Inspector's Report

ABP-305691-19

Development	Processing of alternative feedstocks and production of renewable energy and fertiliser. Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) are submitted. The development comprises an activity requiring an industrial emissions licence from the Environmental Protection Agency (EPA).
Location	Glenmore Estate, Aghaveagh, Ballybofey, Co. Donegal.
Planning Authority	Donegal County Council
Planning Authority Reg. Ref.	1950042
Applicant(s)	Glenmore Generation Limited
Type of Application	Permission
Planning Authority Decision	Grant
Type of Appeal	Third Party
Appellant(s)	Glenmore Action Group

	Glenmore Rivers
Observer(s)	(1) Glenmore Action Group, (2) Carmel Martin & Others, (3) John Griffin & Genevieve Creane, (4) John Harte, (5) Francis O'Hara, (6) Rosemary Haughton & Others, (7) Anne Griffin & Others and (8) Annemarie Carolan & Others
Date of Site Inspection	6th August 2020
Inspector	Mary Crowley

Contents

1.0 Introduction

1.1. The third party appeal received by the Board from Glenmore Rivers also included a request for an oral hearing. The Board decided on 9th March 2020 that an oral hearing would not be necessary in this case.

2.0 Site Location and Description

2.1. Glenmore Generation Limited (GGL) ('the Applicant') operates a biogas facility on a site at Glenmore Estate, Aghaveagh, Ballybofey, County Donegal. GGL is an Irish renewable energy company (the applicant) and the operator of the Glenmore Biogas Plant. GGL is a subsidiary of Connective Energy Holdings who has interests in a number of operational biogas plants in both Ireland and the United Kingdom.

2.2. The appeal site, with a stated area of 3.0136 ha is located within lands known as the Glenmore Estate which is under the applicant company's control. Glenmore Estate is a substantial agricultural holding located in a rural area south of the River Finn and the R252 Glenfin Road. The site is situated in the townland of Aghaveagh, half way between Donegal town and Letterkenny, approximately 30km from each. The twin towns of Ballybofey and Stranorlar are nearest to the proposal site approximately 6km to the east. The site is located a short distance from the R252 Glenfin Road, west of Ballybofey. The site is flat and lands in the vicinity of the site slopes from south to north and towards the site access (R253). Access to the site is via an existing laneway through the estate from the R253 road. The existing biogas site covers about 1ha excluding the laneway

2.3. GGL Biogas Plant is an EPA licensed site (P1004-02) that is permitted to accept and treat 90,000 non-hazardous biodegradable wastes primarily comprising agricultural (e.g. beef slurry and poultry manure) and food waste (e.g. material with a high content of fat, protein or sugar such as fish waste, catering waste, fruit /vegetable waste) and transform these materials into sustainable products (biogas and digestate) using anaerobic digestion (AD) under Reg Ref 14/51399 and as amended by Reg Ref 15/51366 and Reg Ref 18/50910.

2.4. The existing GGL Biogas Plant commenced operations in 2017. The existing plant is positioned in a fully bunded (concrete) site and includes; a weighbridge, a feedstock

reception building, four digester vessels, pasteurisation plant, gas purification plant, compression and bottling plant, enclosed flare, control rooms, and associated drainage infrastructure. Table 2.1 of the EIAR presents the detailed component of the proposed biogas development.

2.5. A set of photographs of the site and its environs taken during the course of my site inspection is attached. I also refer the Board to the photos available to view on the appeal file and in particular the EIAR and the Landscape and Visual Impact Assessment accompanying the further information. These serve to describe the site and location in further detail.

3.0 Proposed Development

3.1. Planning Application

3.2. The application submitted on the 21st January 2019 sought permission for development works at the Glenmore Biogas Plant, Glenmore Estate, Aghaveagh, Ballybofey, County Donegal which will process alternative feed stocks and produce renewable energy and fertilizer. I refer to the public notices and Section 3 of the EIAR Volume 2. The proposed works include

a) development within the curtilage of the existing biogas plant (a) the construction of an extension to the existing feedstock (waste) reception building to accommodate feedstock reception activities and digestive processing equipment, (b) gas purification and compression plant, (c) office extension (first floor open plan), and (d) an externally located test tank.

b) Extension to the northern boundary of the biogas plant to accommodate (a) internal access road from existing biogas site, (b) concrete retention bund, (c) 3 number digester vessels with collection domes, (d) 3 number hydrolysis tanks with collection covers, (e) 2 number pumphouses and associated process pipework (f) stormwater attenuation tank, petrol interceptor and associated pipework,

c) Extension to the northern boundary of the biogas plant to accommodate a fertiliser plant comprising (a) fertiliser processing building containing digestate processing equipment, storage areas and associated externally located odour control; equipment /exhaust stack (17.5m in height), (b) 6 number liquid fertiliser

storage tanks, (c) HGV parking, (d) all process pipework and associated drainage works, and (e) associated site works including fencing and landscape screening.

3.3. In essence the fertiliser plant proposes separating out 60,000 tonnes of the whole digestate produced by the plant, into digestate fibre and digestate liquor. The digestate liquor is proposed to undergo ammonia stripping which will create about 6000 tonnes of high quality fertiliser (ammonium sulphate) while the remaining low ammonia liquor is capable of being recirculated for use in the AD process to water inputs. The digestate fibre fraction (30,000 tonnes) will undergo a pelletising process which reduces its mass through the application of heat. This will create about 10,000 tonnes of product. The net result is that digestate end product is reduced from the approved c153,000 tonnes to about 46,000 tonnes of fertiliser product (30,000 tonnes while digestate, 600 tonnes ammonium sulphate and 10,000 tonnes pelletised product).

3.4. Details of the existing feedstock reception and mixing (stage 1), the anaerobic digestion process (stage2) and pasteurisation (stage 3) are set out in the EIAR. The proposed development, as described above, will add a fourth processing stage; i.e. Enhancement of Digestates (Stage 4). The fourth stage will benefit the Biogas Plant by providing greater efficiencies and reduced volumes of digestates. Digestate enhancement techniques and technologies will primary occur within the fourth stage, however all stages were considered with the objective of reducing and enhancing digestates produced at the plant.

3.5. As the development proposal will alter and reduce the process demand for clean harvested rainwater, additional infrastructure for the control and management of stormwater generated from hardstanding and roofed areas at the site is proposed. The overall site will provide for separate drainage systems for dirty and clean areas at the site. A large stormwater attenuation structure with a capacity of 1,250m3 will be constructed as part of development works on lands adjoining the northern boundary of the existing plant.

3.6. The existing site is served by surface water drainage, water supply, ESB and Telecoms. There are no new connections to public services being proposed and all new services are proposed to be contained within the planning permission site boundary.

3.7. The planning application was accompanied by an EIAR and a NIS and relates to development which comprises and activity requiring an industrial emissions licence under the Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013 from the EPA.

3.8. **Further information**

3.9. Further Information was submitted on the 21st May 2019 summarised as follow. Revised public notices were received on the 30th July 2019.

- ***Type of Waste*** - Type of wastes identified in the EPA licence and DAFM approval include both solid and liquid non-hazardous biodegradable wastes. None of these wastes are classified as "sludges" as defined by the EU Waste Directive 2008/98/EC.
- ***Quantities of Waste*** - The plant is currently operating below 50% of the annual capacity. The plant is receiving about 60% of agricultural waste and 40% of other non-hazardous biodegradable wastes. The Glenmore Biogas Plant licences and approvals provides for acceptance and processing of a wide range of feedstocks. It is anticipated that the plant will receive up to 70-80% agricultural waste and 20-30% other non-haz biodegradable food wastes (based on 90,000 tonnes overall acceptance limit) when at full operating capacity. This is subject to post planning contracts and could as a result change.
- ***Source of Waste*** - Appendix 3 of the EIS of Reg Ref 14/51399 confirmed that non-hazardous biodegradable wastes would be accepted from a 2 hour drive radius and was unequivocal that material would be accepted from almost all of Northern Ireland, Sligo, Cavan, Leitrim and Monaghan. Currently less than 5% of feedstock comes from outside of this radius. The Applicant confirmed that during previous planning applications it was not possible to be categoric about the source of waste given the fact contracts could only be secured post planning. Planning permissions have not sought to restrict the source of waste in any way.
- ***Volumes of Projected Product Output*** - Based on acceptance of 90,000 tonnes of feedstock a yield estimate forecast of 8,000,000m3 per annum of biomethane is calculated for the existing plant. It is expected that the proposed development enhancements and efficiencies will increase this figure by up to 30%.

- ***Volumes of Residual Matter*** - Digestate product is known as 'Whole digestate' and is no longer considered a waste for the purposes of the EU Waste Directive 2008/98/EC. Due to the nature and character of input feedstocks (i.e. largely homogenous material from producers within the agri-food sector), there is no "residual material" (e.g. such as grit or contaminants such as plastic) remaining after the digestion process which requires disposal.
- ***Storm Water Attenuation*** - The proposal's process changes will result in reduced demand for harvested stormwater at the site because low ammonia digestate will be returned from the back end of the process to the front end of the process for mixing of feedstocks instead of clean water. As outlined in the EIAR, a large stormwater attenuation structure with a capacity of 1,250m3 will be constructed as part of development works on lands adjoining the northern boundary of the existing plant. This structure is positioned outside the perimeter of the proposed lower biogas site bund and not hydraulically linked. As is the case for the existing biogas plant site, process effluents generated in dirty areas of the site (within processing buildings and washdown areas) will be collected via a series of gullies and routed to the existing process drainage sump which has a capacity of 110m3 prior to being recycled to the AD process for treatment. Provided there is no evidence of potential contamination or spill within the bunded area the stormwater will be routed to the proposed attenuation structure.
- ***Odour & Dust Abatement Equipment*** - The air handling and extraction and abatement system fitted to the fertiliser building will be capable of providing three air changes per hour to the building and emissions from the drying /processing technologies (point source emissions). The proposed odour removal technique is based on the use of intense and energetic UV radiation to fragment the organic molecules and oxidise the odour compounds by the mechanism of ozonolysis and photolysis. The oxidised gases have a much lower odour threshold and activity. A short/medium residence time carbon bed will be installed after the UV reactor. A final supplier will only be awarded post planning grant.
- ***Office / Kitchen Effluent Disposal*** - The existing system on site comprises a below-ground tank which contains receiving foul effluent generated from on-site toilets. A permitted contractor is engaged by Glenmore Generation Ltd. to remove the contents of the tanks and dispose of at a licensed facility.

- ***Technical Reports*** - Construction Environmental Management Plan (CEMP), which includes Construction Waste Management Plan, Stormwater Response Programme and Site-Specific Response Plan and Noise Impact Assessment Reports (October 2018 EPA Noise Compliance Report and May 2019 Extended Noise Survey Report) submitted. Based on the findings of the survey there are no environmental noise issues at the noise sensitive receptors associated with operations at the Biogas Plant. Supplemental Traffic and Transport Assessment Information also submitted. In summary, survey concluded that the Glenmore Generation Ltd. Biogas Plant site does not cause an adverse noise impact at the residential properties to the north of Plant in the townlands of Welchtown and Ballynatone. Drawing ref 17-101-SK-C in Appendix 4H details proposed remedial works to the public road (Glenmore Site Entrance to R252/R253 junction).
- ***Mechanical Pumping Station & River Finn Water Extraction*** - Glenmore Generation Limited does not abstract water from River Finn for use at the Glenmore Biogas Plant. Various farms in the general area of the site (including Glenmore Estate Farms) do at certain times of year abstract water from the River Finn for agricultural related activities. Unaware of any mechanical pumping station.
- ***Flood Risk*** - Subject to the implementation of mitigation measures detailed herein, there is no flood risk to the R253 from the pre-existing / proposed development for the storm return periods and durations assessed.
- ***Proposed Daily Water Demand*** - Glenmore Generation Limited does not abstract water from Irish Water network for use at the Glenmore Biogas Plant. Two (2No.) wells located to the south of the Biogas Plant provide water (potable) to office building. Harvested rainwater from within and around the site is temporarily stored and used as process water (mainly cleaning and mixing of feedstocks). During dry periods this is supplemented by water abstracted from on-site boreholes. As outlined in the EIAR, the development proposals will reduce the demand for process water as this demand will be met by recirculating digestate liquor.

3.10. The response was accompanied by the following:

- Copy of EPA Licence and DAFM Approvals
- Drawing Ref. 17-101 P30 - Stormwater
- Construction Environmental Management Plan

- Noise Survey Reports (October 2018 and May 2019)
- Trip Generation, Traffic Counts, Traffic Calculations & Traffic Modelling Output
- Micro Drainage Analysis, Drainage Specification & Cut off Land Drain Design Calculations
- Drawing Ref. 17-101-SK-C – Road Improvements
- Transportation Supporting Information

4.0 Planning Authority Decision

4.1. Decision

4.1.1. Donegal County Council issued notification of decision to grant permission subject to 26 no conditions summarised as follows:

1.	Compliance with plans and particulars submitted with the appclaiton as amended by details received on 21st May 2019
2.	a) Maximum 90,000 tonnes raw material shall be treated per annum b) Maximum 20 tonnes of biogas shall be stored on site at any given time
3.	No surface water shall be permitted to discharge to the public road
4.	a) Traffic movements (inputs / outputs) will be limited to Figure4a submitted as FI on 21st May 2019 b) Maintenance and traffic management shall be the responsibility of the developer and any damage shall be made good
5.	Compliance with Construction Management Plan to be submitted and agreed
6.	FFL of process building, digesters (5, 6 & 7) and hydrolysis tanks (1, 2 & 3) shall not excess 6.62m, 15.12m and 16.62 above FFL of weigh bridge
7.	All sound trees, shrubs and hedgerows shall be retained
8.	All site boundaries to the north and eastern site perimeters shall be planted
9.	All waste shall be disposed of at an authorised / licensed facility

10.	Ecological clerk of works to be engaged to ensure strict implementation of the Construction Method Statement & Environmental Control Measures
11.	No loss of concrete products to the river
12.	Pollution Risk Assessment shall be carried out to the adjoining stream prior to commencement of work on site
13.	Lighting shall be hooded to prevent spillage to public road / third party properties / adjoining habitats
14.	Provision of a fire hydrant
15.	Construction hours shall be 0800 – 1800 Monday to Friday, 0830 – 1500 Saturday and exclude Sundays and all bank holidays / public holidays
16.	Feedstock deliveries and transport of digestate and biogases shall be 0700 – 1900 Monday to Friday and 0900 – 1500 Saturday and Sunday
17.	a) Vehicular access shall be solely via the development access road b) Passing bays shall be installed at appropriate intervals c) Vehicle wheels shall be cleaned prior to exit onto public road
18.	Applicant to identify location for deposition of excavated materials form the development. The site shall have the benefit of planning permission and licenses as appropriate.
19.	Details of surface water drainage system to the agreed
20.	a) Site preparation and construction shall adhere to Inland Fisheries Ireland "Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites" b) All effluents and soiled water shall be recycled / contained within the facility and shall not discharge to any stream / drainage that flows into River Finn c) Proposals for collection and discharge of uncontaminated surface water to be agreed d) Bulk fuel storage shall be properly bunded e) Secondary containment shall be provided for all storage tanks

	f) All sludges, effluent and wastes shall be stored in designated areas g) Post construction surface water run off to be directed into a soakpit
21.	An annual report on the operation of the facility shall be submitted to the Planning Authority to include: a) Details of the source of all associated waste and final disposal areas b) Volumes of raw material treated in the AD in the previous 12 months c) Volume of digestate produced and stored in previous 12 months d) Volume / quantity of gas produced / stored on site in previous 12 months
22.	a) Noise level at the site boundary shall not (1) contain any pure tones and (2) exceed the background noise level by 5dB(A) or exceed 55dB(A) by day of 45dB(A) by night whichever is the lesser b) Within 3 months of commencement of operation a noise survey shall be carried out and submitted to the Planning Authority
23.	a) Developer shall confirm the location of all extractor points b) All waste material shall be stored to the rear of buildings
24.	Prior to commencement of the office building, applicant shall obtain planning permission for an appropriate means of effluent treatment and disposal
25.	Development Contribution in the amount of €5,995.71
26.	Mitigation and monitoring measures outlined in the plans and particulars relating to the proposed development including the EIAR and the NIS shall be carried out in full

4.2. **Planning Authority Reports**

4.2.1. Planning Reports

- The **Case Planner** in their first report noted that in the absence of the outstanding information in the submitted EIAR and / or NIS, regarding the following; Construction Waste Management Plan, Site Specific Incident Response Plan, Construction Environmental Management Plan, Traffic Impact Assessment, Noise Impact Assessment and the Stormwater Response Programme and associated mitigation and avoidance measures. Further stated that the Planning authority was

not in a position to carry out a thorough AA of the subject site. Further information sought on the 15th March 2019 to include:

1) Projected maximum amount, type (solid / liquid) quantity and source of all proposed feedstock used in the anaerobic digestion process authorised under new EPA licensing, volumes of projected product outputs, written details regarding the volumes of residential material and how this material is to be disposed of.
2) Proposed means of effluent disposal from the onsite toilet / kitchen facilities
3) Construction Waste Management Plan, Construction Environmental Management Plan, Stormwater Response Programme, Noise Impact Assessment and Site Specific Incident Response Plan
4) Supplementary Traffic Impact Assessment, flood analysis of the storm catchment area of the road crossing on the R252, proposals to rectify recent works on the local road network and details of all GV haulage (contractors and delivery) routesa
5) Nature and location of any mechanical pumping station and nature of any ad hoc extraction of water from the River Finn that has occurred
6) Catchment analysis / comprehensive drainage design calculations to assess associated flood risk on the R252 close to the entrance
7) Existing and proposed daily water volumes and hydraulic model to assess daily demand and impact on the existing network

- The **Case Planner** in their second report and having considered the FI requested revised public notices.
- The **Case Planner** in their third and final report and having considered the further information recommended that permission be granted subject to 26 no conditions. The notification of decision to grant permission issued by Donegal County Council reflects this recommendation.

4.2.2. Other Technical Reports

- **Water & Environemnt** – In their first report requested that the application be referred to the EPA.

- **Road Design** – In their first report requested that the applicant consider preparing traffic management strategy to provide passage of HGVs on local roads networks, laybys for passing traffic etc. Noted that the conditions of parent application do not appear to have been implemented and that this application be considered as premature until such time as same is completed. In their second report and having considered the further information had no further comment. Again, noted that there are a number of conditions on previous applications that have yet to be addressed and that enforcement are dealing with same.
- **Area Roads Engineer** – Further information sought in relation to (1) Traffic Impact Assessment, (2) flooding / surface water proposals, (3) outstanding items from parent permission to be addressed and Traffic Management Design to be implemented immediately (4) upgrade road from the facility entrance to the junction of the R252 / R253 and specific contribution levied to complete the realigning of the R252 / R253 Junction as per the parent permission and (5) clear unobstructed vision lines to be provided at the existing access road as per the parent permission.
- **Senior Executive Scientist** – Makes a number of observations in relation to land spreading of liquid digestate; tanker movements; if liquid digestate is to be retained as a product then modification of it to remove ammonia and other odour-producing compounds should be considered and included in the process to help eliminate environmental impact from land spreading odours; the use of the material in dried pellet form rather than whole digestate represents a method of nutrient application which poses a significantly lower risk of nutrient loss to water, so it is recommended that 95% of digestate undergoes the drying and pelletising process and construction operation hours.

4.3. Prescribed Bodies

- **Loughs Agency** – While the pollution threat from anaerobic digestors is limited as any point discharges are controlled, the principle pollution threats are from failures of tanks, pipe work and materials delivery storage. A number of recommendations and conditions are set out in the report in relation to drainage, tank selection and installation, cleaning activities, storage, deliveries, delivery areas, pipelines and contingency plans. Further information requested in relation to the proposed area for disposal of digestate which has not been clearly laid out.

- **HSE** – In their first report note that the information relating to compliance with previous planning conditions, mitigation measures proposed in previous EIAs and the EPA license is inadequate; the opportunity to examine the effectiveness of existing mitigation meaures and compare real measurements to those predicted by modelling was not availed of; reliance on road transport for feedstock and products, have not been adequately examined; some potentially significant negative impacts not assessed e.g traffic a proper cost benefit analysis, reliance on road transport for inputs and outputs and the impact of Brexit should have been assessed. Applicant to provide further information in relation to inter alia:
  - Evidence that the conditions attached to previous planning applications have been complied with
  - An assessment of the performance of the existing plant against the conditions set in the EPA license
  - An assessment of the impact of replacing locally sourced feedstock with chicken litter sourced from much further away on local farmers, the local environment, traffic, air emissions and climate
  - A revised landscape impact assessment which examines the cumulative impacts of the agricultural sheds, wind turbine, existing development and the proposed extension
  - An assessment which quantifies the impact of the proposal in relation to greenhouse gas emissions and fossil fuel use
  - Details of the haul routes used and an assessment of potential conflict between various categories of road user along the haul routes
  - The results of a noise survey of existing operations and an assessment of potential impacts on Dooish National School

  The HSE in their second report and having considered the further information submitted noted that several aspects of the proposed development have not been adequately dealt with in relation to spreading and storage of digestate, odour control, dust control, provision of drinking water, noise and potential for conflict between HGVs and other traffic users at the junction or R252 and N15 in Ballybofey.

