Inspector's Report
ABP-322136-25

Development	Construction of anaerobic digestion facility with all associated site works. EIAR and NIS submitted. EPA (IE) licence will be applied for.
Location	Curraghnagarraha, Reatagh, and Curraghballintlea, Carrick-on-Suir, Co. Waterford
Planning Authority	Waterford City and County Council
Planning Authority Reg. Ref.	2460536
Applicant(s)	Mr. James Foran & Nephin Renewable Gas – Reatagh Limited
Type of Application	Permission
Planning Authority Decision	Grant Permission
Type of Appeal	Third Party
Appellant(s)	Emmett Mullaly & Others
Observer(s)	An Taisce Lisa Nolan and Paul Diffily

Date of Site Inspection	19th May 2025
Inspector	Matthew McRedmond

Contents

1.0 Site Location and Description

1.1. The subject site is located in a rural area of Co. Waterford, in the townlands of Curraghnagarraha and Reatagh, approximately 3km south east of Carrick on Suir. The site is approximately 7.7ha in area and is currently in use for agricultural purposes, primarily grassland. The site is surrounded by similar agricultural lands.

1.2. The main land area of the proposed site is accessed via a c. 500m proposed laneway that connects to the Scrouty Road to the south. An operational piggery is located to the south of the main operational area of the proposed site, and to the east of the proposed access point.

1.3. The site is gently undulating with AOD of between 96m and 107m. The proposed site entrance and access road location has an existing topography of 122m AOD, sloping from south to north from 122m AOD to 103m AOD at the main site. The Tinhalla Stream is located along the eastern boundary of the site and runs from south to north to connect to the River Suir, c. 1.5km to the north.

2.0 Proposed Development

2.1. The proposed development is for an Anaerobic Digestor facility that will include the following buildings and structures:

- 3no. digestor buildings (15.5m in height)
- 2no. digestate storage structures (12m and 15.5m in height)
- 4no. pasteurisation tanks (6m in height)
- A cooling tank and pre-fertiliser manufacturing tank (both 4m in height)
- A reception building (GFA 2,113sqm, 16.5m height) including laboratory, panel room, tool store and workshop.
- A digestate storage and nutrient recovery building (GFA 880sqm, 12.4m height)

- CO2 related structures including tanks, liquefactor, compressor, biogas flare and associated plant.
- A two storey office and administration building (8.5m height and GFA 272sqm)
- An ESB substation and gas grid injection unit.
- Attenuation pond.
- Site access including entrance and access lane (c. 300m in length), parking and weighbridge within the site.
- Wastewater treatment, lighting, boundary treatments, drainage and all associated site works.

Process

2.1.1. Anaerobic Digestion (AD) is a natural biological decomposition process which takes place in an oxygen-free environment, where micro-organisms (bacteria and archaea) break down organic matter. There are four main stages to this process:

- Hydrolysis - large, complex polymers like carbohydrates, cellulose, proteins, and fats are broken down by hydrolytic enzymes into soluble monomers i.e., amino acids from proteins, long chain fatty acids from lipids, and simple sugars from complex carbohydrates.
- Acidogenesis – these soluble monomers are further broken down into short chain volatile fatty acids (VFAs), alcohols, carbon dioxide and hydrogen.
- Acetogenesis - the products of acidogenesis are broken down into acetate, releasing hydrogen and carbon dioxide.
- Methanogenesis – In this final stage of AD, various groups of methanogenic bacteria consume acetate, hydrogen and carbon dioxide and convert these intermediate products into CH4.

2.1.2. The final products produced from this process are digestate and biogas. The submitted EIAR and submitted NIS sets out the main elements in Anaerobic Digestion (AD) as follows:

- Biogas - The product of this complex biological decomposition of organic materials, mainly consisting of 55-70% by volume methane (CH4), 30-45% carbon dioxide (CO2), together with traces of other gases, i.e., nitrogen (N2), hydrogen (H2), hydrogen sulphide (H2S), ammonia (NH3), as well as water vapour. The exact composition of biogas is dependent on the type of feedstock being digested. Biogas can be 'upgraded' to pure methane, often called biomethane, by removing CO2, H2S, moisture and other trace gases. The biogas upgrading process produces a purified stream of biomethane, which can then be injected into the main gas grid. The upgrading process also produces a CO2 rich gas stream which can be recovered for treatment within a CO2 liquefaction system to produce renewable liquefied CO2. Based on the feedstock composition and design operating capacity, it is projected that the facility will be capable of producing 810-960 Nm3 of biomethane per hour.
- Feedstock - The Proposed Development has been designed to accept and treat up to 90,000 tonnes per annum of predominantly locally sourced agricultural manures, slurries, food processing residues and crop-based feedstocks. These tonnages are indicative and subject to change based on market and season conditions and availability and quality of feedstocks. Overall tonnages will not exceed 90,000 tonnes. 26,200 tonnes per annum of pig slurry will be provided from the neighbouring piggery with 59% of feedstock suppliers being within 10km of the site and 100% within 25km. A full breakdown of feedstock intake is provided in Table 2.4 of the EIAR as shown below.

Feedstock	Tonnes/Annum
Cattle Slurry	7,700
Cattle Manure	1,400
Pig Slurry	26,200
Poultry Litter	12,200
Vegetable Residues	1,000
Food Production Residues	3,100
Drinks Production Residues	7,700
Dairy Production Residues	7,000
Grass Silage	9,000
Whole Crop Silage	14,100
Total	**90,000**

- Reception – Once weighed within the site, feedstock transport vehicles/HGV will proceed to the reception building/hall which is a negative air pressure holding, that will minimise release of odours. Liquid feedstock will be transferred to a reception pit (70m³) or pumped to the liquid feedstock tank

(196m³). Solid materials will be unloaded into designated feedstock bays with a capacity of 745 tonnes which is given as the equivalent of 5 days storage.

- The internal process will involve odour treatment at a rate of 2 air changes per hour, Ammonia scrubbing, DEO 500 treatment (to eliminate/reduce sulphur compounds, aromatics etc.) and activated carbon filtration prior to discharge via the stack.
- In two-stage AD, the digestion process takes place in a series of primary and secondary anaerobic digesters. The primary and secondary digestion process will take place within 3 no. Continuously Stirred Tank Reactor (CSTR) tanks in the subject proposal which are the 2no. Primary Digestion Tanks and the 1no. Secondary Digestion Tank where gas will be captured.
- Pasteurisation - The Pasteurisation System is designed to minimise the risks from microbiological hazards and reduce particle size to less than 12mm in size which is achieved through a screening and maceration process.
- Digestate treatment then follows with screwpress separation, ultrafiltration and reverse osmosis, which allows solid digestate, liquid digestate and clean water to be recovered.
- Liquid and Fibre digestate is stored on site with a total storage capacity of 7,832m³ for digestate liquid concentrate which is the equivalent of 24 weeks volume (Department of Agriculture and Marine maximum requirement is noted as 16 weeks). Digestate fibre storage is given as 16 weeks to accommodate no land spreading during the closed period.
- Digestate Liquid and Digestate Fibre will be classified as a bio-based fertiliser for use on agricultural lands as a direct replacement for chemical/mineral fertilisers. Digestate liquid and fibre will, on the whole, be returned to lands associated with feedstock supplies of crop and/or slurry, thereby promoting a local circular bioeconomy.
- From a total of 78,000 tonnes per annum of pasteurised whole digestate, this will include 8,000 tonnes of solid digestate fibre, 17,000 tonnes of liquid digestate concentrate and 53,000 tonnes of recovered clean water.

- The overall process is supported by additional infrastructure such as the biomethane boiler, CHP unit, biogas upgrading unit, grid injection unit, CO2 liquefaction unit, biogas flare, office building and water treatment and drainage infrastructure.

3.0 Planning Authority Decision

3.1. Decision

Waterford City and County Council granted permission for the proposed development on the 25th February 2025, subject to 20no. conditions including the following:

- Condition 4 – EPA licence required prior to operation. Amended under Section 146A from prior to construction. Applicant submits that condition is unnecessary as EPA licence is required regardless.
- Condition 5(b) – Classes of waste to be as per Table 2.4 of EIAR. Applicant submits in response to appeal that waste should be agreed with EPA and are happy to accept a condition in this regard.
- Condition 14 – Requires all hardstand areas to be constructed of permeable paving to SUDS standards. Applicant submits that due to environmental containment requirements, all hardstanding areas cannot be permeable and the SUDs design for the proposed development takes account of this fact.

3.2. Planning Authority Reports

3.2.1. Planning Reports

The Local Authority Planner had regard to the locational context of the site, national and local planning policy context, the referral responses received, and any submissions made on the application. Their assessment included the following:

- The proposed development is ‘open for consideration’ subject to detailed planning and technical considerations.
- Further detail on gas network grid connection is required to avoid any time lag between the operation of the AD facility and the construction of the pipeline.

- EPA Industrial Emissions licence requirements are noted.
- Based on the 48no. of vehicular trips, the reduction in distribution trips for pig slurry from the adjacent piggery which will now go to the proposed development, the Planning Authority is satisfied that the traffic and transport impacts have been adequately assessed. Additional examination is however required of Scrouty Road alignment, entrance design and capacity for HGVs.
- Odour and emissions mitigation measures are noted with the overall impact considered to be 'neutral to negative, imperceptible to slight' and will have a long term slight positive impact on air quality due to the reduction in landspreading. Further non-technical details of air borne emissions, including CO_2, and associated mitigation are required.
- Noise impacts are submitted as being imperceptible and the PA Environment Section raised no objection to the proposed development in terms of noise. Further details are however required in relation to delivery times and other noise sources that may impact surrounding residential properties.
- Having regard to Chapter 11 of the EIAR and the capacity of the site to absorb the development, the PA are satisfied that landscape and visual impacts have been adequately assessed.
- No significant archaeological or cultural heritage features were found within the proposed site and the Department of Heritage expressed no objection to the proposed development subject to testing pre-development.
- Concern in relation to the proposed gas pipeline connection and impacts on landscape.
- The PA notes the EIAR concludes that the proposed development will not result in significant impacts on land, soil, geology, hydrology or hydrogeology. The overall impact during the construction phase is described as neutral to negative, imperceptible to slight, and temporary.
- Council planner concurs with the recommendation of the Heritage officer that it would be beneficial to have exact confirmation of the watercourses and the ecological status of same in the catchments of Digestate Receivers in order to

comprehensively assess indirect and cumulative impacts of the proposed development on water quality.

- Further information was therefore recommended in relation to a number of items.

Further Information Response

3.2.2. The applicant submitted a further information response in August 2024, which included the following:

- Written response from Gas Networks Ireland (GNI) noting construction of pipeline will be concurrent with construction of the proposed development. Also confirmed there is to be no transport of biomethane by tanker.
- Updated EIAR to correct typographical errors.
- Confirmation that Best Available Techniques (BAT) have been used in the design of the proposed development to limit fugitive emission from the AD Plant. All Biomethane production on site will be in compliance with the Renewable Energy Directive EU 2023/2413 (RED III).
- Details of monitoring, reporting and addressing methane leakage at the facility in a submitted Technical Note.
- The applicant confirms that the NIS considered the land spreading of biobased fertiliser within relevant river catchments. Details are provided in the submitted Technical Note with regard to the benefits associated with biobased fertiliser, and in relation to the assessment of water quality impact associated with the use of biobased fertiliser on receiving farms.
- Locations of digestate receivers in relation to Natura 2000 sites.
- Details of feedstock storage, run-off control, odour treatment system, digestate (biobased fertiliser) storage, digestate liquid concentrate and fibre storage and how it will be managed to avoid run-off and control odour.
- Technical Note provides details of ground investigations undertaken.
- Confirmation that there will be no tonal or impulsive characteristics associated with noise generated at the proposed development.

- Detailed response with regard to traffic and transport related queries, including revised drawings, confirmation of visibility sightlines, swept path analysis, sections, improvements to Scrouty Road, that were agreed with Waterford City and County Council District Engineer on site. A Road Safety Audit was also conducted and is included with the submitted documents.

3.2.3. Following advertisement of the FI response and receipt of submissions, the Local Authority Planner was satisfied with the information submitted by the applicant at further information stage and recommended a grant of permission subject to conditions.

3.2.4. Other Technical Reports

- WCCC Environment Section – Proposed mitigation measures will ensure that no issues arise in relation to groundwater vulnerability. Note that site will have to operate under a licence from the EPA, it is appropriate that odour and air monitoring and limits be set for the operation by the EPA as a condition of that licence. Noise mitigation is considered appropriate. No objection to the proposal subject to conditions in relation to EPA licence obtainment, updated resource management plan, construction hours, bunding to digestate storage tanks, silt damns/fences to protect drains and watercourses from runoff, and minimisation of dust including monitoring if required during construction.
- Climate Action Officer – Notes the commitments under the Climate Action Plan 2021 that includes an annual biomethane production target of 1.6TWh injected into the Natural Gas Grid by 2030.
- District Engineer – No objection to the proposed development subject to the proposed measures discussed on site which include road widening, drainage and sightlines at the proposed entrance.
- Heritage Officer – Proposed development to be carried out in accordance with all mitigation measures detailed in the EIAR, in accordance with an Industrial Emissions Licence by the EPA any land spreading shall be carried out in accordance with the specific Nutrient Management Plan for the receiving farm in accordance with good agricultural practice.

3.3. Prescribed Bodies

An Taisce – More detailed assessment required in relation to fugitive methane losses, use of chemical fertiliser to produce silage and ammonia emissions when applying digestate as fertiliser, before biomethane can be labelled “renewable”.

Ground and surface water should not impact on water quality of adjoining waterbodies, in line with Water Framework Directive.

AA screening and NIS should take account of construction stage run off and operational phase ammonia emissions in relation to impacts on the Lower River Suir SAC. In-combination effects should also be considered.

Greenhouse gas emissions in the context of production of feedstocks should be taken into account in the assessment of the subject proposal.

Fugitive emissions of methane should be assessed to ensure the climate benefits of biogas are not negated. A plan is required for monitoring, reporting and addressing methane leakage at the proposed facility.

Potential ammonia impacts from digestate use at receiving farms should be appropriately assessed.

The proposed biomethane should not be mixed with fossil gas and instead should be supplied to off-grid industrial users for electricity generation.

Traffic and Transport should be closely assessed to ensure the absence of adverse traffic congestion impacts in the local area.

Department of Housing, Local Government and Heritage – Note the site is located in the environs of 2no. fulacht fia and a bullaun stone. No objection to the proposal provided conditions requiring a programme of pre-development archaeological testing is carried out.

EPA – Note that a licence is required under Class 11 of the EPA Act. An assessment of the EIAR will be undertaken by the EPA to ensure the proposal complies with the matters that come within the functions of the Agency. Should a licence application be received by the Agency 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. The Agency cannot issue a Proposed Determination on a licence application until a planning decision has been made.

HSE – Mindful that if permitted, emissions from the proposed development will be regulated under an Industrial Emissions licence including noise and odour, as issued by the EPA. Recommend that mitigation measures included in the EIAR are included as conditions on any grant of permission. Surface water and groundwater sources should be protected vigilantly from possible contamination during construction, operation and future decommissioning. HSE recommend monitoring/sampling of emissions is carried out to protect public health. Odour management to be as per proposed abatement measures including sealed reception hall, rapid roller shutter doors and an odour abatement system. There should be a Site Specific Construction Environmental Management Plan (CEMP) and site Dust Management Plan (EOP) and Odour Management Plan in regard to Air Quality and Odour.

3.4. Third Party Observations

3.4.1. A number of submissions were made in relation to this application at both original application stage and at significant further information (FI) stage. The main issues raised can be summarised thematically as follows:

Planning Policy

- The identified roads issues, including insufficient capacity to cater for increased HGV traffic, conflict with a number of objectives of the Waterford City and County Council Development Plan.
- No specific provision for anaerobic digestion in the CDP. The proposal would lead to a further reliance on fossil fuels.
- The subject proposal is located adjacent to sensitive landscape character units as specified in the CDP. The proposed 90,000 tonne industrial facility cannot be reconciled with this rural landscape.

Gas Network Connection

- Insufficient details provided in relation to the delivery of the connection to the gas network pipeline in terms of financing, routing, timeline and disruptions.

- Construction of proposed pipeline connection will cause traffic delays.

Visual Impact

- Scale and visibility of the subject proposal will present an inappropriate industrial development within a rural setting that will disturb existing views of countryside.

Feedstock Management

- Management of feedstock storage within the site queried, including avoiding an accumulation of feedstock materials in event of a stage in the system failing. Increase in vermin numbers around proposed plant also expected.
- Sustainability of feedstocks is questionable and could worsen greenhouse gas emissions.

Methane

- Methane build up a concern from storage of liquid digestate and a potential for explosion risk and/or leakage. Any methane leakage will negate any greenhouse gas savings.
- Limited information provided in relation to how methane leakage will be measured and monitored. Potential for significant fugitive methane loss in AD facilities.
- Impact assessment needs to consider how much methane will be emitted from digestate discharged as well as from other features of the plant including the flare stack.

Digestate

- Concern in relation to digestate usage, land spreading and impacts on the Lower River Suir SAC, including ammonia impacts. The Suir already has elevated levels of phosphorus and nitrogen and this could be increased by increased digestate use.
- Inadequate details provided at initial application stage in relation to locations for land spreading.

- Locations identified for digestate spreading are concentrated in areas of river sources.

Water Quality Impacts

- Noted that Tinhalla is designated 'moderate' water quality and the Upper Suir Estuary is designated as 'bad' water quality and that subject proposal should not lead to a deterioration in water bodies in the area and contribute to good status by 2027.
- Run off during heavy rainfall should be managed to ensure no run off to local stream (Tinhalla), particularly so with relation to hazardous materials spillage.
- Risk of groundwater contamination is a concern in relation to the use of shared aquifer for potable water.

Odour Treatment

- Three air changes per hour should be implemented instead of two, as per Technical Note 35.
- Potential for significant odour from the proposed facility that will have a throughput of 90,000 tonnes of feedstock per annum. Examples provided of odour emissions from similar facilities, including at a nearby facility at Portlaw. Odour management, complaints and recourse procedures required.

Traffic and Transport

- Traffic surveys do not take account of busy school pick up period at Piquet's Cross. Road already busy with 'world of bounce' adjacent to the site.
- Existing road infrastructure is not sufficient to cater for the proposed development, particularly HGV traffic, and will increase danger to existing users.
- Upgrade of Scrouty Road should not take priority over strategic road upgrade requirements in the County.
- Road is too narrow for HGVs, no pedestrian footpath, inadequate road markings and poor sightlines. Deep drains on either side of road increase traffic safety issues.

- Slurry leakage on local roads a concern.
- Increase of traffic will increase safety risk for carrying out hedge trimming and landscaping in the area.

Biodiversity

- The accuracy of ecological surveys is questioned, including of amphibians etc. in existing waterbodies.
- Proposal will significantly alter the landscape.

Noise Impacts

- Noise impact assessment contained in EIAR does not take into account intermittent buzzers, alarms or reversing vehicle sirens.
- Concern in relation to noise impacts at construction and operational stage.

Other Matters

- Already an AD plant within 5km of the proposed development, permitting the subject proposal would lead to a clustering of similar uses.
- Role of feeding liquid questioned in relation to amount of digestate produced.
- Emergency procedures required in relation to accidents or on-site disasters.
- Other locations more suitable for the proposed development, given the adjoining piggery has no use for biomethane as submitted by the applicant.

4.0 Planning History

There is limited planning history for the lands in question. There are a number of permissions in place related to the adjoining piggery that has been in operation for over 20 years. Relevant planning history includes the following:

WCCC Ref. 10222: Permission granted for a Biogas plant on the subject lands and lands adjacent to the south. This permission was not implemented.

WCCC Ref. 19655: Permission granted for roof mounted PV solar panels on the roof of the existing piggery buildings.

WCCC Ref. 19/896: Retention permission granted for buildings for use as an activity centre for bouncy castle on lands to the southwest of the appeal site.

WCCC Ref. 23190: Grant of permission for ground mounted solar PV system on lands to the northwest of the existing piggery and associated with the provision of energy for same.

5.0 Policy Context

5.1. National Policy

Climate Action Plan 2025 (DECC)

5.1.1. The Climate Action Plan 2025 (**CAP25**) is the third annual statutory update to Ireland's Climate Action Plan under the Climate Action and Low Carbon Development (Amendment) Act 2021. The Plan sets out a framework to guide the country towards decarbonisation, with sectoral strategies for agriculture, among others. A key action to deliver abatement in agriculture, includes increasing land use diversification options for livestock farmers, such as anaerobic digestion, and to expand our domestic biomethane industry through anaerobic digestion.

5.1.2. The Government is committed to delivering up to 5.7 TWh of indigenously produced biomethane, based on agricultural feedstocks. This will provide both a diversification opportunity for farmers and a land-use alternative to livestock production. It is stated within the Plan that CAP25 is to be read in conjunction with CAP24, and as such I have set out a summary of same below.

Climate Action Plan, 2024. [CAP24]

5.1.3. Implements carbon budgets and sectoral emissions ceilings and sets a roadmap for taking decisive action to halve our emissions by 2030 and reach net zero no later than 2050. By 2030, the plan calls for a 40% reduction in emissions from residential buildings and a 50% reduction in transport emissions. The reduction in transport emissions includes a 20% reduction in total vehicle kilometres, a reduction in fuel usage, significant increases in sustainable transport trips, and improved modal share.

National Biomethane Strategy

5.1.4. The National Biomethane Strategy was launched in 2024 by the Department of Agriculture, Food and the Marine, and funding of €40 million was secured to further the ambition of the sector. This is expected to drive expansion of the anaerobic digestion sector towards a target of 5.7 TWh by 2030, which is expected to meet approximately 10% of Ireland's current gas demand. The strategy seeks to increase the number of anaerobic digestion facilities from two in 2024 to 140-250 to meet production targets and to ensure that the production of biomethane aligns with environmental goals, including the protection of water, soil and biodiversity.

5.1.5. The benefits that Ireland can realise from the development of a new agri-centric biomethane industry are summarised as follows:

- Without biomethane, Ireland is unlikely to meet its legally binding climate targets.
- Biomethane helps to reduce agriculture sector emissions.
- Diversification option for farmers.
- Opportunity to replace chemical fertiliser with a supply of biobased fertiliser.
- Helps reduce Ireland's energy emissions.
- Improves gas security and diversification of supply.
- Stimulation of the rural economy

National Planning Framework (First Revision 2025)

5.1.6. Strategic outcomes include delivering 40% of electricity needs from renewables and increased uptake of anaerobic digestion. The NPF notes it is estimated that over 80% of biomethane will be produced from grass silage and cattle slurry. This will require grass from 120,000ha (3% of total agricultural area) to produce the required feedstock. To meet Ireland's target of 5.7 TWh of biomethane by 2030, a large number of anaerobic digestion facilities will need to be developed, alongside the related infrastructure necessary to support these facilities.

5.1.7. The NPF contains a number of relevant National Strategic Outcomes (NSOs) and National Policy Objectives (NPOs) which can be summarised as follows:

5.1.8. NSO 8 - 'Transition to a low carbon and climate resilient society' recognises that more diversified and renewables focused energy systems will be necessary,

including biomass, and that our gas storage capacity is limited. It includes an aim to deliver 40% of electricity needs from renewable sources by 2020, with further increases through to 2030 and beyond in accordance with EU/National policy.

5.1.9. National Policy Objective (NPO) 21 seeks to: *"Enhance the competitiveness of rural areas by supporting innovation in rural economic development and enterprise through the diversification of the rural economy into new sectors and services, including ICT-based industries and those addressing climate change and sustainability".*

5.1.10. NPO 23 has an objective to facilitate the development of the rural economy through supporting a sustainable and economically efficient agricultural and food sector, together with other industries including energy and the bio-economy, while protecting the natural landscape and built heritage which are vital to rural tourism.

5.1.11. NPO 53 Support the circular and bio economy including greater use of renewable resources.

5.1.12. 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*."

Regional Spatial and Economic Strategy (Southern Regional Assembly) 2020-2032

5.1.13. Supports the transition towards a low carbon economy and implementation of the Regional Waste Management Plan for the Southern Region 2015-2021:

- RPO 107: It is an objective to support innovative initiatives that develop the circular economy through implementation of the Regional Waste Management Plan for the Southern Region 2015-2021 and its successor.
- RPO 108 supports the EU action plan for the circular economy.
- RPO 109 relates to the Bio-Energy Implementation Plan whereby: a. It is an objective to support the preparation of a Bio-energy Implementation Plan for the Southern Region in conjunction with the Local Authorities and the Regional Waste Management office; and b. Proposals for Bio-energy development and infrastructure will need to be subject to robust site and/or route selection that includes consideration of likely significant effects on

European Sites and subject to the outcome of the required appraisal, planning and environmental assessment processes.

Waste

- EU Waste Framework Directive (2008/98/EC) - The EC (Waste Directive) Regulations 2011 align Irish legislation with this Directive.
- Regional Waste Management Plan for the Southern Region 2015 – 2021 – Key measures in the Plan include to grow the biological treatment sector, in particular anaerobic digestion (and composting), by supporting the development of new facilities.
- National Policy Statement on the Bioeconomy (2018) - This statement recognises that potential benefits include a reduction in the effects of climate change and the promotion of rural employment and economic development, and highlights that Ireland has significant strengths and comparative advantages in the bioeconomy.
- The Waste Action Plan for a Circular Economy – National Waste Policy 2020-2025 (DECC) – This plan looks at how resources can be preserved by creating a circular economy and climate change targets realised. It aims to realise the food waste resource potential of Anaerobic Digestion (AD) and composting. It states that AD and composting provide opportunities for regional development with benefits for communities through sales of locally generated energy and compost.

5.2. Water Framework Directive

5.2.1. Under the EU Water Framework Directive Member States are required to achieve 'good' status in all waters and must ensure that status does not deteriorate. The Directive has been given effect by the Surface Water and Groundwater Regulations. The main objectives of the WFD are to:

- Achieve at least Good Status for all water bodies by 2027.
- Prevent deterioration of existing water quality.
- Restore water bodies that are not meeting the required standards.

5.2.2. In Ireland, the implementation of the WFD is managed through River Basin Management Plans (RBMPs), which are developed and reviewed every six years. The first RBMPs covered the period from 2010 to 2015, with subsequent plans addressing the periods of 2018-2021 and 2022-2027. The Minister for Housing, Local Government and Heritage is responsible for overseeing the implementation of the directive, while the Environmental Protection Agency (EPA) leads the technical aspects and monitoring efforts.

5.3. National Biodiversity Action Plan (NBAP) 2023-2030

5.3.1. The NBAP includes five strategic objectives aimed at addressing existing challenges and new and emerging issues associated with biodiversity loss. Section 59B(1) of the Wildlife (Amendment) Act 2000 (as amended) requires the Commission, as a public body, to have regard to the objectives and targets of the NBAP in the performance of its functions, to the extent that they may affect or relate to the functions of the Commission. The impact of development on biodiversity, including species and habitats, can be assessed at a European, National and Local level and is taken into account in our decision-making having regard to the Habitats and Birds Directives, Environmental Impact Assessment Directive, Water Framework Directive and Marine Strategy Framework Directive, and other relevant legislation, strategy and policy where applicable.

5.4. Waterford City and County Development Plan 2022-2028

5.4.1. The subject site is not zoned in the County Development Plan and is currently in agricultural use.

5.4.2. In terms of Landscape Character, the site is defined as ‘Farmed Lowlands’ in appendix 8 of the CDP and is a ‘Low Sensitive’ landscape area of primarily pastureland. These areas are defined as having potential to absorb a wide range of development types.

5.4.3. Section 6.4 of the CDP states that *“a focus on renewable energy will thus also require the integration and implementation of projects which provide a wider range of renewable energy sources, such as offshore and onshore wind/renewable energy, hydro, wave, biogas (i.e. anaerobic digestion) and heat”.*

5.4.4. Objective UTL 13 relates to renewable energy and states: *"It is the policy of Waterford City and County Council to promote and facilitate a culture of adopting energy efficiency/ renewable energy technologies and energy conservation and seek to reduce dependency on fossil fuels thereby enhancing the environmental, social and economic benefits to Waterford City and County. It must also be recognised that other sources of electricity generation such as natural gas, particularly renewable and indigenous gas, will continue to have a role to play in the transition to a low carbon economy. As such, renewable energy developments may require support from such sources in times of high energy demand."* And that this will be achieved by: *"Supporting appropriate options for, and provision of, low carbon and renewable energy technologies and facilities, including the development and provision of district heating (and/ or other low carbon heating technologies); anaerobic digestion and the extraction of energy and other resources from sewerage sludge."*

5.4.5. Policy Objective WQ1 – Water Framework Directive and Associated Legislation' seeks to protect existing and potential water resources.

5.4.6. The Renewable Energy Strategy 2016-2030 for Waterford (at appendix 7 of the CDP) recognizes the importance of agricultural AD facilities and their potential in Waterford and for rural economic development.

5.4.7. The Waterford City and County Council Climate Action Plan 2024-2029 also seeks to build a climate resilient and low carbon organization. Strategic Goal 4, Action 4.29 refers to developing a pilot Anaerobic Digestor project in the County in conjunction with stakeholders.

5.5. Natural Heritage Designations

5.5.1. The closest area of natural heritage designation is the Natura 2000 site, Lower River Suir SAC (Site Code 002137), approx. 1.5km to the north.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. A Third-Party Appeal has been submitted against the decision made by Waterford City and County Council to grant permission for the proposed development.

The grounds of appeal can be summarised as follows:

General

- Appellant requests an oral hearing on this application.
- The appeal is submitted on behalf of a number of individuals and seeks for each individual objection lodged to WCCC to be considered as a ground of appeal as per section 7.6 of the appeal document.
- An inadequate assessment of the potential hydrological impacts on the River Suir SAC provided, with the site adjoining the Tinhalla Stream, which is hydrologically connected to the Lower River Suir SAC.
- Failure to provide an archaeological assessment or Visual Impact Assessment as required under objective AH04 in the CDP.
- Inappropriate siting of an industrial scale facility in a rural location. Site is not zoned and there is no policy support within the Waterford CDP for energy or waste-related infrastructure at this location. Conflicting statements by Planning Authority in relation to zoning of the site. The SEA for the CDP does not include for an AD facility at this location.
- Lack of detailed analysis of land spreading of digestate, which could lead to pollution risks to soil, air and water.
- Geological sensitivities of the site have not been adequately assessed.
- Adequate details on connection to gas network have not been provided.
- Referral response from Council internal Departments and from external bodies are noted, particularly the submission from An Taisce that query the global warming potential of grass silage mixed with slurry.
- The planning history for the site includes a range of agricultural and energy related developments that points to incremental intensification of use.
- Appeal queries the ability of the applicant to comply with environmental compliance standards based on previous applications invalidated, withdrawn or substantially modified.

- Potential threat to ground and surface water contamination from digestate storage, which must be stored, treated and disposed of in compliance with environmental regulations.
- Odour and air quality impacts are a significant concern for nearby residents if not properly managed.
- The proposal includes a significantly larger intake of organic material compared to previously permitted biogas facility (Ref. 10/222) from 16,000 tonnes per annum to 90,000 tonnes per annum.

