An Bord Pleanála

Inspector's Report

ABP-309293-21

Development	10 year permission for a waste management facility producing renewable gas for injection into the grid and digestate for land spreading. The development would require an Industrial Emission (IE) Licence from the EPA. An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) accompany the planning application.
Location	Cúil Na Móna Bog, Clonboyne and Clonkeen, Portlaoise, Co. Laois
Planning Authority	Laois County Council
Planning Authority Reg. Ref.	19/530
Applicant(s)	Bord na Móna Powergen Ltd.
Type of Application	Permission
Planning Authority Decision	Grant Permission
Type of Appeal	Third Parties v Grant of Permission
Appellant(s)	1. Tom Greed

	2. Matthew and Colette Duff & Ors 3. Pat Fogarty 4. Andrew & Maria Tyrrell 5. Nicola Ní Lorcáin 6. Tomas Phelan 7. Paul & Kasia Gaynor 8. Colm Dunne 9. Michelle Seale 10. John Paul Seale 11. Brian Seale
Observer(s)	Brian Stanley TD & Cllr. Caroline Dwane Stanley
Date of Site Inspection	15.11.2021
Inspector	Anthony Kelly

Contents

1.0 Site Location and Description

1.1. The site is located approx. 3.5km south west of Portlaoise town centre and approx. 1km south west of the zoned area of the town in central Co. Laois. Cúil na Móna bog covers an area of approx. 657 hectares. The proposed site is located in the eastern section of the bog.

1.2. The site is accessed by way of an existing cul-de-sac road. This road runs in a south westerly direction, generally parallel to the R445/M7 roads. The junction of the cul-de-sac road and the R445 is approx. 100 metres north of the more northerly of the two roundabouts serving Junction 18 on the M7. There are fields to the north western side of the cul-de-sac.

1.3. There is a locked and gated access to bogland approx. 600 metres from the junction of the road and the R445. A roadway services a hard surfaced area with some prefabricated structures/containers. The main area of the site is located north of this hardstanding area and comprises bogland. There is vegetation throughout the site area, including trees. There is bogland to the west and north of the main proposed site area, the fields adjoining the cul-de-sac access roadway are to the east, and the large hard surfaced area is immediately south of the main site area.

1.4. There is some residential development in proximity to the site area including two houses and farmyard just north of the junction of the cul-de-sac and R445, and a house accessed further along the cul-de-sac roadway, adjacent to the south west of the proposed development access road.

1.5. The site has an area of 17.34 hectares.

2.0 Proposed Development

2.1. The public notices advertise the proposed development as follows; Permission is sought for a Renewable Gas Facility, associated peat deposition area, and road upgrades comprising:

1. Renewable Gas Facility (6.85 hectares) including:

    - weighbridge and weighbridge office (21sqm, 4.45 metres in height),

- administration building (228sqm, 5.1 metres in height),
- reception building (2,700sqm, 11.75 metres in height)
- odour abatement unit (400sqm, with a stack height of 18 metres),
- a tank farm comprising two primary digestion tanks (6,500m^3 each, 22 metres in height), two secondary digestion tanks (5,650m^3 each, maximum 17.2 metres in height), two buffer storage tanks (450m^3 each, 6 metres in height), four liquid feed intake tanks (100m^3 each, 12 metres in height), two process water tanks (30m^3 each, 7.5 metres in height), and four pasteurisation tanks (30m^3 each, 7.5 metres in height),
- gas upgrade and injection plant (1,278sqm),
- covered digestate lagoon (55,100m^3),
- surface water attenuation pond (20 metres x 30 metres),
- underground wastewater holding tank (10m^3),
- palisade site fencing (2.4 metres in height, 1.42km in length),
- electrical substation (up to 22sqm),
- 3,500sqm circulation yard including 28 no. car parking spaces.

2. Peat deposition and surrounding area (9.13 hectares).

3. External road upgrades including new roundabout, upgrade of R445 and local access road to the site entrance (660 metres in length).
4. Internal upgrade of site access road (443 metres in length).

2.2. Permission is sought for a period of ten years.

2.3. Connection of the proposed facility to the gas network does not form part of the planning application. However, it has been taken into consideration as part of the Environmental Impact Assessment Report (EIAR). On foot of a further information response, an 'EIAR Addendum Report' was also prepared addressing the upgrade of the water network pipeline as required. This upgrade does not form part of the planning application either.

2.4. In addition to planning permission, other operational approvals required include an Industrial Emissions (IE) Licence from the Environmental Protection Agency (EPA), Animal By-Products approval from the Department of Agriculture, Food, and the Marine, and Gas Safety Case approval from the Commission for the Regulation of Utilities (CRU).

2.5. For the avoidance of doubt, as confirmed by the applicant in the response to the grounds of appeal, the proposed development is first and foremost a waste management facility which would receive 80,000 tonnes per annum of feedstock comprising source segregated biodegradable wastes, food processing/industrial biodegradable wastes, and agricultural residues. Through anaerobic digestion this feedstock is converted into both gas which is to be injected into the grid, and digestate which is to be stored in the digestate lagoon and then exported off-site for land spreading.

2.6. The process broadly comprises the following stages:

- Feedstock material is directed to the reception building to be tipped and inspected. Unsuitable materials will be removed and segregated for removal and disposal off-site.
- Packaged feedstock material will be processed in a depackaging unit to separate the organic material from the packaging.
- Organic material is processed to form a pumpable slurry and is pumped to the buffer storage tanks.
- The slurry is pumped to the primary digestion tank where it is heated and stirred to facilitate digestion where biogas is released (approx. 85% of available biogas is captured).
- Slurry is pumped into a secondary digester to capture the remaining biogas.
- The slurry is pasteurised either prior to or post the digestion stage.
- Captured gas will be cleaned and upgraded for injection to the grid.
- The AD process produces a nutrient rich ‘digestate’ which will be 90% liquid and 10% solid fractions. The liquid fraction will be pumped to the covered lagoon prior to removal off-site for use as an organic bio-fertiliser. The solid

fraction will be removed off-site for use as landfill cover, fertiliser, or soil conditioner, if suitable.

2.7. Approx. 70,700m^3 of peat will be removed from the site area during the construction phase and will be spread/deposited over existing cutaway bog at typical depths of between 1 metre and 2 metres. Peat deposition areas will be re-vegetated. Some of the peat will be used for the creation of berms and planting.

2.8. A combined heat and power (CHP) plant is also proposed as part of the development. The proposed development would be self-sufficient in relation to electricity and heat generation as the CHP plant and hot water generator would run on the biogas produced. A gas flare is also proposed.

2.9. The proposed weighbridge office and administration building have a plastered wall finish with blue black slates to the roofs. The proposed reception building is externally finished in grey cladding. The odour abatement unit is constructed with a concrete wall and a glass reinforced plastic roof. The substation has a render finish. The process water tanks, liquid feed intake tanks, buffer storage tanks, primary and secondary digestion tanks will be finished in goosewing grey coloured materials.

2.10. In addition to standard planning application plans and particulars the application was accompanied by:

- An 'Environmental Impact Assessment Report' (EIAR) prepared by Fehily Timoney & Company (Fehily Timoney) dated August 2019 comprising:
  - Volume 1 – Non-Technical Summary
  - Volume 2 – Main Report
  - Volume 3 – Appendices
- An 'Appropriate Assessment Screening Report' prepared by Fehily Timoney. dated August 2019.
- A 'Natura Impact Statement' (NIS) prepared by Fehily Timoney dated August 2019.
- A 'Construction and Environmental Management Plan' (CEMP) prepared by Fehily Timoney dated August 2019.
- A 'Photomontages' document prepared by Fehily Timoney dated August 2019.

2.11. A comprehensive further information request was issued by the planning authority on 12.11.2019. A detailed response to same was received on 19.05.2020. The further information response included the following:

- A 'Planning Support Statement' prepared by Fehily Timoney and dated May 2020. This document concludes that the proposed development is supported by, and is in accordance with, European, national, regional, and local plans and policies.
- Justification for the type of facility proposed and the proposed site location.
- Justification for the proposed roundabout location on the R445 having regard to Transport Infrastructure Ireland's (TII) submission and the Road Design Office comments.
- An 'Arborist Tree Survey Report', prepared by Independent Tree Surveys, dated April 2020.
- A letter from Irish Water which states that, subject to a valid connection agreement being put in place, a connection to the network can be facilitated. To provide a connection, upgrade works to the existing water network will be required. These works will involve upsizing approx. 2.7km of network infrastructure to 150mm diameter mains. Upgrade works may also be required to an existing pumping station.

  An 'EIAR Addendum Report' prepared by Fehily Timoney and dated May 2020, was provided. This Addendum assesses the potential for effects as a result of the construction of the pipeline which would be required to connect to the proposed development.
- A response to surface water issues having regard to Inland Fisheries Ireland's (IFI) submission.
- A 'Bat Activity Surveys and Roost Survey' prepared by Caroline Shiel dated March 2020.
- A 'Biodiversity Management Plan' prepared by Fehily Timoney dated May 2020.
- A 'Firewater Risk Assessment Report' prepared by Fehily Timoney dated May 2020.

- Detail on the peat deposition areas.
- Comment on the possibility of dewatering, and the potential effects on wells and potential wells.
- Comment on noise monitoring during construction and operational phases.
- Additional photomontages prepared by Macroworks dated 28.01.2020.
- Minor updates have been included in a revised CEMP. This is titled 'Construction and Environmental Plan' prepared by Fehily Timoney dated May 2020.
- An 'Addendum to the Appropriate Assessment Screening Report and Natura Impact Statement' prepared by Fehily Timoney dated May 2020. This was accompanied by 'An Assessment of NO_x Emissions at Nitrogen Sensitive Natura 2000 sites', prepared by AWN Consulting and dated 06.04.2020.
- A 'Response to Third Party Submissions' document setting out the applicant's response to issues raised in the observations received.

2.12. A clarification of further information request was issued by the planning authority on 09.07.2020. The applicant sought and was granted a three month Extension of Time The clarification of further information response was received on 13.10.2020. The clarification of further information response included the following:

- Network analysis by Gas Networks Ireland (GNI) confirmed the ability of the local gas network to accept the volumes of biomethane produced by the proposed development.
- Further justification for the site selection.
- An updated 'Arborist Tree Survey Report' prepared by Independent Tree Surveys and dated April 2020 which aligns with the Biodiversity Management Plan with respect to tree planting.
- An 'Addendum No. 2 to the Appropriate Assessment Screening Report and Natura Impact Statement' prepared by Fehily Timoney and dated October 2020 as well as an updated 'Assessment of NO_x Emissions at Nitrogen Sensitive Natura 2000 Sites' report prepared by AWN Consulting and dated 07.10.2020.

2.13. The planning authority deemed the clarification of further information response to be 'significant' and revised public notices were received on 11.11.2020.

3.0 Planning Authority Decision

3.1. Decision

3.1.1. Laois County Council granted permission for the development subject to 21 no. conditions. Conditions included carrying out mitigation and monitoring measures contained in, inter alia, the EIAR and NIS, operational conditions including a limit of feedstock to be accepted at 80,000 tonnes per annum and digestate generated to be land spread or as otherwise agreed, external finishes, deliveries to be tipped indoors only, no external storage of materials or equipment, transportation of materials in a sealed tanker/container, surface water discharge, fire safety conditions, landscaping, lighting, detail of site decommissioning, receipt of an IE licence, Irish Water connection, requirement for Stage 2, 3 and 4 Road Safety Audits (RSAs), submission of a Construction Management Traffic Plan, development contributions, construction practices, and archaeological monitoring.

3.2. Planning Authority Reports

3.2.1. Three planning authority Planning Reports form the basis of the authority's decision to seek further information and clarification of further information, and to grant permission for the development.

3.2.2. The initial Planning Report considered the planning application in detail. A substantial further information request was recommended, including issues relating to the policy context, the need for the development and reasonable alternatives, transportation, landscaping, water supply, surface water disposal, the impacts of the proposed development on a number of different receptors, issues with the EIAR and the NIS, the content of the Department of Culture, Heritage and the Gaeltacht submission, and the content of the observations received.

3.2.3. The second Planning Report considered the applicant's further information response in detail. It was considered that certain aspects of the response including landscaping,

capacity of the local gas network, justification for the site selection, construction detail of the proposed road and roundabout, Irish Water design detail, and the scope of the NIS required clarification. The An Taisce submission was addressed. Inter alia, the Planning Report considered that there is an important difference between peat harvesting for a power station and feedstocks for a biogas plant in that the feedstocks are generated through the activity of other sectors and will exist irrespective of the development of the biogas plant. The second Planning Report recommended that clarification of further information be sought.

3.2.4. The third Planning Report considered the clarification of further information response, internal and consultee reports, the additional observations received on foot of the readvertised public notices, and calculation of appropriate development contributions. Having regard to the provisions of the County Development Plan 2017-2023, it was considered that, subject to conditions, the proposed development would not seriously injure the amenities of the area, would not be prejudicial to public health, would be acceptable in terms of traffic safety, and would be in accordance with the proper planning and sustainable development of the area. Appendix 1 of the report contains, inter alia, an examination of the information presented in the EIAR and supplementary information, and a reasoned conclusion.

3.2.5. **Other Technical Reports**

Area Office – The report on the original planning application stated, 'No objection'.

In the report received on foot of the clarification of further information response it is recommended the application be referred to Road Design.

Road Design Office – Further information requested relating to road safety requirements i.e. directional arrow signs, traffic calming measures, footpaths and road widths, and pedestrian crossing points. A Stage 2 RSA of the finalised design should be provided for approval. Stage 3 and 4 RSAs to be completed after construction.

On foot of the further information response, the Road Design Office indicated no objection subject to conditions relating to Stage 2, 3, and 4 RSAs and construction standards for the proposed road and roundabout.

On foot of the clarification of further information response, Road Design had no further comment.

Environmental Protection – Comments/observations are made. As stated in the EIAR, the proposed development will require an IE licence from the EPA. Among its conditions, the licence will condition Emission Limit Values for emissions to air and water and specify monitoring requirements. Due to the scale of the development, prior consultation with the EPA and an agreement in principle, if possible, would be beneficial. No operations should begin on site until an IE licence is obtained.

There is concern regarding the potential for odour issues from the transport of waste to and from the site. Can it be conditioned that all trucks are fully covered and air tight.

Inland Fisheries Ireland's 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' should be strictly followed.

An additional response was also provided within the initial eight-week period. This related to reference in observations received about the Laois bylaws on waste management. The Executive Engineer in Environmental Protection understands this to be 'Bye Laws for the Regulation of the Land Spreading of Industrial Organic Waste', dated March 2004. This regulated the land application of industrial organic waste in the county, including restricting land spreading to only waste produced in Laois. The Executive Engineer notes that these bylaws were never enforced and, as they were not submitted to the Minister for Environment, Heritage and Local Government for approval, they have no legal standing.

Chief Fire Officer – No objection in principle. Comments made in relation to a Fire Safety Certificate(s) and fire hydrants.

3.3. Prescribed Bodies

3.3.1. **Environmental Protection Agency (EPA) –** The EPA made a submission on foot of the clarification of further information response.

The planning application states that the site is currently licenced by the EPA under Integrated Pollution Control (IPC) Licence P050701. Bord na Mona Energy Ltd. was issued this IPC Licence on 29.02.2000 for Class 1.4 of the First Schedule of the EPA Act 1992 'the extraction of peat in the course of business which involves an area exceeding 50 hectares'. This licence may need to be reviewed or amended or an IE Licence may be required to accommodate the changes proposed.

The planning application was accompanied by an EIAR. As part of its consideration of any licence application or licence review application which addresses the changes proposed, the Agency shall ensure that before a licence is granted, the licence application will be made subject to an environmental impact assessment (EIA) as respects the matters that come within the function of the Agency. In addition, consultation on the licence application and EIAR will be carried out in accordance with the EPA Act.

Should a licence application or licence review application be received, all matters to do with emissions to the environment from the activities proposed, the licence application documentation and EIAR will be considered and assessed by the Agency. Where the Agency is of the opinion that the activities as proposed cannot be carried on or cannot be effectively regulated under a licence then the Agency cannot grant a licence for such an activity. Should a licence be granted it will incorporate conditions that will ensure that appropriate national and EU standards are applied, and that Best Available Techniques (BAT) will be used. In accordance with the EPA Act, a Proposed Determination on a licence application cannot be issued until a planning decision has been made.

3.3.2. **Irish Water –** Further information was required in Irish Water's submission on the initial planning application. The applicant was required to confirm Irish Water could provide suitable water services and was satisfied with the design, layout, and specification of the proposed connection. The applicant was to commence pre-contract enquiry with Irish Water.

On foot of the further information response, Irish Water state that a Confirmation of Feasibility has been issued subject to upgrade works to the water network, and possibly to a pumping station. Standard conditions to be attached to any permission are requested and set out.

3.3.3. **Inland Fisheries Ireland (IFI) –** Comments/observations made. The site is located in the headwaters of the Cappanacloghy River, a significant tributary of the River Nore. The Nore is an important salmonid fishery. Much of the main channel and many tributaries, including the lower reaches of the Cappanacloghy, are designated as an SAC. Peat drainage has been identified as a significant pressure in the Cappanacloghy River with elevated nutrient concentrations of phosphates and

ammonia, as well as pollution from organic matter. Of significant concern to IFI is that the proposed development will necessitate the continuation of the current drainage/watercourse management scheme, thereby preventing future restoration of the Cúil na Móna bog complex. IFI is also concerned with the proposed peat stripping of the site and the re-use of this material within the development and the potential for significant nutrient loss from this activity. This potential for increased nutrient emissions has not been adequately addressed in the NIS. Further, the Water Framework Directive (WFD) requires that all waters should meet the quality elements to comply with good ecological status for unmodified waters or good ecological potential for modified waters.

Concerns relating to the construction/operational phases are set out e.g. no detail of baseline water quality monitoring and issues relating to the prevention of contaminated surface water discharging. All works will be subject to the annual close season for instream works. Guidance in the 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' should be strictly followed (copy attached to submission). Issues related to silt and settlement ponds are outlined.

The Ecological Clerk of Works (ECoW) should be independent of the main contractor and have the power to close the site should a pollution problem be identified.

A further submission was received from IFI on foot of the further information response. A number of impacts upon fisheries habitat from commercial peat harvesting are outlined e.g. realignment, deepening, widening, culverting, and construction of silt ponds to facilitate commercial peat extraction, all of which has occurred to watercourses flowing through, adjacent to, and downstream of the Cúil na Móna peatland complex. Poor quality habitat in many of the watercourses inspected in the EIAR relates to relatively recent practices linked to peat extraction and this habitat needs to be part of a rehabilitation plan. Significant water quality issues associated with working/cut-over peatland sites are also outlined e.g. organic pollution, lowering the water table, wind-blown peat, ammonia pollution, and water temperature. These all need to be addressed in any restoration/ remediation plan for the Cúil na Móna bog complex.

The applicant refers to an EPA licence requirement for a rehabilitation plan and refers to the transfer of the site to a different IE licence stating the development will not

prevent the rehabilitation plan for the wider bog complex. IFI has been unable to locate any proposal for the permanent rehabilitation of the wider Cúil na Móna bog complex and questions how it will not prevent the rehabilitation of the wider bog complex given that the maintenance of the drainage system within the site will impact on areas of the bog complex outside the site.

IFI also raises issues relating to drainage of surrounding lands, stripping and transfer of peat, groundwater levels, and ammonia run-off to surface waters. The IFI has concerns that the development of the facility may have significant implications on any long term rehabilitation scheme for the larger bog complex and considers the proposed development would be premature.

3.3.4. **Health Service Executive (Laois-Offaly Environmental Health Service (EHS)) –** The EHS considers traffic/roads/local infrastructure, digestate management, types of materials to be accepted, proximity to houses, and employment have been adequately assessed in the EIAR.

In relation to odour, the EIAR recognises the subjective nature of odour nuisance, and it is therefore important to continually monitor odour emissions and have a robust complaints procedure. Mitigation measures will be subject to assessment during the EPA licensing, if permission is granted.

The EHS is satisfied that surface water management and mitigation measures will adequately protect surface and ground water during construction.

A survey is recommended to verify the accuracy of the private well data.

In relation to noise and vibration, the use of EPA Guidance Note NG4 in assessing any impacts from noise does not assess the potential impact where an impact is considered a change in the noise environment. EHS experience is that it is any significant change in an existing noise environment that is most likely to lead to complaints post-construction, and not an absolute noise exposure. Predicted noise levels below the day and night time limits do not negate the necessity to avoid noise nuisance. It is recommended criteria outlined in Table 14-5 of the EIAR is used for assessing noise impacts.

The EHS is satisfied that if all measures in the CEMP are implemented there will be adequate protection of public health during the construction phase.

In conclusion, the EHS is satisfied that the assessments requested in EIAR scoping have been adequately carried out and reported in the EIAR.

3.3.5. **Transport Infrastructure Ireland (TII) –** The development is at variance with official policy in relation to control of development on/affecting national roads outlined in 'Spatial Planning and National Roads Guidelines for Planning Authorities' (2012) as it, or by the precedent it would set, would adversely affect the operation and safety of the national road network. Section 2.7 of the Guidelines concerns development at National Road Interchanges or Junctions. The proposal would create an adverse impact on the national road and associated junction at variance with policy. The proposed roundabout is in too close proximity to the existing interchange roundabout and does not comply with TII publications.

On foot of the clarification of further information response TII stated that its position remains as set out in their original submission.

3.3.6. **Department of Culture, Heritage and the Gaeltacht –** The Department made a submission on the initial planning application in relation to archaeology and nature conservation.

Archaeology – Given the scale and location of the proposed development it is possible that hitherto previously unrecorded wetland archaeological sites/features may be discovered during the course of groundworks. The Department strongly recommends an archaeological condition, as set out in the submission, be included as a condition of planning permission.

Nature Conservation –

1. An assessment of impacts of any nitrogen (NO_x) emissions from the CHP (combined heat and power) plant on nitrogen sensitive Natura 2000 sites should be included in the Appropriate Assessment (AA). Further information is required.
2. Consideration of the biodiversity impacts from land spreading of liquid digestate, including nitrogen deposition and nutrient enrichment of watercourses, should be included in the Environmental Impact Assessment and AA.

3. Care must be taken to ensure that conflict does not arise between the current project and long-term rehabilitation plans for this bog.
4. The legally protected Marsh Fritillary Butterfly has been found along railway lines which serviced the bog. Prior to commencement of any construction near railway lines, the ECoW should undertake a survey for this butterfly and its foodplant, Devil's-Bit Scabious.

The third planning authority Planning Report refers to a subsequent submission from the Department which states that 'The Department has no further comment in relation to this Planning Application at this time. No inference should be drawn from this that the Department is satisfied or otherwise with the proposed activity. The Department may submit observations/recommendations at a later date in the process'. It appears this is in response to the clarification of further information response, but the submission itself is not part of the appeal file and it is not on the planning authority's website.

3.3.7. **An Taisce –** No submission was made by An Taisce on the initial planning application.

A submission was made on the further information response. The EIA Directive requires consideration of the direct, indirect, and cumulative impacts of any EIA-required proposal. In relation to bioenergy, this entails assessing whether the feed input represents a sustainable source stream as well as assessing the impacts of that source. The crucial impact of a project such as this is its off-site sourcing of material inputs. The sustainability of the feed inputs and sources needs to be demonstrated as a preliminary matter and has not been in the original application or further information response.

In An Taisce v An Bord Pleanála (Edenderry Power Station), the High Court held that the environmental effects of extracting the peat for the power plant were not properly assessed for the purposes of the Directive and An Bord Pleanála is obliged to subject those environmental effects to EIA before any permission is granted. There is a direct functional interdependence between the proposed biogas plant and the feed source. Therefore the feedstock must be assessed as part of the EIAR and NIS. The applicant has not adequately assessed the environmental impacts of the possible feedstocks.

It is stated that biomethane production may not be the most maximally sustainable use of food waste, future action is required to reduce levels of food waste which would

reduce availability projections, and EIAR data on organic waste collection is out of date. The sustainability of that feedstock has not been justified. With regard to agri-food residues, the national bovine herd is increasing. This results in an untenable pollution impact etc. Owing to the lack of specificity on feedstock sourcing and sustainability of the feedstock there can be no guarantee of security of supply, the impacts of the feedstock sources cannot be adequately assessed, or choice of location justified.

The further information response does not clarify how climate impact figures were reached and if they take into account the lifecycle emissions from the feedstock.

There is an inherent contradiction in a biogas facility on a cutover bog ostensibly for the purpose of decarbonising. 71,000m^3 of peat will be excavated. This section of the bog should be rehabilitated. IFI concerns have not been addressed.

Bioenergy does not become 'sustainable' unless the sustainability of the feed input and site location choice can be justified. Otherwise it is a 'greenwash'.

3.4. Third Party Observations

3.4.1. More than 210 no. observations were received by the planning authority on foot of the planning application. These were from residents of the general area, two TDs, and eight councillors (one submission being a combined submission from a TD and a councillor). The main issues raised are largely covered by the grounds of appeal received with the exception of the following:

- Concern about the huge lagoon not being covered by an air-tight tarpaulin.
- It will be the first thing visitors will see entering this side of town / The motorway is higher than the development.
- Portlaoise is becoming the dumping ground of Ireland / Portlaoise does not need any more toxins / will turn Portlaoise into an undesirable place.
- Negative impact on tourism.
- Observers previously told the area did not have the infrastructure to cope with extra traffic.

- Permission is only sought to upgrade the R445 but the lane itself is not suitable for the proposed lorry movements.
- Create a new exit off the existing roundabout rather than a new roundabout.
- No footpaths.
- No similar size plant in Ireland / The plant may later be converted into a waste incinerator.
- Traffic impact on schools/through the town/use of the Portlaoise Southern Circular Road once opened.
- Transport routes are not identified / Congestion in Portlaoise and the surrounding towns as these will be the routes used.
- Light pollution.
- Dust nuisance / Impact of dust on flora and fauna.
- Spillages from HGVs will create hazardous driving conditions.
- The volume of traffic will damage the roads.
- The grass verge to be widened appears to be in private ownership.
- The essence of the project is to take various categories of waste and convert it to liquid digestate for land spreading. This majority output is described as a by-product. The development description is camouflage.
- The consultation process should have included businesses in the town centre and all Mountrath Road residents. The offer of a visit to a facility in Wales was to a smaller 50,000 tons facility / Absence of appropriate consultation in the early stages to the majority of local residents / Only residents within 1km were informed.
- The development is tantamount to an experiment to see if such a development can work in proximity to an urban area.
- Use of chemicals and their release into the environment.
- Frequency of flare use and related issues unclear.