- **Department of Arts, Heritage, and the Gaeltacht (DAU)** – It is noted that the proposed development is situated within 600m of and in a location likely to significantly impact on the river Finn Special area of conservation Site No SAC 002301. Site synopsis attached. The Department is of the view that this development could significantly damage / destroy the habitat of Atlantic Salmon (Salmon Salar) and Otter (Lutra Lutra), both of which area species listed in Annex II of the EU Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora). In order to mitigate these potential impacts recommended that conditions be attached to the grant of permission relating to:
    - Best practise site preparation and construction works to conform to the Inland Fisheries Ireland requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites
    - Post construction surface water run-off form hardcore / concreted / tarmacadam areas should be directed into a soakpit.
    - Any effluents and soiled water from the development should be recycled / contained within the facility
    - Any bulk fuel storage tank should be properly bunded
    - All spreading of fertiliser associated with the development to be in accordance with the European Communities (Good Agricultural Practise for Protection of Waters) Regulations, 2010
- **Department of Culture, Heritage and the Gaeltacht (DAU)** – In terms of **archaeology** recommended that a condition be attached requiring predevelopment testing. In relation to **nature conservation**, it is stated that it is not appropriate for the details of the proposed mitigation measures to be agreed post consent.
- **Irish Water** – Further information sought in relation to (1) existing and proposed daily water demand volumes and (2) hydraulic model of the existing network.
- **EPA** – Glenmore Biogas Limited, Glenmore Estate, Aghaveagh was issued with an Industrial Emissions (IE) Licence (Register No P1004-02) on the 15th December 2015 for the recovery or disposal of waste and recovery or a mix of recovery and disposal, of non-hazardous waste. The license was transferred on 30th May 2018

from Glenmore Biogas Limited to Glenmore Generation Limited which is registered in Northern Ireland.

4.4. Third Party Observations

4.4.1. In response to the planning application Donegal County Council received 16 observations in relation to the proposed development from (1) Stefan Redar & Angela Gallinagh, (2) Sylvia E Reid, (3) Jonathon Reid, (4) Three Rivers Centre, (4) Patricia & John Quinn, (5) Gerard Doherty & Ethna Kennedy, (6) Glenmore Rivers, (7) Noel McMenamin, (8) Glenmore Action Group, (9) Terry Hardy, (10) Carmel Martin & Others, (11) Jack & Ivan Patton, (12) Susan Tourish, (13) Peter Sweetman & Associates, (14) Joseph Brennan and (15) Alan Boyd.

4.4.2. Concerns raised relate to inadequate community consultation, non-compliance with planning, scale, unacceptable odour, noise, pollution, lights, traffic, impact to SAC, health risk, industrial operation, leakages into streams, precautions to avoid explosions required, visual impact, insufficient water supply to service the operation, material being taken to Achill Island, impact on tourism, licensed to process 90,000 tonnes currently half being processed and associated impact, impact to world renowned fisher in the River Salmon, risk of pollution, property devaluation, facility has been developed by stealth, development was established under false premises relating to the character of landscape, ecological and hydrological, socio economic and cultural and heritage, industrial type development, visual impact, incremental growth from domestic to industrial, not possible to grant permission which would be in compliance with the EIA Directive and the Habitats Directive,

4.4.3. In response to the further information Donegal County Council received 10 no observations from (1) John Haughian & Others, (2) Joseph Brennan, (3) Patricia & John Quinn, (4) Carmel Martin & Others, (5) Glenmore Action Group, (6) Seamus Ward, (7) Stefan Reder & Angela Gallinagh, (8) Gerard Doherty & Ethna Kennedy, (9) Sylvia Reid and (10) Jonathan Reid.

4.4.4. Concerns raised relate to inappropriate site, smells, lack of consultation, traffic impact, noise, bad smells, light pollution, local authority precluded from completing AA, impact to River Finn SAC, risk to health and safety, long term exposure to ammonia is

detrimental, water pollution, benefits of pelleting are unclear, loss of quality of life to neighbouring properties,

5.0 Planning History

5.1. There is no evidence of any previous appeal on this site. The following planning history has been made available with the appeal file as summarised:

5.2. **Reg Ref 13/51569** – Planning permission granted subject to 17 no conditions for development of a commercial centralised anaerobic digester for the production of renewable energy and fertiliser involving the construction of four primary digesters with collection domes, a co-joining pump room and other structures associated with the operation of an anerobic digester system including the following: two feed hoppers, pre pit, CHP building, gas compression & C02 building, flare and biogas purification & bottling unit. Works shall include the provision of an earth bund, concrete apron, all drainage, all other associated site works; improved sight lines at the entrance to the site from the R253 road involving alteration of the levels of the R253 road; two passing bays on the R253 road between its junction with the R252 road and the entrance to the site; and the widening of the laneway.

5.3. **Reg Ref 14/51399** – Planning permission granted subject to 17 no conditions for (1) a commercial centralised anaerobic digester which shall process alternative feedstock's and produce renewable energy and fertiliser. The works shall involve the construction/ provision of the following: (a) four primary digesters with collection domes, (b) pump house building, (c) control building, (d) C02 compression building, cooling tower, gas storage tanks and truck filing point, (e) provision of a containerised CHP engine and an associated stack, (f) biogas purification and bottling plant unit, (g) a feedstock reception building containing feedstocks areas, liquid feed tanks, pasteurisation tanks, (h) weighbridge, lorry wash-down area, water pumping station, storm water interceptor , waste water storage tank, SUD's storm water attenuation, retaining wall, bund wall and associated landscaping (i) provision of a pre pit, flare, carbon filter and stack (j) all drainage and other associated site development works and retention and completion of two access roads to service the site linking it to existing roads within the Glenmore Estate

5.4. **Reg Ref 15/51366** – Planning permission granted subject to 7 no conditions for retention and completion for the development of a vehicular entrance in lieu of proposed access approved under planning Reg Ref 14/51399 and associated site development works. The vehicular entrance connects directly with the adjoining regional road R-253-1 and includes a new section of internal access road which connects with the previously approved internal roadway

5.5. **Reg Ref 16/50644** – Planning permission granted subject to 2 no conditions for construction of an extension consisting of an electrical substation to the control building currently under construction and approved under planning Reg Ref 14/51399

5.6. **Reg Ref 18/50910** - Planning permission granted subject to 12 no conditions for the flare, process sump, washdown area, CO_2 compression building, 2 no. CO_2 tanks and weighbridge which are in lieu of those approved under 14/51399. A boiler house, carboscan container, 2 no. further CO_2 tanks, security hut at the weighbridge, a controls building, 3 no. digestate dispatch tank, 2 no. transformers, odour control unit, office extension, extension to the north -east corner of the yard and closure of the internal road linking the biogas facility to the wider Glenmore Estate at the south eastern corner of the site and all associated site works on lands accessed off the adjoining regional road r-253-1 associated with Glenmore Estates biogas facility

6.0 Policy Context

6.1. National and Regional Policy/Guidelines

6.2. Climate

- **Climate Action Plan 2019 (DECC, 2019)** - Sets out a framework to guide the country towards decarbonisation, with sectoral strategies for electricity and agriculture. These include to increase reliance on renewable energy sources, support micro-generation and selling into the national grid and the production of bioenergy from agriculture.
- **National Planning Framework** – Sets out strategic goals in respect of transitioning to a low carbon and climate resilient society and sustainable management of waste resources. Strategic outcomes include delivering 40% of electricity needs from renewables and increased uptake of anaerobic digestion

- **Regional Spatial and Economic Strategy (Northern and Western Regional Assembly) 2020-2032** – Supports the transition towards a low carbon economy and implementation of the Connaught Ulster Regional Waste Management Plan 2015-2021.

6.3. **Waste**

- **Connaught Ulster Region Waste Management Plan 2015 – 2021** – Sets out a framework for the prevention and management of waste in the region. The strategic vision of the plan is to rethink the approach to waste, by viewing waste streams as valuable material resources. Key measures in the Plan include to grow the biological treatment sector, in particular anaerobic digestion (and composting).

6.4. **Water**

- The **EU Water Framework Directive** aims to improve water quality and applies to all water bodies. The Directive runs in six year cycles and is currently in its second cycle 2016 to 2021. 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.

6.5. **Development Plan**

6.6. **Donegal County Development Plan 2018-2024**

6.6.1. The County Development Plan (CDP) sets out an overall strategy for the proper planning and sustainable development of the functional area of Donegal County Council. The following polices and objectives are relevant to this appeal:

6.7. **Waste**

- **Objective WES-O-7** seeks to support the implementation of the 'Connacht-Ulster Regional Waste Management Plan 2015-2021' insofar as it relates to the area of County Donegal and have regard to the plan targets and strategic objectives.
- **Objective WES-O-8** seeks to encourage the reduction, reuse and recycling of waste. While, Objective WES-O-9 aims to provide adequate services for:
    - The collection, treatment and disposal of household waste; and
    - The collection, treatment and disposal of commercial and industrial waste, where appropriate through partnership with the private sector.

- CDP Policies confirm through **Policy WES-P-5** that: It is a policy of the Council to prevent and minimise waste, to encourage and support material sorting and recycling, and to ensure that waste is managed and treated without causing environmental pollution.

6.8. **Energy**

- **Objective ED-O-9** seeks to maximise the appropriate development of the county's renewable energy resources and to support and facilitate the creation of a sustainable local renewable energy market place in Donegal from where energy operators can transport, store, trade and export their "local renewable energy product" to domestic and nondomestic markets subject to environmental designations and amenity considerations.

6.8.1. **Section 4.1.3** of the Economic Development Strategy, confirms that within the Rural Area Anaerobic Digestion can convert organic waste and wet biomass into renewable energy and new emerging technologies could be embraced to realise this sector's full potential.

- **T-O-14** aims to support the development of existing and emerging renewable energy

powered transport.

6.8.2. **Section 8.2** "Energy" is the main policy relating to renewables within the CDP. It states that its aim is to:

> *To facilitate the development of a diverse energy portfolio by the sustainable harnessing of the potential of renewable energy including ocean energy, bioenergy, solar, wind and geothermal, along with the sustainable use of oil and gas, and other emerging energy sources in accordance with National Energy policy and guidance. It is also an aim to facilitate the appropriate development of associated infrastructure to enable the harnessing of these energy resources and to promote and facilitate the development of Donegal as a Centre of Excellence for Renewable Energy.*

- **Objective E-O-1** aims to develop sustainably a diverse renewable energy portfolio to meet demands and capitalize on the County's competitive locational advantage. While, Objective E-O-4 seeks to facilitate a sustainable and diverse mix of developments which limit the net adverse impacts associated with global warming

such as promoting renewable energy, the growth of local farm produce and the promotion of sustainable modes of public transport.

6.8.3. These objectives are borne out through Policies:

- **E-P-2**: It is a policy of the Council to facilitate the appropriate development of renewable energy from a variety of sources, including, hydro power, ocean energy, bioenergy, solar, wind and geo-thermal and the storage of water as a renewable kinetic energy resource, in accordance with all relevant material considerations and the proper planning and sustainable development of the area.
- **E-P-3**: It is a policy of the Council to facilitate the appropriate development of the biofuels industry through ancillary infrastructure to enable the harvesting, storage and production of sustainable biofuel crops, in the context of other objectives and policies of this Plan.
- **E-P-6**: It is a policy of the Council to facilitate the development of proposals to convert waste to energy, including anaerobic digestion and dry digestion for farm or other wastes and by-products subject to compliance with other objectives and policies of this Plan.

6.9. Natural Heritage Designations

6.9.1. There are no natural heritage designations within the appeal site. the River Finn SAC (002301) is 0.5km from the site. Other sites considered relevant to this appeal is the Croaghonagh Bog SAC (000129) is 4.4km from the site and the Lough Eske & Cardamone Wood SAC (0000163) is from the 13.5km.

6.10. EIA Screening

6.10.1. An EIAR was submitted with the application as it exceeds thresholds specified under Planning and Development Regulations 2001-2018 Schedule 5, Part 2, Category 11 of the Planning and Development Regulations 2001 as amended which sets out the categories and scale of development that require mandatory EIA as follows:

> *"Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule and has the potential to cause significant environmental effects."*

7.0 The Appeal

7.1. Grounds of Appeal

7.2. There are two third party appeals on the file from (1) Glenmore Action Group and (2) Glenmore rivers. The issues raised may be summarised as follows:

7.3. Glenmore Action Group

7.3.1. Concern is raised about the scale of the prospered extension and how it will impact on residents lives. The existing plant has had a negative impact since it became active. There is a long and contrived planning history by Glenmore Generation at this site. The Board is required to assess this application de novo and to this end it is submitted that the assessment should begin with 11/60108 (digester facility serving existing farm) and follow the complex trail of applications, withdrawals, retentions, and grants to the current scheme which purports to double the processing capacity of the plant and for generations to come be an imposition on the community.

- **Project Splitting** – This is a textbook case of project splitting and is clearly at odds with the O'Grianna & Others v An Bord Pleanála. The biogas cannot exist in isolation. Its by-products and waste products need to be assessed in conjunction with the extension applications. The digestive is not a by-product, but a waste and concerns are raised as to where it is being disposed of.
- **Risk of Pollution** – The addition of three more digesters will increase the risk of leaks into nearby streams and the river Finn which is an SAC (002301). The potential for a catastrophic spill form the plant into the river Finn, with the associated damage to the salmon, sea trout and European eel species is significant.
- **Suitability of the Site** – The existing plant is 500m from the River Finn SAC. The proposed extension will be less than 400m on a steeply sloping hillside. The gradient of the access road is such that large vehicles, laden with heavy loads, are challenged on a daily basis in their attempts to reach the plant.
- **Water** – A hydraulic model of the existing Irish Water supply network was not undertaken and associated consultation with Irish Water was not deemed necessary.

- **Traffic** – The traffic generated from both the plant and Glenmore Farm has increased substantially on the R252, R253 and L2193. The large vehicles are continuously causing traffic congestion in the towns of Ballybofey and Stranorlar. The L2193 is unsuitable for the size of these large industrial tractors with tankers and articulated trucks which are continuously using the road.
- **Pelleting Process** – It is unclear what percentage of processed feedstock will be pelletized or what is left over when the procedure has taken place. What is the likelihood of potential negative consequences form the proposed pelleting process …… from dust, fumes, noise etc?
- **Surveys** – The DAHG report stated that the applicant is required to engage the services of a suitably qualified archaeologist to carry out pre-development testing at the site. Submitted that there is no such report on record to date.
- **Noise** – While the noise from the existing pant may be below the required legal levels it is still audible at night time in this quiet rural area. concern that the proposed additional three digesters and pelletizing process will exacerbate an existing nuisance.
- **Location** – The site is in an area of Medium Scenic Amenity as per the Development Plan. The futuristic appearance of the existing white domed buildings is out of character with the surrounding area.
- **Carbon Footprint** – The energy expended in the collection of feedstock from distant suppliers, the transport of gas to Northern Ireland and the transportation of digestate offsite, by large vehicles, negates the benefit of any green energy produced.
- **Disposal of Digestate** – Reference is made to the Halston Report: Chapter 3, Volume 2 of the EIAR (Sept 2018) Para 3.2(f)1 that states that "*30,000 tonnes of whole digestate will be produced for export off site annually*". There is concern as to where the digestate is stored during the period when spreading is not allowed and where there is enough DAFM approved lands available to spread in permitted periods.
- **Health Concerns** – In light of the high ammonia levels to be retained in the digestate, even after the AD process is completed concern is raised with regard to peoples mental and physical health. There is a sickly odour coming from the plant,

vehicles carrying material to and from the plant leave a lingering putrid smell and smell from the spreading of digestate is also offensive.

- **Climate Change** – Queried whether the intensive model of framing and agri-business as practised at this plant and adjoining farm is compatible with stated government plans to reduce carbon footprint.
- **Natural Justice** – Voice of the community is being ignored by Donegal County Council.

7.4. Glenmore Rivers

7.4.1. Glenmore Rivers is a tourist based private fishery located on the River Finn. The proposed anaerobic digester is located proximate to Glenmore River. Glenmore Rivers and the River Finn is internationally recognised for the quality of its fishing. The proposed development will place in jeopardy this outstanding amenity and business, its employees and the significant investment int eh business over the years. It is of singular concern that the applicants own AA did not rule out the potential for likely significant effects on the River Finn SAC.

- **Dangers to the River Finn arising from the operation of the proposed development** - The potential for a spill from the plant into the River Finn with the associated damage to the salmon, sea trout and European eel species is a very real concern. A spill of any nature arising from the operation of the proposed development could have a catastrophic impact on the River Finn given its environmental sensitivity. It could also result in a large fish kill and / or could lead to the suspension of fishing and as a consequence damage Glenmore Rivers value as a fishery. None of the meaures proposed by the applicants do or can eliminate the risk of a spill from the proposed development. The applicants track-record in this regard provides no confidence whatsoever that such risk can be avoided. On the contrary it demonstrates that the risk of the proposed development is one of exceptional environmental sensitivity and a development of this nature is entirely unsuitable in this location.
- **Uncertainty as to the disposal of the waste effluent generated from the proposed development** - It is beyond dispute that the proposed development will generate significant waste output which forms a significant environmental risk. Significant quantities of waste in the form of a pellet digestate product with high

nutrient levels will be generated. It is unsatisfactory that there is an absence of clarity as to the disposal of the waste generated arising form its operations. It appears there is a possibility, if not a probability, that it is proposed that this waste product will be spread over lands within the drainage basin of the River Finn.

- **Proposed Development is "project splitting"** - In advancing this application the applicant is engaged in a form of "project splitting". It is apparent that the proposed spreading of the waste generated from the new anaerobic digester is an integral part of its operation. However, this does not form part of the planning application and thus cannot be subject to a proper EIA and / or AA.
- **Inadequacy of Environmental Impact Statement Report** - The information used for the EIAR is inadequate and insufficient and does not enable or permit a proper assessment of the impact of the proposed development. These concerns are shared by the EHO (HSE). There has been a failure in the EIAR to adequately consider the cumulative impact of the proposed development. The assessment of noise, traffic and water quality is inadequate and deficient.
- **Inadequacy of Appropriate Assessment and Natural Impact Statement -** The information used for the AA and NIS is inadequate and insufficient and does not enable or permit a proper assessment of the impact of the proposed development on all relevant European Sites especially the River Finn SAC.
- **Previous Site History** - There is no adequate evidence that the applicants have complied with the conditions of previous planning applications or environmental licenses issued by the EPA. Given the site history it is indicated that the appclaint cannot be trusted to adhere to the conditions of any grant of planning permission or any license issued by the EPA.
- **Non-compliance with relevant planning and Government policies** - There is no sufficient evidence that the proposed development is compatible with the Connaught Ulster Regional Waste Management Plan 2015 – 2021 and / or government policies on waste recycling or reduction. Nor has compliance with local regional or national planning policy been established.
- **Inadequate Consultation** - There has been a lack of adequate and / or proper consultation with the local community and stakeholders in respect of the proposed development.

- **Request for Oral Hearing** - Glenmore Rivers requested the Board to conduct an oral hearing.

7.5. **Applicant Response**

7.6. The first party response to the appeal has been prepared and submitted by MBA Planning and may be summarised as follows. Submitted that none of the objections are founded in policy and importantly none seek to challenge the principle of development of the appeal proposal. The comments made largely relate to the existing facility which is a matter outside of the appeal process.

- **Project Splitting** – Project splitting only arises where development is carved up in such a way as to avoid any requirement for EIA. The criticism is entirely misplaced in this case where the application was accompanied by an EIAR. The case law cited by the appellants, in particular O'Grianna vs ABP simply does not have the relevance suggested. The issues of project splitting as it related to land spreading is not a matter for this appeal. Further noted that the production of digestate for land spreading is proposed to be significantly reduced under the appeal proposal.
- **Drainage & Water Pollution** – Drainage and water pollution controls have been adequately designed in acknowledgement of the sensitivity of the site in relation to proximity with the River Finn and with regard to all legislative and policy requirements as well as best practise guidance. Concerns raised with regard to a spill that occurred at the existing biogas site during commissioning is not a matter for this appeal. Following an investigation by the EPA and Loughs Agency the incident report was closed by all enforcement and regulatory bodies.
- **Cumulative Impacts** – Further information in respect of traffic associated with the proposed development was provided and this is considered to address all traffic and road related points raised by the appellants. In addition, the Noise Survey contained in the EIAR and provided as part of the FI response show that the Biogas Plant is in compliance with its EPA License limit values.
- **Inadequacy of the NIS** – The NIS concludes that if appropriate mitigation measures for this specific proposed development are implemented, the proposed development, either alone or in combination with other plans or projects will not result in any adverse effects on the integrity of the any Natura 2000 sites, in view

of their conservation objectives. The response to the further information provides further detailed mitigation measures to ensure that there will be no surface water of groundwater quality impacts during construction of the proposed development. The imposition as pre-commencement conditions is entirely appropriate and does not seek to undermine or contravene any obligations under the Habitats Regulations.

- **Previous Site History** – Planning and pollution control systems are separate by complementary systems of control and regulation designed to protect the environment from harm as a result of development and related operations. The relevant expertise and statutory responsibility for pollution control rests with the relevant pollution control authorities. It is confirmed that all relevant conditions required by previous permissions and associated environmental licenses have been substantially complied with.
- **Inadequate Consultation & Natural Justice** - There has been a long history of planning applications at the site. Each application has been subject to, and compliant with, the requirements of the Planning and Development Regulation 2001 (as amended) including the appeal proposals in terms of appropriate notification to the public. There is no statutory requirement in the legislation to undertake any form of consultation public or otherwise before submitting an application. Notwithstanding this the applicant undertook a number of pre-planning consultation activities outlined in the submission including community consultation and pre planning with DCC. Further noted that the appellants have actively engaged with the planning process and now the appeals process to voice concern.
- **Site Suitability** – The EIAR and FI address in full the ability of the proposals under this appeal to sit harmoniously with the River Finn designation. Regarding concern about the access, it is noted that this relates to the existing established use rights of the biogas plant which are not a matter for this appeal. Noted that the movements from the existing biogas site are to be reduced under this development proposal. Site suitability has also been confirmed in the context of the following:
  1) Policy in the CURWMP and the CDDP
  2) The EIAR which confirms the environmental parameters of the existing site remain the same or improved by the extension into the adjoining northern lands

3) The NIS which confirms that despite the process being activity c100m closer to the River Finn no potentially significant environmental harm will arise that cannot be appropriately mitigated against and

4) The locational requirements in practical terms for an enhancement proposal to be adjoining the facility if which it seeks to improve

- **The Role of Further Information** – DCC confirmed the FI response contained significant additional date and therefore required the submission of revised public notices. The FI falls squarely within the legislative boundary of what the role of FI should be under the EIA Directive and Planning Acts. Items (1), (3), (4), (7) and most of (8) relate to the operation of the existing Biogas plant. They are not mattes bearing direct relevant on the assessment of the appeal proposal but were provided none the less. The other FI responses are not new matters.
- **Pelletisation** – The position has been made clear in the EIAR and NTS Section 1.3. In summary it is proposed that 30,000 of digestate fibre will be subject to palletisation. This will produce about 10,000 tonnes of pelleted material.
- **Archaeology** – The DAHG report requested a pre commencement condition requiring an archaeological report to be submitted. The notification of decision to grant permission did not include this condition. In light of the findings of the EIAR the application has no objection to the inclusion of such a condition.
- **Visual Impact** – The impact of the appeal proposal is established by the context of the existing facility which sits on ground 8.5m higher than the appeal site. The application drawings confirm that all the tanks site a maximum of 3m above the existing biogas sites bunded yard. The tallest structure proposed is the fertiliser and associated stack. The fertiliser building will sit 3.5m below the top of the existing AD tanks, not including the domes for capturing biogas and the stack will sit about 0.7m below the lip of the AD tanks again not including the domes. This combined with being down slope and nestled in closer to the existing mature and sub mature woodland means that visual impact is acceptable. A Landscape Visual Impact Assessment is provided with the response.
- **Carbon Footprint**, **Disposal of Digestate**, **Health Concerns & Climate Change** – The appellant is inviting the Board to trespass upon rights established at the existing biogas facility with regards to comments on carbon footprint, disposal of digestate, health concerns and climate change. As such these are considered

irrelevant to the appeal. Further submitted that the appeal will reduce overall production of digestate and movements / land spreading associated with same.

