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**Environmental Impact Statement
Proposed Bio Energy Facility
The Downs
Mullingar**

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Non Technical Summary

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NON TECHNICAL SUMMARY

Introduction

This is a Non Technical Summary (NTS) of the Environmental Impact Statement (EIS) for the development by Bio Agrigas Ltd of a Bioenergy Facility at The Downs, Newdown, Mullingar, Co. Westmeath.

The EIS has been prepared to accompany an application to Westmeath County Council for full planning permission for a Bioenergy Facility at The Downs, Newdown, Mullingar. The Facility will be operated under a Waste Licence to be issued by the Environmental Protection Agency (EPA). The proposed facility will consist of an Anaerobic Digestion (AD) Plant designed to process some 20,000 tonnes of non-hazardous organic wastes originating in the local area. The Bioenergy Facility will be capable of producing approximately 1 Mega Watts (MW) of electrical power.

The anaerobic digesters will be designed to receive c. 20,000 tonnes/year liquid wastes sourced in the local area including agri-industry processing wastes, food processing wastes and will also process Category 2 ABP material. The EIS outlines the scale and scope of the proposed development and describes the existing environment at the development site. The potential impacts resulting from the proposed facility are identified together with the proposed mitigation measures, which will prevent or reduce the identified potential impacts.

Location & Setting

The 2.30 ha development site is located to the north of the existing commercial premises with the surrounding lands mainly agriculture at Newdown, The Downs, Mullingar, Co. Westmeath, off the Dublin Sligo Road (N4). The site is bounded to the north by the Regional Road, The Downs to Killucan road (R156), to the east by agricultural land, to the west by agricultural lands and proposed N4 The Downs Grade Separation and to the South by N4 Dual Carriageway.

Characteristics of the project

The planned bioenergy facility will combine anaerobic digestion technology to treat non hazardous organic feedstock, generate electrical power & heat and to produce a useful solid soil conditioner.

Deliveries will only be accepted for processing from sources of wastes that have been previously characterised as suitable for treatment at the facility.

The non-hazardous organic feedstock planned to be treated at the waste facility are currently disposed of through land spreading and/or export.

Type of Feedstock	Annual Quantity t/y	Dry Matter Content
Pig Slurry	3,000	8%
Dairy Cow Slurry	2,000	8.5%
Maize Silage	2,000	33%
Grass Silage	3,000	30%
Fodder beet	2,000	20%
Category 2 ABP- Belly Grass	5,000	14%
Bakery Waste – Bread, Dough Fat	3,000	40%
Total	20,000	22%

The Facility has been designed for continuous operation 24 hours a day throughout the year. Scheduled shut down periods will be kept to a minimum to allow the facility to operate at maximum efficiency.

Waste will be accepted at the Facility in fully enclosed tankers and covered trailers between the hours of 0800 -1900 hours, Monday to Friday, 0800 – 1300 hours on Saturday approximately, with no deliveries on Sundays or public holidays except in emergency situations.

Potential Impacts, Mitigation Measures and Likely Significant Effects

The proposed development has the potential to impact on the receiving environment. However, by designing the facility to the best international standards and by operating the facility under a Waste Licence to be issued by the EPA, the potential for impacting on the environment is greatly reduced.

The proposed development is environmentally friendly utilising a carbon neutral process in terms of carbon dioxide emissions and will have a positive impact on the environment.

There will be potential for impact on air quality from dust, odour and gas engine emissions.

The overall modelling carried out by Odour Monitoring Ireland indicates that the facility will not result in any significant impact on air quality in the surrounding area with all ground level concentrations of pollutants well within their respective ground level concentration limit values.

Air quality mitigation measures include;

- The implementation of a dust minimisation plan prior to commencement of site works,
- All site vehicles and machinery to be switched off or throttled down to a minimum when not in use
- Emissions from the gas engine emission point will be governed by regulatory emission limit values

Continuous emission monitors will be installed to ensure compliance with emission limit values and an odour management plan will be prepared to ensure odour emissions are minimised.

While there is a potential for noise impacts from construction and operation of the proposed development, mitigation measures proposed will ensure that the noise levels in the vicinity of the development are within the EPA stipulated guideline values of 55dB(A) and 45dB(A) for daytime and night time noise activities.

Noise mitigation measures include traffic speed restrictions on site and ensuring that the internal plant layout and design will be to a standard that ensures noise levels outside buildings does not exceed 55dB(A). In addition there will be a regular plant maintenance programme.

The operational phase of the development is not expected to pose any significant risk to groundwater flow or the prevailing hydrological conditions in the locality. It is not anticipated that there will be any adverse impact on the prevailing groundwater quality as there will be no discharges from the proposed process to groundwater at this location. However, a wastewater treatment plant has been proposed and a possibility exists that contamination of the

groundwater may occur as a result of the discharging of treated effluent to the ground. The design and installation of the plant has been and will be completed and supervised by an approved Site Suitability Assessor.

The mitigation strategy contained in the EIS document recommends actions which can be taken to reduce or offset the scale, significance and duration of the impacts on the known and potential soils and geological resource. Many aspects of the soils and geological resources are non-renewable and once impacted upon cannot be replaced.

The purpose of the strategy is to specify mitigation measures where appropriate to minimise the 'risk factor' to all aspects of soils and geological resources such as to minimise the potential for hydrocarbons to contaminate the ground, reduce the risk of erosion, etc. This 'risk factor' is reduced or offset by recommending the implementation of a mitigation strategy in each area of the study. On the implementation of this mitigation strategy, the potential for impact will be lessened. As a result, when the recommended mitigation is implemented, there will be no significant residual negative impacts on the soils or geological/hydrogeological environment.

