Crossabeg / Killurin Community Action Group
Oaklawn, Kyle,
Crossabeg, Wexford
Tel: 087.2303045
info@riverslaney.org
www.riverslaney.org

09.12.05

Ref. Reg No 742

A Chara,

We have pleasure in enclosing a copy of our submission to Wexford. Co Co. in response to a request for further information from NRGE .

Regards,

Gerry nash

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Tel: 087.2303945
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09.12.05

Ref. Reg No 742

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RE: PLANNING APPLICATION NUMBER 2005/3035 FOR AN ANAEROBIC DIGESTER ADJACENT TO AN EXISTING PIG FARM OWNED AND OPERATED BY REENARD FARMS, AT THE DEEPS, KILLURIN, CO. WEXFORD.

A Chara,

We refer to the above planning application lodged on the 7th September 2005, and your request for further information from NRGE in connection with this development. We have examined in detail their response, and set out below our comments;

Comments on NRGE Response to Wexford County Council Queries

1.0 The odour levels emanating from the proposed waste stream will be determined by the materials imported, and the proposed handling procedures at the reception area, which is not in an enclosed environment. It should be noted that belly grass and fish waste emit a very obnoxious smell.

2.0 Due to the poor standard of drawings submitted, it is difficult to ascertain the .location of buildings and the full extent of the proposed development.

3.0 While the applicant sets out the specification for roadways from the Farm Development Service Specification for Farm Roadways (S.I. 127 of 2003), this does not provide detail of the existing **condition** of these roadways. The importance of a review of the condition of these roadways cannot be over-stressed. Fractured or stressed road structures present easy conduits for contaminants to pollute the subsurface and groundwater there under. In heavy rainfall, storm-water flows from this facility on to the public road, and into the River Slaney.

4.0 The applicant has not included the revised NMP as requested by Wexford County Council (based on 170 kg N per hectare). Land spreading of digestate is a key potential environmental impact associated with the proposed development. The applicant appears to be avoiding the preparation of the revised NMP. This is frequently a problem when it comes to land spreading as deficiencies in available land banks nutrient assimilative capability become clearly highlighted. In advance of deciding on the planning application, Wexford County Council should ensure the adequacy of and availability of suitable spread lands.

5.0 The applicant was requested to complete a full risk assessment of the storage of slurry on-site in relation to potential impacts on the River Slaney SAC. The assessment completed is totally inadequate. This inadequacy arises from the following key issues;

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RE: PLANNING APPLICATION NUMBER 20082038 FOR AN ANAEROBIC DIGESTER PLANT ADJACENT TO AN EXISTING PIG FARM OWNED AND OPERATED BY REGIARD FARMS AT THE DEEP, KILLURIN, CO. WEXFORD.

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We refer to the above planning application lodged on the 7th September 2008, and your request for further information from NRGE in connection with this development. We have examined in detail their response, and set out below our comments:

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- A risk assessment of the risks that exists should have considered impacts on soil, groundwater and surface waters;
- Typically a groundwater dispersion model would be required to determine the pathways by which contaminants could enter the River Slaney;
- The dependence of the applicant on the existing groundwater well for 'environmental information' is inappropriate as drinking water well tend to extract water from levels much lower than higher levels at which environmental risks to the River Slaney would be likely to occur (i.e. deep groundwater versus shallow groundwater);
- The applicant would need to conduct an intrusive investigation including the assessment of boreholes logs to determine specific subsurface conditions on the site;
- Any reliable Hydrogeological assessment would require the installation of 3 no. groundwater boreholes. This is a basic requirement to determine the direction of groundwater flow, without which the assessment on the River Slaney is fundamentally flawed.

6.0 The applicant has not completed an odour audit or odour dispersion model as requested by Wexford County Council. An odour audit requires the determination of the odour emission rate from all significant sources of odour on-site (the significance needs to be determined by appropriately experienced experts in the field of olfactometry and odour nuisance), these sources need to be input into a recognised dispersion model which includes meteorological data, terrain data, building dimension data. As Wexford County Council may be aware, the EPA have established odour limits for intensive agriculture activities which include the establishment of a limit of <1.5 odour units per cubic metre as a 98%ile of hourly averages. The applicant has not demonstrated what odour level can be obtained at the boundary or the nearest sensitive receptors. The reliance of the applicant on desk-based information is inappropriate and inadequate.