- Gas main should be located in the proposed access road, not the road to be closed.
- Overlooking of nearby property.
- A comprehensive investigation of the botanical and insect species on the bog needs to be undertaken.
- Loss of amenity area.
- An existing problem with water pressure and supply / Proximity to reservoir.
- Who is responsible for monitoring lorries entering and exiting?
- Is there an Explosion Protection Document/Explosion Risk Assessment / Risk of explosion.
- Has the applicant applied for or obtained a waste licence and permit from the EPA.
- Duration of building works.
- Contrary to Regional Planning Guidelines.
- Concern over health impacts such as occurred at Kyletalesha dump.
- Adverse impact on archaeology.
- Full surface water network not adequately surveyed.
- Site location outside the Local Area Plan boundary and will set a precedent.
- Development operations may be expanded in time.
- The development disregards the objectives in the County Development Plan 2017-2023 to take into consideration visual impact, landscape protection, impacts on residential amenity, and impact on wildlife and habitats.
- The development contravenes the applicant's own mission statement.
- Pressure on healthcare system.
- Proposed hours of operation during construction and operational stages.
- Insufficient mitigation measures in the EIAR.
- No applicant representatives at group meetings.

- No surface water capacity for additional volumes.
- Odour complaints from other such facilities and issues with leakage.
- Fire.
- Remediation proposals once no longer in use.
- Impact on agriculture.
- Concern about the quality of feedstock being imported from abroad.
- What legislation will be in place by the time the facility is operational.
- Additional anti-social behaviour from boy racers at the existing and proposed roundabouts.

3.4.2. Revised public notices were published following the clarification of further information response. Approximately 49 no. additional observations were received from residents, one TD, and three councillors on foot of these revised notices. The main issues raised are largely covered by the grounds of appeal and previous observations received with the exception of the following:

- Impact of the proposed works to the water system as suggested by Irish Water.
- The HSE acknowledges there will be an odour issue and advised a robust complaints procedure to be put in place.
- Lack of empathy for families whose houses back directly onto the site.
- Difficulties with timeframes given Covid.
- Taxpayer subsidy is required to make this viable. Without commitment from the government on behalf of the taxpayer in relation to the subsidy required it should be deemed premature.
- Only superficial changes have been made / Concerns have not been allayed.

4.0 **Planning History**

4.1. There has been no previous relevant planning application on site.

4.2. Pre-planning was carried out on 19.04.2018, 04.09.2018, and 16.05.2019. No pre-planning reference number has been provided.

4.3. The EIA Portal ID is 2019151.

5.0 Policy Context

5.1. Climate Action Plan 2021 – Securing Our Future

5.1.1. This was launched in November 2021. The Plan follows the Climate Act 2021, which commits Ireland to a legally binding target of net-zero greenhouse gas emissions no later than 2050, and a reduction of 51% by 2030. These targets are a key pillar of the Programme for Government. Biogas is included as a 'Further Measure' i.e. more challenging – technically and societally – and may not yet be available at the required scale in Ireland.

5.2. Waste Action Plan for a Circular Economy 2020-2025

5.2.1. This is Ireland's roadmap for waste planning and management and is published by the Department of Environment, Climate and Communications. The Plan shifts focus away from waste disposal and looks instead to how we can preserve resources by creating a circular economy.

5.2.2. In relation to food waste, in the 'Food Waste Hierarchy', anaerobic digestion is behind prevention of food waste, feed people, and feed livestock, and ahead of composting, and disposal (landfill or incineration). In relation to anaerobic digestion, it is stated 'We want to realise the Anaerobic Digestion (AD) and composting potential of the food waste resource. AD and composting provide opportunities for regional development with benefits for communities through sales of locally generated energy and compost'.

5.3. Project Ireland 2040 National Development Plan (NPF)

5.3.1. The NPF is a high level strategic plan to shape the future growth and development of the country to 2040. The Framework will be focused on delivering 10 National Strategic Outcomes (NSOs). NSO 8 is 'Transition to a Low Carbon and Climate Resilient

Society'. NSO 9 (Sustainable Management of Water, Waste and other Environmental Resources) refers to effective waste management and states that planning for waste treatment requirements to 2040 will require biological treatment and increased uptake in anaerobic digestion with safe outlets for bio stabilised residual waste, and 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.

5.3.2. A number of relevant National Policy Objectives (NPOs) are contained in Chapter 9 (Realising our Sustainable Future). Inter alia, NPO 55 (Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050) and NPO 56 (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), apply.

5.4. Eastern & Midland Regional Assembly Regional Spatial & Economic Strategy (RSES) 2019-2031

5.4.1. There are 16 no. Regional Strategic Outcomes (RSOs). RSO 8 is to build climate resilience. RSO 9 is to support the transition to low carbon and clean energy.

5.4.2. Section 7.9 (Climate Change) states 'The Strategy supports an increase in the amount of new renewable energy sources in the Region. This includes the use of wind energy – both onshore and offshore, biomass … in accordance with National policy and the Regional Policy Objectives outlined in this Strategy'.

5.5. Eastern–Midlands Region Waste Management Plan 2015-2021

5.5.1. The Executive Summary states that one of the key measures for local authorities and industry contained in the plan is 'Grow the biological treatment sector, in particular composting and anaerobic digestion, by supporting the development of new facilities'.

5.6. Laois County Development Plan 2017-2023

5.6.1. Section 1.2 (Planning Context) includes the Eastern-Midlands Region Waste Management Plan 2015-2021 as one of the regional level strategies considered in the preparation of the Plan.

5.6.2. Strategic Aim 12 of the Plan, as set out in Chapter 2 (Development Plan Strategy (Core Strategy)) is 'Support the development of key infrastructure such as telecommunications, electricity, gas to enable economic development'. Strategic Aim 13 is 'Ensure that development is promoted, supported or facilitated by the Laois County Development Plan, provides for climate change including for the increased risk of flooding and the promotion of renewable energy where possible'.

5.6.3. Section 6.6.1.2 (Bioenergy) states,

'Bioenergy is energy extracted from biomass which includes biological material such as plants and animals, wood and waste.

Bioenergy is produced through many different processes: combustion and anaerobic digestion being the most common and widely used. Combustion is the process whereby biomass (for example wood chips) is burned to produce process heat or to heat space or hot water. Anaerobic digestion involves the bacterial transformation of biomass (for example animal manure) to methane gas or biogas. The biogas can be used to fuel a stationary gas engine or gas turbine to produce electricity, or burned in a boiler to provide heat or to raise steam. Biogas can also be compressed and used as a transport fuel. The majority of current biomass derived energy comes from wood combustion to produce heat.

The Council supports the potential of growing biomass crops on cutaway bogs and at other suitable locations. The Council supports the use of Combined Heat and Power (CHP) Plants which would be fired by environmentally friendly low carbon fuels such as biomass'.

5.6.4. Policies EN1 and EN4 in Chapter 6 (Infrastructure) are relevant. Policy GAS 1 states it is the policy of the Council to 'Support and facilitate the development of enhance gas supplies and associated networks, to serve the residential, commercial, industrial and social needs of the county'.

5.7. Natural Heritage Designations

5.7.1. The closest Natura 2000 site is Slieve Bloom Mountains SPA (Site Code 004160) approx. 5.5km to the north west. The closest heritage area is Ridge of Portlaoise pNHA (Site Code 000876) approx. 3.3km to the north east.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. Grounds of appeal have been submitted by:

1. Tom Greed, Clonkeen, Portlaoise R32 K23R (approx. 850 metres south of the site)
2. Matthew and Colette Duff & Ors, Clonkeen, Portlaoise R32 Y7PN (adjacent to the south west of the site)
3. Pat Fogarty, Clonkeen, Portlaoise
4. Andrew & Maria Tyrrell, Boughlone, Portlaoise R32 W802 (approx. 700 metres north east of the site)
5. Nicola Ní Lorcáin, Tír na nÓg Preschool, Boughlone, Mountrath Road, Portlaoise (approx. 1.3km north east of the site).
6. Tomas Phelan, Clonkeen, Portlaoise R32 V0H3 (approx. 1.2km south of the site)
7. Paul & Kasia Gaynor, 34 Rockdale, Mountrath Road, Portlaoise (approx. 2.2km north east of the site)
8. Colm Dunne, Clonboyne, Portlaoise
9. Michelle Seale, Clonboyne, Portlaoise
10. John Paul Seale, 2 Rockview Hill, Portlaoise (approx. 2.3km north east of the site) and previously Clonboyne, Portlaoise.
11. Brian Seale, Clonboyne, Portlaoise (adjacent to the north east of the site on the R445)

6.1.2. The separate grounds of appeal address similar issues. I have collectively outlined the main issues as follows:

<u>Health</u>

- Proximity to the new largescale cheese production facility and other foodstuff preparation facilities would pose a serious risk with airborne pathogens.

- The planning conditions do not properly protect the local population from prolonged low-level exposure to gasses, exposure to pathogen linked disease contamination and spread, hazardous substances, and biological agents, the local population's living exposure limit, and risk of explosion. Local monitoring should be facilitated to ensure compliance.
- Odour / odour nuisance / odour can have neurological effects / exposure to offensive odour can cause stress / odour can exacerbate health risks.
- An air abatement facility will treat internal odours but there are no proposals to deal with odours from the digestate storage area, lagoons, and trucks.
- Noise, air and water quality, dust and odour are only predicted estimates. Query as to why research into a similar facility was not undertaken and what happens if the predictions are wrong.
- Potential of increased cancer risk.
- Potential for negative impact on air quality / odourless toxic fumes / evaporation of output lingering in the air.
- Nobody can say what health effects the proposed development may have.
- Mental health impacts from stress and worry of potential health impacts.
- Increase in vermin, flies, insects, birds etc.
- Increase in pollution from an increase in traffic.

<u>Infrastructure</u>

- The stretch of road leading to the facility continues to be an accident blackspot / at least eight fatalities in the last 20 years.
- Additional slow moving lorries would enormously increase the danger.
- 83 no. daily lorry movements 40 metres from the Duff property is not acceptable.
- Increased traffic / congestion / traffic hazard.
- TII's position is that the proposed roundabout is too close to the existing roundabout. There is a query about how the 50 metres distance for a new

priority junction from a roundabout was applied rather than the 90 metres distance in the TII publication.

- No RSA was carried out for the access road.
- The proposed roundabout design is not designed to cater for the HGV volume in terms of forward visibility and stopping sight distance not meeting DMURS, sightlines to the west of the facility access road are restricted, and the swept path assessments show two trucks on the bend of the access road off the roundabout will collide, a vehicle exiting the opposite arm has to mount the footpath, two vehicles will collide to the rear of the splitter island and a truck crossing the centre line. Should permission be granted any revisions would not be subject to review by the public or relevant bodies and this would not be acceptable.
- What consideration was given to Policies TRANS 7, 9, and 15 of the County Development Plan 2017-2023 in making the decision.
- The new roundabout would appear to conflict with Policy TRANS 3 relating to future upgrade of the existing interchange.
- The R445 is a strategic regional road. Greater restrictions/scrutiny has applied along this road for new development. Permission for a light industrial warehouse was refused under P.A. Reg. Ref. 05/1396 (unserviced, unzoned land) on the opposite side of the R445. Have the policies now changed to suit this applicant?
- How will the 20% of HGVs using the R445 in the direction of Portlaoise be monitored and controlled / how will the volume of trucks entering and exiting be monitored and will the results be publicly available.
- A large percentage of HGVs avoid toll roads.
- The access lane is currently secluded and safe. There are no proposed cycle lanes or walkways to ensure public safety given the proposed increase in traffic / The access lane is in a bad state of repair and is not safe in terms of width / No survey was carried out of existing pedestrian use of the access road / a footpath should be provided in line with Council policy.
- Farmland is also located on the access road.

- Concern expressed about the manner of closure of part of the existing lane in terms of local access and drainage / No proposals for the closed access road to prevent antisocial behaviour.
- Concern about spillages on the lane/R445.
- The local reservoir will be severely depleted with the sinkage of wells to supply the facility.
- There is no indication of where the 55,100m^3 of water will be sourced for the digestate lagoon.
- Most houses within a 1km radius and all houses and farms in a 500 metres radius rely solely on private wells. The precautionary principle should apply.
- Local water supply is not protected / concern about impact on adjacent and nearby wells / all local wells should be tested a minimum three times a year and an alternative supply of potable water provided should the well run dry / a substantial bond be lodged / pollution of the water system (domestic and agricultural).
- In 2020 an Inspector's Report (ABP-307420-20) for a housing development stated that Irish Water stated that water infrastructure is not capable of supporting any further development in Portlaoise. The project may result in a dramatically diminished water supply to Portlaoise.
- Concern expressed over Irish Water capacity as set out in An Bord Pleanála reports (ABP-303981-19 and ABP-307420-20).
- Possibility of leakage from the lagoons / possibly of flooding of the lagoons from precipitation.
- Risk of subsidence allowing liquids to enter waterways and tables.
- No precedent for this type of waste facility in the area. Under P.A. Reg. Ref. 06/1276 (treatment of biodegradable waste) the Council Planner noted the proximity and precedent of Kyletalesha Landfill Waste Facility and that the nearest house was approx. 300 metres away. In the current application these previous considerations made/opinions reached appears to have been

ignored/overlooked / The most suitable location is co-location with Drehid Landfill in Co. Kildare.

- A similar development in the UK experienced major issues including pollution events.
- The foul water storage calculation is not in line with the Irish Water Wastewater Code of Practice. There is only capacity for approximately 12.5 days, not 20 days. There would not be capacity for two days during the construction phase. No suitable confirmation has been received to indicate there is capacity to accept waste.

Biodiversity

- The by-products will inevitably leak into the local bog and rivers and become a danger to the bog and the population of Portlaoise.
- Siting a factory on pristine bog is criminal. The bog should be allowed to return to its natural order.
- Disturbing and destroying the bog habitat would devastate the flora and fauna of the area / loss of biodiversity and natural habitat.
- Boglands offer the perfect opportunity for more open space facilities for Portlaoise/Co. Laois / could have been developed as a greenway.
- Rehabilitation of boglands offer a much better alternative to reducing carbon emissions than a facility transporting waste across Ireland and the rest of the world / Restoring and rewetting the peatland area would be far more beneficial to the climate than removing thousands of tonnes of peat given a bog's role as a carbon sink.
- Gasses will be emitted and undoubtedly adversely affect the recovery of the bog.
- The bird survey method is very limited and does not satisfy the requirement. Inadequate days and time spent, inadequate months in the survey season, no mention of barn owls.
- A more thorough bat survey should be required.

- The Arborist report does not take into consideration any trees along the access road or the area at the location of the proposed roundabout.
- Allowing liquids to enter local waterways and tables could be extremely detrimental to protected species within the Barrow river system.
- A systems failure will put the population of Portlaoise at risk because the prevailing wind blows into Portlaoise.
- A systems failure with the digestate will destroy the recovery of the bog.
- Bord na Móna continue to harvest peat despite ecologists campaigning to stop interference with bogs.
- Smells and odours may affect livestock.

Operation of the Facility

- While anaerobic digestion is 'green' in concept, outside waste has to be imported to create the gas and make the project viable.
- The amount of vehicle journeys on fossil fuel vehicles required to sustain the plant far outweighs any potential clean energy that could be provided.
- The waste facility is not about providing renewable energy, it is about making money at the expense of people in Portlaoise. The energy by-product does not justify the catastrophic, environmental, social, cultural, and natural effects.
- The applicant told local residents that they will import waste from wherever is necessary, including outside Ireland.
- There is a question as to why the applicant is considering a project of this magnitude when the ultimate aim is to end the use of fossil fuels for home heating.
- Germany recommends small-scale rather than large-scale anaerobic digester plants / if anaerobic digestors are the way to go then a facility to cater for a section of the population of each area should be the alternative.
- Literature does not support the assertion that airtight containers are possible.
- The AA is very sparse on how gas flaring will take place.

- Strict regulations regarding feeder lorries are lacking. Lorries must be strictly managed. Tighter controls and penalties are needed. The application should be turned down until there is proper regulation of feeder lorries.
- The development should not proceed until sufficient contracts have been signed relating to land spreading of digestate. The planning process must protect the local population from improper land spreading / No robust procedure to know where fertiliser will be spread. There will be no accountability in the event of a catastrophic river kill from water contamination.
- Disposal of excess water from chemical processes.
- Accident prevention and emergency response measures need to be clearly defined and understood before permission is granted.
- Only six-eight workers will be employed in the operational stage / The development will provide at most two jobs.
- The applicant has a lack of experience managing/developing these types of facilities.
- The Council's Waste Management Bye-Laws indicate that waste generated outside Laois should not be processed in Laois. It appears the Council has ignored its own waste management bye-laws.
- As methane gas accounts for only 15% of the final product it must be regarded as only being a by-product with the main product being digestates.

<u>Amenity</u>

- Proximity to the Duff and Seale residences and impact on residential amenity.
- No photomontages were taken from the Duff perspective. The development will cause an unsightly visual impact.
- To suggest the visual impacts on local receptors will be imperceptible is ludicrous and untrue / negative impact on the landscape.
- Shadowing impact from digesters into the Seale garden.
- Impact on views.

- Local residents were never made aware of the potential for the proposed development.
- The site location does not put locals' health and safety first but ensures more profitability.
- There are well over 1,000 houses between 250 metres and 2km from the facility.
- Noise and vibration nuisance to local residences from the facility and HGVs.
- One appellant wants the structure of their house to be assessed prior to commencement of development and after completion assessed again with repairs taken care of.

Miscellaneous

- Devaluation of property.
- The development could jeopardise the future development of Portlaoise. Who would want to live near an anaerobic digestor?
- There are more suitable sites both in the applicant's ownership and in the Council's ownership, such as the zoned land at Togher. The Togher land is a strategic location, intended and existing commercial units could supply feedstock and reduce HGV movements, it has a large area of undeveloped land potentially for feedstock, and there are existing services including gas, for connection.
- Concern over possible future uses of the remainder of the bogland.
- At a pre-planning meeting for a house John Paul Seale was informed it was not possible to build on a particular area of land due to the nature of the road and relevant road policies. Therefore surely a development of this magnitude is not safe.
- Impact on existing businesses from odour e.g. Pat Fogarty repair and service, IDA Park, Glanbia cheese factory, Clonminam Industrial Estate.
- Impact on the Tír na nÓg Naíonra business, wellbeing of pupils, and welfare of staff. Much of the Naíonra activity takes place outdoors.

- The applicant has shown no regard for the well-being of local residents / lack of empathy for local families.
- No consultation with the community.
- The applicant has been involved in unauthorised commercial activity (mulching/logging timber) on the site for the last number of years.
- No faith in the applicant to comply with conditions.
- EPA licence conditions must form part of the planning application.
- The EIAR contains massive inaccuracies/general omissions e.g. community engagement, location of residences, no mention of loss of habitat for bees, did not take into account emissions from HGVs required for transportation, impact on agricultural activities / The EIAR requires an independent study.
- Unfair to grant permission during a global pandemic when members of the community cannot meet to form an appeal.
- The waste factory will be situated on a prime location for everyone heading to the south of Ireland.
- As of 25.01.2021 the final Planners Report was still not available on the Council Portal. Without access to this a strong appeal cannot be built. The AA determination is specifically referenced in this regard.
- Query as to how the development complies with 'Ireland's Transition to a Low Carbon Energy Future 2015-2030' / how the development complies with Bord na Móna's Biodiversity Action Plan 2016-2021.
- The Council has failed to adopt their own policies in relation to peatland as set out in the Wind Energy Strategy 2017-2023.
- Controls around Condition 8 of the Council's decision is vague.
- An Bord Pleanála rejected an anaerobic digester in Co. Donegal (PL 05E.242700), for reasons similar to those which are considered to apply for the current application.

- The negative impact of the development as set out in the EIAR affects local residents and residents on this side of Portlaoise whereas the positive impacts are at the national and EU level.

6.2. Applicant Response

For clarity, I will generally use the same headings as contained within the applicant's response. The main points made can be summarised as follows:

Development Overview and Overview of the Process

- The proposed development is a waste management facility that uses an anaerobic digestion (AD) technology designed to treat 80,000 tonnes per annum of biodegradable and organic material to produce biogas and digestates. The biogas will be upgraded on site to biomethane gas for injection onto the local gas network through a Network Entry Facility. GNI will own and control equipment within the Network Entry Facility and ultimately be responsible for distribution of the biomethane on the Irish gas network.
- An approx. 2.3km gas pipeline extension is required from the Bellingham housing estate as well as the upsizing of approx. 3.8km of existing water infrastructure from the Pallas reservoir. These will be undertaken by GNI and Irish Water respectively. The environmental impact of the gas pipeline extension is assessed in the EIAR and of the water infrastructure in the EIAR Addendum, but planning consent is not being sought for either.
- The biodegradable and organic matter, known as feedstocks, includes source segregated biowaste such as brown bin waste, food processing/industrial biodegradable wastes e.g. distillers' grain, dairy by-products etc., and agricultural residues such as slurries, litter, washings.
- The stages of the process are broadly outlined (as set out in Section 2.6 of this Inspector's Report).
- The activity falls within the remit of the Industrial Emissions (IE) Directive (2010/75/EU) and an IE Directive licence application will have to be submitted to the EPA. In accordance with legislation, 'no conditions controlling emissions from the operation of the proposed activity, including the prevention, limitation,

elimination, abatement or reduction of those emissions, or controlling emissions related to or following the cessation of the operation of the activity may be imposed by the planning authority'. Those matters are determined by the EPA. The development cannot operate without the consent and grant of licence from the EPA.

- The IE Licence controls, inter alia, emission limit values for emissions to air and storm water, monitoring requirements for emissions, waste management control documentation, waste acceptance and records, storage and transfer of substances, facility management, and accident prevention and emergency response.
- Animal By-Products approval from the Dept. of Agriculture, Food and the Marine, Gas Safety Case approval from the CRU, and Fire Safety Requirements operational approvals are also required.

Procedural Matters

- The applicant raises issues in relation to the grounds of appeal submitted by Ann Byrne and Matthew and Colette Duff/Joe Bennett[1].

Principle of Development

- The identification of project need and supporting and sectoral policies were set out in the EIAR. Project need was considered against the backdrop of future projected national organic waste generation and evidence of increasing deficits in treatment capacity. The project need also considered the potential for renewable biogas production and GNIs strategic objective of achieving the target of 20% renewable gas by 2030.
- The policy appraisal in the EIAR was augmented as part of the further information response. A Planning Support Statement gave further depth to the policy appraisal and included sections on waste management, renewable energy, climate change, and spatial planning at European, national, and regional scales.

[1] The Ann Byrne grounds of appeal was subsequently withdrawn. The Duff/Bennett grounds of appeal is considered as Matthew and Colette Duff & Ors. For clarity, the content of the Ann Byrne submission has not been taken into consideration in this Inspector's Report.

- The estimated quantum of greenhouse gas (GHG) emission savings is 270,160 tonnes of CO_2 equivalent per annum. Replacement of natural gas with biomethane would help reduce reliance of domestic heating on fossil fuels.
- The development is first and foremost a waste management facility. The principles of the circular economy are embedded in the design and processing activities. As secondary products it will produce biomethane, organic fertilisers, and soil supplements. The primary purpose is to assist in the regional management of organic waste.
- Under the Waste Management Act (1996), planning permission shall not be refused solely on the grounds that the proposed development was not specifically mentioned in a waste management plan, if the planning authority or Board consider the development will facilitate achievement of the waste management plan objectives.
- In relation to how the development would support climate change policies given the objective to remove fossil fuel-based oil and gas heating from new houses, the injection of approx. 7,000,000m^3 of renewable biomethane gas will result in a saving of approx. 14,000 tonnes CO_2 equivalent per annum. There will be a requirement to maintain the existing gas supply network.
- While smaller scale facilities may be a useful addition to the dispersed nature of agricultural waste, the proposed facility is intended to address the significantly wider context of organic municipal waste (brown bin) and industrial biodegradable waste. Agricultural biodegradable material is likely to represent the smallest fraction of the feedstock. To ensure viability for competitively priced biomethane and gate fee for organic waste a facility of this size is necessary.
- The site is in an area of 'Strong Urban Influence' in the rural area. The Core Strategy of the County Development Plan seeks to minimise urban generated housing. Appellants suggest the development would restrict future housing potential. Existing rural housing policies are the dominant influence on the potential for new housing development in the area. The proposed facility will not alter this and will itself not limit future housing opportunity in the area.
- While the proposed development is not directly associated with peat extraction it does align with the applicant's wider enterprise strategy to transition use of

peatlands to decarbonised business activities. 97.6% of the bog area will remain in its current state.

- An appellant indicates the Board refused permission for ABP Reg. Ref. PL 05E.242700, an anaerobic digester in Co. Donegal. The Board granted permission for this application.

Site Location and Selection

- Of the 167 no. land parcels owned by Bord na Móna, 161 no. sites were screened out because of distance from the main sphere of operation in the Midlands, they were greater than 3km from the gas network, were 3km from the main roads network/had poor HGV access or were in proximity to areas of higher biodiversity. The suitability of the remaining six was further assessed applying site-specific selection criteria including proximity to houses, gas network, electricity and other infrastructure, and potential for emissions to sensitive receptors. The applicant was sensitive to proximity to houses and considers adequate separation has been provided. The subject site was identified as being most suitable.
- The decision to locate the facility as proposed within the bog was informed by site area/characteristics (existing activities/use, proximity to road and gas network), identification and consideration of site restraints (distances to landowner boundaries, ecological importance, sensitive receptors, site entrance, and road network), site investigation (preliminary peat probing, trial pits), application of setback distances, and local and community feedback at public consultations.

Nature of the Development

- Digestate Lagoon – The lagoon is designed to have a base storage capacity, with 1 metre freeboard, of 43,000m^3, or the equivalent of 26 weeks digestate production. This ensures sufficient on-site storage in the event of prolonged bad weather disrupting land spreading i.e. there would be capacity for an additional 12,100m^3, or 7.4 weeks emergency storage with 0.25 metres freeboard. The lagoon will provide more than adequate storage during the 14-week closed spreading window.

The base and side wall will be lined with high-density polyethylene (HDPE) to prevent leakage. Included in the design is a groundwater control/leakage monitoring layer below the HDPE liner. A network of pipes will drain to a groundwater collection sump outside the lagoon. This sump will also be used to monitor the integrity of the lagoon. In the extremely unlikely event of the basal liner being damaged during operation the groundwater control layer will act as a preferential pathway for leaking digestate and will be collected at the groundwater control sump, alerting operators.

