of the bottom ash storage building the applicant states that the option to export bottom ash for recovery may not be economical or possible due to reliance on third parties for storage of 3,000 tons in advance of an export shipment. I agree that the development of the ash storage building provides a safeguard in this respect.

8.3.14. To conclude, I consider that the EIAR provides a comprehensive account of the alternatives which were considered. I am of the opinion that the information provided not only complies with the legislative requirements but also supports some of the conclusions drawn earlier in the planning assessment section.

8.4. **Public participation.**

8.4.1. I have summarised earlier the observations received in response to this application. The submissions of observers and the HSE raise issues relating to the nature and extent of public participation, which I address below. There have also been a number of requests for an oral hearing.

8.4.2. Having regard to its status as a prescribed body I consider that the contribution of HSE on this topic constitutes a key issue requiring a response. The submission point is essentially that a public consultation process could not be located, and that meaningful public consultation is recommended. The legal requirements arising

relate to the publication of notices and other matters including the presentation of the EIAR on the portal and the availability of documentation. I am satisfied that all of these requirements have been undertaken.

8.4.3. As set out in the EIAR the applicant's approach to public consultation extended beyond the minimum legal requirements. There was targeted consultation prior to the making of the application involving various consultations with the Indaver Community Liaison Committee as well as prescribed bodies and other interested parties such as Irish Cement and Gas Networks Ireland.

8.4.4. On the broader issue I note that on foot of the pre-application process the application was referred to various prescribed bodies for the purposes of eliciting specialist knowledge. The contribution of Meath County Council presented includes the specific contributions of the elected members as well as presenting the Chief Executive's Report and the individual officers' technical assessments. I note the further information from the applicant which responds to the observers comments. In the preparation of my report I have had regard to the relevant submissions relating to the views expressed on the proposed development. I am satisfied that a wide range of inputs have been received.

8.4.5. It is indicated in the EIAR that engagement with the local community will continue including in the form of communications described in the Communications Strategy (Appendix 5.1/EIAR). This will be particularly relevant to address any issues which arise during construction and to give prior notice of events which are more likely to impact local residents and road users. Allied to this is the proposal for a monitoring schedule which will be prepared by the Site Environmental Manager who will be responsible for initiating and reporting on any corrective action required.

8.4.6. In the circumstance of the proposed development involving a modification to an existing licenced facility and the nature of the proposed amendments as well as the legislative requirements relating to consultation, all of which have been met, I do not consider that there is major substance to the comments of HSE.

8.5. Environmental Impact Assessment Overview

8.5.1. The issues arising can be addressed under the following headings:

Population and Human Health

Biodiversity

Land, Soils, Geology and Hydrogeology

Hydrology

Air & Climate

Noise and Vibration

Archaeology, Architectural and Cultural Heritage

Landscape and Visual

Material Assets

Major Accidents and Disasters

Interactions, Transboundary and overall cumulative effects.

8.5.2. In considering the assessment below the Board should have regard to previous sections of this report.

8.6. Population and Human Health

8.6.1. In consideration of population and human health under the EIA section below I present an overview of the existing environment, the impacts arising and relevant mitigation. Population and human health are assessed in chapter 6 of the EIAR. The assessment relies on information presented in other chapters in relation to potential effects on population and human health arising from traffic, visual effects, natural amenity, nuisance, built and natural heritage, air and noise emissions and climate change. In determining the approach to and scope of the assessment of health impacts regard has been had to relevant guidance including Environmental Protection Agency, European Commission, World Health Organisation and Institute of Environmental Management and Assessment publications. The assessment of health protection is based on a health based standard approach. The adopted standards for air emissions and noise and vibration are set out in section 6.2.4.

Existing Environment

8.6.2. The information presented in the EIAR is that the population in the Duleek electoral division has increased faster than the county and national population increases. The age profile in the electoral division is young relative to county and state levels. The

principal potential receptors in the environs of the facility are residential homes and industrial premises including Irish Cement Platin. There are nine dwellinghouses within 200 m of the site boundary and four primary schools within 2.5km. Presently the existing facility employs 60 persons at the plant. Duleek is a secondary tourist attraction under the development plan and contains high quality built heritage and historic buildings and Duleek Heritage Trail.

Potential Impacts

8.6.3. Observations submitted include some comments which I consider may be described as a principled opposition to the existing waste to energy facility and its extension including the broad references to adverse health effects and impacts on agricultural activity including milk production. The cumulative impacts combined with the nearby platin facility is a further relevant theme in the observations which is relevant to the area of potential health effects, as is the specific reference to incidents at the existing facility and to black and other emissions from the stack.

8.6.4. For the purposes of identifying potential significant effects on human health a literature review was performed and is presented in section 6.5. This addresses a number of reviews undertaken over the last few decades and summarises the provisions of the Waste Incineration Directives, now superseded by the Industrial Emissions (IE) Directive. The basis of the air emission limits specified is to prevent, or limit as far as is practicable, negative effects on the environment and the resulting risks to human health. I consider that the literature review presented is balanced. It acknowledges areas where studies showed links between adverse health effects and incinerators, mainly attributed to the nature of those facilities. In support of its case that well-run and regulated modern facilities are not associated with adverse health effects information is presented from Public Health England in 2015, a UK Small Area Health Statistics Unit Study from 2018 and WHO.

8.6.5. The likely significant effects on population in the construction phase are set out in section 6.6.2 and include additional employment opportunities with up to 120 construction workers on site at peak, secondary economic benefits, potential indirect effects associated with disruption to residents and road users and potential indirect effects from air quality due to localised dust and noise from construction activities. It is considered that local residents are unlikely to be significantly disrupted due to

traffic subject to the implementation of a robust Construction Traffic Management plan.

8.6.6. As described in section 6.6.2.2, construction noise and dust are considered to be the greatest potential effects on human health. Dust minimisation measures to be implemented as described in chapter 8 will ensure effects on air quality will not be significant and will be short-term in duration. Similarly, as described in the relevant chapter the residual effect of noise will be intermittent and temporary and the effects on air quality will not be significant in terms of human health subject to the mitigation measures in chapters 8 and 10. Annoyance from the temporary effects of the construction phase will be very limited and is not in itself a health effect.

8.6.7. In the operational phase the proposed development is stated to have no direct or indirect significant negative effects. Positive effects on the wider economic environment in the locality and nationally will benefit the population. In the operational phase the potential for impacts on human health mainly relates to potential air and noise emissions. The facility will comply with the licensed emission limit values and maximum flue gas flow rate and therefore the increased annual tonnage of waste of up to 15,000 tonnes of additional hazardous waste will not have a significant impact on air quality. The facility will continue to be in compliance with licence requirements. No significant negative effects are predicted on water quality as a result of stormwater, wastewater or fire water management and therefore no adverse effects on human health from water contamination is predicted.

Cumulative impacts

8.6.8. Cumulative effects related to other projects are considered in section 6.7. The identified projects are the planned cement silo and alternative fuels at Irish cement, the 110 kV transmission substations and a solar farm. I have reviewed the planning history and conclude that these are the main projects of relevance for the purposes of cumulative effects. Having regard to the scale and location of the planned developments and the nature of potential effects the submission in the EIAR is that the potential for significant cumulative direct or indirect effects can be excluded. I accept the assessment presented in the EIAR in relation to these projects and the reasons set out by the applicant as the basis for concluding that no significant direct

or indirect cumulative effects on population or human health are predicted during the construction or operation phases.

Mitigation

8.6.9. The EIAR sets out the construction phase mitigation measures relating to the environmental factors (traffic and transportation, air quality and noise and vibration) which might give rise to population and human health effects. The operational phase mitigation measures relating to environmental factors which might give rise to population and human health effects are set out in the relevant chapters relating to traffic and transportation, noise and vibration and major accidents and disasters. I agree with the applicant's conclusion that no further mitigation measures are warranted with respect to population and human health.

Residual Impacts

8.6.10. In the construction phase there will be short-term effects on population and human health from increased dust, noise and traffic. In the operation phase the potential for effects would mainly relate to possible noise and air emissions. The relevant standards for air pollution, noise and vibration which will be adhered to have been set taking into account the possible effects on human health. Subject to mitigation as described in the relevant chapters dealing with these environmental factors, I consider that there is no likelihood that the standards will be exceeded. As such it may be concluded there would be no significant residual effects on population and human health.

Transboundary Effects

8.6.11. There is no likelihood of transboundary effects on population and human health.

Conclusion

8.6.12. I have taken into account the contents of the EIAR and the submissions on file and on that basis, I am satisfied that potential effects on population and human health would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.6.13. I conclude that following mitigation there would be no significant direct, indirect, cumulative or transboundary effects on population and human health.

8.7. Biodiversity

8.7.1. In assessing the topic of biodiversity , which is reported in chapter 11 of the EIAR the information relied upon included surveys of the site carried out in September 2019 and April 2020. Separately I note the submission of an NIS and the Appropriate Assessment section of this report.

Existing Environment

8.7.2. The habitats on site include some immature woodland and recolonising bare ground are of low ecological value at a local level and no rare plant or mammal species were recorded during site surveys. The site drainage system includes an attenuation pond, which will not be affected by the proposed development which contains a population of smooth newt. As shown on figure 11.5 the site drainage system discharges to a seasonal drain and then to Cruicerath stream and onto the River Nanny. Nationally protected habitats in the area include Laytown Dunes / Nanny Estuary pNHA, which is an Important Bird Area. No high-impact invasive species were identified during site surveys.

8.7.3. Six bat boxes were installed at the site and surveys conducted in 2008 and surveys in 2012 and 2015 indicated low usage in four boxes, the proposed development areas deemed to be of low to negligible value for bats. The Cruicerath stream does not support fish and would therefore be of negligible value for otter. Otter may occasionally forage for Common Frog or Smooth Newt in pond habitat on site. The site is home to a stable population of Irish hares.

8.7.4. The majority of birds using the proposed works area are common in the area and overall, the site is of local value for terrestrial bird species.

8.7.5. Regarding species of note which may be present Kingfisher and Grey Wagtail, could potentially use the attenuation pond and Herring Gull. No wading birds were recorded on or near the site and there is no suitable habitat within the site. There is a rookery in ash trees along the R152 close to the site entrance and other breeding birds were recorded in hedgerow habitat outside the site boundary.

Potential Impacts

8.7.6. The extension of screening berms along the southern boundary of the site will impact on a small portion of immature woodland and broadleaf woodland growing on the

existing berm. Some lower value habitat types such as ornamental shrub and recolonising bare ground within the site will also be impacted. Indirect effects due to dust would not be significant having regard to mitigation measures and the low value of the habitats. It can be concluded that there would be no significant direct or indirect impacts on habitats terrestrial including from spread of invasive species.

8.7.7. There is potential for impacts on water quality and aquatic ecology from suspended solids or inadvertent spillages during construction. The risk is low as ditches within and adjacent the site are often dry. Furthermore, the Cruicerath Stream, which is also seasonal is 130 m from the site boundary. The risks in the local water quality and downstream receptors during operation is deemed to be imperceptible as the existing surface water system, which is currently functioning effectively and preventing significant water quality impacts, has the capacity to deal with any surface water from the expanded operation.

8.7.8. As the air quality modelling indicates that the facility will continue to be in compliance with its licence requirements and no significant impacts to ambient air quality are predicted, the effect on fauna will be imperceptible.