Planning Precedents

- Substandard road infrastructure surrounding the site to serve the proposed development, leading to road safety issues. This is particularly relevant at Scrouty Road adjacent to the subject site and Piquet's junction. Previous planning precedents for refusal of permission due to use of substandard roads with inadequate road width and alignment, are referenced (ABP refs. PL92.319720 and PL16.317951). Noise, air pollution and road damage from the increased traffic is also a concern.
- Previous planning precedents at other locations provided in the appeal that support a refusal of permission in this instance. A summary of the precedents provided are outlined in the following table:

ABP Planning Reference	Location	Decision and Main Reasons	Appeal Reasoning
317951	Lislackagh & Carrowbaun, Swinford Co. Mayo	Refuse Permission Road safety impacts at minor country road and National Road and potential impacts on River Moy SAC	1. Similar road network in subject application. 2. Similar proximity to European Site that should be refused permission. Precautionary

			principle referenced.
304149	Causeway, co. Kerry	Refuse Permission Surface water impacts on Lower River Shannon SAC and absence of an NIS, could not be satisfied that potential impacts can be adequately mitigated.	Proximity of subject proposal is 5km closer to an SAC than this refused proposal and therefore should be refused permission.
309122	Causeway, Co. Kerry (same site as above)	Refuse Permission Not satisfied from submitted information that the proposal would not have an impact on the Lower River Shannon SAC	Similar concerns in relation to impacts on European Sites.
303466	Dunbell, Co. Kilkenny	Refuse Permission Not satisfied that the proposal does not entail the processing of waste and to a quantum for which a waste licence is required.	Appeal shares similar concerns in relation to the current application which requires a waste licence.

248164	Lismagratty, Co. Cavan	Refuse Permission In the absence of a submitted NIS, Not satisfied from submitted information that the proposal would not have an impact on European Sites. Absence of sufficient information in relation to input material to undertake a full assessment of adverse impacts.	Submitted that Board refused permission due to proximity to an SAC. A number of details not submitted in this Cavan application have also not been submitted with the subject Waterford application.

- Under Ref. 303466, lack of information concerning the scale of the facility, source and volume of input materials, digestate management, risk assessments and hydrological assessments were included in the reason for refusal. Several of these deficiencies are unresolved in the subject scheme which prevents the Board from carrying out a comprehensive assessment under a number of headings including:
    - No justification for scale of proposal
    - Final destination, frequency and volume of digestate removal not provided.
    - Additional details on biogas flare stack required including noise and emissions.
    - No risk assessment plan for spillages provided.
    - Insufficient details on risk plan for accidents and emergencies

- Grid connection details require clarification.
- Hydrology and hydrogeology assessment requires stronger assessment, without which environmental protection cannot be ensured.

- Permission must be refused based on the lacunae in information identified above.

Technical Details

- Submitted drawings and details are inaccurate. Case law is referenced in relation to the statutory obligation for accurate plans and details to be provided.
- No letter of consent provided for lands outside the applicant's ownership. The application should therefore have been invalidated.
- Appeal submits that the development description and further information notices are inadequate, with the proposed changes not identifiable.
- No details of de-commissioning management provided.
- Lack of public consultation on this proposal.

Environmental Impact Assessment Report

- EIAR is inadequate as it does not provide an adequate assessment of population and human health impacts due to potential odour emissions, noise and vibration as a result of construction and operational practices (including traffic), traffic and transport impacts including pedestrian/cyclist safety, emergency access or road damage.
- Hydrology, hydrogeology and risk of water contamination is not adequately assessed. This is particularly relevant in relation to digestate storage and potential leachate runoff via surface water.
- Air quality and odour impact assessment does not include adequate data on ammonia and hydrogen sulphide emissions. Odour assessment itself is not sufficient.

- Reasonable alternative sites have not been adequately assessed, or alternative feedstock sources identified, which is contrary to Annex IV of the EIA Directive.
- Insufficient mitigation measures proposed for sub-surface archaeological features.
- Validity of EPA licencing under Condition 4 queried, is it sufficient alone, full environmental risk assessment should be completed prior to granting permission and not rely on post-approval licencing to manage impacts.

Appropriate Assessment (AA)

- The Tinhalla Stream forms a natural hydrological corridor between the proposed development site and the Lower River Suir SAC, running immediately adjacent to the site's eastern boundary, creating a direct pathway to the SAC.
- Submitted AA Screening Report and NIS are incomplete as all possible direct and indirect effects are not assessed, particularly those arising from surface water contamination, habitat disturbance and cumulative impacts.
- Mitigation measures proposed in the NIS are vague and do not provide details for accidental spill, increased nutrient loads, surface water run off, or the long term impacts of digestate storage and land spreading. Cumulative impacts with other agricultural and industrial developments have not been adequately assessed.
- Failure to apply the precautionary principle, particularly reliance on post construction monitoring rather than avoidance measures.
- Potential impacts on a number of species not adequately addressed and relies on desk top assessment rather than site specific surveys. Noise and light pollution impact on existing hedgerows have not been adequately assessed. Local biodiversity and pollinators should also be assessed.
- Site specific seasonal hydrological data not provided. The NIS also fails to carry out a hydrogeological risk assessment, which is essential to understanding groundwater flow direction, water table depth, or soil

permeability, all of which are essential to understand how contaminants may migrate toward the SAC.

- Additionally, there is no modelling data of potential overflow scenarios during extreme weather events.
- Planning precedent for refusal of permission (ABP Ref. 317951) due to proximity to SAC is referenced in the appeal. In the referenced case, the mitigation measures outlined in the NIS were found to be insufficient, particularly in relation to nutrient enrichment, cumulative agricultural pollution and lack of clarity on digestate management.

Principle of Development

- The principle of the development is not accepted as there has been no justified need demonstrated, the proposed facility has not been planned for by WCCC, the proposed location is not suitable, and the proposal is fundamentally unsustainable.
- The site is not zoned for industrial scale proposals such as the subject development and should not be located on rural land. Alternative sites should have been assessed that show how the proposal is the preferred option in relation to availability of feedstock, transport capacity, landscape quality and environmental/ecological impacts.
- The proposal should be located on lands zoned 'SI' – Special Industry and development of AD facilities must follow a plan led approach. The proposal will fundamentally alter the rural landscape through the structures proposed, the HGV traffic generated and the odour and air quality impacts arising.
- The submitted LVIA is inadequate and does not assess all sensitive receptors.
- The proposal is unsustainable due to water pollution risks, air quality and emissions impacts and cumulative environmental impacts including land spreading that will lead to increased nutrient loads.

Traffic and Transport

- Application fails to account for the full impact of increased HGV traffic on the local road network and surrounding area. Impacts on agricultural traffic should also be quantified and assessed.
- Picady traffic analysis does not allow for the informal layouts of rural roads. Despite the 18% growth in traffic that triggers a Traffic and Transport Assessment (TTA) no upgrades are proposed to Piquets junction or surrounding roads despite traffic impacts on agricultural traffic, school transport, cyclists and pedestrians.
- No Road Safety Audit (RSA) submitted to improve safety of road network as a result of the proposal.
- Inadequate assessment of haul routes and distribution including on Carrick on Suir and haulage routes have not been specified, which makes a full assessment impossible.
- Peak traffic flows from the proposed development have not been adequately quantified and a cumulative assessment has not been provided.
- Proposal is contrary to local and national transport policy including Trans 37 and Trans 44 of the CDP that seeks to prioritise road safety and retain carrying capacity.
- The proposal will involve the removal of hedgerows required to provide access, which could impact on protected badgers and birds, which has not been appropriately assessed.
- There is adequate planning precedent for refusal of permission in relation to traffic constraints on rural roads as outlined in previous sections of the appeal (ABP Ref. 317951).

Archaeology and Cultural Heritage

- The site lies within a sensitive archaeological landscape and the applicant has failed to provide an adequate assessment of this setting, which is a material contravention of policy objective AH04. A LVIA of the Tinhalla Stream and River Suir setting, and archaeological features has not been undertaken.

Adoption of Appeal Group's submissions to Waterford City & County Council

- The appeal seeks that the submissions of each individual are included in the grounds of appeal. A summary of observations is provided in section 3.4 of this report, and I do not propose to repeat that summary here. All observations have been included in my consideration of this appeal.

6.2. Prescribed Bodies

6.2.1. An Taisce: The main points of the An Taisce observation on the appeal may be summarised as follows:

- Due to potential fugitive methane loss, the use of chemical fertiliser to produce silage and ammonia emissions from bio-based fertiliser produced by the AD process, biomethane cannot be automatically categorised as renewable. Cumulative feedstock provision is a further land-use concern in relation to climate impacts.
- Noted that subject site is located adjacent to 'Tinhalla_10' waterbody, which is designated as moderate water quality. This water body is hydrologically connected to the Upper Suir Estuary transitional waterbody which is designated 'bad' water quality status. Good status requirements by 2027 under the Water Framework Directive are noted and the proposal should be assessed against Article 4 to determine if the proposal will lead to a deterioration in water quality.
- 'Tinhalla_10' is also connected to the Lower River Suir SAC and AA Screening and NIS should take account of possible construction and operational impacts to ensure no significant impacts, individually or cumulatively, on the site's conservation objectives.
- It must be determined that proposed feedstocks are sustainable and not lead to increased GHG emissions and water quality deterioration. Emissions related to feedstock production must also be assessed as indirect impacts. AD predicated on increased grass or energy crop production has the potential to significantly impact climate and water quality as a result of increased chemical fertiliser input. High shares of grass silage (80%) mixed with slurry could result in net positive global warming potential due to emissions.

Furthermore, use of slurry should not be reliant on further bovine agriculture intensification as these are a major GHG emitter.

- AD plants suffer from significant fugitive methane leakage, which impacts on the potential climate benefits of using biogas in place of fossil fuels. Digestate storage and spreading stage is responsible for the majority of methane release and must be appropriately mitigated. Small amounts of methane leakage can wipe out the climate benefits of biomethane production and should be fully assessed. A Plan is also needed for monitoring, reporting and addressing methane leakage in the proposed facility if granted permission.
- An Taisce had some concerns in relation to the details provided at Further Information stage by the applicant. The submission states that subsequent CO2 capture allows any methane slip to be captured beneficially. This detail should be clarified and requires close consideration by the Board. An active system of methane monitoring with immediate remediation is required and not just during commissioning and annual testing. An IEA Bioenergy research paper is referenced and the mitigation measures suggested should be considered by the Board. A common theme is the need for active continuous monitoring of items such as seal leaks, pressure relief vents, flares, and digestate processing.
- Lack of detail in relation to where the digestate product will be used, other than reference to farms that will supply the feedstock. Ammonia emissions are a significant concern in relation to air and water pollution and impacts on flora and aquatic ecosystems. Digestate covering and low emission slurry spreading should be required.
- Mixing of produced biomethane with fossil fuel based gas is a concern in relation to overall fossil fuel use over time. Local off-grid industrial use of the biomethane should be considered a preferable option, to be used for electricity generation and not mixed with fossil gas.
- Traffic impacts from the frequent transport of slurry on local roads should be fully considered.

6.3. **Applicant Response**

The applicant provided a response to the third-party appeal that included a response to the grounds of appeal, a supporting technical note and revised NIS along with associated documentation. The main points of the first-party response can be summarised as follows:

Overview

- Both carbon dioxide and digestate from the anaerobic digestion process will be reused in the drinks and agricultural industry in the case of carbon dioxide and biobased fertiliser in the case of digestate (liquid and solid). This fertiliser can displace chemical fertiliser and use of slurry on agricultural lands as fertiliser will be diverted into the facility.
- The proposal will support the delivery of national climate objectives.
- Site selection was based on a rigorous review of alternative locations. The subject site is best suited given proximity to feedstock sources.

Request for Oral Hearing

- There are no grounds for an oral hearing in relation to the proposal and the appellant has had ample opportunities to make submissions on this application.
- All matters raised in the appeal have been thoroughly examined and responded to in the overall applicant response and accompanying documents and no issue remains that would benefit from discussion at an oral hearing.

Waterford City and County Council Decision to Grant

- The proposed development was subject to rigorous assessment by the Planning authority in relation to EIAR, traffic and transport, and appropriate assessment.
- Condition 4 requiring EPA licence is noted as being superfluous as the applicant is obliged to have licences in place prior to operation regardless of conditions applied by the Planning Authority.

- Condition 5(b) is noted as referring to Table 2.4 of the EIAR that was an estimated annual feedstock composition and intake. The applicant submits that this condition should be amended, and classes of waste should be agreed with the EPA.
- Condition 14 requiring all hardstanding areas is noted as being contrary to SuDs design requirements.
- Condition 19 in relation to noise limits is noted as being unnecessary as the proposed development will be subject to an industrial emissions licence from the EPA.

Policy Context

- Contrary to the appeal submission, the subject proposal is supported by National, Regional and Local Planning Policy. This includes Section 15 of the Climate Action and Low Carbon Development Act 2015 and 2025 Climate Action Plan that has an objective to achieve the production of 5.7TWh of Biomethane by 2030, numerous Regional Policy Objectives and the Waterford City and County Development Plan and Renewable Energy Strategy to promote various forms of renewable energy including AD.
- The proposal will lead to a reduction in agricultural emissions that require a 25% reduction from 2026-2030, with Biomethane to provide an important role.
- The National Biomethane Strategy notes that due to the nature of feedstocks required for biomethane production, it is envisaged that most developments will occur in rural Ireland.

Validity of appeal

- The appeal is not valid under Section 127(1) of the Act as the appeal 'group' did not make a valid submission collectively at application stage, if considered as 11 individual appellants an insufficient fee was paid; and the appeal cannot be considered as a singular appeal party as the appeal makes numerous references to the 'group'.
- The legality of the appeal is set out in a legal letter submitted by the applicant.
- The address of the agent acting on behalf of the appellant is also queried.

Plans and Particulars

- Accuracy of submitted drawings is questioned in the appeal, without any substantiation or clarification of which plans are inaccurate.
- The appeal contention that the letters of consent do not provide for clear consent for lands outside the applicant's ownership is unfounded. All letters of consent have been provided for lands within the red line boundary.
- The appeal references to Article 25 of the Planning Regulations is incorrect and does not refer to FI site notices. FI site notices adequately notified the public of the significant FI as per the Planning Authority requirements.
- There is no requirement to provide plans and particulars for decommissioning and the applicant notes the development is not proposed for a restricted duration and would require separate permission regardless.

Feedback from Planning Authority and Prescribed Bodies

- Pre-planning consultations were via email followed by a Section 247 meeting. The applicant submits that the proposed location is most suitable as it is located adjacent to the largest feedstock source, the existing piggery, and in a rural area as guided by national policy. The planners report submitted provides detailed assessment of odour, noise, traffic, air quality and human health, along with a detailed NIS, all as requested by the Planning Authority.
- The applicant provided a detailed response to matters raised by the Planning Authority Heritage Officer including details of digestate management, the destination for biobased fertiliser and protection of water quality. The Heritage officer raised no further comments and recommended conditions be attached to a grant of permission.
- A response to the District Roads Engineer comments in relation to details and proposals for roads upgrades and later comments from the Roads Engineer records the agreement on these matters.
- In relation to the submission from An Taisce it is contended that the proposal aligns with the provisions of the 2025 Climate Action Plan and the National Biomethane Strategy. The proposal will use local resources to produce

renewable biomethane and biobased fertiliser, both of which will result in reduced GHG emissions.

- In response to the HSE submission, the consultation with adjoining landowners within 1km, local agricultural operators and regional industries is outlined, as well as consultation with the Planning Authority, GNI, the Department of Agriculture, Food and Marine and Bord Bia. This is set out in Table 1.4 of the EIAR.

Siting and Zoning

- The proposal is very strongly supported by planning and climate policy. The subject site is well suited to the proposed development due to the availability of feedstock immediately adjacent, the low sensitivity of the landscape where the site is located, the good quality roads infrastructure in the area and the availability of gas grid connection. Four alternative sites were assessed and considered unsuitable.
- The development of renewable energy projects on unzoned rural land is a well-established principle as acknowledged in the CDP and national policy.
- No justification provided in the appeal as to why the 'Special Industry' zoning would be more suited to the subject proposal. There are not a significant number of SI sites available and if the objectives of the Climate Action plan and National Biomethane strategy are to be met, a significant number of AD facilities will be required in rural locations.
- The site is located in a 'Low Sensitive' landscape area and the submitted LVIA includes a detailed appraisal of the site and surrounds based on the Zone of Theoretical Visibility (ZTV). The LVIA confirms the development will not give rise to significant impacts on sensitive landscape and features during the operational stage and a significant range of mitigation measures have been incorporated into the design to avoid impacts. Mitigation includes siting of the proposed development within the topography of the land to avoid breaking the skyline, protection of hedgerows and additional landscaping. Further response to visual impact is provided in the supporting technical note.

- SEA is not required for individual proposals, which is covered by EIA, which has been undertaken by the Planning Authority and will be carried out by the Board as part of the consideration of the appeal. The SEA itself included the appraisal of renewable energy projects which is standard, accepted practice without reference to individual proposals.
- The NPF and NDP do not fall within the scope of the SEA Directive as confirmed through case law (Friends of the Irish Environment v Ireland [2022] IESC 42), so the reference to this case is unclear.

Planning Precedents

- None of the planning precedents in the appeal are of relevance to the proposed development.
- A number of inaccuracies are included in the appeal in relation to anticipated traffic movements with 48 traffic movements forecast rather than 126 as identified in the appeal, with 80 PCUs existing in the morning (2pcu) and evening (78pcu) peak and not 24 movements as stated in the appeal.

A summary of the appeal cases and the applicant response to the issues raised in the appeal is included in the following table:

ABP Planning Reference	Location	Decision and Main Reasons	Appeal Reasoning	Applicant Response
319720	Change of Use to Creche, Templemore, Co. Tipperary	• Refuse Permission • Insufficient Road Network	• Similar road network in subject application.	No detailed traffic analysis presented in this application and no upgrades to road network proposed, unlike subject application.

317951	Lislackagh & Carrowbaun, Swinford Co. Mayo	• Refuse Permission • Road safety impacts at minor country road and National Road and potential impacts on River Moy SAC	• Similar road network in subject application. • Similar proximity to European Site that should be refused permission. Precautionary principle referenced.	Scrouty Road is a better quality and wider road than the presented road. Road upgrades in the subject application are also ignored. The DAU raised no equivalent concerns about the subject proposal in terms of uncertainty in relation to impacts due to treated water discharge to a watercourse that is connected to a protected site. No evidence or valid arguments are made in the appeal to

				dispute any mitigation measures proposed.
304149	Causeway, co. Kerry	• Refuse Permission • Surface water impacts on Lower River Shannon SAC and absence of an NIS, could not be satisfied that potential impacts can be adequately mitigated.	• Proximity of subject proposal is 5km closer to an SAC than this refused proposal and therefore should be refused permission.	This precedent case was refused due to inadequate details on proposals to deal with clean and soiled water on site leading to potential pollution on adjacent drainage ditches. Comprehensive details on hydrology and drainage are provided with the subject application, which is acknowledged as being materially different to

				the previously permitted development. The relevance of this comparison by the appellant, is unclear. The comparison with appropriate assessment reasons for refusal are not relevant as there was an absence of an NIS in the refused permission.
309122	Causeway, Co. Kerry (same site as above)	• Refuse Permission • Not satisfied from submitted information that the proposal would not	• Similar concerns in relation to impacts on European Sites.	Refusal also related to the absence of an NIS and not proximity to European Site alone. This is not a relevant

		have an impact on the Lower River Shannon SAC		precedent as a detailed NIS is submitted with the subject application.
303466	Dunbell, Co. Kilkenny	• Refuse Permission • Not satisfied that the proposal does not entail the processing of waste and to a quantum for which a waste licence is required.	• Appeal shares similar concerns in relation to the current application in relation to waste requirements.	Current application expressly states that an Industrial Emissions Licence will be applied for to facilitate the proposed development, unlike the precedent case submitted, which also had a different scale and limited feedstock proposed for acceptance.
248164	Lismagratty, Co. Cavan	• Refuse Permission • In the absence of	• Submitted that Board refused permission	This precedent case is incorrectly

		a submitted NIS, Not satisfied from submitted information that the proposal would not have an impact on European Sites. • Absence of sufficient information in relation to input material to undertake a full assessment of adverse impacts.	due to proximity to an SAC. • A number of details not submitted in this Cavan application have also not been submitted with the Waterford application.	referenced under the grounds of appeal section 7.1.1. The Board reason for refusal related to the absence of an NIS, not simply proximity to SAC. A response is provided to the claimed deficiencies in the NIS, which the appeal claims prevent a full assessment of the proposal. A response is provided on justification of scale, final destination of solid and liquid digestate,

				frequency and volume of digestate, grid connection details, and a Risk assessment plan are all provided.

Environmental and Regulatory Compliance

- No evidence is provided to support the claims the subject proposal will not reach environmental and regulatory compliance standards. The proposal will be operated by an expert team with extensive experience in complying with such matters.

Adequacy of EIAR

- The appeal claims the EIAR lacks detail in relation to a number of items. The applicant submits that in relation to Population and Human Health a robust assessment of Airborne pollutants, odorous emissions and construction related dust and emissions was undertaken. Projected levels fall within national and EU ambient air quality limits.
- In relation to noise and vibration, the applicant submits, an appropriate assessment of cumulative impacts and noise sensitive receptors has been undertaken and is further set out in the technical note attached to the appeal response.
- A detailed hydrological and hydrogeological assessment has been undertaken, with a particular focus on the adjacent Tinhalla Stream, contrary to the appeal claims that detailed assessment of digestate storage and potential for leachate run off has not been provided. This is supported by the technical response report submitted with the appeal response.

- The applicant claims a worst-case scenario in relation to air quality emissions has been modelled. Ammonia and hydrogen sulphide will not be emitted from the proposed development due to specific design measures to contain these substances. An ammonia modelling exercise was however undertaken to address this issue and is included in the technical report attached to the appeal response. Ammonia levels in a worst-case scenario are well within air quality standard requirements and would have a negligible impact on human and ecological receptors.
- Assessment of alternatives is detailed in nature and goes beyond minimum requirements in the EIAR Directive. A do-nothing alternative, 4no. alternative site locations, alternative site and layout options and alternative technologies were all considered.
- The proposal will be subject to appropriate development contributions to fund road surfacing improvements in the county, which addresses impacts on material assets. Further details are provided in a technical response on traffic attached to the appeal response, which also includes a detailed road condition report.

Adequacy of Appropriate Assessment (AA) and Natura Impact Statement (NIS)

- A number of issues in relation to the adequacy of the AA and NIS are raised in the appeal including insufficient assessment of surface water impacts, lack of site specific mitigation, and cumulative impacts not adequately assessed among other details on specific species not provided.
- The applicant has revised the NIS to include additional mitigation that was included in other submitted documents, primarily the EIAR submitted, and to take account of additional ecology surveys in April 2025. An additional supporting response on the NIS and biodiversity is submitted by the applicant's ecology team.
- The applicant confirms that surface water contamination, a site-specific hydrological assessment, accidental spillages mitigation requirements and details of specific species (otter, lamprey, Atlantic Salmon) are all provided in the NIS.

- The protection of Tinhalla stream from extreme weather conditions and flood risk was considered in the hydrological assessment with design elements such as the attenuation pond and limiting discharge rates are intended to protect Tinhalla Stream. The submitted flood risk assessment confirms the site is not at risk of flooding.
- In relation to hydrogeological details, borehole data and infiltration test data was all provided in the application documentation and at further information stage. This is supported by an additional technical response provided with the appeal.
- The submitted data is sufficient to conclude that the proposed development either alone or in combination with other plans and projects, would not have any impact on the integrity of a European Site.

Traffic and Transport

- A technical response from the applicant's consulting engineers provides a summary of the appeal claims with regard to Road traffic data and impacts on local roads.
- The appeal incorrectly states there will be a 525% increase in traffic movements on Scrouty Road if the proposal is granted permission. The anticipated traffic volumes are 48 trips per day in total which is modest and will be dispersed throughout the day.
- The appeal claims that inadequate junction analysis at Piquet's Crossroads was undertaken, and the required junction upgrades are not proposed as part of the scheme. A detailed junction analysis is provided by the applicant, which illustrates the junction will operate at 16% capacity in future scenarios. The assessment was done using PICADY analysis tool which is a widely accepted standard traffic modelling software package.
- Adequate access road design, passing bays and entrance layout will allow HGV's to enter and pass each other as shown by the swept path analysis. Pedestrian and cyclist safety will not be impacted and the requirement for public lighting does not arise with the proposed development. The majority of the appeal content in relation to traffic and transport is as a result of misreading of submitted information.

Archaeological Assessment

- A detailed Archaeological and Cultural Heritage Assessment was submitted with the EIAR, including reference to testing undertaken to the south that made no archaeological discoveries, which is contrary to the assertions of the appeal. Nothing of archaeological significance was noted during site inspection.
- The submission by the National Monuments Service (Department of Housing) agrees with the finding of the submitted archaeological assessment and recommended a programme of pre-development archaeological testing, by way of condition, which the applicant is willing to accept.
- The LVIA submitted also considers nearby monuments and archaeological sites, contrary to what is claimed in the appeal.

Ecology Surveys

- The appeal argues that the ecology surveys conducted to inform the EIAR and NIS were inadequate, including on protected species such as otters, lampreys and Atlantic Salmon, which are qualifying interests of the Lower River Suir SAC.
- Initial surveys conducted included a comprehensive habitat survey, mapping, mammal surveys and flora and fauna surveys. The NIS ruled out potential impacts on otters, lamprey and Atlantic Salmon based on appropriate mitigation. Additional ecology surveys have been conducted and an updated NIS provided, which reinforce original findings in the Biodiversity Chapter of the EIAR and the NIS.
- A full assessment of providing openings in the existing hedgerow, is provided in the Biodiversity Chapter of the EIAR. No significant impacts are predicted on ecological receptors.

Miscellaneous Points

- The appeal asks the Board to have regard to the submissions made by the appeal group members at application stage, a response to themed issues is provided by the applicant.

- The location of the site is appropriate as it will use feedstock from the adjoining piggery. The fact that the piggery will not require biomethane is not a valid reason for categorising the subject location as unsuitable.
- Connection to the gas grid via a new pipeline is technically and commercially viable and will not give rise to significant impacts.
- Impacts on traffic and transport have already been addressed. Sealed tankers, cleaned prior to departure will ensure no debris on roads.
- There will be no impacts on long term views as confirmed in the submitted LVIA.
- Detailed odour monitoring indicates no significant impacts due to odour abatement plant and technology.
- The proposal will not lead to further use of fossil fuels and will instead replace the use of fossil fuel with renewable biomethane. A comprehensive response in relation to fugitive emissions is provided in the supporting technical note. The proposal will comply with Best Available Techinique (BAT) requirements.
- The proposed development will allow for reduced use of chemical fertiliser, through the provision of biobased fertiliser. This will improve the existing situation with regard to nitrates and on local water quality.
- Chapter 6 of the EIAR relates to the assessment of vermin impacts that can be adequately addressed with appropriate mitigation.
- Intermittent noise sources are addressed in Chapter 11 of the EIAR, with no significant impacts predicted.
- Issues raised in relation to ecology surveys have been addressed earlier in the appeal response.
- Clear separation of clean and waste water is provided and forms part of the proposal to prevent impacts on water quality.
- Contrary to submissions made, extensive consultation was undertaken with local residents and relevant stakeholders.

- The EIAR and NIS submitted are comprehensive, adhere to the precautionary principle, and there is no doubt that the impact of the development has been robustly addressed in the application.
- The existing condition of the road has been surveyed to ensure ongoing corrective maintenance, if necessary, with proposed upgrades to facilitate safe access to and from the site.
- Claims that the proposed AD plant is unsustainable with concerns in relation to emissions, inefficiencies in biogas production and greenwashing, are not substantiated with any evidence. The proposal is strongly supported by national and local policy documents.
- An EPA licence has been applied for and can only be decided after the planning process is complete and granted permission. As set out in Section 34(2)(c) of the Planning and Development Act and in the EPA Agency Act 1992, the control of emissions is a function of the EPA and should not be subject to conditions on any grant of permission.

An Taisce Submission

- An Taisce have made a submission that noted the high percentage of grass silage (80%) in biomethane production resulted in net positive GHG emissions due to fertiliser used in additional grass silage provision.
- The applicant confirms that the maximum proportion of silage to be used in the proposed development is 25.5%. Additionally, those providing silage feedstock will receive biobased fertiliser in return, thereby reducing overall secondary GHG emissions through chemical fertiliser use reduction.
- Cattle slurry and manure will comprise 10% of the feedstock intake and be from existing farm operations. The largest slurry source is the existing piggery adjoining. The An Taisce submission is therefore of little relevance to the subject proposal.
- An Taisce – The National Trust for Ireland V An Bord Pleanal & ors, ABP [2022] IESC 8 (the Kilkenny cheese case) is referenced by the applicant in relation to ‘strong and unbreakable’ links being absent between the proposed development

and the intensification of bovine agriculture, and therefore any intensification of agriculture would not be required to be considered in the EIAR.

Conclusion

- Each of the recommended reasons for refusal as put forward by the applicant have been responded to by the applicant in the response to appeal document.

Applicant Technical Response Document

- A technical response document has also been submitted by the applicant to support the appeal response. The technical response addresses the adequacy of the EIAR, NIS and associated technical assessments submitted with the application.

  Air and Odour

- An Air and Odour Impact Assessment response is provided in the technical report that states all air quality impacts associated with the construction and operation of the proposal have been assessed using appropriate modelling tools and required standards, contrary to the appeal claims. The findings are presented in Chapter 9 of the EIAR and adequate mitigation measures are proposed. Projected concentrations of air pollutants, including background levels, fall within national and EU ambient air quality limits.
- The odour abatement system will provide a minimum of 2 air changes per hour using a combination of Ammonia scrubbing, high intensity ultraviolet, photochemical oxidation and activated carbon filtration to achieve high levels of odour removal. Additionally, all odour emission rates will be agreed as part of the EPA licence.
- A range of mitigation measures including containment, cleaning procedures and hardstanding surfaces for areas handling organic material will ensure that disease vectors do not pose a risk to human or environmental health.
- Ammonia modelling was undertaken for a worst case scenario event. The results showed a very low level of ammonia dispersion/concentration at nearby Natura 2000 ecological sites (0.13μ³ in case of Lower River Suir SAC), below the 1μg/m³ limit for sensitive species. Human health protection is set at 180μg/m³. Similarly, the associated nitrogen levels are substantially below critical levels,

indicating the proposed facility will not result in any adverse ammonia related impacts in the surrounding environment.

Noise

- Noise and vibration were assessed in accordance with all relevant national and international best practice.
- Baseline noise levels were established at 45db at representative noise sensitive locations (NSLs).
- The results of the noise assessment demonstrate that construction and operational noise levels will remain well within applicable limits set by the EPA and in relation to existing background noise levels, with all predicted impacts classified as either imperceptible or not significant. No tonal or impulsive characteristics would result in additional impacts.
- Where short term construction exceedances were identified (eg. Gas pipeline works) appropriate mitigation and communication protocols are recommended.

Traffic and Transport

- A full assessment of traffic and transport including on site observations, survey data and consultation with relevant authorities is included in the submitted Traffic and Transport Assessment and as set out in Chapter 12 of the submitted EIAR.
- Specific reference is provided to Piquet's Crossroad as a junction with the R677 and Old Scrouty Road.
- The scale of traffic increase is not as represented in the appeal and is conservatively estimated at 48 vehicles per day, which are spread across the 12-hour operational day and will not impact peak periods.
- Detailed junction analysis shows that Piquet's crossroads will operate at 16% capacity when the development is in place, illustrating significant residual capacity.
- Specific reference in the appeal to Carrick-on-Suir and traffic impacts are unfounded as the R676/R677 are designed to accommodate HGV traffic and the proposal will add approximately 2-3 vehicles per hour to this network which is

well within capacity. No cumulative impacts are predicted following a review of permitted developments in the area.

- Proposed road improvement works will enhance forward visibility and will not lead to a deterioration of road safety. The proposal complies with all road safety guidelines as evidenced by the Planning Authority acceptance of the proposal.
- The site and proposal are rural in nature and therefore is not expected to attract pedestrian or cyclist traffic, nevertheless cyclist safety will be enhanced, and the proposal provides 10 cycling spaces to promote sustainable transport choices for staff and occasional visitors.
- Emergency vehicle access, similar to HGV access provision, is adequate due to passing bays and visibility provided.
- The precedent cases put forward in the appeal for a creche in Co. Tipperary and a biogas facility in Co. Mayo, have no resemblance to the subject application, with a different road network and absence of any proposed road improvements.