The entire lagoon will be covered by a welded linear low-density polyethylene (LLDPE) cover which will rise and fall with the filling and emptying of digestate. The primary function of this floating cover is to prevent rainfall ingress. Floating lagoon covers are a commonly applied form of lagoon containment technology. With respect to fugitive odour, the digestate, having being processed prior to transfer to the lagoon, will have been stabilised minimising odour generation. The lining systems will undergo leak detection testing.

The risk of overflow is extremely unlikely. Pumping of digestate to and from the lagoon will be carefully controlled. The development includes a Supervisory Control and Data Acquistion (SCADA) system which allows industrial facilities to control industrial processes, process real-time data, interact with devices, record events, provide alarms etc.

- Vermin – The applicant recognises the potential for concern owing to the type of facility and activity proposed. Vermin control/management will be an innate part of ongoing operation and maintenance. Handling and storage of material will take place within the Reception Building only. By virtue of design and operation the attraction of vermin will be minimised. Mitigation for controlling odour, which may potentially attract vermin, are outlined in the EIAR. An IE Licence will require the operator to ensure that vermin do not give rise to nuisance at the facility or in the immediate area.

- Water Supply and Groundwater Quality – Water usage will consist of a potable and process supply, with an estimated usage of 25,000m^3 per annum. The development will not include the installation of a groundwater supply well(s) and groundwater will not be abstracted for the provision of potable or process water. Water will be provided via the public supply. Process water will be supplemented by rainwater harvesting. Irish Water has confirmed they can supply the demand.

  There is no proposed discharge to ground from site. Wastewater from welfare facilities will be diverted to a storage tank, emptied periodically, and suitably disposed of. Temporary 'portaloos' will be in place for the construction phase.

  During construction dewatering may be required during excavations for deeper foundations if high groundwater is encountered and where excavations have the potential to extend into the groundwater table within the underlying bedrock. This can cause a temporary reduction in groundwater levels. Any potential reduction would be temporary and groundwater levels would revert to pre-construction levels when there is no longer a requirement to control groundwater levels. If dewatering of excavations is required monitoring of groundwater levels from existing monitoring wells will be carried out. The development has been designed and will be constructed to ensure no failure of structures or infrastructure could occur resulting in leaking of stored material to the environment. With implementation of mitigation, the residual impact of the proposed development on hydrogeology and groundwater quality would be imperceptible.

- Hydrogeology and Hydrology – There are comprehensive hydrological and biodiversity impact assessments in the EIAR. A comprehensive AA Screening Report and NIS were prepared. A flood risk screening exercise demonstrated that there is no risk of flooding on site. The EIAR determined the development will not create a flood risk. The development has been designed in accordance with SuDS guidance.

During the operational phase, all surface water runoff will be collected via a dedicated drainage network which will discharge to an attenuation pond. All collected surface water will pass via an oil interceptor prior to entering the attenuation lagoon. The lagoon will discharge to the drainage outfall at the greenfield runoff rate.

The facility will not generate large quantities of wash-down water. Generation will be from washing vehicles, containers etc. in the reception building and biofilter process liquids, run-off from biofilter wetting/trickle feeding. Wash waters generated in the reception building will be collected via the internal drainage network and directed to an underground storage sump from where it will be pumped into the digestion process. Biofilter process liquids will also be pumped into the digestion process.

Rigorous control measures have been incorporated into the design in relation to materials and hazardous chemicals.

A detailed water quality monitoring programme will be implemented in accordance with the requirements of the IE Licence. Overall, with mitigation, the residual impacts on surface water quality will be slight. The development is not likely to result in significant effects to any Natura 2000 site.

Land spreading of digestate will be subject to conditions laid out in the IE Licence. A fundamental condition will be the preparation of Nutrient Management Plans for review and agreement. These plans and land spreading activity will be conducted in accordance with legislation.

The planning authority concluded that there is no likelihood of any impact on private wells associated with the development.

- Explosion and Fire Risk, Hazards and Accidents – The type of feedstock material and quantities of that material accepted will be strictly regulated under the IE Licence. The applicant is subject to regulation under a number of statutory bodies, including the CRU, the body tasked with regulation of gas undertakings in relation to the supply, storage,

transmission, distribution, and use of natural gas. A Safety Case outlines how the operator will manage the risks associated with their activity.

The development includes for safe gas storage to accommodate periods when biomethane cannot be injected in the gas network. The temporary approx. 8.14 tonnes storage is below the lower tier requirement of 10 tonnes for 'P2 Flammable Gases' of the Seveso III Directive. The Directive does not apply to this development.

Propane and all potentially hazardous chemicals will be appropriately handled and stored. The tank farm will be bunded.

The construction of the extension to the gas network pipeline will be undertaken by GNI and injection and distribution of the biomethane will be the responsibility of GNI.

A Fire Water Risk Assessment outlined fire detection and suppressant equipment to be installed.

Prior to commencement of operations a fire certificate will be obtained. No objections were made against the development by the Chief Fire Officer.

Considering the standard of design and the strict regulatory environment and health and safety standards, concerns regarding explosion and fire risk are unfounded.

<u>Scoping and Consultation</u>

- The applicant does not agree that the consultation process was not comprehensive. Engagement with the public comprised two community information sessions in June 2018 and April 2019, two information sessions on the evening before the community information sessions for public representatives, appointment of a Community Liaison Officer in May 2018 who visited approximately 20 no. homes in the immediate vicinity, responses to approx. 30 no. queries, and facilitation of a visit to an AD plant in Wales but only one member of the public was available.

Biodiversity (including Peat Land Rehabilitation)

- A comprehensive biodiversity impact assessment was conducted as part of the EIAR. An AA Screening Report and NIS, and addendums, were also submitted.
- Regarding the barn owl, the EIAR review of the National Biodiversity Data Centre noted the recorded presence of barn owl with the last year of record within the 10km grid being 1972. It was determined not to be a key ecological receptor. Barn owls were not observed during surveys.
- Potential impact on bats was comprehensively assessed in a bat activity report. Only very low levels of bat activity were recorded on site during the August and September 2019 surveys. Existing trees were too immature to provide roosting sites.
- The assessment on biodiversity concluded that, with mitigation, the impact on flora and fauna would be imperceptible to slight.
- A Biodiversity Management Plan was submitted as further information. This outlines the ecological enhancement measures to be implemented to enhance and manage biodiversity e.g. utilisation of excavated peat for creation of berms and subsequent planting, installation of bird and bat boxes, and creation of a wildlife pond.
- A further information response related to a conflict with plans to rehabilitate the bog. The applicant stated the site is only 2.4% of the Cúil na Móna bog area. As part of the IE Licence application Bord na Móna will apply to the EPA to transfer the site from the existing IPC Licence to the new IE Licence. Therefore, the development will not prevent the implementation of the rehabilitation plan for the wider bog as required under the existing licence. Any IE Licence granted will include a condition requiring the licensee to submit a plan for the closure, restoration, and aftercare of the site.

Air Quality and Odour

- A comprehensive air quality impact assessment of potential impacts on air quality and climate was included in the EIAR. The assessment was conducted in accordance with relevant guidance, code of practice, and accepted

methodologies. Dispersion models and impact assessment took account of all potential sensitive receptors.

- Traffic emissions were also assessed. Due to the relatively low volumes of traffic generated during construction and operation the impact from traffic was considered to be long-term and not significant.
- Robust mitigation measures are proposed in the EIAR to mitigate any potential impacts on air quality, including odour, in the design of the facility and operational measures. The air quality assessment concluded that the residual effects on air quality and odour will be imperceptible or not significant.
- The impact in terms of human health is imperceptible.
- The IE Licence will include strict, legally binding conditions regarding management and monitoring of air emissions, including process and odour emissions.

Traffic and Transportation

- Access roads will be upgraded to support the proposed traffic to and from the facility.
- The proposed activities are predicted not to have a significant impact on the receiving road network. The proposed roundabout will give rise to some delay during construction and operation. The proposed roundabout will give rise to road safety benefits.
- A Stage 1 RSA was submitted. The applicant invites Stages 2, 3, and 4 RSAs to be appropriately conditioned.
- It is proposed feedstock deliveries and digestate collections will only occur from 08.00-18.30 Monday to Friday and 08.00-13.00 on Saturday.
- The EIAR concluded that residual effects with regard to traffic and transportation will be slight during the operational phase.
- Construction detail will comply to the latest TII standards and publications unless directed otherwise.

Noise and Vibration

- A noise and vibration impact assessment was conducted for the EIAR in accordance with relevant guidance and best practice methodologies. It included a comprehensive noise emissions model for the operational phase. It was conducted assuming a worst-case scenario i.e. daytime predictions assumed all plant was operating simultaneously including the gas flare, delivery of feedstock and removal of digestate. Evening and night operations are also clarified and included. The impact assessment concluded that during the operational phase predicted noise levels will be below limits. Predicted noise levels are lower than ambient noise levels at noise sensitive receptors and no specific mitigation is required.
- An IE Licence will impose appropriate noise emission limits and noise monitoring requirements.
- Guidance also states rigorous efforts should be made to avoid clearly audible tones and impulsive noise at all noise sensitive locations, and none should be audible at night.

Landscape and Visual

- Mitigation in this regard has been applied such as positioning the facility in a naturally low area of the site, digester tanks have been placed at a slightly lower level than the existing site levels, goosewing grey colour for taller structures to blend in with the typical sky, and maintenance of existing treeline and hedgerows to the south and east.
- Six photomontages were produced. The residual effects will be slight to imperceptible.

6.3. Planning Authority Response

6.3.1. The main points made can be summarised as follows:

- Prior to making a decision the Council undertook a comprehensive assessment of the proposed development. A wide ranging further information request and clarification of further information were sought.

- Relevant local, regional, and national policies were considered as were the views of prescribed bodies and internal sections of the local authority.
- The content of the third party objections were considered.
- The plant cannot become operational unless in receipt of an IE Licence from the EPA.

6.4. **Observations**

6.4.1. One observation has been received by the Board, from Brian Stanley TD & Cllr. Caroline Dwane Stanley. The issues raised are largely covered by the grounds of appeal.

6.5. **Further Responses**

6.5.1. None sought.

7.0 Assessment

7.1. This assessment has three elements: a planning assessment, an environmental impact assessment (EIA), and an appropriate assessment (AA). In each assessment, where necessary, I refer to issues raised by the parties in the various submissions to the Board. There is an inevitable overlap between some assessments, for example some matters raised falling within both the EIA and the AA.

8.0 Planning Assessment

Having examined the application details and all other documentation on file received in relation to the appeal, and inspected the site, and having regard to relevant local/regional/national policies and guidance, I consider that the main planning issues in this appeal, other than those set out in detail within the EIA and AA, are as follows:

8.1. Development Description

8.1.1. The development is described in the public notices as a renewable gas facility. The importation of feedstock or the use of the development as a waste management facility, and the production of digestate for land spreading, were not specifically referenced in the public notices. The planning authority validated the planning application and did not consider this to be an issue of concern. Additional public notices were deemed necessary by the planning authority on foot of the clarification of further information response, but not on the basis of the development description.

8.1.2. The issue of the development description was raised in one of the observations received on foot of the planning application. Item 7 of the further information request invited the applicant to review all of the objections and provide a response. However this specific issue was not addressed by the applicant. In the second Planning Report, it is briefly stated that the further information response received is noted.

8.1.3. It is proposed to import feedstock to the site. This feedstock is the raw material which, when processed, results in renewable gas for injection into the gas network and digestate for land spreading. The facility requires an EIAR because it is in excess of the 'Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule' threshold of the Planning & Development Regulations 2001 (as amended), as set out in Section 1.6.1 of the EIAR. All of this detail is contained within the planning application.

8.1.4. The development description was not an issue raised in the third party grounds of appeal and, as noted, was not considered to be a validation issue by the planning authority who accepted the public notices as submitted. The issue of feedstock importation/use as a waste management facility, and production of digestate as an end product, is contained within the application documentation. It is clear from the content of the third party submissions and observations that the extent of the proposed development is understood. I note the 'renewable gas facility' description in the public notices does include reference to a 2,700sqm reception building, an odour abatement unit and stack, digestion tanks, and a 55,100m^3 digestate lagoon.

8.1.5. On foot of the foregoing, I consider that the development description is adequate. However, should be the Board not consider that the proposed development is

adequately described in the public notices, it could invite the applicant to readvertise as appropriate.

8.2. **Feedstock**

8.2.1. The proposed development is to be serviced by 80,000 tonnes per annum of feedstock. An Taisce made a submission on foot of the further information response. An Taisce refers to the High Court Judgement in An Taisce v An Bord Pleanála [2015] IEHC 633, on the issue of Edenderry Power Station. It was held that there was a functional interdependence between the power plant and the bogs identified in the planning application, and that the environmental effects of extracting the peat fuel for the power plant were not properly assessed for the purpose of EIA. An Taisce considers there is a direct functional interdependence between the proposed biogas plant and the feed source, and therefore the feedstock must be assessed as part of the EIAR and NIS. The submission also raises concerns about, inter alia, the environmental impacts of these feedstocks, security of supply, and an untenable increase in the bovine herd.

8.2.2. Proposed feedstock for the plant includes source segregated biodegradable wastes, food processing/industrial biodegradable wastes, and agricultural residues. Chicken litter is the preferred agricultural residue. As the mix of feedstocks may vary from year to year, depending on market availability and processing capacity, permission was sought to treat up to 80,000 tonnes per year. The availability of suitable feedstock is, according to the applicant, an important commercial consideration. The Waste Management Plans have identified the need for significant additional biodegradable municipal waste treatment capacity and the proposed development is of sufficient scale to make a material contribution to this. The applicant considers that there are substantial quantities of organic biodegradable material requiring management in the Midlands region, coupled with a deficit in treatment capacity. Bórd na Móna currently handles approx. 40,000 tonnes of suitable material including from its own waste collection business, Advanced Environmental Solutions (AES).

8.2.3. Availability of feedstock material is detailed in Section 2.1.1 of the EIAR. The feedstock accepted will be regulated by the IE Licence and approval will be required from the Department of Agriculture, Food and the Marine with respect to the acceptance/treatment of animal by-products. The EIAR estimates there would be

655,979 tonnes of available feedstock in 2019/2020. The primary feedstock to be used is source segregated organics, supplemented with 'up to 50% industrial organic waste and some agricultural residues … There is no current plan to use energy crops … however, the proposed development could accept energy crops with minor design modifications'. AES collects approx. 12,000 tonnes of source segregated organics per annum and 6,000 tonnes of industrial organic waste. This will be supplied to the development as well as approx. 22,000 tonnes of biodegradable waste currently treated at the applicant's Kilberry facility. This diverted waste from Kilberry will be supplemented by green waste. I consider that the applicant has reasonably demonstrated that adequate feedstock is/would be available to serve the proposed development. In order to ensure the proposed development is operated in line with the EIAR, I consider that a condition be attached to any grant of permission requiring that a minimum of 50% of the annual feedstock be comprised of source segregated organics. This would be in line with the content of the EIAR (for example both forecast traffic generation scenarios in Table 13-4 are based on a minimum 50% brown bin and food waste feedstock), while allowing flexibility in terms of other feedstock. A condition could also be included that would restrict feedstock to 80,000 tonnes per annum, for clarity, and require the production of an annual report to be submitted to the Planning Authority that would specify the volume of raw material (feedstock) processed in the anaerobic digestor and the volume of digestate produced.

8.2.4. I do not agree with An Taisce that the judgement referred to is relevant to this planning application. In that situation, considering it in general terms, peat was extracted from the bogs in order to power and operate the power station. I concur with the position of the planning authority in this regard, as expressed in its' second Planning Report. In the current planning application, the feedstock is generated through the activity of other sectors of the economy and will exist irrespective of whether or not the proposed development is provided. The feedstock is not being created or extracted in order to supply the proposed development. The proposed plant offers an alternative method of waste management with the added benefit that both renewable biogas and bio-fertiliser will be provided as an end product of the waste management process. I do not consider that there is any compelling similarity between the judgement referenced by An Taisce and the proposed development.

8.2.5. Having regard to the foregoing, I consider that the applicant has adequately demonstrated the availability of feedstock and there is no necessity for feedstock sources to be considered in the EIA or AA processes.

8.3. Land Spreading

8.3.1. It is intended that the digestate produced from the waste management process will be land spread. The Department of Culture, Heritage and the Gaeltacht considers that the biodiversity impacts from landspreading of liquid digestate, including nitrogen deposition and nutrient enrichment of watercourses, should be included in the EIA and AA. This general issue has also been raised in the grounds of appeal where appellants consider that, among other issues, the development should not proceed until sufficient contracts have been signed relating to land spreading of digestate, the planning process must protect the local population from improper land spreading, there is no robust procedure to know where fertiliser will be spread, and there will be no accountability in the event of a catastrophic river kill from water contamination.

8.3.2. It is estimated that approx. 83,500 tonnes of digestate will be produced per year, in a mixture of solid and liquid form. Solid digestate (approx. 3,000-4,000 tonnes per annum) will be used as landfill daily cover or as a fertiliser/soil conditioner. Section 2.2.7.1 of the EIAR states that it is proposed that the solid digestate will be used as landfill daily cover at Drehid landfill, which is owned by Bórd na Móna. The liquid digestate will be pumped to the lagoon for storage prior to removal. It is intended to land spread the liquid digestate to realise the nutrient value of the fertiliser. The following is taken from Section 3.2.1.7 of the EIAR; 'All liquid digestate arising from the proposed development will be land spread on suitable lands using licenced land spreading contractors and in conjunction with Nutrient Management Plans (NMP). Letters of support from registered land spreading contractors can be found in Appendix 3.1 … All land spreading activities will be regulated as part of the requirements of the facility's IE Licence issued by the EPA … Quality standards will be stipulated for the liquid and solid digestate produced by the proposed facility by the EPA in the facility's IE Licence. This licence will also include conditions on the selection and assessment of landbank suitable for land spreading … The landbanks for land spreading will largely comprise arable lands in areas of North Carlow, South Kildare, Laois and North Kilkenny. Landbanks are identified for land spreading based on their suitability and

their nutrient demand. Once landbanks are identified for the land spreading of digestate a detailed assessment will be carried out to confirm their suitability for the product'. This assessment includes groundwater vulnerability assessments, assessment of the soil's nutrient content, and preparation of NMPs.

8.3.3. The applicant considers that land spreading of liquid digestate is the best environmental option. One of the letters of support in Appendix 3.1 states the company has access to approx. 20,000 hectares or farmland, and two other operators state they could take approx. 25,000 tonnes of digestate per annum between them. The EIAR states 'Land spreading contractors are required to maintain and operate a full traceability system as per the requirements of the IE Licence and other regulatory authorities as required, from point of collection to ultimate point of re-use'. It is estimated that digestate would be land spread on approx. 2,100 hectares of farmland per annum.

8.3.4. There is a robust regulatory system in place for land spreading of the digestate produced. It is not the case that it would be spread in a haphazard, unregulated, manner. Land spreading formed part of the further information request. In response, the applicant stated that the proposed development activity falls within the remit of an IE Licence. Under this process, land spreading of liquid digestate will be subject to conditions. Among other issues, the applicant notes that any spread land assessment undertaken in 2020 (the year of the further information response) would not be suitable for use in 2024 (the then anticipated year of initial land spreading) as the nutrient status of that land bank will have changed by 2024.

8.3.5. I am satisfied that there is separate legislation that must be complied with e.g. European Union (Good Agricultural Practice for the Protection of Waters) Regulations, 2017, as amended, for land spreading. Land spreading would not occur for several years in the event of a grant of planning permission and planning permission is not required for that activity. I consider it unduly onerous for the applicant to have to demonstrate exact land spreading locations etc. Final users of the digestate would have an obligation to comply with statutory regulations outside the planning legislation. I am satisfied, therefore, that land spreading of the liquid digestate is appropriately regulated outside of the planning system.

8.3.6. Having regard to the foregoing, I do not consider that digestate use/land spreading of the digestate is a matter of significant concern in the consideration of this planning application.

9.0 Environmental Impact Assessment (EIA)

Introduction

9.1. The application was accompanied by an Environmental Impact Assessment Report (EIAR) prepared by Fehily Timoney and dated August 2019. The EIAR comprises a Non-Technical Summary (Volume 1), an EIAR Main Report (Volume 2), and Appendices (Volume 3). An 'EIAR Addendum Report' prepared by Fehily Timoney and dated May 2020, was also provided as further information. This Addendum assesses the potential for effects as a result of the water pipeline required to connect to the proposed development. The EIAR, and Addendum, includes all aspects of the overall proposed development, including gas connection and water infrastructure upgrade works.

9.2. The application falls under the requirement of Directive 2014/52/EU. The proposal falls within Schedule 5 Part 2 Section 11 (Other Projects) (b) of the Planning & Development Regulations, 2001 (as amended) i.e. 'Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule'.

9.3. I have carried out an examination of the information presented by the applicant, including the EIAR and supplementary information, and the observations/submissions made during the course of the application and the appeal. A summary of the results of the submissions made by the planning authority, prescribed bodies, third parties and appellants, and the applicant, have been set out in Sections 3 and 6 of this Inspector's Report. The main issues raised specific to EIA can be summarised as follows:

- Health impacts including odour and air pollution.
- Increase in traffic and the type of traffic.
- Water availability and impact on existing water supply.

- Impact on surface waters.
- Impact on biodiversity on the bog.
- Site location and the nature of the proposed development.
- Adverse impact on residential and visual amenity.

9.4. These issues are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation. I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR, and supplementary information provided by the developer, adequately identifies and describes the direct, indirect, and cumulative effects on the environment and complies with article 94 of the Planning & Development Regulations, 2001 (as amended).

9.5. Chapters 1 to 5 of the EIAR are summarised in Sections 9.7 – 9.29. The subsequent sections address each of the environmental factors. The headings are those used in the EIAR. The content of each EIAR chapter is summarised with headings as per the chapter. The 'Assessment & Conclusion' section at the end of each chapter summary is my EIA and conclusion of that particular factor i.e. population and human health, biodiversity etc.

9.6. An EIAR Addendum was submitted as part of the further information response. The Addendum assesses the potential for effects of the construction of the Irish Water pipeline required to connect to the proposed development. The route of the gas pipeline extension was assessed in the EIAR. The route of the water pipeline from the Bellingham estate to the site is along the same corridor. As such, this section has already been assessed. The Addendum assesses the impact of the water pipeline from Bellingham to Pallas reservoir, approx. 1.5km in length.

Chapter 1 (Introduction)

9.7. Chapter 1 of the EIAR introduces the proposed development in the context of the application for permission and documents the procedure that was followed in preparing the EIAR. The applicant is a subsidiary of Bórd na Móna Plc. Bórd na Móna was originally established in 1946 to develop and manage some of Ireland's peat resources on an industrial scale. Bórd na Móna has developed and operates a number

of renewable energy assets. Cúil na Móna bog is the largest (approx. 657 hectares) of a group of four raised bogs known as the Cúil na Móna bog group. Drainage of the bogs commenced in 1958 and has been maintained.

9.8. The proposed activity requires an Industrial Emissions (IE) Licence, and an application will be submitted to the Environmental Protection Agency (EPA). Application will also be made to surrender the development site from the existing Integrated Pollution Control (IPC) licence boundary. The IE Licence controls issues such as those set out in the applicant's response to the grounds of appeal. Category 2 and 3 animal by-products will be accepted, requiring approval from the Department of Agriculture, Food and the Marine. A Commission for Regulation of Utilities (CRU) licence is also required.

9.9. Guidance used in preparation is outlined, as is the terminology used to describe the quality of effects, the significance of effects, the duration and frequency of effects etc. The activities identified for consideration in the cumulative assessment, are set out. These include IE and IPPC licenced sites within 10km such as peat extraction, autobody works, a Glanbia facility, hazardous waste recovery works, waste transfer station and recycling centre, and sawmills. The storage/chipping of wood immediately south of the site, as referenced in third party observations, will cease in the coming months. Baseline studies include this activity, but the cumulative impact of the activity is not considered in the EIAR. A list of contributors and competent experts to the EIAR is provided, with CVs attached as Appendix 1.2.

Chapter 2 (Need for the Development and Reasonable Alternatives Considered)

9.10. Chapter 2 assesses both the need for the proposed development and alternatives considered during the design process. Need was determined through the current and predicted volumes of biological waste streams, assessment of existing and proposed biological treatment capacity, and the contribution towards meeting renewable energy targets.

9.11. Feedstocks to be accepted are source segregated household and commercial biodegradable wastes e.g. household, out of date/spoiled wastes from hotels, restaurants, supermarkets etc., industrial biodegradable wastes e.g. residues from dairy or meat industry, and agricultural residues such as poultry litter (this will be

primarily sought as it has a higher biogas yield potential, and cattle and pig slurry is normally directly spread to land). The EIAR predicts available feedstocks in 2019-2020 as 655,979 tonnes. The primary feedstock to be used is expected to be source segregated organics, 'supplemented with up to 50% industrial organic waste and some agricultural residues …' Feedstock inputs will be controlled and monitored as part of the EPA licence. The EIAR shows a deficit in treatment capacity of approx. 240,000 tonnes, of which 80,000 tonnes can be provided by the proposed development.

9.12. Reasonable alternatives under several headings are set out in the EIAR:

- Alternative Site Locations and Land Uses – Only land within Bord na Móna ownership was considered. The site location selection set out is more detailed but consistent with that described in the 'Site Location and Selection' section of the applicant's response to the grounds of appeal.
- Alternative Locations within Cúil na Móna Bog – The justification for the specific location within the bog is more detailed but consistent with that described in the 'Site Location and Selection' section of the applicant's response to the grounds of appeal. Alternative options in the 50 hectare area of cutaway bog are outlined.
- Alternative Site Layout and Design Options – The initial layout proposed the tank farm and reception building on the eastern area with the digestate lagoon to the west of these. Access was located to the south east. This had optimal ground conditions. This was refined and further increased the distance from the reception building to the nearest neighbour by 165 metres, but on poorer ground. Advantages include greater separation to neighbours and the reception building doors facing west. This became the preferred option.
- Alternative Site Access (Road) Upgrade Options – Five junction improvement options from the R445 were considered and illustrations provided:

  (i) Simple priority junction with passing bays (upgrade of both the junction and access road beyond the right-angled bend with inclusion of passing bays on the access road).

  (ii) Simple priority junction with road widening to 6.5-7.0 metres.