- **Environment -** The application included a NIS. The NIS set out mitigation measures which would prevent impacts on the Finn River SAC. The planning authority was satisfied with this conclusion. The application included an EIAR. This identified 20 residential uses within the area, but all are 250m distant from the site. The EIAR demonstrated that no serious injury to residential amenity would arise for these receptors from dust, noise or odour. The proposed development will not give rise to water pollution.

7.6.1. The response was accompanied by the following:

- Department of Agriculture, Food and the Marine letter on Digestate
- Photomontages of Public Views of Existing Biogas Plant
- Annotated Site Layout Plan
- Commentary on Process
- EU Policy Drivers Infographic
- McCann Fitzgerald Legal Position Paper
- Landscape and Visual Impact Assessment

7.7. Planning Authority Response

7.7.1. The planning authority responded to the appeals to say that it was satisfied to rely on the contents of the Planners report and recommendation and had no further comments to make.

7.8. Observations

7.8.1. The Board has received 8 observations in relation to the proposed development from (1) Glenmore Action Group, (2) Carmel Martin & Others, (3) John Griffin & Genevieve Creane, (4) John Harte, (5) Francis O'Hara, (6) Rosemary Haughton & Others, (7) Anne Griffin & Others and (8) Annemarie Carolan & Others.

7.8.2. The issues raised relate to impact to River Finn, disposal of digestate, lack of adequate consultation with local residents, non-compliance with planning, scale, odour, noise, pollution, light pollution, traffic, impact to SAC, gradient of access of access road,

incremental growth of the development, impact to mental and physical health, accepting waste form Northern Ireland, project splitting, impact to surface water, visual impact of industrial development and spreading of digestate.

7.9. **Further Responses**

7.9.1. **EPA** – Glenmore Biogas Limited, Glenmore Estate, Aghaveagh was issued with an Industrial Emissions (IE) Licence (Register No P1004-02) on the 15th December 2015 for the recovery or disposal of waste and recovery or a mix of recovery and disposal, of non-hazardous waste. The license was transferred on 30th May 2018 from Glenmore Biogas Limited to Glenmore Generation Limited which is registered in Northern Ireland.

7.9.2. **Loughs Agency (x 2) -** The report recommends a number of conditions to be attached in relation to drainage, tank selection and installation, cleaning activities, storage, deliveries, pipelines, contingency plans. Stated that further information is required on the proposed area for disposal of digestate, which has not been clearly laid out. In the absence of such information the Agency would be reluctant to fully endorse this current proposal. In a further report it is submitted that there is insufficient information pertaining to the proposed locations for the spreading of digestate from the facility and details of emergency preparedness and response planning.

8.0 Assessment

8.1. This assessment is based on the plans and particulars submitted to the Planning Authority on the 21st January 2019 as amended by further plans and particulars submitted by way of further information the 21st May 2019 and revised public notices of 30th July 2019 together with further plans and particulars received by An Bord Pleanála.

8.2. I note the general concerns raised regarding the inadequacy of the EIAR and NIS submitted. While EIA and AA are dealt with under separate heading below I am satisfied that the EIAR complies with the requirements of Article 94 and Schedule 6 of the Planning and Development Regulations 2001 (as amended) and that the NIS complies with the requirements of Part XAB of the Planning and development Act 2000

(as amended). Further I am satisfied that together with my site inspection that there is adequate information on the appeal file to determine this appeal.

8.3. I further note the concerns raised with regard to the planning history pertaining to the site and compliance or otherwise with conditions attached. This is not a matter for An Bord Pleanála. The Planning Acts provide for a planning enforcement mechanism that is operated on the ground by local planning authorities. Accordingly, it is my view that any such concerns should be dealt with at local authority level. These comments are without prejudice.

8.4. With regard to the concerns raised that no meaningful consultation has taken place with local residents I refer to the Section 1.4.3 of the EIAR where details of the non-statutory consultation entered into by the applicant as part of the preparation of the application and EIAR and prior to the lodgement of the application are set out. I also refer to the first party response to the appeal where details of pre-planning consultations are also set out. Direct public consultation, while considered good planning practise in many cases, is not mandatory. I refer to the statutory requirement to publish / erect public notices (newspaper and site notice) the purpose of which is to inform the public of the proposed development and alert them as to its nature and extent. Third parties may then examine the files in detail at the planning office (or on the authority's website, where applications are put on the website) and, if they so wish, may lodge a submission or objection. In this regard I am satisfied that the public notices in this case are in accordance with the relevant statutory requirements and that the applicant has engaged in a public consultation process with the local residents. The extent or effectiveness of the public consultation process initiated by the applicant is not a matter for this appeal

8.5. For the purpose of clarity I would point out that the development now before the Board has been considered "de novo". That is to say that the Board considers the proposal having regard to the same planning matters to which a planning authority is required to have regard when making a decision on a planning application in the first instance and this includes consideration of all submissions and inter departmental reports on file together with the relevant development plan and statutory guidelines, any revised details accompanying appeal submissions and any relevant planning history relating to the application

8.6. Having regard to the information presented by the parties to the appeal and in the course of the planning application and to my site inspection of the appeal site, I consider the key planning issues relating to the assessment of the appeal can be addressed under the following general headings:

- Principle
- Other Planning Issues
- Appropriate Assessment
- Environmental Impact Assessment

8.6.1. Concerns raised in the appeal in relation to project splitting, risk of pollution, traffic impact, noise pollution, disposal of digestate, odour, climate change and impact to the River Finn SAC are dealt with under the Appropriate Assessment and Environmental Impact Assessment section of this report below.

8.7. **Principle**

8.7.1. The existing GGL Biogas Plant is identified by planning reference 14/51399 and amended by 15/51366 and 18/50910. The Glenmore Biogas Plant is authorised through planning and licencing permissions to accept and treat 90,000 tonnes of non-hazardous biodegradable waste. The Plant operates under licenses and approvals from the Environmental Protection Agency ('EPA') (Reg. No. P1004- 02) and the Department of Agriculture Food and Marine (DAFM) (Reg. No. BIOG100) which authorises and controls the operation of the plant whilst ensuring protection of environmental and human receivers. It is stated that a variation to respective licenses will be sought for the new development and processes proposed under this application in due course.

8.7.2. This planning application does not seek to amend the tonnage of the facility or the type of waste to be processed. Subsequently, it is submitted that there is no effect or change proposed to the following conditions attached to the 2014 permission and repeated in the 2018 permission:

> *2.a. A maximum of 90,000 tonnes per annum of raw materials shall be treated in the anaerobic digesters.*

8.7.3. The proposal provides for further development and alteration at, and adjacent to, the existing biogas plant and the introduction of technologies and techniques to enhance digestate products. This will increase the yields of biogas and value of digestates produced from the input feedstocks and it will also reduce the dependence on land application.

8.7.4. Feedstock for the facility is supplied by contract in part by the intensive cattle finishing business operating within a separate planning unit of the Glenmore Estate and other agricultural and food industries within a 2-hour radius, including poultry litter (25,000 tonnes) from chicken operators in Northern Ireland. It is expected that this will increase to become the main feedstock for the facility in the coming years subject to contract. These feedstocks are recovered through the biogas plant using anaerobic digestion ('AD') techniques for the primary purpose of producing biogas.

8.7.5. A by-product of the AD process is digestate which is a bio-fertiliser. Digestate is used to replace traditional chemical (mineral) and organic (e.g. slurries) fertilisers and is currently spread on the lands through contractual arrangements with separate legal entities including a 410-acre farm business at Glenmore Estate and across a further c. 2,500-acre farm at An Grianán Estate at Speenogue, Burt, Co. Donegal.

8.7.6. The primary rationale for the changes is to reduce the overall volume of digestate being produced by the site and to ensure that there is appropriate storage capacity available on site as opposed to on third party land owners farms as specified under the 2014 permission and to provide enhanced digestate products (in this case digestate fibre /pellets and ammonium sulphate) from the site to allow GGL to achieve its goals in terms of the quality of the produce from the site and satisfy licensing agencies. Both the DAFM and EPA, whom have regulatory functions associated with the operation of the plant, requiring GGL to provide for plans for management of digestate. This plan should include contingency in the event that lands application or off-site storage is not available during specific periods of the year (e.g., during closed spreading season or inclement weather conditions during the spreading season. The proposed alterations to processing arrangements at the plant, including enhancement of digestates and recirculation of digestate liquor, will provide the necessary infrastructure on site to satisfy digestate management regulatory requirements.

8.7.7. Following on from the above it is noted that the EU has established several cross sectorial policies, regulations, directives and actions with a clear target and roadmap aimed at sustainable energy regeneration, greenhouse gas emissions abatement, preservation of soil and aquatic systems and food security. The circular economy and bioeconomy are increasingly recognised as a strategy in achieving decarbonisation, regional development, energy security from renewable sources, along with environmental protection in Ireland. The existing GGL Biogas Plant is a 5MW renewable energy plant which will produce 8,000,000m^2 per annum of biogas and up to 153,000 tonnes of fertiliser. As documented the appeal proposal seeks the improvement of the process to reduce digestate by two thirds (contributing to reducing GHG and improving water quality) and will increase biogas generated from the facility by 30% as confirmed in the further information submission.

8.7.8. Overall, the scheme is in compliance with the Connacht-Ulster Region Waste Management Plan 2015 – 2021 which explicitly seeks the improvement of the pre-treatment processing of wastes to ensure the maximum value of products produced by renewable energy plants. The proposal is also consistent with the Donegal County Council Development Plan energy policy which seeks to facilitate the development of Anaerobic Digestor plants and facilities associated with the pelleting of biomass products. Having regard to the available information I am satisfied that the proposal will ensure the long-term sustainability of the development by improving its efficiency.

8.7.9. On the basis of the above policy, the selection and development of the proposal at the subject site is appropriate and compatible with EU, National, Regional and County Planning and Policy objectives.

8.8. Other Planning Issues

8.8.1. **Development Contribution** – Donegal County Council has adopted a Development Contribution scheme under Section 48 of the Planning and Development Act 2000 (as amended) and is in place since October 2016 namely the Donegal Development Contribution Scheme 2016-2021. While the proposed development does not fall under the exemptions listed in the scheme a reduction does apply. It is therefore recommended that should the Board be minded to grant permission that a suitably worded condition be attached requiring the payment of a Section 48 Development

Contribution in accordance with the Planning and Development Act 2000 (as amended).

8.8.2. **Archaeology** – The DAHG report requested a pre commencement condition requiring an archaeological report to be submitted. The notification of decision to grant permission did not include this condition. I refer to the EIAR where it states that review of the archaeological and built heritage databases confirms there are no material assets within the application site. I also refer to the planning history pertaining to the site and note that when the biogas facility was constructed no man-made heritage, features were uncovered. In light of the findings of the EIAR together with the recommendations of the DAHG it is recommended that should the Board be minded to grant permission that a condition be attached requiring predevelopment testing as the current proposal relates to land required to be developed for the extended area proposed which lay outside of the previous red line boundary.

8.8.3. **Office / Kitchen Effluent Disposal** – Permission is also sought for an extension to the office building second floor over the existing unit to provide for additional space for administrative related activities. In response to the request for further information the applicant submitted that the Office / Kitchen Effluent Disposal is by means of the existing system on site comprising a below-ground tank which contains receiving foul effluent generated from on-site toilets and that a permitted contractor is engaged to remove the contents of the tanks and dispose of at a licensed facility. I note that Condition No 24 of the notification of decision to grant permission required that prior to commencement of the office building, the applicant shall obtain planning permission for an appropriate means of effluent treatment and disposal to service this building. The *applicant was further advised that a planning application accompanied by a site suitability assessment shall be required*. While I support the general approach outlined in Condition No 24 I am concerned that to permit the proposed extension without adequate consideration and determination of the proposed means of effluent treatment and disposal would be premature and therefore inappropriate. While there is no objection to the proposed office / kitchen extension it is required that the appropriate means of effluent treatment and disposal is considered prior to the granting of same. Accordingly, it is recommended that a condition be attached requiring that the office / kitchen extension be omitted.

8.8.4. **EPA License** – The appeal was referred to the Environmental Protection Agency (EPA) for comment. In their response the EPA state that Glenmore Biogas Limited, Glenmore Estate, Aghaveagh was issued with an Industrial Emissions (IE) Licence (Register No P1004-02) on the 15th December 2015 for the recovery or disposal of waste and recovery or a mix of recovery and disposal, of non-hazardous waste. The license was transferred on 30th May 2018 from Glenmore Biogas Limited to Glenmore Generation Limited which is registered in Northern Ireland.

8.8.5. As noted above the Plant operates under licenses and approvals from the Environmental Protection Agency ('EPA') (Reg. No. P1004- 02) and also the Department of Agriculture Food and Marine (DAFM) (Reg. No. BIOG100) which authorises and controls the operation of the plant whilst ensuring protection of environmental and human receivers. The development proposals will require "licence review" of the existing EPA Industrial Emission Licence (P1004-02) and alterations to DAFM approval (BIOG100). The fertiliser plant aspect of the proposal will also require an additional approval from DAFM in accordance with it being classified as an organic fertiliser /soil improver plant. It is stated that a variation to respective licenses will be sought for the new development and processes proposed under this application in due course.

8.8.6. The process for EPA Licenses is separate to the planning code. The EPA is the relevant authority in regard to wastewater discharge authorisation and the setting of emission limit values (ELVs) on EPA licensed activities. Accordingly, emissions arising from the operational phase of the development, will be avoided by the statutory requirement for the applicant to obtain and operate the proposed development in accordance with an Industrial Emissions licence, which will specify emission limits for all relevant parameters. Monitoring of compliance with emission limit values will fall to the EPA

8.9. Appropriate Assessment

8.9.1. I refer to Volume 3 of the EIAR and Appendix 2.1 River Finn Conservation Objectives and Qualifying Interests (Source NPWS), 6.1 Natura Impact Assessment and Site Synopsis (NIS) and Appendix 6.2 Biodiversity Habitat Map therein together with the further information submitted to Donegal County Council comprising inter alia the

Construction Waste Management Plan, the Construction Environmental Plan and the Stormwater Response Programme.

8.10. Introduction

8.10.1. A Screening for Appropriate Assessment was completed for the project which could not rule out the potential for likely significant effects on the River Finn SAC (Site Code 002301), arising from the construction, operation and decommissioning phases of the proposed development at the site. Specifically, the proposed development has the potential to result in indirect and cumulative water quality impacts including pollution and siltation/sedimentation run-off during construction and nutrient input and eutrophication during operation, potentially affecting the freshwater aquatic qualifying interests of the River Finn SAC (Atlantic Salmon, Otter), with reference to their conservation objectives.

8.10.2. Therefore, in accordance with Article 6(3) of the Habitats Directive, a Natura Impact Statement (NIS) was submitted. The NIS concluded that proposed development works at the existing Glenmore Biogas Plant site will not have an adverse effect on the integrity of the Natura 2000 sites, alone or in combination with other projects or proposals, in respect of the requirements of Article 6(3) of the EC Habitats Directive (1992), transposed in Ireland as the EC (Birds and Natural Habitats) Regulations (2011).

8.11. Stage 1 Screening for Appropriate Assessment

8.11.1. As stated the application included a Natura Impact Statement to evaluate the potential impacts(s) of the proposed development on European Sites located within 15km radius. While 15km is not a statutory requirement I am satisfied that it is a reasonable parameter and that the sites identified in Stage 1 of the AA are acceptable.

8.11.2. The appeal site is not located within a designated Natura 2000 site. However, the River Finn SAC is c0.5km to the north of the appeal site. Other sites considered relevant to this appeal site include the Croaghonagh Bog SAC and Lough Eske and Ardnamona Wood SAC. Details are summarised as follows:

European Site	Distance (km)	Qualifying Interests	Conservation Objective

River Finn SAC (002301)	0.5km N	▪ Salmon ▪ Otter ▪ Oligotrophic waters containing very few minerals of sandy plains ▪ Northern Atlantic wet heaths ▪ Blanket bogs ▪ Transition mires and quaking bogs	The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest.

River Finn SAC (002301) Conservation Objectives

- Conservation Objectives for Salmon Salmo salar is to maintain the favourable conservation condition of Atlantic Salmon in River Finn SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives.
- Conservation Objectives for Otter Lutra lutra is to maintain the favourable conservation condition of Otter in River Finn SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives
- Conservation Objectives for Oligotrophic waters containing very few minerals of sandy plains is to restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) in River Finn SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives
- Conservation Objectives for Northern Atlantic wet heaths with Erica tetralix is to restore the favourable conservation condition of Northern Atlantic wet heaths with Erica tetralix in River Finn SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives
- Conservation Objectives for Blanket bogs (* if active bog) is to restore the favourable conservation condition of Blanket bogs (*if active bog) in River Finn SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives
- Conservation Objectives for transition mires and quaking bogs is to restore the favourable conservation condition of transition mires and quaking bogs in River Finn SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives

Croaghonagh Bog SAC (000129)	4.4km S	▪ Blanket bogs	Conservation Objectives for : Blanket bogs is to restore the favourable conservation condition of Blanket bogs (* if active bog) in Croaghonagh Bog SAC, which is defined by the list of attributes and targets set out by the NPWS
Lough Eske and Ardnamona Wood SAC (000163)	13.5km S.W.	▪ Freshwater Pearl Mussel ▪ Salmon ▪ Oligotrophic waters containing very few minerals of sandy plains ▪ Petrifying springs with tufa formation ▪ Killarney Fern ▪ Old sessile oak woods with Ilex and Blechnum in the British Isles	The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest

Lough Eske and Ardnamona Wood SAC (000163) Conservation Objectives

- Conservation Objectives for Freshwater Pearl Mussel Margaritifera Margaritifera is to restore the favourable conservation condition of Freshwater Pearl Mussel (Margaritifera margaritifera) in Lough Eske and Ardnamona Wood SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives
- Conservation Objectives for Salmon Salmo salar is to restore the favourable conservation condition of Atlantic Salmon (Salmo salar) in Lough Eske and Ardnamona Wood SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives
- Conservation Objectives for Oligotrophic waters containing very few minerals of sandy plains is to restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) in Lough Eske

and Ardnamona Wood SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives

- Conservation Objectives for Petrifying springs with tufa formation (Cratoneurion) is to maintain the favourable conservation condition of Petrifying springs with tufa formation (Cratoneurion)* in Lough Eske and Ardnamona Wood SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives
- Conservation Objectives for Killarney Fern Vandenboschia speciosa is to maintain the favourable conservation condition of Killarney Fern (Vandenboschia speciosa) in Lough Eske and Ardnamona Wood SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives
- Conservation Objectives for Old sessile oak woods with Ilex and Blechnum in the British Isles is to maintain the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum in the British Isles in Lough Eske and Ardnamona Wood SAC, which is defined by the list of attributes and targets set out in the NPWS Conservation Objectives

8.11.3. Given the distance, the lack of hydrological connectivity and lack of impact pathways the Croaghonagh Bog SAC and Lough Eske and Ardnamona Wood SAC (000163) have been screened out from further consideration.

8.11.4. There are a number of surface water features at the site. The largest of these is a stream which carries runoff water from lands and field drainage ditches up gradient of the site. The stream then runs in a north-eastern direction through the woodland before it meets and crosses the existing access lane which runs through Glenmore Estate before it discharges to the roadside ditch beside the junction of the R252 and R253. This roadside drainage ditch subsequently discharges into the River Finn (through field culverts) east of Glenmore Bridge.

8.11.5. The existing plant is located approximately 550 metres from River Finn SAC. There are no aquatic habitats within the proposed development area. The aquatic habitats present in the woodland to the north of the site (stream) are not evaluated as having any fisheries value, due to the high gradient and seasonal flow regime; particularly with reference to the designation of Atlantic salmon as a qualifying interest of the River Finn SAC.

8.11.6. There is potential for significant indirect and cumulative effects on the River Finn SAC, arising from the construction, operation and decommissioning phases of the development. Specifically, the proposed development has the potential to result in water quality impacts including pollution and siltation/sedimentation run-off during construction and nutrient input and eutrophication during operation, potentially affecting the freshwater aquatic qualifying interests of the River Finn SAC (Atlantic salmon, Otter), with reference to their conservation objectives.

8.11.7. On the basis of the findings of the Screening for Appropriate Assessment, it is concluded that the proposed development:

- is not directly connected with or necessary to the management of a Natura 2000 site; and
- has the potential for significant adverse effects on the River Finn SAC, with reference to surface water impact pathways affecting water quality.