7.0 The assertions of the applicant that the existing waste water infrastructure (septic tank and percolation area) was constructed in the 1970's for a larger number of staff than is currently required is irrelevant. The waste water treatment facilities on site need to be demonstrated to be compliant with the requirements of the Environmental Protection Agency. The request by Wexford County Council for a site characterisation assessment has not been completed by the applicant. Inadequate waste water treatment poses a risk to both the environment and human health. Septic tank treatment systems constructed in the 70's typically had no percolation are, but rather a soakaway. which is totally unacceptable by current standards. This we feel is an example of the applicant's lack of concern for the

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environment, when they are not prepared to consider an upgrade of the existing septic tank, to ensure protection of ground water.

8.0 No comment.

9.0 In the absence of a landscape master plan and photomontages, it is considered that the extra information provided by NRGE does not demonstrate the visual impact of the proposed development or the suitability of the planting regime to blend in with the existing landscape. It is recommended that a full landscape master plan with associated photomontages be prepared.

10.0 It should be noted that the analytical results presented for the quality of surface water discharged from the existing facility is not considered as a robust assessment of the surface water run-off and hydrological influences of the introduction of the new process plant and civil works associated with the proposed development. Due to the high risk activity proposed (with regard to potential for pollution of the River Slaney), it is strongly advised that storm water retention lagoons are provided on-site with on-line TOC meters on all surface water outflows which permit the automatic closure of penstock valves diverting surface water to the retention lagoons in the event of potentially contaminating material being detected in the surface waters being discharged. This method of ensuring the quality of surface water discharges from the site is in place on other EPA IPC licensed facilities and should be considered as appropriate due to the sensitivities of the receiving environment. Despite the request from Wexford County Council the applicant has **not** provided confirmation that slurry etc. will not enter local watercourses.

11.0 The applicant has not responded directly to Wexford County Council's query regarding the capacity of the facility to accept materials other than those referred to in the submission. The community would have concerns that in the event of planning permission being granted for the facility that the applicant would then diversify from the management of their own waste materials to 'scale up' (which may in itself not require planning permission) and accept a more disparate and diverse range of materials. The community have concerns that stringent limits on traffic numbers, types of wastes and the catchment areas for such waste should be committed to by the applicant both now and for the lifespan of the proposed development. This will assist the Wexford County Council in fully evaluating the environmental impact throughout the lifespan of the proposed development in advance of making a decision on the planning application.

12.0 No comment.

Oakdawn, Kyle,
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13.0 NRGE's comments regarding the large volume of submissions made, in relation to this planning application , are basically not worthy of comment, as they fail to address the various issues, which are clearly in contravention of the County Wexford Development Plan, and the multiple environmental risks associated with the proposed development. It is just **not** acceptable to quote BAT as the answer to the many questions raised in the various submissions.

Conclusion

The signatories of NRGE have requested Wexford County Council to grant planning permission for the proposed development *'to prove to all stakeholders that this proposed development will enhance the environs adjacent to this site and the customer farms whereupon pig manure is currently being applied'*

To the dismay of the community as is demonstrated through our above response, the applicant has either failed to fully understand the technical requirements of an adequate response to the valid environmental queries from Wexford County Council or intentionally declined to do so. In either case, Wexford County Council do not have the adequate information to fully determine the possible effects on the environment from the proposed development, the likely general disturbance on the community or the impact on residential amenity.

In addition the community still has grave concerns for the ability of applicant to deliver on a project which will not introduce additional environmental pressure on the River Slaney, the possible long term strategic intent towards the site and their ability to operate same in a manner which does not harm the environment.