8.7.9. Habitats which will be directly affected may form part of territories of various mammals including Irish Hare resulting in a slight, short-term impact on mammal populations. No potential bat roosting sites are within the works area and the native hedgerow along external boundaries is to be retained and no significant changes in lighting levels proposed and the overall impact on feeding habitat for bats is not significant. Mammals present would be expected to be habituated to ongoing disturbance within the facility. The impact on otter, if they utilise the site, would be not significant and in the long term would be imperceptible.

8.7.10. There will be some loss of seminatural habitats used by a range of common bird species. During construction there will be increased noise and disturbance which will impact terrestrial birds, which is considered to be a short-term not significant impact. The use of the pond as a feeding habitat for Kingfisher is deemed to be improbable and the pond is outside the works area.

8.7.11. If wading birds were to use agricultural lands in the vicinity of the proposed development site these birds would be already habituated to noise and disturbance

from the existing facilities and should continue to use these fields during and after construction.

Mitigation

8.7.12. A range of mitigation measures is proposed to ensure protection of habitats during construction including fencing off and earmarking habitats, providing for natural regeneration where habitats are damaged or disturbed, protection of tree root systems and replanting of disturbed wood lands.

8.7.13. Water quality and surface water management measures involve mitigation and monitoring to minimise effects on aquatic habitats. The requirement relating to surface water discharge which will continue to be monitored is that it not change from the current situation. A CEMP including emergency response procedures will be maintained and the document is provided in appendix 5.1. An incident response plan is included as part of the CEMP. Provisions relating to the prevention of spread of non-native invasive species as recommended by the Heritage Officer of Meath County Council can be addressed by condition.

8.7.14. The project design incorporates detailed controls to deal with sanitary services, prevention of accidents and spillages, unloading of aqueous liquid wastes and management of fire water and transport of bottom ash and flue gas residues.

8.7.15. Measures to ensure noise and vibration effects are mitigated will be undertaken. Adherence to legal requirements relating to removal of vegetation in the breeding season will be undertaken. I recommend that this be reinforced by condition having regard to the recommendation of the Heritage Officer of Meath County Council.

Cumulative impacts

As reported earlier I agree with the applicant's assessment of cumulative effects in terms of the list of projects identified. In the event of concurrent construction of any of the significant permitted developments potential cumulative effects will not be significant given the distances involved and the absence of significant emissions to air or water.

Residual Impacts

The residual effects are as set out in table 11.12. No adverse effect on designated sites or their conservation objectives will occur and effects on habitats will be on

those that are primarily of low value. The residual effects predicted include indirect impacts on water quality and aquatic ecology which will be localised, short-term and not significant during construction and imperceptible in the long term. Such effects could impact otter, Kingfisher, other birds and mammals in the unlikely event that they would be present during construction in particular.

Transboundary

8.7.16. There is no likelihood of any significant transboundary effects on biodiversity.

Conclusion

8.7.17. I have taken into account the contents of the EIAR and the submissions on file, particularly the submission of NPWS and I am satisfied that potential effects on biodiversity would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.7.18. I am satisfied that the proposed development would not have any significant direct, indirect, cumulative or transboundary effects on biodiversity.

8.8. Land, Soils, Geology and Hydrogeology

8.8.1. These environmental topics are addressed in Chapter 14 of the EIAR. In accordance with IGI guidance a Conceptual Site Model has been prepared as the basis for assessment of likely significant effects (Section 14.3.4/Vol.1/EIAR and Figures 14.8 and 14.9 Appendix 15/Vol.2/EIAR). The baseline environment was assessed with site-specific investigations including boreholes and geophysical investigation and a review of previous studies and data including information from nearby Platin.

Existing Environment

8.8.2. The site overlies boulder clay where there is potential for sand/gravel lenses. This overburden overlays are limestone bedrock and depth to bedrock across the site varies from 10 m to 15 m bgl. Water levels are over 30 m bgl and groundwater flow direction is to the north-west towards Platin. The site is characterised as a man-made dynamic hydrogeological environment with nearby quarrying activities below the water table. Features of geological and hydrogeological importance are the bedrock (due to aggregate potential) and the aquifer (regionally important with multiple well fields including Kiltrough water supply). The groundwater source

protection zone for Kiltrough PWS does not overlap with the PDS. There are two production wells within the site with a sustainable yield of 600m3/day and current abstraction of 216m3/day. The site overlies Bettystown groundwater body the status of which under the Water Framework Directive is poor due to over abstraction - abstraction from Platin quarry on average is stated to be 17,500m3/day. Groundwater quality results from three on-site monitoring boreholes show total coliforms and faecal coliforms present in the majority of samples.

8.8.3. No sites of geological interest or karst features are relevant. There are no groundwater dependent habitats or other ecological areas with direct pathways to the PDS. There is no evidence of soil contamination within the PDS.

Potential Impacts

8.8.4. The proposed development will involve works which are relevant to land and soil including topsoil stripping, regrading and placing of fill and construction of earth retaining berms and the creation of additional hard surface.

8.8.5. The potential significant impacts on soils, geology and hydrogeology in the construction phase relate to potential minor local permanent change to aquifer vulnerability and potential localised contamination of groundwater in the event of accidental spillages and leaks. The base of excavation would be up to 2m bgl and excavation of bedrock or dewatering is anticipated.

8.8.6. The potential impacts on soils, geology and hydrogeology in the operational phase are stated to be unchanged from the existing situation and comprise a risk of accidental spillage of potentially polluting substances. Aqueous wastes unloading areas and the tank farm will be within concrete containment bunds. Other new paved areas to be developed will have a contained drainage system and surface drainage will be released when there is confirmation that there is no contamination. The water demand for operation of the HGU will be approximately 25% of the existing abstraction from the PDS and is negligible in comparison with the abstractions in the region. HSE has raised issues relating to the operation of wastewater treatment facilities, which I have considered under the planning assessment section above and concluded that matters can be addressed by condition.

Mitigation

8.8.7. The relevant construction phase mitigation measures include regulatory compliance with the requirements of statutory bodies and completion of the construction in accordance with the CEMP. A contingency plan for pollution emergencies will be developed. Implementation of the CEMP will be monitored.

8.8.8. Mitigation measures relating to excavation works, stormwater and foul water management, materials storage, site hygiene, waste management and monitoring are described in summary in section 14.7.1 (Vol. 1/EIAR) I would describe these as standard measures. I note the use of geotextile lining in soak pits and the monitoring measures which include monitoring of weather forecasts to inform programming of earthworks and stockpiling. I have referred earlier to the temporary arrangements for foul effluent. There is stated to be no likelihood of encountering contaminated lands.

8.8.9. In the operation phase the continued monitoring of groundwater quality as part of the EPA licence is proposed.

Cumulative

8.8.10. I have reviewed the permitted projects in the vicinity in terms of the potential for cumulative effects on land, soils, geology and hydrogeology.

8.8.11. There is no significant cumulative loss of overburden having regard to the location of the development within the PDS, which has already been developed as an industrial facility.

8.8.12. Subject to my recommendation relating to the detail of the proposed wastewater treatment system, I consider that the impact on the bedrock aquifer in combination with existing and planned development is not significant.

8.8.13. No significant cumulative effect on groundwater abstraction is anticipated as the additional abstraction associated with the HGU is very small.

Transboundary Effects

8.8.14. No transboundary effects are predicted.

Residual Impacts

8.8.15. Subject to the implementation of the mitigation measures I consider that there will be no significant residual effects on land, soils, geology and hydrogeology.

Conclusion

8.8.16. I have taken into account the contents of the EIAR and the submissions on file and on that basis I am satisfied that potential effects on land, soils, geology and hydrogeology would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.8.17. I am satisfied that the proposed development would not have any unacceptable direct, indirect, cumulative or transboundary effects on land, soils, geology and hydrogeology.

8.9. Hydrology

8.9.1. This topic concerns the potential effects on water quality, drainage and flooding. The topic is addressed in Chapter 15 of the EIAR. The information relied upon included a range of listed site investigations and previous studies and the Flood Risk Assessment report (Appendix 15.1/Vol.3/EIAR). I have separately addressed under the Planning Assessment section of this report matters relating to groundwater impacts and flood risk.

Existing Environment

8.9.2. The site falls within the Nanny-Devlin catchment and the Nanny is 2km south of the site. The Cruicerath Stream flows approximately 200 m to the west of the site and the Platin Stream approximately 500 m to the east. The river water quality status for the nanny is poor to moderate and the water body is 'At Risk' of not achieving good status. The key elements of the on-site surface water drainage collection include an attenuation pond of volume 2,887m^3, which is significantly in excess of the volume required to serve the existing development for a 1 in 100-year storm event. The site discharges to this feature following collection and monitoring. The monitored outfall point from the pond is to an external drainage ditch and onto the Cruicerath Stream. If water quality does not meet required standards at the monitoring points it is not passed onwards.

8.9.3. The surface water monitoring is under the EPA licence and the stormwater system is stated to be fully in compliance with the licence requirements. No observer has made any comments to the contrary.

8.9.4. The Flood Risk Assessment indicates that the risk of flooding at the site is minimal or non-existent.

Potential Impacts

8.9.5. The potential for adverse water quality effects arises from spillages of substances utilised as part of the construction and from excessive siltation entering the watercourse. The construction phase includes elements which could temporarily alter the water quality.

8.9.6. As set out in the Planning Assessment above I agree with the applicant's conclusion that the proposed development will not increase flood risk during operation. In the operation phase there would be increased hardstanding areas and new drainage infrastructure in the form of an attenuation tank under a concrete slab area will be required to deal with a particular site constraint regarding levels.

8.9.7. HSE has raised issues relating to the duration of storage of water in the new attenuation tank on the disposal route and also to the frequency of diversions of stormwater in the existing system. Regarding the frequency of diversions of stormwater in the existing system, I note that this is subject of the IE licence and do not consider that this detail of information is necessary for this planning application. The applicant has clarified that the tank drainage will be pumped to the existing attenuation pond which has sufficient capacity. I consider that this clarifies the matter raised.

8.9.8. The Environment Section of Meath County Council has raised more extensive matters relating to the surface water calculations for the site drainage system. I recommend the attachment of the Board's standard condition in this respect which would allow for any required upsizing to be provided if necessary.

8.9.9. The design of the proposed development includes provision to retain fire water, if required, within the bunker, within the fire water retention tank or within the tank farm prior to removal of site or treatment in the furnace. Based on the assessment, it may be concluded that there are no potential hydrological impacts associated with fire water. However, I note the recommendation to review this matter, which I consider is reasonable and which can be subject of agreement with the planning authority.

Mitigation

8.9.10. Mitigation measures presented in the EIAR address the potential construction phase surface water quality effects. The primary construction phase surface water management measure will be to facilitate infiltration to ground by way of silt traps and managed soak ways. Separate measures are proposed for areas where fuel may be stored including paving and bunding. I consider that the proposed measures are sufficiently described including in section 5.6.3 of chapter 5 and in the context of the soils and geology. I consider that the proposals are adequate. Further measures are proposed when working adjacent to or in the vicinity of ditches or streams. Surface water run-off from the construction works area, where permitted, will be monitored as described.

8.9.11. The primary plans relevant all aspects of construction include the CEMP, which is a live document, and which incorporates an Incident Response Plan. These provide for preventative and corrective measures and are aided by a monitoring schedule.