(iii) Simple priority junction with left turn lane and passing bays/widening of access road.

(iv) An upgrade of Option (iii) to provide a ghost island right turning lane with auxiliary left turning lane serving the site. However land ownership in the verge is unclear and residential road frontage would be required.

(v) Roundabout as proposed. This would accommodate a significant volume of traffic and future proof the junction as well as having a traffic calming influence.

- Alternative Gas Pipeline Options – Gas Networks Ireland (GNI) has sole responsibility for the selection of the gas pipeline extension route. Three options were discussed between the applicant and GNI involving (i) crossing third-party lands from Bellingham housing estate (the nearest gas connection location) to the site, (ii) the proposed option along the R445, and (iii) extending a pipeline from the existing connection at the Iarnród Éireann works depot. Options (i) and (iii) would involve obtaining agreements for construction works and maintenance access with multiple landowners, crossing the Kylegrove stream or a main railway line route, and cost.

- Alternative Waste Technologies – The primary waste technologies for treatment of biodegradable wastes are composting or anaerobic digestion (AD), both naturally occurring processes. The primary advantage of AD is that both a renewable fuel and a biofertiliser are produced therefore generating greater commercial and environmental value from the feedstock material. It was decided to progress with AD. AD plants can be configured in several different ways depending on, for example, feedstock, footprint, required speed of gas production. A 'wet' process was selected as the preferred option, related to the nature and type of feedstock to be accepted. Operation under mesophilic conditions was selected (30-40 degrees, as opposed to 50-60 degrees in thermophilic conditions). This is generally more stable and requires less added heat. The two-stage process, as opposed to single-stage, improves the efficiency of the process.

  Options for utilising the methane produced included (i) flaring (which harnesses no energy), (ii) generation of electricity using a gas turbine or gas engine (lose

considerable energy, turbines increase capital cost and have reduced efficiency of converting to electricity, while engines require more maintenance and are susceptible to degradation), and (iii) generation of electricity and heat in a combined heat and power (CHP) Plant (an outlet for this heat is required e.g. district heating system or nearby industry that requires the heat). Some gas would be used for the on-site CHP and the proposed flare would be used only in an emergency or during extended maintenance periods. Injection into the gas network was considered the best option for utilising the methane produced.

There are four gas upgrade options. These were assessed under six criteria and membrane separation emerged as the preferred gas upgrade technology.

- Digestate Management – Approx. 3,000-4,000 solid tonnes of digestate and approx. 80,000 tonnes of liquid digestate will be produced on an annual basis. The solid digestate will be used as landfill cover at Bord na Móna's Drehid landfill, Co. Kildare where there is daily demand. Alternatively, it may be used as biofertiliser on arable crops. Use of the solid digestate will be regulated by the IE Licence.

  Liquid digestate can be used for land spreading, which is the best environmental option. It could also be treated at a municipal wastewater treatment plan (WWTP), or on-site WWTP and discharged to surface water however this would not utilise the significant biofertiliser potential. The surface water drainage network is not suitable for discharges.

  Though not of short or medium term potential, digestate could be used in horticultural products in future.

- 'Do Nothing' Alternative – In the scenario of no development, a Site Rehabilitation Plan will be implemented in accordance with Integrated Pollution Control (IPC) Licence requirements, to environmentally stabilise the site. However, the opportunity to convert biodegradable waste into a renewable gas would be lost, as would the opportunity to contribute to meeting targets for renewable energy production. This alternative was not considered to be a reasonable alternative.

9.13. Further Information – Item 1(c)(I) and (II) of the further information request sought justification why a proposal for 80,000 tonnes per annum of category 2 and 3 waste

has been submitted and why other, larger or smaller, proposals were discounted. The response stated that the primary factors considered in determining the capacity and size of the facility were waste treatment capacity needs as determined by the Regional Waste Management Plans, the availability of suitable feedstock, economies of scale, and the capacity of the local gas network to accept the volume of biomethane produced. The applicant briefly summarises each item and/or refers to the specific sections of the submitted EIAR.

9.14. Item 1(d) of the further information request sought detail on the location of other potential sites that were assessed, and why these were discounted. The process used to arrive at the six sites given further consideration is briefly summarised (proximity to gas and road networks and distance to sensitive receptors). The six specific sites were set out in Section 2.2.1 of the EIAR and of the potential sites in Counties Roscommon, Offaly, Meath, Kildare, and Laois (two sites), the Cúil na Móna bog scored highest in the applicants' assessment of the potential site locations. This was again addressed in a clarification of further information response.

9.15. Further to Item 1(d), Item 1(e) of the further information request sought additional clarity on the site specific selection criteria and basis for the assessment of each criterion in relation to thresholds chosen, potential direct links to Natura 2000 sites, and the scoring system. Thresholds of 1km from houses and 3km from ecologically sensitive sites were chosen to enable a comparison of alternative sites and were based on professional judgement for the particular exercise. A detailed assessment of potential impact on Natura 2000 sites was not carried out. The numerical score attached to assessment criteria was provided.

9.16. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. Some of the issues raised in the grounds of appeal relate to this chapter of the EIAR e.g. the existence of more suitable sites in the applicant's and Council's ownership and the use of smaller AD plants.

9.17. The applicant only considered potential sites within its ownership, which, given the 80,000 hectare landholding, I consider to be reasonable. The selection process for choosing this particular site over other potential sites, both in terms of the wider landholding and the specific location within the eastern area of Cúil na Móna bog, has

been outlined. The applicant has also provided justification for the provision of an 80,000 tonnes per annum facility over other capacity alternatives.

9.18. I consider that the need for the development and the reasonable alternatives considered, in terms of both location and facility type, have been satisfactorily set out.

Chapter 3 (Description of the Proposed Development)

9.19. This chapter provides a description of the proposed development detailing the infrastructure required for the project from the acceptance and management of feedstock materials, generation of the raw gas for upgrading to biomethane and injection into the gas network through to the production and management of the organic biofertiliser/digestate. The chapter notes that, though permission for the gas pipeline extension works is not being sought, the environmental impact associated with this is assessed in the EIAR. The development description has been set out in Section 2.0 of this Inspector's Report and a broad, high-level description of the process from receipt of feedstocks to the finished products is outlined in Section 2.6 of this Inspector's Report.

9.20. The chapter is detailed in terms of describing the proposed built infrastructure and processes carried out within the separate infrastructure, and some photographs are included giving an indication of the type of infrastructure proposed. An overview of the liquid digestate land spreading is provided outlining typical information the EPA will require for an IE Licence application. Alterations and upgrades to the road network are described as are ancillary infrastructure such as the peat deposition areas, surface water, washdown water, and wastewater management, lighting, landscaping etc. The other licences and approvals required, other than planning consent, are referenced i.e. from the EPA, Department of Agriculture, Food and the Marine, CRU, and Laois Co. Co. (fire certificate). Detailed construction methodologies are also outlined for the various infrastructure.

9.21. Construction of the development is anticipated to last 18-24 months. Construction times are proposed as 07.00-19.00 Monday to Friday and 08.00-18.00 on Saturday. Site decommissioning is subject to the IE Licence which will require a Closure, Restoration, Aftercare Management Plan.

9.22. EIAR Addendum – The site of the water pipeline includes the road corridor along the R445 from Bellingham northwards and turning west along Boughlone Way to Pallas reservoir. Adjacent land use includes agriculture, housing, and industry. The upgrade would be undertaken by Irish Water and comprise upsizing of approx. 3.8km of existing water network infrastructure to 150mm diameter mains, and possible upgrade works to a pumping station on the R445. It is planned the proposed pipe will replace the existing pipe. This would be determined by Irish Water at detailed design stage. Construction of the upgraded pipeline would require soil stripping or breaking of concrete if in the road, excavation of trench, removal of existing pipe, install of new pipe, infill of trench, and replacement of topsoil or road reinstatement. Works are expected to progress at a rate of approx. 100 metres per day.

9.23. Assessment & Conclusion – A detailed description of the proposed development is provided in the EIAR and its Addendum. The description of the proposed development is addressed in Section 8.1 of this Inspector's Report.

Chapter 4 (Planning and Policy)

9.24. This chapter examines waste management, energy, climate change, alternative fuels and planning policy, and the legislative context at international, European, national, regional, and local levels with regards to their relevance to the proposed development. The EIAR considers that all relevant policy, legislation, and guidelines is considered to provide the supportive context for the proposed development. The summary of the chapter considers 'The proposed development is aligned and will significantly contribute to achieving the targets and objectives set out in the aforementioned Planning Policies by contributing to the development of a low carbon economy, achievement of renewable energy targets and the provision of much needed waste treatment capacity for the management of biodegradable waste'.

9.25. Further Information Response – Item 1(a)(V) of the planning authority's further information request required the applicant to provide a Planning Supporting Statement which brought together the overall case for the proposed development, and consideration and demonstration with international, national, regional, and local planning policies. A comprehensive Planning Supporting Statement was submitted as part of the applicant's further information response which detailed compliance with the relevant policy documents.

9.26. Items 1(a)(I)-(IV) related to specific elements of the EIAR. In summary, in part (I) the applicant stated that the current proportion of the grid that is supplied from biogas is 0% and the proportion from the proposed development to the gas grid would be approx. 0.13%. Though an established technology across Europe, it is only an emerging technology in Ireland. In response to (II), clarification on how the proposed development would aid in achieving six specific NPF National Policy Objectives (NPOs) contained in the NPF was provided. The applicant justified including a reference in the EIAR to farming from the RSES for (III). In part (IV) of the further information request, the planning authority stated that there is reference in the EIAR to policies of the Laois County Development Plan 2017-2023 and it had not been made clear why the proposed development is in accordance with those policies. In addition, the planning authority specified approx. 60 no. policies related to transportation, water supply and wastewater, environmental issues, biodiversity, green infrastructure, and development management standards, which it considered pertinent in the consideration of the planning application. A detailed response relating to the proposed development and the relevant policies of the Plan is contained within Section 4 (Local Policy Documents) of the Planning Support Statement.

9.27. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. I consider that the applicant has demonstrated that the policy context at international, national, regional, and local levels is in place in principle to support the provision of a waste management facility of the type proposed, resulting in production of biogas for the network and digestate for use as fertiliser.

Chapter 5 (Scoping and Consultation)

9.28. Chapter 5 describes the EIA scoping and consultation process that was undertaken, presents the issues and key points that arose and outlines how these were addressed in the EIAR.

9.29. A more detailed outline of community consultation is provided to that set out in ‘Scoping and Consultation’ in the applicant’s response to the grounds of appeal in Section 6.2 of this Inspector’s Report. A consultation letter and EIA scoping report was issued to 29 no. statutory consultees, non-governmental organisations, and key stakeholders in October 2018. Seven responses were received, and these were fully

considered. Three pre-planning meetings were held with the planning authority in April and September 2018 and May 2019. There have been several meetings with GNI and there was a meeting in March 2019 with the Department of Agriculture, Food and the Marine.

Chapter 6 (Population and Human Health)

9.30. This chapter assesses the likely significant effects of the proposed development on population and human health. The study area comprises the local electoral divisions of Clondarrig and Clonkeen.

9.31. Assessment Methodology – There is no specific guidance relating to the assessment of impacts on population and human health, though general guidance has been used. A desk-based study was carried out to characterise the environment. Health based standards are set at a level to protect the vulnerable. These standards are taken into direct consideration in Chapters 8-11 and 13-15 of the EIAR. The EIAR considers that the Seveso Directive does not apply.

9.32. Receiving Environment – The population of Clondarrig grew significantly between 2006 and 2016 (likely as a result of some of the electoral division being adjacent to/part of the Portlaoise urban area) while the population of Clonkeen grew much more modestly in the same period. There are currently no known human health risks associated with the peat land, though wildfires can occur.

9.33. Potential Effects – If the development does not proceed, the 'do nothing' effect, the site will likely remain as cutaway bog.

9.34. In the construction phase up to 180 no. jobs will be created, a short-term positive impact. There is also potential for purchase of construction materials from suppliers within Laois and beyond. Nearby residents may experience impacts in relation to e.g. air quality (dust), water quality, construction traffic, and noise and vibration. These are more fully addressed in specific chapters.

9.35. In the operational phase, six-eight full-time jobs will be created with an estimate of 30-35 no. drivers employed directly and indirectly to transport feedstock and digestate. The operation of the site will provide an outlet for waste generated, contributing to meeting the needs of the Midlands, and other regions, in waste management. The

potential impact of the operational phase on population is considered to be imperceptible.

9.36. Human health is to be considered via assessment of the environmental pathways through which health could be affected. In relation to the proposed development these are considered to be air quality, hydrology, geology, traffic, and noise. Specific impacts which have the potential to impact on human health have been addressed in subsequent chapters of the EIAR though brief reference is made to some of these in Chapter 6. Safety issues related to biological agents, gas hazards, and fire and explosion are outlined. These have been addressed during the design process and the development will be operated and managed with the appropriate standards and legislation. There would be significant impacts on human health to those working on site who may come into direct contact with biological agents, gas hazards, or explosion and fire. The significance of the impacts of biological agents and gas hazards on human health to others off site is considered to be moderate, with the significance of explosion and fire to others off site predicted to be not significant.

9.37. At decommissioning the development is considered to have a similar impact to the construction phase though with a reduced number of personnel required.

9.38. In terms of risk of accident or disaster, as with all industrial type facilities, there is a risk that accidents may occur. The facility will be subject of an IE Licence and will operate in accordance with all health and safety guidelines and legislation.

9.39. Mitigation Measures – There are no specific mitigation measures proposed in relation to population. For human health, in the construction stage, mitigation such as a Safety and Health Management Plan and Traffic Management Plan will be in place. Dust, surface water etc. are addressed in other chapters. With regard to the predicted significance during the operational phase, Section 6.6.2.2 (Safety) of the EIAR outlines a number of mitigation measures such as health and safety risk assessments and plans, a safety case, and a code of operations. Mitigation during decommissioning will be similar to those during the construction phase.

9.40. Cumulative Impact – No specific projects were determined to have a cumulative impact in terms of population and human health.

9.41. Residual Effects – The residual impacts will be slight, positive, long-term on population (local employment) and following mitigation the impact on human health is considered to be imperceptible.

9.42. Interactions – Interactions and interrelationships with other aspects of the EIA are discussed in the chapter.

9.43. EIAR Addendum – Section 2 of the Addendum relates to population and human health (and traffic). There is likely to be nuisance effects on the local community from noise, dust, and traffic management during the construction stage of the water pipeline. These will be temporary, and works will progress at a rate of approx. 100 metres a day. There are no operational effects. Construction phase mitigation measures in terms of dust and noise would be as set out in the EIAR.

9.44. Further Information – Item 2(e) of the further information request related to hours of operation and construction phase mitigation. The applicant considers the hours cited (07.00-19.00 Monday to Friday and 08.00-18.00 on Saturday) are standard construction hours and has not identified any adverse effect that should require more strict hours. Mitigation measures are detailed in the relevant EIAR chapters. I consider that a construction commencement time of 07.00 is too early, given the possibility of impact on adjacent residences, and consider 08.00 to be more appropriate.

9.45. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. Some of the impacts raised in the grounds of appeal are interlinked with other factors such as air quality, water etc. and these are assessed in more detail elsewhere. I note that operation of the facility will be controlled by licences and approvals from the EPA, the Department of Agriculture, Food and the Marine, CRU, and Laois County Council (fire certificate). I am satisfied that the potential for impacts on population and human health can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on population and human health.

Chapter 7 (Biodiversity)

9.46. This chapter comprises the biodiversity assessment. The study area encompasses the proposed development site, much of the wider Cúil na Móna bog area, and a 50 metres buffer along the proposed gas pipeline corridor.

9.47. Assessment Methodology – A number of the reference documents used in the preparation of the chapter are identified. A desk study was carried out and consultation letters issued to various bodies on 18.10.2018 though no responses were received. In terms of avifauna, two wintering bird transect surveys were completed in January and February 2018, two wetland bird surveys were completed on 17.01.2018 and 16.02.2018, a single fixed vantage point location was used to survey the site/study area on January 17th, February 16th, May 10th, and June 18th, 2018, and two breeding bird transect surveys were completed on 10.05.2018 and 18.06.2018. Mammal surveys were carried out on May 10th, June 18th, and the 26th and 27th of September 2018, and included the access road and proposed gas pipeline route, and a buffer of greater than 50 metres from all proposed infrastructure. Bat roost surveys were carried out in June 2018. Observations of note of other fauna e.g. amphibians, insects, molluscs, butterflies etc. were noted while conducting the various surveys.

9.48. A walkover survey to identify habitats were also carried out on May 10th, June 18th, and the 26th and 27th of September 2018. A walkover aquatic survey was conducted on 21.09.2018 where watercourses within and adjoining the boundary, as well as those with both direct and indirect downstream connectivity were assessed. Instream and riparian habitat were surveyed. Watercourses included drainage ditch/stream and existing peat settlement (attenuation) ponds. A fisheries appraisal of the watercourses within the proposed works footprint was undertaken to establish the importance of these areas as salmonid, lamprey, European eel, and coarse fish habitat.

9.49. Existing Environment – The closest Natura 2000 site is Slieve Bloom Mountains SPA (Site Code 004160) approx. 5.5km to the north west. The closest heritage area is Ridge of Portlaoise pNHA (Site Code 000876) approx. 3.3km to the north east. Notwithstanding the Slieve Bloom Mountains SPA being the closest Natura 2000 site, the proposed development is hydrologically linked to the River Barrow and River Nore SAC (Site Code 002162) through drainage ditches connected to a set of controlled discharge points running from the site into the Cappanacloghy River which flows into

the River Nore approx. 11.6km to the south. The proposed gas pipeline is to run along the R445. This road crosses the Kylegrove Stream which feeds the Triogue River which joins the Barrow approx. 16km downstream to the north. An appraisal of potential impacts on European sites is set out in the AA Screening Report and NIS.

9.50. A total of 19 no. bird species were identified in the avifauna vantage point surveys. 'Target species' birds are birds listed on Annex I of the Birds Directive, red-listed birds of conservation concern, and regularly occurring migratory species. In the winter vantage point surveys, three target species were recorded; two kestrels, a sparrowhawk, and a buzzard. In the summer vantage point surveys, two target species were observed; one kestrel and a pair of buzzards. 25 no. bird species were recorded in the transect surveys over winter and summer. One species recorded, meadow pipit, is a red-list bird, while nine other species are amber-listed. Results indicate the habitat on site is not optimal for wintering birds. No wetland birds were recorded but seven golden plover, a red-list species and listed in Annex I, were observed roosting on cutaway bog approx. 800 metres west of the site.

9.51. During mammal surveys the following species or their field signs were observed within the study area; badger, red squirrel (live sighting), pine marten, and rabbit. The red squirrel is 'near threatened' i.e. close to qualifying for or is likely to qualify for a threatened category in the near future. Badger and pine marten are of 'least concern' i.e. widespread and abundant. Species such as fox, hedgehog, Irish stoat, pygmy shrew, Irish hare, and red deer are likely to occur in the study area. Three of the seven badger field signs were within the proposed development site boundary. Nine setts were observed, two within the site. Red squirrels were observed east of the site boundary, and no pine marten or rabbit field signs were found inside the proposed site boundary. Rabbits are considered to be an invasive species.

9.52. Six bat species have been recorded in the National Biodiversity Data Centre (NBDC) and National Parks & Wildlife Service (NPWS) grid square S49 in which the site is located. The bat landscape suitability index scoring system for the 2km grid indicted the area is not the most suitable for bat species. The bat roost survey concluded there was negligible suitability for roosts in the study area. It was determined an activity survey was not required.

9.53. Data for the 10km grid square S49 contains records of 24 no. other protected fauna, and these are set out. Of these, a frog (least concern) and a wood white butterfly (near threatened) were recorded during the ecological surveys as were two caterpillar larvae (least concern) and a common blue damselfly (least threatened).

9.54. 12 no. habitats and habitat mosaic types are found within the study area and are all described in detail. The primary habitat within the proposed development site boundary for the renewable gas development is cutover bog intersected every 4-6 metres by drainage ditches. Under the National Roads Authority (NRA) site evaluation the habitat would be rated as being of Local Importance (Higher Value). Dense bracken and scrub, and a mosaic of both, is present in and adjacent to this area as is bog woodland. Other habitats are present outside the development boundary e.g. artificial lakes and ponds, improved agricultural grassland, hedgerows, and dry meadows and grassy verges. None of the twelve habitats have a rating higher than Local Importance (Higher Value). Six habitats are identified and described along the proposed gas pipeline corridor i.e. drainage ditches, dry meadows and grassy verges, scrub, hedgerows, treelines, and amenity grassland (improved). None of the six habitats have a rating higher than Local Importance (Higher Value).

9.55. No Flora Protection Order 2015 or Ireland Red List No. 10: Vascular Plants species were identified during field surveys. The invasive species montbretia was identified within the renewable gas facility study area but outside the site boundary, and along the gas pipeline corridor. It is a low impact invasive species.

9.56. The results of the aquatic surveys showed the overall salmonid habitat was poor to moderate. Only two of ten sites offered good quality salmonid habitat. None of the ten sites offered good lamprey habitat, either in terms of nursery or spawning potential. European eel habitat was moderate across most survey sites though some good suitability existed locally. No white-clawed crayfish were recorded, and freshwater pearl mussel is not known to be present in the River Triogue. During walkovers, approx. 15sqm of snowberry, an amber-list invasive species, was recorded on the Kylegrove Stream. There were three water sampling sites. One was slightly polluted (moderate status) Q3-4, the other two were moderately polluted (poor status) Q2 and 3.

9.57. A biodiversity evaluation is provided. ‘The basis of evaluation assessment should be a determination of which ecological resources within the zone of influence of the proposed development are of sufficient value to be material in decision making …’ Of 36 no. avifauna species considered, 16 no. are considered to be key ecological receptors (KERs). Of 16 no. terrestrial mammals considered, 8 no. are considered to be KERs. All six bat species set out are considered KERs. 14 no. habitats are evaluated, 8 no. of which are identified as KERs. 25 no. other fauna species are set out. Only three (common frog, common blue damselfly, and marsh fritillary butterfly) are considered KERs. All aquatic ecological receptors (salmon, trout, lamprey, eel, white-clawed crayfish, and freshwater pearl mussel) are considered KERs. A rationale for including and excluding each species and habitat as a KER is provided.

9.58. Potential Impacts – If the development does not proceed, the ‘do nothing’ effect, the habitats within the development site itself will, over time, revert into scrub and eventually bog woodland.

9.59. Potential impacts on Natura 2000 sites during the construction phase are addressed in the AA Screening Report and NIS submitted with the application. No direct impacts are predicted on the eight nationally designated nature conservation areas (NHAs/pNHAs) within 10km of the site as there are none within the study area. In terms of indirect impacts, there are hydrological links to two pNHAs (one in excess of 10km from the site) which gives rise to potential for water quality impacts. Construction, particularly the removal of habitat from the development footprint, is the main potential source of impact on avifauna given the loss of habitat and disturbance. Habitat within the site is not of high value to avifauna, as the bird assemblages observed were mainly passerines. ‘It is considered near certain that the proposed impact of habitat loss will be a long-term imperceptible impact’ to passerine birds, birds of prey, and wetland bird species. Though loss of habitat, including potential nesting and potential prey foraging and hunting habitat will occur, the loss is considered to be negligible due to the availability of this habitat in the wider area and the small scale of habitat loss. Probable, short term and imperceptible potential indirect impacts will likely occur to passerines, birds of prey, and wetland bird species during the construction phase as a result of high levels of activity and disturbance, and on aquatic habitats through pollution events.

9.60. Potential direct impacts on terrestrial mammals can be summarised as follows:

- Badger – There were nine setts observed within the study area, two located within the site, one was 10 metres from the development, and another was 74 metres with the other five greater than 100 metres. Without mitigation there is potential for badgers to be injured as well as noise disturbance which will result in near certain short-term significant impact.
- Red Squirrel – The effect is deemed near certain, long term and not significant.
- Pine marten – No field signs were found inside the development site though multiple field signs were found in the study area. Impact is considered near certain, long term and not significant.
- Irish hare – Impact is considered near certain, long term and imperceptible.
- Wood Mouse – Removal of scrub and minimal removal of trees will have a near certain short term imperceptible impact.
- Otter – Otters are likely to use the habitats in the catchment. There is potential for otters to be disturbed by construction noise, if present. Unmitigated impacts will probably be short term and slight.
- Bats – Construction phase impacts are likely to be near certain, short term and imperceptible.

9.61. While other mammals were not observed e.g. stoat, fox, and deer, they are likely to inhabit the study area and forage within common habitats. Direct impacts are not likely though some breeding, resting or hibernation sites could be disturbed. In terms of potential indirect impacts to mammals during the construction phase there may be localised disturbance. Given the habitats present, affected mammals will be able to move to other locations until disturbance has ceased. Some other species such as frog, lizard, and marsh fritillary are also referenced.

9.62. The development will lead to a permanent loss of habitat at the renewable gas facility and road upgrade areas. Peat removed during construction will be spread within the site. It is not currently possible to predict direct habitat loss for the gas pipeline extension as the precise route will not be known until pre-construction i.e. within the R445, within the road verges, or a combination of both. In a worst-case scenario it would be 2.42km of grassy verge habitat and treeline/hedgerow. Potential indirect impacts to habitats and flora (cutover bog and bog woodland) during the construction

phase include eco-hydrology and are considered to be imperceptible though indirect impacts to drainage ditches and as a result of existing invasive species i.e. montbretia, may have implications.

9.63. In terms of direct impacts on aquatic ecology, there is potential for a release of suspended solids. Site development, roadway development, and gas pipeline corridor installation also have potential to increase silt run-off into waterways linked to important sites, habitats, and/or species population. There is potential for eutrophication of streams and run-off of sediment. The construction of the proposed development is expected to slightly affect the drainage regime with direct impacts affecting drainage ditches and aquatic ecology. 'Potential direct construction phase impacts on aquatic ecology, in the absence of mitigation, are assessed as being near certain moderate in the short term'. In terms of potential indirect impacts at construction stage, these are assessed as being probable, slight negative, short term.

9.64. The EIAR considers that the operational phase will have less of a potential impact on the local ecology than the construction phase, with the main potential operational impact being vehicular movement. In terms of NHAs/pNHAs, spills of oil/fuel from vehicles may enter the local stream network but this is considered very unlikely. Run off from peat deposition areas may impact sites of importance downstream. Due to vehicular movement in the operational phase, avifauna may be disturbed and avoid the area, though acclimatisation will occur. The washing of silt into waterbodies from the peat deposition areas may deteriorate water quality, impacting feeding opportunities and prey populations of birds. There is likely to be disturbance on feeding success of terrestrial mammals during the first number of months of operation. Indirect impacts may include disturbance from site activities and lighting during winter. There are no direct impacts to bats envisioned. Localised avoidance of lit areas may be an indirect impact.