The community would also like to reiterate that they are not opposed to Anaerobic Digestion in principle, but are opposed to the location of the proposed development on the grounds that it is located within the zone of environmental influence of the River Slaney candidate Special Area of Conservation and its associated flora and fauna as protected under the 1992, Habitats Directive, Natural Habitats Regulations, 1997 and the Wildlife Acts 1976 and 2000.

We call upon the Local Authority in the best interests of the River Slaney, the Environment, and Co. Wexford, to stand by their development objectives and designations, and refuse outright this planning application.

Yours sincerely,

Peadar o Connor
Secretary

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1 November 2005

REGISTERED POST

NRGE
Moorestown
Lattin
Co. Tipperary

PLANNING AND DEVELOPMENT ACT 2000

Planning No: **20053035**

Applicant: **NRGE**

Proposed: **CONSTRUCT A NEW FATTENING HOUSE, A FOUR SPAN SHED, FOUR OVERGROUND STORAGE TANKS, ONE UNDERGROUND STORAGE TANK, A PRIMARY DIGESTER WITH GAS PURIFICATION SYSTEM, MODIFICATIONS TO AN EXISTING PIG MANURE STORAGE TANK TO INCORPORATE A GAS HOLDER AND ASSOCIATED SITE WORKS, TO PROCESS PIG MANURE AND OTHER ORGANIC MATERIAL TO PRODUCE RENEWABLE ENERGY AND FERTILIZER. THIS DEVELOPMENT COMPRISES OF AN ACTIVITY IN RELATION TO WHICH A LICENSE UNDER PART IV OF THE ENVIRONMENTAL PROTECTION AGENCY ACT 1992 AS AMENDED BY PROTECTION OF THE ENVIRONMENT ACT 2003 IS REQUIRED. AN APPLICATION FOR A REVIEW OF THE IPPC LICENCE IN RESPECT OF THIS DEVLOPMENT HAS BEEN SUBMITTED TO THE ENVIRONMENTAL PROTECTION AGENCY (LICENCE REG. 742). AN EIS WILL BE SUBMITTED TO THE PLANNING AUTHORITY WITH THE APPLICATION.**

Location: **DEEPS, KILPATRICK**

A *Chara,*

I wish to refer to the above application for **PERMISSION** under the above Act. To enable your application to be considered, it will be necessary for you to submit the following:

1. Submit details of the gas produced and electricity saved by this process.

2. Show all the slurry tanks and surface water tanks on revised site layout plan (not all the tanks or the reception vessels have been shown on the site layout plan) and revised locations of same where applicable (where the new fattening unit may interfere with them).

3. Please fully describe the finished yard surfaces and access driveways including cross sections (include existing and proposed surfaces).

4. Page 9 Section 1.7 of the Environmental Impact Statement states the amount of Nitrogen that can be spread is 250kg./ha. for non Rural Environmental Protection Scheme farms and 170kg./ha. for Rural Environmental Protection Scheme farms.

   Please submit a revised NMP based on an application rate for all farms of 170kg./ha. in accordance with the Nitrate Regulations and revised farm plans where applicable.

5. Given the proximity of the River Slaney and its classification as a SAC and Salmonid River, it is appropriate that a full Risk Assessment be carried out on the slurry storage at the site. This should include consideration of bunding in relation to the slurry storage tanks. Submit details of the Risk Assessment.

6. An audit of all odour generating areas and activities should be carried out and an odour model using recognised procedures be prepared.

7. If intending to use the existing septic tank effluent system, it will be necessary to carry out a full assessment / inspection of the system to ensure it complies with the current Environmental Protection Agency's recommendations based on the existing and proposed loading. Therefore please carry out a Site Characterisation Assessment and submit full proposals to upgrade the effluent system (to serve the employees) if applicable.

   The percolation area also has concerns, that the proposed new fattening unit location is proposed over the septic tank system which is unacceptable and relocation and upgrade of same to include soil percolation / soil polishing and disposal to ground or surface is required in accordance with Environmental Protection Agency's recommendations. Submit revised site plans to show this.

8. Submit clarification/further information/revised plans regarding the storage facilities and disposal arrangements proposed for:
   - digestate production over the winter / non-growing season;
   - semi-solid waste of high phosphorous content.