Archaeological Assessment

- The archaeology assessment within the EIAR demonstrates a thorough and evidence-based approach to identifying and mitigating potential impacts on cultural heritage. The subject site does not contain any archaeological or cultural heritage constraints, and this will be further assessed by the recommended pre-construction testing. There is a low to moderate potential for previously unrecorded archaeological remains given the proximity to known Bronze Age activity in the wider area.

Consideration of Alternatives

- Contrary to the claims of the appeal, the applicant submits that a series of alternatives were considered including a ‘do-nothing’ scenario, alternative locations, layouts and designs and alternative technical processes. All of this is in accordance with standard regulations and guidelines in relation to contents of an EIAR.
- The do-nothing scenario would represent a missed opportunity for renewable gas production that would reduce fossil fuel based fertilisers.

- The chosen location scored highest on an assessment matrix that scored a range of factors including proximity to feedstock, flood risk, visual and environmental sensitivity and access to infrastructure.
- The chosen layout evolved from a number of design iterations.
- The technical process selected is considered the most efficient and compatible with available feedstocks.

Landscape and Visual Impact

- Chapter 11 of the EIAR confirms that the scope, standard and rigour of the Landscape and Visual Impact Assessment (LVIA) is appropriate and complies with best practice.
- Survey work was done in January and July 2024 to understand variable vegetation and weather conditions. The assessment referenced the Waterford City and County Landscape Character Assessment and the Rathgormuck Lowlands (2B) are noted as being of low to medium sensitivity.
- Landscape sensitivity was assessed based on the scale, extent and duration of the development's visual presence. Six key viewpoints, including a review of visibility from the High Amenity area, 850m from the site, were all undertaken. Siting of the proposal was specifically designed to reduce views of the proposal and when combined with proposed landscaping mitigation, views of the proposed development will be reduced to the minimum.

Response to Hydrology and Hydrogeology Claims in Appeal

- A hydrology and hydrogeology assessment is provided within Chapter 8 of the EIAR, which the applicant submits is comprehensive, methodologically robust and adheres to best practice. The use of extensive baseline data, field surveys, analysis of the Tinhalla stream, and clear mitigation and monitoring strategies collectively illustrate the appropriateness of the assessment provided. This assesses the potential for surface water impacts and how these are mitigated and monitored to ensure no significant impacts on existing watercourses.

Response to Claims Regarding Flood Risk Assessment

- The submitted flood risk assessment identifies the site within Flood Zone C, which is at low risk of flooding. Particular attention is given to the Tinhalla Stream in relation to potential impacts.
- Design elements such as the attenuation pond and discharge rate limitations are intended to protect the Tinhalla Stream from hydrological alteration or pollution. A three-network drainage system is proposed that includes attenuation, sump system and design for 1 in 100-year rainfall events.
- Claims within the appeal that the flood risk assessment is inadequate are therefore unfounded.

Response to Claims Regarding Ecological Assessment and NIS

- The applicant response submits that the Biodiversity Chapter of the EIAR (Chapter 5) and the NIS were prepared in line with statutory and best-practice requirements and were subsequently updated with additional ecology surveys conducted in April 2025.
- Surveys in March 2024 and April 2025 covered habitat classification (Fossitt, 2000), floral composition, mammal activity, amphibians, and breeding birds. Aquatic and macroinvertebrate sampling and water quality profiling was also conducted at the Tinhalla Stream to inform the EIAR and NIS.
- A range of mitigation measures are proposed including surface water and sediment control through silt fencing, settlement ponds and attenuation basins, pollution prevention including management and appropriate storage of fuels, ecological supervision, pre-construction surveys of otters, badgers and nesting birds, a site Environmental Management System, appropriate digestate handling and land spreading to be carried out in line with good agricultural practices and the landholding specific nutrient management plan.
- The claims in the third-party appeal in relation to inadequacy of the EIAR and NIS are unfounded.

Air Quality Impact Assessment

- The applicant submitted an Air quality Impact Assessment, attached to the Technical Response document as Appendix A. The assessment addressed NOx and CO, as well as odour and ammonia from the odour treatment system.

Airborne pollutants were found to not have a detrimental effect on residential or ecologically sensitive receptors in the vicinity, with all modelled levels coming within acceptable ranges within 15km of the proposed facility.

- In relation to cumulative assessment, while the existing background levels are exceeded for ammonia, a maximum impact of 0.3% ammonia and nitrogen is forecast, which is below 1% trigger for cumulative assessment requirements.

Existing Pavement Condition Report and Transport Letter

- Appendix B of the Technical Response document provides an Existing Pavement Condition Report, that provides a review of road surface conditions at the site access, Old Scrouty Road and surrounding junctions. The Report provides a synopsis of the existing road condition with all noted as having moderate surface defects. The report is supported by site photos and is in response to the appeal claims that the road is not in an appropriate condition to carry the predicted traffic from the proposed development, and in response to a condition on the grant of permission issued by the Planning Authority.
- 2no. Transport letters are also attached to the Technical Response note, that includes a response to traffic related items raised in the appeal.
- The letters state that proposed road improvements will enhance carrying capacity of Old Scrouty Road. The applicant submits that the Road condition Report provides a more detailed representation of the existing road condition from what was presented in the appeal. The road is in generally good condition with adequate road width to accommodate passing HGV. The road widening was agreed with the District Engineer of the Planning Authority (WCCC).
- The transport letters confirm that no lands outside the redline boundary are required for the proposed development.
- Road improvement works will be undertaken as part of the development as provided under Condition 7 of the Planning Authority grant of permission. The applicant would welcome a similar condition.
- Forecast traffic volumes are 48 vehicle movements per day, which is worst case scenario and will be dispersed throughout the day. Agricultural traffic coexists

with the proposed traffic and the road is of adequate condition to cater for expected volumes.

- The applicant submits that appropriate junction analysis and sightline assessments have been carried out. Details on haul routes, distribution of traffic and impact on Carrick on Suir and other towns is adequately addressed.
- Seasonal variation management is proposed through on-site storage to manage peak deliveries, arrangements with suppliers to distribute evenly throughout the year and diverse feedstock sources.
- Appropriate road safety measures have been proposed to enhance driver safety. Public lighting is not required in such a rural setting.
- Additional details in relation to construction traffic management, pedestrian and cyclist safety, emergency vehicle access, and precedent cases comparison, have all been referenced in other sections of the appeal response and are reiterated in the transport letters submitted.

Updated NIS and EIAR Biodiversity Chapter (Chapter 5)

- The applicant provided an updated Natura Impact Statement (NIS) and updated Chapter 5 – Biodiversity, of the Environmental Impact Assessment Report (EIAR). The updated NIS and EIAR chapter include the additional survey work results and amended details to ensure compliance with the final design, including final details of mitigation incorporated into the NIS, which were in other documents forming part of the application (primarily within the submitted EIAR). Additional details of the content of the applicant's response on NIS and EIAR issues raised by the appellant are included in preceding sections of this Inspector's Report.

6.4. Planning Authority Response

None on file.

6.5. Observations

There was 1no. third party observation submitted in relation to the appeal. The main points of the observation can be summarised as follows:

- Observers house is located across from the proposed development and therefore will be impacted directly.
- Concern in relation to fumes, toxins, emissions and leakages from the proposed plant.
- Odour from production and transport of feedstock (animal manure, slurry, crops and other organic matter) will negatively impact local homes.
- The proposal is a factory in a rural setting, within 300m of existing houses, and should not be permitted in this rural location.
- Risk of toxic spills has the potential to contaminate groundwater, which local residents rely on for water supply.
- Risk of fire and explosion from the proposed biogas plant is a concern.
- Increase of HGV traffic on already constrained roads is a danger to walkers, cyclists and joggers, as well as existing traffic.
- Overall health and safety concerns jeopardise home ownership and devalue homes in the area.

6.6. **Further Responses**

6.6.1. At the request of the Board, the revised NIS submitted in the applicant's response to the appeal was published in a newspaper, with a new site notice erected under Section 142(4) of the Planning and Development Act, on the 19th May 2025, for a 5-week period. There were 2no. observations received in relation to the applicant's response to the appeal and revised NIS. 1no. response was from the appellant and 1no. response was from An Taisce. The main points of each submission are provided below.

6.6.2. **Appellant Response**

An Bord Pleanala Letters

- In relation to first letter notifying the re-advertisement of the revised NIS, appellant's initial submission on application is still valid and therefore no additional submission is provided by the appellants at this stage.

- In relation to the second letter notifying the appellant of the applicant's response to the appeal, the appellants submit a detailed response, including response to the amended NIS. Ask that original application is taken as read.

Procedural Matters

- Confirm the appellant is Emmett Mulally supported by others, all of who made submissions at local level. Additional acknowledgement letters included.
- Ask that An Bord Pleanala confirm if oral hearing will be held or not.
- Attempts to invalidate the appeal, by the applicant, are unfounded.
- Insufficient public consultation undertaken that was not transparent, as residents had no input to design or mitigation.
- Despite the EPA licence being a separate process, The Board must still assess the impacts on European sites and environmental acceptability.

Validity and Completeness

- A number of issues outlined in the original appeal remain unresolved. Site boundary, landowner consent is incomplete, and revised public notices are ambiguous.
- Applicant's claims that appeal is invalid are unfounded, as all details of the appeal party are provided, and the appellant is acting on behalf of a residents group which is accepted practice. The appropriate fee was also paid, all relevant details are included in the appeal, and the issue of the agent's address is irrelevant to the validity of the appeal.
- Validity of submitted drawings and letters of consent remains relevant to the appeal. The case law referenced (Sweetman v ABP (Derryadd) and Ballscadden Residents) clearly state accuracy and reliability of drawings is required. The letters of consent are ambiguous and do not meet statutory requirements.
- Details of further information were not included in the public notices as per Article 35 of the Planning and Development Regulations 2001, which undermines public participation.

- Lack of detail on decommissioning plans presents an absence of environmental responsibility and a deficiency in the application.

Zoning and Siting

- Proposed site is not zoned for the industrial use put forward. Lack of justification for this rural setting and unserviced area, as required by the Planning Authority. The proposal materially contravenes the zoning objectives of the Waterford CDP.
- Logistical efficiency is not a relevant argument for rural location of AD facility as provided in case examples in the appellant's response to the applicant's response to the appeal.
- Absence of definitive assessment by the EPA is not an indication of support for the project.
- While Appendix 7 of the WCCC CDP acknowledges the potential role of AD in supporting renewable energy and agricultural diversification, it does so with clear reference to environmental and spatial planning constraints.
- The An Taisce submission notes that biomethane cannot be automatically categorised as renewable, without detailed environmental assessment.
- The site is unsuitable due to un-zoned status, ecological sensitivity, road access limitations, and absence of supporting policy designation.
- 'Special Industry' or 'SI' land is not the only land use zoning type that would be more suitable for the proposed development. Other zoned, serviced and appropriately buffered land use zonings are available, where the subject proposal would have been more suitably located.
- The appellant maintains that the landscape and visual impact is inappropriate at this location, and the mitigation measures proposed are inadequate. The views presented show the proposal impacting the skyline, which is as a result of the heights of proposed structures.
- SEA requirements in relation to the environmental impact of the proposal remain a concern and the appeal does not conflate SEA and EIA processes. As supported by CJEU Case C-727/22, where development is of strategic

significance, it should be aligned with a policy framework that has been subject to prior SEA – particularly where that framework is relied upon to justify exemption from zoning or local plan compliance. While the Biomethane Strategy notes that most AD facilities will be rural in nature, it does not endorse industrial-scale energy infrastructure on un-zoned, infrastructure-deficient, or ecologically constrained sites.

Feedback from Planning Authority and Prescribed Bodies

- Critical feedback from prescribed bodies and the WCCC in relation to road capacity, ecological impact and water quality are downplayed by the applicant.
- Level of public consultation was insufficient and submissions by HSE and An Taisce remain relevant. Absence of EPA licence leads to inability of statutory bodies to assess the application and therefore gaps in the environmental assessment at planning stage. National climate policy does not override environmental compliance on a project specific level.

Planning History and Precedents

- The planning history for the site with numerous amended, withdrawn and unimplemented permissions raises significant concerns about the credibility of the applicant.
- The cited precedent examples provide real-world examples of similar proposals that were refused permission by the Board for environmental, infrastructural and planning reasons.

Visual Impact

- LVIA lacks clarity around seasonal variations of vegetation cover of this industrial type of use, on what is a sensitive site, visible from a range of views in the surrounding area.

Environmental Compliance

- Failure to complete previously approved AD projects raises concerns in relation to regulatory and environmental compliance.

- The applicant company includes company directors that were previously involved with NRGE Ltd. who were previously prosecuted for six separate breaches of environmental emissions at a site in Cork. The appellant claims a level of 'greenwashing' is being carried out by the applicant.
- Section 35 of the Act is relevant due to past failures to comply with a permission and regulatory requirements.

Development Description and Public Notification

- Development description does not disclose key aspects of the project including gas pipeline, digestate quantities or traffic volumes.

Assessment of Alternatives

- The assessment of alternatives provided is inadequate and insufficient in detail, in the context of the EIAR Guidelines 2022 by the EPA.

Climate and Circular Economy Claims

- No evidence provided that the biogas will replace fossil fuels locally, and feedstock haulage will undermine sustainability credentials. Digestate management, transport of feedstock, infrastructure provision such as the pipeline, and methane leakage will all impact sustainability of produced gas.
- No assurance provided that feedstock providers can supply the proposal without impacting existing farm operations.

Grid Connection

- The required gas pipeline to connect to the grid is an integral part of the project but is yet not consented, assessed or confirmed.

Adequacy of the EIAR

- The EIAR lacks detail in relation to a number of items including a detailed impact analysis, absence of reasonable alternatives, weak mitigation, and failure to account for cumulative and site-specific risks.

Population and Human Health

- Lack of cumulative impact assessment (particularly with existing odour levels), insufficient baseline public health context, and overly optimistic assumptions

on the efficacy of odour and vector mitigation measures. No modelling of short-term acute exposures of odour to the local population.

Traffic and Transport

- Traffic impact is underrepresented in the application, additional trips for various reasons are likely. Seasonal variability/surge is also not accounted for. On small rural roads, even a small increase in traffic is significant and particularly when this is an increase in HGVs.
- Cumulative impacts and junction safety are not addressed. Road infrastructure is inadequate to cater for the proposal and upgrades are required to the 5m wide Scrouty Road to accommodate two HGV passing, visibility, and for safe pedestrian environment. Comparison with the road infrastructure serving an AD plant within 5km is provided- R680 is of much higher capacity and more suitable.
- Proposed access road and passing bays are not adequate, guaranteed or provided with lighting, signage or pedestrian facilities.
- Piquet's crossroad junction analysis with PICADY does not account for rural road driver behaviour and variable geometry. Clear failure to mitigate impacts at this junction, despite being above the TII 10% threshold in traffic growth.
- No traffic accident data has been presented to quantify road safety issues at this location. Submitted details focus on vehicle throughput rather than a holistic approach to safety (pedestrians, cyclists etc.)

Noise and Vibration

- Baseline noise monitoring is inadequate, sensitive receptors are not sufficiently assessed, and cumulative impacts are excluded. Intermittent noise sources such as alarms, reversing are also not assessed adequately for noise sensitive receptors. Ongoing monitoring and complaints procedure is not provided.

Air Quality and Odour

- No baseline assessment of existing air quality seems to have been undertaken.

- N_2S is omitted from odour assessment without empirical evidence and worst-case scenarios are not assessed, ammonia is not adequately assessed. No continuous monitoring is proposed. Operational failure not modelled. General rather than site specific mitigation is put forward.

Biodiversity and Ecology, AA and NIS

- Ecology surveys are inadequate and undertaken at incorrect windows for certain species, including otters, Lamprey, Salmon, bats and aquatic species. No meaningful mitigation to protect the Lower River Suir SAC.
- Lack of hydrological specificity to model overloads on the system and therefore impacts on the SAC.
- The NIS relies on standard mitigation measures that do not take account of the elevated nutrient pressures of the Lower River Suir SAC.
- There is no binding nutrient management plan or contingency strategy for digestate spreading under saturated soil or high-flow conditions.
- Monitoring, post-construction cannot be considered an appropriate mitigation measure.
- Borehole and infiltration data were not appropriately assessed in the NIS.
- Impacts on hedgerows is significant and not adequately assessed.
- Where doubts exist about impacts, the precautionary principle applies.

Water Quality and Hydrology

- EIAR lacks hydraulic modelling, particularly of emergency events. SuDS details are generic and unsupported by hydraulic reports. 1-in-100 year storm with climate allowance is not modelled. A dedicated emergency spill response plan is required. Potential for groundwater contamination is high, despite the mitigation proposed.
- Cumulative nutrient impacts on the SAC are not modelled. Digestate spreading lacks enforceable nutrient thresholds or landbank clarity. Over-reliance on Good Agricultural Practice (GAP) regulations.

- Digestate may be used as a supplement rather than a replacement for slurry spreading on land banks to be used. Since the final land banks to be used for digestate spreading have not been identified, a full analysis of water quality impacts and nutrient loading is not possible. Details of digestate storage are also unsatisfactory.
- Groundwater connectivity and diffuse ammonia emissions from digestate land spreading and slurry application are not assessed.
- Without a site-wide water management plan integrated with ecological receptor tolerances and real hydrological data, the conclusions drawn within the NIS cannot be deemed reliable or scientifically robust under Article 6(3) of the Habitats Directive.

Material Assets and Cultural Heritage

- HGV impact on local rural roads and special treatment of cultural heritage risk not provided for in the proposal and therefore impacts on material assets and cultural heritage are not adequately assessed. HGV traffic is likely to have an intense impact on road surfacing of rural roads and this will not be covered by development contributions.
- Geophysical survey and pre-construction archaeological testing should have been undertaken in this culturally sensitive area. The LVIA for the proposed development is inadequate as it does not include zone of theoretical visibility (ZTV), photomontages or heritage specific visualisations. The National Monument Service (NMS) recommendation for post-consent testing does not resolve the potential for archaeological impact, nor does it meet the requirements of Objective AH 04 of the CDP, whereby a visual assessment of all archaeological sites is required.

Community Accessibility and Transparency

- Appeal claims that the complexity and quantity of the application submission made it difficult for the local population to engage with the process. This is perceived as a strategy to reduce public scrutiny and facilitate large scale developments such as AD plants.

Cumulative Impact of AD plants

- The proposed development lies within close proximity to Ormonde Organics AD plant in Portlaw. Cumulative Impacts are a concern in relation to traffic, odour and industrial scale.

Lack of Justification for increase in Scale

- No justification for increase in scale compared to previous, withdrawn applications.

Emergency Response

- Lack of sufficient detail in relation to emergency response and noise impact of alarms on existing residents.

Digestate Management

- No clear information on how digestate will be stored, transported, or applied to land. An Taisce's submission raises serious concerns in relation to nutrient load, runoff risk, and absence of binding agreements with landowners.
- Absence of vermin management plan to control pests attracted by the proposed feedstocks and waste on site.

An Taisce Submission

- The An Taisce submission is relevant and is not confined to grass silage percentages. No nutrient budget, land use mapping for digestate spreading or verification to support the claim digestate will replace chemical fertiliser.
- The absence of a strong unbreakable link, as referenced in the 'Kilkenny cheese' case, does not absolve the applicant from assessing indirect effects. The link between feedstock production, and consequent reliance on chemical fertiliser, is integral to the viability of the proposal. Off-site agricultural pressures as raised by An Taisce, therefore remain relevant.

Planning Risk Assessment

- Appeal response provides a risk assessment of the proposal and finds that proposal falls short on a number of matters including adequacy of the EIAR and NIS, as well as insufficient technical details submitted.

Appeal Recommendation

- The appellant puts forward a number of recommended reasons for refusal based on the evidence provided in the appeal and response to the applicant's submission on same.

An Taisce Response

'Renewable' Biomethane classification

- Without a detailed assessment, biogas facilities cannot be automatically categorised as renewable gas, due to the potential for fugitive methane leakage, the use of chemical fertiliser in the production of grass silage and possible ammonia emissions from digestate spreading.

Methane Leakage

- Full assessment of mitigation measures is required as small amounts of methane leakage can eliminate climate benefits of AD Biomethane. Proportion of carbon capture to offset methane slip should be clarified due to the high global warming potential of the gas.
- The points raised at further information stage around methane leakage and assessment of mitigation measures are reiterated. These are produced elsewhere in this Inspector's Report so I will not reproduce them here. Summarily, biogas emissions should be at least monitored daily, with an associated protocol, to prevent methane leakage.

End use of Biomethane

- Potential for biomethane to be mixed with fossil fuel based gas, leads to concerns in relation to infrastructural lock to fossil fuel use. Local off-grid industrial uses are preferable to generation into the gas network.

Feedstock

- Sustainability of feedstock must be verified and considered/assessed as indirect impacts.
- A high percentage of silage feedstock is again highlighted as having global warming potential. A low percentage of silage feedstock should be ensured.

Digestate Use

- Ammonia impacts from digestate spreading at the subject site and other destination sites has not been adequately assessed. A cumulative assessment of pNHA sites, with designated SAC and SPA sites should be undertaken. Potential for nutrient leaching in associated waterbodies adjacent to land spreading sites.
- The digester receiver network should have a coordinated storage, processing and application regime across farm-level nutrient management plans, to avoid nutrient run off. Implementation of Good Agricultural Practices and nutrient management plans is currently weak and an adequate mitigation strategy is required to fully account for indirect impacts.
- Furthermore, a cumulative impact assessment of ammonia emissions from each of the receiver location's proposed land spreading practices could be articulated in the provided ammonia impact assessment and NIS.

7.0 Assessment

7.1. I have inspected the site, had regard to local and national policy and guidance, and examined the application details and all other documentation on file, including all of the submissions received in relation to the appeal. Many of the issues relevant to this case relate to Environmental Impact Assessment and Appropriate Assessment, which are examined in sections 8.0 and 9.0 respectively. In addition, I consider that the main issues in this appeal, that are not covered by AA and EIA, and require specific assessment, are as follows:

- Procedural Matters
- The Principle of the Development
- The Scope of the Assessment
- Policy and Zoning Support for Location
- Planning Precedents
- Points Raised in Submissions

7.2. **Procedural Matters**

7.2.1. The first-party response to the appeal raises a number of procedural issues generally in relation to the appeal. These issues relate to the validity of the appeal in the context of Section 127 of the Planning and Development Act 2000, as amended.

7.2.2. Issues associated with the name of the appellant as attached to the appeal documentation are noted. The applicant queries if this is an appeal by a group of individuals as an unincorporated body, 11 individual appellants or by Mr. Emmett Mullaly alone. I am satisfied that Mr. Emmett Mulally represents his own views and the views of local residents as set out in the submissions on the application. Appropriate acknowledgement letters have been provided, and I therefore accept the validity of the appeal in this regard.

7.2.3. The third-party appeal also raises concerns in relation to the details submitted with the application, and the application should therefore have been deemed invalid. These issues relate to the plans and particulars submitted with the application, site boundary and letters of consent, development description and post operation management.

7.2.4. Issues associated with validation of applications and provision of appropriate information, as raised by the appellant are noted. However, any issues with the validation of applications are a matter for the Planning Authority. Validation and compliance are not matters for the Commission and I do not propose to address these issues in this report. I am satisfied there is sufficient information before me to decide on the merits of the proposal as set out in the following sections.

7.2.5. Issues associated with previously granted permissions not being implemented, as raised by the appellant are noted. Failure to implement previous permissions, for whatever reason, are not matters for the Commission and I do not propose to address these issues in this report.

7.2.6. The appeal, appeal response and observations on the re-advertised NIS are wide ranging and include some duplication of issues raised under various headings. I have sought to consolidate my assessment of the issues under the headings below and under my Environmental Impact Assessment (Section 8) and Appropriate Assessment (Section 9) that should be read collectively.

7.3. Principle of Development

7.3.1. The appeal raises significant concern in relation to the principle of the proposed development at the subject location, particularly locating what the appeal describes as an industrial type of development in a rural area.

7.3.2. Section 5 of this report, and the applicant's documentation, outlines a wide range of European, national, and regional policies and objectives aimed at addressing climate change, reducing GHG emissions, improving waste management, and improving water quality and agricultural practice.

7.3.3. More particularly, the Climate Action Plan 2025 (read in conjunction with CAP 2024), notes the publication of the National Biomethane Strategy and the launch of grant aid towards development of the sector. This is expected to drive expansion of the anaerobic digestion sector towards the target of 5.7 TWh per annum of indigenous sustainably produced biomethane for injection into the gas grid by 2030. Climate Action Plan 2024 states that agricultural feedstocks, primarily grass silage and animal slurries, required to produce 5.7 TWh, after the utilisation of waste resources, could be provided through improved productivity and grassland management practices while keeping within the sustainability criteria as laid out in the Renewable Energy Directive. Regarding fertiliser use, CAP 25 aims for a significant reduction in nitrous oxide emissions by changing farm management practices in relation to nutrient use, including a reduction in use of chemical nitrogen use on Irish farms to a maximum of 300,000 tonnes by 2030.

7.3.4. I note the National Biomethane Strategy, which is a government published document. I note that it suggests that the Agri-centric biomethane sector will be a key diversification option for farmers. The strategy notes that due to the nature of feedstocks required for biomethane production, it is envisaged that most developments will occur in rural Ireland

7.3.5. The Climate Action Plan acknowledges that the circular economy and climate action are inherently interlinked and highlights the Waste Action Plan for a Circular Economy, and the focus on increasing recycling, minimising waste generation by prioritising the prevention of waste at every opportunity through eco-design, reuse and repair, and increasing segregation. It aims to enhance food waste segregation,

collection and treatment (including anaerobic digestion) and also highlights the Government's vision for the bioeconomy, as set out in the National Policy Statement on the Bioeconomy, which is to grow Ireland's ambition to be a global leader for the bioeconomy through a co-ordinated approach that harnesses Ireland's natural resources and competitive advantage, and that fully exploits the opportunities available while monitoring and avoiding unintended consequences. Anaerobic digestion is noted as a possible diversification option for livestock farmers, that will aid reduction in purchase of nitrogen fertiliser by Irish Farmers, that has been responsible for much of the GHG emissions reduction in agriculture since 2022.

7.3.6. In terms of national planning policy, I note that NSO8 and NSO53 support the sustainable management of waste, investment in different types of waste treatment, and circular economy principles, including an increased uptake in anaerobic digestion. NPOs 21 and 23 also aim to support rural economies through increased diversity and sustainability, including investment in sectors/industries that address climate change, energy efficiency and the bio-economy.

7.3.7. At regional level, the RSES for the SRA supports the development of the bio-economy for energy production and supports the development of the gas network, including gas to grid injection and the development of AD facilities. The Regional Waste Management Plan for the Southern Region 2015-2021 also supports the growth of new facilities in the biological treatment sector, in particular composting and anaerobic digestion. The Waterford City and County Development Plan is also generally consistent in supporting the development of renewable energy, biogas and rural diversification.

7.3.8. In terms of locational policy as outlined in the CDP, I note that Objective UTL13 promotes the production of renewable gas and Anaerobic Digestion. Section 6.4 encourages a wide range of renewable energy production including anaerobic digestion. Appendix 7, Renewable Energy Strategy refers to anaerobic digestion facilities in rural areas and providing for rural diversification.

7.3.9. With regard to CDP, I note that the anaerobic digestion land use type or biogas facility is not specifically defined in the land use matrix or permissible land use under various zoning provisions. However, I would consider there to be sufficient flexibility for land use types and that 'other uses' may be considered on a case-by-case basis

as specified in the CDP (Chapter 11). White lands are chiefly in agricultural use and may contain isolated development. I consider that limiting anaerobic digestor facilities to 'special industry' or similar land use zoning types on the rationale of access to infrastructure is a narrow view of the various factors that must be considered in the context of biomethane production. The National Biomethane Strategy clearly sees a leading role for farming and the agricultural sector in the production of biomethane, with access to feedstocks being one crucial factor, and I therefore consider this rural location as being appropriate for this development type, subject to other environmental and planning matters being complied with.

7.3.10. The third party appeal argues that the Strategic Environmental Assessment (SEA) of the Development Plan does not include an assessment of impact of an anaerobic digestion facility. I acknowledge the SEA for the Development Plan includes consideration of renewable energy production, and I consider anaerobic digestion to fall within this remit. National and Regional policy support for anaerobic digestion facilities in rural locations is clear and I am satisfied that the proposal can be considered on its merits within this policy context.

7.3.11. I do not consider that a connection to the gas network would be a prerequisite for an AD facility proposal or that the proposed development is contrary to the objectives of the CDP simply by reason of the absence of a connection to the transmission network. I consider that the proposed development would provide a large-scale renewable energy development within the County, which would be consistent with the provisions of Objective UTL 13.

7.3.12. Similarly, I acknowledge that the CDP contains policy that encourages industrial development on suitably zoned lands, subject to the consideration of other policies/objectives. While the aim of this policy thread is acknowledged, I do not consider that this specifically precludes industrial development on other lands subject to suitability. I consider this to be the case given that the nature and scale of the proposed development would not easily integrate with urban development or existing/future residential development.

7.3.13. The proposed development involves the use of silage, slurry and agri-food residues for the production of biomethane as a renewable gas supply, carbon dioxide for re-use in the food sector, and digestate as an organic fertiliser. Having regard to the

policy context outlined above, I consider that the benefits of anaerobic digestion are widely recognised in national, regional and local policy such that, in principle, the form of development proposed is in my opinion acceptable and compatible with national energy and waste policy. It would contribute towards the achievement of national targets for greenhouse gas emission reductions through the proposed replacement of natural gas with gas generated from the anaerobic digestion process. It would also be consistent with policies that support rural/agricultural diversification and would promote the use of digestate as an organic fertiliser in place of the spreading of slurry or the use of chemical fertilisers. In the context of the location of the proposed development within a rural area - adjacent to an existing piggery, that will provide a direct supply of slurry, reducing longer distance trips in the process, as well as a reduction in land spreading of the raw slurry - there are numerous benefits to providing the principle of the proposed development within the rural location selected.

7.3.14. I note that several 3rd party submissions have raised questions about the nature and scale of the proposed development, with some suggesting that the absence of a gas/electricity grid connection will give rise to additional impacts, and others contending that the excessive scale will compromise the visual and rural amenity of the area. However, notwithstanding the relative proximity of the gas and electricity grids, I am satisfied that the RSES supports the principle of gas to grid injection facilities, and a connection pipeline can be provided through a separate consenting process. Although not included in the proposed scheme, the gas connection pipeline has been considered in the EIAR and AA for the proposal. I provide a further review of the gas connection issue under Section 7.4.5 below. Regarding scale, I acknowledge that the Climate Action Plan supports the development of micro/small-scale energy generation. However, I do not consider that this is to the exclusion of larger scale projects as proposed.

7.3.15. The appeal notes that the subject site is not zoned for the use proposed and it would be more appropriately located within a special industry zone or a general industry zone that is more easily connected to relevant transport and gas network infrastructure. While there may be some merit in locating anaerobic digestor facilities at zoned industrial sites, I do not accept that these are the only locations that AD plants may be considered. As put forward by the applicant, locating the proposal

adjacent to a supply of agricultural feedstocks will reduce journey times to the AD facility, with an additional trip saving with the distribution of digestate fertiliser later in the process. National and local policy clearly provides that AD facilities would form part of rural diversification, with the ultimate goal of reducing agricultural emissions. I am therefore satisfied that the location of the subject proposal in a rural area is acceptable.