9.65. No further impacts on habitat and flora are predicted during the operational phase. Potential impact on water quality could affect habitats and flora indirectly through sediment erosion and runoff until peat areas are re-vegetated. Potential direct impact on aquatic ecology is limited during the operational phase.

9.66. Decommissioning is not likely to cause a significant impact to habitats or species in the study area.

9.67. In terms of risk of accidents or disasters, potential events include uncontrolled digestate spillage, a spill during liquid waste transport, or discharge of contaminated firefighting water. The facility will be designed and constructed in accordance with best practice. As part of the IE Licence, emergency response procedures will be implemented during operation. Transport of feedstock and digestate will be undertaken by a licenced contractor.

9.68. Cumulative Effects – No future development of scale or which has the capacity to affect ecological receptors has been identified in the vicinity. The National Peatlands Strategy (2016) recognises that some of the Bórd na Móna land bank has the potential for commercially beneficial uses with potential greatest at locations where the land bank coincides with major infrastructure i.e. M7 and gas network.

9.69. Mitigation Measures – These are composed of a range of practices, methods, and techniques used to mitigate the effects of an impact upon an ecological or environmental receptor. This section relates to ecological based mitigation measures. For the construction stage, detailed mitigation measures to avoid and reduce impacts on downstream designated conservation sites are detailed, which encompasses aquatic ecology. Peat deposition activities, measures for spills, and invasive species are included in the mitigation proposed. The CEMP is to be further developed. This document defines the work practices, environmental management procedures, and management responsibilities relating to the construction phase. A monitoring programme will be established to ensure that the water quality is maintained. Mitigation measures relate to habitats, avifauna, terrestrial mammals, and bats.

9.70. There are significantly fewer mitigation measures proposed during the operational phase. Measures outlined in other chapters are also relevant for this phase. Possible contamination of water bodies is the main consideration. Decommissioning phase mitigation is also outlined.

9.71. Residual Effects – The EIAR considers that the residual impacts on the NHA / pNHA sites linked hydrologically to the site will be not significant. It is envisaged that impact on avifauna, and bats, will be short-term imperceptible. Overall terrestrial mammal impacts, after mitigation, will be short-term slight, with badgers impacted to the highest degree through destruction of three (one active / two inactive) setts. Frog habitat and feeding areas will be destroyed. Following mitigation, the residual impact to frogs will

be moderate during construction reducing to imperceptible over the short-term. The residual impact on habitats and flora is considered to be long-term and slight, given the re-vegetation of the peat deposition area and implementation of water quality protection measures. Once mitigation is implemented the effect on aquatic ecology will be non-significant.

9.72. Interactions – The EIAR sets out how biodiversity interacts with other environmental attributes i.e. landscape and visual impacts, land and soil, and hydrology and surface water quality.

9.73. EIAR Addendum – Biodiversity is addressed in Section 3 of the Addendum. The water upgrade route will be located within the road corridor. Habitats include dry meadows, grassy verges, treelines, and hedgerows. A walkover was conducted on 27.04.2020. A number of trees were recorded as having moderate roosting potential for bats. Treelines and hedges are suitable for nesting birds. Spanish bluebell, a low-risk invasive species, was recorded. No mammals were recorded but potential tracks were. A 186 metre long ditch along the road was dry.

9.74. The pipeline will be most likely contained within the roadway but as this has not been confirmed it must be assumed it could be constructed within the grassy verge. The overall area, approx. 600mm wide, is relatively low. The verge would be reinstated and grass will revegetate quickly. Any deterrence of fauna during construction would be temporary and there is a wide availability of habitat. Should all proposed development occur at the same time cumulative effects on biodiversity would occur but there would be no cumulative loss to habitat from the water pipeline. Construction phase mitigation is outlined e.g. any unlikely vegetation clearance works outside breeding season, invasive species, and preliminary bat roost survey. The residual effect during construction would be temporary and imperceptible.

9.75. Further Information – An arboricultural impact assessment was submitted as part of the response to further information Item 2(b). A layout plan identifying areas of trees along the eastern and southern areas of the site to be retained is included. Having regard to Chapter 15 (Landscape and Visual Impact), the further information response confirms that the plan has been reviewed by the relevant specialist and the trees to be removed are not visible from the six viewpoints used and the landscape and visual impact assessment in Chapter 15 is unchanged.

9.76. Bats were the subject of Item 3(a)(i) of the further information request. A 'Bat Activity Surveys and Roost Survey' document prepared by Caroline Shiel and dated March 2020 was submitted. In addition to other 2018 and 2019 bat-related surveys previously cited, a winter roost survey was conducted in February 2020. Two hibernating common pipistrelles were recorded roosting in gaps between cement sections of the under surface of the M7 motorway bridge. The report concluded there will be no significant impacts to bats from the proposed development and the EIAR findings are confirmed.

9.77. Further information request Item 3(a)(ii) referenced the habitat loss (bog, treeline, and scrub). Submission of a biodiversity management plan was recommended. A 'Biodiversity Management Plan' prepared by Fehily Timoney dated May 2020 was provided in response. The objective of the plan is to mitigate habitat loss where possible to enhance degraded habitats and to protect and enhance features of biodiversity value. Biodiversity enhancement measures include planting of berms, re-use of nutrient poor limestone soil in selected landscaping areas, natural colonisation of immediate peatland habitats, provision of bird and bat boxes, and creation of a wildlife pond within the peat deposition area. The plan concludes these measures reflect and complement the natural environment and provide maximum biodiversity benefits.

9.78. In relation to further information Item 3(a)(iv), Marsh Fritillary butterfly was not recorded during any ecological surveys during the optimal period. The larval foodplant required, Devil's-Bit Scabious, was not present within the site or wider study area. There are no records of this butterfly for the area held by the NBDC or the NPWS. A further pre-construction survey for this species will be carried out as per the recommendation of the Department of Culture, Heritage and the Gaeltacht.

9.79. The planning authority identified a contradiction between the Arborist Report which stated that no additional planting is proposed, whereas the Biodiversity Management Plan includes tree mitigation. As part of the response to the clarification of further information request, the applicant states that the Arborist Report has been updated to align with the conclusions of the Biodiversity Management Plan with respect to tree planting. It appears the contradiction may relate to proposals in the Biodiversity Management Plan to planting of berms constructed in margins along access roads

and around the development site, and where feasible, trees within the development footprint could be translocated to these berms.

9.80. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. Impact on biodiversity is one of the primary bases for the grounds of appeal and a number of issues are raised. Some of the issues relate to other interlinked processes such as hydrology and emissions. Specific biodiversity impacts cited include the principle of siting the facility of bogland in the first instance, possible alternative use as open space area or as part of a greenway, rehabilitation of the bogland, the adequacy of the bird and bat surveys, and the content of the arboricultural submission.

9.81. The subject bogland is cutaway bog which has already been subject of industrial use. I consider that the development of a waste management/renewable energy facility on peatland is supported in principle by relevant planning policy. The National Peatlands Strategy 2015, published by the Department of Arts, Heritage and the Gaeltacht, covers the period 2015 to 2025. Although the use of bogs as locations for windfarms is specifically considered, Principal P21 states 'Consideration will be given to how best cutaway bogs can contribute to a low carbon economy through their use as sites for renewable energy'. Policy LS 40 of the Laois County Development Plan 2017-2023 states 'Recognise the importance of peatlands for ecology, history, culture and for alternative energy production'. Policy LS 44 also relates to peatlands and states 'Support the identification of projects that have the potential to achieve commercial value such as industrial developments, renewable energy, tourism developments etc. while at the same time promoting high environmental standards and supporting Biodiversity objectives'. Therefore, I consider that there is a reasonable policy basis for considering a waste management/renewable energy facility which would produce bio-gas and digestate fertiliser on a cutaway bog.

9.82. Though there are other possible uses for the proposed development site, as suggested by some third parties, the planning application has been made for the proposed facility and therefore that is the development subject of this assessment. The applicant has stated that an application will be made to the EPA to surrender this part of the bog from the current IPC Licence so the rehabilitation under that will not be affected. In addition, it will be a condition of the IE Licence, which is required for the operation of the proposed facility, that a decommissioning and restoration plan be

submitted. I am satisfied that the bird, bat, terrestrial mammal, and aquatic surveys submitted are suitably comprehensive and allow for the establishment of a reasonable baseline and assessment of the receiving environment. The arboricultural assessment identifies the trees/hedgerow areas to be retained on site in the vicinity of the renewable gas facility itself, which will aid with both biodiversity and the screening of the most substantial built element. Planting of berms, the re-vegetation of the peat deposition area, and the creation of a small wildlife pond in the peat deposition area would also contribute. I consider that the detail contained within the EIAR, and the supplementary information provided, allows for a reasonable assessment of impacts on biodiversity as a result of the proposed development.

9.83. I am satisfied that the potential for impacts on biodiversity can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on biodiversity.

Chapter 8 (Air Quality and Climate)

9.84. This chapter presents the findings of the air quality, odour, and climate impact assessment.

9.85. Assessment Methodology – Key guidance documents relating to the assessment of the air quality, odour, and climate impacts associated with the proposed development are outlined. Applicable limit values for dust and the methodology for assessing dust impact is set out. Background on odour as a pollutant and detail on how the potential for odour impacts was assessed is provided as is background on ambient air quality pollutants and detail on how the potential for ambient air impacts was assessed for the purpose of the EIAR. Odour is addressed in some detail. Traffic is also noted as a potential source of air emissions. Applicable agreements and emissions ceilings are set out. The Gothenburg Protocol, Kyoto Protocol, and the Paris Agreement are referenced as are other relevant plans such as the Climate Action Plan. The methodology for assessing impacts on climate and regional air quality during the construction phase (determined by a qualitative assessment of the nature and scale of greenhouse gas (GHG) generating construction activities, which includes peat excavation) and the operational phase (determined by a combination of qualitative and

semi-quantitative assessment of the nature and scale of GHG generating activities) is also set out.

9.86. Receiving Environment – For baseline air quality the site area is considered to be in Zone D (rural Ireland and towns with <15,000 population). The EIAR notes that 'existing baseline levels of the pollutants based on extensive long-term data from the EPA are below ambient air quality limit values in the vicinity of the proposed development. This indicates there is a relatively good level of air quality in the area of the proposed development'. Pollutants monitored are nitrogen dioxide (NO_2), sulphur dioxide (SO_2), carbon monoxide (CO), benzene, and any particulate matter in the air with a diameter of 10 micrometres or less (PM_{10}).

9.87. Sensitive receptors located closest to the proposed development and its access road were selected for inclusion within the odour and air dispersion modelling assessments. The results at all other sensitive receptors will experience lower impacts. 16 no. residential receptors were selected, including Bellingham housing development. All receptors are on the north side of the M7.

9.88. Potential Effects – If the development does not proceed, the 'do-nothing' effect, ambient air quality will remain as per baseline levels and change in accordance with trends in the wider area.

9.89. The EIAR considers that the greatest potential impact on air quality during the construction phase is from dust emissions. While construction dust tends to be deposited within 200 metres of a construction site, the majority of deposition occurs within the first 50 metres and there are a small number of residential receptors within 50 metres of the site. Potential construction phase impacts are short term in nature. In terms of climate, the impact associated with peat excavation is classified as short-term, negative, and not significant in relation to national obligations. Construction traffic and the embodied energy of construction materials will have a short-term and imperceptible impact on climate.

9.90. In the operational phase, odour modelling results indicate that the predicted ground level concentrations are below the relevant odour guideline value. The predicted ground level odour concentrations at the worst-case sensitive receptor reach 34% of the odour guideline value. Odour emissions during operation lead to a predicted odour concentration that is negative, long-term, and not significant. For process emissions,

the impact of the proposed development in terms of NO_2, SO_2, and non-methane volatile organic compounds (NMVOPs; the assumption was made for the purpose of modelling that all NMVOCs were benzene as it has the most stringent limit value) can be considered negative, long-term, and not significant. For CO it can be considered negative, long-term, and imperceptible.

9.91. The EIAR considers that concentrations are compliant with air quality value limits and will not result in a significant impact on human health. The overall impact of the proposed development in terms of human health is long-term and imperceptible. The impacts to air quality and climate from emissions from the flare will be imperceptible, and from the proposed gas upgrading plant and proposed pressure relief valves and digestor vents will be not significant. Unmitigated fugitive odour emissions from transport and unloading of feedstock could have a significant negative impact on nearby receptors. Impact from traffic on climate will be not significant.

9.92. Biogas production and use as a fuel is considered CO_2 positive and does not add GHG to the atmosphere. There is a potential GHG emissions saving of 270,160 tonnes of CO_2 equivalent; approximately 0.44% of Ireland's 60.74 million tonnes CO_2 equivalent GHG emissions in 2017. The net effect during the operational phase will be a slight, positive, long-term impact on climate and regional air quality. The development will be self-sufficient in relation to electricity and heat generation as the CHP plant and hot water generator will run on the biogas produced.

9.93. The decommissioning impacts will be broadly similar to the construction phase.

9.94. In terms of risk of accidents and disasters the development will have an IE Licence and it will be operated in compliance with all relevant health and safety guidelines and legislation.

9.95. Cumulative Effects – Predicted cumulative effects on air quality and climate are not significant.

9.96. Mitigation Measures – Pro-active control of fugitive dust will ensure the prevention of significant emissions during the construction phase and a number of relevant measures are set out. Operational phase mitigation measures are largely aimed at odour emissions e.g. stack height, abatement technologies, sealing of the reception building, the reception building will operate under negative pressure, and preparation

of an odour management plan. Decommissioning mitigation will be the same as those for the construction phase.

9.97. Residual Effects – Once mitigation is implemented the residual impacts on odour, air quality, or climate will be imperceptible or not significant.

9.98. Interactions – The most significant interactions are between air quality and traffic, human beings, and sensitive ecosystems.

9.99. EIAR Addendum – Air quality and climate is addressed in Section 4 of the Addendum (along with noise and vibration). This site is also in Zone D for air quality. The only potential impact during construction is dust emissions and emissions from equipment. This will not be significant. The development is minor in scale and there is potential for dust 25 metres from the source. Mitigation measures proposed include sweeping of roads and watering during dry and windy periods. There would be an imperceptible residual effect on air.

9.100. Further Information – Item 3(b)(i) required detail of the proposed odour monitoring programme. The applicant stated that the operation of the facility will be subject of an IE Licence and that specific monitoring requirements can only be finalised in the course of preparing the licence application. It is common for the EPA to prohibit any odour that would interfere with the environment beyond the installation boundary though at this stage in the process it is not possible to pre-empt the exact odour monitoring requirements of the facility. Subsection (ii) sought clarification on how the applicant will determine whether odorous feedstocks are delivered in either covered or sealed containers in terms of odour emission. The response stated that liquid feedstock will be delivered in sealed tankers and solid feedstock in covered skips and enclosed trailers.

9.101. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. The impact of the proposed development on air quality in the operational stage of the development, specifically odour, is one of the primary areas of concern in the grounds of appeal. I acknowledge this and consider it to be an understandable concern for local residents. However, having regard to the content of the EIAR, and the supplementary information provided, I am satisfied that the potential for impacts on air quality and climate can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. In a

wider context, the EIAR considers that the net effect during the operational phase will be a slight, positive, long-term impact on climate and regional air quality. All matters to do with emissions to the environment from the activities proposed will be subject to the conditions of an IE Licence issued by the EPA. Odour modelling results during operation indicate that the predicted ground level concentrations are below the relevant odour value guideline. Mitigation measures are proposed to mitigate potential impacts on air quality including the design of the facility and operational measures. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on air quality and climate.

Chapter 9 (Hydrology and Surface Water Quality)

9.102. This chapter examines the potential impacts of the proposed development on the hydrology in the local environment.

9.103. Assessment Methodology – Relevant guidance and legislation is outlined, including the Water Framework Directive, the overriding purpose of which is to achieve at least 'good status' in all European waters and ensure that no further deterioration occurs in these waters. Flood risk screening was conducted, and a desk study was completed. In terms of field work a site visit took place on 19.12.2018, a drainage survey was undertaken by Bórd na Móna in March 2019 to map the drainage channels and flow, and surface water monitoring is undertaken by Bórd na Móna in accordance with their IPC Licence.

9.104. Receiving Environment – This includes descriptions of the general catchments and water quality as well as Cúil na Móna site specific drainage and water quality. The wider bog area has a water shed running east to west with natural outfalls to the south into the Nore catchment (the southern area of the site is in this catchment) and to the north into the Barrow catchment (the northern area of the site is in this catchment). Local manmade bog drainage across the main development site area flows to the southwest and via the existing settlement pond until it meets the Clonadacasey stream which flows predominantly south where it meets the Cappanacloghy stream and that discharges to the River Nore. Both catchments are considered in the assessment.

9.105. Shanahoe Marsh pNHA (Site Code 001923) 7.9km away was identified as having a hydrological connection to the proposed site. European Sites are addressed in the AA

Screening Report and NIS. The shallow bog drains across the site generally flow in a westerly direction towards a deeper bog drainage network which flows south along the western boundary of the site and then in a south westerly direction. The gas pipeline corridor crosses the Kylegrove Stream which feeds into the Triogue, a tributary of the Barrow. Biological water quality is measured by the EPA at a number of locations upstream and downstream of the study area on the Cappanacloghy and Triogue. The water quality status ranges from poor (in five of the seven stations) to moderate in the remaining two. Surface water quality is monitored on a quarterly basis at six locations around the bog as set out in the IPC Licence for Cúil na Móna bog, including location SW-9 which the development drainage would pass through. OPW data shows no risk of flooding on the site of the renewable gas facility though there is some negligible risk in the vicinity of the proposed gas pipeline.

9.106. Potential Effects – In the 'do nothing' scenario the site would likely remain a cutaway bog with the hydrological regime and surface water quality remaining largely unaltered.

9.107. During construction, the development has the potential to impact on the hydrological regime and on the quality of waters draining the site through e.g. construction of the site access, road upgrades, earthworks, construction of the proposed facility itself, extension to gas network, and peat stripping. The potential impacts of these separate elements are set out in detail such as silt laden and sediment runoff, disturbance of soils, fuels, increase in ammonia and phosphorus concentrations, reduction in groundwater levels, concrete operations, and suspended solids to surface waters. These potential impacts are considered, prior to mitigation, to be of moderate significance.

9.108. During the operational phase, the IE Licence will control elements associated with hydrology and surface water quality e.g. emissions limit values for surface water and monitoring requirements for surface water. The main potential hydrological impact would be an increase in the runoff to the Nore catchment due to the change in land use resulting in an increase in impermeable ground conditions which will result in additional flows being discharged. Accidental leaks, uncontrolled digestate spillage, and outbreak of fire are other potential operational impacts.

9.109. Potential decommissioning impacts will be similar to those identified at construction stage though such impacts would likely be less as the surface water management

system would have been constructed and areas of hardstanding are to remain in situ and allowed to be covered and re-vegetate.

9.110. In terms of cumulative effects, no cumulative effects are envisaged during construction or operation with respect to impacts on the hydrological environment.

9.111. Mitigation Measures – Mitigation measures set out for the construction stage includes the CEMP which will be a live document, reviewed and updated as required. Details of the proposed surface water management system and mitigation measures are contained within the CEMP. They are also summarised in the EIAR. A suitably qualified Ecological Clerk of Works will be appointed. Surface water management measures will also be adopted for the peat deposition areas.

9.112. At operational stage the IE Licence will control elements associated with hydrology and surface water quality e.g. emissions limit values and monitoring requirements for surface water. The facility has been designed and will be constructed in accordance with best practice to control any potential risk from accidents and disasters during operation. The SCADA system will provide water quality monitoring on a continuous basis. Transport of feedstock and digestate will be undertaken by appropriate licenced contractors. The proposed surface water management system has been designed to operate effectively during the operation period. The main elements of this are an oil interceptor, attenuation pond, hydro-brake, surface water quality monitoring chamber, and an emergency shut-off valve.

9.113. At decommissioning, mitigation will be similar to the construction phase where relevant.

9.114. No cumulative impacts are envisaged with respect to impacts on the hydrological environment and no mitigation measures are required.

9.115. During the construction phase a monitoring programme will be established to ensure water quality is maintained e.g. daily visual inspection of drains and outfalls and a water quality monitoring programme. During the operational phase water quality monitoring requirements will be enforced by the EPA.

9.116. Residual Effects – The residual significance on downstream sensitive receptors is expected to be slight, having regard to the proposed mitigation measures. A summary of the magnitude and significance prior to mitigation and post mitigation of the impacts of the various activities at the construction and operational phases are set out in Table

9-9 of the EIAR. The post-mitigation magnitude and significance of each activity is considered to be negligible.

9.117. Interactions – Hydrology and surface water quality interacts with several other environmental attributes i.e. population and human health, biodiversity, land and soil, and hydrogeology.

9.118. EIAR Addendum – Section 5 of the Addendum relates to hydrology and surface water quality. A survey of the route did not identify any stream crossing or culvert. There is no risk of flooding. The importance of the receiving hydrological environment is low. Excavations during construction could have impacts on surface water quality. The trench will be backfilled immediately. Potential construction phase impacts are negligible. No cumulative impacts are expected during operation or construction. Sediment control measures will be implemented if necessary. There would be imperceptible residual effects.

9.119. Further Information – Item 2(d) of the further information requested the applicant to respond to issues raised by IFI in relation to surface water. IFI refer to the Cúil na Móna bog complex. This comprises three separate bogs, including Cúil na Móna bog itself. The complex is operated under an IPC Licence, Condition 10.2 of which requires that a rehabilitation plan is prepared for the permanent rehabilitation of the boglands. The proposed development occupies 2.4% of Cúil na Móna bog. As part of the required IE Licence, Bórd na Móna will apply to the EPA to transfer the proposed development site from the IPC Licence to the IE Licence which will not prevent the implementation of the rehabilitation plan. In addition, any IE Licence will require a plan for the closure, restoration, and aftercare of the site.

9.120. The loss of potential nutrient sources from the operation of the facility to surface waters will be isolated by design of the surface water management system. In terms of ammonia, water quality monitoring results indicate that the concentration of ammonia is on a downward trend. Peat excavation/deposition will occur over an 8-10 week period after which there will be no further peat disturbance. If concentration of ammonia during that 8-10 week period is at the same levels as when the bog was active, it will be below the trigger limit agreed with the EPA. Peat deposition works will encompass mitigation measures. There will be no significant effects on aquatic species.

9.121. In terms of a pre-construction baseline for surface water quality monitoring, the applicant states this is carried out on a quarterly basis at six locations as per the IPC Licence, including SW-9 which is downgradient and hydrologically connected with the development site. The monitoring requirements for surface waters will be set by the IE Licence. In terms of triggering valve closure, a SCADA system is proposed to facilitate operation. Features of the settlement pond required by IFI will be incorporated.

9.122. In terms of the concentration of suspended solids discharged to surface waters, and the pH of surface waters, the applicant notes these will be within the remit of the IE Licence. The applicant confirms that daily visual inspections of all settlement ponds, surface water, and drainage systems will be carried out, twice daily in periods of heavy rainfall, and this will be included in the CEMP (an updated CEMP was submitted as part of the overall further information response). Any silt fencing shall be CE marked. The applicant states that it is not proposed to construct a new surface water outfall. The proposed surface water attenuation pond will discharge into the bog drain that flows in a southerly direction.

9.123. Issues relating to hydrology and surface water quality were also the subject of Item 3(c) of the further information request. Subsection (i) outlines justification for stating the post-mitigation residual effects on downstream water quality will be negligible. A 'Firewater Risk Assessment Report' prepared by Fehily Timoney dated May 2020 was submitted in response to subsection (ii). Subsection (iii) sought clarification of the timing for installation of drainage measures. The response stated it will be installed during the construction phase and will collect all construction stage surface water runoff. The system will be installed as an advanced earthworks contract prior to commencement of the main development works contract. The applicant states that a siltbuster will not be used, contrary to subsection (iv) of the further information request. Subsection (v) required detail on the surface water monitoring programme. Construction stage monitoring is outlined. During the operational stage it is a matter for the IE Licence and is likely to be required at the outlet of the attenuation pond and the existing SW9 monitoring location.

9.124. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. The impact of the proposed development on hydrology and surface water quality is cited in the grounds of appeal,

in particular the possibility of leakages or pollution events affecting the water quality of the surface water network. Having regard to the content of the EIAR, and the supplementary information provided I am satisfied that the potential for impacts on hydrology and surface water quality can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I also note that surface water discharge and monitoring is a matter for the EPA under the required IE Licence. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on hydrology and surface water quality.

Chapter 10 (Land, Soil and Geology)

9.125. Chapter 10 examines the potential impact of the proposed development on the land, soils, and geology in the local environment.

9.126. Assessment Methodology – Relevant guidance used in the preparation of the chapter is referenced. Several activities will take place on site during each phase, some of which have the potential to cause impacts on the geological regime. Tables are provided which define the terminology used in terms of criteria rating, estimation of magnitude of impact, and ratings of significance. A desk study was undertaken as were site walkovers and peat stability assessments between January and August 2018. A number of tests and surveys were carried out.

9.127. Receiving Environment – The quaternary geology at the proposed renewable gas facility comprise cutover raised peat, with depths varying from 0.3 metres to 1.9 metres overlying upper glacial till. A stiff glacial till deposit was encountered beneath this horizon where it overlies bedrock. Cutover raised peat and till derived from limestone was encountered beneath the proposed access road and existing access road to be upgraded. The subsoils present on the site of the gas network extension along the R445 is till derived from limestone. Bedrock geology shows the entire site area is underlain by the Carboniferous Ballysteen Formation, described as comprising bioclastic argillaceous limestone with oolitic limestones occurring throughout the formation. Bedrock was encountered at depths ranging from 2.4 metres below ground level to 6.0 metres below ground level. There are several unnamed faults within the area but due to their age they are no longer considered active and do not present an issue for construction.

9.128. The proposed development is not located in an area of specific geological heritage interest. Among key findings of the site walkover and peat stability assessment was an average peat depth of 1.25 metres, peat had a low to moderate moisture content, no evidence of existing ground instability, and slope stability analysis shows the safety values across the study area are well above the minimum safety factor required for both short- and long-term stability. No evidence of soil contamination was noted.