8.11.8. Therefore, further consideration is required.

8.12. Stage 2 Appropriate Assessment

8.12.1. The Screening process above has examined the potential for the proposed development to cause adverse effects on Natura 2000 European Sites and qualifying features of interest. A number of species have been identified which require to be brought forward for further consideration due to potential for adverse effects as a result of the proposed development in the absence of appropriate mitigation measures.

8.12.2. The following impacts with potential to adversely affect the conservation objectives of the identified Natura 2000 sites were considered in the NIS.

8.13. Direct Effects

8.14. Construction Phase

8.14.1. None of the qualifying interests of the River Finn SAC, either habitats or species, occur within or directly adjacent to the site or its associated infrastructure. There is no suitable habitat within the proposed development site to support the freshwater qualifying interests of the River Finn SAC. The SAC boundary follows the riparian corridor of the River Finn. There are no pathways for direct impacts associated with the proposed development during the construction phase of the works. The agricultural land use within and adjacent to the development site, in addition to the distance of the

works areas from the River Finn corridor would preclude any effects which may significantly impact on the conservation objectives for either Atlantic Salmon or Otter, with respect to their conservation status.

8.15. **Operation Phase**

8.15.1. The proposed development will operate following the Project Description as set out in Chapter 3 of the EIAR which accompanies the Planning Application. Water management will comprise a fully closed-loop system where process effluents are recycled to the anaerobic digestion process.

8.15.2. Development works and proposals to alter and install new processes areas at the biogas plant are being undertaken to enhance digestates and reduce overall volumes of low value whole digestate. This is driven by the digestate management plan. Presently digestate produced at the GGL biogas plant is spread to agricultural land as whole digestate fertiliser. Because the spreading of digestate to land is controlled and informed by the European Nitrates Directive and agricultural nutrient management plans (NMPs), whole digestate requires the availability of significant suitable lands for application and digestate storage for the closed spreading season. The development proposal will;

- increase the value of the digestate;
- create new markets for digestate products;
- reduce the dependence on land application;
- ensure more secure and sustainable outlets for digestate products; and
- reduce the operating cost of the plant.

8.15.3. There will therefore be no operational discharge directly to the River Finn SAC. In the absence of any discharges to the River Finn, and taking account of the separation by distance from the site, there are no pathways for direct impacts identified which would have the potential for significant adverse effects on any of the qualifying interests of the River Finn SAC.

8.16. **Indirect Effects**

8.17. **Construction Phase**

8.17.1. The proposed works have the potential to give rise to indirect water quality impacts during the construction phase due to surface water run-off leading to diffuse discharge

of pollutants or suspended solids. The baseline water quality within the wider study area is evaluated as being of 'Moderate status'; however, the project must not preclude the potential for the River Finn SAC to reach 'Good status', or achieve the compliance parameters for Atlantic salmon and Otter to reach their Conservation Objectives.

8.17.2. The potential impacts with reference to water quality during the construction phase may arise due to connectivity to minor drains and watercourses in the vicinity of the development site This gives rise to pathways for surface water /storm water run-off with downstream connectivity to the River Finn SAC. During construction the potential indirect, temporary impact is as a result of hydrocarbon contamination and siltation associated with installation of the proposed digestate lagoon and the trenching works required for the pipeline connection.

8.17.3. There is potential for adverse effects in the absence of appropriate mitigation measures.

8.18. **Operation Phase**

8.18.1. Indirect impacts affecting the qualifying interests are limited to potential water quality effects extending downstream which may adversely affect Atlantic salmon and Otter within the River Finn SAC. The principle pollution threats are from (a) failures of tanks, pipe work, and materials delivery and storage and (b) discharge of clean stormwater to a receiving watercourse to the north of the site.

8.19. **Cumulative and In-Combination Effects**

8.19.1. The proposed development is associated with the existing and consented biogas facility within the Glenmore Estate. Taking account of the site location and its discreet construction and operational regime, there are no other plans or projects, consented or in planning, which would have the potential to interact cumulatively or in combination with the current proposal. In the absence of significant adverse effects on the aquatic ecology of drainage ditches and streams in the vicinity of the proposed development, there are no cumulative impacts which would preclude the potential for the River Finn main channel within the SAC to achieve 'Good Ecological Status'. The pressures and drivers of water quality in the SAC are located upstream of the proposed development and are not associated via any potential impact pathways.

8.20. **Mitigation**

8.21. Mitigation measures to prevent possible impacts arising from the proposed project are as follows

8.22. **Construction Phase**

8.22.1. Potential indirect impacts affecting the River Finn SAC have been identified during the construction phase. The proposed measures to remove the risk from potential contamination and emergency procedures to be implemented in the event of an accidental spill of potentially contaminating substances outlined in the NIS and further information:

- A Surface Water Management Plan: This will be iterative and will follow an adaptive management structure to ensure its effectiveness in delivery of the surface water quality requirements set out in the Surface Water Regulations (2009) and the Salmonid Regulations (1988). Site-specific monitoring criteria will be developed to ensure that the construction works are managed within the effective parameters to ensure that discharges from the site will not adversely affect Atlantic salmon or Otter. Suspended solids exposure will be with reference to physiological impacts, siltation within substrates and habitat impacts; with implications for populations of these species migrating through the River Finn within the SAC boundary.
- An Erosion and Sediment Control Plan: This will provide for the effective management and limitation of sediment run-off and siltation over land to downstream watercourses, with management controls specified to avoid any siltation affecting the main channel of the River Finn. This Plan will incorporate construction stage design proposals from the site engineer, with specialised input from experienced environmental scientists such as a hydrologist, hydrogeologist and aquatic ecologist.
- Method Statements shall be submitted in full by the contractor to Donegal County Council and IFI /Loughs Agency for review and approval two weeks prior to the commencement of the works on site.
- The Contractor shall avoid water quality impacts through the provision of attenuation measures, silt traps or geotextile curtains to reduce and intercept sediment release from construction areas to the riparian zone.
- The Contractor shall ensure that all fuel or lubricating oils stored in bulk on the site are located as far as reasonably possible and outside of a 50m buffer from any

minor watercourse draining the works area. These stores will be kept covered and surrounded with an effective bund capable of holding the full contents of the store, and shall be kept locked when not in use.

- The Contractor will inspect machinery for leaks on a daily basis.
- The Contractor will ensure that no stockpiling of loose soil or spoil occurs within 50m of any minor watercourse or land drain. Storage compounds / works areas will be secured prior to commencement of works.
- The Contractor will ensure that any waste material is disposed of at a licenced facility approved to take this waste stream. The waste material destination will be specified in the CEMP.

8.22.2. Decommissioning impacts which would have the potential to affect the River Finn SAC, in the absence of mitigation, are limited to ground works, excavation and machinery operation which could adversely affect water quality within the River Finn main channel within the SAC designation. Such impacts are in line with and directly comparable to construction stage effects as described above.

8.23. **Operation Phase**

8.23.1. Mitigation meaures that will form part of the proposed development to ensure that adverse effects in the surface water and treated trade effluent discharge arising from the site can be avoided are set out below.

- Applications for alterations to the existing EPA license (P1004-02) and DAFM approval (BIOG100) will be sought. Separate approval in accordance with DAFM requirements will be sought for operation of the fertiliser plant.
- Management systems and licences require frequent inspection and monitoring of processes and emissions. Compliance with surface water quality commitments will require that there is no discharge off site, of polluting effluents to land or to any surface water feature within the River Finn catchment.
- As the development proposals involve changes to processes (enhancement and reduced demand for harvested rainwater) and construction of new processing areas resulting in an increase to impermeable surfaces, there will be an increase in surface water runoff which will require management. This is to be achieved through the collection, treatment monitoring and discharge of clean stormwater using an isolated separate drainage system and attenuation tank. The system has

been designed in accordance with policy F-P-5 of the Donegal CDP 2018-2024, which states

- The surface water attenuation tank has been designed to the 1% AEP event and provides for supplementary in-line controls (automated shut-off values, penstock chambers, and a monitoring and inspection chamber) to protect the downstream receiver
- The proposed site provides for separate drainage systems for dirty and clean areas at the site. The digestate enhancement proposals will result in reduced demand for harvested stormwater at the site (because low ammonia digestate will be returned from the back end of the process to the front end of the process for mixing of feedstocks in substitution for clean water). Therefore, clean stormwater will be collected and managed using a proposed stormwater attenuation structure from three areas of the site
- A large stormwater attenuation structure with a capacity of 1,250m3 will be constructed as part of development works on lands adjoining the northern boundary of the existing plant. The structure includes four internal chambers (with penstocks) to provide for isolation, attenuation and water quality testing. The structure will also provide reserve water for process use (if required). The system will provide for a controlled discharge of clean stormwater to a local watercourse (5l/s/ha) via a throttle pipe and downstream oil interceptor.
- Automated shut-off valves will be fitted to the outflow from inspection chambers /pumping stations upstream of the stormwater attenuation structure. In the event that stormwater from any of the areas becomes contaminated from on-site processes sources, the corresponding valve will automatically close on the outflow from inspection chambers /pumping stations activated by continuous in-situ instruments (such as turbidity and dissolved oxygen probes).
- It is also proposed to install continuous in-situ monitoring instrumentation within the final chamber of the stormwater collection system. A stormwater response programme comprising daily inspection and sampling of water in the final chamber will be implemented as part of the EMS for the site.
- All potential effluent generating areas are being moved to internal locations, e.g. vehicle washdown areas within the biogas site and digestate dispatch areas. This

will reduce the potential for interaction with clean stormwater drainage system at the site.

- The operational management and maintenance of the development proposal will necessitate frequent monitoring. Compliance with surface water quality commitments will require that there are no discharges of process effluent off site, to land or to any surface water feature within the River Finn catchment.
- All digester vessels (including hydrolysis tanks) and ammonium sulphate storage tanks will be contained in concrete bunds designed to provide for retention in accordance with EPA guidance, i.e. to a volume not less than the greater of the following:
  i) 110% of the capacity of the largest tank or drum within the bunded area,
  ii) 25% of the total volume of the substance which could be stored within the bunded area,
- Feedstock handling, vehicle washing and handling of digestates will all be undertaken indoors with suitable drainage system provided to contain localised spills /drips and recover these to the AD process;
- Movement of digestates to the fertiliser plant will be via enclosed (above-ground) pipelines which will provide for inspection;
- Effluents generated within the feedstock reception building or fertiliser building will be recovered to the AD process for treatment.

8.23.2. There are no other specific mitigation measures proposed for the operational phase of the proposal.

8.24. **Monitoring**

8.25. Monitoring measures to prevent possible impacts arising from the proposed project are as follows

8.26. **Construction -**

8.26.1. Surface water quality monitoring during the construction stage of the proposed development will be required, within the minor watercourses draining the site, in order to monitor compliance and manage downstream siltation effects. An appropriately qualified environmental scientist or aquatic ecologist will be engaged separately to the appointment of the Contractor and will provide input into the construction phase

management plans and compliance monitoring. This role will include an ongoing review and compliance reporting with reference to the implementation of mitigation measures and avoidance of impacts adversely affecting the qualifying interests of the River Finn SAC.

8.27. **Operation -** Any exceedances identified during the operational monitoring of the proposed development will be recorded, reported and corrective action undertaken, with reference to licence compliance conditions. In the event of exceedances recorded the operator will be required to take immediate action (notwithstanding reporting, direction or requirements issued by Donegal Co. Co., EPA or Loughs Agency) in order to prevent further contamination of water quality within the River Finn SAC. It will be necessary to undertake post-event follow-up monitoring, to include a full suite of chemical and biological sampling, in order to establish the significance of exceedance events and implications for the qualifying interests of the SAC.

8.28. **Conclusions**

8.28.1. am satisfied that an examination of the potential impacts has been analysed and evaluated using the best scientific knowledge. Significant effects on Natura 2000 sites were identified. Where potential adverse effects were identified, key design features are prescribed to remove risks to the integrity of the European sites. I am satisfied based on the information available that if the key design features are undertaken, maintained and monitored as detailed in the NIS, adverse effects on the integrity of Natura 2000 sites will be avoided.

8.28.2. I consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the River Finn SAC (002301) or any other European site, in view of the site's Conservation Objectives.

8.29. **Environmental Impact Assessment**

8.29.1. I have carried out an examination of the information presented by the applicant, including the EIAR, and the submissions made during the course of the application and appeal. A summary of the results of the submissions made by the planning authority, prescribed bodies, appellants and observers, has been set out in the

foregoing sections of this report. The main issues raised specific to EIA relate to project splitting, risk of pollution, traffic impact, noise pollution, disposal of digestate, odour, climate change and impact to the River Finn SAC. These issues are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation, including conditions.

8.29.2. Concern is raised that the information relating to land spreading is not contained within the submitted documentation and is therefore project splitting for the purposes of the EIA Regulations and the EIAR is incomplete. I refer to the planning history pertaining to the site. The Glenmore Biogas Plant is authorised to accept 90,000 tonnes of feedstock and to generate more that 150, 000 tonnes of whole digestate. The proposed development does not change the amount of feedstock but will substantially reduce the volume of whole digestate (to 30-40,000 tonnes) and, indeed the outputs from the process by half. Project splitting only arises where development is carved up in such a way as to avoid any requirement for EIA. In this case the application was accompanied by an EIAR. I also refer to the further information submitted together with the response to the appeal including the letter from the Department of Agriculture, Food and the Marine where it states inter alia that digestate produced forma bio gas plant using the EU transformation parameters is considered to be an organic fertilizer / soil improver (OFSI) as defined in the EU Animal By-product Regulations. Overall I agree with the applicants that the case law cited by the appellants, in particular O'Grianna vs ABP simply does not have the relevance suggested.

8.29.3. As documented the appeal will reduce overall production of digestate and movements / land spreading associated with same. Even if it were conceded that the effects of individual dairy supply farms are indirect effects it remains that the environmental effects of digestate have been addressed in the planning application, further information and appeal response and have not been excluded completely. Overall, I am satisfied that that issues of project splitting do not arise in this case.

8.29.4. With regard to potential transboundary effects the proposed development includes the spreading of digestate in lands in Northern Ireland. My understanding is that land spreading in the North is also the subject to statutory control under the Nutrient Action Programme 2019-2022 and would be a matter for this jurisdiction.

8.1. Introduction

8.1.1. The relevant classes of development that require EIA are set out in Schedule 5 of the Planning and Development Regulations 2001 (as amended). Schedule 5 transposes Annex 1 and Annex II of the EU EIA Directive (85/337/ECC as amended) into Irish Law as Parts 1 and 2 of the Schedule. The requirement for EIA and the subsequent EIAR arises in this instance on the basis that the development falls within Schedule 5, Part 2, Category 11 of the Planning and Development Regulations 2001 as amended:

> *Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule and has the potential to cause significant environmental effects.*

8.1.2. The plant is permitted to accept and treat 90,000 non-hazardous biodegradable wastes primarily comprising agricultural (e.g. beef slurry and poultry manure) and food waste (e.g. material with a high content of fat, protein or sugar such as fish waste, catering waste, fruit /vegetable waste) and transform these materials into sustainable products using anaerobic digestion (AD) under planning application 14/51399. Both the 2014 amending EIA Directive (Directive 2014/52/EU) and the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 are applicable in this instant case.

8.1.3. The EIAR is prepared in support of proposed changes to the site layout, process layout and infrastructural components of the biogas plant. Because the existing biogas plant is already operational, the EIAR provides an assessment of the cumulative impacts of the existing plant and construction of new components (extensions) and changes to processes. The proposed processing stages at the plant are described under the following process stages:

- STAGE 1: Feedstock Reception and Mixing (within biogas plant)
- STAGE 2: Anaerobic Digestion (within biogas plant)
- STAGE 3: Pasteurisation of Digestate (within biogas plant)
- STAGE 4: Enhancement of Digestate (within fertiliser plant)

8.1.4. The proposed construction of a fertiliser plant (Stage 4) to enhance digestate produced at the biogas plant is driven by the digestate management plan. Presently digestate produced at the GGL biogas plant is spread to agricultural land as whole digestate fertiliser (grassland and arable agriculture) and is considered an excellent fertiliser as it contains useful quantities of N, P and K.

8.1.5. Although this is a good use of the nutrients within the digestate, the value of the digestate is relatively low and the volumes produced are high (relative to inputs). Because the spreading of digestate to land is controlled and informed by the European Nitrates Directive and agricultural nutrient management plans (NMPs), whole digestate requires the availability of significant suitable lands for application and digestate storage for the closed spreading season.

8.1.6. The proposed construction of a fertiliser plant (coupled with proposed alterations to the existing biogas plant processes - hydrolysis phase and recirculation of low ammonia digestate liquor) are designed and incorporated to:

- increase the value of the digestate;
- create new markets for digestate products;
- reduce the dependence on land application;
- ensure more secure and sustainable outlets for digestate products; and
- potentially reduce the operating cost of the plant.

8.1.7. The proposed site layout is presented in Drawing Ref. No. 17-101-P30. A process flow diagram for the site which includes proposed development and alterations is presented in Figure 2.4 of the EIAR Volume 2.

8.2. Compliance with Legislation

8.2.1. The EIAR consists of three volumes, grouped as follows:

- Volume 1: Non-Technical Summary
- Volumes 2 Environmental Impact Assessment Report
- Volume 3 Appendices
- EIAR Addendum (Consultation Update & Statement of Competency)

8.2.2. In accordance with Article 5 and Annex IV of the EU Directive, the EIAR provides a description of the project comprising information on the site, design, size and other relevant features of the project. It identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (c) land and soils, water (hydrology and hydrogeology), air quality, noise & vibration and climate; (d) material assets including waste, traffic & roads and

wastewater discharge; cultural heritage and landscape & visual and it considers the interaction between the factors referred to in points (a) to (d).

8.2.3. The contributors / competent experts involved in the preparation of the EIAR are set out in Section 1.4.4 of the EIAR and accompanying Addendum. I note the qualifications and expertise demonstrated by the experts involved in its preparation and I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality. No specific difficulties are stated to have been encountered in compiling the required information or in carrying out the assessment.

8.2.4. The EIAR provides an adequate description of forecasting methods and evidence used to identify and assess the significant effects on the environment. It also provides a description of measures envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects. The mitigation measures and monitoring arrangements are presented at the end of each chapter of the EIAR. Environmental Interactions are addressed in Chapter 12.

8.2.5. I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR and supplementary information provided by the developer, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with article 94 of the Planning and Development Regulations 2000, as amended.

8.3. Vulnerability to Risk of Major Accidents and / or Disaster

8.3.1. The requirements of Article 3(2) of the Directive include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disaster.

8.3.2. A biogas plant involves complex processing engineering and it is important that they are designed, constructed, commissioned and operated in a sustainable, efficient and reliable manner with safety being considered at both personnel and plant level. If the appropriate protective measures are taken, hazards in and around biogas plants are limited and are reduced to the extent that the risk is low. The EIAR addresses the risk of accidents and unplanned events which may either be caused by or have impact on the proposed development have been assessed. A risk-based approach has been employed and is detailed in the following chapters: biodiversity, soils and geology, water, air quality, odour and climate, traffic and transport and noise and vibration.

8.3.3. The proposed volumes of biogas which will be stored on site at any given time will be below the qualifying quantity for application of the Control of Major Accident Hazards (COMAH) Regulations (i.e.,50 tonnes). The site is not connected to or close to any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations i.e. SEVESO and so there is no potential effects from this source. Given the nature of and volumes of materials proposed to be stored on-site the Serveso Regulations would not apply.

8.3.4. As stated the building and operating a biogas plant presents health and safety risks both during construction and operation. At the start of the construction stage of the project, a Project Supervisor for the Design Process (PSDP) and a Project Supervisor for the Construction Stage (PSCS) will be appointed. The PSDP will be responsible for the compilation of the safety file for the client. The role of the PSCS will be to manage and co-ordinate health and safety matters during the construction stage. In order to control potential negative impacts during construction, a Construction Environmental Management Plan (CEMP) will be developed and implemented by the nominated Contractor. Mitigation measures outlined within the various section of the EIAR will be incorporated into the CEMP. Post mitigation, impacts to population and human health during the constructions (and decommissioning stages) are predicted as short-term direct and indirect slight positive short-term. Decommissioning phase impacts are likely to be broadly similar to construction phase impacts, in terms of disturbance through increased noise levels, ground clearance works, and reinstatement; and potential surface water quality impacts from ground disturbance, re-fuelling and the storage of potentially hazardous materials onsite. A Decommissioning Plan will be put in place, containing specific actions aimed at high quality habitat restoration of areas impacted by the decommissioning works.

8.3.5. There are a number of hazards associated with the operation of a biogas including environmental, biological, gas, mechanical, electrical etc. Due to the complex process engineering involved at biogas plants, it is important that the activity is strictly operated in accordance with licenses (EPA and DAFM), health and safety legislative requirements and international best practice.

8.3.6. As previously documented the Plant operates under licenses and approvals from the Environmental Protection Agency (‘EPA’) (Reg. No. P1004- 02) and also the Department of Agriculture Food and Marine (DAFM) (Reg. No. BIOG100) which

authorises and controls the operation of the plant whilst ensuring protection of environmental and human receivers. The development proposals will require "licence review" of the existing EPA Industrial Emission Licence (P1004-02) and alterations to DAFM approval (BIOG100). The fertiliser plant aspect of the proposal will also require an additional approval from DAFM in accordance with it being classified as an organic fertiliser /soil improver plant. It is stated that a variation to respective licenses will be sought for the new development and processes proposed under this application in due course.

8.3.7. A Supervisory Control and Data Acquisition ("SCADA") system is installed at the existing site to monitor the performance of the biogas plant. The SCADA system will be updated to reflect proposals. Warning signs and security infrastructure will be in place around the site in accordance with Health and Safety Legislation to protect workers, including visitors and contractors. The following controls are included within the design to reduce and control hazards:

- The plant will be operated in accordance with the requirements of an accredited safety management system, such as ISO 45001;
- The plant has been designed to reduce risks from hazards;
- All infrastructure associated with the collection and storage of gas is and will be installed and tested by competed engineers.
- An enclosed flare is included at the existing site for use in emergency situations;
- Pressure relief valves are, and will be, fitted to existing and proposed gas domes;
- Annual routine maintenance will be carried at the plant;
- Workers will be required to wear appropriate PPE and carry personal gas detection monitors when working in certain areas of the plant and when carrying out certain activities.