7.3.16. In conclusion, and notwithstanding that the lands are not zoned for industrial development or that the proposal does not include a connection to the gas/electricity network, I do not consider that the proposed development is precluded by the zoning objectives or planning policy regarding the location of such developments. Furthermore, the proposed location within a rural area is considered to be an acceptable location in principle given that the nature and scale of the development would not easily integrate with urban development or existing/future residential development and is reliant on proximity to feedstock supply. The suitability of the proposed site therefore warrants consideration on its merits and will be assessed in further detail throughout this report.

7.3.17. Having regard to the foregoing, I have no objection in principle to the proposed development, subject to further detailed assessment of planning considerations and environmental impacts below.

7.4. Scope of the Assessment

7.4.1. The appeal, submissions from An Taisce, and 3rd party observers highlight the need to widen the scope of assessment of the proposal to assess the impacts of feedstock supply and digestate spreading. It is argued that no detailed information has been submitted on the locations for feedstock supply and land spreading and that, consequently, a cumulative and comprehensive assessment of the indirect impacts of the development cannot be completed.

7.4.2. I acknowledge that the feedstock is to be sourced within a 10-25km radius of the site and that general locations are specified by the applicant and included in relevant assessments. However, given the volume of material required (90,000 tonnes per annum) and the likely lifespan of the project, I consider that:

- The practicalities of identifying specific sources for the input of feedstock into the anaerobic digestion process are infeasible.
- It would be unreasonable to expect that agreements with farmers would be finalised at this stage or that the feedstock locations would remain constant over time.
- There is a functional independence between the proposed development and the feedstock suppliers.
- The applicant would have no legal remit to control or oversee the operations of feedstock suppliers and any condition requiring this would be ultra vires.

7.4.3. Accordingly, I do not consider that it is feasible or practical to carry out an assessment of the impacts of feedstock supply within a multiplicity of defined sources. Furthermore, I would contend that none of the feedstock inputs are being produced with the sole intention of supplying the AD process. The silage, slurry and agri-food residues are already being produced and in the event of a 'do-nothing' scenario would have to be disposed of by alternative means. No specific new crops are proposed to be grown for the purposes of the AD facility.

7.4.4. A similar situation occurs with regard to the digestate produced from the anaerobic digestion process. It will be suitable to be used as an organic fertiliser on agricultural lands and, again, I consider that the identification, assessment and control of the land-spreading locations is infeasible in the context of the current application. The EIAR, by highlighting the environmental improvements associated with the proposed digestate, does not entirely disregard the impacts of land spreading. I would concur that the proposed digestate would replace more potentially contaminating raw materials such as slurry and chemical fertilisers, and that, in a 'do nothing' scenario, the cattle slurry, manure, pig slurry and poultry litter that makes up approximately 40% of the proposed feedstock would likely be disposed of by spreading on land. And while the activity of digestate disposal clearly has the potential for impacts, I am satisfied that the activity does not form part of the current project and that it can be appropriately controlled by the requirement for Nutrient Management Plans and compliance with the European Union (Good Agricultural Practice for the protection of waters) Regulations 2017 as set out in the mitigation measures in Chapter 7 of the submitted EIAR. I refer the Commission to the attached reports from An Comisiúin

Pleanála (ACP) Senior Ecologist Inspector and from ACP Scientist in support of this assertion.

7.4.5. The question of assessing the impacts of gas grid injection facilities as part of this application has also been raised. The applicant has set out in submitted documents that Biomethane will be supplied to the existing gas network via the Grid Injection Unit (GIU) within the subject proposal, and a new pipeline connecting the site to the existing medium pressure distribution gas pipeline located ca. 2.5km north from the site at Carrickbeg, Carrick-on-Suir, Co. Tipperary. The pipeline will be installed along Scrouty Road, Rath Road and the R680 and is subject to a separate consenting process. I am aware that Gas Networks Ireland (GNI) currently operates a purpose-built injection facility in Cush, Co. Kildare. The Board has granted permission for another facility in Mitchelstown, Co. Cork (ABP Ref: 307394, 21st December 2020) and GNI has stated plans to roll out a network of facilities across the country. I am satisfied that the on-going roll-out of these facilities will expand the market and integration of the proposed development into the grid. Furthermore, I am satisfied that these facilities will be suitably assessed as independent projects in the planning and consenting process and do not warrant a cumulative assessment as part of the proposed AD project.

7.4.6. Some 3rd parties and the An Taisce submissions have raised concerns about the potential for indirect impacts of the proposed development, including from land spreading and associated ammonia impacts. However, I am satisfied that the appeal should be assessed on the basis of the current plans and particulars and that the conditions of any grant of permission would appropriately control the operation of the development, including the nature and quantity of feedstock, with additional environmental controls being mandated through the EPA as a separate consenting authority for the Industrial Emissions Licence. I note the applicant's submission that Condition 4 of the Planning Authority grant of permission is superfluous as an EPA licence would be required regardless of a planning condition being included. I agree with this assertion and do not consider there to be a requirement for a condition specifying EPA licence requirements as this is required to operate the facility, regardless of planning conditions. Some concern was referenced about any future material changes and intensification, which would have to be assessed as part of a new application for planning permission.

7.4.7. Having regard to the above, I consider that the scope of assessment can reasonably concentrate on the direct, indirect and cumulative/in-combination impacts of the proposed development itself. A cumulative assessment is not warranted in relation to the agricultural activities associated with feedstock supply and digestate spreading, or in relation to gas grid injection and connection pipeline projects.

7.5. Planning Precedents

7.5.1. The appeal sets out a planning history for the area surrounding the site, with multiple applications at the subject site for agricultural and energy-related developments. The appeal argues the planning history points to a record of non-conformance and questions the applicant's ability to reach regulatory compliance.

7.5.2. The third-party appeal also sets out a number of previous planning decisions that is argued, provide evidence of reasons for refusal that are relevant to the subject proposal. I provide a brief review of each of these cases below.

7.5.3. **ABP Ref. PL92.319720 – Templemore, Co. Tipperary –** This application for a proposed change of use to a creche was refused permission on the grounds of increased traffic on a substandard local road. The application documents in this regard do not include a detailed analysis of traffic and transport issues nor any road upgrade at the entrance to allow for improved vehicular safety. The road network accessing the creche in question is a narrow local road. While Scrouty Road accessing the subject site is a local road, it is of sufficient width to allow two HGV pass at the same time, and the distance travelled on this road would be 500-600 metres before reaching higher capacity regional roads. The route options from Piquet's Crossroads would further add to the dilution of traffic impact.

7.5.4. I would also consider the vehicular movements associated with a creche to have different characteristics than an anaerobic digestor facility, with more concentrated peak periods. Detailed review of traffic and transport is provided in my Environmental Impact Assessment of the proposal; however I consider there to be few similarities between the subject proposal and the refusal of permission under 319720.

7.5.5. **ABP Ref. PL16.317951 – Swinford, Co. Mayo –** This application for a proposed biogas renewable energy facility was refused permission on two grounds related to (1) Traffic and Transport, and (2) insufficient information in the submitted NIS to

eliminate potential for impacts on European Sites. The traffic and transport elements of the proposal are further reviewed in my EIA of the proposal. The submitted photographic documentation in relation to 317951 does not provide sufficient evidence to support a comparison with Scrouty Road, which has a higher quality surface and road width. The traffic and transport reason for refusal on 317951 also includes reference to access on to a national primary route, which is contrary to national policy. I note TII did not make a submission on the subject application, and the Council Roads Engineer was satisfied with the road proposal associated with the application, including details submitted at further information stage.

7.5.6. In relation to matters associated with appropriate assessment and impacts on European Sites, the Swinford case includes a submission by the NPWS who raised concerns in relation to the hydrological connection to the River Moy SAC and that information on monitoring was absent. My full review of appropriate assessment matters is provided in Section 9 of this report; however, proximity is only one factor in the overall consideration of impacts on designated sites and it is not accepted practice that because one proposal was refused permission, another should follow. Each development proposal should be considered on its own merits, and the details of the subject proposal are reviewed in detail in the following sections.

7.5.7. **ABP Ref. PL08.304149– Causeway, Co. Kerry** – The appeal sets out that this application is yet another example of a proposal being refused permission due to proximity to an SAC, and because the subject proposal is 5km closer to an SAC, should be refused permission.

7.5.8. I note there was no NIS submitted with the Causeway application and therefore the final decision to refuse permission was related to the absence of certainty in relation to the treatment of surface water. I note detailed surface water and NIS documents have been submitted with the subject application and which I will review in the following sections.

7.5.9. The appeal also references a previous permission that was materially different from the one proposed under 304149 and the third-party appeal seeks to draw comparison to the subject proposal where a smaller scale facility was previously granted permission under Waterford CCC Ref. 10222. The applicant nor the Planning Authority sought to rely on the previous permission to justify the merits of

the subject proposal, and I do not accept this as a valid argument or justification for refusing permission in this instance.

7.5.10. **ABP Ref. PL08.309122– Additional Application, Causeway, Co. Kerry** – The reason for refusal on this application again related to the absence of a NIS with the submitted application, which in turn meant that significant impacts on an SAC could not be ruled out. The subject application includes an NIS and details related to appropriate assessment that will be reviewed in the following sections.

7.5.11. **ABP Ref. PL10.303466 – Dunbell, Co. Kilkenny** – This application for a proposed AD plant was refused permission as they were not satisfied that a Waste Licence was not required. The development description for the subject proposal includes reference to an Industrial Emissions Licence, which has already been applied for under licence number P1218-01. I therefore consider comparisons with the Dunbell, Kilkenny case to be irrelevant.

7.5.12. **ABP Ref. PL92.319720 – Lismagratty, Co. Cavan** – This application for an anaerobic digestion facility was refused permission for the absence of an NIS, which in the first instance does not justify comparison to the subject proposal. The second reason for refusal related to the absence of details on a number of items, which the third party appeal seeks to compare to the subject proposal. The lack of details submitted relate to the following:

- Justification of scale
- Final destination of digestate
- Frequency of removal of solid and liquid digestate
- Volume of removal of liquid digestate
- Biogas Flare
- Risk assessment plan for spillages

7.5.13. The response to the appeal sets out an indication of where each of these matters are detailed in the application documentation.

7.5.14. Chapter 2 of the EIAR sets out details of the availability of feedstock and the scale of the proposal in relation to this availability. I accept that the processing of 90,000 tonnes per annum is an appropriate scale to justify the costs involved in developing a proposal such as the one put forward. The processing of feedstocks is linked to the

capacity of the roads infrastructure in the area, air and noise impacts, and water quality impacts. All of which are set out in my assessment in the following sections.

7.5.15. The details submitted at further information stage include an indicative map of the destination of digestate from the proposed development. I accept these are indicative locations only and cannot be provided with certainty at this time. The end use of digestate is addressed in section 7.4 of my report.

7.5.16. The details of the biogas flare were submitted with the application documentation, and confirm this will be used in emergency situations only in the event of an interruption to the operation of the gas injection unit. It is further submitted by the applicant that the flare will comply with the requirements of the EPA and any potential conditions on an EPA Licence for industrial emissions. I am satisfied that the flare will only operate in the event of the biogas upgrading unit or CHP ceasing to effectively operate, meaning there is no outlet. I note the flare is controlled and operated by the Supervisory Control and Data Acquisition (SCADA) system and will operate below 65dB when in use. I therefore do not consider there to be any significant concerns in relation to the biogas flare or its operation.

7.5.17. I note spillage and leakages are considerably accounted for in the subject proposal with bunding to contain 110% of capacity of the largest tank volume, continuous monitoring and use of the flare stack, only where necessary. Additional mitigation is also set out in relation to spill kits being provided, monitoring for fire and explosion risks, and impermeable surfaces at appropriate locations to prevent leakage to subsurface levels. I consider the risk assessment for spillages, fire and explosions to be fully accounted for within the application documentation.

7.5.18. I have addressed the gas connection pipeline elsewhere and note this will form part of a separate consenting process. The application does account for the impacts of the gas pipeline connection works, and these are discussed in the following sections.

7.5.19. In relation to hydrology and hydrogeology, I assess this under the relevant section of the EIAR in Section 8 of my report. This includes a detailed analysis of impacts on the Tinhalla Stream and the Lower River Suir SAC. Further Assessment is provided in Section 9 of my report under Appropriate Assessment.

7.5.20. The third-party appellant's included additional planning decision examples that they highlight as being relevant to grounds for refusal on the subject proposal. As

reiterated in relation to the above examples, each individual proposal has been considered on its own merits with various locational and design characteristics. A comparison with each of the examples provided is not appropriate as the many variables involved do not justify a like for like comparison.

7.5.21. Based on the foregoing, I conclude that there are no relevant planning precedents put forward in the appeal as set out above.

7.6. **Other matters and Points Raised in Submissions**

7.6.1. The appeal seeks that all points in raised in observations on the application be adopted as part of the appeal. My response to the main points of these submissions, that are not covered elsewhere my assessment, is set out below:

- Fossil Fuel reliance and Fugitive Emissions – The appeal notes that by connecting to the Gas network pipeline, reliance and interdependence with fossil fuel sources will be locked in. I am satisfied the subject proposal can be defined as a renewable gas energy facility that will increase the production and use of this gas that long term, can lead to the replacement of fossil fuels. In relation to fugitive emissions, these will be monitored through personal monitors of staff daily and detection surveys on an annual basis. The safety and effectiveness of the proposal will inherently rely on reducing gas leakages and therefore I am satisfied that appropriate measures are put forward by the applicant.
- Impact of Feedstocks and Digestate – The generation and distribution of biobased fertiliser will reduce impacts on soil and water networks compared to the current usages of chemical fertiliser and raw slurry.
- Consultation – The applicant sets out a range of consultation with statutory bodies and local residents prior to the submission of the application. Adequate public submission periods were available at application stage and through the readvertised NIS to allow members of the public to comment also. I am satisfied that sufficient public consultation took place in relation to the proposal.
- Climate and Sustainability – Observations raised concerns in relation to the emissions of biogas production that would lead to the AD plant being

unsustainable. As set out in earlier sections of my assessment, I am satisfied that the subject proposal may be categorised as renewable energy production and is subject to detailed assessment of environmental factors as set out in the following sections.

- An Taisce Submission – The An Taisce submission is referenced and the concerns raised in relation to the percentage of grass silage to be used, with 80% proportion being referenced as creating global warming potential. The applicant confirms that approximately 25% of feedstock will be grass silage, which is below the high levels that could lead to GHG emission concerns. In addition, the use of digestate instead of chemical fertiliser at the end of the process is considered to be an overall positive, due to a reduction in the level of nitrogen. Cattle manure and slurry is also noted as being just 10% of overall feedstock mix, from existing sources, which negates the argument for potential intensification. I refer the Commission to the attached report by the Commission Scientist that refers to the categorisation of biomethane as a renewable gas. While the concerns of An Taisce are noted, the feedstock mix and proposed intrinsic design features of the proposal will ensure the proposal can be defined as a renewable gas processing facility.

8.0 Environmental Impact Assessment

8.1. Introduction and Statutory Provisions

8.1.1. This section sets out an EIA of the proposed project and should be read in conjunction with the planning and appropriate assessment sections of my report. The development provides for a 90,000-tonne capacity Anaerobic Digestion Facility and associated infrastructure on a gross site area measuring 7.7ha in the Waterford City and County Council area.

8.1.2. In the context of the Proposed Development, the most relevant project type in Schedule 5 of the Planning and Development Regulations 2001-2019, as amended, is identified in Part 2, Class 11 (b) Other Projects:

(b) Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule.

8.1.3. The application is accompanied by an Environmental Impact Assessment Report (EIAR). Section 1.5 of the EIAR states that following a review of the legislation and guidance governing the requirements, it is concluded that there is a mandatory requirement to undertake an EIA of the Proposed Development.

8.1.4. This section of my report evaluates the information in the EIAR and carries out an independent and objective environmental impact assessment (EIA) of the proposed project in accordance with the requirements of relevant legislation. In carrying out an independent assessment, I have examined the information submitted by the applicant, including the EIAR, as well as the written submissions made to the Commission on appeal as set out in section 6.0 of this report. The main issues raised specific to EIA have been addressed under the relevant headings and, as appropriate, in the reasoned conclusion and recommendation, including conditions. The main issues can be summarised as follows:

- The scope of the assessment and impacts relating to feedstock collection, digestate disposal and connection to the gas network.
- The potential for accidents and/or disasters.
- Impacts on Biodiversity, including the Natura 2000 network.
- Pollution of surface water and groundwater.
- Air, noise and odour pollution.
- Landscape and Visual impacts.
- Traffic and Transport impacts.

8.1.5. As outlined above, concerns have been raised that the scope of the EIAR does not consider the entire project and, in particular, excludes the potential impacts associated with the provision of feedstock, the disposal of digestate, and the connection of the gas to the national network. I have previously addressed these matters in section 7.3 of this report, and I have concluded that it is not feasible or practical to assess the impacts of feedstock supply and digestate land-spreading over a multiplicity of sources/destinations, particularly under the circumstances when these activities are already occurring and will be suitably controlled by good agricultural practice and legislation. Regarding connection to the gas grid, I am satisfied that the gas pipeline connection to the grid will be suitably assessed as an independent project in the planning process and do not form part of the proposed

development for the purposes of EIA. I note there is reference to the provision of the gas pipeline connection in the application documents, which I include in the following, relevant sections. Accordingly, I do not consider that the issue of project-splitting arises in this case, and I am satisfied that it is not reasonable or practical to assess the cumulative impacts of activities/projects associated with feedstock provision, digestate spreading or gas grid connection.

8.1.6. The EIAR includes supporting information and studies, as well as a separate non-technical summary. Several issues relevant to the EIA have already been addressed in my planning assessment as outlined in section 7.0 of this report such as the principle of the development, planning policy, planning precedents and response to submissions. This EIA section should, where appropriate, be read in conjunction with the relevant parts of the planning assessment.

8.1.7. The impact of the proposed development is addressed under all relevant headings with respect to the environmental factors listed in Article 3(1) of the 2014 EIA Directive. The EIAR sets out a description of the proposed development and associated processes. The application has complied with statutory public notice requirements in the form of site notice, newspaper notice and EIA Portal notification. The competency of experts involved in producing the EIAR are set out in Section 1.8.

8.1.8. I am satisfied that the information contained in the EIAR has been prepared by competent experts to ensure its completeness and quality; that the information contained in the EIAR and supplementary information adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment; and that it complies with Article 94 of the Planning and Development Regulations 2001 (as amended).

8.2. Compliance with the Requirements of Article 94 and Schedule 6 of the Planning Regulations

8.2.1. In the proceeding table, I assess compliance of the EIAR submitted with the requirements of Article 94 and Schedule 6 (paragraphs 1 and 2) of the Planning Regulations.

A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development, including the additional information referred to under section 94(b).
A description of the proposed development is contained in Chapter 2 of the EIAR, including details on the site location, design, layout and size of the development, arrangements for access, and the construction methodology. In each technical chapter of the EIAR details are provided on use of natural resources and the production of emissions and / or waste where relevant. I am satisfied that the development description provided is adequate to enable a decision.
A description of the likely significant effects on the environment of the proposed development, including the additional information referred to under section 94(b).
An assessment of the likely significant direct, indirect, and cumulative effects of the development is carried out for each of the technical chapters of the EIAR. I am satisfied that the assessment of significant effects is comprehensive and sufficiently robust to enable a decision on the project.
A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment of the development, including the additional information referred to under section 94(b).
The EIAR includes designed in or embedded mitigation measures and measures to address potential adverse effects identified in technical studies. These measures and arrangements for monitoring, are summarised in Chapter 16 of the EIAR titled 'Schedule of Mitigation', the submitted CEMP and Chapter 6 of the NIS. Mitigation measures comprise standard good practices and site-specific measures that are capable of offsetting significant adverse effects identified in the EIAR.
A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed

development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment, including the additional information referred to under section 94(b).
Section 3.4 of the EIAR provides a description of the range of alternatives considered, including alternative locations, alternative technical configurations, alternative designs and layouts, and a 'do-nothing' alternative scenario. If the development were not to take place, the lands would remain in the present form for agricultural grazing and the opportunity to capture County Waterford's bioenergy for the production of biomethane to supply the national grid would be missed. In the 'Do-Nothing Scenario' agricultural wastes would not be treated locally through the AD process. Untreated and unpasteurised manures and slurries would continue to be applied directly to the land at current volumes, with the continued addition of chemical fertiliser. The 'do-nothing' scenario would result in a loss of local direct and employment opportunities. The applicant assessed 4no. alternative locations for the proposed AD plant and a detailed site selection process was undertaken, with a scoring matrix applied to each of the 4 options under a number of headings: The results of the scoring matrix are included at Appendix 3.1 of the EIAR, with the subject site scoring highest in relation to transport, proximity to feedstock in the rural area (with an adjacent piggery to provide slurry), proximity to the existing gas network, proximity to sensitive receptors, landscape and visual impact and flood risk. Overall, I am satisfied that the applicant provided a detailed review of alternative site options for the proposal. Alternative layout options were assessed in terms of use of existing topography to minimise excavation and minimise visual impacts and met design and operational requirements. Alternative details for stacks, entrance layouts and landscaping were considered with the final design considered to be optimal for the subject site in terms of visual appearance and adequate landscape screening. Alternative technical configurations were also considered as part of the design process. There are several different process configurations around which AD

systems may be designed. Factors considered when making design decisions included whether the process is 'batch' or 'continuous' feed, whether it is a 'dry' or 'wet' system, whether it is a 'single stage' or 'multistage' process and whether the anaerobic digester is operated at 'mesophilic' or 'thermophilic' temperatures. The Best Available Techniques (BAT) were selected based on industry standards and reliability of the digestion process.

I am satisfied, therefore, that the applicant has studied reasonable alternatives in assessing the proposed development and has outlined the main reasons for opting for the current proposal before the Commission, and in doing so the applicant has taken into account the potential impacts on the environment.

A description of the baseline environment and likely evolution in the absence of the development.

The baseline environment is addressed in each technical chapter within the EIAR, and the likely evolution of this environment in the absence of the proposed development is described, with particular reference to 'do-nothing scenarios'.

A description of the forecasting methods or evidence used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information, and the main uncertainties involved.

The methodology employed in carrying out the EIA, including the forecasting methods, is set out in each of the individual chapters assessing the environmental effects.

The applicant has indicated in section 1.12 of the EIAR that there were no limitations encountered in compiling the information within the EIAR. I am satisfied that forecasting methods overall are adequate in respect of likely effects.

A description of the expected significant adverse effects on the environment of the proposed development deriving from its vulnerability to risks of major accidents and/or disasters which are relevant to it.

This issue is specifically dealt with in section 6.6.4.3 of the EIAR. One of the main hazards at an AD plant is the risk of explosion. The mixture of gases can form an explosive atmosphere under certain conditions. Such explosive atmospheres can ignite and cause extensive damage and serious or fatal injuries and this is raised specifically in the third party appeal and associated observations on the application.

Under the Control of Major Accident Hazards Involving Dangerous Substances (COMAH) Regulations 2015 (S. L No. 209 of 2015), P2 Flammable gases (methane) are subject to a threshold quantity of 10 tonnes meaning that any biogas facility storing less than 10 tonnes of Methane will fall outside of the COMAH Regulations. At full operation, the Proposed Development will store less than 3.72 tonnes of flammable gas, and is, therefore not a COMAH regulated site.

Proposed mitigation measures including ventilation, zonal prohibitions, monitoring of gas leakages, and protective equipment are considered to minimise any risks. Having regard to the location of the site in a rural area, separated from sensitive receptors, coupled with the mitigation measures proposed, I am satisfied that there are unlikely to be any significant effects of the project deriving from major accidents and / or disasters.

Article 94 (c) A summary of the information in non-technical language.

The EIAR submitted with the application comprises a non-technical summary (Volume I), and a main report (Volume II) with appendices. I have read the Non-Technical Summary document, and I am satisfied that the document is concise and comprehensive and is written in a language that is easily understood by a lay member of the public.

Article 94 (d) Sources used for the description and the assessments used in the report.

The sources and references used to inform the description, and the assessment of the potential environmental impacts are set out at the commencement of each

individual chapter in the EIAR. I consider the sources relied upon are generally appropriate and sufficient in this regard.
Article 94 (e) A list of the experts who contributed to the preparation of the report.
A list of the various experts who contributed to the EIAR are set out in Table 1.2 in Chapter 1 of the EIAR. Where relevant, I am satisfied that the introductory section of each of the EIAR chapters demonstrates the competence of the individuals who prepared each chapter of the EIAR, including details relating to expertise and qualifications.

8.3. Compliance

8.3.1. Having regard to the foregoing, I am satisfied that the information contained in the EIAR, and the associated supplementary information provided by the applicant, is sufficient to comply with article 94 of the Planning Regulations. Matters of detail are considered in my assessment of likely significant effects below.

8.4. Consideration of alternatives

8.4.1. Part 2 of Annex IV of the 2014 EIA Directive requires that the developer sets out a description of reasonable alternatives studied and provides an indication of the main reasons for selecting the chosen option. Chapter 3 of the EIAR sets out the evaluation of the alternatives considered as part of the development.

8.4.2. As referenced in the table under Section 8.2.1 above, alternatives were considered under the following headings:

- Do nothing scenario
- Alternative Locations
- Alternative Designs and Layouts
- Alternative Technical Configurations

8.4.3. The EIAR states that indigenously produced biomethane will play a significant role in enabling a transition to net zero, as biomethane can displace fossil gas in many

hard-to-decarbonise sectors. It is stated that in the do-nothing scenario, the opportunity to capture a volume of County Waterford's bioenergy resource for the production of biomethane to supply the national grid would be missed.

8.4.4. The proposal to locate an anaerobic digestor plant at the subject site was informed by a detailed site selection process and assessment/scoring matrix under key headings. Key land use considerations were identified as:

▪Transport Network and Access,

• Availability and proximity to Feedstock Supply

• Availability and proximity to Digestate Receivers

• Existing Land Use

• Landscape Sensitivity

• Ecological Designations

• Archaeological Designations

• Access to Gas Grid

• Access to Electricity Grid

• Proximity to Sensitive Receptors

• Available Land Size

• Land Availability

• Landscape and Visual Amenity

• Proximity to Suitable Water Course or Sewer

• Proximity to Drinking Water Source/Aquifer

• Topography

• Flood Risk

8.4.5. Four potential sites were considered and rated according to relevant assessment criteria. The four sites were as follows:

- Site 1: Reatagh and Curraghnagarraha, Co. Waterford (Subject Site). (Overall ranking score: 110)
- Site 2: Kilmacthomas, Co. Waterford - (Overall ranking score: 98)

- Site 3: Old Molloy Factory, Cleaboy Road, Waterford City, Co. Waterford– (Overall ranking score: 97)
- Site 4: Lands and industrial Unit at Gracedieu, Co. Waterford (98).

8.4.6. The subject site was chosen given the accessibility of the site, availability of feedstock in the immediate vicinity (particularly the piggery adjoining), proximity to the existing gas network 4.9km to the north, relationship to European Sites that can be adequately mitigated, the minimal landscape and visual impact of the proposal, and suitability in relation to minimal flood risk.

8.4.7. Alternative sites considered were deemed unsuitable due to uncertainty regarding the availability of sustainably sourced agricultural feedstocks in the vicinity and, secondly, the distances required to transport these feedstocks from their source locations to the alternative sites would result in significantly more HGV (heavy goods vehicle) movements compared to the current proposal and higher estimated greenhouse gas emissions. Other sites assessed are also a considerable distance from gas network connections.

8.4.8. Alternative layouts were considered and progressed in order to incorporate adequate mitigation to address landscape impacts, operational requirements of industrial emissions licencing, and DAFM requirements. The design of emissions stacks was considered through the design and planning process and informed the suitable height of the 1 No. CHP stack, 1 no. Biomethane Boiler stack and 1 No. Odour Treatment stack.

8.4.9. The final design aims to minimise visual intrusion through the provision of additional areas around the site boundaries to incorporate landscaping, and the proposed site entrance was relocated to retain mature trees.

8.4.10. Alternative landscape schemes were assessed, with the final proposal considered to provide the optimum visual screening, when compared with other scenarios.

8.4.11. Several different process configurations were considered, and the chosen process design is a continuous feed system with multi-stage process to take advantage of the fact that different portions of the overall biochemical process have different optimal conditions and to increase the overall rate of production. Several options for dealing with the biogas generated were considered. The final design includes a standby flare

(for emergency use) and an on-site CHP, while the vast majority of biomethane produced will be exported for use in the heat and transport sectors.

8.4.12. I note that 3rd party submissions have raised concerns about the nature and extent of the alternatives considered and that due consideration of zoned industrial sites was not provided. In this regard the EIAR has concentrated on a variety of site types and the applicant states that this is informed by relevant policy and constraints relating to access, distance, sustainable transport of feedstock and output products, and availability of services. I consider that the applicant's assessment of options is reasonable given the provision of the Ireland Biomethane Strategy that the majority of these facilities will be provided in rural areas. I acknowledge that rural areas are not without residential and environmental sensitivities, but consider them to be a more favourable location given the agricultural related product involved and the possibility of a higher number of residential receptors in urban areas. However, I note that the consideration of all potential rural locations would be excessive, and I am satisfied that the various sites considered provide a reasonable approach.

8.4.13. Within that focus, the EIAR considers 4 potential locations, 2 sites (no.'s 1 & 2) on greenfield/unzoned lands and 2 (sites 3 & 4) on industrial zoned lands. I would concur with the concerns raised in relation to sites 3 and 4, which largely relate to proximity to feedstock, proximity to residential areas and associated noise, air, and human impacts. Site 3 also adjoins residential areas, does not have convenient access to the regional road network, and rates only moderately in relation to noise, air, landscape, soils, geology, hydrogeology, agronomy, ecology and human impacts. I would concur with the EIAR conclusion that Site 1 (the appeal site) is the most appropriate of the options considered. It has the most convenient access to the feedstock supply to minimise length of journey to the AD plant, is not constrained by site size, and is moderately distanced from sensitive residential receptors. I acknowledge that it rates only moderately in relation to landscape, land use, and topography but I am satisfied that these issues can be assessed further as part of the EIA process.

8.4.14. In addition to the issue of location, the EIAR has outlined the alternatives considered in relation to layouts and processes. I note that alternative landscape and layout options were discounted in favour of the current proposals, and that the levels of the proposed development have been designed to achieve an appropriate balance

between visual impact, ground water flooding and air control/dispersion. I also note that process configuration options were decided on the basis of a continuous feed system which promotes recycling and the maximisation of productivity.

8.4.15. Having regard to the above, I am satisfied that the EIAR includes an adequate examination of the reasonable alternatives to the proposed development.

8.5. Consideration of risks associated with major accidents and/or disasters

8.5.1. Article 3(2) of the 2014 EIA Directive includes a requirement that the expected effects derived from the vulnerability of the project to major accidents and/or disasters that are relevant to the project concerned are considered. There are no existing Seveso sites in the vicinity of the site.

8.5.2. I note that the appeal has questioned the potential to prevent hazards such as fire and explosion risks, gas leaks, contamination and public health risks in the event of an uncontrolled odour or emissions release. Other concerns have been raised about the design and layout of the proposed development and potential safety concerns, including structural failure of digesters and bund leakage to surface water outlets. The EIAR outlines that explosion and fire risk will be managed by primary, secondary and tertiary explosive protection that includes prevention of explosive atmosphere (e.g. ventilation), prevention of ignition (e.g. zones of prohibited mobile phone use) and reduction of consequences (e.g. PPE, evacuation procedures). In relation to gas hazards a number of preventative measures are specified including signage, detection devices, employee education and limited time within confined spaces. Noxious gasses include CO2, NH3, CH4 and H2S and exposure limits and assessment are defined in the EIAR.