9.129. Potential Effects – In the 'do nothing' scenario, the study area would likely remain as cutaway bog and impact on land, soils, and geology would remain unaltered.

9.130. Potential direct impacts of the construction phase are set out and they include impacts from extensive earthworks, stripping and spreading of approx. 70,700m^3 of peat which will be placed over existing cutaway bog at typical depths of between 1 metre and 2 metres, excavation of approx. 61,300m^3 of glacial till deposits (the 'soft' clay horizon beneath the peat) from under proposed high loading infrastructure and which will be reused for the digestate lagoon embankments, construction/upgrade of the roads will include the excavation of existing overburden deposits, an increase in surface water runoff due to soil compaction from construction traffic, fuel/oil spills, and concrete works. There is a low risk of peat stability hazard from the surcharge. The magnitude of these impacts is considered to be of moderate or slight significance. A potential indirect impact is the demand that will be placed on local quarries for significant quantities of material.

9.131. Very few potential effects are envisaged during the operational phase. Minor accidental leaks from normal operational traffic, fuel storage, accident risk, and uncontrolled digestate leakage is referenced. These are of slight significance.

9.132. Decommissioning activities will be similar to the construction phase though hardstanding areas are to remain in situ, covered and allowed re-vegetate. Any required decommissioning of the gas network will be under the control of GNI.

9.133. The development is not expected to contribute to any significant, direct cumulative effects. There will be a slight, indirect cumulative effect in terms of demand placed on local quarries and available void space at licenced facilities for disposal of any materials unsuitable for reuse. This would be a slight cumulative impact.

9.134. Mitigation Measures – Mitigation by design and best practice will be implemented. During the construction phase a CEMP will be in place, a live document reviewed and

updated as necessary. The CEMP includes sections relating to earthworks and peat stripping/deposition. Some mitigation measures include phasing to reduce the number of exposed excavations at any one time, excavated material will be reused as far as possible, temporary stockpiles will not exceed two metres in height, work corridors will be pegged with machinery to stay within them, refuelling only in designated areas, peat will be profiled to allow efficient surface water runoff, peat stability will be monitored, and interceptor drains will be in place prior to any placement of peat materials. Best practices will be employed in the in the prevention of silt-laden runoff from entering watercourses. Measures for spills and slope stability are outlined.

9.135. It is not considered there will be significant impact on land, soil, and geology during the operational phase as there will be no further disturbance of soils post-construction. The main impact would be risk to soil and bedrock from contamination. An IE Licence will be issued and enforced by the EPA which would include storage and transfer of substances. The facility will be designed and constructed in accordance with best practice to control any potential risk from accidents and disasters. No significant, direct negative cumulative impact is envisaged during the operational phase.

9.136. Mitigation during decommissioning will be similar to the construction phase where relevant.

9.137. Residual Impacts – Residual impacts that could occur during construction is a change in ground conditions with natural materials being replaced by surfacing materials. This change is considered to be imperceptible, following mitigation. During operation, increased hardstanding may result in increased water runoff. Drainage infrastructure will also change the sub-surface hydrology, but careful design of this drainage will help mitigate negative impacts of artificial drainage. Following mitigation, the residual impact significance to the receiving environment would be slight to imperceptible during construction and imperceptible during operation.

9.138. Interactions – Land, soil, and geology interacts with population and human health, biodiversity, hydrology and surface water quality, and hydrogeology.

9.139. EIAR Addendum – Section 6 of the Addendum addresses land, soil, and geology (and hydrogeology). Excavation and backfilling of trenches will be required during the construction phase. It is proposed all excavated material shall be reused. The magnitude of potential impacts are of slight significance. There are no predicted

operational phase impacts and no significant cumulative impact. In terms of soil erosion and potential contamination of soils, relevant mitigation is per the EIAR. There will be imperceptible residual impacts.

9.140. Further Information – Item 3(d) of the further information request sought detail on the sequencing and methodology for the use of the proposed peat deposition areas, and how the peat would be stabilised to prevent erosion. Detail is contained in the EIAR and CEMP (an updated CEMP was submitted as part of the overall further information response) and a summary methodology provided in the further information response. A peat stability report is contained within an appendix of the EIAR. Drainage and siltation controls will be installed prior to the commencement of the peat placement works.

9.141. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. The impact of the proposed development on land, soil, and geology is cited in the grounds of appeal, in particular the possibility of leakage and subsidence. Having regard to the content of the EIAR, and the supplementary information provided I am satisfied that the potential for impacts on land, soil, and geology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on land, soil, and geology.

Chapter 11 (Hydrogeology)

9.142. This chapter examines the potential effects on the hydrogeology in the local environment.

9.143. Assessment Methodology – The relevant guidance and legislation used in the preparation of this chapter is set out. The Water Framework Directive is referenced as is the Groundwater Directive that establishes a regime which sets groundwater quality standards and introduces measures to prevent or limit input of pollutants into groundwater. Characterisation of the hydrogeological regime underlying the study area and evaluation of the risks and potential effects of the proposed development were examined to determine the potential effects on the hydrogeological regime. Tables are provided which define the terminology used in terms of criteria rating,

estimation of magnitude of impact, and ratings of significance. A desk study was undertaken to help determine baseline conditions. Site walkovers and peat stability assessments were undertaken. A number of tests and surveys were carried out.

9.144. Receiving Environment – The quaternary and solid geology is outlined in the previous chapter. The groundwater vulnerability is classified by the Geological Survey of Ireland (GSI) as being 'moderate' given the presence of low permeability deposits. The study area is located within two groundwater bodies (GWBs); Portlaoise and Rathdowney, with a watershed running east to west. The Portlaoise GWB underlies the northern section, while the Rathdowney underlies most of the site. Both GWBs are classified as having 'good' status in terms of quality and quantity. Both GWBs are described in some detail. Both GSI aquifer classifications are 'locally important aquifer – bedrock which is moderately productive only in local zones (LI)'. There are no Public Supply Source Protection Areas within the site boundary. The closest is 3.5km to the north east (Portlaoise). There are two shallow wells within 1km south of the site. Groundwater quality is outlined. GSI information indicates that the Rathdowney GWB is considered to be 'very hard'. The results of groundwater samples collected are set out.

9.145. Potential Effects – The potential effects on the hydrogeological regime within the study area are assessed for activities associated with each phase. In the 'do nothing' scenario, the study area would likely remain as a cutaway bog and the hydrogeological regime would remain largely unaltered.

9.146. Potential direct effects on hydrogeology during the construction phase include extensive earthworks and the potential for impact to the underlying hydrogeological regime from excavation and removal of peat and glacial till deposits. There is potential for groundwater pollution from removal of overburden (Peat and glacial till) which reduces the level of protection. There is potential for silt infiltration to groundwater, soil erosion, contamination from leaks from plant. Construction of the site access, the renewable gas facility itself, and the gas extension pipeline can all contribute to potential direct effects for similar reasons to the earthworks and also by way of e.g. cement, and reduction in groundwater levels from dewatering of excavation. Impacts are considered of slight to moderate significance.

9.147. Very few potential effects are envisaged during the operational phase. Accidental leaks from operational traffic, fuel storage, accident risk, and uncontrolled digestate leakage is referenced. These are of slight significance.

9.148. Decommissioning activities will be similar to the construction phase though hardstanding areas are to remain in situ, covered and allowed re-vegetate. Any required decommissioning of the gas network will be under the control of GNI.

9.149. The development is not expected to contribute to any significant, direct cumulative effects. A summary of unmitigated potential effects is provided.

9.150. Mitigation Measures – Mitigation measures avoid or reduce the potential impact development on the hydrogeological environment. For the construction phase, a CEMP will be in place. Works will be designed and checked by geotechnical and civil engineers. Some measures include phasing to reduce potential impacts on hydrogeology, a design risk assessment will be prepared to evaluate risks posed to the hydrogeological regime, supervision by geotechnical personnel, refuelling at designated areas, surface water management, and monitoring of groundwater levels from existing monitoring wells if dewatering is required. Mitigation measures for spills are set out.

9.151. It is not considered there will be significant impact on the hydrogeological regime during the operational phase as there will be no further disturbance of overburden post-construction. The main impact would be risk to groundwater from contamination. An IE Licence will be issued and enforced by the EPA which would include storage and transfer of substances and facility management. The facility will be designed and constructed in accordance with best practice to control any potential risk from accidents and disasters.

9.152. Mitigation during decommissioning will be similar to the construction phase where relevant.

9.153. The development is not expected to contribute to any significant, negative cumulative impacts with other existing or proposed developments.

9.154. Residual Impacts – Residual impacts that could occur during construction is a change in the vulnerability of the underlying aquifer to groundwater pollution from the removal of peat and glacial till deposits and a temporary reduction in groundwater levels and

quality during construction from dewatering and potential infiltration of contaminants. With effective mitigation, the residual significance is expected to be imperceptible.

9.155. Interactions – Hydrogeology interacts with population and human health, biodiversity, hydrology and surface water quality, and land, soils, and geology.

9.156. EIAR Addendum – Hydrogeology is referenced in Section 6 of the Addendum (along with land, soils, and geology). During the construction phase there is potential for groundwater pollution from the removal of overburden deposits. The underlying aquifer is rated as having a moderate to high vulnerability which may temporarily be increased as overburden is removed. Soil erosion as a result of exposure in open excavations represents a potential impact to the underlying aquifer. There is potential for contamination to groundwater from leaks from plant. There would be a negative impact of slight significance during construction. In terms of mitigation during construction measures set out in the EIAR will be applied such as quick backfilling and employment of best practice. There would be imperceptible residual impacts following mitigation.

9.157. Further Information – As a response to Item 2(c) of the further information request, the applicant provided a letter from Irish Water stating that connection to the water network could be facilitated. Upgrade works to the water connection would be required involving upsizing approx. 2.7km of water network infrastructure. Upgrade works may also be required to a pumping station, this would be determined following receipt of a connection application. Water would be supplied from Pallas reservoir.

9.158. Hydrogeology was also the basis of Item 3(e) of the further information request which related to the potential impact on private wells. The response to subsection (i) states initially that no groundwater will be used in the operation of the facility. Dewatering of excavation might or might not be required during construction only if high groundwater is encountered. In a worst case scenario the total volume of groundwater likely to be intercepted is estimated at potentially up to 75m^3. If dewatering is required monitoring of groundwater levels from existing groundwater monitoring wells installed will be carried out. Any dewatering will be short term and temporary. There will be no potential effect on private wells according to the response to subsection (ii). As water supply will be from a mains supply, subsection (iii) states that, during the operational phase, there will be no on-going impacts to groundwater levels for any well in the vicinity as no groundwater abstraction is proposed.

9.159. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. The impact of the proposed development on hydrogeology is cited in the grounds of appeal, in particular the source of the water supply, the impact of the proposed development on existing water supplies (both private wells and the public supply), the capacity of the public system, and the potential for pollution of groundwater.

9.160. The development is to be supplied by an upgraded public system which has been subject of an EIAR Addendum in terms of its route from Bellingham to the existing reservoir. No groundwater will be extracted to serve the proposed development during operation. It has been demonstrated that, while there may be a requirement for dewatering during the construction phase, this will be short-term and temporary. Irish Water is the body responsible for the public water system. It has submitted a letter stating the proposed connection can be facilitated, subject to upgrade works to the existing water network. Potential impacts to groundwater are mitigated by proposed measures.

9.161. Having regard to the content of the EIAR, and the supplementary information provided, I am satisfied that the potential for impacts on hydrogeology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on hydrogeology.

Chapter 12 (Archaeological, Architectural and Cultural Heritage)

9.162. Chapter 12 assesses the impacts, if any, on the archaeological, architectural, and cultural heritage environments in the vicinity of the site.

9.163. Assessment Methodology – The objectives are to identify all known features of importance, determine any potential impacts of the development on them, and identify measures to mitigate any potential impacts. A 1km study area for archaeology and protected structures was used. A desk review was undertaken, and a field inspection was carried out.

9.164. Receiving Environment – There are no recorded monuments within the proposed development area, while there are three within the 1km study area. The closest is a burial ground approx. 200 metres north west of the gas connection route. Cúil na Móna

bog was archaeologically surveyed in 2005 and no archaeological features were revealed. A townland and barony boundary extends north west / south east across part of the proposed development area, while a townland boundary extends north east / south west across the line of the proposed gas connection route. No archaeological, architectural, or cultural heritage features were revealed within the development area or surrounding landscape on the walkover survey. There is no protected structure on site, with one within the 1km study area. This is Rockview House (RPS No. 591), approx. 825 metres north east of the proposed gas connection route.

9.165. Potential Effects – In the 'do nothing' scenario, there would be no impact no archaeology, architecture, or cultural heritage. There will be no direct or indirect construction phase impacts on the recorded archaeological, architectural, or cultural heritage resource. The operational phase is considered to have an imperceptible effect while there will be no effect during decommissioning. There is no risk of accidents or disasters and no cumulative effects.

9.166. Mitigation Measures – During construction it is recommended that archaeological monitoring of all groundworks is carried out as well as the creation of a written and photographic record of the townland and barony boundary, and separate townland boundary, located within the development area. No mitigation is proposed during the operational or decommissioning phases. There are no cumulative effects and no requirement for future monitoring.

9.167. Residual Effects – There are no residual effects envisaged to unrecorded archaeology or barony/townland boundaries, and imperceptible residual effects on the archaeological and architectural resource.

9.168. Interactions – It is considered there will be no interactive effects.

9.169. EIAR Addendum – This chapter of the EIAR is addressed in Section 7 of the Addendum. A recorded monument, (RMP No. LA013-040, burial ground), is located immediately adjacent to the pipeline corridor on Boughlone Way. As the proposed development is located within 60 metres of this, the National Monuments Service will require two months advance notice of works. The Addendum states that there will be no impact to this RMP as a result of the construction phase as the works will be in the road or verge. It is stated that there will be no cumulative effects, and no mitigation measures are proposed.

9.170. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. I am satisfied that the potential for impacts on archaeology, architecture, and cultural heritage can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on archaeology, architecture, or cultural heritage.

Chapter 13 (Traffic and Transportation)

9.171. Assessment Methodology – The purpose of the Traffic and Transport Assessment (TTA) is to describe the existing receiving road network and to quantify the existing and likely future traffic flows arising. The underlying objective is to demonstrate that the road network can suitably cater for the forecast increase in traffic flows. A number of documents referred to in preparing the TTA are set out. A study scope that it is stated was agreed with the planning authority is outlined.

9.172. Receiving Environment – The greatest concentration of development traffic will be on the site access road, the accommodation road, and the short section of the R445 between the M7 roundabout and the junction of the accommodation road. The wider principal roads are the M7 east and west and the R445 to Portlaoise and Mountrath. A description is provided of these and other main roads in the vicinity. Transportation objectives and policies in the Laois County Development Plan 2017-2023 are set out.

9.173. Survey data was collected for the accommodation road, R445, and motorway junction. Data was collected between 07.00 and 19.00. NRA guidelines state that surveyed 12 hour traffic flows are estimated to be 82% of the annual average daily traffic (AADT) based on the time period this survey was taken. AADT traffic flows could therefore be approx. 18% higher than recorded.

9.174. Potential Effects – It is proposed to reconstruct and widen the existing accommodation road to 6.5 metres using the extensive verge area to the west which is under the control of the planning authority. Curve widening is proposed at bends and junctions. The site is likely to generate predominantly HGV traffic. Accordingly, a number of alternative junction layouts with varying degrees of serviceability were initially considered. The planning authority expressed a preference for the roundabout option. These have been subject of a Stage 1 RSA. The proposed roundabout is not required

on the grounds of capacity, however given the turning movements of HGV to the proposed development and to the Road Maintenance Depot on the opposite side of the R445, 'there is significant benefit arising from the traffic calming influence on passing traffic'. The existing site access is also to be improved and has similarly been designed to accommodate the turning movements and opposed passage of the maximum legal length articulated vehicles (16.5 metres).

9.175. Two scenarios are provided for assessing the likely volume of traffic generation. Scenario 1 assumes a feedstock of predominantly brown bin waste while Scenario 2 is based on a mixture of broader sources. Both calculations are based on the vehicle types and typical payloads associated with the types of feedstocks, a 5.5 day working week, and a 50 week per year operation. Both scenarios show a similar generation of HGV traffic with Scenario 1 producing marginally higher traffic flows (approx. 34 no. per day). Scenario 1 is considered the more probable and seasonal fluctuations of imported material are not expected though export of digestate will fluctuate seasonally. Surveyed traffic includes HGVs associated with processing of logs adjacent to the site (this is the unauthorised activity referred to in the grounds of appeal). Though this activity is to cease, this surveyed traffic has not been removed from the baseline traffic, in the interest of a robust assessment. Peak digestate export will be a six week period in February and March with 51 no. vehicles per day with an autumn five week peak of 37 no. and a three week summer period of 14 no. per day. The EIAR states that 'the theoretical average HGV traffic generation over the course of the year equates to 33 HGV trips per day where a trip includes both the vehicle movement to and from the proposed facility … In total the peak HGV traffic generation associated with the facility is 66 HGV trips per day'. Significant fluctuation is not expected beyond land spreading periods.

9.176. To prepare a robust evaluation it is assumed that HGV generation will be 83 no. per day, as opposed to the 66 no. cited, during the six-week spring period. This approx. 25% increase figure is considered to represent an extremely conservative and robust assessment given the nature of the proposed development. Forecast traffic distribution has been predicted based on, inter alia, sources of available feedstock and engagement with land spreading contractors. The R445 is predicted as the most popular feedstock route (22%) with Junction 16 (Portlaoise East/Carlow) on the M7 predicted as the most popular digestate route (38%). The forecast distribution of car

traffic is based upon the distribution of existing car traffic. The forecast increase in traffic on the R445 is in the order of +2% based on average daily traffic generation and +3% using the upper value peak traffic generation figures. These are significantly less than the 5% threshold set out in NRA Guidelines and is indicative that the proposed development is not likely to have a significant material impact on the carrying capacity of the existing receiving road network.

9.177. The construction phase and construction traffic generation is set out. A Traffic Management Plan will be prepared for inclusion in the CEMP. Importation of aggregates and cohesive soils will be the period with the most intense movement of vehicles (16-20 weeks), approx. 44 no. – 55 no. HGV articulated tipper lorries per day. There will be significantly more staff on site during construction than the operational phase. The peak in HGV traffic generation during construction is likely to be less than 60 HGV per day. It is expected that the majority of traffic transporting materials to the site will use the M7 and R445. As the short-term construction phase impact is likely to be less than the peak operational traffic, the operational phase represents a worse-case scenario. There will be some delay to R445 users during the construction of the roundabout and the gas network extension. GNI indicates the extension can be progressed at approx. 100 metres per day.

9.178. Capacity assessments/modelling analyses have been provided for base (2022) and future years (2027 and 2037). The methodology used for this is outlined. Capacity assessments are provided for the proposed R445 roundabout, the M7 Junction 18 northern roundabout, and the M7 Junction 18 southern roundabout. It has been demonstrated that the proposed roundabout junction, and existing interchange roundabouts, will operate within capacity for future assessment traffic flow scenarios.

9.179. Mitigation Measures – In general, there is significant mitigation inherent in the proposed design. For the construction stage a detailed Traffic Management Plan will be submitted as part of the CEMP. The upgrade of the accommodation road and the construction of the proposed roundabout are considered to be the primary mitigation measures for the operational phase. A dedicated Logistics Coordinator will be appointed. For decommissioning, mitigation measures similar to those associated with corresponding types of activity at the construction stage would be appropriate. The EIAR states that there are no other projects or plans to be considered as part of a cumulative assessment.

9.180. Residual Effects – Significant impact on the operation of the receiving road network is not predicted. The proposed roundabout will give rise to some delay during construction and operation, though the delay will not be significant during the operational phase. The reduction in traffic speeds will give rise to road safety benefits. The residual effects are expected to be slight during the operational phase.

9.181. Interactions – The most significant interaction is with noise and vibration, and population/human beings.

9.182. EIAR Addendum – Section 2 of the Addendum is concerned with traffic (and population and human health). There will be construction phase nuisance effects on the local community due to traffic management. Effects are likely to be temporary and slight and the upgrading will take place at a rate of approx. 100 metres per day. Construction phase mitigation measures are contained within the EIAR e.g. temporary traffic management and maintenance of accesses.

9.183. Further Information – The planning authority sought further information based on the comments from TII in Item 2(a)(i)-(iii). The applicant acknowledged the proximity of the roundabout to the interchange but the increase in traffic arising would only result in a minor intensification of use of the interchange and not to the extent that it could be considered to be ‘‘adverse’, by the normal standard of evaluation’. The impact on the M7 ‘will be practically imperceptible’. The applicant also notes that access to a national road is not proposed, and the 90 metres required between two roundabouts only applies to a national road. The proposed roundabout will eliminate the queuing arising from the existing junction layout. Subsections (iv) to (x) of Item 2(a) relate to issues such as signage, road width, footpath, RSAs, and car parking provision.

9.184. As part of a clarification of further information response, the applicant confirmed that construction details relating to the public road and roundabout will comply to the latest TII standards and publications, unless directed otherwise by the planning authority.

9.185. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. A number of issues raised in the grounds of appeal relate to the issue of traffic and transportation. These issues include the number of slow moving HGV trips generated by the proposed development, increased traffic congestion and traffic hazard, the location and design of the proposed roundabout, Laois County Development Plan 2017-2023 policies, monitoring, the poor

condition of the access road, absence of a footpath on the access road, and the manner of the road closure at the location of the existing junction between the access road and R445.

9.186. The proposed development itself will undoubtedly increase the number of traffic movements in the area, and particularly in the immediate vicinity of the proposed roundabout. However, it has been demonstrated that this increase would not have any material impact on the capacity of the receiving road network. The additional vehicular movements would not be significant on the wider road network. However, I do consider that the additional vehicular movements would likely be noticeable to those residents in the immediate vicinity of the proposed site and proposed roundabout. I do not consider any additional specific traffic hazard would result from the development. It is stated that this stretch of the R445 is an accident blackspot. However, the physical infrastructure proposed as part of the proposed development would lead to a reduced speed environment, and a likely consequent safety benefit.

9.187. The applicant has justified the position of the proposed roundabout in the context of the existing M7 Junction 18 northern roundabout. I am satisfied that the proposed roundabout location will not have any material impact on the operation of the existing roundabout or the overall junction. Concern has been raised in relation to the design of the proposed roundabout itself. I am satisfied that the design is generally acceptable. I consider that a final access/accommodation road upgrade roundabout design should be agreed with the planning authority prior to commencement of development. As a compliance condition it would not permit a fundamental alteration of the design. I do not consider that agreeing design detail with the planning authority, in the absence of public consultation as referenced in one of the grounds of appeal, is not acceptable.

9.188. In terms of the policies of the Laois County Development Plan 2017-2023, I do not consider that the proposed development would be contrary to particular policies referenced in the grounds of appeal i.e. TRANS 3, 7, 9, and 15.

9.189. Policy TRANS 3 relates to development immediately adjacent to interchanges. TRANS 9 is a similar policy. The TII submission considers the proposed development would be at variance with Section 2.7 (Development at National Road Interchanges or Junctions) of the Spatial Planning and National Roads Guidelines for Planning

Authorities (2012). TII considers the proposed development 'would create an adverse impact on the national road and associated junction'. This is not expanded upon. While the proposed development is in relative proximity to the interchange, I do not consider that it would have any material adverse impact on the junction, and TII has not clarified how it would create an adverse impact. There are existing stepped junctions on either side of the R445 that are to be consolidated into one proposed roundabout. The accommodation/access road exists and serves farmland, the bog, and a residence. No new roads are being created as a result of the proposed development. The closest physical structure of the facility i.e. digestate lagoon, would be approx. 350 metres away from any part of the M7 carriageway or Junction 18. It has been demonstrated that there would be no material impact on the carrying capacity of the existing roundabouts associated with the motorway junction from the proposed development and the proximity of the motorway interchange is a positive aspect of the site location in terms of vehicular access. TII has not stated that there are any plans to upgrade this junction. Therefore, I consider that the proposed development would not be contrary to Policy TRANS 3 and would not create any significant adverse impact on the national road network or associated junction.

9.190. In relation to TRANS 7, the development accesses the regional road network, not the national road network, and therefore this policy is not relevant. The R445 is a Strategic Regional Road. TRANS 15 states it is the policy of the Council to manage and maintain the strategic regional road network in a manner which safeguards the strategic function of the road network. The Plan states that the Council 'shall adopt a restrictive policy in relation to new development in the interests of traffic safety'. I do not consider the proposed development is inconsistent with this policy. The proposed development would help to achieve national targets in terms of renewable energy, no 'new' access point is being created, two stepped junctions onto the R4445 would be consolidated, and I do not consider the proposed development would comprise a traffic hazard.

9.191. In terms of previous planning applications, each planning application is assessed on its own merits. Each site and proposed development is different and local, regional, and national policies can evolve and change over time.

9.192. No footpath is proposed. The access road is a public road in a rural area and there is no existing footpath in place, notwithstanding the relatively limited use of the access road currently. I do not consider a footpath is required in this rural location and there

is no existing footpath network to link into Portlaoise. I consider the matter of how the existing junction of the local cul-de-sac road and R445, and short section to be replaced by the upgraded road, is treated, is a matter for the planning authority, given it is a public road.

9.193. Having regard to the foregoing, I am satisfied that the potential for impacts on traffic and transportation can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on traffic and transportation.

Chapter 14 (Noise and Vibration)

9.194. This chapter examines the potential impacts on noise and vibration in the local environment.

9.195. Assessment Methodology – The relevant guidance used in the preparation of the chapter is referenced. The study area includes noise sensitive locations within 600 metres of the development site as well as within 100 metres of the proposed gas pipeline and roads. 36 no. receptors were modelled for the operational impact assessment. A British Standard was used to derive appropriate noise limits for the proposed development. A baseline noise survey was carried out at four locations to determine threshold limits using the 'ABC Method'. Four noise sensitive locations were selected, including adjacent to the house to the south of the site access (N1) and adjacent to the house to the north of the existing junction of the access road and R445 (N2). Ambient noise levels rounded to the nearest 5db at these two locations were 60dB so they were afforded 'Category A' designation. If the modelled total noise level (ambient plus construction noise) exceeds 65dB, then a potential significant effect is predicted.