8.9.12. I am satisfied that the mitigation measures set out are appropriate and sufficient to address the potential impacts identified.

8.9.13. Relating to the operational phase the applicant's proposal is to rely on the existing water monitoring. The applicant also notes that under the IE licence surface water monitoring which is carried out will continue. I accept the applicant's conclusion that no additional mitigation measures are required for the operational phase.

Cumulative

8.9.14. The construction of the proposed development could give rise to cumulative effects with nearby developments and the planned and permitted developments in the vicinity of the facility are described. I accept the nature of the assessment undertaken the general trust of which includes that the nearby developments have all been assessed as resulting in significant or imperceptible hydrological effects in the construction and operation phases and for this reason there would be no cumulative impact. I am satisfied that there would be no likely significant cumulative hydrological effects even in the event of a temporal overlap in construction. I am also satisfied that there is no potential for significant cumulative hydrological effects including related to flood risk in the operation phase.

8.9.15. No significant cumulative effects on water and hydrology are envisaged in the construction, operation or decommissioning phases.

Transboundary Effects

8.9.16. No transboundary effects are relevant to surface water.

Residual Impacts

8.9.17. No significant residual effects on water and hydrology are envisaged in the construction, operation or decommissioning phases.

Conclusion

8.9.18. I have taken into account the contents of the EIAR and the submissions on file and on that basis, I am satisfied that potential effects on hydrology would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.9.19. I am satisfied that the proposed development would not have any unacceptable direct, indirect, cumulative or transboundary effects on population or hydrology.

8.10. Air and Climate

8.10.1. The environmental topic of air is addressed in Chapter 8 and climate is in chapter 9 of the EIAR. I consider that the assessment utilises recognised methodology and assesses the effects relative to standard air quality criteria and that the relevant climate issues are suitably addressed.

Existing Environment

8.10.2. Local air quality is assessed based on the location of the site in Zone D noting that it is directly on the boundary of Zone C, which has been factored into the assessment. The baseline air quality has been assessed as reported in section 8.3.2 following a review of EPA data and baseline monitoring survey information. Monitoring surveys have found that levels of all pollutants, NO2, SO2, PM 10, PM 2.5, HCl, HF, PCDD/PCDFs, PAHs, Hg, Cd, Tl and heavy metals were well below the relevant limits for the protection of human health. It is noted in addition that the continuous, quarterly or biannual monitoring under the licence requirements for the facility ensures that pollutant concentrations remain in compliance with the limits and do not add significantly to concentrations in the ambient environment.

8.10.3. Regarding climate the current predictions are that Ireland will exceed its greenhouse gas emissions reduction targets for certain sectors including electricity. At the site

level the calculation of the net contribution to greenhouse gas emissions of the proposed development has been calculated and compared against 2020 targets. The existing facility recovers thermal energy which is converted into electrical output and is available to the National Grid. From time to time (and increasingly) there is no market for this electricity and the intention is to utilise spare electricity for the purposes of generating hydrogen. The assessment undertaken takes into account that the electricity generated at the facility would be likely to displace alternative generation based on gas.

Potential Impacts

8.10.4. The EIAR reports potential air quality impacts related to construction dust emissions, construction and operational phase traffic emissions and the increase in the amount of hazardous waste accepted from a maximum permitted 10,000 TPA to a maximum of 25,000 TPA. The proposed development does not require any significant changes to the processes at the facility or any changes to the licensed parameters. The submission of the EPA notes the review of the licence may be needed. The applicant submission is that the facility will continue to operate within its licence requirements.

8.10.5. Construction phase dust emissions may give rise to potential nuisance dust. There are a small number of sensitive receptors within 50 m of the site boundary where the majority of dust deposition would occur. The change in traffic levels is not of significant magnitude to require an air quality assessment under the screening criteria which are described in section 8.2.3.2. Traffic-related air quality impacts during construction would be short-term and imperceptible.

8.10.6. Operational phase air emissions from the facility are addressed in section 8.5.3. The majority of the additional waste intake will be aqueous wastes. The treatment of these wastes is and will continue to be regulated by licensed emission limit values and maximum flue gas flow rate and there will not be a significant impact to the ambient air quality according to the applicant. To support this statement the applicant refers to the detailed modelling undertaken as part of the original application for the facility and it's revision to incorporate the proposed development. I consider that the applicant has demonstrated the suitability of the selected model and note the incorporation of measures to address building downwash (Appendix 8.1/Vol.3/EIAR). As summarised in table 8.6 for each of the relevant compounds the predicted

environmental concentration at ground level relevant to the proposed development would give rise to very low variations when considered as a percentage of the ambient limit and as compared with the original 2009 modelling undertaken.

8.10.7. The potential climate impacts of the proposed development relate to traffic emissions, the increase in amount of waste and the development of the hydrogen generation unit.

8.10.8. The potential construction phase vehicles and generators may give rise to CO_2 and NO_2 emissions which are unlikely to be a significant source of pollutants and based on IAQM guidance do not require a detailed assessment and would not be significant in the context of the national greenhouse gas emissions. The increased road traffic in the operational period is not of sufficient magnitude to warrant a detailed assessment as per DMRB screening criteria and are long-term, negative and imperceptible. I accept these conclusions. I note in addition the avoidance of emissions due to the reduction in export of hazardous waste.

8.10.9. The operational phase greenhouse gas emissions related to incineration activities would be the dominant source of CO_2 and NO_2 emissions. There is potential for the emissions to increase with the increased tonnage of hazardous waste accepted at the facility but the volume flow rates and emission concentrations have been modelled to remain unchanged and to be in compliance with the licensed limits. The assessment presented in table 9.3 and table 9.4 and section 9.5.3 is that the increase in annual waste throughput to 250,000 TPA will result in an increase of 0.03% of Ireland's 2020 greenhouse gas emissions target. The development of the HGU is assessed as offsetting an equivalent amount of 0.003% of the national 2020 target.

8.10.10. The generation of hydrogen will aid in the goal of decarbonisation of the transport sector (or possibly the heating sector). Curtailment at the existing facility in 2021 was 1157 hours and has steadily increased from 91 hours in 2013.

Mitigation

8.10.11. Dust deposition measures will be undertaken throughout the development and are presented in the EIAR and CEMP (Appendix 5.1/V2). The measures presented in the CEMP include standard best practice to minimise the generation of dust and suppress and control dust.

8.10.12. There are no significant air or climate impacts and hence no requirement for mitigation.

Cumulative

8.10.13. The construction of the proposed development could give rise to cumulative effects on air quality and climate with nearby developments and the planned and permitted developments in the vicinity of the facility are described in section 8.7 (air) and 9.7 (climate). I accept the nature of the assessment undertaken the general trust of which includes that the nearby developments have all been assessed as resulting in insignificant or imperceptible air quality and climate effects in the operation and for this reason there would be no cumulative impact. I am satisfied that there would be no likely significant cumulative construction stage dust emissions even in the event of a temporal overlap in construction.

Residual Impacts

8.10.14. There will be no adverse residual effects related to elevated air emissions during construction or operation. There would be no breaches of the air quality standards. The impact of the proposed development on air quality is assessed in the EIAR as imperceptible. I agree with this conclusion, which I consider is supported by suitable assessment based on accepted methodologies and utilising high-quality baseline information.

8.10.15. The development will result in a permanent but not significant adverse impact on climate as a result of the additional contribution of the facility to the national emission of greenhouse gases. There are positive but not significant residual impacts related to the avoidance of generation of transport emissions in the export of hazardous waste and by the utilisation of electricity to produce hydrogen. The proposed HGU however is relatively innovative at this time and would serve as a model for the transition to a low carbon economy and is significant in this respect.

Transboundary Effects

8.10.16. No significant adverse air or quality transboundary effects are predicted.

Conclusion

8.10.17. I have taken into account the contents of the EIAR and the submissions on file and on that basis I am satisfied that potential effects on air quality and climate would

be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.10.18. I am satisfied that the proposed development would not have any unacceptable direct, indirect, cumulative or transboundary effects on air quality and climate.

8.10.19. I conclude that following mitigation the significant effects on Air and Climate are as described below.

Significant construction phase impacts which can be mitigated by measures to minimise air emissions as set out in the EIAR and subject to implementation of a Construction Environmental Management Plan.

Positive impacts on climate from the use of electricity generated on site for the production of hydrogen, which will assist in the transition to a low carbon circular economy.

8.11. Noise and vibration

8.11.1. The assessment of noise and vibration follows the requirements of the EPA Draft EIA Guidance and references other approved guidance for the purposes of quantifying of impacts and consideration of the construction phase (BS 5228-1, IEMA, TII and DMRB). The assessment follows a review of noise monitoring data from annual noise monitoring surveys. Additional monitoring at the closest noise sensitive locations was undertaken.

Existing Environment

8.11.2. Operations are largely contained within the existing WtE building and the noise contribution from the existing site is described as relatively low. There are nine residential locations within 200 m of the PDS and one of these is 20 m to the south-east of the site boundary.

8.11.3. The existing facility operates on a 24/7 basis with site traffic restricted to daytime hours. Under the IE licence the noise emission limits for the daytime period is 55dBLaeq (30 minutes) and 50 and 45 dBLaeq (30 minutes) for evening and night.

8.11.4. The annual noise monitoring results for 2019 presented in table 10.3 (Vol 2/EIAR) indicate exceedances of the specified limits at noise receptors to the south and east (close to the R152) but not at the monitoring point adjacent the existing site attenuation pond. The latter location is stated to be influenced by the plant activities and the other three are heavily influenced by road traffic related noise. As reported in section 10.3.3 the LA90 parameter for night-time is considered to reflect more accurately the specific noise contribution from the facility. On that basis the applicant's position as represented in chapter 15 is that use of the LA90 parameter representing the steady background noise levels confirms that the facilities operate within its licence limits for all survey locations. The applicant acknowledges that activities from the existing facility are audible at low level during quieter night-time and evening periods during lulls in road traffic particularly.

8.11.5. The licence does not specify operational vibration limits.

Potential Impacts

8.11.6. The highest potential noise and vibration impacts are associated with site clearance, demolition, excavation and construction works, which have the potential to generate high levels of noise at the nearest sensitive receptors. Construction traffic to and from the site is also identified. Vibration impacts will be limited to ground excavation and building foundation works.

8.11.7. The assessment of construction noise as presented in section 10.5.5 (Vol 2/EIAR) is based on an estimated schedule of 16 months (phase 1) and 12 months (phase 2). Utilising the methodology set out in BS 5228 – 1 typical noise levels for construction related to the proposed development and the impact on the nearest noise sensitive locations are described. There is potential for significant construction phase noise which has been modelled for the worst-case scenario for the main construction activities and taking into account attenuation and reflection effects and the periods of operation of the plant. The nearest noise sensitive locations include houses as close as 30 m from the works, which will be affected by noise associated with berm reshaping. The modelling undertaken which assumes simultaneous operation of all plant is described as a highly worst-case scenario and the calculated noise levels at 200 m and 90 m are presented and are well within the construction noise limit of 70dBLAeq during daytime periods.

8.11.8. Peak construction phase traffic flows will occur in phase 1 and an additional 100 HGV movements per day as well as 86 staff vehicle movements are predicted. The modelling undertaken predicts an increase of no more than 0.3dB.