9. It should be clearly demonstrated that the proposed development would not have a detrimental visual impact on the amenities of the area and in this regard written clarification and further information regarding the landscaping of the site should be submitted. Information to be submitted should include:
   - Drawings demonstrating the short term (1 year), medium term (5 years) and longer term (10 years onwards) impact of the species and tree sizes selected;
   - confirmation that the site will be effectively screened all year round.

10. Submit complete details regarding the management of surface water at the site, to include confirmation that slurry etc will not enter local watercourses.

11. Submit written statement regarding the need for the scale of the facility as proposed to include a comment as to whether the facility has the capacity to accept materials other than those referred to within the submission. Having regard to sensitive nature of the site, it should be noted that the Planning Authority would have concerns if the facility as proposed had a capacity which could accept significant additional materials. It should be demonstrated that facility and the structures are of a scale commensurate with the levels of material generated by the pig farms referred to in the submission only and revised proposals in this regard should be submitted, as appropriate.

12. Submit clarification regarding the traffic generated by the proposed development to include numbers of and types of vehicles (the Environmental Impact Statement and supporting statement submitted appear to give different figures for this)

13. The application has generated numerous third party submissions and the applicant is invited to inspect these and to submit written statements, further information and revised plans as appropriate with regard to the submissions.

    NOTE: The applicant is advised that this request for additional information does not necessarily indicate that permission would subsequently be granted.

NOTE: ***That 6 no. copies of all documentation must be submitted. All plans/maps /drawings / specifications must bear the full name and address of the person by whom they were prepared. In accordance with Article 33(4) of the Planning and Development Regulations, 2001, please note that where there is failure to reply to this request for further information within 6 months of the date of the request, the application shall be declared to be withdrawn.***

Please note that **Lorcan Griffin**, Executive Planner, is dealing with this matter and can be contacted at the *Planning Department,* **tel. (053) 42211** if you have any queries. Any queries regarding applications in the Enniscorthy area should be directed to the Planner in the Enniscorthy Office on **(054) 33212.**

Mise, le meas,

Ar Son Runai

NRGE
Nutrient Recovery to Generate Electricity

Moorsfort,
Lattin,
Co Tipperary,
Tel 062 55385
Fax 062 55483
E-mail NRGE@iol.ie

PLANNING DEPARTMENT
WEXFORD COUNTY COUNCIL
COUNTY HALL
WEXFORD

DATE: 15 November 2005

RE: Planning No: 20053035

Applicant: NRGE

Proposed: Construction of a New Fattening House, a four span shed, four over ground storage tanks, one underground storage tank, a primary digester with gas purification system. Modifications to an existing pig manure storage tank to incorporate a gas holder, and associated site works, to process pig manure and other organic material to produce renewable energy and fertilizer at The Deeps Killurin Co Wexford.

I herein acknowledge receipt of your correspondence dated 01 November 2005, in response to the submission our planning application (Planning Ref 20053035), which we lodged on the 7th September 2005. In order to help your consideration of this planning application I herein respond to each of the queries raised in the same numerical format;

1 The estimated volume of gas to be generated by the proposed development is set out in table 1 below.

	M3
Total Gas Produced in Digester 1	894464
Gas Collected in Storage	107336
Total Methane	1001800
Biogas @ 64% CH4	1565313

This gas level production is based on the treatment of 33000 m3 of pig manure and 6000 tonnes of other organic materials, as referenced in Paragraph 1.8 of the Non Technical summary of the EIS submitted with the planning application. The other organic waste streams identified were selected on the

basis of a review of all organic wastes currently being land spread in the Wexford area. The following is a list of proposed waste streams for this proposed Anaerobic Digester.

(a) Green Energy Crops (ie, maize, grass, oil seed or corn)
(b) By products from the processing of energy crops.
(c) Belly Grass (ie; Digestive tract content separated from the digestive tract)
(d) Cake Sludge from a Dairy processing plant.
(e) Fish waste.
(f) General waste from a feed mill.