9.196. In terms of on-site operational noise, noise is appraised against the EPA's Guidance Note for Noise (NG4). Typical noise limits apply in this area i.e. it is not a 'Quiet Area' or 'an area of low background noise'. For terminology, a degree of effect matrix and a description of effects are provided. The increase in traffic volume has the potential to impact on residences. Classification of magnitude of noise impacts in the short (when opened) and long term (typically 15 years) is set out. Vibration arising from

construction and operation will not be perceptible at nearby sensitive locations and any vibration arising from such activities will be significantly below any thresholds for structural damage to properties. As such, this aspect is not discussed further.

9.197. Receiving Environment – The surrounding environment is dominated by traffic noise from the M7 and R445. A baseline noise survey was conducted at four locations on 20th and 21st March, 2019. These locations were close to the nearest occupied dwellings (to the south of the site, two on the R445, and one on the opposite side of the M7). Baseline survey results from each location, including comments, are provided. The background levels measured are high.

9.198. Potential Effects – In a 'do nothing' scenario, the noise from the M7 and R445 are nonetheless expected to increase due to the increase in predicted traffic volumes.

9.199. For the construction phase, conservation parameters were used. The individual elements of the construction phase were considered and the potential effects of these described. The properties near the access road will experience a perceptible noise level increase from site traffic though it will remain low in the context of the higher noise levels from the R445. For the construction of the site access road, noise levels will be below the daytime noise limit of 65dB $L_{Aeq,1hr}$ at the nearest receptor, R9. For works on the access road this daytime noise limit will be exceeded at R23 (66.6 and 69dB $L_{Aeq,1hr}$ respectively for phase 1 works (excavation of drainage channels, removal of subsoil, delivery of sub-base material etc.) and phase 2 works (surface course of macadam etc.) but this 'must be considered in the context that these are the expected highest predicted noise levels with all plant operating simultaneously'. In practice, all plant will not operate simultaneously, and the actual noise levels will be below those predicted. Also, the distance between the construction activities and noise sensitive locations will be greater than the minimum distances modelled.

9.200. For the earthworks, the construction of buildings and weighbridge, the construction of the tank farm and bunded area, the construction of the digestate storage lagoon, and the construction of the gas upgrade and injection plant infrastructure, the nearest occupied house is receptor, R9. In all instances the predicted noise levels are below the construction noise limit of 65 dB $L_{Aeq,1hr}$. Approximately 2.3km of new gas pipework will be laid along the R445, access road, and site access. There is potential for brief periods where noise levels will be elevated at houses close to the works. These levels

will only occur for short durations at a limited number of properties. It is expected works will progress at approximately 100 metres per day.

9.201. In the operational phase anaerobic digestion will occur constantly. Feedstock deliveries and digestate removal will occur from 08.00 to 18.30 Monday to Friday and 09.00 to 13.00 on Saturday. Noise will be associated with, for example, deliveries and plant. An overview of operational noise prediction modelling is provided including on-site traffic. Predicted operational noise levels were calculated at 36 no. receptors and assessed against operational noise criteria. Two of these receptors are commercial premises and are not considered to be noise sensitive. A worst-case is assessed for all periods, though no deliveries or digestate removal occurs in the evening and night. The predicted noise levels are below the EPAs daytime, evening, and night-time limits, and in practice not all activities will occur simultaneously as was modelled. 'The predicted noise levels are also below the baseline ambient noise levels measured at the four noise monitoring locations. Therefore, it is likely that traffic noise will mask the noise from the proposed development. However, it is possible that operational noise from the proposed development will be audible at the nearest noise sensitive locations especially when traffic noise subsides. In terms of the significance of impact, as the existing ambient noise levels are above the predicted noise for the proposed development, the potential impact from operational noise levels is not significant'. The highest noise level predicted is 49.6 dB $L_{aeq,30min}$ at 4.5 metres height (first floor level) in the daytime period at R9. It is also noted that the proposed roundabout will increase the distance to sensitive receptors than is currently the case from the existing access road junction. Noise levels from traffic along the access road will have a major increase. However, the EIAR states that while there will be a perceptible increase, the road traffic noise along the access road will remain low in the context of the higher noise levels currently experienced on the R445 and M7.

9.202. Noise from decommissioning would be during the day and would be controlled through guidance and standards in place at the time. There are no other plans or projects to be considered for cumulative impacts.

9.203. Mitigation Measures – There is no specific mitigation requirement for most of the construction phase. However, close to sensitive receptors the simultaneous use of plant will be minimised. Residents affected by roadworks or construction of the pipeline will be notified in advance. Hours of construction activity will be limited. General

mitigation will be implemented to reduce construction impacts e.g. noise monitoring, maintenance of internal haul routes etc. No specific mitigation measures are required during operation. The noise limits for the facility will be set out in the IE Licence. At decommissioning, mitigation measures in line with the construction phase are proposed. There are no other projects or plans to be considered as part of a cumulative assessment.

9.204. Residual Effects – There may be occasions where there are elevated noise levels during construction of the access road or gas pipeline close to houses. However the impact will be slight and for a brief period. The residual impacts at the operational stage are not significant.

9.205. Interactions – The most significant interactions are between noise and vibration and traffic, and noise and vibration and human beings.

9.206. EIAR Addendum – Noise and vibration is addressed in Section 4 of the Addendum (along with air quality and climate). Traffic noise is dominant in the receiving environment. Noise sources will be similar to those for the gas pipeline. Predicted noise levels are outlined at 15, 30, and 60 metre ranges. In some instances, noise levels may be elevated at noise sensitive locations close to the road. This will only occur for short durations at a limited number of houses. Works are expected to progress at a rate of approx. 100 metres per day. Mitigation includes minimising the simultaneous use of plant and notification of works to affected residents. There may be slight and brief residual impact during the construction period.

9.207. Further Information – Item 3(f) of the planning authority's further information request related to noise. Subsection (I) sought information on the noise monitoring programme for the construction phase, subsection (II) sought information on the noise monitoring programme for the operational phase, and (III) related to HSE comments. Construction phase detail was provided and noise monitoring during operation will be undertaken in accordance with the IE Licence. In response to the HSE concerns, the applicant states that the existing ambient noise levels are above the predicted noise for the proposed development and therefore the potential impact from operational noise levels is not significant.

9.208. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. I note that some of the issues raised

in the grounds of appeal relate to this chapter of the EIAR. Relevant issues include that noise predictions in the EIAR are only estimates, and noise and vibration nuisance.

9.209. While noise levels are only predicted, as stated, I consider that robust modelling has been provided by the applicant which sets out that there would not be a significant impact on the noise environment. While there would be some increase to local residents, I consider the conclusion of this chapter of the EIAR to be reasonable. Noise impact and general nuisance is an unavoidable aspect of a substantial development, but a Construction Management Plan would be implemented to reduce the impact as much as possible. The main area of construction is relatively remote from local residences. I concur with the applicant that there is no reasonable risk of structural damage to any property from vibration.

9.210. I am satisfied that the potential for impacts on noise and vibration can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts of noise and vibration.

Chapter 15 (Landscape and Visual Impact)

9.211. This chapter describes the existing landscape and visual context and assesses the likely landscape and visual impacts of the proposed development. Landscape impact assessment (LIA) relates to assessing effects of a development on the landscape as a resource in its own right. Visual impact assessment (VIA) relates to assessing effects of a development on specific views and on the general visual amenity experienced by people.

9.212. Assessment Methodology – The LIA and VIA process is set out as is relevant guidance. The landscape and visual impacts of the proposed development will be assessed as a function of sensitivity versus magnitude. Definitions of terminology used in landscape assessment is outlined i.e. landscape value and sensitivity, magnitude of landscape impacts, and an impact significance matrix. VIA criteria is the sensitivity of visual receptors weighed against the magnitude of visual effect and these factors are described. The study area extends to the nearest roads accessible in every

direction (6km west south west being the furthest), and high points in the landscape in the vicinity of the site.

9.213. Receiving Environment – A description of the landscape context of the proposed site and wider study area is provided. The site slopes from a high point of 114mAOD in the south east to a low point of 110mAOD in the north west. Ground cover is a mixture of bare ground and heather with some hedgerows and treelines along the edges. The bog extends to the north and west. The wider study area is largely made up of lowland agricultural areas and urban fringe closer to Portlaoise. The location of one-off houses in the area is noted. It is stated that the site is not visible from the R445 though the proposed roundabout will be. Passing views from the M7 are possible.

9.214. The site is in the Peatlands Area Landscape Character Type as per the Landscape Character Assessment (LCA) appendix of the County Development Plan 2017-2023. Inter alia, the character assessment states, as a general recommendation, 'To recognise the importance of peatlands for ecology, history, culture and for alternative energy production'. Policy LS44 of the Plan, related to peatland areas, supports the identification of projects that have the potential to achieve commercial value such as industrial developments, renewable energy, tourism etc. while also promoting high environmental standards and supporting biodiversity objectives.

9.215. The bog landscape has been heavily modified by human activity and has a sterile, industrial character as per the LCA. The site is not a particularly unique or distinctive landscape and, overall, the landscape sensitivity of the receiving lands is deemed to be medium-low.

9.216. Only those parts of the receiving environment potentially afforded views are of concern. A computer generated Zone of Theoretical Visibility (ZTV) illustrates where the proposed development is potentially visible from. It is based solely on terrain and ignores features such as buildings, vegetation, or the M7 which may screen views. The value of the ZTV is to determine from where the proposed development definitely will not be visible. Theoretical visibility occurs within 1km in all directions though in reality the site is screened from view everywhere south of the M7. The visual envelope is the extent of potential visibility of the site to or from a specific area or feature. Existing well developed treelines, forestry and hedgerows screen the site in all directions. Three representative viewpoints were selected, and photomontages

prepared. There are no known amenity or heritage locations within the study area. The proposed development is not visible from the Rock of Dunamase.

9.217. Potential Effects – In a 'do nothing' scenario the site will remain largely as scrub. Construction phase landscape effects are considered to be no greater than moderate-slight. Visual effects during construction will be no greater than moderate.

9.218. During the operational phase there will be an industrial feature in the cutaway bog. This localised change reflects a new relationship between the cutaway bogland and an industrial use. From a distance only, taller structures will be visible from elevated vantage points where there are gaps in vegetation at passing views. In the immediate vicinity the overall significance is no greater than moderate-slight with the rest of the study area likely to experience slight-imperceptible landscape impacts. In terms of the visual effects, from the three viewpoints selected, the significance of the visual impact ranges from slight to slight-imperceptible and no significant adverse changes are expected. The proposed development is only slightly visible from VP3 (the overpass above the Bórd na Móna railway on the local road south west of the site entrance and representative of the view from the M7).

9.219. Once decommissioned the likely concrete slab will not be visible outside the applicant's landholding. There would be a slight landscape impact and imperceptible visual impact. In terms of cumulative effects, there are no significant proposed developments within the vicinity that would give rise to a cumulative landscape or visual impact.

9.220. Mitigation Measures – Avoidance and reduction mitigation measures integral to the design of the development are the primary means of mitigation e.g. the renewable gas facility is positioned in a naturally lower area of the site, goosewing grey colouring for taller structures to blend with the typical sky, and maintenance of existing screening treelines and hedgerows to the south and east.

9.221. Residual Effects – The residual landscape and visual impact during the construction stage will be no greater than moderate-slight. The overall residual effects are considered to be slight-imperceptible during the operational phase.

9.222. Interactions – Landscape and visual impacts interacts with biodiversity, land, soil, and geology, and archaeology, architectural, and cultural heritage.

9.223. EIAR Addendum – Section 8 of this is relevant to this chapter. The water pipeline corridor is not a distinctive landscape and is almost indistinguishable from the surrounding areas. The landscape sensitivity is low. Any visual construction effects will be temporary, and the overall potential construction phase impact is imperceptible. There will be no operational phase impacts. There are no cumulative effects, and no mitigation is proposed. Residual effects will be imperceptible.

9.224. Further Information – While noting the content of the EIAR in relation to landscape and visual impacts, the planning authority sought additional photomontages from Viewpoints D, E, and F, 'for avoidance of doubt', and an assessment of each. These photomontages show the proposed development is not visible from any of these viewpoints.

9.225. Assessment & Conclusion – I have considered the submissions on file, this chapter of the EIAR, and all supplementary documentation. I note that some of the issues raised in the grounds of appeal relate to this chapter of the EIAR. Relevant issues include the visual impact of the proposed development to local residents, those in the wider local area and to users of the M7, the conclusions drawn in the EIAR as to landscape and visual impact, and impact on views.

9.226. I note the content of the grounds of appeal and visual impact is a consideration in the assessment of any proposed development. However, while the subject site and immediate vicinity may be a rural and natural environment on the edge of a bog, it is not of any particular significance in terms of the overall quality. The site and environs comprise, inter alia, cutaway bog, a bog railway, areas of bare ground, a local access road, a motorway, and a motorway junction. I noticed some minor fly tipping had occurred close to the site access on inspection. There are no natural designations in the area and in the LCA in the County Development Plan 2017-2023 it is designated as a peatland area. The importance of peatland areas for alternative energy production is specifically cited in the Plan. The proposed development is consistent with Policy LS 44, will be licenced by the EPA, and biodiversity has been considered in Chapter 7 of this EIA.

9.227. Designated amenity views and prospects are set out in Section 7.20 of the Plan. None of these views and prospects would be affected by the proposed development. Notwithstanding the content of the EIAR and photomontages, there may be an

intermittent visual impact from the proposed development on a limited number of private areas. Any such nuisance could be addressed by appropriate landscaping of the private area, if necessary. Notwithstanding, given the relatively remote/secluded location of the main development site, the extent of the existing bog to the north and west, the extent of significant infrastructure in relatively close proximity i.e. the M7 and Junction 18, the extent of natural vegetation and man-made features in the vicinity which would help to screen views, the description of the area as per the LCA, and the policy of the planning authority that peatland areas are generally suitable for industrial/renewable energy developments, I do not consider, overall, that the proposed development would have any significant adverse impact on the landscape or visual impact of the area.

9.228. Having regard to the foregoing I am satisfied that the potential for impacts on landscape and visual impact can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on the landscape and visual amenities of the area.

Chapter 16 (Schedule of Environmental Commitments)

9.229. This chapter summarises the mitigation measures/environmental commitments in the EIAR. 279 no. total mitigation measures from each chapter from Chapter 6 (Population and Human Health) to Chapter 16 (Landscape and Visual Impact) are set out. It is stated that where similar commitments appear in multiple chapters they have been included only once in Chapter 16, in the most appropriate section.

Chapter 17 (Inter-Relationships and Interactions)

9.230. This chapter takes a more holistic view of the inter-relationships and interactions between different aspects of the project discussed in other chapters ensuring there is adequate coverage of the potential for the development to cause overall effects and cumulative impacts. The process examines whether interactions between the different effects may cause greater impacts than those individually. Cumulative effects and their inter-relationship are fully considered and described.

9.231. Impact Summary – Potential negative effects, prior to mitigation, are identified i.e. impact on population during the construction and operation phases, impact on biodiversity during construction, the potential for dust generation during construction and the potential for odour generation during operation, impact on hydrology and surface water quality, and hydrogeology, during both phases, the potential impact on soils during construction, the potential for increased traffic, and the potential for increased noise levels during both phases.

9.232. Potential positive effects are identified as provision of appropriate waste management infrastructure to support waste management policy, reducing the volume of biodegradable municipal waste to landfill, generation of biomethane for injection into the gas network, positive impact on GHG emissions, employment provision and demand for goods and services, and production of digestate for use as fertiliser.

9.233. Table 17-1 identifies whether there are interactions and inter-relationships between the key environmental aspects e.g. population and human health, biodiversity, noise and vibration etc. Table 17-2 summarises the relative significance of the impacts both with and without mitigation. This table considers that, after mitigation, the highest significance recorded is 'slight-moderate'. These relate to landscape and visual effects.

9.234. Interaction of effects with other activities and projects – This outlines the interaction between the proposed development and other activities and projects. No specific activities or projects were identified though some interactive elements taken into account in the EIAR include background levels of pollutants in air, background traffic noise, and existing and potential future road traffic. No specific future development of scale has been identified in the vicinity of the development location and no further consideration in this regard is undertaken. Relevant planning applications to the planning authority have been considered.

Reasoned Conclusion

9.235. I consider that the EIAR and supplementary information is sufficient to identify, describe and assess the likely significant effects of the project on the environment. Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the developer,

and the submissions from the planning authority, prescribed bodies, appellants, and observers in the course of the application, it is considered that the main significant direct and indirect effects of the proposed development are, and will be mitigated as follows where relevant:

- Biodiversity – There will be habitat loss primarily due to the construction of the proposed renewable gas facility. However, this is not a particularly notable area of biodiversity. The site is a cutaway bog and forms a small section of the larger Cúil na Móna bog. Measures for the construction, operation and decommissioning phases are set out relating to general mitigation, habitat/flora mitigation, fauna mitigation. Mitigation measures include implementation of a Biodiversity Management Plan.
- Air Quality and Climate – Overall, there will be positive impacts on the environment as a result. Biomethane gas will be produced for injection into the gas network. Biofertiliser will be produced for land spreading. These two products contribute to the circular economy. While concern about odour and other emissions are set out in the grounds of appeal, operation of the proposed development would be controlled by an IE Licence issued by the EPA.
- Hydrology and Surface Water Quality – There is the potential for surface water quality to be adversely affected by the proposed development. The potential for any pollution event can be avoided by implementation of mitigation measures contained within the CEMP. Surface water discharge and monitoring is a matter for the EPA under the required IE Licence.
- Hydrogeology – The proposed development is to be served by the public system, subject to upgrade. Irish Water has stated that a connection to the network can be facilitated. Therefore, there will be no risk to existing private wells in the vicinity as the proposed development will not use groundwater.
- Traffic and Transportation – There will be some increase in heavy traffic on the local road, regional road, and national road network during the construction and operational phases. Alterations to the regional road network are proposed as part of the planning application and this will give rise to road safety benefits. Overall, the impact to the road network will not be significant.

- Noise and Vibration – The applicant has demonstrated that noise impacts arising from the operational stage will not be significant. Operation of the proposed development would be controlled by an IE Licence issued by the EPA, which would include noise.
- Landscape and Visual Impact – A Landscape and Visual Impact Assessment has indicated that the impact of the proposed development will not be significant. The site is not located in a particularly unique or distinctive landscape.

9.236. I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect effects on the environment.

10.0 Appropriate Assessment (AA)

Appropriate Assessment (AA) Screening

Compliance with Article 6(3) of the Habitats Directive

10.1. The requirements of Article 6(3) of the Habitats Directive, 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.

Background on the Application

10.2. The applicant submitted an 'Appropriate Assessment Screening Report', prepared by Fehily Timoney and dated August 2019, as part of the planning application. The Screening Report incorporates the proposed renewable gas facility plus the extension to the gas network. Two addenda specifically related to the AA process were subsequently also submitted.

10.3. The Stage 1 AA Screening Report considers the implications of the proposed development, on its own and in combination with other plans and projects, for European sites in view of the conservation objectives of those sites. The report and addenda inform and assist the competent authority in carrying out its screening for AA.

10.4. The Screening Report concludes that, without the inclusion of mitigation measures, 'it cannot be excluded, on the basis of objective scientific information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on the River Barrow and River Nore SAC and the River Nore SPA'. However, as set out in Addendum No. 2, the possibility of NOx emissions to the Slieve Bloom Mountains SPA and Slieve Bloom Mountains SAC could not be excluded at screening stage either.

10.5. An 'Addendum to the Appropriate Assessment Screening Report and Natura Impact Statement' document prepared by Fehily Timoney and dated May 2020 was submitted as part of the further information response. Inter alia, this Addendum assessed the effects, if any, of the proposed water pipeline on European sites. The route assessed in the addendum is from Bellingham to Pallas reservoir as the other section of the route is along the same route as the gas pipeline which had previously been assessed. In so far as it relates to AA screening, the addendum concludes that the pipeline will be constructed within the road corridor. There are no indirect effects on any European site due to a lack of ecological connectivity and as there are no watercourse crossings required indirect effects on water quality will not occur. No AA in respect of these works is required.

10.6. 'Addendum No. 2 to the Appropriate Assessment Screening Report and Natura Impact Statement' document prepared by Fehily Timoney and dated October 2020 was submitted as part of the clarification of further information response. In relation to the AA Screening Report it relates to NOx emissions to all sites within a 15km radius. Two sites are screened in, Slieve Bloom Mountains SPA and Slieve Bloom Mountains SAC. Due to distance, 'it is concluded beyond reasonable scientific doubt that there are not likely to be significant effects from NOx from the proposed development', to any other European site.

10.7. Having reviewed the documents, addenda, 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

10.8. 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 a European Site(s).

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

Brief Description of the Development

10.10. The applicant provides a brief description of the project on page 7 of the AA Screening Report and elsewhere e.g. page 1 of Chapter 3 of the EIAR. The Screening Report contains a detailed outline of the proposed development from pages 7-34 and a construction methodology from pages 34-50. In summary, the development comprises a waste management facility which uses imported feedstock to generate both biogas for injection into the grid and digestate for land spreading. The overall facility includes a weighbridge and weighbridge office, an administration building, a reception building, an odour abatement unit, a tank farm, gas upgrade and injection plant, CHP plant, a gas flare, a covered digestate lagoon, a surface water attenuation pond, an underground wastewater holding tank, palisade site fencing, an electrical substation, and a circulation yard including 28 no. car parking spaces. Other elements include a peat deposition area of 9.13 hectares, external road upgrades including new roundabout, upgrade of the R445 and local access road to the site entrance (660 metres in length), and the upgrade of the internal site access road (443 metres in length).

10.11. Connection of the proposed facility to the gas network does not form part of the planning application. However, it has been taken into consideration as part of the AA process. Similarly, the upgrade of the water network does not form part of the planning application, but it has been considered as part of the AA process. The works to the water pipeline were screened out from further consideration in the first addendum. I concur with this assessment, though I note the route assessed was only from Bellingham to Pallas reservoir, and not from Bellingham to the proposed site. A

watercourse crossing occurs on the previously assessed gas pipeline route which would be in a similar corridor to the water pipeline along the R445.

10.12. The site location and receiving environment are described in pages 1 and 2 of Chapter 1 of the EIAR. The site is approx. 3.5km south west of the centre of Portlaoise, north of the M7 motorway. The proposed site is located in the eastern portion of the approx. 657 hectares Cúil na Móna bog. The site is characterised as cutaway bog since the cessation of commercial scale use for peat extraction. The site is accessed from an unnamed local road, off the R445 just north of Junction 18 of the M7. There are a number of residential receptors within the vicinity. To the west of the site is bogland. To the south of the site is a logging area (this activity appears to have stopped), and further south is agricultural land and one house before the M7. To the east and south east are established hedgerows and bog woodland and beyond these are agricultural land and two houses. To the north of the site there is bogland with agricultural fields beyond. Habitat maps are provided as Figures 4.3A and 4.3B of the Screening Report.

10.13. Taking account of the characteristics of the proposed development in terms of its location and the scale of works, the following issues were considered for examination in terms of implications for likely significant effects on European sites in Table 5-3 (Assessment of Significant Effects) of the Screening Report (which was updated as Table 2-1 in Addendum No. 2 to include NOx emissions):

- The individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to significant effects on the Natura 2000 sites.
- Likely direct, indirect, or secondary effects (either alone or in combination) on the Natura 2000 sites by virtue of:
    - size and scale, land-take, and distance from European sites,
    - resource requirements and excavation requirements,
    - emissions (pollutants and sediments),
    - emissions (NOx)
    - transportation requirements,
    - duration of construction, operation, and decommissioning,

- cumulative and in-combination effects.

- Any likely changes to the sites arising as a result of reduction of habitat area, disturbance of key species, habitat or species fragmentation, reduction in species density, changes in key indicators of conservation value, or climate change.

- Any likely impact on the sites as a whole in terms of interference with the key relationships that define the structure of the sites and interference with the key relationships that define the function of the sites.

- Indicators of significance as a result of the identification of effects set out above in terms of loss, fragmentation, disruption, disturbance, or change to key elements of the site e.g. water quality etc.

- Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known.

Submissions and Observations

10.14. Concern about nitrogen emissions (NOx) were raised by the Department of Culture, Heritage and the Gaeltacht. Biodiversity impacts from land spreading of liquid digestate, including nitrogen deposition and nutrient enrichment of watercourses, were also referenced. Land spreading is addressed in Section 8.3 of this Inspector's Report. The IFI submission also considered that potential for significant emissions from the proposed peat stripping had not been adequately addressed. An Taisce considered the feedstock must be assessed as part of the NIS. This is addressed in Section 8.2 of this Inspector's Report. One submission considers that the AA is very sparse on how gas flaring will take place and it is referenced in a submission that as of 25.01.2021 the final Planners Report was still not available on the Council Portal. The AA determination is specifically referenced in this regard.

European Sites

10.15. The development site is not located in or immediately adjacent to a European site. The closest European site is Slieve Bloom Mountains SPA (Site Code 004160) approx. 5.5km to the north west.

10.16. European sites within the zone of influence (ZoI) must be evaluated on a case by case basis. Figure 5.1 (European Sites Within 15km of the Proposed Development) of the Screening Report illustrates the position of the site in the context of European sites in a 15km radius. This includes, according to the Screening Report, all hydrologically and hydro-geologically connected sites i.e. there are no such additional sites outside the 15km radius. In terms of the development subject of the planning application the European sites within approx. 15km of the application site are Slieve Bloom Mountains SPA (Site Code 004160, approx. 5.5km to the north west), Slieve Bloom Mountains SAC (Site Code 000412, approx. 7.4km to the north west), River Barrow and River Nore SAC (Site Code 002162, approx. 7.8km to the south (approx. 9km hydrologically), and this SAC is also hydrologically linked in a northern direction from the proposed gas pipeline), River Nore SPA (Site Code 004233, approx. 9.4km to the south), Mountmellick SAC (Site Code 002141, approx. 11.2km to the north), Knockacoller Bog SAC (Site Code 002333, approx. 13km to the south west), and Ballyprior Grassland SAC (Site Code 002256, approx. 14.1km to the east).

10.17. The AA Screening Report used the source-pathway-receptor model to identify which European sites, and which of their qualifying interests (QIs) or special conservation interest species were potentially at risk. In the original AA Screening Report the European sites identified within the ZoI of the proposed development were River Barrow and River Nore SAC and River Nore SPA. In Addendum No.2 Slieve Bloom Mountains SPA and Slieve Bloom Mountains SAC were also considered to be within the ZoI because of NOx emissions. I concur with considering these four sites only within the ZoI.

10.18. The other three SAC sites were discounted because there is no connectivity between the proposed development and the relevant SAC, and distances. In terms of proximity of the Slieve Bloom Mountains SPA being the closest European site the Screening Report states that the core foraging range of the QI species (hen harrier) is approx. 2km and the development site area is relatively small with very limited foraging potential.