8.11.9. Operational noise sources of significance will derive from use of equipment to serve the tank farm and new buildings, vehicle movements within the site and to and from the site. The noise sources will include pumping at the tank farm, a fan at the bottom ash storage building and noise from the HGU. To assess potential operational phase noise impacts at 3D noise model of the facility was developed. The package utilised takes account of various factors which affect the propagation of sound and the nature of the modelling main sources selected as inputs are described in section 10.5.4 (Vol.2/EIAR). In terms of the operation of the facility including the new components a worst-case scenario is taken, assuming for instance continuous operation and maximum loading and unloading by HGVs.

8.11.10. The modelled results for operational phase noise from new sources are presented in table 10.14 and the combined noise levels are presented in table 10.15. All of the results are shown to be within the daytime limit values set by the existing licence based on use of the LA90 figures for the baseline information.

8.11.11. Regarding the additional traffic on the surrounding road network, its contribution to noise and vibration is assessed as being imperceptible to not significant, with resulting increases in noise levels in the order of 0.1dB.

8.11.12. Construction phase vibration will be minimal as there is a minimal level of intrusive work required. There will be some parts of the site where foundations will need to be piled. The tank farm foundations will be constructed using augured piles which generate the lowest levels of vibration and this phase will take place for approximately three weeks. Taking into account information from BS 5228 -2 it is concluded that the range of vibrations are below a level which would cause any disturbance to occupants of the nearest off-site sensitive buildings. Vibration during the construction phase is not expected to pose any difficulties in terms of building damage or human perception and any impacts would be of imperceptible significance.

8.11.13. There are no anticipated operational vibration impacts.

Mitigation

8.11.14. Best practice noise and vibration abatement measures will be undertaken to comply with the relevant recommendations of BS 5228. This commitment is made by the applicant notwithstanding that the criteria for noise and vibration during construction are likely to be met. As such, I consider it reasonable to conclude that the EIAR measures will be highly effective in preventing significant noise or vibration impacts on nearby residences and their occupants. The additional measures which are described referred to selection, use and maintenance of plant and use of attenuators and acoustic enclosures. Limiting hours of work, liaison with the public and noise monitoring are further measures. All of these are set out in the environmental management strategy which will be adopted and implemented, and which is presented in summary in the CEMP. The CEMP will be finalised by the contractor following undertaking of construction noise predictions and design of suitable noise control measures.

8.11.15. The key operational phase mitigations for noise include closure of the roller shutter doors of the ash storage building, switching off of engines and best practice measures relating to the specification of new items of plant, the siting of new plant and their operation and the use of acoustic attenuators and enclosures. Under the terms of the licence annual noise monitoring will be undertaken and results submitted to the EPA for review.

Cumulative

8.11.16. I note and accept the statement to the effect that a review of projects listed for potential cumulative impacts leads to a conclusion that none of the proposed developments are close enough or include any significant noise sources to result in cumulative noise impact. This conclusion is also valid in relation to vibration.

Transboundary Effects

8.11.17. No transboundary noise or vibration effects will result.

Residual Impacts

8.11.18. There will be temporary noise effects at residences near the PDS, which will be of short duration and which will not exceed the adopted construction noise limits which are based on relevant guidance. There will be no perceptible level of vibration at the nearest sensitive locations.

8.11.19. The operation of the development will result in a slight to moderate negative effect at the closest receptor but will remain within the EPA limits.

8.11.20. There are no residual noise or vibration effects in the operational phase.

Conclusion

8.11.21. I have taken into account the contents of the EIAR and the submissions on file and on that basis I am satisfied that potential effects on noise and vibration would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.11.22. I am satisfied that the proposed development would not have any unacceptable direct, indirect, cumulative or transboundary effects on noise and vibration.

8.11.23. I conclude that following mitigation the significant effects on Noise and Vibration are as described below.

- Construction phase noise impacts which can be mitigated by measures set out in the EIAR and subject to implementation of a Construction Environmental Management Plan.

8.12. Archaeology, Architectural and Cultural Heritage

8.12.1. These environmental topics are assessed in Chapter 12 of the EIAR. It reports on the full suite of architectural, archaeological and cultural heritage resources in the area and assesses the likely significant impacts. The study is based on accepted methodology and the desktop study was supplemented by field surveys.

Existing Environment

8.12.2. There are no RMP sites within the PDS and there are no protected structures or buildings, or gardens listed on the NIAH within the PDS or within the 1.5 km study area. The closest RMPs are 150 m or more to the south-east and include a ring fort and other enclosures. Previous archaeological investigations in 2009 did result in identification of five features of archaeological potential within the site.

8.12.3. The site of the main development areas includes lands which have been previously subject to archaeological monitoring in 2009. Only at the location of the proposed

office rebuild area and HGU were any archaeological features previously identified – this was a single pit of late Neolithic date which was fully resolved by excavation.

Potential Impacts

8.12.4. The majority of works will be on previously developed land but some are on undisturbed land. The proposed development has the potential for archaeological effects in the context of the requirement for ground disturbance and site preparation. The 2009 archaeological investigations at the site over a period of five months identified only the single feature referred to above. The author noted three areas which would require further on-site archaeological supervision if they were to be disturbed by future development. These areas include land under the high-voltage power line and under the berms and limited sections of these areas will be impacted by the proposed development as described in section 12.5.1 (Vol.2/EIAR). The works within the powerline corridor comprises an area of only 50 m x 2 m width but is close to the previously encountered pit feature. Within the area under the berms where the proposed ash storage building and concrete yard will be developed, the majority of this area has been subject of previous monitoring and no features were identified. At both locations there is a possibility that hitherto unknown subsurface archaeological material will be uncovered.

8.12.5. I agree with the EIAR conclusion that there would be no significant visual effects including with respect to the World Heritage Site Bru na Boinne. In this respect I note that the proposed development does not include any structures at the height of the 79 m stack which is already present on the site and that the matter of air emissions and its visibility has been previously determined to be insignificant. It follows from my assessment of the air quality impacts culminating in a conclusion that there would be no significant change in the emissions that the proposed development would not result in any change in this respect. These comments are relevant also to other features in the area including the Battle of the Boyne site and the ecclesiastical centre of Duleek.

Mitigation

8.12.6. Having regard to the above I agree that there is a requirement for construction phase archaeological monitoring as described in section 12.6 (Vol. 2/EIAR). This includes the possibility of preservation in situ of any archaeological material covered and

relocation of the element of the proposed development on the area of archaeological sensitivity. In the context of the location of the proposed development within a major facility I am satisfied that there would be no significant planning consequences from such mitigation. Preservation in situ would be best practice and I support the mitigation measures proposed.

Cumulative Effects

8.12.7. I note that the EIAR concludes that the combination of various projects may have a cumulative effect on the archaeological landscape in the vicinity.

Transboundary Effects

8.12.8. There are no transboundary effects.

Residual Impacts

8.12.9. The applicant concludes that with the implementation of archaeological mitigation measures no significant residual effects on archaeological, architectural and cultural heritage is predicted. I agree with this conclusion.

Conclusion

8.12.10. I have taken into account the contents of the EIAR and the submissions on file and on that basis, I am satisfied that potential effects on archaeological, architectural and cultural heritage would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.12.11. I am satisfied that the proposed development would not have any unacceptable direct, indirect, cumulative or transboundary effects on archaeological, architectural and cultural heritage.

8.13. Landscape and Visual

8.13.1. A Landscape and Visual Impact Assessment is incorporated in Chapter 13 (Vol.2/EIAR) as supplemented by photomontages presented in Appendix 13.1 (Vol.3/EIAR).

Existing Environment

8.13.2. The receiving environment includes the existing facility on the site, which is located in an area which includes major infrastructure including roads and railway and major facility at platin. In the immediate vicinity the surrounding lands are generally rural and agricultural lands predominate. Existing berms and buildings cover much of the site and screen views. Extensive screen planting carried out in and around the facility has matured and provides an effective partial screening including from the regional road. Views listed in the development plan include a view 4 km from the site which includes a view to the existing plant. The landscape is designated as being of high value.

Potential impacts

8.13.3. The focus in the EIAR is on views on visual amenity in the vicinity of the PDS. I consider that this is appropriate. Regarding the World Heritage site, I consider that there are no potential impacts. I note the listed view to the west and given the separation distance of 4 km and the view to the PDS in the context of Platin as well as the nature of the proposed development I accept the conclusion in the EIAR that the principal views potentially yielding visual impacts are from the regional road. An additional viewpoint is stated to have been included at the request of a local resident.

8.13.4. I accept the accuracy of the photomontages and the suitability of the selected 5 no. viewpoints. I agree with the applicant's submission that the construction phase would not give rise to significant landscape in visual impacts and that the main potential sources of impact would be those resulting from the height, scale and mass of the proposed structures.

8.13.5. Regarding listed view number 66 which is essentially the same as the view under the updated development plan, this is noted as including the existing WtE plant, I note and agree with the comment in the EIAR that this view is already very compromised by industry and urbanisation. In the context of the existing buildings, I accept the applicant submission that there would be no perceptible impact on this view.

8.13.6. Regarding the location of the site in a landscape, which is designated under the development plan as being of 'high-value' I consider that assessment of the proposed development in this respect has to take into account the context of the Platin site and the existing WtE in this regard I do not consider that the landscape designation would be materially affected.

8.13.7. In terms of the height, scale and location of the proposed development I consider that the most significant structures in terms of potential impacts are the tank farm, the ash storage building and the HGU, which are 24 m, 14 m and 11 m in height.

8.13.8. In terms of the potential impacts of significance I consider:

- Significant impacts are restricted to the operational phase – construction phase impacts would not be deemed to be significant.
- Apart from the tank farm and some of the smaller elements of the proposed development, the elements including the proposed HGU, and the ash storage building are of standard industrial appearance, are clad in Kingspan and similar materials and are of a scale, massing and height which will ensure that they can be assimilated into the existing complex of structures.
- The location of the proposed tank farm in the north-west of the site ensures that this 24 m high element of the development is screened by the existing facility and is not visible from the regional road or any sensitive receptors.

I concur with the overall conclusion that the impacts on landscape and visual amenity are unlikely to be significant given the small scale of the proposed development in the context of the existing facility and also the presence of the nearby cement works. In this context I note also that notwithstanding the proximity of the site to a number of residential receptors, the observations submitted do not indicate significant concern relating to the proposed development in this regard.

Mitigation

8.13.9. I consider that the significant mitigation measures described in the EIS include:

- The consideration of the most appropriate locations for the larger structures in order to minimise potential visual impacts.
- The proposed extension in length and height of planted berms to further assist screening from identified key viewpoints.
- The adoption of external finishes to match the existing facility where possible.

8.13.10. The mitigation measures for the construction phase include measures to prevent dirt and to maintain a tidy site. The operational phase measures described

are effectively the in-built design measures. I consider that the design detail in the landscaping will reduce any visual impact.

Cumulative

8.13.11. Cumulative effects are considered in the EIAR and I agree with the conclusion presented that there is no potential for significant negative direct or indirect impacts. I consider that this conclusion is reasonable given the nature scale and location of the proposed development and the landscape mitigation measures which are part of the development as well as the separation of the PDS from other projects.

Transboundary Effects

8.13.12. There are no transboundary landscape or visual effects.

Residual Impacts

8.13.13. The residual impacts are described in section 13.8 (Vol.2/EIAR). There are no residual landscape effects as the development will effectively not be visible from the public realm and will not change the perceivable landscape. Regarding the visual impact on the key viewpoint selected the proposed development will in most cases be screened behind intervening built elements, landforms or existing screen planting. Where the development would not be screened only a very small portion of the overall development would be visible. I agree with the conclusion drawn that the impacts from the selected locations will be imperceptible or not significant on the basis of the significance criteria set down in the draft EPA EIA guidance.