The total of the materials listed in (a) to (f) above will be 6000 tonnes per annum.

The engine selected is a Jenbacher JMS 312, which produces approx.625 kW electricity and approx. 698 kW heat at an input power of approx. 1,600 kW gas.

2 All structures on the site (existing and proposed) are clearly shown on the site layout plan submitted and chronologically cross referenced with the farm structures table. All tanks and connecting channels were identified on the 1:500 scale site plan No 001 submitted with the planning application. A colour coded version of this plan at a scale of 1:1500 is included in attachment 1.
The proposed location of the new fattening house 9A as identified on the site layout plan submitted overlays an existing Hospital unit and part of the slurry routing channels. This channel system will be rerouted to accommodate the new house as shown on Site Plan 001. The old hospital unit which has been decommissioned for the past 5 years will be demolished. There is no septic tank or percolation area on or adjacent to the proposed location of Fattening House 9A.

3 This proposed development is adjacent to an existing pig farm established in 1963 as Wexford Pig Co op, when it consisted of a 2000 Fattening Places and a Mill. It grew to 10000 pigs Approx in the early 1980's, when it milled all its own feed and supplied feed to its weaner suppliers. The Co op was estimated to have approx 57 weaner suppliers which dwindled to less than 30 suppliers by late 80's. At the time it was the largest single pig enterprise in the country and the largest user of cereals. The Killurin Unit currently houses 7500 pigs which is a drop of 2500 since the early 1980's. This reduction was due to the ongoing requirement for space per animal on welfare grounds. The application for an additional 1000 places is due to extra productivity of the breeding units (Cornwall & Slobs), and further increases in space per animal under welfare regulations. The proposed stocking rate on the site of 8500 fattening places is less than the numbers carried on site in the 1980's.

The existing road infrastructure which has been put in place to service this site over the past 3 decades is constructed in accordance with the Farm Development Service Specification for Farm Roadways S127 Feb 2003. This regulation set out below, will also be fully complied with for all proposed surfaces.

1. GRAVEL ROADS

1.1 Preparation of Site

All top soil and soft material shall be excavated to a minimum depth of 150mm or down to a solid stratum and the excavated material shall be suitably disposed of. Where slopes are unavoidable they should be kept to a minimum and be as uniform as possible. Provisions shall be made for drainage of the site. In the case of roads, such culverts and drains as may be required for the stability of the roadway or the drainage of adjacent land shall be provided.

1.2 Foundation

The foundation shall consist of 150mm of well compacted hardcore gravel or dry filling, laid to produce a smooth surface, with gradients corresponding closely to those required in the finished roadway.

1.3 Rubble or Gravel roads

Preparation of site and placing of hardcore foundation shall be as set out under 1.0 and 1.1 above. The foundation shall be covered evenly with not less than 75mm clean course gravel and well consolidated.

1.4 Roadway Widths

Farm roads shall be from 2.75m to 3.6m wide. Vehicular access to the farmyard from a public road may be 3.6m wide but in the event of such road being longer than 200m it shall be constructed to a width of 3.2m, with a section 12m long widened to 4.5m to form a lay-by every 200m. Roadway fences shall be set back at least 1.0m from the edge of the road.

A drawing is included in Appendix 2, which shows a cross section of the new proposed surfaces for this facility. All storm water run off from this facility is collected by a storm water collection system, and diverted to monitoring points identified on the site layout plan in Appendix 1. These monitoring points are visually inspected weekly and sampled every 3 months. These inspections and monitoring results are summarised annually in the Annual Environmental Report which is submitted to the EPA and the 2004 report was included as Appendix 12 of the EIS submitted in support of this application.

The storm water flows from these monitoring points via a drain system to the river slaney. This storm water is not allowed to flow out the entrance road, to the public roadway, nor is it diverted to a soakway.