8.5.3. Regarding the Seveso Directive, the EIAR states that the planned development will be licenced under the Industrial Emissions (IE) Directive; therefore, the site will conform with all appropriate legislation and will apply all risk reduction processes as specified within the relevant IE licence in order to avoid off-site impacts. Additionally, the Proposed Development will conform with all appropriate health and safety guidelines and legislation. I acknowledge under Note 19 of the notes to Schedule 1 of the COMAH Regulations that for the purpose of the regulations, upgraded biogas may be classified under entry 18 of Part 2 of this Schedule where it has been

processed in accordance with applicable standards for purified and upgraded biogas ensuring a quality equivalent to that of natural gas, including the content of Methane, and which has a maximum of 1% Oxygen. Entry 18 refers to Liquefied flammable gas and natural gas that sets a lower tier requirement threshold for P2 'flammable gas' of 10 tonnes. Total storage of biomethane on site at any one time will be equivalent to c. 3.72 tonnes as set out in Section 2.3.3 of the EIAR and this is below the qualifying quantity for application of the Control of Major Accident Hazards (COMAH) Regulations, which is 10 tonnes.

8.5.4. I note that the 2no. proposed primary digesters are equipped with a double membrane gas collection dome with a biogas storage capacity of 2,460 Nm^3. It is not specified in the EIAR if this is primary, secondary, or all digester tanks. I acknowledge that the EIAR details a maximum storage of 3.72 tonnes of flammable gas at full operation (i.e. in the provision of 2 no. primary digestion tanks and 1no. secondary digestion tank). The details of this calculation as they relate to biogas storage capacity of each tank are not provided.

8.5.5. In the absence of the applicant's assessment, I would note that the typical weight of biogas is approximately 1.15kg / cubic metre, which would likely vary depending on the exact mixture and atmospheric conditions. Using 1.15 kg/ cubic metre, the level of 2,460 cubic metres of gas storage provided in the 3 digestors domes would equate to a total of 8,487 kg or 8.5 tonnes, which would be below the 10-tonne threshold.

8.5.6. However, I would acknowledge that generalised assumptions have been made in this calculation. I also understand that the AD process is likely to collect a significantly smaller volume of gas in the secondary digestor, so the maximum volume of gas collected in the domes is likely to be less than the theoretical maximum of 8.5 tonnes. Finally, I note that the biogas would consist of approximately 60% methane, 35% carbon dioxide, and the remainder consisting of other components such as oxygen, nitrogen and hydrogen sulphide. The mixture would therefore consist of a significant proportion that is not relevant to the COMAH Regulations (i.e. carbon dioxide) and I understand that such situations would result in a reduced overall total of dangerous substances when calculating compliance with the relevant COMAH thresholds. Therefore, the factors outlined above would result in a total biogas capacity that is significantly below the 10-tonne threshold.

8.5.7. In conclusion, I acknowledge the applicant's contention that the project is below the qualifying quantity for application of the Control of Major Accident Hazards (COMAH) Regulations, and I would highlight the ultimate requirement in this regard to comply with regulatory regimes of the Health and Safety Authority. Therefore, I am satisfied that a suitable condition can be applied taking into account the salient points outlined above. Firstly, the condition should specify that the maximum quantities present on site at any one time shall not exceed the relevant thresholds of the COMAH Regulations. Secondly, the developer shall be required to submit information to *demonstrate* that the maximum quantities will not exceed the relevant thresholds, including details of the suitable operational controls to be implemented.

8.5.8. Otherwise, I note that, where relevant, each section of the EIAR outlines the expected effects deriving from vulnerability to risks of major accidents or disaster, including those relating to population and human health, which are discussed in the following sections of this report. The EIAR outlines the existing and proposed procedures and mitigation measures in this regard and does not identify significant residual risks. I am satisfied that this is a reasonable conclusion subject to the inclusion of conditions as outlined in the previous paragraph.

8.6. Assessment of the likely significant direct and indirect effects

8.6.1. The EIAR describes and assesses the direct and indirect significant effects of the project on the following factors; (a) biodiversity with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (b) population and human health; (c) land, soil and geology; (d) Hydrology and hydrogeology; (e) Air, Odour and Climate; (f) noise and vibration; (g) landscape and visual; (h) traffic and transport; (i) Archaeology and Cultural Heritage; (j) Material assets. It also considers the interactions between factors (a) to (j) and provides a schedule of mitigation measures.

8.6.2. A decommissioning phase for the project, has not been assessed due to the intended permanent nature of the development. Should the proposed buildings be demolished, further permission would be required, and it is assumed that the legislation, guidance and good practice at that time would be followed, and the effects are likely to be similar to the proposed construction effects.

8.7. **Biodiversity**

Issues Raised

8.7.1. Observers to the application and the appeal assert that insufficient and inadequate information is included with the application regarding biodiversity and a full assessment of impacts on European Sites have not been provided, including cumulative impacts. The appeal states that the precautionary principle has not been applied, insufficient survey work has been undertaken and impacts related to surface water flows during flood events are not fully understood in terms of impacts on the Tinhalla Stream, and subsequently the Upper River Suir SAC. A submission from An Taisce refers to the need to protect downstream water quality during construction and operation phases. The Planning Authority state that there would not be a significant impact on the SAC or Natura 2000 sites within the catchment of the site. Positive benefits of biobased fertilizer use are also highlighted, noting the reduction of hydraulic loading by c. 22,500 tonnes per annum that would minimise the likelihood of excess nutrients washing away.

Context

8.7.2. Chapter 5 of the EIAR addresses impacts on biodiversity and provides an Ecological Impact Assessment (EcIA) on the potential ecological impacts that may occur on terrestrial, avian and aquatic ecology, as a result of the proposed development. A detailed list of references providing guidance for this part of the assessment is provided in Section 5.1 and Appendix 13.1 of this chapter. The methodology for the assessment incorporated desk-based studies, identification of sensitive ecological sites and fieldwork, including habitat surveys during the flowering and growing period of mid-April, mammal survey, bat roost potential survey, reptiles, amphibians and bird surveys. Surveys were undertaken in February 2024 and April 2025. It is noted that an AA Screening and NIS report for the project was provided as a separate standalone document accompanying the application. Section 9 of my report assesses the proposed development in the context of the conservation objectives for designated European sites within the zone of influence of the project. As with every chapter of the EIAR, the criteria used in establishing the nature of the impact arising from the proposed development is set out.

8.7.3. Having regard to the limited and largely improved habitats within the main area of the Proposed Development site, the applicant considered that there were no seasonal constraints associated with the habitat assessment element of the field work. The timing of the survey was ideal for the identification of mammal tracks and signs. Follow up surveys were conducted in April 2025 to account for seasonal variation and possible changes to flora and fauna within the site. The revised survey took account of nesting birds at the site entrance, which was amended at FI stage.

Baseline

8.7.4. Habitats identified on site are provided in Table 5.6 of the EIAR. The site is stated by the applicant to be dominated by highly modified improved Agricultural Grassland (GA1). Some features of wetland were observed at the northeastern tip of the site, which was likely due to a preceding season of heavy rainfall. The overall ecological value of the grassland habitat within all fields is given as low. The hedgerows and treelines within and bordering the site are of a higher biodiversity value as they provide nesting sites for birds and form part of the ecological network that connect to the Lower River Suir SAC.

8.7.5. The Proposed Development site is within the Zone of Influence of three sites designated under the Natura 2000 network (SACs / SPAs). The closest of these is the Lower River Suir SAC, which is 1.3km north-east of the site. The hydrological connectivity between these areas is 1.9km, via the Tinhalla Stream, which runs along the eastern boundary of the site.

8.7.6. The Proposed Development site is also within 15km of nine sites designated as Natural Heritage Areas (NHAs and pNHAs). The closest of these is Tibberaghny Marshes pNHA and this is 1.6km north-west of the site, on the northern shores of the River Suir.

8.7.7. Within the Proposed Development site itself the dominant habitats are improved agricultural grasslands, watercourses (the Tinhalla Stream and its tributaries), hedgerows and treelines. The watercourses, treelines and hedgerows that occur along the perimeters of the site are important local ecological features - these areas provide important nesting areas and safe commuting corridors for local populations of birds and small mammals, including potentially bats and are of ‘Higher Value’.

They also provide ecological connectivity to the SAC. The Lower River Suir SAC is of International Importance.

8.7.8. No evidence of otter or badgers were found on site, however given the natural habitats that are present on the lands, the site may be of local importance to mammal species. No red status bird species were identified with amber status species such as house sparrow, Sand Marten, house marten, swallow, starling and song thrush identified. No amphibians, reptiles or invertebrates of note were identified.

8.7.9. The water status of the surrounding environment was identified, with the Tinhalla Stream being noted as 'moderate' and the Suir Estuary being identified as 'poor'. It is noted good status needs to be achieved by 2027. The site is within the Comeragh Groundwater Body which is noted as 'good' and 'not at risk'. Groundwater vulnerability of the site is noted as high to extreme.

Potential Effects

Table 8.2: Summary of Potential Effects

Area of Impact	Type of Potential Impact without Mitigation
Natura 2000 Sites	• Deterioration of water quality from ground and surface water during construction • Deterioration of water quality from ground and surface water during operation. Area of high groundwater vulnerability which extends to areas of extreme groundwater vulnerability with bedrock at the surface. • Noise pollution during operation and construction • Inappropriate land-spreading. Positive benefits of biobased fertiliser also considered. • Balanced nutrient availability of biobased fertiliser. • Slow released nutrients providing a lower risk of nutrient leaching to watercourses. • Pathogen and weed reduction • Enhanced soil health

	• Biobased fertiliser usage reduces the use of untreated manures and slurries by approximately 16,000 tonnes per annum. • Cumulative impacts with other proposed and existing developments considered, primarily at the adjoining piggery. As this facility is subject to Industrial Emissions licence monitoring requirements, no significant cumulative impacts are expected.
Natural Heritage Areas	• Impacts on Natural Heritage Areas are the same as Natura 2000 sites if mitigation not applied.
Impacts within the Site	<u>Construction</u> • Habitat loss and fragmentation including potential loss of hedgerows which are of local biodiversity value. • Potential impacts on birds and mammals as a result of works, noise, traffic and human activity. No significant effects anticipated on amphibians, reptiles and insects. • Pollution to surface and groundwater is as per potential impacts outlined in the Natura 2000 sites impact section. <u>Operation</u> • Impacts on Wildlife including otter due to reduction in water quality. Increased lighting could have a negative effect on local bats. • Pollution of surface water and ground water could occur without adequate structural integrity and associated mitigation. • Flood events could create additional pathways for pollutants to enter nearby watercourses.

	• Cumulative impacts could arise due to habitat loss but the new areas for biodiversity within the site and protection of existing hedgerows will provide ecological corridors and networks to reduce overall cumulative impacts.

Mitigation

8.7.10. The proposed development appears to largely address the potential primary impacts on habitats on and off the site via measures that are embedded in the overall design of the scheme and the construction methods. In order to avoid any reductions in water quality in the area surrounding the Proposed Development, a number of mitigation measures must be implemented and followed. These measures will protect the surface and ground water quality locally and will subsequently prevent significant effects upon the Lower River Suir SAC. Measures have also been suggested that will help to protect or enhance the local biodiversity of the surrounding area and to ensure the protection of local wildlife.

8.7.11. To address potential impacts of the project on local ecology, the applicant sets out various pre-construction, construction and operational measures to address the negative impacts. This includes protective barrier fencing at a minimum of 2m from boundaries to protect existing hedgerow features and construction mitigation measures to ensure run-off does not enter the Tinhalla Stream. Various measures would be employed to control surface water runoff, including bunding, spill kits, silt fences, interceptor trench and monitoring of silt fences. Impermeable membranes are also proposed to the attenuation area to avoid leakage to groundwater. Ecological monitoring of vegetation would be undertaken, including implementation of an invasive species management plan. Removal and timing of tree removal works would avoid the bird nesting season. Existing tree and hedge lines should be enhanced and maintained including increased native shrubs. Bat boxes to be appropriately managed and erected in suitable orientations. Land-spreading of biobased fertiliser to be done in accordance with Good Agricultural Practice Regulations.

Residual Effects

8.7.12. With the implementation of mitigation measures, including monitoring, residual effects of the project are not considered by the applicant to be significant. Any impacts on ecological features would be neutral and slight according to the applicant.

Direct and Indirect Effects Assessment

8.7.13. I have examined, analysed and evaluated chapter 5 of the EIAR, all of the associated documentation and submissions on file in respect of biodiversity. I am satisfied that the applicant's presented baseline environment, is comprehensive and that the key impacts in respect of likely effects on biodiversity, as a consequence of the development have been identified. Parties to the application have raised a number of issues in respect of biodiversity at various stages of the application and appeal process, which I address below:

- Adequacy of Surveys;
- Cumulative Impacts and impacts of land-spreading
- Surface water quality.

8.7.14. The appeal states that the surveys provided are inadequate and do not cover species related to the SAC including lamprey, salmon and otter. The survey details provide results from February 2024 and April 2025. Aquatic surveys were also carried out in March 2024. The NIS appropriately provides an analysis of the qualifying interests of the SAC, which includes the species listed above. There is therefore a presumption of these species in the catchment of the site, and I am satisfied that impacts in relation to the protection of these species is adequately covered in the NIS, which is addressed in Section 9 of my report. Flora and Fauna surveys in the two field survey periods undertaken by the applicant provide a clear picture in relation to existing habitats, bird species, bats, mammals and aquatic species to allow a full assessment of impact to be undertaken. I refer the Commission to the attached report by the Senior Ecologist Inspector of ACP, which confirms the survey methodology and baseline is appropriate.

8.7.15. The appeal claims mitigation measures proposed in the NIS are vague and do not provide details for accidental spill, increased nutrient loads, surface water run-off, or the long-term impacts of digestate storage and land spreading. Additionally, the appeal claims cumulative impacts with other agricultural and industrial developments have not been adequately assessed, including cumulative impact with an anaerobic

digestor facility 5km to the east in Portlaw. I have undertaken a full assessment of appropriate assessment requirements in section 9.0 of this report, however for the purposes of the Biodiversity chapter of the EIAR, the other points raised in the appeal are also valid and I address each in turn below.

8.7.16. In relation to mitigation measures that prevent impacts on surface water, the applicant provides a range of measures aimed at containing any accidental spillages on site including bunded areas, contained storage tanks, attenuation tanks with impermeable membrane and spill kit measures. The site is not prone to flooding as set out in the submitted flood risk assessment and therefore the likelihood of inundation and increased surface run off is low.

8.7.17. Mitigation also refers to the nutrient loads that would result from the use of biobased fertiliser in place of chemical fertiliser and I acknowledge there will be an overall net benefit to the use of biobased fertiliser in terms of nutrient loads and adherence to Good Agricultural practices that would already be in place with the existing use of untreated slurries and manures. The digestate is stored in sealed containers within a bunded area and a comprehensive emergency response protocol is outlined. I am satisfied adherence to this protocol can be ensured by way of condition on any grant of permission and accidental spillages can be appropriately managed within the site.

8.7.18. The protection of Tinhalla stream from extreme weather conditions and flood risk was considered in the hydrological assessment with design elements such as the attenuation pond and limiting discharge rates intended to protect Tinhalla Stream, which feeds into the River Suir, as well as the provision of an impermeable membrane beneath the attenuation pond to prevent leakage to existing groundwater. The submitted flood risk assessment confirms the site is not at risk of flooding.

8.7.19. In relation to hydrogeological details, borehole data and infiltration tests data was submitted by the applicant. This is assessed under the relevant Hydrology and Hydrogeology section of my report.

8.7.20. I consider land-spreading to be an indirect impact that does not form part of the application for consent in this instance and as detailed earlier in my report. The comparative benefits of the spread of biobased fertiliser versus chemical fertiliser is an overall net benefit in my opinion, and is accounted for in the overall appraisal of the proposal. Land-spreading at receiving farms will be managed by Good

Agricultural Practice Guidelines at individual farms and I consider this to be an appropriate mechanism to manage nutrient loads in the receiving locality.

8.7.21. The appeal claims there was inadequate assessment of light-spill to hedgerows and associated impacts. Section 5.13.5.4 of Chapter 5 of the applicant EIAR provides a range of mitigation measures to manage impacts on hedgerows including trimming, enhanced biodiversity provisions including bat boxes, bee banks and direction and type of lighting proposed in the subject development.

8.7.22. In relation to cumulative impacts, I consider the implementation of the mitigation measures contained in the submitted EcIA and NIS, will result in the current application having no cumulative impacts upon the Lower River Suir SAC site when considered in combination with other developments that are adequately screened for AA or where mitigation measures have been included as part of a Natura Impact Assessment. The applicant refers to the absence of the 'precautionary principle' in the assessment of the subject proposal, whereby if there is doubt in relation to the impacts of a proposal on a European Site, permission should be refused. While a full Appropriate Assessment is undertaken in this report separately, I am satisfied there is no doubt in relation to the impacts of the proposal on biodiversity, which can be adequately mitigated through the measures put forward in Chapter 5 of the EIAR.

Direct and indirect Effects Conclusion

8.7.23. I have considered all the information on file, including submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts predicted to arise in relation to biodiversity would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of biodiversity.

8.8. Population and Human Health

Issues Raised

8.8.1. Issues were raised in the course of the planning application by observers asserting insufficient and inadequate information is included with the application regarding the risk to human health arising from the proposed development. The Environment Section of the Planning Authority raised no objection to the proposed development

subject to conditions to manage construction activities, surface water and dust management. The Health and Safety Executive (HSE) recommended the implementation of mitigation measures set out in Section 6.7 of the EIAR, should permission be granted.

Context

8.8.2. Impacts of the project on population and human health are addressed in chapter 6 of the EIAR. The methodology for the assessment is described, as well as the study area, receiving environment and the sources referenced. The assessment is undertaken having regard to the requirements set out in government and industry guidelines for EIA. The assessment methodology includes site surveys, a desk-top study on human health and the population baseline environment, population sensitivity, and reference to planning policy. The approach undertaken to derive the significance of effects from the receptor value and the magnitude of impacts is outlined. Impacts on population, employment, community and human health are assessed.

Baseline

8.8.3. The assessment considers attributes and characteristics associated with local land uses, neighbouring facilities and services, transport, health and safety, demographics and human health. The baseline environment with respect to these factors is described throughout my report above, including section 2.

Potential Effects

Table 8.2: Summary of Potential Effects

Project Phase	**Type of Potential Impact without Mitigation – Direct, Indirect and Cumulative**
Do-Nothing Scenario	Bio-based fertiliser and biomethane processing facility would not be provided and there would be no impact on local population and employment, community, land use or human health. Do-Nothing scenario would also be considered sub-optimal in the context of the national and county targets

	for the adoption of renewable energy sources, and in the context of anthropogenic climate change. Furthermore, an opportunity to introduce a bio-based fertiliser, with reduced pathogen content into the local bioeconomy would be missed.
Construction	• Imperceptible impact on population of the area. • Positive, temporary impact in relation to employment creation. • Short-term, negative effect due to construction traffic, air quality and noise (dealt with in individual specific chapters of EIAR). • Negative, temporary impact associated with installation of connecting gas pipeline, which is subject to a separate design and consenting process.
Operation	• No material impact on local population. Likely to be positive in long term in terms of employment and economic benefit. • Significant employment benefits, both direct and indirect. • Slight impact on community in relation to mobility from a minor increase in traffic on the road network. • Potential impacts on human health off site from air emissions, odour treatment systems. Expected to be within national and EU limits. • Potential on site human health risk as a result of vermin. • Human health on site may be impacted by fugitive emissions, hazardous substances, electrical

	hazards, gas hazards, explosion and fire risk and major accidents.
Cumulative	Cumulative impacts could arise in relation to air odour and climate, noise and vibration. Given the nature and scale of this development and mitigation proposed, any potential cumulative effects of this Proposed Development are considered by the applicant to be minor.

Mitigation

8.8.11. Mitigation measures are set out in relation to each of the potential effects of the project. Measures are quite extensive and, in particular, include those proposed under noise and vibration, materials assets (traffic) and air quality, as set out in relation to the project CEMP to prevent nuisance and undue impacts to human health, such as dust and noise monitoring, controlling emissions to appropriate levels through the use of standard management measures and controlling construction hours and delivery times / haul routes.

8.8.12. Population, employment and community impacts are expected to have net positive effects including job creation and therefore no mitigation measures are proposed in this regard.

8.8.13. In relation to the gas pipeline, backfilling of the pipe trench and appropriate disposal of asphalt waste are considered appropriate to mitigate any adverse impacts.

8.8.14. Furthermore, the imposition of limits by conditions in any grant of permission would further reinforce the preservation of human health.

8.8.15. At operational stage, mitigation is set out for pest control, fugitive emissions containment including an automatic flare system to burn biogas during CHP downtime, gas tight digestate storage tanks and measuring devices are proposed. Mitigation is set out in relation to hazardous substances, gas, mechanical and fire/explosive hazards, and management of emergency situations.

Residual Effects

8.8.16. With the implementation of mitigation measures, including monitoring, residual effects of the project are set out in section 6.9 of the EIAR. These measures provide that neutral to positive, imperceptible to slight and long-term residual effects on human health or population will arise. It is acknowledged that the residual effects of the subject proposal also interact with other aspects of the environment including air, odour and climate, and noise and vibration, which are discussed in individual chapters.

Direct and Indirect Effects Assessment

8.8.17. Mitigation measures for the construction stage have included an outline Construction Environmental Management Plan (CEMP) and post-mitigation impacts to population and human health are predicted to be 'negligible'. Operational mitigation measures include various monitoring and control systems to reduce and control hazards; odour controls/treatment; digester and digestate storage vessels to be integrity-tested and fitted with airtight covers; and concrete bunding to contain spillage, after which impacts are predicted as being 'positive, slight to moderate, long-term'. The EIAR concludes that no residual or likely significant negative impacts for population and human health are predicted and that the proposal has the potential to result in overall net positive impacts.

8.8.18. The appeal also raises concern about potential noise and air quality impacts, fire hazards, traffic impact, landscape and visual, and potential accidents and gaseous emissions.

8.8.19. I would concur with the submitted application documents that the proposal has limited potential to impact on the population trends in the area. I would also accept that the construction phase has the potential to negatively impact on the amenity of surrounding residents through traffic, noise and other disturbances, but I am satisfied that this would be a temporary effect that would be acceptable as part of any large-scale project, particularly given that housing density is very low in the immediate environs. This will be suitably mitigated through a CEMP. There will also be positive effects during the construction and operational stage through employment generation and economic boost.

8.8.20. Regarding potential hazards and accidents, the EIAR acknowledges the need to comply with the Safety Health and Welfare at Work Act 2005. The EIAR also

recognises the hazards associated with the operation of a biogas plant, the process of AD and biogas production. Appropriate signage, management and on-site training are recommended to minimise the risk of human health and emergency situation impacts.

8.8.21. I note that the other potential environmental interactions with population and human health are largely dealt with in other chapters of the EIAR (i.e. landscape and visual, traffic and transport, noise and vibration, air quality). Therefore, consistent with the EIAR approach, I propose to address these impacts in other sections of my assessment.

Direct and Indirect Effects Conclusion

8.8.22. I have considered all the information on file, including submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts predicted to arise in relation to population and human health would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of population and human health.

8.9. Land, Soils & Geology

Issues Raised

8.9.1. No specific issues in relation to soil and geology were raised in the appeal or observations. The nature of the proposed land use at this rural location was raised as an issue.

Context

8.9.2. Chapter 7 of the EIAR addresses land, soils and geology, with the applicant initially setting out the legislative and policy context for the assessment. This section of the EIAR was supported by on-site investigations, and soakaway testing that was undertaken at initial application stage, with further testing carried out at further information stage to cover the eastern and northeastern sections of the site. Site walkover consisted of verifying desktop findings including drainage patterns, exposures, drainage infrastructure, flora and fauna identification, and identifying of poached ground. The applicant refers to a desktop assessment using a variety of

maps and datasets including from the Geological Survey of Ireland (GSI) and the EPA.

8.9.3. Given the availability of site investigations survey results for the site, the mapped findings revealing soil and geology comparisons for the area and the nature and scale of the subject proposals, the provision of detailed on site surveying does not present substantive limitations with respect to an understanding of soil and geology conditions and the impact of the development on same.

Baseline

8.9.4. The use of the site is agricultural and has been so historically. No illegal waste activities were recorded within the 2km study area and the licenced Integrated pollution prevention control premises of the adjacent piggery is noted.

8.9.5. The site is located in Landscape Unit 5 – Foothills, and adjacent to Landscape Unit 7 – Farmed lowlands, as specified in the Landscape Character Assessment of the CDP. Various receptors are identified including designated sites (Lower River Suir SAC), Geological Heritage (none within 2km study area), and Drift Geology ('mountain rounded'). The EIAR review of Second Edition General soil map of Ireland outlines that the surrounding area consists of Acid Brown Earths (75%) with associated soils including Gleys (15%) and Brown Podzolics (10%). Parent material is noted to consist of Ordovician – Silurian – Cambrian shale till. A section of the northeastern portion of the site is noted as 'Bedrock outcrop or subcrop'.

8.9.6. The formation underlying the Proposed Development is known as the Ballindysert Formation. The 1:100,000 Bedrock Solid Geology Map indicates that the bedrock type in this formation is dark grey slate and greywackle. The lithological description of the formation is "characterised by dark grey slates". There are 9 groundwater wells within the 2km study area at depths of 1.2 to 9 meters below ground level. There are no karstic features located within the proposed boundaries of the Proposed Development or within the immediate vicinity of the site. There are no karstic features, or quarries located within the 2km study area. Site is in a moderate to high radon area and relevant buildings are recommended to be fitted with radon barriers.

8.9.7. In terms of geology, the EIAR states that the GSI soil maps show that the site overlies mineral poorly drained (mainly acidic) (AminPD) derived mainly from non-

calcareous parent materials. The soil groups associated with this category are surface water gleys and ground water gleys. A bedrock outcrop is noted at the northern extent of the site. A number of bedrock areas in the surrounding area are also noted and are classified as belonging to soils groups of Lithosols, Regosols, Podzols (Peaty) and Peats. The trial pit at the centre of the site reached bedrock at 1.6m bgl. Given the range of groundwater vulnerabilities associated with the northeast portion of the Proposed Development which range from High to Extreme (Rock near or at surface or karst), it was recommended that additional Trial Pit excavations are conducted prior to the commencement of the construction phase. These additional trial pits were undertaken at FI stage of the application process, where groundwater was encountered at 2.1m and 3.0m in Trial Pits SA31 and SA32, with possible bedrock encountered at various depths of 1.8m to 3.7m in trial pits TP-01 to TP04, which was at OD 89-90. With the maximum depth of 1.75m from top of attenuation pond to the bottom of the attenuation pond (OD 94.00m), sufficient soil depths are available to avoid impacts on groundwater. I refer the Commission to the attached report (Appendix 5) from the ACP Scientist in relation to ground investigations undertaken and which is further discussed in relation to Hydrology and Hydrogeology.

Potential Effects

Table 8.3: Summary of Potential Effects

Project Phase	**Type of Potential Impact without Mitigation – Direct, Indirect and Cumulative**
Do-Nothing Scenario	• No impact on local soil or geology. Current rates of surface water percolation and run off would continue. • Do-Nothing scenario would also be considered sub-optimal in the context of the national and county targets for the adoption of renewable energy sources, and in the context of anthropogenic climate change. Furthermore, an opportunity to introduce treat agricultural wastes locally and produce a bio-based fertiliser, with

	reduced pathogen content into the local bioeconomy would be missed.
Construction	• Impact on topography of site to provide level base for the proposed development. • Removal and stripping of topsoil. • Exposure of bedrock during site excavations and associated groundwater vulnerability. • Negative, slight, temporary impact associated with installation of connecting gas pipeline, which is subject to separate design and consenting process. Polycyclic Aromatic Hydrocarbons (PAHs) produced from asphalt removal. • Subsoil and bedrock contamination in bad weather. • Hydrocarbon contamination. • Risk to underlying bedrock aquifer (increased vulnerability) due to a reduction in the overlying burden. Installation of attenuation pond may increase flora and fauna (including burrowing species which enhance soil quality) and is overall negative-neutral and permanent effect. • Contaminated soils – not significant due to site investigation results and re-use of excavated material on site.
Operation	• Risk of hydrocarbon contamination with delivery of feedstocks by HGV. • Leaks of nutrient laden liquids and/or solids could contaminate groundwater and bedrock aquifers. • Land-spreading of digestate has the potential to have a positive, slight and long-term effect in comparison to chemical fertiliser. • Attenuation pond if inappropriately constructed may pose a risk to underlying bedrock aquifer, and

	as such the attenuation pond will be lined with impermeable membrane.
Cumulative	• As excavated soils will be repurposed for landscaping functions at the subject site, impacts on other sites are not expected.

Mitigation

8.9.8. Section 7.6 of the EIAR outlines mitigation measures for the construction and operation phases to include the following:

- Adherence to CEMP mitigation measures
- Adherence to conditions of Industrial emissions licence including waste management, accident prevention, storage and transfer of substances and resource use.

8.9.9. CEMP highlights mitigation at excavation stage including relationship to Tinhalla Stream, soil compaction methodologies, management of run off including silt fencing along eastern extents to limit accidental discharge to the Tinhalla Stream. Management of concrete, construction contaminants and contaminated materials and soils are all set out.

8.9.10. Embedded design elements of the project include reuse of Materials on site where this is possible. During the operation stage a monitoring and waste management plan will provide protection to soils and geology. Mitigation of uncontrolled releases and spillages including bunding, bund kits and secondary containment units are proposed. All stormwater discharge is to be via the attenuation pond, with flow through a petrol interceptor. The Digestion Tanks and Digestate Storage tanks will be located within a bunded location to the east of the site, this will act as a secondary containment in the event of loss of tank contents. This is raised as a potential impact on waterbodies by the appellant and is addressed in the hydrology section of this report.

8.9.11. The EIAR states that the construction mitigation measures will similarly be applied to the de-commissioning phase to ensure that all such impacts are avoided.

Decommissioning is noted as being under a separate process and is not included in this proposal. It also states that no cumulative impacts exist for the on-site receptors given that impacts will be negligible post mitigation, and that the residual effects of the development will be negligible.

Residual Effects

8.9.12. With the implementation of mitigation measures, including embedded and additional measures, residual effects of the project are set out in Table 7.13 of the EIAR. These provide that no significant residual effects on land soils and geology will arise.

Direct and Indirect Effects Assessment

8.9.13. I have examined, analysed and evaluated chapter 7 of the EIAR, all of the associated documentation and submissions on file in respect of land, soil and geology. I am satisfied that the applicant's presented baseline environment is reasonably comprehensive and that the key impacts in respect of likely effects on land, soil and geology, as a consequence of the development have been identified. The altered use of the land is not considered to be a significant effect of the project.

8.9.14. I acknowledge that the loss of soil and bedrock is an inevitable consequence of development, and I consider that the significant retention and landscaping of soil on site will assist in mitigating these impacts. Furthermore, I consider that the loss of any geological features will not be significant and the EIAR includes adequate measures to mitigate against potential bedrock/geological impacts during construction and operation.

Direct and Indirect Effects Conclusion

8.9.15. In relation to the potential to impact on land, soils and geology, I am satisfied that these impacts would be mitigated by a suite of appropriate construction phase management measures, including pre-construction / excavation surveying for additional geological features and implementation of measures within the preliminary CEMP, as well as the mitigation listed in Table 7.13 of the EIAR, resulting in no significant residual effects for land, soils and geology.

8.10. Hydrology & Hydrogeology

Issues Raised

8.10.1. This chapter of the EIAR focuses on the water environment (surface water and groundwater) and its relationship with the underlying geological environment. It is informed by a review of the development proposal, site-specific reports, legislation and guidance. Site investigations also informed the study, comprising 4 trial pits (part of the Flood Risk Assessment and stormwater design works) and field survey works (part of hydrogeological risk assessment works). Additional trial pits were dug at further information stage to include soakaways, dynamic probing, boreholes and trial pits. The additional trial pits were dug in the eastern and northeastern sections of the site where the attenuation pond is proposed, which is adjacent to the Tinhalla Stream.