Conclusion

8.13.14. I have taken into account the contents of the EIAR and the submissions on file and on that basis, I am satisfied that potential effects on landscape and visual resources would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.13.15. I am satisfied that the proposed development would not have any unacceptable direct, indirect, cumulative or transboundary effects on landscape and visual resources.

8.14. Material Assets

8.14.1. Based on the draft EPA guidance the topic of material assets as assessed under chapter 16 focuses on services and infrastructure, roads and traffic and waste management. In relation to roads and traffic impacts there is more targeted consideration of this topic under chapter 7. I have considered roads and traffic under the Planning Assessment section of this report and relied on the information contained in the EIAR and there is an overlap between these two sections which should be cross referenced.

Existing Environment

8.14.2. It is stated that the developed parts of the site represent approximately 3.5 ha of the 10 ha PDS. The site is traversed by three wayleaves which relate to the natural gas transmission line and underground powerlines. The site is equipped with a range of facilities and services including a surface water management system.

8.14.3. Key features of the relevant road network include Junction 8 of the M1 to the north-east, the R152 at the southern site boundary, New Lanes Cross and the village of Duleek. The site entrance is served by a deceleration lane and a right turn lane.

Potential Impacts

8.14.4. There will not be a requirement for diversions of services to facilitate the development but there will be a need for extensions to power and water supply and to foul and surface water drainage. No significant effects on these infrastructural elements are anticipated. There would be no impact on existing way leaves.

8.14.5. The HGU will use 10 MW of electricity that would otherwise be wasted and produce 160 tons of hydrogen annually. Use of this fuel which is currently wasted for the production of carbon free fuel will have a significantly positive effect on material assets. The application for connection to input hydrogen to the gas network by way of the proposed AGI appears to be outstanding.

8.14.6. The increased water usage associated with the HGU and the use of other raw materials in the waste to energy process are not significant in terms of material assets.

8.14.7. The development will result in additional traffic and use approximately 0.5 ha of grassland habitat and other land.

8.14.8. There would be no significant effects on the capacity of the road network.

8.14.9. The proposed development in terms of material assets will involve additional raw material inputs and additional residues after waste processing. The processing of up to 10,000 tonnes of hazardous waste will divert this amount from export to thermal treatment within the state. Similarly, the figure for additional hazardous residues recovered as a result of the proposed development is 30,000 tonnes.

8.14.10. As a result of the construction of the development there will be some surplus material removed from the site - the applicant states that where possible this will be avoided. The estimate provided in the EIAR is that 31,000 m^3 of surplus material will have to be removed either for reuse, recovery or disposal. Recovery and disposal options would constitute a slight negative effect on waste resources. By suitable regulation however there will be no adverse environmental impacts associated with this activity, which is incorporated into the applicant's traffic assessment. Importation of materials in the amount of an estimated 2,300 m^3 of engineering fill and crushed stone will not have a significant effect on the resources of construction materials.

8.14.11. General waste management will be in accordance with a Construction Waste Management Plan incorporated in the CEMP. Details of anticipated waste levels are reported and it is noted that there is no likelihood of contaminated lands being encountered. Proposals for the management of construction and demolition waste which are presented are in keeping with the waste hierarchy (Appendix 5.1/Vol.3/EIAR). The management of general waste for this reason will not have a significant effect on waste resources.

8.14.12. The applicant has presented detailed consideration in section 16.5.3.10 of bottom ash. Bottom ash residues from the plant are currently characterised as non-hazardous. In the event of bottom ash recovery being put in place within the state this would be an alternative to the current options involving sending the material to a licensed landfill and alternatively for export for recovery. Any facility accepting this material would be subject of significant regulatory control. Nearby Knockharley is a possible destination and the additional truck movements have been modelled into the applicant's traffic assessment. Bottom ash export to recover aggregates would be facilitated by the bottom ash storage building. This would take place by way of Drogheda port and is incorporated in the traffic assessment.

8.14.13. The applicant's calculation is that the proposed development will result in the production of 600 tonnes of additional flue gas cleaning residues annually which when pre-treated will amount to 917 TPA. An additional 39,000 tonnes per annum of pre-treated residues will be produced at the existing on-site pre-treatment facility. In all 30,000 tonnes of boiler ash, flue gas cleaning residues and similar material from third parties will be accepted as part of the proposed development – this will be similar to the boiler ash and flue gas cleaning residues from the existing facilities and the additional pre-treated residues from the WtE plant and from third parties will be sent for recovery to specifically licensed salt mines. The recovery of this material by backfilling in salt mines will not have a significant negative effect on the environment. A facility in Northern Ireland will be used but from time to time this may be unavailable in which case export to Germany is an option. All of these facilities would be regulated and have been subject to EIA and subject to the requirements of the Waste Framework Directive and therefore the potential treatment of the boiler ash and flue gas cleaning residues is not likely to have a significant negative effect on the environment.

8.14.14. In line with existing practice the proposed development will incorporate provision for appropriate waste management and for the recovery of ferrous and nonferrous metals.

Mitigation

8.14.15. The operation of the facility will rely on efficient power systems, water conservation and recycling or recovery of wastes. This will include seeking a beneficial use for the bottom ash and metals recovery from the bottom ash as well as pre-treatment of additional boiler ash and flue gas residues.

8.14.16. The primary mitigation measures for roads and traffic include scheduling of construction start/finish hours so as to avoid peak traffic periods on the local road network and to undertake similar arrangements in the operational period. In the construction phase impacts of construction traffic will be minimised under a Construction Traffic Management Plan (Appendix 5.1/Vol.3/EIAR). Traffic management will be aided by signage, avoidance of peak times and avoidance of a route through Duleek village. These measures will be contractual obligations and will be enforced including by recording of vehicle registration numbers and monitoring.

Further strategies detailed include communications with local authorities and the local community.

8.14.17. No additional mitigation measures for the construction phase are required other than the adoption and implementation of the CEMP and appointment of a Construction Waste Coordinator to implement a Construction Waste Management Plan.

Cumulative

8.14.18. In the event that another major project is being constructed at the same time as the proposed development efforts will be made to coordinate to ensure traffic build-up is avoided.

8.14.19. No significant cumulative effects would be anticipated.

Transboundary Effects

8.14.20. If bottom ash is characterised as hazardous or if there are constraints in local markets for this material then export for recovery is likely, with resulting potential for transboundary effects. Similarly, the export of pre-treated residues would have potential for transboundary effects.

8.14.21. A transfrontier shipment licence would apply to exports and this would ensure that waste is tracked and properly handled. In addition, information has been presented in the EIAR with respect to the limited likelihood of accidents based on experience and the nature of some of the material being exported which would consolidate on contact with water.

8.14.22. Given the regulatory environment which the relevant sites operate under and the previous consents which would have been obtained there is no significantly likelihood of environmental impacts related to these activities.

Residual Impacts

8.14.23. There will be no resultant effect on the local, regional or national road network as a result of the proposed development.

8.14.24. The increased capacity in the hazardous waste sector is a positive impact on material assets.

8.14.25. There would be no significant residual impacts on other material assets.

Conclusion

8.14.26. I have taken into account the contents of the EIAR and the submissions on file and on that basis, I am satisfied that potential effects on material assets would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

8.14.27. I am satisfied that the proposed development would not have any unacceptable direct, indirect, cumulative or transboundary effects on archaeological, architectural and cultural heritage.

8.14.28. I conclude that following mitigation the significant effects on Material Assets are as described below.

Significant construction phase impacts on the public road network and the environment which can be mitigated by measures to manage construction traffic as set out in the EIAR and subject to implementation of a Construction Environmental Management Plan incorporating a Construction Traffic Management Plan.

Positive environmental impacts on material assets during the operational phase by the increase in national capacity to treat hazardous waste and reduce dependency on export.

8.15. Major Accidents and Disasters

I refer to my earlier consideration of this topic under the Planning Assessment.

The proposed development has been considered in terms of the potential for major accidents and disasters. A number of credible accident scenarios have been identified and assessed. There would be no impacts off site.

There are no developments sufficiently proximate to the PDS to trigger any accidents on site and no potential for cumulative impacts. There is no potential for significant transboundary effects related to the transportation of bottom ash or residues.

Having regard to the identified likely significant effects and mitigation measures I consider that there are no significant residual effects.

8.16. Interactions, transboundary and overall cumulative effects.

Interactions of the Foregoing

8.16.1. I consider that the main interactive impacts arising from the proposed development are adequately addressed in the EIAR. I note the collaborative effort to minimise potential for significant interaction which I consider in the context of the operating facility is likely to be successful. The potential for interactions between the relevant environmental topics as set out in the summary matrix in table 18.4 and the potential interactions are described in section 18.4.2. I note that the identified potential interactions include some which are relevant to issues raised by observers including with respect to health impacts and the suitability of the selected site location.

8.16.2. With respect to traffic and transportation and climate interactions I agree with the conclusions drawn with respect to greenhouse gas emissions and I note in particular that the proposed development will avoid the need for export of hazardous waste.

8.16.3. With respect to population and human health and air quality I consider that having regard to the nature and scale of the proposed development and governing EPA IE licence conditions, which will be adhered to there are no likely significant impacts to air quality during operation.

8.16.4. Regarding major accidents and disasters and population and human health, the construction phase interactions are typical to any construction site. In the operation phase the risks associated with the identified accident scenarios have been shown to be as low as reasonably possible.

Transboundary

8.16.5. Regarding transboundary effects these relate *inter alia* to the possibility that bottom ash may be exported and also to the export of boiler ash and flue gas cleaning residues to Northern Ireland. If bottom ash is exported by way of Drogheda port to a licensed facility in the UK, Netherlands or Belgium for use as an aggregate it will be subject to the requirements of the transfrontier shipment arrangements. I am satisfied that the shipment of bottom ash to continental Europe is not likely to have significant negative effects on the environment and therefore significant transboundary effects will not arise.

8.16.6. With respect to the transport of boiler ash and flue gas cleaning residues to Northern Ireland or possibly to continental Europe I note that the continental European route has operated and that recovery to the salt mine facility in Northern Ireland now appears likely. Both facilities would have obtained consent to the relevant planning consent processes including with respect to environmental impact assessment. The transport would also be subject to the transfrontier shipment of waste processes and the TFS is in place for both Northern Ireland and for Germany. This will ensure safe handling. If untreated boiler ash and flue gas cleaning residues come into water they will solidify. The history of a major shipping operator is provided to support the conclusion that there is very limited likelihood of containers falling overboard. I support the conclusion presented that the potential treatment of boiler ash and flue gas cleaning residues is not likely to have a significant effect on the environment and that no significant transboundary effects arise.

8.16.7. I note that the proposed development will give rise to additional volumes of ferrous and nonferrous metals and that these will be sent for recovery in Ireland and mainland Europe in line with existing practices. I agree with the conclusion that significant transboundary effects will not arise as a result of this activity.