8.3.8. Other mitigation measures to ensure that adverse effects do not occur as a result of the operation include:

- Feedstocks will not be handled outside the main processing building;
- The feedstock reception building and fertiliser processing buildings are totally enclosed and provides for controlled operating conditions.;

- The extraction system and odour control units serving both buildings will ensure that the inside of the building is maintained under negative pressure. This prevents uncontrolled fugitive odour emissions when access doors are opened;
- Air extracted from the feedstock reception building is treated using the odour control system before exhausting and dispersing to atmosphere;
- New digester vessels will be constructed in concrete (cast in situ) to ensure integrity of the structure. Integrity testing of all structures will be undertaken as part of commissioning works. The digester vessels will also be fitted with air tight covers to prevent uncontrolled releases of gases /odours;
- The design of the extension area includes for the construction of a concrete bund which will encompass and contain spillage associated with site activities. Similar to the existing site, digester vessels constructed within the concrete bund is designed in accordance with best practice to contain 110% of the largest vessel within the bund or 25% of total vessel contents within the bund structure, whichever is greater

8.3.9. Further detailed mitigation meaures in relation to the construction and operation of the plant is provided with Chapters 6 to 11 of the EIAR

8.3.10. It is considered that having regard to the nature and scale of the development itself, there are unlikely to be any effects deriving from major accidents and or disasters and I am satisfied that this issue has been addressed satisfactorily in the EIAR.

8.4. **Alternatives**

8.4.1. An outline of the main alternatives studied by the Applicant and an indication of the main reasons for the choice of project, considering the environmental effects, is provided in Chapter 4. There has been no consideration of alternatives in respect of the existing biogas plant since such consideration would be of no benefit to the EIA in light of its consented status. Consequently, Chapter 4 identifies the extent to which alternatives have been considered in respect of future development proposals outlined in Chapter 3.

8.4.2. The main alternative in physical and design terms considered in detail was a digestion storage facility ('DSF') located approximately 700m SW of the existing biogas plant. The rationale for the DSF was the requirement to store digestate produced by the biogas facility during the closed spreading season or other times (e.g., during periods

of poor weather conditions). However, the DSF facility was not progressed due to a number of environmental effects relating to the requirement to clear-felling of c 3ha of forestry land, requirement for a significant cut exercise involving rock removal proximate to residential receptors and the sterilisation of agricultural land. A further factor was the local community resident perception of harm which was expressed through community consultation exercises the Applicant held over the course of 4 months. A do-nothing scenario will constrain and limit the operating potential of the GGL biogas plant in its role in supporting the principle of the circular economy.

8.4.3. Other storage technological options were assessed but were ruled out following assessment of available demonstrated technological options, potential for environmental impacts and consultation with stakeholders.

8.4.4. The level of detail of the consideration of alternatives is reasonable and commensurate with the project. I am satisfied that the requirements of the Directive in terms of consideration of alternatives have been discharged.

8.5. Consultations

8.5.1. Details of the non-statutory consultation entered into by the applicant as part of the preparation of the application and EIAR and prior to the lodgement of the application are set out in Section 1.4.3 of the EIAR. Pre-planning consultation meetings were undertaken with the Planning Department of Donegal County Council on the 15th August 2017 and 28th August 2018. Various Consultations were also undertaken with the Department of Agriculture Food and the Marine (DAFM), Donegal County Council and the Environmental Protection Agency (EPA) in respect of development and enhancement proposals during the period August 2017 to August 2018. Three community consultation events have been held in advance of the application being lodged (October 2017, November 2017 and September 2018). The concerns were considered as part of the EIAR process and are addressed in relevant chapters. I am satisfied that the participation of the public has been effective.

8.6. Construction & Commissioning

8.6.1. I refer to Section 3.3 of the EIAR. The development is likely to occur over an estimated 8-month period, during which time construction activities will have the potential to impact the existing environment. After the estimated 8-month construction period, it is expected that new infrastructure and processes will be commissioned and capable

of operating as designed. It is stated that the specific details of the construction programme are not currently known as such this programme will be developed by the main contractor. It is therefore difficult to assess the staffing and delivery levels for the development. However, it is considered that the design and proposed layout of the facility has developed sufficiently to discuss the potential environmental impacts of proposed construction methods. An estimate of construction traffic volumes has been made for a site of this size and typical works associated with a development of this type are described.

8.6.2. The timing of the commencement of construction is subject to planning, design, tendering and ecological constraints. It would be expected, that any works associated with site clearance and removal of soils will be seasonally limited to mitigate against any adverse ecological affects. The impact of construction activities on Biodiversity and Roads and Traffic are assessed in Chapters 6 and 10, respectively. A construction management plan will be developed and implemented for the construction phase of the development. This document will provide a framework under which construction activities which have potential for environmental impact (e.g. generation of dust, ecological impacts, surface water discharge, etc) will be managed. Mitigation measures as outlined in the EIAR will be included within this plan

8.6.3. Typical construction timeframe is set as follows: with further details provided in Section 3.3.1 of the EIAR Volume 2.

Phase	**Details**	**Time**
1.	Site Evaluation	4 weeks
2.	Sie Preparation & Clearance	3- 4 weeks
3.	Civil & Structural Works	4 months
4.	Mechanical & electrical Installation	2 months
5.	Commissioning & Testing	1 – 2 months

8.6.4. Heavy vehicle movements to the site are expected to consist predominantly of plant and material deliveries. The majority of machinery associated with the construction phase is likely to remain onsite for the duration of the construction process. Therefore,

the traffic associated with heavy plant will be limited to their delivery and removal, with the intervening period comprising internal movements within the site. It has been estimated that during the course of an average day during construction, that up to 10 trucks will access the site to deliver materials. These will be spread over the course of the working day.

8.6.5. Employment levels across the project will vary depending on the construction programme and the extent of activities occurring on the site. It is expected that during peak activities, there will be up to 30 construction workers at the site. It is anticipated that during peak construction periods, approximately 15 vehicles will enter the site in the morning and leave the site in the evening. This is based on vehicle occupancy of two. An assessment of the likely traffic volumes which may arise during the construction and operational phase are discussed in Chapter 10 of the EIAR.

8.6.6. Subject to agreement with the planning authority, it is anticipated that the following times will constitute the standard working hours on the construction site.

- Monday to Friday 07:00 to 19:00
- Saturdays 08:00 to 16:00 pm
- Site closed on Sundays
- Site open on Bank Holidays as per Saturdays

8.6.7. Working hours may vary slightly depending on weather conditions and daylight hours during winter months. Heavy construction activities will be avoided where possible outside the normal working hours outlined above

8.6.8. Temporary Environmental Protection Measures include the following:

- During the construction stage site construction roads will be sprayed with water during dry periods to mitigate against the formation of dry dust particles. Excavated materials stored or moved on site could lead to the formation of airborne dust particles during dry weather periods. Water suppressants will be used during these dry weather conditions.
- The landscaping areas proposed for the facility will be constructed and planted at the earliest opportunity thus limiting the potential for off-site migration of airborne dust. Where temporary stockpiles are required the material will be stored in

designated areas and will be covered with tarpaulins and/ or regularly dampened during dry weather periods.

- All potentially polluting substances such as oils, chemicals and paints used during construction will be stored in designated storage areas. These will be bunded to a volume of 110% capacity of the largest tank/container within the bunded area with all filling and draw-off points fully located within the bunded area. Drainage for the bunded area will be diverted for dedicated collection and safe disposal.
- All domestic effluent generated on site will be discharged to temporary sewage containment facilities prior to transport and treatment off site.
- Temporary settlement ponds and interceptors will be constructed as necessary during the early stages of construction mitigating against silt laden run-off to the existing drainage network. Prior to commencement of development a construction quality assurance plan (CQA) will be jointly prepared by the contractor and developer. Written approval of the CQA will be sought from the planning authority prior to site development. Good housekeeping and facility management during the construction period will ensure that there will be no negative environmental impacts from the construction of the proposed facility.
- The majority of machinery associated with the construction phase is likely to be onsite for extended periods of time. The traffic associated with these will therefore be limited to their delivery and removal, with the intervening period involving internal movements within the site. The impact of these on the surrounding road network is therefore expected to be minimal and infrequent
- Artificial lighting, and its positioning, which may be required during construction of the project will be sympathetic to local biodiversity.

8.6.9. Further mitigation in relation to the construction and operation of the plant is provided with in Chapters 6 to 11 of the EIAR.

8.7. Likely Significant Effects on the Environment

8.7.1. The likely significant effects of the development are considered under the following headings, as set out in Article 3 of the EIA Directive 2014/52/EU:

- population and human health;
- biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;

- land, soil, water, air and climate;
- material assets, cultural heritage and the landscape;
- the interaction between the factors referred to in points (a) to (d).

8.7.2. In total the main EIAR includes 12 chapters. Chapters 1 to 4 provide an introduction to the project, description of the site and planning history, proposed development including a description of the construction and commissioning together with benefits and alternatives considered. Chapter 5 addresses waste management and planning policy, chapter 6 addresses biodiversity, chapters 7, 8 and 9 address soil and geology, water, air quality, odour and climate, chapter 10 addresses traffic and transport, chapter 11 addresses noise and vibration and chapter 12 addresses interactions. Each of the above chapters are considered in detail below, with respect to the relevant headings set out in the Directive.

8.8. Population and Human Health

8.8.1. There is no effect of the proposal on population. The development proposal offers many positive benefits to the economy of the local area. The most significant positive impact will be the employment opportunities that will result from the construction (30 jobs) and operational phases. Indirect employment will also arise from the development in the form of hauliers and other contractors supplying services and goods to the plant. There is also the likely benefit which would accrue to the local area and region in terms of the ability to provide employment through spin-off sectors; such as organic farming; digestate products produced at the GGL plant are currently certified as a suitable fertiliser for organic farming.

8.8.2. Human health has the potential to be impacted by the proposed development in a number of ways, including through increased levels of traffic, noise, odour and emissions and hazards/accidents. These matters are respectively considered in Chapters 6-11 of the EIAR.

8.8.3. Digestate products will continue to be applied to agricultural lands but the development proposals will result in reduced volumes of digestate being generated at the Biogas Plant. The benefits of using digestate as a fertiliser compared to slurry are identified in Chapter 3. One benefit is that it can help ensure compliance with the Nitrates Regulations (S.I. 610 of 2010) which transpose into national law the Nitrates Directive

(91/676/EEC) that has the objective of reducing water pollution caused or induced by nitrates from agricultural sources and preventing further such pollution, with the primary emphasis being on the management of livestock manures and other fertilisers. This has a minor positive impact on human health by reducing pollution risks which may enter or impact on the food chain

8.8.4. In order to control potential negative impacts during construction, a Construction Environmental Management Plan (CEMP) will be developed and implemented by the nominated Contractor during the construction phase of the project. Mitigation measures outlined within the various sections of the EIAR will be incorporated into the CEMP. Post mitigation, impacts to population and human health during the constructions (and decommissioning stages) are predicted as short-term direct and indirect slight positive short-term.

8.9. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of population and human health can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on population and human health.

8.10. **Biodiversity**

8.10.1. Chapter 6 of the EIAR evaluates the impacts of the proposed development on biodiversity. Means to mitigate any significant impacts are proposed. As well as considering potential impacts on flora and fauna, the Section also considers impacts on designated areas. The Biodiversity Section of the EIAR is supported by a Natura Impact Statement report, Volume 3, Appendix 6.1.

8.10.2. The site is situated in the townland of Aghaveagh which is situated along the River Finn, approximately 6km due west of Ballybofey, Co. Donegal. The surrounding area of Aghaveagh is primarily rural and agricultural. Small-scale farms, rural dwellings and commercial conifer plantations dominate the surrounding countryside. Other prominent features of the landscape include the River Finn corridor which lies approximately 500m due north of the existing biogas site. The proposal includes

development within the curtilage of the existing permitted biogas site and on lands, improved grasslands, adjoining the site to the north.

8.10.3. There are no designated conservation areas within the proposed development site. Therefore, the proposed development site does not directly impact on any Special Area of Conservation (SAC), Natural Heritage Area (NHA), Special Protection Area (SPA), National Park or Nature Reserve. The River Finn SAC, located approximately 500m north of the site, is a designated SAC (Site Code 002301). It comprises almost the entire freshwater element of the Finn and its tributaries – the Corlacky, the Reelan sub-catchment, the Sruhamboy, Elatagh, Cummirk and Glashagh, and also includes Lough Finn, where the river rises. The spawning grounds at the headwaters of the Mourne and Derg Rivers, Loughs Derg and Belshade and the tidal stretch of the Foyle north of Lifford to the border are also part of the site. The Finn and Reelan, rising in the Bluestack Mountains, drain a catchment area of 195 square miles. All of the site is in County Donegal.

8.10.4. The River Finn SAC is selected for active blanket bog, a priority habitat listed under Annex I of the E.U. Habitats Directive. The site is listed for lowland oligotrophic lakes, wet heath and transition mires, also on Annex I of the E.U. Habitats Directive. The site is also selected for Atlantic Salmon and Otter listed on Annex II of the same directive.

8.10.5. A desk study was undertaken together with field surveys in March 2017 and August 2017 with a walkover survey undertaken at the site in August 2018. No seasonal limitations or constraints were encountered with regard to the identification of sensitive ecological receptors within the study area.

8.10.6. The surveys were undertaken in accordance with The Heritage Council's 'Best Practice Guidance for Habitat Survey and Mapping'. A mammal survey was completed together with a bat suitability survey. Potential occurrence and habitat suitability for breeding and wintering birds were recorded with the potential for reptiles to occur and suitable supporting habitat was also evaluated. The potential for sensitive aquatic and water-dependant ecological receptors to occur was identified. An evaluation of the surface water features was also undertaken. During the field surveys undertaken in 2014 and 2017, birds noted on site and calling were recorded. Over the course of the survey visits, searches were made for the presence of mammals. A full

bat survey was not undertaken as the project will not require felling of trees, nor will it result in fragmentation of potential foraging routes.

8.10.7. The terrestrial and aquatic habitats within the development area or potentially affected by the development are listed below and are shown in the habitat map (Volume 3, Appendix 6.2).

- WN Semi-natural Woodland: WN2 Oak-ash-hazel woodland. WS Scrub/transitional
- Woodland: WS1 Scrub
- Improved agricultural grassland (GA1);
- Grassland (GS4)
- Dry Meadows and Grassy Verges (GS2)
- Recolonising bare ground (ED3);
- Buildings and artificial surfaces (BL3);
- Stone walls and other stonework (BL1);
- Eroding/upland rivers (FW1);
- Drainage ditches (FW4)

8.10.8. Mammal Survey

8.10.9. The Mammal Survey may be summarised as follows:

- Badgers - There was no evidence of badger activity in the vicinity of the site, although the occurrence of grassland, treelines and hedgerows with broadleaved woodland makes it suitable for badgers. This species is evaluated as being of local importance (higher value); however, as no pathways for significant impacts are identified, badger are screened out and are not considered further in the impact assessment.
- Red squirrel - No evidence of Red squirrel was recorded during the field survey. Red squirrel is evaluated as being of local importance (higher value); however, as no pathways or evidence of their existence within the development site was found, red squirrel are screened out and are not considered further in the impact assessment.
- Bats - The proposed development will not require the removal of any significant foraging or commuting corridors affecting the landscape connectivity in the wider

study area. There will be no fragmentation or isolation of habitat which may be used by bats as a result of the proposed development. In the absence of any potential for significant impacts affecting potential roost features or foraging/commuting features, bat species are scoped out and will not be evaluated further in the impact assessment.

- Otters - No evidence of otters was found within the proposed development site, no evidence was recorded during surveys from the minor streams to the north of the development area and this would not be expected given the lack of suitable habitat. The species may at times utilise the riverbank of the River Finn within the SAC but will not be affected by the proposed development. Otter are therefore screened out and are not evaluated further in the impact assessment.

8.10.10. Other mammal species protected under the Wildlife Acts 1976 and 2000, which could possibly occur, are Irish hare, pine martin, hedgehog and stoat. Given the suitable habitat of broadleaved woodland, there is potential for these species to occur. No visual sightings or signs of these mammals were found on the site on the days survey works.

8.10.11. Reptiles, Amphibians and Invertebrates

8.10.12. The common newt and common frog are protected species under the Wildlife Act 1976 and 2000. Neither species were observed on dates of survey. No suitable ponds or pools were observed for suitable habitat for the common newt to occur, however it is likely that common frog is present within wetter grassland areas and drainage ditches within the overall study area. In the absence of records or likelihood of occurrence for either species, the potential for significant impacts affecting either Common lizard or Smooth newt is limited. Reptile and amphibian species are scoped out and will not be considered further in the impact assessment.

8.10.13. Records of terrestrial invertebrate populations were evaluated based on the NBDC online dataset; the Annex II listed Marsh fritillary butterfly was previously recorded from the wider study area (2 km radius) dating from 2010. No other invertebrate species listed as protected / of conservation concern was identified. Marsh fritillary butterfly, where populations occur outside of designated European Sites, are evaluated as being of County Importance. In the absence of suitable habitat for this species there is no potential for significant adverse effects, it is therefore

scoped out and not considered further in the impact assessment. No other terrestrial invertebrates are scoped in for further impact assessment.

8.10.14. Birds

8.10.15. Records of bird species from the wider study area (2km radius) were evaluated from the NBDC dataset. The following species of conservation importance (Birds of Conservation Concern (BOCCI)6 and EU Birds Directive, 2009) have been previously recorded from suitable habitats:

- Birds Directive Annex I species: Hen harrier, Corncrake, Peregrine Falcon, Whooper Swan, Golden Plover;
- BoCCI red-listed species: Twite (b), Yellowhammer (b), Red Grouse(b), Blackheaded gull(b), Curlew(b/w), Northern Lapwing(b/w), Meadow Pipit(b), Whinchat(b), Woodcock(b), Pochard(w), Tufted Duck(w), Dunlin(b/w);
- BoCCI amber listed species: Common Sandpiper(b), Sky Lark(b), Teal(b/w), Common Swift(b), House Martin(b), Sand Martin(b), Swallow(b), Snipe(b/w), Lesser Black-backed Gull(b), Spotted Flycatcher(b), Wheatear(b), Cormorant(b/w).

8.10.16. No species listed by Birdwatch Ireland as Birds of Conservation Concern in Ireland (BoCCI), were recorded within the area of the existing biogas plant site. However, it is considered likely that the upland blanket bog, coniferous plantations and wetlands associated with the lower River Finn corridor in the wider study area provide extensive suitable habitat for those species of conservation importance listed above.

8.10.17. Overall, based on the extent of the site and the presence of habitats to support avifauna, the bird populations present are evaluated as being of local importance (lower value); with potentially greater diversity occurring within the wider landscape at a distance from the proposed development site. No bird species of conservation concern are identified with regard to pathways for significant impacts arising from the proposed development. Therefore, bird species are scoped out and will not be considered further in the impact assessment.

8.10.18. Aquatic Ecology & Fisheries

8.10.19. It is considered that the aquatic habitats present in the immediate vicinity of the site; the small sections of woodland streams (FW1) or drainage ditches (FW 4) are not suitable for fish due to their very small size, likely seasonal lack of water and general lack or remoteness of connectivity with larger fish supporting watercourses.

8.10.20. The existing biogas plant is located approximately 550m from River Finn SAC (site code 002301). One of the qualifying features of the River Finn is Atlantic Salmon, but there is no suitable habitat for this species within the site. The River Finn, upstream of the River Foyle, is a designated Salmonid river and has a reputation as one of the best salmon and sea trout rivers in Europe.

8.10.21. There are numerous factors which impact negatively on Salmon, the most important of which are reduced marine survival (probably as a result of climate change), poor river water quality (resulting from factors such as inadequate sewage treatment, agricultural enrichment, acidification, erosion and siltation), forestry-related pressures and over-fishing. This species is evaluated as being of overall 'Inadequate' conservation status nationally (NPWS 20138) with an overall trend in Conservation Status classed as ‘stable’. The presence of Atlantic salmon in the River Finn main channel which is within the drainage catchment of the proposed development gives rise to pathways for potential effects, and is evaluated further in the impact assessment below.

8.10.22. The River Finn is identified as a Freshwater Pearl Mussel catchment (NPWS, 20149), with an extant population occurring in the main channel. There is no suitable habitat for this species in the minor streams draining lands within Glenmore Estate in the vicinity of the proposed development. The absence of suitable habitat is due to very variable seasonal flows, high gradients and mobile substrate which do not favour the sedentary requirements of this species. In the absence of records for this species from within the surface water features draining lands in the vicinity of the proposed development site, or from the River Finn in proximity to the proposed development, there are no pathways for potential significant impacts identified. This species is therefore scoped out and not considered further in the impact assessment.

8.10.23. It is clear from the available data (EPA biological water quality monitoring) that upstream cumulative direct and diffuse sources of pollution are negatively impacting on ecological status and biological water quality in the River Finn. The River Finn is

classified as ‘poor status’ under the Water Framework Directive and risk category 1a – ‘at risk failing to meet good status by 2015’. The North Western River Basin Management Plan (2009-2015) proposes an extended timeframe of 2021 to restore good status in the River Finn. This evaluation is due in part to the failure to meet good ecological status in the river for the population of Freshwater pearl mussels, as well as with reference to Atlantic salmon conservation limits, and biological water quality results. Due to the hydrological connectivity between the proposed development and River Finn watercourses, the potential for significant impacts affecting aquatic macroinvertebrate communities evaluated further in the impact assessment below.

8.10.24. Impact Assessment

8.10.25. The following sensitive biodiversity receptors were identified as being of local importance (higher value) or greater and for which pathways for potential impacts exist, have been carried forward for impact assessment:

- Designated Sites – River Finn SAC.
- Habitats and Flora –Eroding/upland watercourses;
- Aquatic Ecology and Fisheries – Atlantic salmon and macroinvertebrate communities.