8.10.2. Issues raised in the appeal and observation on the re-advertised NIS included that Hydrology, hydrogeology and risk of water contamination is not adequately assessed. This is particularly relevant in relation to digestate storage and potential leachate runoff via surface water and the connection of the Tinhalla Stream to the Lower River Suir SAC. The appeal claims the EIAR lacks hydraulic modelling and the 1-in-100 year storm event is not modelled.

8.10.3. An Taisce and the third-party appellant noted that the subject site is located adjacent to ‘Tinhalla_10’ waterbody, which is designated as moderate water quality. This water body is hydrologically connected to the Upper Suir Estuary transitional waterbody which is designated ‘bad’ water quality status. Good status requirements by 2027 under the Water Framework Directive are noted and the proposal should be assessed against Article 4 to determine if the proposal will lead to a deterioration in water quality.

8.10.4. ‘Tinhalla_10’ is also connected to the Lower River Suir SAC and AA Screening and NIS should take account of possible construction and operational impacts to ensure no significant impacts, individually or cumulatively, on the site’s conservation objectives.

8.10.5. The Planning Authority note the EIAR contains a detailed schedule of mitigation measures during the construction and operation phase of the proposed development to ensure maximum protection of groundwater and surface water receptors.

Context

8.10.6. Impacts of the project on water are addressed in Chapter 8 of the EIAR. The legislative and policy context for the assessment is initially set out, followed by the methodology for the assessment, including a qualitative assessment setting out the baseline conditions. The approach undertaken to derive the significance of effects from the receptor value and the magnitude of impacts is outlined. The assessment relies on results from trial pit excavation, BRE Digest 365 percolation/soakaway testing and a site walkover to assess drainage patterns, exposures, infrastructure and wet ground. I do not consider there to be any limitation of the assessment, given the test locations and the nature of the subject proposals.

Baseline

8.10.7. The topographical and geological environment is set out, and as defined under Chapter 7. In terms of hydrology, the site is within the South Eastern River Basin District (SERBD) and within the River Suir Catchment (Suir_SC_140 sub-catchment). The Suir is considered a main hydrological feature in the wider vicinity of the proposed development with a number of significant tributaries, including Tinhalla, at the eastern permitter of the site. The groundwater vulnerability ranges in classification from “Moderate” to “High” and “Extreme” from west to east across the site according to the GSI map viewer. The trial pit excavations have revealed at least 1m of soil/subsoil cover exists, throughout the entire site, and the groundwater table is adjudged to be >1m below ground level, indicating the development location is generally acceptable under the R1 and R3 vulnerability ratings. I note these vulnerability ratings do not specifically apply to anaerobic digestor facilities and are more applicable to principles of groundwater vulnerability during land spreading, however they do give an indicator of vulnerability levels in the absence of a more appropriate mechanism. Potential impacts on designated sites are noted as being addressed in the NIS.

8.10.8. The proposed Development is classified as Highly Vulnerable Development by the Planning System and Flood Risk Management Guidelines and would be best suited to Flood Zone C. Based on evidence provided from the aforementioned sources the development site is located in within Flood Zone C.

8.10.9. Under the Water Framework Directive (WFD) the Tinhalla_010 river has a ‘moderate’ WFD status and is ‘under review’ in accordance with meeting WFD objectives. The

applicant undertook on site review of the water status given the lack of information on the EPA catchments website. The survey results returned good-moderate WFD status and slightly polluted to unpolluted at 2 separate monitoring points. According to the Water Framework Directive (WFD) the receiving water body of the Tinhalla_010 stream: the Upper Suir Estuary River has a 'Bad' WFD status and is 'At risk' of not achieving WFD objectives. Figure 8-4 of the EIAR illustrates the locations of these watercourses relative to the application site.

8.10.10. The closest GSI mapped well is located approximately 0.36km to the northwest of the site. The Comeragh Groundwater Body and the Tinhalla stream/ River Suir and downstream receptors Lower River Suir SAC are identified as the main waterbody receptors from the proposed development

Potential Effects

Table 8.4: Summary of Potential Effects

Project Phase	**Type of Potential Impact without Mitigation – Direct, Indirect and Cumulative**
Do-Nothing Scenario	• No impact on local water systems. Current rates of surface water run off would continue. Groundwater status would also remain unchanged.
Construction	• Potential for most significant impact on water environment. • Elevated silt and suspended solids from soil stockpiling that could migrate to water sources. • Accidental spillage of harmful substances such as chemicals, hydrocarbons or cement. • Increased groundwater vulnerability due to soil stripping. • Given the maximum depths of excavations required to level the site are anticipated at 6.3m bgl (4.0m in the case of the area of the attenuation

	pond), interaction with bedrock is possible but not expected. Predicted effects will have negative, significant, long-term effect on hydrogeology. • Gas network pipeline installation including excavation work could impact groundwater vulnerability. • Conversion of permeable soils to hard standing areas could increase the risk of flooding to the area. • Contaminated soils – not significant due to site investigation results and re-use of excavated material on site.
Operation	• Contaminated run off from impermeable areas such as hydrocarbons, heavy metals and sodium chloride from de-icing during summer months. • Foul water untreated leakage risk. • Flood events that would create additional pathways to water sources. • Conversion of permeable soils to hard standing areas could increase the risk of flooding to the area. • Leakage or spillage of biobased fertiliser or feedstocks via vehicle movements or from feed line or tank failure could have an impact on water quality and aquatic life. • Firewater in the event of a fire incident. • Uncontrolled release of discharge could impact water quality. No discharge of process water is

	proposed from the development and will instead be used. • Inappropriate land spreading in the absence of mitigation measures would result in negative, significant, temporary effects on the water quality of the Tinhalla stream, the River Suir and further downstream receptors such as the Lower River Suir SAC. Positive impacts of biobased fertiliser instead of chemical fertiliser are also considered. • Attenuation pond if inappropriately constructed may expose underlying bedrock and recue the overburden between the development and underlying bedrock aquifer.
Cumulative	• Hydrology interacts with land, soil and geology and with biodiversity and subject to mitigation, potential hazards will be managed. • Considering the level of proposed surface sealing (paving, buildings etc.) the proposal has the potential to significantly contribute to cumulative hydrological response to rainfall. Subject to mitigation, no significant cumulative adverse impact may arise.

Mitigation

8.10.11. Embedded mitigation measures forming part of the overall development are initially set out in relation to the potential effects of the project on water. Measures are quite extensive and include those proposed in the project CEMP to prevent release of hydrocarbons, sediment and other potential pollutants to water, as well as maintaining of the drainage regime. These measures would be guided by site investigations for the application site, as well as best practice measures and guidance that would be adhered to for various activities and in the movement of

materials. The efficacy of such measures, including control of surface water runoff, monitoring of environmental conditions and fuel storage, all managed as part of a final CEMP, are well established in practice. During the operation phase maintenance and management measures for development infrastructure and facilities would be undertaken to address impacts to water, including undertaking and implementing SUDS and attenuation measures and monitoring. Uncontrolled releases and spillages will be managed in accordance with an Industrial Emissions Licence including bunds and storage tank quality. Fire and resultant firewater are designed into the capacity of the site.

Residual Effects

8.10.12. With the implementation of mitigation measures, residual effects of the project are set out in Tables 8.21 and 8.22 of the EIAR. These provide that no significant residual effects on water will arise and that there would be some benefits to surface land spreading of digestate that would reduce nitrates.

Direct and Indirect Effects Assessment

8.10.13. I have examined, analysed and evaluated chapter 8 of the EIAR, all of the associated documentation and submissions on file in respect of water, hydrology and hydrogeology. I am satisfied that the applicant's presented baseline environment is reasonably comprehensive and that the key impacts in respect of likely effects on water, as a consequence of the development have been identified. Parties to the application have raised a number of issues in respect of water which I address below.

- Sedimentation release and pollutant control during emergency situations;
- Surface water management and lack of hydraulic modelling;
- Emergency planning and flood events

8.10.14. Chapter 6 of the EIAR considers the effects deriving from the vulnerability of the development to risks of major accidents or disasters. It states that the risk of earthquakes, fire, tidal or weather events is low, and that flood risk has been assessed. With regard to accidents, it is stated that the development will be constructed in accordance with relevant guidance and/or regulations, and that the operational activity will be in accordance with an Environment Health and Safety

Management Plan. Vulnerability to major accidents or disasters is therefore considered to be low.

8.10.15. In relation to the potential for excess sediment and pollutants to enter receiving waters during the construction phase, I am satisfied that these potential impacts would be mitigated by a suite of appropriate construction phase management measures, including the implementation of measures within the CEMP and the various stated good construction practice measures, resulting in no significant residual effects for water.

8.10.16. The project would feature an array of surface water management measures, including SUDS, which would restrict surface water discharge from the site to greenfield runoff rates, with fuel interceptors installed to remove hydrocarbons.

8.10.17. As also addressed in the following section on Appropriate Assessment, surface water contamination, a site-specific hydrological assessment, accidental spillages mitigation requirements and details of specific species (otter, lamprey, Atlantic Salmon) are all provided in the NIS.

8.10.18. The protection of Tinhalla stream from extreme weather conditions and flood risk was considered in the hydrological assessment with design elements such as the attenuation pond and limiting discharge rates are intended to protect this waterbody. The submitted flood risk assessment confirms the site is not at risk of flooding.

8.10.19. In relation to hydrogeological details, borehole data and infiltration tests data was all provided in the application documentation and at further information stage. This is supported by an additional technical response provided with the appeal response that confirms groundwater vulnerability can be appropriately managed through mitigation. Although monitoring is proposed, I do not consider this a specific mitigation measure and instead an ongoing good practice compliance method to ensure relevant levels of water contamination are not breached and water quality status can reach ‘good’ levels. A water framework impact assessment is provided later in my report and in the attached appendix. I also refer to Section 2.2 of the attached ACP Scientist’s report at Appendix 5 that relates to Hydrology and Hydrogeology investigations, with a conclusion that the site has been appropriately

assessed in this regard and appropriate soil depths are available to implement the proposal without impacts on groundwater.

8.10.20. The submissions on the file also highlight general water quality challenges and obligations, as well as the potential impacts associated with intensifying agricultural activity and land spreading (which I have previously advised to be outside the scope of this assessment).

8.10.21. I acknowledge the sensitivities and interactions of surface water and groundwater activity in this region, and the associated concerns raised by the appeal. However, I consider that the EIAR information, including the geophysical survey completed, constitutes an acceptable level of investigation and prediction of bedrock below the site and the potential impacts of the project on the hydrogeological environment. This would be followed by further pre-construction ground investigations to inform detailed foundation design and to ensure the integrity of the bund design. I would accept that the requirements for further ground investigation and detailed design contain an inherent potential for the identification of further impacts. However, I would not consider this to be an uncommon feature of the construction stage, and I consider that such further investigation/monitoring is an acceptable construction mitigation measure which could be further controlled through the agreement of details by condition. Groundwater levels are relevant in the context of the proposed attenuation pond and I note the trial pits in the eastern and north eastern sections of the site identify groundwater at approximately 2.1m-3.0m below ground level, which is noted at a level of approximately OD 90.4m. Existing ground levels in the area of the proposed attenuation pond are given as OD 93.5-95.5m, and with a maximum excavation of 4.0m bgl at the wetland to the northeast, adequate ground depth is provided to avoid impacts on groundwater. Appropriate conditions in relation to monitoring the impact on groundwater during site clearance and excavation works can be incorporated to ensure impacts are minimised. Accordingly, I am satisfied that the EIAR presents an acceptable level of certainty regarding hydrogeological impacts and that any residual impact risks could be acceptably managed.

8.10.22. I acknowledge that the construction stage has the potential for impacts on surface water and groundwater due to construction materials/pollutants, soil disturbance/removal, construction run-off, and impacts on groundwater levels/flows.

However, the EIAR includes a wide range of construction-stage mitigation measures, including a Construction and Environmental Management Plan (CEMP) addressing construction site run-off, water pollution prevention controls, and water quality monitoring and management, and I am satisfied that these measures will satisfactorily address the identified risks.

8.10.23. I also acknowledge the potential operational stage effects emanating from sources including effluent, digestate, feedstock, and other hazardous material. However, the proposed project is based on a self-contained system whereby potential water pollutants will be controlled in accordance with the mitigation measures outlined in Tables 8.21 and 8.22 of the EIAR. On this basis, the only potential hydrological connections will be via the proposed attenuation pond that will filter and discharge to the Tinhalla Stream. Bunding arrangements for the storage of digestate are in line with Eurocode standards as set out in the attached report from the ACP scientist at Appendix 5 of this report, which I am in agreement with. I consider the provision of a bunded area in compliance with Eurocode 2 will eliminate the risk of contamination from this area seeping directly into groundwaters.

8.10.24. Regarding the infiltration area, I note that it has been included to accommodate overflow in the incidence of a 1 in 100-year storm event with a maximum storage capacity of 1,151.8m³. Max flow from the pond will be 17.8l/s which is less than greenfield run off. Accordingly, given that water infiltration will only occur in storm events and will be adequately treated, I am satisfied that any potential impacts as a result of surface water infiltration can be appropriately mitigated.

Direct and Indirect Effects Conclusion

8.10.25. I am satisfied that the impacts that are predicted to arise in relation to water during the construction and operational phases are acceptable having regard to the characteristics of the existing hydrological and hydrogeological regime. I have considered all the information on file, including submissions received, the third-party appeal and the information contained in the EIAR, further information submitted, and detailed technical response to the appeal. Having regard to the above, I am satisfied that impacts predicted to arise in relation to water would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions. I refer the Commission to the attached

report at Appendix 5 for supporting assessment of these issues. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of water.

8.11. **Air Quality, Odour & Climate**

Issues Raised

8.11.1. The appeal and observations on the revised NIS, which includes a response to the applicant's response to the appeal, raises a number of concerns in relation to the air and odour assessment undertaken by the applicant. The appeal submits that the impact assessment needs to consider how much methane will be emitted from digestate discharged as well as from other features of the plant including the flare stack and that worst-case scenarios have not been adequately assessed such as operational failures and weather anomalies.

8.11.2. The appeal states the air quality and odour impact assessment does not include adequate data on ammonia and hydrogen sulphide emissions and the odour assessment itself is not sufficient.

8.11.3. The appeal also submits that three air changes per hour should be implemented instead of two, as per Technical Note 35, and there is potential for significant odour from the proposed facility that will have a throughput of 90,000 tonnes of feedstock per annum. Examples provided of odour emissions from similar facilities, including at a nearby facility at Portlaw. Odour management, complaints and recourse procedures required.

Context

8.11.4. Chapter 9 of the EIAR includes an Air, Odour and Climate assessment of the potential impacts from the emissions on the nearest residential properties (41no. receptors) and commercial receptors (14no. receptors). 3no. designated European sites were also identified as sensitive receptors. The study area for this assessment was 250m from the Proposed Development boundary and/or within 50m of the roads used by construction vehicles on the public road up to 250m from the site entrance. I am satisfied that use of existing air quality information based on similar locations sourced from EPA data to allow for modelling of future scenarios would allow for the impacts of the project on air quality to be predicted in a reasonable manner. A

dispersion modelling assessment is included to predict the impact and allow for comparison to an appropriate odour annoyance criterion and the relevant ambient air quality standards outlined in the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011) and the EPA Air Dispersion Modelling Guidance Note (AG4), (EPA, 2020). A detailed Dispersion Modelling Assessment (AERMOD) is also used to predict the emission levels. Exposure criteria for the anaerobic digestor proposed is perceived to be medium to high offensiveness and therefore the exposure criteria is classified as worst case at 1.5OUE/m³.

8.11.5. Additional Air and Odour Impact Assessment details were provided in the applicant's response to the appeal, which reiterated the findings of the original assessment.

Baseline

8.11.6. The baseline environment is described based on air quality details from the EPA and weather conditions from Met Éireann. Westerly to south westerly prevailing winds are noted. Annual mean concentrations of particulate matter, nitrogen oxide and nitrogen dioxide in locations such as Birr and Emo Court during 2022 are detailed in Table 9.12 of the EIAR. Potential receptors in the immediate area are identified, with 41no. residential receptors and 14 commercial/education/religious/community receptors. Greenhouse gas emissions from the project are expected to reduce as referenced in the EIAR. Section 9.3.4 of the EIAR sets out that wind speeds are currently within tenable conditions, 3m/s at the nearest weather station in Fermoy which is considered representative of wind speeds at the site and the immediate environs, and in general they are comparable to the wind speed of the undisturbed flow for the direction considered, which is 10m/s for significant dust incidences to displace loose material from storage piles.

Potential Effects

Table 8.5: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	No potential change in air quality, climate or microclimate would arise.

Construction	Release of particulate matter during demolition and construction works, including via vehicle movements and earthworks. Increased release of pollutants, including greenhouse gases from plant and machinery. No sensitive receptors within 50m of the site. Construction traffic and embodied energy of construction materials are likely to be a possible cause of greenhouse gas emissions because of construction related to the Proposed Development.
Operation	The main source of emissions from the proposed site have been confirmed as: • Reception Hall • Solid Digestate Storage Building • Liquid Feed Tanks • Pasteurisation Tanks For the operational phase, the EIAR predicts the following potential impacts: • Potential emissions include nitrogen oxides (NO2), sulphur dioxide (SO2), non-methane volatile organic compounds (VOCS), carbon monoxide (CO) and particulates, and indicate that maximum short-term and annual mean ambient ground level concentrations (GLCs) are below the relevant air-quality standards. • Maximum odour emissions from the feedstock stack at the nearest residential receptor are well below target values. • The predicted nitrogen deposition rates at the Lower River Suir SAC are less than 1% of the relevant critical load and at other designated sites assessed. Therefore, there will be no significant impacts on designated sites or sensitive habitats.

	• Annual mean nitrogen oxide and sulphur dioxide concentrations at all designated sites will also be below the relevant limit values for the protection of vegetation. • The limited level of vehicle movements associated with the development will not result in a significant air quality impact. Carbon monoxide (CO) nitrogen oxides (as NO_2) and odour could potentially be omitted during the operational phase.
Cumulative	Potential for impact associated with other developments that may occur within 250m of the site. Due to proposed mitigation measures, cumulative impacts during construction are short term and not significant. The pig farm in the vicinity of the site is noted and feedstock from this source will be transported directly to the proposed development. Cumulative impacts of air and odour are included in the air modelling undertaken.

Mitigation

8.11.9. Mitigation measures are set out in table 9.29 and 9.30 of the EIAR to minimise dust emissions, manage the release of fumes, odour emissions and air emissions, including the provision of a Construction Environmental Management Plan (CEMP), monitoring, speed restrictions to manage construction traffic on access roads and an odour treatment system. Other projects within 250m of the site would need to incorporate their own dust management and minimisation measures, and any potential cumulative impacts arising would be short term. Traffic volumes for the operational phase of the development have been modelled and significant impacts are not envisaged for air quality, primarily as the expected resultant air pollutant concentrations would be in compliance with the respective air quality standards.

8.11.10. Emissions from potential sources will pass through an odour treatment system. The total odour emissions from the Odour Treatment System are based on the maximum odour concentration from the system, as well as the total volume of air passing through the system, as summarised below:

- The maximum odour concentration from the Odour Treatment System is 1,000ou/m3.
- The Reception Hall has a volume of approx. 19,000m3 and the Solid Digestate Storage building has a volume of approx. 8,000m3, which corresponds to a total volume of 27,000m3.
- The ventilation and Odour Treatment System will be designed to achieve a minimum 2no. air changes per hour which corresponds to a flowrate of 54,000m3 /hour, providing adequate air changes in accordance with BAT.
- The Odour Treatment System will be designed to treat 60,000-70,000m3 /hour providing an overcapacity of approx. 10-12% and an odour destruction efficiency of 95-99.5%

Residual Effects

8.11.11. With the implementation of mitigation measures, including the embedded and additional measures, residual effects of the project on air quality and climate are set out in section 9.8 of the EIAR. During the construction phase, the overall impact following mitigation is considered to be negative, imperceptible to moderate, and temporary. During the operational phase, there is a slight positive long term impact at national scale in terms of climate due to the development being self-reliant and giving the grid an alternative to conventional fossil fuels. The overall impact anticipated by the operational phase of the project following the implementation of suitable mitigation measures is considered to be neutral to negative, imperceptible to slight, and temporary to long term.

Direct and Indirect Effects Assessment

8.11.12. I have examined, analysed and evaluated Chapter 9 of the EIAR, all of the associated documentation and submissions on file in respect of air, odour and climate, including the applicant's response to the third-party appeal, and the third party observations on the re-advertised NIS. I am satisfied that the applicant's presented baseline environment is comprehensive, and that the key impacts in respect of likely effects on air quality, odour impacts and climate, as a consequence of the development have been identified.

8.11.13. In relation to the potential to impact on air quality, as would be expected, there is potential for dust emissions to occur from earthworks, construction works and vehicular movements during the construction phase to sensitive receptors and the atmosphere in the vicinity. I am satisfied that such impacts would be mitigated by a suite of appropriate construction phase management measures, including implementation of a dust management plan as part of the final project CEMP. The expected greenhouse gas emissions would have negligible impact on the climate given the proportionate impact relative to Irish emissions limits.

8.11.14. I also consider that the air and odour impact at operational stage have been suitably identified and mitigated and that these impacts will be satisfactorily controlled through the Industrial Emissions Licence process with the EPA, which has already been commenced by the applicant. Ammonia emissions have been adequately addressed and will be overall reduced by reducing the amount of direct land spreading from chicken manure. The proposed development will operate within a negative air pressure environment, with an odour scrubbing process that will reduce impacts to imperceptible levels to any nearby sensitive receptors. I consider air and odour impacts from traffic at operational stage are unlikely to be significant as a proportion of existing traffic emissions based on the low levels of forecast traffic, and do not warrant further assessment.

8.11.15. The EIAR states that an appropriate stack height determination study was carried out through an iterative process to establish a minimum 6m height for the stack at the odour treatment system and 10m for the CHP installation. A stack height of 5.6m is proposed at the boiler.

8.11.16. In relation to climate change and greenhouse gases, I consider that the proposed production of biogas will result in an overall reduction in carbon dioxide emissions in comparison to typical fossil energy sources and this will be a positive impact on climate.

Direct and Indirect Effects Conclusion

8.11.17. I am satisfied that the impacts that are predicted to arise in relation to air quality, odour and climate are acceptable having regard to the nature and scale of the proposed development. I have considered all the information on file, including

submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts predicted to arise in relation to air quality, odour and climate would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of air quality, odour and climate.

8.12. **Noise and Vibration**

Issues Raised

8.12.1. The third-party observations and third party appeal note the Noise impact assessment contained in EIAR does not take into account intermittent buzzers, alarms or reversing vehicle sirens for noise sensitive receptors and an ongoing monitoring and complaints procedure is not provided. Concern in relation to noise impacts at construction and operational stage are raised.

8.12.2. In addition, baseline noise monitoring is submitted as being inadequate, sensitive receptors are not sufficiently assessed, and cumulative impacts are excluded.

8.12.3. In relation to noise and vibration, the applicant submits, an appropriate assessment of cumulative impacts and noise sensitive receptors has been undertaken and is further set out in the technical note attached to the appeal response. The applicant further submits noise and vibration were assessed in accordance with all relevant national and international best practice.

8.12.4. Baseline noise levels were established at 45db at representative noise sensitive location (NSLs). The results of the noise assessment demonstrate that construction and operational noise levels will remain well within applicable limits set by the EPA and in relation to existing background noise levels, with all predicted impacts classified as either imperceptible or not significant. No tonal or impulsive characteristics would result in additional impacts.

8.12.5. Where short term construction exceedances were identified (eg. Gas pipeline works) appropriate mitigation and communication protocols are recommended.

8.12.6. The PA noted that noise impacts are submitted as being imperceptible and the PA Environment Section raised no objection to the proposed development in terms of noise and note the noise mitigation submitted at further information stage is appropriate.

Context

8.12.7. Impacts of the project on noise and vibration are addressed in chapter 10 of the EIAR, with a series of appendices included with respect to the noise definitions, data collected, times of day and contours collated to inform this part of the assessment. The methodology for the assessment is described, as well as the study area receiving environment and the sources referenced. The nearest sensitive receptors to the application site are identified and a baseline noise survey was undertaken to provide a reasonable representation of the background noise environment to inform the assessment. The EIAR outlines the noise level standards to be achieved as part of the development, in particular allowing for the plant and works during construction and the potential increase in road traffic. The applicant refers to 'BS 5228-1:2009 +A1:2014: Code of Practice for Noise and Vibration Control on Construction and Open Sites – Parts 1 and 2', as well as other guidelines and criteria in providing guidance and standards for the noise and vibration impacts.

Baseline

8.12.8. The primary sources of noise in the area immediate to the application site comprise road traffic noise along the adjoining roads. Other noise contributing to background levels includes rustling vegetation and bird song. Predicted daytime noise levels surrounding the development are provided in the EIAR based on the applicant's modelling.

Potential Effects

Table 8.6: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	No new noise or vibration sources would arise.
Construction	Increased noise during the construction works, in particular from machinery operation and traffic movements.

	Increased vibration during the excavation and construction works.
Operation	Noise from operational plant equipment and traffic movements associated with the proposed development.
Cumulative	Cumulative impacts from noise and vibration are not expected based on modelling accounting for existing noise levels.

Mitigation

8.12.9. The measurements recorded for background noise were not deemed to qualify as an 'quiet area' and noise limit criteria was determined based on EPA guidance as 45dB (daytime noise, dB L_{A90}), and 40dB (night-time noise, dB L_{A90}).

8.12.10. The EIAR states that construction will be limited to the 'daytime' and uses BS 5228 guidance to establish that a noise limit of 65 dB $L_{Aeq,T}$ applies. It predicts the worst-case scenario noise levels at the closest noise sensitive location (NSL) from various construction noise sources (ranging from c. 51 dB(A) to c. 54 dB(A) at 366m west of the proposed site) and concludes that the construction noise limit (65 dB $L_{Aeq,T}$) will not be exceeded at the nearest sensitive receptor.

8.12.11. The EIAR outlines mitigation measures for the construction phase (none deemed necessary for operational phase) to include the following:

- No plant used on site will be permitted to cause an on-going public nuisance due to noise.
- Proper maintenance of plant will be employed to minimise the noise produced by on site operations.
- All vehicles and mechanical plant will be fitted with effective exhaust silencers and maintained in good working order for the duration of the contract.
- Compressors will be attenuated models, fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers.
- Machinery that is used intermittently will be shut down or throttled back to a minimum during periods when not in use.
- During the construction programme, supervision of the works will include ensuring compliance with the limits detailed in Section 6.2.1

using methods outlined in BS 5228- 1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise.

- The hours of construction activity will be limited to avoid unsociable hours where possible. Construction operations shall generally be restricted to between 07:00hrs and 19:00hrs weekdays and between 08:00hrs and 16:00hrs on Saturdays. However, any necessary or emergency out of hours working will be agreed in advance with the local Planning Authority.
- Any plant, such as generators or pumps, which is required to operate before 07:00hrs or after 19:00hrs will be surrounded by an acoustic enclosure or portable screen.

Residual Effects

8.12.12. The EIAR states that the background noise levels have been considered and no other significant cumulative effects are identified. It concludes that there will be no significant residual noise impacts associated with the development with a slight and brief level of effect at construction stage.

Direct and Indirect Effects Assessment

8.12.13. I have examined, analysed and evaluated chapter 10 of the EIAR, all of the associated documentation and submissions on file in respect of noise and vibration. I am satisfied that the applicant's presented baseline environment, is comprehensive and that the key impacts in respect of likely effects on noise and vibration, as a consequence of the development have been identified. Parties to the application have raised a number of issues in respect of noise and vibration, including in relation to the appropriateness of the noise assessment and inclusion of alarm and reversing vehicle sounds in the assessment.

8.12.14. The residential and noise sensitive receptors have been addressed in the noise impact assessment/Chapter 10 and the nature of the proposed development is such that following the construction phase it would not result in substantive increases in noise levels in the area, other than via increased traffic, which the applicant has accounted for as part of their noise impact assessment. I consider the impact of reversing vehicles (construction and operational) is adequately included in the forecast noise levels provided and accept that due to separation distances involved

to NSLs, that noise impacts would be negligible. Noise management measures are proposed as part of the CEMP and the noise impact assessment sets out how the facility would be managed over the operation phase of the project, with the main acoustic generating plant being within buildings that provide associated sound insulation. I consider the measures outlined are appropriate and well established as being effective in controlling noise and vibration in similar developments.

8.12.15. The CEMP accompanying the application sets out that monitoring would be undertaken during the course of the construction works, including monitoring of noise levels, with a register that would be available for auditing and inspection and that the noise emissions would be subject to EPA licencing.

8.12.16. Based on the predicted operational noise levels within the EPA Noise Limits, I am satisfied that no further mitigation measures are required in this regard as the proposal will be subject to an EPA Emissions Licence that will be subject to noise limits if the Commission are minded to grant permission.

8.12.17. I acknowledge that the construction stage has the potential for impacts on sensitive receptors as a result of construction activities and the operation of vehicles/plant, particularly during the construction of the gas pipeline, which is subject to a separate consenting process but is accounted for in the noise assessment. However, the EIAR includes a range of construction-stage mitigation measures, including a Construction and Environmental Management Plan (CEMP), and I am satisfied that these measures will satisfactorily address the potential impacts.

Direct and Indirect Effects Conclusion

8.12.18. I am satisfied that the impacts predicted to arise in relation to noise and vibration are negligible. I have considered all the information on file, including submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts predicted to arise in relation to noise and vibration would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of noise and vibration.

8.13. Landscape & Visual

Issues Raised

8.13.1. The third-party appeal and observation on the readvertised NIS raises concern in relation to the landscape and visual impact of the proposal, adjacent to a sensitive landscape as set out in the CDP and submits that a LVIA of the Tinhalla Stream and River Suir setting, and archaeological features has not been undertaken.

Context

8.13.2. Chapter 11 of the EIAR deals with the landscape and visual impacts of the development, with the applicant initially setting out the legislative and policy context for the assessment, including reference to the Waterford City and County Landscape Character Assessment and the Guidelines for Landscape and Visual Impact Assessment. This section of the EIAR was supported by 'Verified Photomontages', including a total of 6 short, medium and long-range viewpoints. A Zone of Theoretical Visibility (ZTV) was undertaken that informed the viewpoints used. The photomontages submitted provide visual representations, which I am satisfied would be likely to provide a reasonably accurate portrayal of the completed development in summer settings with the proposed landscaping in a mature and well-maintained condition. I have viewed the site from a variety of locations in the surrounding area, and I am satisfied that the photomontage viewpoints are taken from locations, contexts, distances and angles, which provide a reasonably comprehensive representation of the likely visual impacts of the development from key reference points. In addition to the photomontages, the applicant provided 3d Images of the completed development.

Baseline

8.13.3. The site is within a rural area, and it is within an area of low landscape sensitivity. The site is not included within a landscape character area of high amenity or historical merit. The Development Plan does not identify any protected views or landscapes of value affecting the site. 'Most Sensitive' landscape of River Suir corridor is located to the north and the 'High Sensitivity' designation to the east and south east. A description of the site environs is provided in section 2 of my report and expanded upon in the planning assessment above. The immediate area generally comprises agricultural farmland with rolling to gently undulating ground levels. There are existing mature native hedgerows surrounding the site.