8.16.8. My overall conclusion is that transboundary effects would not be significant.

Overall conclusions with respect to potential cumulative impacts

8.16.9. The applicant provides an integrated / summary presentation of the information relating to cumulative impacts (Chapter 18/Vol. 2/EIAR). This confirms the conclusions set out under the individual topic chapters. A useful summary chart of potential cumulative effects on environmental factors is set out in section 18.3.2. Following a review of the planning history and consideration of the applicant's submissions, I am in agreement with the conclusion drawn in the EIAR namely that the proposed development would not result in significant cumulative impacts. I consider that this conclusion is valid having regard to the assessment process involved in obtaining planning consent, the details of the relevant permitted developments and the regulatory control to which the relevant developments would be subject. In addition, I have taken into account the nature of the subject projects, as well as the distance to the PDS and nature of the receiving environment.

8.16.10. To support the overall conclusion presented above I consider it relevant to comment on issues related to cultural heritage and to respond to the observers' concerns relating to cumulative air quality effects. There is potential for impacts on hitherto unknown subsurface archaeological finds or features and the risk that there will be a requirement for preservation by record. The evidence suggests that any impact would be slight and on that basis may be concluded there would be no overall cumulative impact. With respect to the specific issue raised by observers and the HSE in terms of cumulative effects relevant to air quality and consequences for human health, I agree with the conclusion presented by the applicant that the potential cumulative effects are not likely to be significant given the scale of the proposed development and taking into account the information presented on the specific topic of air quality.

8.16.11. I conclude that there is no potential for significant adverse cumulative impacts.

8.17. Conclusion

8.17.1. I conclude that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated, as follows:

Significant construction phase impacts on the public road network and the environment can be mitigated by measures to minimise air and noise emissions and to manage construction traffic as set out in the EIAR and subject to implementation of a Construction Environmental Management Plan incorporating a Construction Traffic Management Plan.

Positive environmental impacts on material assets during the operational phase by the increase in national capacity to treat hazardous waste and reduce dependency on export.

Positive impacts on climate from the use of electricity generated on site for the production of hydrogen, which will assist in the transition to a low carbon circular economy.

9.0 Appropriate Assessment

9.1. Introduction

9.1.1. The requirements of Article 6(3) as related to Appropriate Assessment of a project under Part XAB, Sections 177U and 177V of the Planning and Development Act 2000 (as amended) are considered fully in this section. The areas addressed in this section are as follows:

- Compliance with Article 6(3) of the EU Habitats Directive.
- Documentation and Proposed Development
- Screening for Appropriate Assessment.
- Appropriate Assessment of implications of the proposed development on the integrity of each European site.

9.2. Compliance with Article 6(3) of the EU Habitats Directive

9.2.1. The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site before consent can be given.

9.2.2. The proposed development is not directly connected to or necessary to the management of any European site and therefore is subject to the provisions of Article 6(3).

9.3. Documentation and Proposed Development

9.3.1. The applicant has submitted a Screening Report and Natura Impact Statement entitled *Stage 1 Screening Report and Stage 2 Natura Impact Statement (NIS) Indaver Meath Site Sustainability Project*.

9.3.2. The basis for the NIS includes information contained in various sections of the EIAR particularly chapters relating to biodiversity, air quality, noise and vibration, CEMP, water, land and soils and traffic and transportation. I consider that the NIS has been prepared by professionals who are experienced in ecological assessment and has regard to the relevant regulatory context and guidance.

9.3.3. I am satisfied that the information available constitutes the best available scientific information and is sufficient to allow the Board to carry out an Appropriate Assessment. The NIS and the information on which it is based indicates that the nature of the proposed development is well understood and that the detailed design is well advanced and that there is ample information on the baseline environmental conditions including the ecology and the design and operation of the existing facility and associated infrastructure. The fact that there is an operating licenced facility at this site ensures the availability of long-term and high-quality information relating to water quality, air and noise.

9.3.4. The significant elements of the proposed development include the proposed increase in waste intake including hazardous waste, the construction of the proposed aqueous waste tank farm, hydrogen generation unit and bottom ash storage building and the increase in the acceptance of ash, flue gas and other residues for pre-treatment and storage prior to recovery in Northern Ireland.

9.3.5. Associated with the substantive elements of the proposed development are a range of infrastructural works including for the management of stormwater runoff during construction, the operational phase site drainage , firewater management and measures to deal with foul and process effluent. These works largely involve modifications to existing infrastructure. New facilities include small scale on-site wastewater treatment services.

9.3.6. The facility will operate under the IE licence which will be reviewed by the EPA and the proposed development will fall under the relevant BREFs. In the event of decommissioning of the site and under the terms of the IE licence the closure, remediation and aftercare management plan will be implemented.

9.4. Appropriate Assessment- Screening

Introduction

9.4.1. The requirements of Article 6(3) as related to screening the need for Appropriate Assessment of a project under part XAB, section 177U of the Planning and Development Act 2000 (as amended) are considered fully in this section.

9.4.2. Stage 1 of the Appropriate Assessment process is the screening stage whereby it is determined whether the project is likely to have a significant effect, either individually or in combination with other plans and projects on European sites in view of the sites' conservation objectives.

9.4.3. The *Stage 1 Screening Report and Stage 2 Natura Impact Statement (NIS) Indaver Meath Site Sustainability Project* includes a screening for Appropriate Assessment. The screening assessment determines the potential for the development to have an adverse effect on European sites in the absence of mitigation and is based on potential impact pathways. The screening assessment conclusion is presented below.

> Potential impacts, though improbable, have been identified for the River Boyne and River Blackwater SAC, River Boyne and River Blackwater SPA and the River Nanny Estuary and Shore SPA. Screening conclusions with regard to the qualifying species and habitats for these Natura 2000 sites is provided in Table 7. No significant effects on the conservation objectives for the Boyne Coast SAC and Boyne Estuary SPA will occur.

9.4.4. Having reviewed the documents and submissions I am satisfied that the information allows for a complete examination and identification of any potential significant effects of the development, alone, or in combination with other plans and projects on European sites.

Screening for Appropriate Assessment - Test of likely significant effects

9.4.5. The project is not directly connected with or necessary to the management of a European Site and therefore it needs to be determined if the development is likely to have significant effects on European sites.

9.4.6. The proposed development is examined in relation to any possible interaction with European sites designated Special Conservation Areas (SAC) and Special Protection Areas (SPA) and the qualifying interests to assess whether it may give rise to significant effects on any European site.

Submissions and Observations

9.4.7. Meath County Council notes that the Board is the competent authority in relation to Appropriate Assessment. The report of the Heritage Officer notes that a source pathway receptor link exists to one of the Natura sites within 15km of the PDS, that is to the River Nanny Estuary and Shore SPA. The report recommends that all mitigation measures outlined in the NIS (and its appendices) and the CEMP should be fully implemented. It concludes that based on the scientific data provided and the construction methodology, mitigation measures and controls proposed, there will be no significant effects (direct or indirect) on the qualifying interest of any Natura 2000 sites, either individually or in combination with other plans or projects.

9.4.8. Darren O Rourke TD states that potential impacts have been identified for the River Boyne and Blackwater SAC, River Boyne and Blackwater SPA and River Nanny Estuary and Shore SPA and for flora and fauna, which is a very serious matter. The NIS does not include an assessment of the proposed development in combination with other plans and projects and for example the landfill and cement works are not mentioned he states. For these reasons the observer states that there is insufficient information available to the Board to undertake Appropriate Assessment.

9.4.9. None of the prescribed body submissions raise matters relevant to this section of this report.

9.4.10. No other observations or submissions raised issues relevant to appropriate assessment.

European sites with potential pathways to proposed development

9.4.11. The PDS is not in or immediately adjacent to any European site. The European sites which are within 15km of the proposed development were considered by the applicant to be appropriate for consideration and these sites, their qualifying interests and potential impacts are set out in Table 7 of the NIS.

9.4.12. I note that in the undertaking of the screening exercise the approach presented in the documentation includes screening of qualifying interests and considering whether or not to take forward certain qualifying interests to Stage 2. I am not satisfied that this approach is optimal, and I recommend that the approach adopted by the Board rely solely on the screening of the European sites in their entirety - I utilise that approach in undertaking an Appropriate Assessment. Notwithstanding

my reservations about the approach undertaken in the documentation it is not necessary for the documentation to be revised as the Board is the competent authority on this matter and the available information is sufficient for the Board to exercise its functions. My reservations relate solely to the placing of information within the document rather than its nature and extent.

9.4.13. In relation to the availability of information with respect to cumulative impacts I note that the applicant's response to Deputy O' Rourke's submission refers to Table 15 of the NIS which does in fact list the Irish Cement facility including recently permitted alterations which are to be undertaken. I accept the point made by the applicant that the relevant developments are included in this table and I consider that the developments which are relevant are all included. I note that the Heritage Officer of Meath County Council did not raise any concerns with respect to the NIS including the manner of consideration of the potential cumulative impacts. I am satisfied that this matter has been sufficiently addressed.

9.4.14. A summary of European Sites that occur within 15 km of the proposed development is presented in the table below and the location of these site relative to the PDS is on Figures 5 and 6 of the applicant's report. Where a possible connection between the development and a European site has been identified this is referenced and the relevant pathway of potential impact is described in the table below. Where there is no pathway the European site can be eliminated from further consideration and this is noted.

9.4.15. To support the conclusions presented in summary in the table below I have considered the characteristics of the proposed development in terms of its location and the scale of works. I have considered the potential pathways in terms of implications for possible significant effects (PSEs) on European sites and my conclusions are as follows:

- Potential direct and indirect effects including from the spread of invasive species could give rise to habitat loss or fragmentation. The nearest European site is 3.2km from the PDS and therefore there is no potential for direct effects on European sites due to habitat loss. Buddleja is the only non-native invasive species that was recorded within the PDS and this was not found in the works

area and is not a high-risk species and for these reasons there is no risk of significant effects from this potential pathway.

- Airborne noise and disturbance could lead to short-term disturbance of qualifying species in the construction period or by way of in-combination effects. There is potential for construction phase noise effects to be relevant to mobile species which are qualifying interests or special conservation interests. As the modelling indicates no significant increase in noise there is no potential for noise or disturbance effects in the operational phase.
- Hydrological impacts to water quality in the construction phase could affect European sites to which there is a pathway. The operational phase effects would not be relevant as there are no process emissions and the site will continue to be regulated by an IE licence.
- Air quality effects from the increased waste tonnage will not be significant in terms of the ambient air quality and can be excluded as a source for potential significant effects on nearby European sites.
- The transport of boiler ash and flue gas cleaning and other residues will be regulated and as the material is already pre-treated and in a solid monolithic form there will not be a significant effect on the environment which might be relevant for appropriate assessment. I agree with the conclusion presented by the applicant that there is low risk of accidents and no impacts possible on Natura sites as the residues would solidify on contact with water and the bottom ash is inert.

Table - Location of European sites, potential pathways and conservation objectives.