8.10.26. Designated Sites

8.10.27. The proposed development site does not lie within or in direct proximity to any European Site. None of the qualifying interests of the River Finn SAC, either habitats or species, occur within or directly adjacent to the site or its associated infrastructure. There is no suitable habitat within the proposed development site to support the freshwater qualifying interests of the River Finn SAC.

8.10.28. The SAC boundary follows the riparian corridor of the River Finn, and does not include the minor streams which drain lands in the vicinity of the existing site and proposed works. There are therefore no pathways for direct impacts associated with the proposed development during the construction phase of the works. The existing agricultural land use within and adjacent to the development site, in addition to the distance of the works areas from the River Finn corridor would preclude any pathways for direct effects which may significantly impact on the conservation objectives for either Atlantic Salmon or Otter, with respect to their conservation status. The potential for indirect or secondary effects on this designated European Site are identified with

regard to pathways for water quality impacts affecting the aquatic and water-dependant qualifying interests of the site: Otter and Atlantic Salmon. Both of these sensitive biodiversity receptors are evaluated individually below.

8.10.29. The Natura Impact Statement (NIS), prepared to inform the Appropriate Assessment process accompanying the current planning application, concluded that the potential for significant adverse effects on any European Sites, with specific reference to the River Finn SAC, are unlikely to arise as a result of the proposed development, either individually or in combination with other plans or projects.

8.10.30. The need for this development proposal is driven by the requirement for management of digestates produced at the existing Biogas Plant and optimising processes to gain efficiencies. Currently digestates produced at the GGL biogas plant are spread to agricultural land as fertiliser (OF/SI). Although this is a good use of the nutrients within the digestate and it provides for substitution and displacement of mineral (chemical) fertilisers with recycled product, the current value of whole digestate is low when the cost of transportation and spreading is considered. Also, the application of nitrogen in organic materials to agricultural lands is regulated by the European Nitrates Directive (91/676/EEC). The Nitrates Directive forms an integral part of the Water Framework Directive and is one of the key instruments in the protection of waters against agricultural pressures. The Nitrates Directive prohibits the spreading of chemical and organic fertilisers to land over the Winter period in Ireland; in Donegal (classed as Zone C) the prohibition application periods for organic fertilisers is 15th October to 31st January. The regulations also prohibit such application at any time of the year when the ground is frozen, waterlogged or heavy rain is forecast.

8.10.31. The proposal therefore provides for further development and alteration at, and adjacent to, the existing biogas plant and the introduction of technologies and techniques to enhance digestate products. This will increase the yields of biogas and value of digestates produced from the input feedstocks and it will also reduce the dependence on land application.

8.10.32. Operational mitigation measures for the avoidance of impacts to the River Finn SAC are set out below with regard to the River Finn SAC, Upland Eroding Rivers and Atlantic Salmon and Macroinvertebrates with the River Finn.

8.10.33. During the operational phase, the pollution threat from digester vessels is limited as the vessels (existing and proposed) will be contained within concrete bunds designed to retain spillages in accordance with EPA guidelines (110% of the largest vessel or 25% of total tank volume within a bund, whichever the greater). The process is a closed loop system designed provide for anaerobic degradation of feedstocks and production of renewable products (including digestate, carbon dioxide and biomethane).

8.10.34. Habitats and Flora (Eroding Upland Rivers)

The proposed development on lands adjoining the northern boundary of the existing biogas plant site will involve excavation and trenching gives rise to the potential for significant negative impacts in the local extent, directly associated with the character of the soil and hydrological regime at this location. The main potential impact that will occur to water during the construction phase is surface water /storm water run-off to streams and drainage channels. However, it is proposed to use a sustainable urban drainage system (SuDS) approach to stormwater management throughout the site. This will provide control at source and will ensure that an effective system is put in place to mitigate the potential impact to watercourses from surface /storm water runoff. Other threats to streams and drainage ditches are pollution from nutrients, silt and toxic chemicals, and physical degradation of the structure of the water body. However, if suitable precautions are taken and best practice for the storage, handling and disposal of such materials is followed, impacts are likely to be minimal. The impacts in the absence of mitigation are evaluated as short term, likely but reversible.

8.10.35. Aquatic Ecology and Fisheries (Salmon and Macroinvertebrates)

8.10.36. The proposed works have the potential to give rise to indirect water quality impacts during the construction phase due to surface water run-off leading to diffuse discharge of pollutants or suspended solids. The baseline water quality within the wider study area is evaluated as being of ‘Moderate status’; however, the project must not preclude the potential for the River Finn to reach ‘Good status’, or achieve the compliance parameters for Atlantic salmon and Otter to reach their Conservation Objectives. Mitigation measures are proposed to avoid and reduce the potential for significant water quality impacts affecting the aquatic environment.

8.10.37. Decommissioning Phase impacts are considered to be the same as those detailed under the construction phase.

8.10.38. Mitigation proposed includes that which has been identified in other chapters of the EIAR (notably Chapter 8: Water), embedded mitigation (project design) and also specific mitigation by avoidance, reduction and offsetting as specified within this chapter. The principle mitigation measures proposed are as follows:

- There will be no direct discharge to watercourses, including land drains,
- All outflows from drainage associated with construction will be by diffuse overland drainage at appropriate locations,
- There will be no on-site holding of any effluent or construction run-off potentially containing chemical pollutants or cementitious material excepting within appropriately bunded / contained areas,
- Disturbed ground within the site will be actively revegetated immediately post construction,
- The proposals to control potential pollution detailed within the Chapter 8: Water of this EIAR will be implemented in full,
- Works relating to the widening of the road will be subject to the requirements of 'Guidelines on protection of Fisheries during Construction Works in and Adjacent to Waters' (IFI 2016),
- A Construction Environmental Management Plan will be developed for the construction period. This will include details of the implementation and monitoring of environmental control measures to be applied during the construction process,
- Lighting will be designed for the site to minimise lighting spill to sensitive habitats

8.10.39. As previously mentioned the development proposals will require "licence review" of the existing EPA Industrial Emission Licence (P1004-02) and alterations to DAFM approval (BIOG100). The fertiliser plant aspect of the proposal will also require an additional approval from DAFM in accordance with it being classified as an organic fertiliser /soil improver plant. Any exceedances of emission limit values identified during the operational monitoring of the biogas facility (including fertiliser plant) will be recorded and corrective action undertaken, with reference to the compliance conditions of any planning consent and /or licences. In the event of exceedances recorded the operator will be required to take immediate action (notwithstanding

reporting, direction or requirements issued by Donegal Co. Co, EPA or Loughs Agency) in order to prevent further contamination of water quality within the River Finn SAC. It will be necessary to undertake post-event follow-up monitoring, to include a full suite of chemical and biological sampling, in order to establish the significance of exceedance events and implications for the qualifying interests of the SAC, in terms of their resiliency to such effects. This monitoring data will inform future compliance limits and thresholds as part of the planning consent and operational licencing process.

8.10.40. The operational management and maintenance of the development proposal will be incorporated into the existing management plans prepared for the site. This will specify frequent monitoring, with all process effluents managed within the proposed closed-loop system. Compliance with surface water quality commitments will require that there is no process discharges off site, to land or to any surface water feature within the River Finn catchment. This is necessary to ensure that the proposal remains within the parameters of the evaluated impact assessment and thus avoids long term or ongoing adverse effects on water quality in the River Finn SAC.

8.10.41. Stormwater collected and managed from clean areas of the site (roofs and non-risk areas) will be attenuated and contained within a retention tank prior to be tested and discharged under controlled conditions to a receiving watercourse north of the site. Stormwater will also pass through oil interceptors from vehicle trafficked areas of the development (internal roads). The stormwater attenuation structure will contain a number of internal chambers to provide for settlement of any suspended solids. In accordance with existing EPA licence conditions, storm waters will comply with assessment criteria (trigger values as agreed with the EPA).

8.10.42. In addition, all digestates produced from the site and applied to agricultural lands will be done so in accordance with the European Union (Good Agricultural Practice for Protection of Waters) Regulations 2014.

8.10.43. Residual impacts after mitigation are evaluated as neutral to imperceptible in the local context and will not affect (a) the conservation status of the qualifying interests of the SAC, in view of their conservation objectives and (b) the sensitive ecological receptors, with reference to water quality and aquatic habitat requirements.

8.10.44. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of biodiversity can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on biodiversity.

8.11. Soil & Geology

8.11.1. Chapter 7 of the EIAR focuses on the geology and soil environment and discusses the potential impacts associated with the proposed development during the construction and operational and decommissioning phases.

8.11.2. Regionally the area is dominated by till derived from metamorphic rocks, blanket peat bogs and areas of alluvium associated with the River Fin which lies to the north of the site. A review of the publicly available datasets details that the soil cover is composed 'deep well drained mineral soils' (AminDW) (mainly acidic), described as fine loamy over shale and slate bedrock. The existing developed biogas site is surfaced with hardstanding (concrete /asphalt). Proposed development lands adjoining the site to the north is described as improved grassland and it is understood that alterations to the natural topography of the lands has been undertaken in the past; soils stripping and grading of contours using soils /broken rock. The GSI Quaternary Geology online viewer indicates that the majority of the site is underlain by "metamorphtic till". Bedrock outcropping is shown to be present in the general area of the site; geology of the outcropping bedrock geology of the Boultypatrick (Grit) Formation (described as Psammite, graphitic clasts/beds, pebbles).

8.11.3. The GSI 100k bedrock maps demonstrate that the development site is underlain by the Boultrypatrick (Grit) Formation. The GSI viewer highlights that the rock outcrops at the surface in the general area of the site. Three boreholes were drilled in the vicinity of the existing biogas site. Shallow bedrock was confirmed to be present (<8m) and was recorded as being Psammite bedrock to a known depth of 145m below ground level (bgl). Shallow groundwater was detected within the boreholes (surface of the bedrock) with artesian groundwater strike detected at circa 90m bgl in the boreholes drilled to the north of the site. Low groundwater yields were recorded from both of

these wells. Estimated groundwater yield of 50m3/day were recorded in the groundwater well drilled to the south (upgradient) of the site.

8.11.4. The GSI database indices groundwater vulnerability at the site is Extreme (E). Site specific information on depth to bedrock and subsoil type was obtained during site visits. Areas of exposed bedrock were noted in localised excavations in the vicinity of the site. Depths to bedrock in undisturbed areas in the vicinity of the site are estimated to be less than 3m. This agrees with the GSI Extreme (E) vulnerability classification for the site. There are no direct process related discharges to ground or soils associated with operations of the existing facility. There are no identified sources of contamination from historical land use within the site boundary or in adjacent land.

8.11.5. There are a number of minor surface water features at the site; the largest of these is a stream which carries runoff water from lands and field drainage ditches upgradient of the site. The stream runs along the western boundary of the site before entering the wooded area, downhill and north of the site. The stream then runs in a north-eastern direction and is culverted before it discharges to the roadside ditch beside the junction of the R252 and R253.

8.11.6. The main risk to soils and the local water environment during the operational phase is the loss of containment of waste liquors or digestate. This has a very high biological oxygen demand which can render water bodies anoxic and damage ecosystems. Pathogens associated with the waste inputs may also be released to the environment. Any leaks would be detected quickly so the impact would be short-term in duration.

8.11.7. Existing process water requirements is sourced from the harvesting of rainwater for reuse at the site where possible. Stormwater generated on site is collected and returned to the process. The site also includes a sustainable urban drainage system (SuDS) which was installed to manage excess clean stormwater generated at the site. The system was designed to provide control at source and to ensure that an effective system is put in place to mitigate the potential impact to watercourses from surface /storm water runoff run-off by reducing runoff rates, volumes, frequency and pollutant concentrations.

8.11.8. Drainage infrastructure at the existing Biogas Plant is designed to ensure separation and isolation of ‘contaminated’ surface water with ‘uncontaminated’ surface water. In order to ensure that uncontaminated surface drains are not mixing with possibly

contaminated surface drains, 'risk areas' are discharged directly to the process effluent sump. Small areas that have the potential for causing contamination of surface drain water are separated from the overall surface water drainage. Appropriate surfacing and containment or drainage facilities for all operational area exists at the site. As the process of AD is a closed loop system, any minor process wastewater (effluents) generated (such as washwater) are recycled to the process effluent sump for re-use along with stormwater collected within the site bund.

8.11.9. The proposed development will not have any significant residual effects on the geological environment if all mitigation measures are implemented. The site development will result in the creation of low permeability and impermeable surfaces, limiting the potential for contamination of the subsurface. New development on lands to the north of the existing biogas plant will result in in physical disturbance to the existing soil profile. Given the physical layout of these lands (extension area) within the Glenmore Estate, the site's agricultural potential and the residual effect is negligible.

8.11.10. The receptors for this assessment are considered to be shallow soils, the underlying drift and bedrock geology. Whilst the development proposals have the potential to cause detriment to the sensitive receptors identified, the recommended mitigation measures will ensure that the risk of potential impacts are reduced to negligible.

8.11.11. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of soils and geology can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on soils and geology.

8.12. **Water**

8.12.1. Chapter 8 of the EIAR focuses on the water environment and discusses the potential impacts associated with the proposed development during the construction and operational and decommissioning phases.

8.12.2. The site is located in the Foyle catchment which includes the area drained by the River Foyle and by all streams entering tidal water between Culmore Point, Co. Derry and Coolkeeragh, Co. Derry. The sub catchment is identified as the Finn[Donegal]_SC_020 which as an area of 106.81km2. The proposed site is positioned near the eastern boundary of this subcatchment with the River Finn defining the northern boundary of the subcatchment in this area and includes upland areas extending west and south-west of the proposed site characterised by peatlands, coniferous forest and pockets of agricultural lands.

8.12.3. The dominant surface water features in the general area of the site is the River Finn, which is designated as a Special Area of Conservation (SAC 002301), and tributaries (including the River Rough Burn), which flow into the Finn from upland areas located to the south of the River Finn. The Finn flows in an eastern direction approximately 400m north of the proposed development site. The steep slopes in the uplands around and up gradient of the site promote surface runoff. The relatively high stream density is likely to be influenced by the lower permeability rocks.

8.12.4. The Rough Burn is located approximately 950m east of the site but development works are not within its catchment. A number of smaller streams (tributaries to the River Finn) drain lands and carry surface water run-off from lands in the vicinity of the site. The relatively high stream density is likely to be influenced by the lower permeability rocks. Surface water drainage in close proximity to the development site has been modified for agricultural drainage purposes and to manage run-off from the hillside. Modifications include field boundary drainage ditches and culverting. There are a number of minor surface water features at the site; the largest of these is a stream which carries runoff water from lands and field drainage ditches in the vicinity of the site. The stream flows through woodland downhill and to the north of the site.

8.12.5. For the 2010–2015 period, the River Finn was assigned “Moderate” status along its course west and east of the site towards Cloghan and Ballybofey respectively. The Finn(Donegal)_040 and Rough Burn River, which are inputting surface water bodies to the main channel of the River Finn in the vicinity of the site, were classed as “Moderate” and “Good” during the survey period. Further west (approximately 5km west of the site), the River Reelan (inputting surface waterbody to the River Finn) is classed as “poor”. According to the assessment, the environmental pressures causing

a reduced quality status of surface water bodies described above are agriculture and forestry.

8.12.6. A review of flood information available for the area demonstrates that the proposal development site is not located on lands susceptible to flooding and no flood plans are proposed in the general area of the site. The further information request required causes of flood risk to the R253, insofar as these relate to the pre-existing / proposed development planning application, to be fully explored and for mitigation measures to be developed to address the same. These requirements have been addressed by the completion of catchment analyses and preliminary drainage designs (Appendices 4E and 4G of the FI response) which culminate in the proposed measures detailed on the drawings contained in Appendix 4F of the FI response. The measures proposed to manage surface water runoff from agricultural lands adjacent to the proposed development are adequate to make sure that no surface water passes from the lands in question on to the public highway. Accordingly, flood risks have been adequately addressed; no flood risks exist from the lands in question to the highway for the events and durations considered in this assessment. Subject to the implementation of mitigation measures detailed herein, there is no flood risk to the R253 from the pre-existing / proposed development for the storm return periods and durations assessed.

8.12.7. The receptors for this assessment are considered to be surface waters (River Finn and its tributaries) and groundwater. Whilst the development proposals have the potential to cause impact to the sensitive receptors identified, the recommended mitigation measures will ensure that the risk of potential impacts are reduced to negligible. Design mitigation measures include bunding of storage vessels on site, separation of clean and dirty drainage on site, use of attenuation structure to provide for testing and controlled discharge of clean stormwater generated at the site. Applications for operation of the existing biogas plant in combination with development proposals will be subject to EPA and DAFM approvals and these applications will be submitted in due course.

8.12.8. The development proposal will continue to provide for the management and treatment of non-hazardous organic wastes. Construction of a fertiliser plant and provision of digestate enhancement techniques provides increased efficiencies and benefits associated with the management and operation of the existing biogas plant and digestates arising. Spreading of digestate to land is controlled and informed by the

European Nitrates Directive and agricultural nutrient management plans. The proposed development will reduce the dependence on land application as volumes of whole digestate will be reduced and it is expected that alternative enhanced products will benefit from the forthcoming introduction new Fertiliser Regulations which will include digestates and composts.

8.12.9. The proposed development will not have any significant residual effects on the water environment if all mitigation measures are implemented The site development will result in the creation of low permeability and impermeable surfaces, limiting the potential for contamination of the subsurface. Part of the proposals includes for development on lands to the north which are greenfield. The proposed development will result in physical disturbance to the existing soil profile. Given the alternatives considered with respect to storage and management of digestate, the availability of the lands adjacent to the existing biogas plant and that no environmental protections are assigned to it, the residual effect is negligible.

8.12.10. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of water can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on water.

8.13. Air Quality, Odour and Climate

8.13.1. Chapter 9 has been prepared to assess the potential air quality and odour impact on the nearest neighbouring residential properties in proximity to the site from the existing biogas plant and proposed development works. i also refer to the further rinfomation submitted on file.

8.13.2. The background air quality in the area of the development is of very good quality and the site is located in ‘Zone D’ as denoted by the EPA. Concentrations of air quality pollutants in Zone D are very low and well below the relevant air quality limit values.

8.13.3. There is no significant individual odour source in proximity to the proposed development site. Background odours are most likely to be typical of intermittent rural area odours influenced by existing agricultural activities, etc. Improvement works have

been undertaken at the existing Biogas Plant over the past 12 months to mitigate and further reduce any odour arising from activities at the site. Ongoing odour controls are in place at the existing biogas plant and include; maintaining the feedstock reception building under negative pressure with ventilated gases being treated using the odour odour control abatement system, carrying out daily subjective odour assessments using FIDOL criteria are per EPA guidance AG5 and inspection and assessment of vehicles delivering feedstock to the site.

8.13.4. As part of assessment works twenty (20No.) representative sensitive residential receiver locations were selected in proximity to the facility. The River Finn SAC has also been assessed by selecting five (5No.) representative locations along the River Finn in proximity to the Biogas Plant.

8.13.5. The assessment and evaluation of the air quality and odour impact arising from the proposed development involved the identification of sources, quantification of emission rates, dispersion modelling of emissions and a comparison of modelling results with relevant criteria.

8.13.6. The nearest residential sensitive receptors to the site is located at a distance of over 250m. Therefore, the impact from construction activities can be considered to be imperceptible. All sensitive habitats are located at a distance greater than 25m from the emission source and as a result the impact on habitats will be imperceptible.

8.13.7. The assessment shows that the worst-case odour concentration at a residential property will be approximately half of the odour target value of C98, 1-Hour 1.5 ouE/m3 even when based on the elevated odour emission concentration limit of 1,500 ou/m3. The 17.5m heights of the Feedstock Reception Building and the Fertiliser Plant odour control stack result in effective dispersion of the odours from the facility.

8.13.8. The nearest designated site to the facility is the River Finn SAC located approximately 0.5km to the north of the facility and is a sensitive habitat on account of the presence of blanket bogs. The predicted nitrogen deposition rate at the River Finn SAC (0.059 Kg/Ha/Yr) is 1.18% of the relevant Critical Load of 5 Kg/Ha/Yr. As the maximum predicted nitrogen deposition rate at the River Finn SAC is less than 10% of the relevant Critical Level (Cle) and 0.8% of the existing background nitrogen deposition level of 7.09 Kg/Ha/Yr, the proposed facility will not have a significant impact on nitrogen deposition rates at nearby designated sites or sensitive habitats

8.13.9. Suitable operational designs and procedures have been recommended which will be enforced on site to prevent potential odour impacts. There is no potential for exceedances of the air quality standards as a result of emissions to atmosphere from combustion sources at the site (boilers & CHP).

8.13.10. GGL have engaged with a number of international suppliers of process odour and dust abatement systems and have been provided with the following equipment specification to serve the proposed fertiliser building. The fertiliser building will house digestate handling and processing equipment, e.g. separator and dryer. The design and layout of the system is based on experience of similar systems in the UK, Germany and Scandinavia. The abatement system will handle two separate airstreams and the as envisaged is as follows;

- Odorous air from process equipment (e.g. dryer); The airstream from the dryer and other associated machines are expected to be of medium odour intensity (reduced from high intensity) as the material will already have undergone anaerobic digestion thereby liberating biogas which is contained beneath the digester domes before being further processed into biomethane.
- General room extraction; The system for general room extraction is designed around volume of the new building (14,000m3). The air is expected to be of low odour intensity.

8.13.11. The air handling and extraction and abatement system fitted to the fertiliser building will be capable of providing three air changes per hour to the building and emissions from the drying /processing technologies (point source emissions).

8.13.12. The proposed odour removal technique is based on the use of intense and energetic UV radiation to fragment the organic molecules and oxidise the odour compounds by the mechanism of ozonolysis and photolysis. The oxidised gases have a much lower odour threshold and activity. A short/medium residence time carbon bed will be installed after the UV reactor. This contains an adapted volume of carbon for low and medium concentration odour sources within the fertiliser plant. The active carbon has a long lifetime as the excess ozone generated by the UV lamps helps to destroy organic compounds captured on the carbon thus significantly extending the carbon life.