4 Section 1.7 of the EIS submitted stated

"*The digestate will be applied on 3167 hectares (7825 acres) after deductions of well drained Productive farmland, at an average rate of 15 m3 per hectare, (1330 gallons per acre). These customer farms are already approved by the Environmental Protection Agency for the use of pig manure under IPC licences 453 (Deeps Cornwall), and 429 (Sloblands), in their nutrient Management Plan*

for 2005. An Individual fertiliser plan has been prepared for each farm. The fertiliser plan has taken into account the phosphorus level in the soil, the phosphorus produced on the farm, the phosphorus in pig manure and the limit to the amount of nitrogen that can be spread from organic manure (i.e. 250 kgs per hectare; 170 Kgs per hectare for REPS farms). Spreading during the growing season only, will further protect against nitrate-nitrogen contamination of groundwater. Each customer farmer proposing to use digestate as fertiliser on his lands will be advised to apply same in compliance with the "Code of good Practice for land spreading", and the required Buffer Zones, in accordance with the conditions of IPC Licence's Reg Nos 453 and 429".

In line 4 and 5 of this paragraph we made reference to the fact that this was based on the nutrient management plan reports for 2005, which had been approved by the EPA
The European Communities (Good Agriculture Practice for Protection of Water Quality) Regulations 2005, which when implemented will give effect to Irelands Nitrate Action Programme, is still in DRAFT FORMAT. In fact a consultation paper issued jointly by DOAF and DOEHLG on 07 October 2005 states the following

"*The draft European Communities (Good Agricultural Practice for Protection of Water Quality) Regulations, 2005 are intended to strengthen the protection of waters against pollution from agricultural sources with the primary emphasis being on the management of livestock manures and other fertilisers. They will give further effect to several EU Directives and will, in particular, support the implementation of Ireland's Nitrates Action Programme. The Nitrates Action Programme and these draft Regulations which are the legal instrument to give effect to the Programme have been prepared in the context of the judgment of the European Court of Justice (March 2004) that Ireland is non compliant with the Nitrates Directive by failing to establish and implement an action programme to protect water quality against pollution by farming*".

"*The purpose of this Consultation Paper is to provide an opportunity for interested persons to comment on the draft Regulations before they are finalised. It is envisaged that, following receipt and consideration of comments, the Regulations will be made in November 2005 and will come into effect on 1 January 2006. They will apply to all farm holdings. The making of the Regulations will enable further progress to be made on Ireland's application for derogation in certain circumstances from the limits imposed by the Nitrates Directive regarding the use of livestock manure on land.*

This consultation paper continues the process of public consultation which has taken place in several stages since December 2001 in relation to the implementation of the Nitrates Directive. The paper also responds to a commitment to public consultation given in 2003 in the context of Sustaining Progress. A copy of the paper has been sent directly to all persons who engaged in the earlier stages of consultation.

The Nitrates Action Programme and the draft Regulations were prepared jointly by the Department of the Environment, Heritage and Local Government and the Department of Agriculture and Food in consultation with Teagasc – the Agriculture and Food Development Authority. A guidance document on the requirements of the Regulations, when made, will be prepared and distributed to farmers, other relevant stakeholders and competent authorities.

Invitation to comment

Interested parties are invited to comment on the draft European Communities (Good Agricultural Practice for Protection of Water Quality) Regulations 2005 which are set out in the Appendix to this consultation paper. Comments received by Friday 4 November 2005 will be taken into consideration and, where appropriate, the draft Regulations will be revised to reflect comments received. Please address comments to one or both of the following persons ".

It is therefore not possible at this time to prepare the NMP report for 2006, as the new regulations are not yet published. However the following points are worthy of note:

(i) The P requirement of the customer farms in the 2005 NMP is 61568 Kgs.
(ii) The current total production of P from the pig manure is 29700 Kgs.
(iii) After treatment in the AD plant the digestate will be separated into liquid and a fiberous product. 70-80 % of the P will be contained in this Fibre.
(iv) This fibre product will be transferred off site every two weeks, and will not be used for agricultural purposes. Therefore the estimated volume of P that will be available for customer farmers to use as a fertiliser will be 12000 to 17000 Kgs, thereby greatly reducing existing impacts.
(v) The making of the Regulations referenced above will enable further progress to be made on Ireland's application for derogation in certain circumstances from the limits imposed by the Nitrates Directive regarding the use of livestock manure on land.