Potential Effects

Table 8.9: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	Existing piggery would likely continue to expand, with slurry being land spread. Trends in the existing environment indicate field size may increase over coming years with loss of hedgerows. No visual or landscape impact if construction does not occur.
Construction	At the construction phase the placing of the structures at a lower base ground level helps partially absorb them into the topography. The objectives of the landscape plan to protect the landscape and views from change that reduces visual amenity cannot be realised at the construction phase but will make a positive difference during the operational phase when the planted material starts to establish and mature. Each viewpoint 1-6 is analysed with the magnitude of change negligible to medium, with some significant effects. The nature of effects for each view ranges from neutral to negative.
Operation	Low to negligible landscape impacts in high sensitivity viewpoints that would be permanent and not readily reversible. Imperceptible neutral impacts, slight to not significant effects and neutral- negative nature of the effects from the areas surrounding the site based on the 6 viewshed reference points.
Cumulative	Reference made to existing piggery, which is accounted for in the LVIA, with no other developments of a similar nature planned in the area currently.

Mitigation

8.13.4. Mitigation measures are wholly embedded in the design of the proposed scheme according to the applicant. This includes siting of the proposed buildings and landscaping/screen planting.

8.13.5. The EIAR outlines that mitigation measures include the planting and landscaping plan that will establish over time and will be maintained in line with best practice measures. Management measures include protection against disease on planted

species, use of local soil, management of invasive species. Embedded mitigation will also be provided in the colour/tone of the proposed buildings/structures.

Residual Effects

8.13.6. Once all mitigation measures have been implemented and there is ongoing care provided to the landscape tree planting and hedgerows over the life of the project, the Proposed Development will not be hidden but it will be effectively screened.

Direct and Indirect Effects Assessment

8.13.7. I have examined, analysed and evaluated chapter 11 of the EIAR, all of the associated documentation and submissions on file in respect of landscape and visual impacts. I am satisfied that the applicant's presented baseline environment, is comprehensive and that the key visual impacts in respect of likely effects on landscape, as a consequence of the development have been identified. The following table 8.10 provides a summary of my assessment of the likely visual change from the applicant's 6 selected viewpoints arising from the completed proposed development.

Table 8.10 Viewpoint Changes

No.	Location	Description of Change/Assessment of Viewpoints
1	Tinahalla – 640m northwest	Visibility of the subject proposal would not be possible due to topography and existing hedgerows.
2	Curraghnagarraha – 430m west	Visibility of the dome of the digester buildings would be visible largely due to the white colour. Reception building also visible but mitigated by green colour. Views of proposal are also mitigated by screen planting and existing hedgerows. View does not breach the skyline of existing landscape in this viewpoint. The level of visual change is only slight from this long-range view, due to the separation distance.
3	Curraghnagarraha – 130m south	Visibility of the dome of the digester buildings would be visible largely due to the white colour. Reception building also slightly visible but mitigated by green colour. Views of proposal are also mitigated by screen

		planting and existing hedgerows. View does not breach the skyline of existing landscape in this view. The level of visual change is only slight from this long-range view, due to the separation distance.
4	Curraghnagarraha – 670m south	Domes visible in this view but proposal is largely screened by existing vegetation. I consider the magnitude of visual change from this medium-range view to be negligible in the context of the receiving rural environment.
5	Reatagh – 800m southeast	Visibility of the subject development would not be achievable due to the existing buildings and planting.
6	Portlaw Wood – 2.2km southeast	Visibility of the subject proposal would not be possible due to topography and existing hedgerows. The level of visual change is only slight from this long-range view, due to the separation distance.

8.13.8. In the immediate area, I consider the development would be most visible from the approaches along Curraghnagarragha (road) and Scrouty Road, with only intermittent views possible. The development does not represent a significant insertion into the landscape and even when considered from 'most sensitive' landscape character areas, the view is intermittent and largely shielded by topography and screen planting.

8.13.9. Where potentially discernible from long range views, the proposed development would read as part of the wider emerging rural landscape, including the existing piggery. Environmental conditions would also influence the appearance of the development from the selected viewpoints, however the largely evergreen native hedgerow species would maintain any screening throughout the seasons. I am satisfied that the visual change would be largely imperceptible from the wider areas, with slight- not significant visual impacts closer to the site. The appearance of the development would not be out of character with the emerging character of the area, including buildings of similar scale and height. The local population would become accustomed to the development over time, owing to the fleeting intermittent views of the digestate domes from local roads.

Direct and Indirect Effects Conclusion

8.13.10. In conclusion, I am satisfied that the predicted landscape and visual impacts are acceptable having regard to localised area affected due to the low-lying nature of the site where the proposal is embedded into the low-lying landscape and having regard to the location of the project within a rural area of County Waterford. I have considered all the information on file, including submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts predicted to arise in relation to landscape and visual amenity would be avoided, managed, and mitigated by the measures which form part of the proposed scheme. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of landscape and visual amenity.

8.14. **Traffic & Transport**

Issues Raised

8.14.1. Observers to the appeal and the appeal itself raise a number of concerns in relation to the traffic and transport assessment and submit that the traffic impact is under represented in the assessment provided by the applicant. It is submitted that the road network in the surrounding area would be negatively impacted by the number and frequency of HGV trips on the network and local junction/road upgrades are not adequate. The Planning Authority District Engineer had no objection to the proposed development subject to the proposed measures discussed on site which include road widening, drainage and sightlines at the proposed entrance

Context

8.14.2. Chapter 12 outlines the roads, traffic and transport impacts of the proposed development and is based on a desktop study (including traffic collisions), field work (traffic counts and geometric measurement) and picady traffic modelling (to account for future assessment years, daily/peak trips, and junction modelling). A manual traffic count was carried out in May 2024 and growth factors have been applied in accordance with TII guidelines. The assessment has been carried out on the basis of access to the site via Scrouty Road and Piquet's Crossroads to the west, which join with the R677, and via Curraghnagarraha to reach the R680. It is noted the local

road network has sufficient capacity to cater for the projected traffic flows, however the predicted turning movements at Piquet's Crossroads are above the threshold for providing a full Traffic and Transport Assessment (TTA). This assessment is provided in the application documents at Chapter 12 of the EIAR.

Baseline

8.14.3. The assessment addresses the existing road infrastructure forming the local network serving the site, as well as the existing policy context including the 'Traffic and Transport Guidelines' by TII. The Proposed Development plans include providing vehicular access from Scrouty Road to the south of the site. This access will primarily be via the Regional Road R677, located southwest of the site, and will utilise the Scrouty Road/Rath Road/L4031/R677 junction, commonly known as Piquet's Crossroads. Existing daily traffic flows at Piquet's Crossroads are estimated to amount to 113 PCU in the AM Period and 166 PCU in the PM Period. 5% of the total passing traffic was observed to be HGVs in the morning period and 22% in the evening period. Figure 12.5 of the EIAR illustrates the roads network in the surrounding area with Figures 12.6 to 12.8 illustrating the existing Scrouty Road and Piquet's Crossroads. Other infrastructures available in the area, including footpaths and cycle routes, are not provided within this rural area, with limited road width available to include this infrastructure.

Potential Effects

Table 8.11: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	There would be negligible impacts and imperceptible effects on local road network within only natural growth occurring.
Construction	Short-term effects arising from increased traffic due to the vehicular movements (20 per day) associated with the site clearance, excavation and construction works, including works traversing the junction with Scrouty Road.
Operation	Positive effects of producing a methane-rich biogas, which is converted into renewable energy or upgraded to biomethane which

	is injected to the natural gas grid, and a nutrient-rich fertiliser known as 'biobased fertiliser'. Direct effects for traffic due to the increased vehicular movements from personnel (10 trips per day) and deliveries/distribution of produce (Feedstock, Co2, biobased fertiliser) (48 trips per day) required to serve the proposed development. This is an average increase of 2% HGV traffic on the local road network.
Cumulative	No other significant developments proposed in the area. Trips from the existing piggery for land spreading purposes will be reduced as a result of the proposal. No significant cumulative impacts are expected.

Mitigation

8.14.4. The following mitigation measures are proposed at construction stage:

- Appointment of a Construction Project Manager to be responsible for the day-to-day implementation of measures outlined in the TMP;
- Identify routes to be used in the delivery and export of materials to the site and routes that shall be avoided by HGVs;
- Monitor the condition of the roads throughout the construction period and a truck-mounted vacuum mechanical sweeper will be assigned to roads along the haul route as required; and
- Access to the site to be monitored at all times by a banksman who will direct traffic safely into the construction site and facilitate the safe navigation of larger construction vehicles.

8.14.5. No mitigation measures are considered necessary at operational stage outside of the embedded design features that include internal passing bays at the access road and widened junction to improve sightlines and vehicular safety on entry/exit..

Residual Effects

8.14.6. With the implementation of mitigation measures, including monitoring, residual effects of the project are set out in sections 12.8 of the EIAR. These provide that no significant residual effects on traffic and transport would arise.

Direct and Indirect Effects Assessment

8.14.7. I have examined, analysed and evaluated chapter 12 of the EIAR, all of the associated documentation and submissions on file in respect of traffic and transportation. I am satisfied that the applicant's presented baseline environment is comprehensive and that the key impacts in respect of likely effects on the local road network and surrounding environment, as a consequence of the development have been identified.

8.14.8. In relation to the traffic arising from the proposed development, and its impact on the local road network, the results of the assessment provided in the EIAR confirm that the surveyed junction – Piquet's Crossroads - would remain operating within capacity post development in the opening, design and future-year scenarios.

8.14.9. The predicted average daily operational phase two-way traffic movements are outlined in Table 12.12 of the EIAR and indicate a total of 48 two-way movements, the majority of which are HGV. The impact of this HGV traffic on the local road network is challenged in the appeal and in observations to the appeal. Ultimately, I note that the existing level of traffic on the local road network is low and the majority of HGV/Tanker movements relate to feedstock delivery and whole digestate collection (19 two-way movements), with both delivery and collection trips covered under the collective figure provided.

8.14.10. In relation to feedstock delivery, it is proposed to deliver a maximum of 90,000 tonnes per annum and the EIAR states that the facility will operate 7 days a week. Therefore, the predicted movements would appear to be based on an average of 10 no. 30-tonne deliveries per day (i.e. 90,000 tonnes/365 days/10 vehicles for a total of approximately 300 tonnes of feedstock per day as provided in table 12.7 of the EIAR), which I consider to be a reasonable estimation. I accept that there may be fluctuations in quantities of silage feedstock deliveries on a seasonal basis, although silage need not necessarily be delivered during the cutting season. Furthermore, it should be noted that the predicted feedstock delivery movements are not based on

silage only and other feedstock sources make up a significant proportion (73%). Accordingly, I consider it reasonable that deliveries could be balanced throughout the year and I have no objection to the figures predicted in the EIAR.

8.14.11. Regarding whole biobased fertiliser collection by tanker, I would estimate that the average daily movements of 6 no. tankers (using a weight capacity of 30tonnes) would equate to the collection of c. 25,000 tonnes of whole digestate per annum (312 days). I accept that this is a maximum figure, and that some flexibility should apply to these estimations. The same principle of maximum figures applies to Co2 collection, which amounts to 4 trips per day, exporting 10,000 tonnes per annum

8.14.12. Having regard to the above, I consider that the predicted traffic movements set out in Table 12.15 of the EIAR are reasonable. Based on the EIAR traffic counts at Piquet's Crossroads, the predicted operational trips equate to 18% of the AM peak hour traffic movements and 12% of the PM peak hour movements. I accept that these percentages are a reflection of the existing low level of traffic utilising this junction. The industry standard PICADY modelling software has been used to demonstrate that the junctions tested will operate with a Ratio of Flow to Capacity (RFC) of 0.16 (16%) at the Scrouty Road arm of the junction to the R677 north and south in the evening peak, which is well below the theoretical capacity of 0.85 RFC. Therefore, while I acknowledge the inherent margins that apply to traffic modelling predictions, I consider that there is significant spare capacity in the road network, that any likely increase in estimated volumes could be satisfactorily accommodated, and that further assessment is not required in relation to Piquet's Crossroads.

8.14.13. Regarding the travel routes to and from the subject site, I again note that the EIAR sets out a clear intention that collection/delivery vehicles will be via lightly trafficked roads and in agreement with the planning authority. This is not an uncommon arrangement for traffic associated with operations such as this and I am satisfied that it can be appropriately controlled by the operator. Furthermore, I consider that the identified feedstock sources and digestate destinations are unlikely to generate a desire to travel through the town centre. The vast majority of the feedstocks will come from within a 10-25km radius and from a variety of directions. This will serve to spread the low level of traffic generation across the network and reduce any significant HGV traffic impact. Accordingly, I am satisfied that the source and destination routes associated with the proposed development will not generate a

desire to travel through Carrick on Suir, with an estimation of 2-3 trips per hour via this route. This will not result in a significant impact on the regional road network.

Direct and Indirect Effects Conclusion

8.14.14. In conclusion, I consider that the application clearly outlines the existing traffic conditions at the site and reasonably predicts that the impact of the proposed development and wider traffic growth will not result in a cumulative adverse impact on traffic and transport. I am satisfied that the impacts that are predicted to arise in relation to traffic and transport are acceptable having regard to the nature and scale of the proposed development. I have considered all the information on file, including submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts predicted to arise in relation to traffic and transport would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions where appropriate. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of traffic and transport.

8.15. **Archaeology & Cultural Heritage**

Issue Raised

8.15.1. The third-party appeal and subsequent submissions, provide that the site lies within a sensitive archaeological landscape and the applicant has failed to provide an adequate assessment of this setting, which is a material contravention of policy objective AH04 of the Waterford City and County Development Plan.

8.15.2. The Department of Housing, Local Government and Heritage note the site is located in the environs of 2no. fulacht fia and a bullaun stone. The Department have no objection to the proposal provided conditions requiring a programme of pre-development archaeological testing is carried out.

Context

8.15.1. Chapter 13 of the EIAR describes and assesses the impact of the development on cultural heritage, including archaeological and architectural heritage. The legislative and planning policy context for this part of the assessment is set out, including the provisions of the National Monuments Act. Policy objectives AH04 of the Development Plan aim to protect and preserve archaeological sites. In terms of

archaeological potential, the applicant undertook a desk-based study of the site and an area 1km from the site. This was followed up with a field survey in December 2023. Details of the placenames relating to the area and a chronological description of the historical background to the surrounding area is provided, including cartographic analysis. It was noted that an archaeological assessment of the field to the immediate south highlighted low potential for any surviving archaeological remains on this adjoining site.

Baseline

8.15.2. The applicant states that there are no recorded monuments or places (RMPs) on site, and that the closest archaeological sites are two fulacht fia (WA003-094-- & 94001--) located approximately 200m to the west of the application site, a Burnt mound located roughly 470m to the southeast and a bullaun stone (WA004-023----) is located 270m to the northeast. The site is not within an ACA and the nearest Protected Structure are the gate lodge and gates of Curraghmore House and demesne (NIAH No.'s 22900401 and 22900404 respectively) which are located over 2km to the south.

Potential Effects

Table 8.12: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The site would remain as a primarily agricultural landholding and there would be no effect upon the archaeological, architectural, or Cultural Heritage resource.
Construction	Direct effects for archaeological heritage given the potential for significant undiscovered archaeological material, and given the proposed ground disturbance works. there is a low to moderate potential for unrecorded sub-surface deposits surviving below ground within this location, and the proposed route for the gas pipeline

Operation	Direct effects for features or landscapes of cultural significance from a visual perspective.
Cumulative	Any remains that may be identified within the proposed development area will be fully excavated and recorded. As the Proposed Development will not result in any impacts on the architectural heritage resource, no cumulative impacts have been identified

Mitigation

8.15.3. The applicant asserts that monitoring by a suitably qualified and licensed specialist archaeologist should oversee the works with the agreement and approval of an archaeological method statement by the National Monuments Service of the Department of Housing, Local Government and Heritage, with any findings recorded and investigated for the nature of discovery.

Residual Effects

8.15.4. With the implementation of mitigation measures, residual effects of the project for archaeological, architectural and cultural heritage are set out in Section 13.4.2 of the EIAR. If the above-described mitigation is implemented there are no predicted residual impacts on the archaeological and architectural resource

Direct and Indirect Effects Assessment

8.15.5. I have examined, analysed and evaluated chapter 13 of the EIAR, all of the associated documentation and submissions on file in respect of archaeological, architectural and cultural heritage. I am satisfied that the applicant's presented baseline environment, is reasonably comprehensive and that the key impacts in respect of likely effects on archaeological, architectural and cultural heritage as a consequence of the development have been identified.

8.15.6. The proposed development is a substantive distance from known features of cultural heritage significance and the separation distances involved would not result in direct impacts on such features, with the intervening rural landscape negating the impact of the development on the setting or character of the closest neighbouring cultural

heritage features. In relation to visual impacts, as discussed in previous sections of my report, in my opinion, any views of the proposal would be intermittent, and I do not consider these to have a significant impact on views of existing archaeological features that are generally absorbed into the rural landscape in any case. During the construction phase, the applicant has set out standard measures with respect to archaeological monitoring and recording, which could be further clarified as a condition in the event of a grant of planning permission for the development. I note the Department of Local Government and Heritage support this approach and have no objections to the granting of permission.

Direct and Indirect Effects Conclusion

8.15.7. I am satisfied that the impacts that are predicted to arise in relation to archaeology and cultural heritage are acceptable having regard to the absence of significant archaeological/heritage features within the site and distance to existing features in the surrounding area. I have considered all the information on file, including submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts predicted to arise in relation to archaeology and cultural heritage would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of archaeology and cultural heritage.

8.16. **Material Assets**

Issues Raised

8.16.1. Chapter 14 of the EIAR evaluates the impacts on material assets discussed under the following headings:

- Road Infrastructure
- Foul Water Network
- Surface Water Network
- Public Water Network
- Gas Network
- Electricity Network
- Telecommunications Network

- Municipal Waste

Context

8.16.2. Impacts on material assets specifically in relation to traffic and transport are dealt with in chapter 12 of the EIAR. A Traffic and Transport Assessment was provided as part of the application and deals with roads infrastructure.

8.16.3. Impacts on material assets specifically in relation to utilities are dealt with in chapter 14 of the EIAR.

Baseline

8.16.4. The assessment addresses the existing infrastructure serving the site including public utilities. Details on traffic and transport have been covered under chapter 12 of the EIAR and earlier in my report. Access to the foul water network is not provided and an on-site wastewater treatment system is proposed. Surface water will be managed via an attenuation pond where it will be treated prior to discharge to the adjacent Tinhalla Stream. Water impacts from the proposal are discussed elsewhere in my report. There is no public water connection to the proposed development, and the proposal will be served by fire water (drained from roofs), grey water from rainwater harvesting and reverse osmosis, and potable water delivered to the site for drinking and cleaning. A new gas network connection, 2.5km in length is proposed and has been given preliminary confirmation. This connection will be subject to a separate consenting process. A 10Kv/20Kv overhead ESB line traverses the site. An ESB substation will be provided within the proposed development to connect the proposal to the network, although this will be used for back up purposes only. Ongoing electricity supply will be via the CHP unit and Solar PV. Connections to the telecommunications network will be provided. Waste will be appropriately managed at construction (via CEMP) and operational stages (not considered to be significant given 10no. staff).

Potential Effects

Table 13.7: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	If the Proposed Development does not proceed there will be no additional impact on local Material Assets. The rate of demand on

	the road infrastructure, electrical, public water, foul water, surface water, and telecommunication networks would remain unchanged. There would be no change to the current land use.
Construction	Short-term effects arising from increased traffic due to the vehicular movements associated with the site clearance, excavation and construction works, including works traversing Scrouty Road. Direct negative short-term effects for material assets (utilities) due to the potential for damage to underground services and power outages, contaminated run off to surface water and increased waste that if not stored correctly could lead to litter.
Operation	Positive effects of increased production of renewable biomethane. Direct effects for traffic and public transport due to the increased vehicular movements and passengers required to serve the operational requirements and deliveries/collections in the proposed development. Increased demand on services such as waste and telecommunications. Potential contamination in local aquifer.
Cumulative	The construction phase of the project will involve an increased demand on the existing waste infrastructure, road infrastructure, public water network and surface water network. The major cumulative impacts of significance on the Material Assets for the operational phase of the Proposed Development are mainly from an increased demand on services such as the road infrastructure/traffic, telecommunications network, and surface water network. The mitigation measures outlined will ensure that cumulative impacts on Material Assets are minimised.

Mitigation

8.16.5. Mitigation measures to address the impacts of traffic and transport during the construction phase relate to the adherence to measures within a final construction traffic management plan as part of the project CEMP and TMP, including use of assigned haul routes, control of delivery times and provision of construction worker

parking. The construction phase impacts on traffic would be primarily addressed as part of the construction traffic management plan and the monitoring of the performance of same.

8.16.6. Construction management measures will mitigate any potential contamination of waterbodies. Operational stage mitigation measures are proposed in relation to management of surface water run-off, also to prevent contamination of waterbodies. These measures including attenuation of surface water run-off and treatment via a hydrobrake and within an attenuation pond with an impermeable underlay.

8.16.7. Engagement with utility operators would act as a mitigation measure for the project, in identifying and protecting existing services, as well as providing for continued operation of such services. The EIAR concludes that no significant impacts are likely given the mitigation measures that have been embedded in the design and implementation of the proposed development.

Residual Effects

8.16.8. With the implementation of mitigation measures, including monitoring, residual effects of the project are set out in section 14.8 of the EIAR. The overall impact anticipated by the construction phase of the project following the implementation of suitable mitigation measures is considered to be negligible to neutral, imperceptible to slight, and brief to temporary.

8.16.9. The overall impact anticipated by the operational phase of the project following the implementation of suitable mitigation measures is considered to be negligible to positive, slight to significant, and long term.

Direct and Indirect Effects Assessment

8.16.10. I have examined, analysed and evaluated Chapter 14 of the EIAR, along with all of the associated documentation and submissions on file in respect of material assets. I am satisfied that the applicant's presented baseline environment is comprehensive and that the key impacts in respect of likely effects on materials assets, as a consequence of the development have been identified.

8.16.11. In relation to the traffic arising from the proposed development, and its impact on the local road network, I note the results of the assessment provided in the EIAR, and I

consider that the surveyed neighbouring junctions would remain operating within capacity post development in the opening, design and future-year scenarios.

8.16.12. I am of the opinion that the continued liaison with utility providers will serve to address the potential impacts of the development on various infrastructures during the construction phase as is standard construction practice, and the information presented highlights capacity in local services to cater for the proposed development.

8.16.13. I have previously outlined that the project conforms with best practice policy relating to agriculture, waste management and energy production. The proposal will assist in the reduction of agricultural pollution through the replacement of slurry-spreading and chemical fertilisers with organic fertiliser and will assist in the reduction of GHG emissions through the replacement of fossil fuels with renewable gas.

Direct and Indirect Effects Conclusion

8.16.14. I am satisfied that the impacts that are predicted to arise in relation to material assets are acceptable and have been adequately addressed throughout various sections of the EIAR. I have considered all the information on file, including submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts predicted to arise in relation to material assets would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts in terms of material assets.

8.17. Interactions

8.17.1. Chapter 15 of the EIAR addresses the interactions between different aspects of the environment that may be impacted as a result of the construction and operation of the proposed development. The potential interactions are set out in Table 15.1 of the EIAR. The main aspects for interaction are Population & Human Health (with Air, Odour, Climate, Noise & Vibration, Landscape and visual, Biodiversity, Waters, Soils & Geology, material assets, and Traffic & Transport), Biodiversity (with Population & Human Health, Air, Odour, Climate, Noise & Vibration, Landscape and visual, Waters, Soils & Geology), Soils & Geology (with Population & Human Health, Air,

Odour, Climate, Biodiversity, Waters, Material Assets, Traffic & Transport) and Traffic & Transport (with Population & Human Health, Air, Odour, Climate, Noise & Vibration, and Material Assets). The EIAR highlights that the potential interactions have been considered in the design of the proposed development and the inclusion of mitigation measures.

Conclusion

8.17.2. I am satisfied that the predicted interactions have been adequately identified and that potential impacts have been satisfactorily addressed and mitigated in relevant sections throughout the EIAR. I have considered all the information on file, including submissions received and the information contained in the EIAR. Having regard to the above, I am satisfied that impacts relating to interactions would be avoided, managed, and mitigated by the measures which form part of the proposed scheme and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative interactions.

8.16. **Reasoned Conclusion**

8.16.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the applicant, the reports from the planning authority and submissions by prescribed bodies and the appellant in the course of the application, it is considered that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated, as follows:

- Direct positive employment impacts from the construction and operational stages, as well as indirect employment associated with haulage, services and other spin-off sectors.
- Potential risks associated with major accidents and/or disasters, which will be suitably mitigated through compliance with the relevant health and safety regulatory regimes and by limiting the quantities of dangerous substances present on site to levels below the relevant thresholds for the COMAH Regulations.

- Direct and indirect impacts on Biodiversity at the construction and operational stages due to the loss of habitat, disturbance of species due to noise and lighting, and impacts on water quality and air quality. These impacts will be addressed by embedded mitigation measures including a sealed effluent/water system and landscape/habitat creation through reinforcement and embellishment of existing hedgerows. Construction stage impacts will be mitigated by the implementation of a Construction Environmental Management Plan including the establishment of a working corridor near treelines/hedgerows and an active approach to silt control. Operational stage impacts will be mitigated by the provision of suitable lighting and habitat creation, as well as future monitoring and remediation of habitat restoration proposals.
- Potential direct and indirect impacts on Hydrology and Hydrogeology at construction and operational stage as a result of construction materials/substance pollution, soil disturbance/removal, groundwater flood risk, and pollution from the operational processes and materials. These potential impacts will be mitigated through a Construction and Environmental Management Plan and appropriate operational measures for the bunding design, storage and containment of potential pollutants. Surface water management, including SuDS, attenuation, and interceptors, will be employed to ensure that all potential discharges to water will be adequately contained. Any potential cumulative water impacts have been satisfactorily addressed by the replacement of existing land spreading trips from the nearby piggery, which will now go directly to the proposed development for processing and conversion into digestate.
- Direct air and odour impacts on sensitive receptors (including designated sites and biodiversity) and populations in the site vicinity as a result of emissions during the construction and operation stages. Construction stage impacts will be suitably distanced from sensitive receptors and will be mitigated by dust suppression measures. Operational air and odour emissions will be appropriately treated (including containment, CHP combustion, and odour abatement) and dispersed at height to comply with the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011) and stringent odour target values.

This will be further managed by EPA licencing and control of emissions through the industrial emissions licence process.

- Positive indirect impacts on Climate due to a reduction in carbon dioxide emissions through the production of biogas as a replacement of fossil energy sources.
- Direct Noise impacts during the construction phase which will be suitably mitigated through compliance with construction noise standards and a Construction Environmental Management Plan and noise impacts at operational phase that will be managed through the separate industrial emissions licencing process governed by the EPA.
- Landscape and Visual impacts due to the scale of the project, which will be mitigated by embedded design measures including the proposed layout, form and colours, as well as the location of the proposal within existing topography and additional landscape planting.
- Direct and indirect traffic and transport impacts which will be mitigated by the design of the proposed entrance and the control of haulage routes.

8.16.2. Having regard to the above, I am satisfied that the likely significant environmental effects arising from the proposed development have been identified, described and assessed, and I consider that, subject to the mitigation measures proposed, the proposed project would not have any unacceptable, direct, indirect or cumulative effects on the environment.

9.0 AA Screening

9.1. Screening Determination

Significant effects cannot be excluded

9.1.1. In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the information considered in this AA screening, I conclude that it is not possible to exclude that the proposed development alone will not give rise to significant effects on the Lower River Suir SAC European Site in view of the sites conservation objectives.

9.1.2. It is therefore determined that Appropriate Assessment (stage 2) [under Section 177V of the Planning and Development Act 2000] of the proposed development is required.

9.2. **Appropriate Assessment Conclusion: Integrity Test**

9.2.1. In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on the Lower River Suir SAC, in view of the conservation objectives of this site and that Appropriate Assessment under the provisions of S177U was required.

9.2.2. Following an examination, analysis and evaluation of the NIS all associated material submitted and taking into account observations of third parties, I consider that adverse effects on site integrity of the Lower River Suir SAC can be excluded in view of the conservation objectives of this site and that no reasonable scientific doubt remains as to the absence of such effects. I refer the Commission to the attached report from the Senior Ecologist Inspector of ACP in relation to the appropriateness of the AA and NIS completed, including the survey work undertaken, and which supports my assessment of impacts on designated sites.

9.2.3. My conclusion is based on the following:

- Detailed assessment of construction and operational impacts.
- To maintain and improve the existing water status of adjoining waterbodies including the Tinhalla Stream that feeds into the River Suir.
- Effectiveness of mitigation measures proposed including standard practice construction mitigation measures, dust management and noise mitigation.
- Application of planning conditions to ensure these measures.
- The proposed development will not affect the attainment of conservation objectives for the Lower River Suir SAC or the Cork Harbour SPA.

9.2.4. Please refer to the attached appendices for detailed Stage 1 and 2 Appropriate Assessment.

10.0 Water Framework Directive

10.1.1. I conclude that on the basis of objective information, that the proposed development will not result in a risk of deterioration on any water body (rivers, lakes, groundwaters, transitional and coastal) either qualitatively or quantitatively or on a temporary or permanent basis or otherwise jeopardise any water body in reaching its WFD objectives based on the mitigation measures, drainage arrangements and management of surface water as set out in the proposed development. Please see WFD Assessment attached at Appendix 3 of this report.

11.0 Recommendation

11.1.1. I recommend that permission be GRANTED based on the following reasons and considerations and subject to the following conditions.

12.0 Reasons and Considerations

In coming to its decision, the Commission performed its functions in relation to the making of a decision, in a manner consistent with the following:

(a) the policies and objectives set out in the National Planning Framework and the Regional and Spatial Economic Strategy for the Northern & Western Regional Assembly

(b) the policies and objectives set out in the Waterford City and County Development Plan 2022-2028

(c) the provisions of the Climate Action Plan 2025 (Government of Ireland)

(d) the Draft Bioenergy Plan (Department of Communications, Energy and Natural Resources, 2014)

(e) the National Policy Statement on the Bioeconomy (Government of Ireland, 2018)

(f) the Waste Action Plan for a Circular Economy – National Waste Policy 2020-2025 (Department of Environment, Climate and Communications)

(g) the Southern Regional Waste Management Plan 2015-2021

(h) The Planning System and Flood Risk Management Guidelines (Department of Environment, Heritage and Local Government and The Office of Public Works, 2009)

(i) the nature, scale and design of the proposed development

(j) the pattern of existing and permitted development in the area

(k) the planning history of the site and the surrounding area

(l) the submissions and observations received, and

(m) the report of the Inspector.

13.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application on the 17th of September, 2024, as revised by details submitted on 19th December 2024 and as further revised by additional details submitted to An Bord Pleanála on the 01st May 2025 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 developer shall ensure that all mitigation measures set out in the Environmental Impact Assessment Report and Natura Impact Statement submitted with the application on the 17th of September, 2024, as revised by details submitted on 19th December 2024 and as further revised by additional details submitted to An Bord Pleanála on the 01st May 2025, shall be implemented in full, except as may otherwise be required in order to comply with the following conditions.

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

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

   (a) A maximum of 90,000 tonnes per annum of raw materials shall be treated in the anaerobic digesters
   (b) The composition of feedstock used as input into the anaerobic digestors shall be agreed in writing with the Environmental Protection Agency (EPA).

   Reason: In the interests of clarity.

4. 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 and weight of digestate produced and stored in previous 12 months, and
   (d) The volume and weight of Biomethane and Carbon Dioxide produced/stored 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.

5. 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.

6. Prior to commencement of development, the developer shall enter into water and/or waste water connection agreements with Irish Water.

   Reason: In the interest of public health

7. Feedstock deliveries to the site and transport of digestate and biogases from the site shall be confined to between the hours of 0700 to 1900 Monday to Friday and between the hours of 0900 to 1500 on Saturday and Sunday.

   Reason: In the interest of orderly development and the residential amenity of surrounding dwellings.