8.13.13. The system can also be fitted (subject to detailed design of the enhancement process and chosen technology manufacturers) with dust filters to remove all particulates (99.9% of dust burden) from the exhaust air stream. The combination of these technologies delivers high performance and low energy consumption by recovering energy from the process.

8.13.14. A final supplier will only be awarded post planning grant and so it is not possible to be categoric about specific specifications, however the Applicant has ensured a worst-case approach within the EIAR on the basis of assessment to ensure protection of the environment and compliance with emission limit values

8.13.15. The scheduled emission points in the proposed plant will be regulated through the EPA Licensing process. This Air Quality & Odour Impact Assessment has demonstrated that the emissions will result in an acceptable air quality impact in accordance with the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011) and there will be no impact on designated sites.

8.13.16. The impact of emissions from the proposed Biogas facility will not be significant on local air quality in relation to the relevant Air Quality Standards Regulations. There will be no significant residual impact from the operation of the Plant

8.13.17. With regards to Climate, although it is noted that the proposal is beneficial in reducing the carbon footprint of farming activities in the area and reducing reliance on fossil fuels it is not considered that the proposal would have a significant impact on climatic or any other environmental factors. No other environmental issues have been identified in the previous three planning applications for the biogas facility and the addition of the digestate facility and laneway does not increase traffic movements to and from the site there is no change to this assessment.

8.13.18. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of Air Quality, Odour and Climate can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on Air Quality, Odour and Climate.

8.14. Traffic & Transport

8.14.1. Chapter 10 deals with Traffic & Transport. Because the existing biogas plant is already operational, this section of the EIAR provides an assessment of the cumulative roads and traffic related impacts the construction, operation, and decommissioning of the proposal and the continued operation of the existing Biogas Plant. I also refer to the Trip Generation, Traffic Counts, Traffic Calculations & Traffic Modelling Output accompanying the further information. I also refer to the further information submitted with the appclaiton.

8.14.2. The access to both the existing biogas plant and development proposal is located on the southern side of the carriageway of the R253 regional road, approximately 240m to the west of its junction with the R252 regional road. The R252 regional road provides a link between the N15 (Sligo to Lifford) national road at Ballybofey which is 7km to the east, and the N56 (Donegal to Letterkenny) national road to the south of Dungloe which is 41km to the west.

8.14.3. A desk study and field work (traffic counts and measurements) was undertaken. In the vicinity of the site access junction, the receiving environment is currently characterised as follows:

- The sealed surface of the R253 regional road carriageway is 5.8m in width and is not demarcated by any road markings;
- The R253 regional road has a straight horizontal alignment and relatively level vertical alignment, crest being present as discussed;
- Residential properties are present to both the east and west of the site on the southern side of the carriageway of the R253 regional road;
- The northern side of the R253 regional road is bounded by a low berm, whilst the southern side of the R253 regional road carriageway is demarcated by wooden fencing in the immediate vicinity of the site access, the typical height of the fence being 1.4m over carriageway level;
- The site access has a typical width of 7m and is gated 23m from the edge of the carriageway of the R253 regional road. The width increases to 27m at the junction bellmouth

- Surface water gullies are present in the vicinity of the tie-in between the site access and R253 regional road, but surface water was currently observed to pond towards the western end of the tie-in;
- Utility poles are present on both sides of the carriageway of the R253 regional road but no public lighting is present; and,
- The posted speed limit for the R253 regional road is 80km/h.

8.14.4. The roads, traffic and transport impacts of the proposed development have been assessed by utilising an approach based on the prevailing Transport Infrastructure Ireland (TII) guidelines on Traffic and Transport Assessment (TTA) (May 2014). The impact assessment considered a range of factors including background traffic growth; the trip generation associated with the various phases of the development; and, software-based highway capacity modelling.

8.14.5. During the construction phase of the development, trip generation comprises two distinct elements. Firstly, the delivery of construction related machinery and materials to the site usually by HGV; and, secondly, the workforce constructing the site usually by LGV. In relation to this proposed development, the main construction inputs are concrete and reinforcing steel. Construction materials should be delivered to the site by appropriate routes utilising the national road network whenever possible, and the R252 regional road and R253 regional locally. Drivers delivering to the construction site should be made aware of appropriate delivery routes. Deliveries using such routes should be timed to avoid passing schools during the start and finish times of the school day (pupil drop-off and collection times).

8.14.6. As part of this assessment a review has been undertaken of the previously estimated operational trips, cumulatively with trips resulting from the proposed development. The predicted type and number of cumulative daily two-way movements during the operational phase of the development are relatively consistent with the levels previously permitted.

8.14.7. I refer to the further information submitted. The tables show that the proposed development will result in significantly less generated traffic movements with the proposed development operating at 100% capacity when compared to the currently permitted development operating at 100% capacity. This is primarily due to the reduction in the water context, and therefore mass, of the outputs from the site.

8.14.8. For a development to be considered to have a material impact on the road network, the impact of the development is typically in excess of 5% of nondevelopment related traffic volumes. Based on this measure, the material impact of the proposed development would be limited to the R253 to the east of the Biogas plant access. However, the impact of the proposed development is significantly less in percentage terms than the currently permitted (existing) development. Remedial works are proposed in response to the associated FI Item 4(c) for this section of the R253 (See Appendix 4H).

8.14.9. The impact of traffic movements related to both the current permitted (existing) development operating at 100% capacity, and the proposed development operating at 100% capacity, on the site access junction onto the R253 and at the R252/R253 junction, have been assessed for AM and PM peak hours in a future assessment year of 2035 using PICADY, industry standard software for such junction modelling applications. The modelling input is included as Appendix 4C

8.14.10. The PICADY modelling output (Appendix 4D), shows that both the site access junction onto the R253 will operate with over 95% spare capacity in all scenarios tested, and the R252/R253 junction, will operate with over 92% spare capacity in all scenarios tested. Nether the permitted nor proposed developments will significantly impact the operation of the regional road network at these locations

8.14.11. No significant defects were observed related to the carriageway of the R253 regional road in the immediate vicinity of the site access. Due to the relatively low number of additional vehicle movements associated with the development, particularly in the operational phase, the development is not anticipated to result in observable degradation to the R253 regional road. Mitigation against degradation is included in Section 10.5 of the EIAR.

8.14.12. If the proposed development proceeds without the recommended mitigation measures, there is an increased risk of collisions at the site access junction with the R253 regional road. Such collisions are likely to result in injury to vehicle occupants and environmental impacts including the uncontrolled release of pollutants into the local environment from vehicles involved in the collisions.

8.14.13. Mitigation Measures and Monitoring are set out in Section 10.5 of the EIAR and summarised as follows:

Pre-Construction

- Stop control markings and signing should be provided at the site access to increase the definition of the edge of the carriageway of the R253 regional road.
- The wooden utility pole located to the east of the residential dwelling to the east of the existing site access should be relocated and the associated grass embankment lowered or removed in order to maximise the available egress visibility from the site access to the east.
- The wooden post and rail fence adjacent to the R253 regional road to the west of the site access should be repositioned (set-back) to maximise egress visibility from the site access to the west.

Construction Phase

- Construction materials should be delivered to the site by appropriate routes utilising the national road network whenever possible, and the R252 regional road and R253 regional locally. Drivers delivering to the construction site should be made aware of appropriate delivery routes. Deliveries using such routes should be timed to avoid passing schools during the start and finish times of the school day (pupil drop-off and collection times).
- The construction access should be signed with appropriate temporary advance directional signing, including at the R252/R253 regional road junction.
- Construction vehicles leaving the site should be appropriately cleaned, e.g. through use of a wheel wash, to minimise dust and dirt being carried from the site on vehicles onto the R253 regional road and associated external road network.
- Whilst damage to the road structure of the R253 regional road is not anticipated, a survey should be conducted with the local Donegal County Council Area Engineer prior to, and following completion of, the construction phase. Any defects attributable to the construction of the development should be made good following completion of the construction phase. Additionally, any defects observed during the construction phase should be reported immediately to the Donegal County Council Area Office.

Operational Phase

- The pre-construction mitigation measures should be maintained during the operational phase of the redevelopment.

- With the exception of collections from and deliveries to local farms and businesses, traffic movements within the local area related to inputs and outputs from the proposed development will be limited to the routes highlighted in orange Figure 4A, namely the R252, R253, N13 and N15.
- Defined specific haulage routes will be specified in all haulage contracts.

Decommissioning Phase

- Mitigation measures for decommissioning should be as per the construction phase, including survey and reporting of defects to the R253 regional road.
- Covered vehicles should be used for removal of material from the site to minimise the spread of materials and dust into the local environment.

8.14.14. With the recommended mitigation measures in place, no significant adverse roads and traffic related environmental impacts are anticipated during the construction, operational or decommissioning phases of the proposed development

8.14.15. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of traffic and transport can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on traffic and transport.

8.15. Noise & Vibration

8.15.1. Chapter 11 deals with Noise & Vibration. The noise impact assessment has been prepared to assess the noise levels in proximity to the main noise sources on site and to assess the potential impact on the nearest neighbouring residential properties in proximity to the site. I also refer to the further information submitted with the application.

8.15.2. The noise impact assessment and evaluation of the noise impact arising from the proposed development involved review of baseline noise survey results, a comparison of the noise impact on the nearest residential receivers against the World Health Organisation (WHO) Guidelines for Community Noise and an assessment in accordance with the EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4). The area is rural with

infrequent traffic noise on the R252 and R253 roads with agricultural noise sources dominating the background noise climate of the area.

8.15.3. This noise impact assessment has compared the measured noise levels in proximity to the nearest noise sensitive properties to the relevant guideline noise limits outlined in the WHO Guidelines for Community Noise and the EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4).

8.15.4. No night-time or evening construction works will take place. At the nearest noise sensitive receptors, the ambient noise levels (rounded to the nearest 5 dB) are approximately 55 - 60 dB LAeq,T during daytime and evening. Therefore, all noise sensitive receptors fall into Category A of the 'ABC' assessment methodology. Hence, daytime construction noise will be subject to a limit of 65 dB LAeq,T.

8.15.5. In response to FI Item 3d, reports detailing information prepared in support of licence conditions and non-licensing works is presented in Appendix 3B. Environmental noise monitoring was carried at the GGL Biogas Plant located at Aghaveagh, Ballybofey, Co. Donegal on the in May 2018 during normal site operations for the purpose of complying with EPA licence conditions . The survey was carried out in accordance with the EPA Guidance Note for Noise (NG4). Based on the findings of the survey there are no environmental noise issues at the noise sensitive receptors associated with operations at the Biogas Plant. Daytime, evening-time and night-time noise limits were complied with at all noise sensitive locations with regard to GGL Biogas Plant noise emissions.

8.15.6. Intermittent traffic along public roads were the dominant noise sources at NSL1, NSL2 and NSL4 along with farm related sources and bird song. Frequency analysis data recorded during the daytime and night-time noise surveys indicates that operations at GGL Biogas Plant do not give rise to a tonal noise impact at the nearest residential properties.

8.15.7. A further daytime and night-time environmental noise survey was undertaken in May 2019 at five properties north of the Glenmore site in the townlands of Welchtown and Ballynatone along the L2193 and R252. The survey and noise impact assessment was prepared to assess the noise impact at 5no. receivers north of the Glenmore site.· A comparison of the noise impact at the receiver locations was undertaken against the

World Health Organisation (WHO) Guidelines for Community Noise and a review of the potential for adverse noise impact in accordance with the BS BS 4142: 2014 'Method of Rating and Assessing Industrial and Commercial Noise'. Reference was also made to the EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) (January 2016 Update).

8.15.8. During daytime, while the noise sources on the Glenmore site are audible at the residential properties to the north of the Glenmore site in Welchtown and Ballynatone, the actual measured noise levels are broadly in accordance with the WHO guidelines recommended daytime limit of 50 – 55 dB(A) for outdoor living areas. It is the frequent traffic noise from the R252 that elevates noise levels in the area. The highest measured background noise level of 40.5 dB LA90 at NSR-203 can be interpreted to represent the specific continuous noise level from the Glenmore site when all daytime plant and the sweeper are in operation. The EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) outlines that a Daytime Noise Criterion of 55 dB LAr,T (07:00 to 19:00hrs) should apply in areas that are not designated as a 'Quiet Area' or an 'Area of Low Background Noise'. This area is neither a 'Quiet Area' or an 'Area of Low Background Noise'.

8.15.9. During night-time, while the noise sources on the Glenmore site are faintly audible at the residential properties to the north of the Glenmore site in Welchtown and Ballynatone, the measured specific night-time noise levels (with no influence from traffic) are well below the WHO guidelines recommended night-time limit of 45 dB(A) outside a bedroom window. The EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) outlines that a nighttime Noise Criterion of 45 dB LAr,T (23:00 to 07:00 hrs) should apply in areas that are not designated as a 'Quiet Area' or an 'Area of Low Background Noise'. In summary, survey concluded that the Glenmore Generation Ltd. Biogas Plant site does not cause an adverse noise impact at the residential properties to the north of Plant in the townlands of Welchtown and Ballynatone

8.15.10. The main sources of noise due to construction of the proposed development will be from activities such as earth movement and excavations, foundations and general building construction activities. There is likely to be temporary and intermittent increases in noise levels during the construction phase of the proposed development

at the adjacent properties. The following construction practices have the potential to produce intermittent and temporary noise impacts:

- Infilling / Levelling Excavators & concrete pour
- Foundations Excavators, Concrete lorries, dumpers
- Building Erection Block-laying & Delivery vehicles
- General Construction Masonry construction, services, drainage, road building and surfacing etc.

8.15.11. The Construction of the proposed development will include associated construction site traffic, comprising of contractors' vehicles, excavators, diggers, possibly generators and other diesel-powered vehicles. During the construction phase, the proposed development will generate HGV movements throughout the duration of the construction period. The noise impact of passing HGVs will be short-term at receiver locations in the area.

8.15.12. Construction noise can be assessed in terms of the equivalent continuous sound level and/or in terms of the maximum level. The level of sound that arises from a construction site depends on a number of factors and the estimation procedures need to take into account the following significant factors;

- the sound power outputs of processes and plant;
- the periods of operation of processes and plant;
- the distances from sources to receptor;
- the presence of screening by barriers;
- the reflection of sound

8.15.13. Typical noise levels from construction works likely to take place during the construction phase of proposed development are outlined in Table 11.6. of the EIAR and include activities such as site clearance / excavation, removal of waste/rubble, foundations, general construction works, road works / landscaping and infilling / levelling.

8.15.14. Worst-case construction noise levels at specific distances from the area of construction have been predicted assuming the use of the following equipment with a 75% operating 'on' time as outlined in Table 11.7 of the EIAR. The closest noise sensitive receptors are in excess of 200m from the main areas of construction on the

development site and hence, there should be no exceedance of the daytime construction noise limit of 65 dB LAeq,T at the noise sensitive receptors in the area. It will be incumbent on the contractor to ensure that construction works are undertaken with particular sensitivity to ensure no significant construction noise impact. All construction works will take place during daytime hours and so the relative construction noise impact will not be significant.

8.15.15. Predicted operational noise levels at noise sensitive receivers are based on the drawings and information provided. The proposed development will consist of the following aspects of which some have the potential to be the main noise sources:

- Feedstock Reception Building
- CHP Engines
- CO2 Building
- Biogas Purification & Bottling Plants
- Biogas Purification & Bottling Plant Compressors
- Pump House Buildings
- Boiler Building
- Process Pit
- Digestate Tanks x 7
- Flare (only used in emergency)
- Fertiliser Processing Building

8.15.16. In terms of development generated traffic, traffic movements coming to and exiting the site are predicted in Table 11.8 Development Generated Traffic of the EIAR. A worst-case figure of 10 HGV movements to the site per hour during daytime hours has been assumed. Such traffic movements will not occur during night-time.

8.15.17. The results of the predicted noise levels at the noise sensitive receivers in the area during daytime, evening and night-time are presented in Table 11.9. It is assumed that the worst-case noise impact will be the same during evening and night-time as there will be no traffic movements on site. The measured noise levels at the noise monitoring location are in accordance with the relevant guideline noise limits outlined in the WHO Guidelines for Community Noise and the predicted noise levels at the

nearest residential properties are in accordance with the WHO Guidelines for Community Noise during daytime and night-time.

8.15.18. Mitigation Measures and Monitoring are set out in Section 10.5 of the EIAR and summarised as follows:

8.15.19. Appropriate mitigation measures have been recommended to ensure the Construction Phase target noise limits are not exceeded. The contractor should take note of the control measures recommended in BS 5228 and apply the appropriate measures where applicable. Other measures recommended include:

- Working hours during site construction operations will be restricted to daytime hours as outlined;

  07.30 hours to 18.00 hours (Monday to Friday)

  08.00 hours to 13.00 hours (Saturdays)
- An on-site speed limit will be enforced for all traffic. Drivers of vehicles will be
- advised of the speed limits through the erection of signs i.e. a typically recommended on site speed limit of 10 km/hr.
- Where practicable the use of quiet working methods will be selected and the most suitable plant will be selected for each activity, having due regard to the need for noise control.
- Best practicable means will be employed to minimise noise emissions and will comply with the general recommendations of BS 5228, 1997. To this end operators will use “noise reduced” plant and/or will modify their construction methods so that noisy plant is unnecessary.
- By positioning potentially noisy plant as far as possible from noise sensitive receivers the transmission of sound can be minimised. Earth mounds and/or stacks of material or buildings on site can be used in such a way that they act as a physical barrier between the source and the receiver.
- Mechanical plant used on site will be fitted with effective exhaust silencers. Vehicle reverse alarms will be silenced appropriately in order to minimise noise breakout from the site while still maintaining their effectiveness.
- All plant will be maintained in good working order. Where practicable, machines will be operated at low speeds and will be shut down when not in use.

- If required, compressors will be of the “noise reduced” variety and fitted with properly lined and sealed acoustic covers.
- In all cases engine and/or machinery covers should be closed whenever the
- machines or engines are in use.
- All pneumatic percussive tools will be fitted with mufflers or silencers as recommended by the equipment manufactures. Where practicable all mechanical static plant will be enclosed by acoustic sheds or screens.
- Employees working on the site will be informed about the requirement to minimise
- noise and will undergo training on the following aspects:
- The proper use and maintenance of tools and equipment
- The positioning of machinery on-site to reduce the emission of noise to the noise sensitive receptors
- Avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment
- The use and maintenance of sound reduction equipment fitted to power pressure tools and machines
- Cognisance should also be taken of the ‘Environmental good practice site guide’ 2005 compiled by CIRIA and the UK Environment Agency. This guide provides useful and practical information regarding the control of noise at construction sites.
- It is recommended that should complaints be received from nearby residential properties, periodic noise monitoring should be undertaken during construction works to determine noise levels at noise sensitive receptors. On the basis of the findings of such noise monitoring and appropriate noise mitigation measures should be implemented to reduce noise impacts. Where excessive noise levels are recorded, further mitigation measures should be employed which may include temporary screening of the nearest receptor to on-site activities.
- Responsible Person - It is recommended that the Contractor should appoint a responsible and trained person who will be present on site and who will be willing to answer and act upon complaints and queries from the local public.
- Night-time Working - If there are items of plant (e.g. dewatering pumps and similar) in use during night-time hours they should be chosen, sited and enclosed such

that levels at the nearest properties do not exceed the measured background noise levels.

The worst-case assessment of operational noise from the proposed plant and traffic movements associated with the proposed development has indicated that the EPA's "Area of Low Background Noise" limit criteria will not be exceeded at the nearest residential properties. Therefore, no additional specific mitigation measures beyond those which are already proposed within the design have been recommended to reduce operational noise.

8.15.20. The noise impact of the existing plant and development proposal will not be significant in relation to the existing background noise level in the area. There will be no significant residual impact from the operation of the overall proposal.

8.15.21. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of noise and vibration can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on noise and vibration.

8.16. Cultural Heritage

8.16.1. I refer to the EIAR and Section 8.8.2 of this report above. No materials assets including features of architectural, archaeological or cultural heritage were identified in the three previous applications for the biogas facility (these are identified in Chapter 2.0).

8.16.2. There is no evidence that there are any material assets within or adjoining the parts of the site that were not included in the 2014 permission i.e., the extended yard area. The 2014 permission was subject to a condition requiring, amongst other things, predevelopment testing by a suitably qualified archaeologist and the submission of a written report to the Planning Authority. Depending on the content of the report, monitoring may be required and the Department of Arts, Heritage and the Gaeltacht will advise on relevant matters. It was considered that these measures would equally and appropriately prevent adverse impact on any material asset that may be within the site. When the biogas facility was constructed no man-made heritage, features were

uncovered but this condition would remain appropriate so far as it relates to land required to be developed for the extended area proposed which lay outside of this red line. Consequently, no further assessment was deemed necessary to be commented on in this EIAR as far as the proposed development is concerned.

8.16.3. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of cultural heritage can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on cultural heritage.

8.17. Landscape and Visual Impact Assessment

8.17.1. I refer to the Landscape and Visual Impact Assessment prepared by Park Hood, Chartered Member of the Landscape Institute UK and submitted with first party response to the appeal. The overall approach and methodology undertaken in the LVIA is based on techniques and guidance in the *Guidelines for Landscape and Visual Impact Assessment (3rd Edition)* by *the Landscape Institute and the Institute of Environmental Assessment (2013)*.

8.17.2. The site is located on sloping lands that face north towards the River Finn Valley, a defining landscape feature in this part of Donegal. the levels drop from approx. +110m to the south of the site to approx. +99m at the entrance lane. While the River Finn is inconspicuous, the associated valley comprises a broad and open landscape of large rectangular or square agricultural fields overlooked by mountainous areas of upland bog. The levels to the immediate north of the site have been subject to significant modification in recent years to facilitate construction of the Biogas plant, ancillary plant works, cattle sheds and associated yard areas. There are no streams of watercourses on the site itself and it is self-draining. The steeper lands to the north and west of the site area in woodland made up of mature mixed species deciduous trees.