Summary Table of European Sites Within the Zone of Influence of the Proposed Development

European Site (Code)	List of Qualifying Interest / Special Conservation Interest	Distance from Proposed Development (Km)	Connections (source, pathway, receptor)
River Barrow and River Nore SAC (002162)	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows [1330] Mediterranean salt meadows [1410] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] European dry heaths [4030] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Petrifying springs with tufa formation [7220] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior [91E0]	7.8km (approx. 9km hydrologically)	Hydrological

	Desmoulin's whorl snail [1016] Freshwater pearl mussel [1029] White-clawed crayfish [1092] Sea lamprey [1095] Brook lamprey [1096] River lamprey [1099] Twaite shad [1103] Salmon [1106] Otter [1355] Killarney fern [1421] Nore pearl mussel [1990]		
River Nore SPA (004233)	Kingfisher [A229]	Approx. 9.4km	Hydrological
Slieve Bloom Mountains SPA (004160)	Hen harrier	Approx. 5.2km (from NOx emission point)	Emissions to air
Slieve Bloom Mountains SAC (Site Code 000412)	Northern Atlantic wet heaths with Erica tetralix [4010] Blanket bogs (*if active bog) [7130] Alluvial forests with Alnus glutinosa and Fraxinus excelsior [91E0]	Approx. 7.3km (from NOx emission point)	Emissions to air

Identification of Likely Effects

10.19. The conservation objectives of the Natura 2000 sites are as follows:

- River Barrow and River Nore SAC – Conservation objectives are set out in the 'Conservation Objectives River Barrow and River Nore SAC 002162'

document published by the National Parks & Wildlife Service (NPWS). They are to maintain or restore favourable conservation condition. I note that the status of the freshwater pearl mussel as a qualifying species is under review and the outcome of this will determine whether a site-specific conservation objective is set for this species. I also note that while 'Reefs [1170]' is set out as a QI on the NPWS website it is not included within the Conservation Objectives document published by the NPWS.

- River Nore SPA – The conservation objective is set out in the 'Conservation objectives for River Nore SPA [004233]' document published by the NPWS. It is 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'.
- Slieve Bloom Mountains SPA – The conservation objective is set out in the 'Conservation objectives for Slieve Bloom Mountains SPA [004160]' document published by the NPWS. It is 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'.
- Slieve Bloom Mountains SAC – Conservation objectives are set out in the 'Conservation Objectives Series Slieve Bloom Mountains SAC 000412' document published by the NPWS. They are to restore the favourable conservation condition of each habitat.

10.20. Other plans and projects identified within 15km include Cúil na Móna bog where peat extraction has now ceased and the storage/chipping of wood immediately south of the site which will cease in the coming months (and which was not observed to be ongoing on a site inspection). EPA Licenced sites within 15km include autobody works, a Glanbia facility, hazardous waste recovery works, waste transfer station and recycling centre, sawmills, manufacturing, and pig farming.

10.21. Table 5-3 (Assessment of Significant Effects), as updated in Addendum No. 2, is the applicant's assessment of potential significant effects of the proposed development alone or in combination with other plans and projects, without inclusion of mitigation measures. Potential significant effects are:

- During construction and operation there is potential for sediment and/or pollutants to enter the on-site drainage ditches which discharge (i) into the Clonadacasey

and downstream to the Cappanacloghy Stream and then into the River Nore or, (ii) the Kylegrove Stream, and hence to the River Barrow via the Triogue River. The renewable gas facility works would discharge to the Clonadacasey system whereas the gas pipeline extension/water upgrade works would discharge to the Kylegrove system. The hydrological link to the SPA is only via the Clonadacasey system. Negative water quality impacts could alter habitat in the SAC and decrease food supply for kingfisher.

- During construction there is the potential for invasive species to spread and enter watercourses via contaminated machinery.
- During operation, there is the potential for NOx emissions to affect proximal Natura 2000 sites.

10.22. I concur with the potential effects as set out in the Screening Report, and Addendum No. 2, as summarised above.

Mitigation Measures

10.23. 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

Significant effects cannot be excluded, and Appropriate Assessment required

10.24. The proposed development was considered in light of the requirements of section 177U of the Planning & Development Act, 2000 (as amended). Having carried out Screening for Appropriate Assessment of the project, I conclude that the project individually (or in combination with other plans or projects) could have a significant effect on European site River Barrow and River Nore SAC (Site Code 002162), River Nore SPA (Site Code 004233), Slieve Bloom Mountains SPA (Site Code 004160) and Slieve Bloom Mountains SAC (Site Code 000412) in view of the site's Conservation Objectives, and Appropriate Assessment (and submission of a NIS) is therefore required.

Appropriate Assessment (AA)

10.25. The requirements of Article 6(3) as related to appropriate assessment of a project under Part XAB, sections 177U and 177V of the Planning & 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
- Screening the need for appropriate assessment
- The Natura Impact Statement and associated documents
- Appropriate assessment of implications of the proposed development on the integrity of each European site.

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

10.26. 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.

10.27. 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).

Screening Determination

10.28. Following the screening process, it has been determined that AA is required as it cannot be excluded on the basis of objective information that the proposed renewable gas facility development, including extension of the gas pipeline and upgrade of the water network, individually or in combination with other plans or projects, will have a significant effect on the following European sites i.e. there is the *possibility* of significant effect:

- River Barrow and River Nore SAC (Site Code 002162)
- River Nore SPA (Site Code 004233)
- Slieve Bloom Mountains SPA (Site Code 004160)

- Slieve Bloom Mountains SAC (Site Code 000412)

10.29. The possibility of significant effects on other European sites has been excluded on the basis of objective information.

10.30. Measures intended to reduce or avoid significant effects have not been considered in the screening process.

The Natura Impact Statement

10.31. The application included a 'Natura Impact Statement' (NIS) prepared by Fehily Timoney and dated August 2019, which examines and assesses potential adverse effects of the proposed development on the River Barrow and River Nore SAC and the River Nore SPA. It is stated that the document assists in the appropriate assessment to be carried out by the competent authorities 'to evaluate the potential impact(s) of the proposed development on the integrity of European sites in light of their conservation objectives'. The submitted NIS is a detailed document. It also includes the legislative framework and a comprehensive description of both the proposed development (building and processes) and proposed construction methodology.

10.32. The NIS conclusion in the first addendum states '(i) all aspects of the proposed development project have been identified which, in the light of the best scientific knowledge in the field, can by themselves or in combination with other plans or projects, affect the European sites in the light of their conservation objectives; (ii) there are complete, precise and definitive findings and conclusions regarding the identified potential effects on any relevant European site; (iii) on the basis of those findings and conclusions, the competent authorities are able to determine that no scientific doubt remains as to the absence of the identified potential effects; and (iv) thus, the competent authorities may determine that the proposed development will not adversely affect the integrity of any relevant European site'.

10.33. The initial submission of the Department of Culture, Heritage and the Gaeltacht considered that an assessment of impacts of any nitrogen emissions from the CHP (combined heat and power) on nitrogen sensitive Natura 2000 sites should be included in the AA and recommended further information. The initial IFI submission considers that there is potential for significant emissions from the proposed peat stripping and this has not been adequately addressed in the NIS.

10.34. An ‘Addendum to the Appropriate Assessment Screening Report and Natura Impact Statement’ document prepared by Fehily Timoney and dated May 2020 was submitted as part of the response to a further information request. A further document, ‘Addendum No. 2 to the Appropriate Assessment Screening Report and Natura Impact Statement’, prepared by Fehily Timoney and dated October 2020 was submitted as part of the response to the clarification of further information request. The Addendum of May 2020 addressed Item 5(i) and (ii) of the further information request. Subsection (i) related to surface water discharge, generally addressed elsewhere in this AA section. Increased emission of ammonia was referenced in subsection (ii), as raised by IFI. The addendum states that water quality monitoring results indicate that the concentration of ammonia is on a downward trend. Peat excavation/deposition will occur over an 8-10 week period after which there will be no further peat disturbance. If concentration of ammonia during that 8-10 week period is at the same levels as when the bog was active, it will be below the trigger limit agreed with the EPA. Peat deposition works will encompass mitigation measures. There will be no significant effect on aquatic species in the SAC and, due to the instream distances to the Natura 2000 sites there is a large dilution factor.

10.35. As a response to Item 5(iii) of the further information request, the conclusion of the NIS was revised, as set out in Section 10.32.

10.36. An assessment of nitrogen (NO_x) emissions from the proposed development on Natura 2000 sites was sought as subsection 5(iv) (and Item 6(a)) of the further information request. A Technical Note was submitted in response, prepared by AWN Consulting dated 06.04.2020. However, this only considered Slieve Bloom Mountains SAC, even though Slieve Bloom Mountains SPA is closer to the proposed development site. This was noted by the planning authority. As part of a clarification of further information request this issue was raised and Addendum No. 2 was submitted by the applicant in response. Addendum No. 2 assessed the potential for NOx emissions on the Natura 2000 sites within 15km and considered there was potential for emissions to affect both Slieve Bloom Mountains SPA and Slieve Bloom Mountains SAC.

10.37. Having reviewed the documents, submissions, addendums, 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 the two SACs and the two SPAs alone, or in combination with other plans and projects.

Appropriate Assessment of Implications of the Proposed Development

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

10.39. Slieve Bloom Mountains SPA and SAC – A Technical Note was prepared by AWN Consulting and was submitted as an appendix to Addendum 2. Loads were assessed for Slieve Bloom Mountains SPA and Slieve Bloom Mountains SAC. The impact on more distant Natura 2000 sites is predicted to decrease with distance. Based on modelling the increase in NOx is predicted to be 0.03 – 0.04 µg/m3 with a background concentration of 6 µg/m. The annual mean limit is 30µg/m3 NOx. The effects of acid and nitrogen deposition were also considered. Worst-case scenario modelling results identify that compliance with all appropriate ecological ambient air quality critical levels/loads is predicted to continue with the operation of the CHP and hot water generator. The effects of nitrogen deposition are imperceptible. As a result, I consider that it has been adequately demonstrated that there would be no significant NOx emission impact on the Slieve Bloom Mountains Natura 2000 sites and it will not adversely affect the integrity of the European sites, and the remainder of this AA concentrates on impacts on the River Barrow and River Nore SAC and River Nore SPA.

10.40. River Barrow and River Nore SAC and River Nore SPA – The River Barrow and River Nore SAC is hydrologically linked to the development site by two different routes. The primary link is in a southerly direction from the proposed waste management/renewable gas facility to the River Nore. The second link is in a northerly direction from the proposed gas pipeline extension/water upgrade works to the River Barrow. The link to the River Nore SPA is also in a southerly direction from the renewable gas facility site. These sites and their Qualifying Interests/Special Conservation Interests, including any relevant attributes and targets for these sites,

are set out in the NIS (Table 5-1), and summarised in Sections 10.18 and 10.19 of this report as part of my assessment.

10.41. The main aspects of the proposed development that could adversely affect the conservation objectives of the relevant European sites are summarised in Section 10.21, above. These are set out in more detail in Section 5.4 of the NIS as follows:

- During construction, the movement of peat/soils by machinery has the potential for sediment release into drains and hence into downstream streams and rivers.
- During construction, the use of oils, greases, concrete, and other pollutants has the potential for the release of these pollutants into on-site drains and hence into downstream streams and rivers.
- During construction, the use of machinery near invasive species such as Montbretia which was identified within the gas corridor pipeline, has the potential to spread these non-native invasive species.
- During operations, there is the potential for sediment release from the peat deposition area until such time as this area has been revegetated. Sediment release into on-site drains has the potential to be discharged into downstream streams and rivers.
- During operations, there is potential for pollutants such as oils and greases to be spilled or to leak from machinery and enter on-site drains which discharge downstream into streams and rivers.
- During operations, there is potential for liquid waste or digestate to spill and enter on-site drains, which discharge to streams and rivers downstream.

10.42. River Barrow and River Nore SAC – There is no potential for direct habitat loss. There is potential for water quality to be affected in the drains within the site which discharge to downstream streams which discharge into the SAC. There is potential for aquatic species to be affected by a deterioration in water quality. Due to the distance between the development site and the terrestrial and estuarine habitats of the SAC, these habitats will not be affected by the proposed development.

10.43. The conservation objectives of the SAC are set out in the 'Conservation Objectives River Barrow and River Nore SAC 002162' document published by the NPWS. They are to maintain or restore favourable conservation condition. The status of the

freshwater pearl mussel as a qualifying species is under review and the outcome of this will determine whether a site-specific conservation objective is set for this species. Detailed attributes and targets are tabulated in Table 5-1 of the NIS.

10.44. The potential for impact on the SAC is only by way of the hydrological links between the development and the River Nore and River Barrow. Drainage ditches across the site of the main renewable gas facility drain in a southerly direction to the Clonadacasey Stream which discharges to the Cappanacloghy Stream which itself discharges into the River Nore approx. 7.8km to the south (approx. 9km instream distance). The gas pipeline/water upgrade corridor requires a crossing of the Kylegrove Stream which discharges to the Triogue River which flows north and into the River Barrow approx. 15km downstream. Both the Nore and Barrow comprise the SAC, individually and collectively. There is potential for sediment and pollutants to enter into these streams and affect the downstream SAC during the construction, operational, and decommissioning phases. There is also the potential for invasive species to spread and enter watercourses via contaminated machinery. There is the potential for habitat alteration due to a negative change in water quality from the ingress of sediment and pollutants during the construction and operation phases. Though there are significant distances between the site and the SAC from both distinct links, and hence a large dilution factor, a significant effect on QIs cannot be ruled out.

10.45. Mitigation measures proposed to avoid or reduce the adverse effects on the integrity of the site are set out in Section 5.8 of the NIS. Table 5.4 lists the proposed mitigation measures, details how the measures will avoid or reduce adverse impacts, who will implement the measures, and the degree of confidence in their successful implementation. Mitigation is proposed prior to and during construction, and during operation. Measures include appointment of a project ecologist, updating the CEMP, surface water runoff management and monitoring, drip trays and spill kits, concrete pouring a minimum of 50 metres from drainage ditches where possible, installation of silt fencing, wheel washes, waterbody protection fencing, surfacing of construction phase access tracks, deposition, compaction, and grading of peat, silt protection controls, cordoning off invasive species/biosecurity, and bunding. All proposed mitigation measures have a ‘high probability of success’. The project including the proposed mitigation measures is assessed against the detailed conservation objectives for the SAC in Table 5-5 (Evaluation of Proposed Development and

Mitigation Measures Against the Conservation Objectives of the Relevant European Site) of the NIS.

10.46. A cumulative impact arises from other actions together with the proposed development. There are a number of small developments within the surrounding area which are unlikely to have significant effects on European sites given the lack of discharges to surface waters. There are other EPA licenced facilities though 'these are subject to emissions limits and so are not likely to have significant effects'. Peat extraction has ceased. Taking into consideration the extensive mitigation measures proposed there will be no adverse impact on the SAC as a result of the proposed development and therefore there is no scientific doubt remaining as to the absence of cumulative effects from this project in combination with other plans and projects to have an adverse impact on any European site.

10.47. Following the appropriate assessment and the consideration of mitigation measures, I am able to ascertain with confidence that the project would not adversely affect the integrity of River Barrow and River Nore SAC in view of the Conservation Objectives of this site.

10.48. This conclusion has been based on a complete assessment of all implications of the project alone and in combination with plans and projects.

10.49. River Nore SPA – There is no potential for direct habitat loss. There is potential for aquatic species to be affected by a deterioration in water quality i.e. food sources for kingfisher.

10.50. The conservation objective of the SPA set out in the 'Conservation objectives for River Nore SPA [004233]' document published by the NPWS is 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'.

10.51. The potential for impact on the SPA is only by way of the hydrological link between the development and the River Nore. Drainage ditches across the site of the main renewable gas facility drain in a southerly direction to the Clonadacasey Stream which discharges to the Cappanacloghy Stream which itself discharges into the River Nore approx. 7.8km to the south (approx. 9km instream distance). There is potential for sediment and pollutants to enter into these streams and affect the downstream SPA during the construction, operational, and decommissioning phases. There is also the

potential for invasive species to spread and enter watercourses via contaminated machinery. There is the potential for habitat alteration due to a negative change in water quality from the ingress of sediment and pollutants during the construction and operation phases which could have an indirect effect on the special conservation interests of the SPA, causing a decrease in food supply for the kingfisher. Though there are significant distances between the site and the SPA, and hence a large dilution factor, a significant effect on special conservation interests cannot be ruled out.

10.52. Mitigation measures proposed to avoid or reduce the adverse effects on the integrity of the site are set out in Section 5.8 of the NIS. Table 5.4 lists the proposed measures, details how the measures will avoid or reduce adverse impacts, who will implement the measures, and the degree of confidence in their successful implementation. Mitigation is proposed prior to and during construction, and during operation. Some measures proposed are set out in Section 10.45, above. All proposed mitigation measures have a 'high probability of success'. The project including the proposed mitigation measures is assessed against the overall conservation objective for the SPA in Table 5-5 (Evaluation of Proposed Development and Mitigation Measures Against the Conservation Objectives of the Relevant European Site) of the NIS

10.53. The absence of cumulative impacts as set out in Section 10.46, above, also applies to the SPA.

10.54. Following the appropriate assessment and the consideration of mitigation measures, I am able to ascertain with confidence that the project would not adversely affect the integrity of River Nore SPA in view of the Conservation Objectives for this site.

10.55. This conclusion has been based on a complete assessment of all implications of the project alone and in combination with plans and projects.

Appropriate Assessment Conclusion

10.56. The proposed renewable gas facility development has been considered in light of the assessment requirements of sections 177U and 177V of the Planning & Development Act, 2000 (as amended).

10.57. Having carried out screening for Appropriate Assessment of the project, it was concluded that it may have a significant effect on River Barrow and River Nore SAC (Site Code 002162), River Nore SPA (Site Code 004233), Slieve Bloom Mountains

SPA (Site Code 004160), and Slieve Bloom Mountains SAC (Site Code 000412). Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying features of those sites in light of their conservation objectives.

10.58. Following an Appropriate Assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of European site Nos. 002162, 004233, 004160, or 000412, or any other European site, in view of the sites Conservation Objectives.

10.59. This conclusion is based on:

- A full and detailed assessment of all aspects of the proposed project including mitigation measures in relation to the Conservation Objectives of the River Barrow and River Nore SAC and River Nore SPA.
- Detailed assessment of the in-combination effects with other plans and projects including historical projects, current proposals, and future plans.
- No reasonable scientific doubt as to the absence of adverse effects on the integrity of River Barrow and River Nore SAC.
- No reasonable scientific doubt as to the absence of adverse effects on the integrity of River Nore SPA.
- No reasonable scientific doubt as to the absence of adverse effects on the integrity of Slieve Bloom Mountains SPA.
- No reasonable scientific doubt as to the absence of adverse effects on the integrity of Slieve Bloom Mountains SAC.

11.0 **Recommendation**

11.1. I recommend that planning permission should be granted subject to conditions, for the reasons and considerations as set out below.

12.0 **Reasons and Considerations**

Having regard to:

(i) European Union and national sustainable energy and waste policies, the provisions of the Eastern–Midlands Region Waste Management Plan 2015-2021, the provisions of the Laois County Development Plan 2017-2023 including, in particular, policies in relation to renewable energy and support for gas development,

(ii) the requirement for the waste management/renewable energy facility to be subject to and regulated under an Industrial Emissions Licence to be issued by the Environmental Protection Agency,

(iii) the location of the proposed site on cutaway bogland at the edge of Cúil na Móna bog and the limited amount of residential development in the vicinity of the site,

(iv) the location of the proposed development close to the national road network and the proximity to the Gas Networks Ireland network for the export of gas,

(v) the relatively close proximity to the source of feedstock material and locations which are suitable for the spreading of digestate,

(vi) the design, nature, and extent of the proposed anaerobic digester structures for renewable biogas and digestate production, appropriate to their location in an area characterised by former industrial peatland use,

(vii) the nature of the landscape and the absence of any specific conservation or amenity designation for the site,

(viii) mitigation measures proposed for construction and operation of the proposed development,

(ix) the submissions on file including those from prescribed bodies and the planning authority,

(x) the documentation submitted with the application, including the Environmental Impact Assessment Report, Appropriate Assessment Screening Report, Natura Impact Statement, and additional information and Addenda,

It is considered that, subject to compliance with the conditions set out below, the proposed development:-

- would comprise an acceptable form of energy recovery from biodegradable and agricultural waste,
- would be in accordance with European, national, and regional waste and sustainable energy policies and the provisions of the Laois County Development Plan 2017-2023,
- would not give rise to a risk of serious pollution given its regulation by the Environmental Protection Agency,
- would not be prejudicial to public health,
- would not interfere with a protected view and prospect of importance or the heritage of the area,
- would not seriously injure the amenities of the area or property in the vicinity,
- would be acceptable in terms of traffic safety and convenience, and,
- would not give rise to a major accident risk.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

13.0 **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 19th day of May 2020, 13th day of October 2020, and the 11th day of November 2020, 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.

Reason: In the interest of clarity.

2. The period during which the development hereby permitted may be carried out shall be 10 years from the date of this order.

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

3. All environmental mitigation measures set out in the Environmental Impact Assessment Report and Natura Impact Statement, and associated documentation and addenda submitted by the developer with the application, by way of further information, clarification of further information, and the appeal shall be implemented in full except as may otherwise be required in order to comply with the conditions of this order.

Reason: In the interest of clarity and to protect the environment during the construction and operational phases of the development.

4. The following limits and requirements shall be complied with in the anaerobic digestion process:

   (a) A maximum of 80,000 tonnes per annum of raw materials shall be treated in the anaerobic digesters,

   (b) A minimum of 50% of feedstock used as input into the anaerobic digestors shall comprise source segregated organics.

Reason: In the interests of clarity.

5. Monitoring of the construction phase shall be carried out by a suitably qualified and competent designated person to ensure that all environmental mitigation measures contained in the documentation which accompanied the planning application, including appendices, addenda, further information, clarification of further information, and response to the grounds of appeal, are fully implemented. The designated person shall liaise with the planning authority or members of the public in the event of complaints or queries in relation to environmental mitigation measures during the construction phase. The name

and contact details of the designated person shall be provided to the planning authority prior to the commencement of any development on site.

Reason: To safeguard the amenities of the area.

6. An annual report on the operation of the facility hereby permitted shall be submitted to the planning authority. The content of this report shall be as agreed in writing with the planning authority and shall include, inter alia, the following:

   (a) Details of the source of all feedstock and final disposal areas of digestate,

   (b) The volumes of raw materials treated in the anaerobic digester in the previous 12 months,

   (c) The volume of digestate produced and stored in previous 12 months,

   (d) The volume and weight of gas produced on site in previous 12 months.

Reason: In the interest of orderly development and to ensure compliance with the parameters set out in the application.

7. Detail of the finishes of the buildings and structures on site shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

Reason: In the interest of visual amenity.

8. (a) Prior to commencement of development on site the developer shall submit, for the written approval of the planning authority, the detailed design for the proposed new roundabout junction and all works to the public road network. No development shall commence until the written approval of the planning authority has been provided in this regard.
   (b) Prior to commencement of development on site the developer shall provide, for the written approval of the planning authority, a Stage 2 Road Safety Audit for the detailed design.

(c) A Stage 3 Road Safety Audit shall be carried out on completion of construction and prior to operation of the facility for the written approval of the planning authority.

(d) A Stage 4 Road Safety Audit shall be carried out for the written approval of the planning authority.

(e) Detail of the junction of the existing public road and proposed site access road, including boundary treatments, shall be submitted for the written approval of the planning authority and the works shall be in place prior to operation of the facility.

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

9. Details of all signage shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development, or as otherwise agreed with the planning authority.

Reason: In the interest of the amenities of the area.

10. Feedstock deliveries to the site and transport of digestate from the site shall be confined to between the hours of 08.00 to 18.30 Monday to Friday and 09.00 to 13.00 on Saturday.

Reason: In the interests of orderly development and residential amenity.

11. Water supply and drainage arrangements, including the attenuation and disposal of surface water shall comply with the requirements of the planning authority for such works and services.

Reason: In the interest of public health and to ensure a proper standard of development.

12. Lighting shall be provided in accordance with a scheme, details of which shall be submitted to, and agreed in writing with the planning authority prior to commencement of development. The scheme shall minimise obtrusive light.

Reason: In the interest of amenity and public safety.

13. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within 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) relating to the proposed development,

    (b) employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and

    (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. Site development and building works shall be carried out only between the hours of 08.00-19.00 Mondays to Fridays inclusive and 08.00-18.00 on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority.

Reason: In order to safeguard the amenities of property in the vicinity.

15. The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including:

(a) Location of the site and materials compound(s) including area(s) identified for the storage of construction refuse,

(b) Location of areas for construction site offices and staff facilities,

(c) Details of site security fencing and hoardings,

(d) Details of on-site car parking facilities for site workers during the course of construction,

(e) Details of the timing and routing of construction traffic to and from the construction site and associated directional signage, to include proposals to facilitate the delivery of abnormal loads to the site,

(f) Measures to obviate queuing of construction traffic on the adjoining road network,

(g) Measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network,

(h) Alternative arrangements to be put in place for pedestrians and vehicles in the case of the closure of any public road or footpath during the course of site development works,

(i) Details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels,

(j) Containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained. Such bunds shall be roofed to exclude rainwater,

(k) Off-site disposal of construction/demolition waste and details of how it is proposed to manage excavated soil/peat,

(l) Means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local surface water sewers or drains,

(m) Provision of a wheel wash,

(n) Details of the proposed development's key construction management personnel.

A record of daily checks that the works are being undertaken in accordance with the Construction Management Plan shall be kept for inspection by the planning authority.

Reason: In the interest of amenities, public health, and safety.

16. Construction and demolition waste shall be managed in accordance with a construction waste and demolition management plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall be prepared in accordance with the 'Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects', published by the Department of the Environment, Heritage and Local Government in July 2006.

Reason: In the interest of sustainable waste management.

17. The site shall be landscaped in accordance with a comprehensive scheme of landscaping, details of which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. All planting shall be adequately protected from damage until established. Any plants which die, are removed, or become seriously damaged or diseased, within a period of five years from the completion of the development, shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority.

Reason: In the interest of visual amenity.

18. 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, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority 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 authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, 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.

Anthony Kelly
Planning Inspector
14.01.2022