Site Name and Site Code	Conservation Objectives and Qualifying Interests (Habitats and Species)	Location / distance to European site and Potential Pathways
River Boyne and River Blackwater	To maintain or restore the favourable conservation condition of the habitats or species for which the SAC has been selected. Alkaline fens [7230]	This European site is 3.2 km north / north-west of the PDS and there is potential for

SAC (002299)	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Lampetra fluviatilis (River Lamprey) [1099] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355]	disturbance to qualifying species of that site or for water quality effects on mobile species. There is no hydrological connectivity and no other potential impact pathway.
Boyne Coast and Estuary SAC (001957)	To maintain or restore the favourable conservation condition of the habitats and species for which the site has been selected which is defined by a list of attributes and targets 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonizing mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1410 Mediterranean salt meadows (Juncetalia maritimi) 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with Ammophila arenaria ('white dunes') 2130 *Fixed coastal dunes with herbaceous vegetation ('grey dunes')	This is over 7km from the PDS and there is no hydrological connectivity and overall, no potential impact pathway.
River Boyne and River Blackwater	To maintain or restore the restore the favourable conservation condition of the habitats and species for which the site has been selected A229 Kingfisher	This is 3.4km north / north-west of the PDS and there is potential for disturbance to qualifying species. There is no potential for surface

SPA (004232)		water effects to impact the special conservation interests as there is no hydrological connectivity.
Boyne Estuary SPA (004080)	To maintain or restore the favourable conservation condition of the habitats and species for which the site has been selected which is defined by a list of attributes and targets A048 Shelduck Tadorna tadorna A130 Oystercatcher Haematopus ostralegus A140 Golden Plover Pluvialis apricaria A141 Grey Plover Pluvialis squatarola A142 Lapwing Vanellus vanellus A143 Knot Calidris canutus A144 Sanderling Calidris alba A156 Black-tailed Godwit Limosa limosa A162 Redshank Tringa totanus A169 Turnstone Arenaria interpres A195 Little Tern Sterna albifrons A999 Wetlands	This is 6.1km to the north-east. There is a potential source – pathway – receptor link due to potential disturbance to qualifying species. There is no potential for surface water effects to impact the special conservation interests and no other potential impact pathway.
River Nanny Estuary and Shore SPA (04158)	To maintain or restore the favourable conservation condition of the habitats and species for which the site has been selected which is defined by a list of attributes and targets A130 Oystercatcher Haematopus ostralegus wintering A137 Ringed Plover Charadrius hiaticula wintering A140 Golden Plover Pluvialis apricaria wintering A143 Knot Calidris canutus wintering A144 Sanderling Calidris alba wintering A184 Herring Gull Larus argentatus wintering A999 Wetlands	This is 8.1km to the east. There is a potential source – pathway – receptor link due to potential disturbance to qualifying species. There is also a hydrological connection between the PDS and this site and potential for water quality related effects.

As there is no potential impact pathway between the PDS and the European site Boyne Coast and Estuary SAC (001957) it is considered that there is no possibility of significant effects and that this site can be screened out from further consideration.

I note that the applicant's screening conclusion screened out the Boyne Estuary SPA. Having regard to the potential for noise and disturbance effects on special conservation interests I do not consider that this conclusion can be supported and that further consideration of the likely significant effects on the special conservation interests of this site is necessary.

I consider that there is potential for significant effects on the other Europeans sites

- River Boyne and River Blackwater SAC (002299)
- River Boyne and River Blackwater SPA (004232)
- Boyne Estuary SPA (004080)
- River Nanny Estuary and Shore SPA (04158).

Mitigation measures

9.4.16. No measures designed or intended to avoid or reduce any harmful effects of the project on a European Site have been relied upon in this screening exercise.

Screening Determination

9.4.17. The proposed development was considered in light of the requirements of 177U of the Planning and Development Act 2000 as amended. Having carried out screening for Appropriate Assessment of the project, it has been concluded that the project individually (or in combination with other plans or projects) could have a significant effect on European Sites No. 002299, 004232, 004080, 004158, in view of the sites' Conservation Objectives, and Appropriate Assessment is therefore required.

9.5. Appropriate Assessment – Stage 2

9.5.1. Following the screening process, it has been determined that Appropriate Assessment is required as it cannot be excluded on the basis of objective information that the proposed development individually or in-combination with other plans or projects will not have a significant effect on the following European sites:

- River Boyne and River Blackwater SAC (002299)

- River Boyne and River Blackwater SPA (004232)
- Boyne Estuary SPA (004080)
- River Nanny Estuary and Shore SPA (04158).

9.5.2. The possibility of significant effects on other European sites has been excluded on the basis of objective information and in particular the following European site has been screened out for the need for Appropriate Assessment.

- Boyne Coast and Estuary SAC (001957).

9.5.3. Having reviewed the documents, submissions and consultations, I am satisfied that the information allows for a complete assessment of any adverse effects of the development, on the Conservation Objectives of those European sites alone, or in combination with other plans and projects.

Appropriate Assessment of implications of the proposed development

9.5.4. The following is a summary of the objective scientific assessment of the implications of the project on the qualifying interest features of the European sites using the best scientific knowledge in the field. All aspects of the project which could result in adverse effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are considered and assessed.

European Sites

9.5.5. The following sites are subject to Appropriate Assessment:

- River Boyne and River Blackwater SAC (002299)
- River Boyne and River Blackwater SPA (004232)
- Boyne Estuary SPA (004080)
- River Nanny Estuary and Shore SPA (04158).

9.5.6. A description of the sites and their conservation and qualifying interests/special conservation interests are set out in the NIS and in the table above.

9.5.7. I have also examined the Natura 2000 data forms as relevant and the conservation objectives supporting documents for these sites available through the NPWS website (www.npws.ie). There are site specific conservation objectives for Boyne Estuary SPA (004080), River Nanny Estuary and Shore SPA (04158) and River Boyne and

River Blackwater SAC (002299) and generic conservation objectives for River Boyne and River Blackwater SPA (004232). The site-specific conservation objectives for and River Boyne and River Blackwater SAC (002299) were published on 3 December 2021 and I have examined the contents of the document and taken them into account.

Aspects of the proposed development.

9.5.8. The proposed development could adversely affect the conservation objectives of European sites as follows:

- Through disturbance or displacement during construction of the proposed development
- As a result of emissions to water during construction.

The potential for impacts on the qualifying interests of the relevant European sites is considered below.

River Boyne and River Blackwater SAC (002299)

As there is no hydrological connection between the PDS and the European site and no potential groundwater impacts there is no potential for impacts on Alkaline fens or Alluvial forests. The distance between the European site and the SAC is over 3km and the Platin quarry is in between. There is no potential for dewatering or other groundwater effects associated with the proposed development which might impact fens. There is no alluvial forest habitat in the vicinity of the proposed development – the site-specific conservation objectives show the location of some of this habitat over 3km north of the PDS and north of the Platin quarry. I am satisfied that there is no potential for effects having regard to the nature of the habitat, the distance and the intervening development.

As there is no hydrological connection between the PDS and the European site there is no potential for water quality effects on river lamprey or salmon.

As otter is mobile there is potential for use by the species of lands on or near the PDS and that noise and disturbance could impact on this qualifying interest. The species is known to occur in the River Nanny, but the nearby Cruicerath Stream would not support any prey which would attract otter. The stream is very small and was recorded as dry in April 2020 and I consider that the conclusion that it would not

support fish is reasonable. The NIS does identify the potential prey (common frog or smooth newt) within the attenuation pond on site. This area is very visible within the site. The site surveys did not record any evidence of use of PDS by otter. If the species was frequently using the attenuation pond for feeding it is likely that it would have been witnessed nearby the pond or that evidence of use of these lands would have been found in the ecological surveys. I accept the conclusion drawn in the NIS that any use of the attenuation pond by otter for feeding would be likely to be sporadic on the basis that there are no clear linkages which would be used as clear commuting routes to attract otter to this area. If the species does use the pond for feeding, then it is reasonably concluded in the NIS that such usage would be sporadic and not a critical food resource. Taking into account the known adaptability of otter to habitualise to noise and disturbance and the fact that the attenuation pond is located in a busy part of the site I agree with the conclusion drawn in the NIS that potential impacts on this due to noise and disturbance would not be significant adverse effects.

River Boyne and River Blackwater SPA (004232)

The special conservation interest for which this site has been selected is kingfisher. The bird is known to frequent the River Nanny. The limiting factors for its presence or absence is the availability of suitable nesting banks and water availability and prey. Similarly, to the analysis for otter the NIS indicates the potential use of the on-site attenuation pond for feeding. I agree that this is unlikely given the pattern of development and lack of a significant hydrological pathway or commuting route between the PDS and the Nanny. The drains within and near the PDS and the Cruicerath Stream would not support a permanent fish population. I agree with the conclusion presented in the NIS that due to the high level of activity around the attenuation pond there would be existing displacement effects and disturbance of the species and that the pond would not be likely to be a critical resource. The adoption of the CEMP and the measures relating to the control of noise during construction further reinforces the conclusion that there would be no significant effect on this special conservation interest.

Boyne Estuary SPA (004080)

The special conservation interests are shelduck, oystercatcher, golden plover grey plover, lapwing, knot, sanderling, black-tailed godwit redshank, turnstone, little tern and wetlands.

There is no suitable habitat on site or in the vicinity of the site for these wading birds. There is no hydrological connection between the PDS and the SPA and therefore no potential impacts on the habitats on which these birds are dependence and on the special conservation interest wetlands. None of these bird species were recorded in the bird surveys undertaken on 30 September and 22 April. I note the assessment in the NIS Screening which is that if wading birds were to utilise agricultural lands in the vicinity of the PDS they would be likely to be habituated to noise and disturbance associated with the existing facility. I also note the noise impact assessments undertaken. I agree with the conclusion drawn in the applicant's documents that there would be no significant effect on the special conservation interests of this European site.

River Nanny Estuary and Shore SPA (04158)

As there is a hydrological connection between the PDS and the SPA there is potential for water quality effects during construction as a result of inadvertent spillages. I agree with the information in the NIS relating to the low likelihood that spillages, should they occur, would affect the SPA as the working will not take place in the immediate vicinity of a watercourse and the nearest watercourse, the Cruicerath Stream (which may be dry) is 130m from the PDS. In addition, it is relevant to note the 11km distance to the SPA downstream. Nevertheless, there is potential for water quality related effects which could result in significant adverse effects on the special qualifying interests oystercatcher, ringed plover, golden plover, knot, sanderling, herring gull and wetlands. Any such contamination events could affect the prey availability for the wading and estuarine birds and also the conservation objective wetlands. The significant dilution effect in a large estuary is a mitigating factor.

Regarding herring gull this is the only special conservation interest which has been recorded in the vicinity of the PDS. This species is known to travel long distances and to forage widely. The species would be habituated to any noise and disturbance in the area and has significant other suitable and available land to utilise if disturbed.

There is no likelihood of significant adverse effects on this special conservation interest.

Potential in-combination effects on the European Sites

9.5.9. Table 15 of the NIS sets out a list of developments near the site which are considered to have potential for in combination effects. I have reviewed the information provided and considered the recent planning history relating to lands in the vicinity of the site. I note the developments listed and I have reviewed the planning history and confirm that the list is comprehensive.

9.5.10. In the absence of suitable controls and measures there is the possibility that the construction and/or operation phases of the above developments could give rise to in combination effects related to water quality. The governing consents for these developments include licenses and permissions which have been formulated to impose strict limits and meet water quality standards and ensure implementation of good practice standard construction environmental measures. All of the listed projects will be constructed and implemented following an assessment of potential impacts to relevant European sites. On that basis and given adherence to the relevant consents and implementation of best practice construction no significant in combination effects are anticipated on the qualifying interests of the Boyne Estuary SPA, River Nanny Estuary and Shore SPA, the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA.