8.17.3. There are no amenity, destination or recreational features on the site or in the Glenmore Estate landholding. No features, scenic / walking routes or notable landscapes are annotated in or near the appeal site in the County Development Plan. The site is located adjacent to a utilitarian and functional land-use associated with eh

Biogas Plant / Farm complex that has a generally low landscape condition , quality and value. The site and wider area has a medium condition and value being made up of farmland bound by mixed hedgerows and scattered tress on its immediate periphery. The Development Plan indicated the site as being located in a "Structurally Weak Rural Area" which is the lowest rating provided for rural landscape types in the county.

8.17.4. The study area includes the site itself and the wider landscape where the proposed (or cumulative) development may have an influence either directly or indirectly. Site surveys were undertaken to assess the baseline environmental conditions against which any future changes can be measured or predicted and assessed. The process allowed for identification of 6 no representative viewpoints in locations that are publicly accessible and based on a determination of the actual visibility of the site from where there are significant numbers of likely visual receptors. The following representative viewpoints were selected:

- Viewpoint 1 – L2173 Road, Welchtown (towards Kinnaderry)
- Viewpoint 2 – L2193 Road, Bally atone
- Viewpoint 3 – R252 Road, Kinnaderry
- Viewpoint 4 – Glenmore / Welchtown Picnic Spot
- Viewpoint 5 – R252 Road, Glenmore Bridge and
- Viewpoint 6 – R252 road, Ballynatone / Glenmore

8.17.5. With the exception of Viewpoint 1 the predicted change in the remaining 5 viewpoints as a result of the proposed development would be negligible due to distance and intervening woodland on the Glenmore Estate. With Viewpoint 1 it was determined that the majority of the proposed development will be out of view but there will be very slight effects on this section of the L2193 Road and part of Welchtown as a small portion of the development will be visible on the east side of the site. This will be a very limited glimpsed view that would be closed off as the boundary planting to the east of the site matures. The extent of building on this part of the Glenmore Estate will increase but given the site setting and distance, this would not be rated as having a significant to unacceptable effect on this view.

8.17.6. During the construction phase there will be short term substantial effects to the site due to groundworks. The majority of these effects will derive from construction activity.

No trees or significant vegetation is to be removed to facilitate the development. In terms of public perception this will be limited to those who work in this area. With the main construction area set back by over 320m from the nearest public road (R253) and due to intervening woodland there would be no effects on these views. The most appreciable impact at this stage to publicly accessible areas will derive form the taller construction equipment which will have a short term slight adverse effect to distant views (in excess of 0.5km) across the Finn Valley. In any views the existing plant and broad panoramic views ensure that the effects would be of a low magnitude and not significant.

8.17.7. At the operational phase the development will significantly increase the area of actual building in this part of the Glenmore Estate set between an existing cluster of trees (to be retained) and a mature wooded belt. This will have long term and substantial effects with a high magnitude of change in terms of land use, management, uage and built elements. While such effect are inevitable, the site presents a very suitable and appropriate location for this type of development given the adjacent land uses and visual containment offered by woodland and topography. This ensures any significant effects are restricted tot eh site and the applicants land holding.

8.17.8. In the wider study area the most appreciable views of the proposed development will be within a 50m range of the site which are private lands and part of the applicants landholding. None of the key scenic landscape, natural, cultural, social, heritage, amenity or recreational features or views and prospects identified in the Landscape Character of County Donegal (2016) or the County Donegal County Development Plan (2018 – 2024) will be affected by this proposal and any significant changes limited to area on or immediately adjacent to the proposed site. The existing setting and considered site selection ensure that this proposal while sizable can be successfully assimilated into the medium sensitivity area and of countryside without causing significant or unacceptable effects to the landscape character or amenity.

8.17.9. Mitigation Measures and Monitoring are summarised as follows:

Construction Phase

- A key mitigation is that of site selection with the proposed development located aside an existing Biogas Plant / farm complex and yard in ana area that is not widely visible from any publicly accessible areas. The site is not visually prominent

or likely to affect any key natural or environmentally sensitive areas or result in significant visual or landscape effects.

- Landscape mitigation measures were considered during the design and as part of the proposal to assist in the visual integration and assimilation of this proposes into the River Finn Valley
- The proposed non-reflective cladding material will be in keeping with the adjacent developments and the matt medium grey colour will tie in with the adjacent landscapes on a year round basis. When feasible associated structures and other plant will be coloured in dark or muted shades to help blend and mute the proposed development into the wider landscape setting.
- Proposed lighting will be high quality and selected on basis of minimising light spillage by casting light directly into the site area and thus limiting light "pollution" to adjacent lands.
- Proposed site signage will be grouped on a minimum number of poles where possible or tied in with boundary or internal fencing / walls.
- Existing trees and hedgerows will be retained and protected. Tree protection fencing will be erected around the base of all trees or hedgerows to be retained on site to ensure their protection during the construction phase. There are no proposals to fell any significant trees or vegetation as part of this development.

Operational Phase

- The design ensures that external working areas are easy to maintain and manage. The maintenance programme from the outset will ensure presentable, clean and tidy site appearance and replacement of any damaged features or elements.
- The landscape proposes are indicted on *Figure 5.4 Proposed Landscape Setting* and *Drawing 6645 L001 Proposed Landscape Works* which includes details for structure planting, hedgerows and new woodland.
- Landscape works will include new hedgerows or woodland belts and augmentation / improvement of existing hedgerows to the north and eastern site perimeters. The trees to be planted shall be a mix of indigenous species.
- Planting will be maintained regularly by the client and any tress dying within subsequent three years shall be replaced.

8.17.10. The decommissioning stage would entail returning the site to its existing state of improved pasture. No mitigation measures are anticipated in landscape and visual terms at this stage.

8.17.11. Effects to the site during the construction state will be of a substantial nature sue to the extent of construction activity but the magnitude of any change in LVIA terms is low given the existing site setting and character. the effects taking into account mitigation measures during construction period will be slight to negligible and insignificant to areas beyond the site. where views are afforded, effects on visual amenity or landscape character area assessed as slight due to the distance and context of the adjacent land uses.

8.17.12. At the operational phases the key mitigation measures relate to pre-construction considerations in terms of site selection and the proposed non-reflective cladding and colour in terms of the buildings design considerations. The proposed planting to the periphery of the proposed development will assist its integration into the local landscape. The planting will as it matures, visually close off distant views to the north-eat and assist in screening the eastern edge of the development and parts of the AD plant and farm complex.

8.17.13. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of Landscape and Visual Impact heritage can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on material assets.

8.18. Interactions

8.18.1. Chapter 12 of the EIAR describes interactions between the various impacts identified under Environmental Factors described in each of the previous Chapters of the EIAR during both the various phases of the development proposal. Stated that while all environmental factors are inter-related to some extent, the significant interactions were taken into consideration by each specialist during preparation of the EIAR. This required each specialist to review other relevant Sections of the EIAR prior to

determining the potential interactions. Potential impacts identified can be eliminated by the implementation of mitigation measures as detailed in each Section of the EIAR.

8.18.2. The proposed development works at, and adjacent to, the existing Glenmore Biogas Plant has the potential to impact on various environmental aspects, and there are interactions and inter-relationships between these aspects, as presented in Table 12.1 and described in Table 12.2 of the EIAR and summarised below:

Interaction of Environmental Factors	Description
Population and Human Health	Interactions of environmental factors will occur during construction activities as a direct result of earth works associated with site clearance and civils works (construction of structure foundations, road improvement works, internal road constructions, berm construction, etc). These activities will result in the generation of noise and dust. The development would have the potential for negative impact if construction activities were to proceed without implementing adequate mitigation measures. Health and Safety on site is also recognised as being of paramount importance to human health during the construction, operation and decommissioning phases and this will not be compromised, if the specified mitigation measures outlined in the various chapters of the EIAR are adhered too.
Air Quality and Population & Human Health	There is potential for impact to human beings living in the area of the proposed development during the construction, operation and decommissioning phases of the development. These have been outlined and assessed in Chapter 9 (Air Quality, Climate and Odour) of the EIAR. The air quality impact at the nearest residential receivers is predicted to be below the relevant air quality standard limit values and is therefore determined to be low. The assessment of odour impact shows that worst-case odour impact will be well below the odour target value of C98, 1-Hour 1.5 ouE/m3 at the sensitive residential receptors in the area. The emissions from the Building Odour Control Stacks result in effective dispersion of the odours from the facility. The main interactions between air quality and biodiversity are related to emissions of acidifying gases such as nitrogen oxides (NOx). The predicted nitrogen deposition rate at the River Finn SAC (0.059 Kg/Ha/Yr) is 1.18% of the relevant Critical Load of 5 Kg/Ha/Yr. As the maximum predicted nitrogen deposition rate at the River Finn SAC is less than 10% of the relevant Critical Level (Cle) and 0.8% of the

	existing background nitrogen deposition level of 7.09 Kg/Ha/Yr, development of the proposal at the existing site will not have a significant impact on nitrogen deposition rates at nearby designated sites or sensitive habitats. One of the most important contribution of biogas technology to environmental protection is that it avoids additional carbon dioxide (CO2) emissions compared with fossil energy sources. Producing energy from biogas is largely CO2 neutral, i.e. the CO2 released by burning biogas was previously removed from the atmosphere during the generation of biomass through photosynthesis. The fermentation of manure also reduces emissions of methane, a gas that has an effect on the climate and would otherwise escape uncontrolled from raw liquid manure with far more damaging effects for the climate than CO2. New research suggests that emissions of laughing gas (N20) – which also has an effect on the climate – can also be reduced by fermentation. Furthermore, fermentation reduces the development of odours during liquid manure storage and spreading since the odours contained in it are broken down and neutralised during the fermentation process. In addition, fermentation improves the quality of manure as pathogens and weed seeds are killed and nutrients made more available for plants, enabling the manure to be applied in a more targeted fashion as a substitute for inorganic fertilisers. Therefore, the digestate is an ideal fertiliser in arable farming/crop production and a good soil conditioner.
Noise, Human Beings and Biodiversity	The impact of noise on the human beings living in the area of the proposed development has been addressed during the construction, operational and decommissioning phases of the proposed development. Appropriate mitigation measures have been recommended to ensure the Construction phase target noise limits are not exceeded. The contractor will also be required to adopt and implement suitable control measures as recommended in BS 5228. These will be further prescribed in a construction management plan subject to planning. The predicted noise levels at the nearest neighbouring residential properties due to the operation of the existing site and development proposal are in accordance with the WHO Guidelines for Community Noise during daytime and night-time and the relevant noise limits outlined in the EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4 Noise levels generated during the operation

	of the proposed development will not be audible at the nearest sensitive receptors (human and ecological).
Soils, Geology and Waters	There is a strong interaction between soils & geology and waters (surface waters and groundwater). The disturbance of soil during construction has the potential to impact on water quality. Construction activities which disturb or expose the soil have the potential to elevate suspended solids in runoff from the site which could impact on surface water bodies such as the River Finn. Mitigation measures during the construction process will prevent sediment run-off and construction discharges. A construction environmental management plan (CEMP) will be developed and implemented for the construction phase of the development. This document will provide a framework under which construction activities which have potential for environmental impact (e.g. generation of dust, ecological impacts, surface water discharge, etc) will be managed. Mitigation measures as outlined in the EIAR will be included within this plan. There will be no direct process related discharges to soils or surface water bodies during the operational phase of the development. Bund are designed and provided in accordance with best practice to contain and spillages /escape of organic materials and encompass areas where processing relating activities will be carried out. This removes the pathway of potential sources of pollution to receptors. Stormwater generated on the site will be managed in accordance with proposals as presented in EIAR.
Traffic & Transport, population and human health, noise & vibration, and biodiversity	There will be potential interactions with increased traffic movements as a result of the construction and operation of the proposed biogas plant with population and human health, air quality odour and climate and noise and vibration and biodiversity. Recommended mitigation is proposed within each of the Sections of the EIAR.
Landscape & Visual Impacts and Cultural Heritage, Ecology and Population	There are no archaeology / cultural heritage features on the site. all other scheduled monuments are distant enough form the site to be subject to anu significant changes to their landscape and visual setting. The proposed landscape works were reviewed by the project ecologist and plant species include significant indigenous species which will have a positive effect as they mature on local ecology and diversity comparable to what currently derives form a field in improved pasture. The design process took into account potential visual effects to the nearest residential properties which are all excess of 500m of the site

	or have no views due to intervening vegetation and topography. This proposal is at a suitable distance from any residential properties for there to be any significant or unacceptable on these areas int eh landscape and visual terms. Recommended mitigation is proposed within the LVIA.

8.18.3. This EIAR has considered these interactions and inter-relationships throughout the design process through appropriate siting of development components, functional design in accordance with the relevant standards /codes and guidelines and incorporation of mitigation measures as recommended. I consider that this summary of the potential for interacting impacts to be reasonable.

8.18.4. In conclusion, I am satisfied that such affects can be avoided, managed and mitigated by the measures which form part of the proposed development, mitigation measures, and suitable conditions. In my opinion, there is therefore nothing to prevent the granting of permission on the grounds of cumulative effects.

8.19. Reasoned Conclusion

8.19.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR and the supplementary information provided by the applicant, and the submissions of the prescribed bodies, and objectors in the course of the applicant, it is considered that the main significant direct and indirect impacts of the proposed development on the environment are as follows:

- Biodiversity - Impacts to biodiversity are likely to arise during construction works. Ecological desk and field studies were undertaken for the proposed project. Based on these, sensitive biodiversity receptors identified within the proposed development site, or connected via indirect/secondary pathways for effects include: River Finn SAC; Eroding Upland Rivers, Atlantic salmon; and aquatic invertebrate communities. The impacts arising would be mitigated by additional planting, appointment of an Ecological Clerk of Works, a CEMP, attenuation of surface water and following best practice and procedures during the construction phase. Detailed mitigation measures are prescribed within this Biodiversity chapter and in additional chapters of the EIAR (Soils and Geology and Waters). With the full implementation of these mitigation measures, residual impacts are

evaluated as being neutral to slight negative in magnitude; restricted to the local context; temporary to short-term in duration and reversible; and therefore, not significant.

- Water – Potential environmental impacts arise from wastewater discharge and surface water. Having regard the EIAR and further information submitted and the mitigation measures contained in same that include surface water management, SuDS and attenuation tanks it is considered that all potential discharges, both those governed by the Industrial Emissions license from the EPA and discharges that may result from spillage or firewater, can be adequately contained. Subject to full compliance with all mitigation measures listed in the documentation, by virtue of this development there is no potential for significant adverse impact on the receiving environment proximate or removed from the site, either from this development alone or in combination with other developments.
- Air Quality & Odour - Air pollution and odour are likely to arise during the construction / operational phase such as would impact negatively on sensitive receptors and populations in the vicinity of the site. The Air Quality & Odour Impact Assessment demonstrated that the emissions will result in an acceptable air quality impact in accordance with the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011). Impacts are avoided by the indicated operation of the existing plant through air handling and extraction and abatement systems, odour removal techniques (UV radiation) and dust filters as well as by the agreement of measures within a Construction and Environment Management Plan (CEMP) to include specific provisions relating to dust monitoring and odour management.
- Traffic & Transport – Construction phase impacts in the form of short term increases in the traffic (private cars and HGVs) on the local road network are recognised, addressed in the EIAR and, specifically in the construction and environment management plan. The mitigation measures are reasonable and practicable. With the recommended mitigation measures in place, no significant adverse roads and traffic related environmental impacts are anticipated during the construction, operational or decommissioning phases of the proposed development.
- Noise & Vibration – noise pollution is likely to arise during the construction / operational phase such as would impact negatively on sensitive receptors and

populations in the vicinity of the site. these impacts will be mitigated by the agreement of Construction Management Plan (CEMP) to include specific provisions relating to noise management. There will be no negative impacts subject to mitigation measures outlined or otherwise addressed by condition

- Landscape & Visual Impact Assessment – The proposed development entailing a series of modern industrial design buildings would have an impact on the visual character of the immediate area. This impact is considered acceptable given the location of the site beyond which, any effects will be of slight and non-significant nature given the limited visual envelope, existing site context, nature of peripheral woodland and distance of any possible views. In more distant views from across the River Finn valley, it will not have any significant, unacceptable, or adverse effects on the setting or amenity value of these areas.
- Population & Human Health – There are potential positive impacts for employment opportunities and economic activities in the region. Impacts arising from noise, odour, traffic, and construction will be mitigated by a Construction Management Plan including traffic management measures. There will be no negative impacts subject to mitigation measures outlined or otherwise addressed by condition.

8.19.2. In conclusion, having regard to the above identified significant effects, I am satisfied that subject to mitigation measures proposed the proposed project would not have any unacceptable direct or indirect impacts on the environment.

9.0 **Recommendation**

9.1. On the basis of the above planning assessment, environmental impact assessment and appropriate assessment, I recommend that the Board approve the application for the proposed development for the reasons and considerations and subject to the conditions set out below.

10.0 **Reasons and Considerations**

10.1. Having regard to:

(i) The written submissions made in respect of the application

(ii) The established nature of the existing Glenmore Biogas Plant, the detailed nature, scale and form of the development and its location relative to nearby sensitive receptors,

(iii) Mitigation measures which are proposed for the construction and operation phases of the development including the management and discharge of surface water and digestate arising on site,

(iv) National planning policy in respect of waste management and climate action together with the provisions of the Connacht-Ulster Region Waste Management Plan 2015 – 2021 and the Donegal County Development Plan 2018-2024

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

(vi) The submissions on file including those from prescribed bodies and the Planning Authority

(vii) The documentation submitted with the application, including the Environmental Impact Assessment Report and Natura Impact Statement

It is considered that, subject to compliance with the conditions set out below, the proposed development would be in accordance with the Development Plan policies, would not seriously injure the amenities of the area or of property in the vicinity, would not be prejudicial to public health or water quality, and would be acceptable in terms of traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

11.0 **Conditions**

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application as amended by the further plans and particulars submitted on the 21st day of May 2019 and by the further plans and particulars received by An Bord Pleanála on the 18th day of November, 2021, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development

	and the development shall be carried out and completed in accordance with the agreed particulars. **Reason**: In the interest of clarity
2.	The proposed office extension shall be omitted. **Reason**: In the interest of public health.
3.	a) A maximum of 90,000 tonnes per annum of raw materials shall be treated in the anaerobic digesters b) A maximum of 20 tonnes of biogas shall be stored on site at any given time (inclusive of gases within tank domes and gases being stored prior to transportation off-site) **Reason**: In the interests of clarity
4.	All environmental mitigation measures set out in the Environmental Impact Assessment Report and associated documentation submitted by the developer with the application, by way of further information and the appeal shall be implemented in full except as may otherwise be required in order to comply with the conditions of this order. **Reason**: In the interest of clarity and to protect the environment during the construction and operational phases of the development.
5.	Digestate generated by the proposed development shall be disposed of by spreading on land, agreed in writing with the planning authority. The location, rate and timing of spreading together with any buffer zones required shall be in accordance with the requirements of the European Communities (Good Agricultural Practices for the Protection of Water) Regulations, 2017. **Reason**: To ensure the satisfactory disposal of waste material, in the interest of amenity, public health and to prevent pollution of watercourses.
6.	Monitoring of the construction phase shall be carried out by a suitably qualified and competent person to ensure that all Environmental mitigation measures contained in the documentation which accompany the application, further information and appeal submission are fully implemented. In addition, the designated member of the company's staff shall interface with the Planning Authority or 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.
7.	An annual report on the operation of the faciality hereby permitted shall be submitted to the Planning Authority. The content of this report shall include inter alia: a) Details of the source of all associated waste and the final disposal areas b) The volumes of raw materials treated in the anaerobic digester in the previous 12 months c) The volume of digestate produced and stored in previous 12 months d) The volume / quantity of gas produced / stored on site in previous 12 months **Reason**: In the interest of orderly development and to ensure a proper standard of development.
8.	Water supply and drainage arrangements, including the 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.
9.	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. **Reason:** In the interest of amenity and public safety.
10.	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.
11.	The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including and not limited to: (a) hours of construction and operation, (b) location of the site and materials compound(s) including area(s) identified for the storage of construction refuse, (c) location of areas for construction site offices and staff facilities, (d) details of site security fencing and hoardings, (e) details of car parking facilities for site workers during the course of construction, (f) 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, (g) measures to obviate queuing of construction traffic on the adjoining road network, (h) measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network,

	(i) 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, (j) details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels, (k) 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, (l) means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local surface water sewers or drains, (m) a maintenance contract for the oil interceptor to ensure it is emptied on a regular basis shall be submitted (n) details of construction lighting, and (o) details of key construction management personnel to be employed in the development. The plan shall include measures for monitoring dust, noise, groundwater and surface water and shall include a proposal for periodic reporting to the planning authority. Site preparation and construction shall adhere to best practise and shall conform to the Inland Fisheries Ireland "Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites" 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. A Construction Manager shall be appointed to liaise directly with the Council for the duration of the construction of the scheme. **Reason:** In the interest of amenities, environmental protection, public health and safety.

12.	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.
13.	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
14.	A noise management plan and 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 agreed in writing with the planning authority prior to commencement of the 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.
15.	During construction the wheels of all trucks shall be washed prior to their exit from the site in a wheel wash facility. Details of the construction, installation and operation of this facility shall be agreed in writing with the Planning Authority prior to commencement of any development. **Reason**: To safeguard the amenities of the area.

16.	The site shall be landscaped and planted in accordance with a scheme to comprise predominantly native and naturalised hedgerow, shrub and tree species reflecting those species naturally occurring in the locality. This plan shall be prepared with input from an ecologist. Full details (including drawings and a timescale for implementation) shall be submitted in a landscape plan to be agreed in writing with the Planning Authority prior to commencement of development. It is desirable that the plan will reflect the principle of no net loss of native trees or hedgerows. All planting shall be adequately protected from damage until established. Any plants which die, are removed or become seriously damaged or diseased, within a period of five years from the completion of the development, shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority. **Reason**: In the interests of visual amenity and protecting the biodiversity value of the site.
17.	The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, 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

Mary Crowley

Senior Planning Inspector

28th May 2021