Finally I wish to point out that all future nutrient management reports will comply with the regulations specified at that time. Further a copy of these regulations will be provided to the relevant authorities, as specified in the regulations.

5. A risk assessment of the storage facilities on the site was undertaken by GES Ltd on behalf of NRGE, and a full copy of this assessment is included as Appendix 3. The **HAZARD-PATHWAY-TARGET** risk model is proposed. The hazard being the potentially polluting slurry/digestate held in the storage tanks on site. The target being the groundwater beneath the site and the adjacent River Slaney. The pathway under consideration is the potential leakage from tanks where the integrity is compromised. On the basis of the geological setting, it is considered that any breach of the tank integrity would result in contaminants entering the aquifer and the water table. It is therefore considered that monitoring of groundwater presents the most effective means of confirming the integrity of the tanks.

6. In section 1.21 of the EIS submitted with this application we stated the following; *"This proposed development has the potential to benefit all stakeholders adjacent to the proposed site and the customer farms. The nett result of this proposed development will be a reduction of existing impacts to the order of at least 50%, from the site and 80% form the application of digestate in place of pig manure to customer farms."*

In section 3.4.3 of the EIS submitted with this application we stated the following; *"The main objective of this application is to aid the overall reduction of emissions from this facility. This issue was discussed in a report prepared by Odournet UK Ltd, in 2001 titled "**Odour Impacts and Odour Emission Control Measures for Intensive Agriculture Part A Odour annoyance assessment and criteria for intensive livestock production in Ireland",** which was commissioned by the Environmental Protection Agency, wherein section 9.6 page 69 it states " that a reduction in odour emission is not likely to be greater than 50% and more likely to be in the order of 25-30%" by reducing crude protein levels in the diets. Emissions from open slurry storage tanks are also discussed in section 9.9 page 74 wherein it states that ammonia emission reductions of 70-80% have been achieved by covering open tanks. Removal of pig manure from this facility at present is by tanker armoured suction hose inserted into the tank with minimal odour release.*

This development proposes that all pig manure from this farm will be utilised to produce gas via the anaerobic digester, and transferred to adjacent covered storage tanks, after separation of solids, from where the odourless digestate will be exported to customer farms as liquid fertiliser. Odours that can arise during land spreading of the pig manure will be eliminated by this technology. The Relevant sections of this Odournet UK report are included in Appendix 27.

Control Measures to Minimise and Abate Odour on site at present

Emissions from the Killurin/Cornwall site are currently contained using the following recommendations;

1. *Reducing uncontrolled air movements on site and leakage from the ventilation system and from pig houses (I.E windows and doors)*
2. *The use of a high-tech computerized ventilation system, in animal houses with a back up system.*
3. *Minimising the generation of odours during meteorological conditions which favour spread of odours.*
4. *The storage of carcasses in covered sealed containers on site.*
5. *A 100mm buffer is maintained at the top of all covered pig manure storage tanks to allow for the accumulation of gases.*
6. *Minimisation of the agitation of pig manure and the filling and emptying of liquid storage tanks from below the surface of the stored manure.*
7. *Transporting pig manure in suitably contained, leak proof vehicles.*
8. *Limited areas where pigs are moved outside buildings, and covering of passageways and yards where animals have access.*

9. *Use of low protein diets to all animals on site has reduced emissions on site by 30%.*