Mitigation

The NIS outlines in summary the mitigation measures which are incorporated into the project design for the purpose of avoiding impacts on the qualifying interests and conservation objectives for European sites. I note that in my earlier consideration of the individual qualifying interests no particular matters arose which would warrant bespoke or targeted mitigation. The nature of the mitigation measures presented by the applicant may be described as standard and frequently utilised mitigation measures including adherence to relevant construction guidance. The relevant measures include measures to address the protection of watercourses during construction including the adoption of a CEMP and IRP, measures relevant to surface water and foul water management and to noise and vibration. I am satisfied that these measures are appropriate and sufficient to ensure that there would be no

adverse effects on the conservation objectives relating to the European sites. Furthermore, I consider that the nature of the measures set out is such that there can be confidence in their successful implementation including by reason of the monitoring measures proposed.

Appropriate Assessment Conclusion

9.5.11. I consider it reasonable to conclude on the basis of the information on the file, which I consider is adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the Boyne Estuary SPA, River Nanny Estuary and Shore SPA, the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA, or any other European site, in view of their conservation objectives.

10.0 Recommendation

10.1. I recommend that the Board approve the proposed development subject to the reasons and considerations and the conditions set out in the draft order below.

REASONS AND CONSIDERATIONS

In coming to its decision, the Board had regard to the following:

European legislation and policy, including of particular relevance:

Directive 2014/52/EU amending Directive 2011/92/EU (EIA Directive).

Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directives).

Directive 2018/851 amending Directive 2008/98/EC (Waste Framework Directive).

Directive 2010/75/EU (Industrial Emissions Directive).

Closing the loop - EU Action Plan for the Circular Economy (COM/2015/0614).

EU Hydrogen Strategy – A hydrogen strategy for a Climate Neutral Europe (COM/2020/301).

National legislation and policy, including of particular relevance:

National Planning Framework 2018-2040, which supports the development of hazardous waste management facilities to avoid the need for treatment elsewhere.

National Development Plan 2021 – 2030, which supports the provision of additional capacity in waste to energy facilities including for hazardous waste.

Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020 – 2025, which supports the development of adequate and appropriate treatment capacity at indigenous facilities.

National Hazardous Waste Management Plan 2014-2020 and associated documentation which highlight the need for increased self-sufficiency in the treatment of hazardous wastes.

Climate Action Plan, 2021, which notes Ireland's success in diverting waste from landfill.

Regional planning and related policy, including:

Eastern-Midlands Region Waste Management Plan 2015-2021 and in particular policies E15a and E16, which supports the development of additional thermal recovery capacity for non-hazardous and hazardous waste.

The local planning policy including:

Meath County Development Plan 2021-2027 including INF OBJ 59 to ensure that waste management facilities are appropriately managed and monitored.

The following matters:

(a) The nature of the proposed development including the intake of additional hazardous waste.

(b) The established nature of the existing licenced Waste to Energy facility, which is authorised to accept hazardous wastes.

(c) The environmental benefits arising from the development of a bottom ash storage building and the aqueous waste tank farm and their role in facilitating appropriate treatment and recovery of wastes.

(d) The production of hydrogen, which results in a beneficial use of electricity which would otherwise be lost through curtailment.

(e) The need for operator flexibility, which it is considered is established.

(f) The design, layout and landscaping of the proposed development.

(g) The increased traffic predicted in the construction and operation of the proposed development.

(h) The emerging policy provisions relating to the Leinster Orbital Route.

(i) The stated purpose of the offices which is related to the operation of the facility.

(j) The range of proposed mitigation measures set out in the submitted in the documentation lodged including the further information submitted, the Environmental Impact Assessment Report, and Natura Impact Statement incorporating Appropriate Assessment screening.

(k) The submissions made in relation to the application.

(l) The report and recommendation of the Inspector and the Board's consultant.

Appropriate Assessment

The Board agreed with the screening assessment and conclusion carried out in the Inspector's report that the River Boyne and River Blackwater SAC (Site Code 002299), the River Boyne and River Blackwater SPA (004232), the Boyne Estuary SPA (004080), the River Nanny Estuary and Shore SPA (04158) are the only European Sites in respect of which the proposed development has the potential to have a significant effect.

The Board considered the Natura Impact Statement and associated documentation submitted with the application for approval, the mitigation measures contained therein, the submissions and observations on file, the response to further information and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the affected European Site,

namely the River Boyne and River Blackwater SAC (Site Code 002299), the River Boyne and River Blackwater SPA (004232), the Boyne Estuary SPA (004080), the River Nanny Estuary and Shore SPA (04158) in view of the sites' conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment. In completing the appropriate assessment, the Board considered, in particular, the following:

i. the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,

ii. the mitigation measures which are included as part of the current proposal, and

iii. the conservation objectives for the European Sites.

In completing the appropriate assessment, the Board accepted and adopted the screening and the appropriate assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Site, having regard to the site's conservation objectives.

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the sites' conservation objectives.

Environmental Impact Assessment

The Board completed an environmental impact assessment of the proposed development taking account of:

(a) the nature, scale, location and extent of the proposed development,

(b) the Environmental Impact Assessment Report (EIAR) and associated documentation submitted in support of the application, including the further information submitted,

(c) the submissions received from the prescribed bodies, and

(d) the Inspector's report and the report of the Board's consultant.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development, and identifies and describes adequately the direct,

indirect, secondary and cumulative effects of the proposed development on the environment. The Board agreed with the examination, set out in the Inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made in the course of the application. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

> Significant construction phase impacts on the public road network and the environment can be mitigated by measures to minimise air and noise emissions and to manage construction traffic as set out in the EIAR and subject to implementation of a Construction Environmental Management Plan incorporating a Construction Traffic Management Plan.
>
> Positive environmental impacts on material assets during the operational phase by the increase in national capacity to treat hazardous waste and reduce dependency on export.
>
> Positive impacts on climate from the use of electricity generated on site for the production of hydrogen, which will assist in the transition to a low carbon circular economy.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures proposed, and subject to compliance with the conditions set out below, the effects of the proposed development on the environment, by itself and in combination with other plans and projects in the vicinity, would be acceptable.

Proper planning and sustainable development:

It is considered that subject to compliance with the conditions set out below the proposed development would accord with European, national, regional and local planning, transportation, waste and related policy, would not have an unacceptable impact on the environment including water and ecology, would not seriously injure the visual or residential amenities of the area or of property in the vicinity, and would be acceptable in terms of traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further plans and particulars submitted on the 4th day of June 2021, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars. In default of agreement, the matters in dispute shall be referred to An Bord Pleanála for determination.

Reason: In the interest of clarity.

2. The period during which the development hereby permitted may be carried out shall be ten years from the date of this order.

Reason: Having regard to the nature and extent of the proposed development, the Board considered it appropriate to specify a period of validity of this permission in excess of five years.

3. Waste to be accepted at the facility shall not exceed a total of 280,000 tonnes per annum as follows:

    - an additional 15,000 tonnes per annum of waste for treatment, which may be hazardous waste and
    - up to 30,000 tonnes per annum of third-party boiler ash and flue gas clearing residues and other residues for pre-treatment.

Reason: In the interest of clarity and to ensure compliance with policy provisions.

4. The mitigation measures and monitoring commitments identified in the Environmental Impact Assessment Report shall be implemented in full.

Reason: In the interests of clarity and the proper planning and sustainable development of the area.

5. The mitigation measures contained in the Natura Impact Statement submitted with the application shall be implemented in full.

Reason: In the interests of clarity and the proper planning and sustainable development of the area and to ensure the protection of European Sites.

6. (a)The construction of the development shall be managed in accordance with a Construction and Environmental Management Plan which shall be submitted to and agreed in writing with the planning authority prior to the commencement of the development.

   (b) The CEMP shall:

   cover all aspects of the construction phase and incorporate measures to avoid, minimise and mitigate potential effects on the environment.

   incorporate a Construction Traffic Management Plan

   incorporate a Waste Management Plan

   incorporate measures to prevent the introduction and spread of non-native invasive species

   incorporate measures to deal respond to incidents

   be otherwise in accordance with the requirements of the planning authority.

   (c) The implementation of the CEMP shall be in accordance with a programme of monitoring commitments which shall be incorporated in the plan and which shall include surface water monitoring.

   (d) The plan shall be updated at regular intervals.

   (e) A Complaints Register shall be maintained during the construction stage.

Reason: In the interests of public safety and residential amenity.

7. Save where strictly necessary and subject to obtaining prior written agreement of the planning authority no HGV traffic associated with the construction or operation of the proposed development shall pass through Duleek.

Reason: In the interest of clarity.

8. Save where otherwise agreed with the planning authority the following shall be reviewed for incorporation in the detailed design:

(a) The applicant shall design the tank farm catering for the fire case scenario as part of the design criteria, including the provision of adequately sized emergency relief venting and any other safety measures deemed appropriate to mitigate risk.

(b) The recommendations of the HAZID&RA Team which are presented in Appendix 4 of Appendix 17.1 of the EIAR particularly with respect to the fire water retention study.

Reason: In the interest of the protection of the environment.

9. Surface water management shall be in accordance with the detailed requirements of the planning authority.

Reason : To ensure a proper standard of development and in the interest of water quality and the management of surface water.

10. A comprehensive landscaping plan, prepared by a suitably qualified person, shall be submitted to and agreed in writing with the planning authority, prior to the commencement of the development.

Reason: In the interests of visual amenity.

11. Details of the materials, colours and textures of all external finishes to the proposed buildings shall be submitted to, and agreed in writing with the planning authority, prior to commencement of the development.

Reason: In the interests of visual amenity.

12. The use of the offices shall be restricted to use solely in connection with the operation, management and development of the existing Waste to Energy facility, including during periods of construction and maintenance.

Reason: To avoid unnecessary employment related commuting and to ensure that the development accords with the development plan policy.

13. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist on the site. In this regard, the developer shall-

a. notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) in relation to the development,

b. employ a suitably qualified archaeologist who shall monitor all site investigations and other excavation works.

c. provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.

14. Trees and hedgerows not to be removed during nesting season in accordance with Wildlife Act (as amended).

Reason : In the interest of biodiversity.

15. The developer shall pay a sum of money to the planning authority, either annually or in such manner as may be agreed, towards the cost of the provision of environmental improvement and recreational or community amenities in the locality. The identification of such projects shall be decided by the planning authority having consulted with the community liaison committee as provided for under the original permission PL17.126307, governing the development of the site. The amount of the contribution and the arrangements for payment shall be agreed between the developer and the planning authority or, in default of such agreement shall be referred to the Board for determination. The amount shall be index linked in the case of phased payment. The developer shall consult with the planning authority in this regard prior to the commencement of the development.

Reason: It is considered reasonable that the developer should contribute towards the cost of environmental, recreational or community amenities which would constitute a substantial gain to the local community.

16. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to planning authority, to secure the satisfactory reinstatement of the site and delivery route upon cessation of the project, coupled with an agreement empowering the planning authorities to apply such security or part thereof to such reinstatement. The form and amount of the security shall be as agreed between the planning authorities and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

    Reason: To ensure satisfactory reinstatement of the site.

17. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000. The contribution shall be paid prior to the commencement of development or in such phased payments as the planning authorities may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authorities and the developer or, in default of such agreement, the matter shall be referred to the Board to determine the proper application of the terms of the Scheme.

    Reason: It is a requirement of the Planning and Development Act 2000 that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

Mairead Kenny
Senior Planning Inspector
31 December 2021