8. Prior to the commencement of development, the developer shall submit details for the written agreement of the planning authority of the proposed entrance arrangements and compliance with the recommendations of the Road Safety Audit, including details of signage, lighting and road markings.

   Reason: In the interest of traffic safety.

9. Permission is hereby granted on the basis that the maximum quantity of biogas and/or biomethane present on the site at one time can never exceed the relevant lower tier thresholds under the Seveso Directive. Prior to the commencement of development, the developer shall submit details for the written agreement of the Planning Authority that clearly demonstrate compliance with these limits, including details of operational controls to limit the quantities, such as, but not limited to, the monitoring of liquid levels in tanks, monitoring biogas concentrations in the vapour spaces of the tanks, and the use of flaring to manage inventory.

Reason: In the interests of clarity and to prevent the facility from becoming an establishment for the purposes of the Seveso III Regulations.

10. Following further ground investigations and prior to the commencement of development on site, the developer shall submit for the written agreement of the planning authority details of the proposed foundation and bund design. Proposals shall clearly demonstrate that mitigation measures relating to the protection of soil, geology, hydrogeology and groundwater have been appropriately incorporated, and that the bund design shall withstand the uplift pressure of groundwater.

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

11. The developer shall facilitate the planning authority in preserving, recording, or otherwise protecting 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 satisfactory arrangements for the recording and removal of any archaeological material which may be considered appropriate to remove.

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

12. Site development and building works shall be carried out only between the hours of 0800 to 1900 Mondays to Fridays inclusive, between 0800 to 1400 hours on Saturdays and not at all on Sundays and public holidays. Deviation

from these times will only be permitted in exceptional circumstances where prior written approval has been received from the planning authority.

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

13. The construction of the development shall be managed in accordance with a Construction and Environmental Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall incorporate all the construction stage mitigation measures outlined in the Environmental Impact Assessment Report and Natura Impact Statement, and shall provide details of intended construction practice for the development, including and not limited to:

(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 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 if required,
(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) details of construction lighting,
(l) details of key construction management personnel to be employed in the development, and
(m) Means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local surface water sewers or drains.

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

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

14. Monitoring of the construction phase shall be carried out by a suitably qualified and competent person to ensure that all mitigation measures outlined in the Environmental Impact Assessment Report and Natura Impact Statement are fully implemented. In addition, the designated member of the company's staff shall interface with the planning authority and members of the public in the event of complaints or queries in relation to environmental emissions. Details of the name and contact details, and the relationship to the operator of this person shall be available at all times to the planning authority on request whether requested in writing or by a member of staff of the planning authority at the site.

Reason: To safeguard the amenities of the area.

15. 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.

16. All solid wastes arising on the site shall be recycled as far as possible. Materials exported from the site for recovery, recycling or disposal shall be managed at an approved facility and in such a manner as is agreed with the Planning Authority. In any case no such wastes shall be stored on the site except within the confines of the buildings on site. Adequate on-site arrangements for the storage of recyclable materials prior to collection shall be made to the satisfaction of the Planning Authority.

    Reason: To safeguard the amenities of the area

17. 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 outside the boundaries of the development at all times and shall comply with the mitigation measures for bats as outlined in the Natura Impact Statement.

    Reason: In the interest of amenity, public safety, and the protection of bats.

18. An odour management plan, which shall include a monitoring programme, shall be put in place by the developer in respect of the construction and operation phase of the development. The nature and extent of the plan and the monitoring sites shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. The results of the programme shall be submitted to the planning authority on a monthly basis.

    Reason: To protect the residential amenities of the area.

19. 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

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

Matthew McRedmond
Senior Planning Inspector

23rd September 2025

Appendix 1

Form 1 - EIA Pre-Screening

Case Reference	ABP-322136-25
Proposed Development Summary	Construction of a proposed Anaerobic Digestion Facility and all associated works.
Development Address	Curraghnagarraha, Reatagh, and Curraghballintlea, Carrick-on-Suir, Co. Waterford
	In all cases check box /or leave blank
1. Does the proposed development come within the definition of a 'project' for the purposes of EIA? (For the purposes of the Directive, "Project" means: - The execution of construction works or of other installations or schemes, - Other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources)	☒ Yes, it is a 'Project'. Proceed to Q2. ☐ No, No further action required.
2. Is the proposed development of a CLASS specified in Part 1, Schedule 5 of the Planning and Development Regulations 2001 (as amended)?	
☐ Yes, it is a Class specified in Part 1. **EIA is mandatory. No Screening required. EIAR to be requested. Discuss with ADP.**	State the Class here
☒ No, it is not a Class specified in Part 1. Proceed to Q3	
3. Is the proposed development of a CLASS specified in Part 2, Schedule 5, Planning and Development Regulations 2001 (as amended) OR a prescribed type of proposed road development under Article 8 of Roads Regulations 1994, AND does it meet/exceed the thresholds?	
☐ No, the development is not of a Class Specified in Part 2, Schedule 5 or a prescribed	

type of proposed road development under Article 8 of the Roads Regulations, 1994. **No Screening required.**	
☐ Yes, the proposed development is of a Class and meets/exceeds the threshold. **EIA is Mandatory. No Screening Required**	Part 2, of Schedule 5 - Class 11 (b) Other Projects: *(b) Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule.* EIAR mandatory and submitted with the application.
☐ Yes, the proposed development is of a Class but is sub-threshold. **Preliminary examination required. (Form 2)** **OR** **If Schedule 7A information submitted proceed to Q4. (Form 3 Required)**	**State the Class and state the relevant threshold**

4. Has Schedule 7A information been submitted AND is the development a Class of Development for the purposes of the EIA Directive (as identified in Q3)?	
Yes ☐	**N/A**
No ☐	

Inspector: _____Date: _____

Appendix 2: AA Screening

Screening for Appropriate Assessment Test for likely significant effects	
Step 1: Description of the project and local site characteristics	
Brief description of project	The proposed development is for an anaerobic digestor facility and all associated works at Curraghnagarraha, Reatagh, and Curraghballintlea, Carrick-on-Suir, Co. Waterford. I have provided a detailed description of the proposed development elsewhere in my Inspector's Report in relation to this appeal.
Brief description of development site characteristics and potential impact mechanisms	It is proposed to construct an anaerobic digestion facility for the production of biomethane at Curraghnagarraha, Reatagh and Curraghballintlea, Carrick-on Suir, Co. Waterford. A detailed description of the site, surrounding area and proposed development is provided in Sections 1.0 and 2.0 of the Inspector's Report and detailed specifications of the proposal are provided in the AA Screening Report/NIS and other planning documents submitted by the applicant. In summary, the proposed development includes a 3 digesters of 15.5m in height, 2no. digestate storage structures c. 15.5m and 12m in height, pasteurization tanks, reception hall, odour abatement plant, CO_2 tanks (2no.) and associated CO_2 pumps and compressors, biogas treatment skid and emergency flare, two storey office and admin. Building, grid injection unit, ESB substation, alterations to the public road at the entrance to the site, access road with passing bays and all associated ancillary works. Potential impacts arise during construction, air, odour, noise and light spill during operation and deterioration of water quality from surface water and ground water (during construction and operation) and land-spreading of digestate. Cumulative Impacts are also possible. The Lower River Suir SAC is located c. 1.3km north east (1.9km downstream), Hugginstown Fen SAC is located 14.2km north-east and the and the Comeragh Mountains SAC is located approximately c. 10.7km to the southwest.
Screening report	Yes, screening report provided by the applicant, prepared by ORS.
Natura Impact Statement	Yes, NIS submitted by the applicant and prepared by ORS.
Relevant submissions	Third Party Submissions and appeal – Queried potential impacts on European Sites as a result of water quality impacts, reliability of surveys undertaken, inadequate mitigation measures and management of digestate on site, particularly in the event of inundation/storm events. Health and Safety Authority – Recommend implementation of mitigation measures in EIAR if permission is granted.
Step 2. Identification of relevant European sites using the Source-pathway-receptor model Three European sites were identified as being located within a potential zone of influence of the proposed development as detailed in Table 2 below. I note the applicant did not consider any additional sites within a wider sphere of influence and I agree that no further range of European Sites is necessary for consideration in relation to this proposed development. **Table 1:**	

European Site (code)	Qualifying interests[1] Link to conservation objectives (NPWS, date)	Distance from proposed development (km)	Ecological connections[2]	Consider further in screening[3] Y/N
Lower River Suir SAC (002137)	Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Taxus baccata woods of the British Isles [91J0] Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Austropotamobius pallipes (White-clawed Crayfish) [1092] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] Alosa fallax fallax (Twaite Shad) [1103] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355] Lower River Suir SAC | National Parks & Wildlife Service (27/07/2025)	**1.3km north-east/1.9km downstream**	**Yes, proximity and potential reduction in water quality to the Lower River Suir SAC.** **Surface water discharge during construction and operation.** **Process/foul/firewater discharge during operation.** **Noise and light disturbance.** **In-combination impacts.** **The site is 1.9km upstream of this SAC. Having regards to the hydrological connectivity (source-pathway-receptor linkage) that exists between the proposed site and this SAC, then in the absence of mitigation, significant effects upon this SAC and its QIs cannot be ruled out and will be considered further. Significant effects could arise due to pollution to surface or groundwaters during the construction and operation of the site.**	**Y**
Hugginstown Fen SAC (000404)	Alkaline fens [7230]	**14.2km north east**	**No, There is no hydrological or ecological**	**N**

	Hugginstown Fen SAC | National Parks & Wildlife Service (27/07/2025)		**connectivity between the site and this SAC, therefore significant effects can be ruled out.**	
Comeragh Mountains SAC (001952)	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Northern Atlantic wet heaths with Erica tetralix [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] Blanket bogs (* if active bog) [7130] Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110] Calcareous rocky slopes with chasmophytic vegetation [8210] Siliceous rocky slopes with chasmophytic vegetation [8220] Hamatocaulis vernicosus (Slender Green Feather-moss) [6216] Comeragh Mountains SAC | National Parks & Wildlife Service (27/08/2025)	**10.7km south west**	**No, There is no hydrological or ecological connectivity between the site and this SAC, therefore significant effects can be ruled out.**	**N**

[1] Summary description / **cross reference to NPWS website** is acceptable at this stage in the report
[2] Based on source-pathway-receptor: Direct/ indirect/ tentative/ none, via surface water/ ground water/ air/ use of habitats by mobile species
[3]if no connections: N

Given the proximity of the site to Lower River Suir SAC, potential effects could occur due to deterioration of water quality through surface water and ground water during construction and operation, lighting impacts on hedgerow, land spreading of digestate and cumulative impacts will all require management to avoid impacts on SCO.

Significant effects from other pathways have been ruled out i.e., habitat loss, impacts from foul water discharge, impacts from noise and disturbance.

Step 3. Describe the likely effects of the project (if any, alone or in combination) on European Sites
The proposed development will not result in any direct effects on the SAC as it relates to the Lower River Suir. However, due to the size, scale and proximity of the proposed development to the Lower River Suir, and the hydrological connectivity via the Tinhalla Stream that runs adjacent to the eastern boundary of the site, impacts generated by the construction and operation of the proposed development require consideration.

Sources of impact and likely significant effects are detailed in the table below.

AA Screening matrix

Site name **Qualifying interests**	**Possibility of significant effects (alone) in view of the conservation objectives of the site***	
	Impacts	**Effects**
Site 1: Lower River Suir SAC (002137) QI list: Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Taxus baccata woods of the British Isles [91J0] Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Austropotamobius pallipes (White-clawed Crayfish) [1092]	Direct: No direct impacts within the SAC. Indirect: The Proposed Development will occur on lands that are hydrologically connected to the Lower River Suir SAC via the Tinhalla Stream. Therefore, taking a conservative approach, in a worst-case scenario and in the absence of mitigation, an accidental pollution event of a sufficient magnitude during the construction or operation, either alone or in-combination with other pollution sources, could potentially affect the surface water quality in the Tinhalla Stream to an extent that undermines the conservation objectives of certain qualifying interests of the Lower River Suir SAC. A reduction in water quality in the River Suir has the potential to affect the aquatic habitats and natural conditions that are required to maintain or achieve the specific attributes and targets of the qualifying interests and the conservation objectives of the Lower River Suir SAC that have been defined for these qualifying interests. Significant effects from other pathways have been ruled out i.e., habitat loss, impacts from spread of invasive species, noise and disturbance, primarily due to the farmed nature of the site where there are no established areas of vegetation (outside of existing hedgerows that will be maintained and enhanced through additional planting) to provide quality habitats and a baseline of noise and disturbance that already occurs from the existing piggery. No high risk	Potential negative indirect effect on habitat quality as a result of impacts on water quality due to the hydrological connection to the SAC and alterations to water quality arising from surface water run-off and/or groundwater pollution. Possibility of significant effects cannot be ruled out without further analysis and assessment.

Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] Alosa fallax fallax (Twaite Shad) [1103] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355	invasive plant species is identified within the site, therefore no impact on qualifying interests.	
	Likelihood of significant effects from proposed development (alone): Y	
	If No, is there a likelihood of significant effects occurring in combination with other plans or projects? N/A	
	Possibility of significant effects (alone) in view of the conservation objectives of the site*	

Step 4 Conclude if the proposed development could result in likely significant effects on a European site

It is not possible to exclude the possibility that proposed development alone would result in significant effects on the Lower River Suir SAC from effects associated with surface water run off during the construction and operational phases and lighting during the operational phase.
An appropriate assessment is required on the basis of the possible effects of the project 'alone'. Further assessment in-combination with other plans and projects is not required at screening stage.

Proceed to AA Stage II.

Screening Determination

Significant effects cannot be excluded
In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the information considered in this AA screening, I conclude that it is not possible to exclude that the proposed development alone will give rise to significant effects on the Lower River Suir SAC European Site in view of the sites conservation objectives.

It is therefore determined that Appropriate Assessment (stage 2) [under Section 177V of the Planning and Development Act 2000] of the proposed development is required.

AA and AA Determination

Lower River Suir SAC (Site Code 002137)

Summary of Key issues that could give rise to adverse effects (from screening stage):

- **Impacts form surface water runoff/discharges during construction**
- **Impacts from surface water runoff/discharges during operation**
- **Lighting impacts**

- **In-combination impacts.**

See Section 5.3 of NIS

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes (summary- inserted)	Potential adverse effects	Mitigation measures (summary) NIS SECTION 6 (updated at FI stage to include additional mitigation measures)
Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] (not likely to be impacted due to separation distance of +25km in estuarine habitats) Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] **Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]** **Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] (not likely to be impacted due to main threats and pressures to both these habitats [91A0 & 91E0] include invasive species, grazing of**	To maintain or restore the favourable conservation condition of the Annex I habitats for which the SAC has been selected	Section 5.3.1 of the NIS identifies potential sources of impact that include deterioration of water quality from pollution of surface water and groundwater at both construction and operational phases. The presence of fuels, lubricants and other chemicals from construction activities also have the potential to impact water quality within Tinhalla Stream and therefore Lower River Suir SAC. A degradation in water quality caused by the runoff of hydrocarbons, cement or other chemical can also affect fish, plant life and macroinvertebrates by altering pH levels of the water. This could potentially impact on the intensity of use of areas of foraging habitat by SCI birds. Inadvertent spillages of hydrocarbon and/or other chemical substances could introduce toxic chemicals into the aquatic environment via surface	Water quality control measures to maintain existing surface and ground water quality are proposed in Section 6.0 of the NIS that include strict controls of erosion, sediment generation and other pollutants including silt traps and geotextile curtains to reduce and intercept sediment release into local watercourses, no uncontrolled discharge of contaminated waters to ground or surface water from the development, management of fuels and re-fuelling processes, management of construction waste and soil. Bunding and impermeable membranes applied to digestate storage areas, spill kits and monitoring of surface water. Landscape and lighting measures are also proposed to enhance and protect local biodiversity. All digestate to be used in accordance with Good Agricultural Practice regulations and the specific nutrient management plan for each individual farm. Additional measures are outlined in relation waste management, traffic management, air quality, surface water/groundwater and soil protection in the CEMP and EIAR that are

forests, problematic native species and dumping. The proposed development will not lead to any increase in the threats or pressures that could negatively affect these habitats) **Taxus baccata woods of the British Isles [91J0]) (Not likely to be impacted as the QI for this woodland is not within the zone of influence of the subject site)** **Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] (Not likely to be impacted as this species occurs in the Clodiagh River, which is not hydrologically connected to the subject site)** Austropotamobius pallipes (White-clawed Crayfish) [1092] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] **Alosa fallax fallax (Twaite Shad) [1103] (not likely to be impacted due to separation distance of +25km in estuarine habitats**		water run-off. Aquatic plant communities may also be affected by increased siltation. Pollution of groundwater could occur during loading or unloading of the material or digestate. In addition, any structural weaknesses in the effluent or soiled water holding tanks on site could lead to impacts upon groundwater. Groundwater quality can impact upon surface water quality as these two resources mix at the hyporheic zone, which is the region just under a river or stream bed where there is a mixing of shallow ground water and surface water. Any pollution of groundwater locally could lead to significant effects upon designated water dependant ecosystems that are in the same catchment The biobased fertiliser produced will be a rich source of nutrients that will be used by customer farmers for the fertilisation of their land. These farms have been identified in Figure 4 of the NIS. However, any inappropriate land-spreading of the biobased fertiliser could lead to impacts upon the receiving waters in local catchments and it can result in eutrophication, algal blooms, fish kills and loss of biodiversity. Designated habitats and species can be impacted upon. This is a greater risk when groundwater vulnerability at the spread lands is high,	recommended for implementation.

Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355]		or when land-spreading is undertaken close to drains or streams. In these situations, the Pollution Impact Potential for both phosphates and / or nitrates is high.	

Assessment of issues that could give rise to adverse effects in view of conservation objectives:

The following possible future impacts on the Lower River Suir SAC are provided in the NIS. In the absence of mitigation, these impacts could lead to significant effects upon the QIs of the SAC.

1. Deterioration of Water Quality in Designated Areas Arising from Pollution to Surface Water or Ground Water During Site Preparation and Construction.
2. Deterioration of Water Quality in Designated Areas Arising from Pollution to Surface Water or Ground Water During the Operation of the Site.
3. Impacts on Designated Sites arising from the Land-Spreading of the Digestate
4. Cumulative Impacts

The construction of the new structures and associated works will involve the excavation of soil and the pouring of concrete for foundations and other surfaces. These works will take place on a site that is adjacent to the Tinhalla Stream and hydrologically upstream of the Lower River Suir SAC. The excavation of the attenuation pond and foundations may also encounter bedrock and water table features if not appropriately managed. If appropriate mitigation measures are not taken during construction and operation of the proposed development, then there is the possibility that run-off into the Tinhalla Stream could occur, leading to deteriorations further downstream in the River Suir SAC. Therefore, as there is a potential risk of direct and indirect impacts arising from the site preparation and construction of the Proposed Development, appropriate mitigation will be required to maintain the conservation status of the Lower River Suir SAC and its protected habitats and species.

Other sources of pollution during the operation of this Proposed Development were also considered. The site is within an area of high groundwater vulnerability which extends into areas of extreme groundwater vulnerability – bedrock at surface. Pollution of groundwater could occur during loading or unloading of the material or digestate. In addition, any structural weaknesses in the effluent or soiled water holding tanks on site could lead to impacts upon groundwater.. Groundwater quality can impact upon surface water quality as these two resources mix at the hyporheic zone, which is the region just under a river or stream bed where there is a mixing of shallow ground water and surface water. Any pollution of groundwater locally could lead to significant effects upon designated water dependant ecosystems that are in the same catchment.

Inappropriate land spreading of digestate fertiliser could lead to impacts on receiving waters of local catchments.

Mitigation measures and conditions

Proposed mitigation measures include:

- Good practice, standard construction methodologies to reduce surface water run-off during construction
- Appropriate management of chemical storage including spillage procedures, bunded storage areas, security, management of refuelling practices, leakages.
- Management of sediment and silt levels within the site.
- Appropriate foul and surface water management practices.
- Ecological supervision by an Ecological Clerk of Works
- Protected species measures including pre-construction surveys
- Operation of a site-wide Environmental Management System.
- Habitat enhancement including native hedgerows and landscape planting.
- Appropriate digestate handling in accordance with Good Agricultural Practice regulations and farm specific nutrient management plans.

The NIS lacks detail in relation to mitigation of groundwater vulnerability and excavation of bedrock aquifer where I note an excavation depth of 6.3mbgl may be required and which would increase groundwater vulnerability, increasing particular areas of the site from 'high' to extreme'. I am satisfied that the Hydrology and Hydrogeology Chapter (Chapter 8) of the EIAR includes relevant mitigation measures as follows (along with other operational and construction stage measures):

- Excavations to be backfilled as soon as possible to prevent any infiltration of contaminants to the subsurface and the aquifer.
- Landscaping to take place as soon as possible to reduce weathering.
- Further trial pits are recommended pre-construction to determine soil depth to the east/northeast of the Proposed Development.
- Installation of impermeable liners is recommended under the attenuation ponds.

While additional trial pits are recommended pre-construction, I note the series of ground investigations undertaken at further information stage of the application. I note groundwater was encountered at 2.1m and 3.0m in Trial Pits SA31 and SA32, with possible bedrock encountered at various depths of 1.8m to 3.7m in trial pits TP-01 to TP04, which was at OD 89-90m. With the maximum depth of 1.75m from the top of attenuation pond to the bottom of the attenuation pond (OD 94.00m), sufficient soil depths are available to avoid impacts on groundwater. An additional layer of certainty in relation to protection of groundwater can be included by way of condition to confirm construction methodology of proposed attenuation pond, prior to commencement of development.

I am satisfied that the preventative measures which are aimed at interrupting the source-pathway-receptor are targeted at the key threats to water quality and by arresting these pathways or reducing possible effects to a non-significant level, adverse effects can be avoided. Mitigation measures can be included by way of condition.

In-combination effects

I am satisfied that in-combination effects have been assessed adequately in the NIS. The applicant has demonstrated satisfactorily that no significant residual effects will remain post the application of mitigation measures and there is therefore no potential for in-combination effects.

The following plans/projects were considered in Section 5.3.5 of the NIS in relation to in-combination effects:

- 19655 - The Erection of PV solar panels on the western aspect of the roofs of the following buildings in the farmyard complex: Fattening Houses A, B, C, D, P, Q, R, A-B, A-C, Farrowing House Gi, Weaner Houses Gi, sow Houses L & M. The development comprises of an activity in relation to which an Industrial Emissions Directive Licence (formerly IPPC Licence) is operated. This application is adjacent to the proposed development site. This application was screened for AA by Waterford City and County Council and significant effects upon Natura 2000 sites were ruled out.

- 23190 - A 450 kwh ground mounted Solar PV system on 0.94 ha site and all associated ground works to the rear of the premises. This application is adjacent to the proposed development site. This application was screened for AA by Waterford City and County Council and significant effects upon Natura 2000 sites were ruled out.

It is noted that for future applications, the Local Authority must ensure that any development that has the potential to impact upon the Natura 2000 sites be screened competently for Appropriate Assessment.

With the implementation of the mitigation measures contained in the EIA, CEMP and the NIS, the current application will have no cumulative impacts upon the Lower River Suir SAC site when considered in combination with other developments that are adequately screened for AA or where mitigation measures have been included as part of a Natura Impact Assessment

Appendix 3

WFD IMPACT ASSESSMENT STAGE 1: SCREENING			
Step 1: Nature of the Project, the Site and Locality			
An Bord Pleanála ref. no.	**ABP-322136-25**	**Townland, address**	**Curraghnagarraha, Reatagh and Curraghballintlea, Carrick-on Suir, Co. Waterford.**
Description of project		**It is proposed to construct an anaerobic digestion facility for the production of biomethane at Curraghnagarraha, Reatagh and Curraghballintlea, Carrick-on Suir, Co. Waterford.** **In summary, the proposed development includes a 3 digesters of 15.5m in height, 2no. digestate storage structures c. 15.5m and 12m in height, pasteurization tanks, reception hall, odour abatement plant, CO_2 tanks (2no.) and associated CO_2 pumps and compressors, biogas treatment skid and emergency flare, two storey office and admin. Building, grid injection unit, ESB substation, alterations to the public road at the entrance to the site, access road with passing bays and all associated ancillary works.**	
Brief site description, relevant to WFD Screening,		**Site is located in the Townland of Curraghnagarraha, Reatagh and Curraghballintlea, south east of Carrick-on Suir, in Co. Waterford.. The site is relatively flat and the Tinhalla Stream runs along the eastern boundary of the site. Excess storm water will drain to an attenuation pond that will discharge to the Tinhalla Stream and that connects to the Lower River Suir (1.3km to the northeast). A water quality monitoring station is located approx. 1.5km northeast of the site at Tinhalla (ID: RS16T310740) and the site is located within the Suir catchment.**	
Proposed surface water details		**Connection to proposed attenuation pond before discharge to Tinhalla Stream at greenfield run off rates.**	

Proposed water supply source & available capacity	**Water supply is divided into three parts: fire water, grey water, and clean water (potable). The fire supply is collected from roof drain runoff, transported via underground piping and stored in an underground tank. Rainwater harvesting and the water generated from the reverse osmosis process within the facility will be used for grey water. Clean water (potable) for drinking and cleaning will be brought into the site. During construction, the existing piped water source for the livestock shall be utilized and potable water will be brought in for drinking/cleaning.**
Proposed wastewater treatment system & available capacity, other issues	**The proposed site requires a septic treatment and storage system for the proposed waste from the proposed office building.**

Step 2: Identification of relevant water bodies and Step 3: S-P-R connection

Identified water body	Distance to (m)	Water body name(s) (code)	WFD Status	Risk of not achieving WFD Objective e.g.at risk, review, not at risk	Identified pressures on that water body	Pathway linkage to water feature (e.g. surface run-off, drainage, groundwater)
River Waterbody	**Adjacent to eastern boundary**	**Tinhalla_010**	**Moderate**	**Review**	**Agricultural run off**	**Yes – stormwater ultimately drains to Tinhalla Stream via attenuation/detention pond. SuDs features drain to ground water as much as possible**

						with remainder to attenuation pond.
Groundwater Waterbody	Underlying site	Comeragh IE_SE_G_154	Good	Not at Risk	Ground	Yes, via groundwater

Step 4: Detailed description of any component of the development or activity that may cause a risk of not achieving the WFD Objectives having regard to the S-P-R linkage.							
CONSTRUCTION PHASE							
No.	**Component**	**Waterbody receptor (EPA Code)**	**Pathway (existing and new)**	**Potential for impact/ what is the possible impact**	**Screening Stage Mitigation Measure***	**Residual Risk (yes/no) Detail**	**Determination** to proceed to Stage 2. Is there a risk to the water environment? (if 'screened' in or 'uncertain' proceed to Stage 2.**
1.	River	Tinhalla_010	Yes. Direct connection from site to stream.	Siltation, pH (Concrete), hydrocarbon spillages	Standard construction practice CEMP	Yes. Potential for spillages to river stream warrants further assessment	Screened in
2.	Ground	Comeragh IE_SE_G_154	Yes, pathway exists via moderate drainage characteristics	Spillages, leakage to groundwater water table	As above	Yes – drainage characteristics warrants further assessment.	Screened in.
OPERATIONAL PHASE							

1.	**River**	**Tinhalla_010**	**Yes. Direct connection proposed from attenuation pond to stream.**	**Hydrocarbon spillage/siltation, digestate leakage, inundation prior to treatment**	**Bunding, hydro brake, attenuation with 1,151.8 m³ capacity**	**Yes. Drainage characteristics and potential for leakage to stream warrants further assessment.**	**Screened in**
2.	**Ground**	**Comeragh IE_SE_G_154**	**Yes pathway exists via moderate drainage characteristics and high to extreme vulnerability**	**Spillages**	**As above**	**Yes. Drainage characteristics warrant further assessment**	**Screened in**
DECOMMISSIONING PHASE							
5.	**N/A**						
STAGE 2: ASSESSMENT							
Details of Mitigation Required to Comply with WFD Objectives							
Surface Water							
Development/Activity e.g. culvert, bridge, other crossing, diversion, outfall, etc	**Objective 1:Surface Water**	**Objective 2:Surface Water Protect, enhance and restore all bodies of**	**Objective 3:Surface Water Protect and enhance all artificial and heavily**	**Objective 4: Surface Water Progressively reduce pollution from**	**Does this component comply with WFD Objectives 1, 2, 3 & 4? (if**		

	Prevent deterioration of the status of all bodies of surface water	**surface water with aim of achieving good status**	**modified bodies of water with aim of achieving good ecological potential and good surface water chemical status**	**priority substances and cease or phase out emission, discharges and losses of priority substances**	**answer is no, a development cannot proceed without a derogation under art. 4.7)**
	Describe mitigation required to meet objective 1:	**Describe mitigation required to meet objective 2:**	**Describe mitigation required to meet objective 3:**	**Describe mitigation required to meet objective 4:**	
Construction works	**Site specific mitigation methods described in the Construction Environmental Management Plan and NIS including:** • **Good practice, standard construction methodologies to reduce surface water run-off during construction** • **Appropriate management of chemical storage including spillage procedures, bunded storage areas,**	**Site specific mitigation methods as described.**	**Site specific mitigation methods as described.**	**Site specific mitigation methods as described.**	**YES**

	security, management of refuelling practices, leakages. • **Management of sediment and silt levels within the site.** • **Appropriate foul and surface water management practices.** • **Ecological supervision by an Ecological Clerk of Works** • **Protected species measures including pre-construction surveys** • **Operation of a site-wide Environmental Management System.** • **Habitat enhancement including native**				

	hedgerows and landscape planting. • **Appropriate digestate handling in accordance with Good Agricultural Practice regulations and farm specific nutrient management plans.** • **Excavations to be backfilled as soon as possible to prevent any infiltration of contaminants to the subsurface and the aquifer.** • **Landscaping to take place as soon as possible to reduce weathering.** • **Further trial pits are recommended pre-construction to determine soil depth to the east/northeast of the Proposed Development.**				

	• Installation of impermeable liners is recommended under the attenuation ponds.				
Stormwater drainage	Adequately designed SUDs features, permeable paving and attenuation	SuDS features as described	SuDS features as described	SuDS features as described	YES
Details of Mitigation Required to Comply with WFD Objectives					
Groundwater					
Development/Activity e.g. abstraction, outfall, etc.	Objective 1: Groundwater Prevent or limit the input of pollutants into groundwater and to prevent the deterioration of the status of all bodies of groundwater	Objective 2 : Groundwater Protect, enhance and restore all bodies of groundwater, ensure a balance between abstraction and recharge, with the aim of achieving good status*	Objective 3:Groundwater Reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity		Does this component comply with WFD Objectives 1, 2, 3 & 4? (if answer is no, a development cannot proceed without a derogation under art. 4.7)

Development Activity 1: Development of processing and warehouse facility	**Site specific construction mitigation methods including:** • **Good practice, standard construction methodologies to reduce surface water run-off during construction** • **Appropriate management of chemical storage including spillage procedures, bunded storage areas, security, management of refuelling practices, leakages.** • **Management of sediment and silt levels within the site.** • **Appropriate foul and surface water management practices.**	**Site specific mitigation methods as described.**	**Site specific mitigation methods as described**	**Yes**

	• **Ecological supervision by an Ecological Clerk of Works** • **Protected species measures including pre-construction surveys** • **Operation of a site-wide Environmental Management System.** • **Habitat enhancement including native hedgerows and landscape planting.** • **Appropriate digestate handling in accordance with Good Agricultural Practice regulations and farm specific nutrient management plans.** • **Excavations to be backfilled as soon as**			

	possible to prevent any infiltration of contaminants to the subsurface and the aquifer. • **Landscaping to take place as soon as possible to reduce weathering.** • **Further trial pits are recommended pre-construction to determine soil depth to the east/northeast of the Proposed Development.** • **Installation of impermeable liners is recommended under the attenuation ponds.**			

Appendix 4

Appendix 5