Along with a Traffic and Transport chapter associated with the EIS, there is also a separate Traffic and Transport Assessment Report associated with the planning application. This Traffic and Transport Assessment Report examines existing and proposed traffic conditions and transport activity to determine the effects on the local road network attributable to a proposal by Bio-Agrigas to construct a Bioenergy Facility to produce electricity from organic feedstock. Existing and collected traffic data have been used to enable accurate assessments of the prevailing existing conditions and predicted future conditions.

Established empirical data have been used to anticipate future traffic generation resulting from the introduction of the proposal and to develop a model of flow conditions following the commencement of the proposed development.

The proposed access arrangements have been analysed using these anticipated flow parameters by means of recognised junction capacity assessment techniques. These analyses have confirmed that the access junction will accommodate anticipated traffic conditions and will comfortably operate within levels of acceptable capacity without undue detrimental effects on the existing road network.

The report also analyses the proposed access junction in accordance with the NRA's DMRB guidelines to ensure that the developments access complies with all existing standards.

Recent programs of archaeological fieldwork have revealed prehistoric activity represented by cremation pits, burnt mounds and 'industrial' pits dating to the Bronze Age and Iron Age in the vicinity of the area of proposed development.

A burnt mound was identified during testing, undertaken in advance of the N4 The Downs Grade Separation Scheme, located immediately to the south of the northwestern limit of the proposed access road. Further testing undertaken in advance of the N4 Grade Separation scheme, which adjoins the proposed development area, revealed a second large burnt mound c. 100m north of the proposed access route. As the site is located on the wetland/ dryland margin it is the ideal location for burnt mound activity and as such has the potential to reveal previously unknown archaeological deposits.

Due to the rich archaeological heritage of the area and the number of recently discovered sites of archaeological activity within the vicinity of the proposed development area it is recommended that a program of archaeological testing be undertaken. Testing should be carried out by a licensed eligible archaeologist. Full provision should be made for the resolution of any archaeological features/deposits that may be discovered, should that be deemed the appropriate way to proceed.

With respect to the ecology of the site, the site for the proposed development is ordinary, nutrient-rich farmland divided between pasture and tillage. Neither it nor the surrounding hedgerows have significant interest for flora and fauna though the presence of an adjacent bog increases the diversity of visiting species.

The effect of the project can be seen as neutral for the area in question but positive for the wider environment since it will reduce atmospheric emissions from farming and lead to tighter control of nutrients and potential pollution.

With respect to visual impact, the site is generally level with the ground falling gradually from the south-west to the north-east across the site. The existing trees are confined to those contained within the hedgerows around the site. The site itself is a small portion of a much larger tract of agricultural land with pockets of residences, commercial premises, a school and some sports pitches.

The primary visual features adjacent to the site are the Flynn Feed agri-industrial storage buildings located to the south-west of the site.

The proposed development will alter the existing landscape character from agricultural to agri-industrial, similar to the buildings and structures that exist on the adjacent Flynn Feeds site. During the construction phase there will be landscape and visual impacts from normal construction activity such as construction traffic, site compounds, dust, building materials, site hoarding, ground disturbance and vegetation removal.

The proposed development will have a visual impact on views from the surrounding road network and six photomontages were prepared to illustrate the visual impact from these key locations.

Mitigation Measures Construction Phase:

The appropriate site management measures and work practices will be implemented to ensure the site is kept tidy, dust is kept to a minimum (this will include use of a wheel wash facility), and that public areas are kept free from building material, site rubbish etc. Temporary fencing, barriers, traffic management and signage will be removed when no longer required and all remaining spoil and construction material will be removed.

Mitigation Measures Operational Phase:

The visual impact of the development will be mitigated through the design of the buildings and structures by the utilization of colours, textures and materials which will visually diminish the apparent massing of these buildings in the landscape. A comprehensive landscape scheme will be implemented with tree and shrub planting provided to soften the visual appearance of the proposed buildings and structures along with new hedgerow planting at the boundaries to provide screening.

As stated above the proposed development will alter the existing landscape character from agricultural to agri-industrial. Given the small portion of agricultural land that will be taken up by the development and juxtaposed against the existing Flynn Feeds commercial centre, it is assessed that the receiving environment would be tolerant to the proposed change and the impact on the landscape character of the site will not be significant. The subject site offers little or nothing in the way of visual amenity value and has no recreational amenity value. Therefore the landscape and visual impact on the visual and recreational amenity of the subject site will also not be significant.

As all lands within this application are restricted to that outlined within the site boundary, it was concluded that the proposed Bioenergy Facility will not result in any significant environmental impacts relating to land severance, land access or disruption to current agricultural land use.

With the listed mitigation measures in place, neither the construction nor operational phases of the development will result in any significant negative impacts on the existing economic assets. When the facility is in operation it will have a significant beneficial impact in the reduction of the quantity of non-hazardous organic waste, carbon emissions, GHG emissions and will provide an economic boost to the area

In addition, the proposed facility will produce approximately 1MW electricity for export to the National Grid. Using residual waste to generate electricity also replaces non-renewable fossil fuels such as coal, oil and natural gas in the generation of electricity. This is seen as a very positive long term residual impact of the Bioenergy Facility.

Conclusion

The EIS concludes that there will be no significant effect on the local environment arising out of the proposed development of the Bioenergy Facility at The Downs, Newdown, Mullingar, Co. Westmeath.

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