Proposed Measures to further Minimize and Abate Odour on site

1. *Continued incorporation of low protein diets on site in line with recommendations from Devenish Nutrition Ltd. It is estimated that 30% reductions have already been achieved, in line with recent research (See Report included in attachment 27).*
2. *All pig manure will be delivered fresh to the anaerobic digester, thereby greatly reducing emissions from under floor storage tanks. The fresher the pig manure is delivered to the digester the greater the gas production levels that will be achieved. Removal of pig manure regularly from the storage tanks under the pig houses will effectively qualify these houses as low emission housing. This process is described in detail in a document that is publicably available on the internet, at http://www.infomil.nl/luch/index.htm.*
3. *The odour impact of land application of liquid digestate vv pig manure will be reduced by 80% approx, based on studies undertaken in Denmark on the actual application of liquid digestate replacing pig manure applications.*
4. *The development of this anaerobic digester will negate the requirement of agitation of raw pig manure in open storage tanks, which we know is a major source of emissions from this site currently, as all pig manure leaving this facility is agitated in one of the four existing over-ground storage tanks. Odournet UK Ltd who have acted as the Agency's experts on a number of sites to date have referenced in a report prepared for another pig farm that "The specific emission rate of an open storage tank, is assumed to increase from 150 ouE`m$^{-2}$·s$^{-1}$ to 500 ouE`m^{-2}·s^{-1}, when the slurry is being agitated" this is stated in page 10. section 2.2, of a report prepared by Odournet UK titled* ***'Review of Odour impact of two pig production units and options for improvement'.***

The nett result of this proposed development will be a major reduction of the current level of emissions from this facility, in the order of at least 50%, including for the increased 1000 fattening places proposed for the site".

All the odour reduction measures outlined therein are based on "Good Science", and "Proven Technologies", which are identified as BAT for the intensive agriculture sector.

In respect of the use of Low Protein Diets Devenish Nutrition are the diet formulators for this pig farm, and it is based on their Devicare formula.

DeviCare diets are formulated using the technology developed in conjunction with Dr John O'Doherty Dept of Agriculture and Prof Vincent Dodd Dept of Agri Engineering University College Dublin on which the attached scientific paper is based. "The influence of diet crude protein level on odour and ammonia emissions from finishing pig houses" (see Attachment 2).
E.T. Hayes [a],*, A.B.G. Leek [b], T.P. Curran [a], V.A. Dodd [a], O.T. Carton [c], V.E. Beattie [d], J.V. O_Doherty [b]

The septic tank and percolation area associated with this site was constructed in the early 70's and designed to handle waste volumes generated by 20 staff members working on the farm at that time. The proposed staff numbers at this facility will be 6, therefore the existing system is more than adequate for the waste loading generated by these staff levels.

Reference is made to a septic tank in the area where the proposed fattening house 9A is to be located in the request for further information. There is no septic tank or percolation area in that area.

8. The resultant digestate from the process will be separated into a liquid digestate and a fiberous product. The fibre product will contain 70-80% of the P content and 20% approx of the nitrogen. The liquid digestate will contain 80% of the Nitrogen and 20 % of the P.
The liquid digestate will be applied to land as fertiliser in accordance with NMP plans and Code of Good practice, during the growing season, and will be stored in the covered storage tanks during the closed period.
I herein refer to our previous submission dated 07 September 2005, and in particular to Attachment 18 of the EIS, wherein we enclosed the Farm Structures Tables for Killurin and Cornwall sites. We have since discovered a calculation error on the Killurin Table, and include herewith a corrected version in Appendix 4.

The details of the pig manure and digestate storage on the Cornwall and Killurin sites (Reg 453) are set out in the Farm Structures Tables included in Attachment 3. The storage capacity of the South Slobs (Reg 429) is 6699 M3.
The storage capacity of the three pig farms is summarized overleaf;

PIG FARM	CAPACITY (M3)
Killurin	8932.4
Cornwall	2221
South Sloblands	6699
Total	17852.4

The total volume of pig manure produced in these 3 pig farms annually is 33,350 M3 as referenced in section 1.5, page 8 of the EIS Attached. This provides for 28 weeks storage capacity".

The fibre product will be removed off site every two weeks all year round for use outside of the agricultural sector. However there is a facility in Shed 10 on site to store for 5 weeks.

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Received 3 January 2003; received in revised form 15 March 2003; accepted 25 March 2003

This paper proves that by decreasing protein content of the diet from traditional levels the emissions from the farm are decreased significantly.

The paper also proves conclusively that by decreasing protein content of the diets, odour emissions from the unit are decreased (See paragragh 3.2 and Table 2 on the attached scientific paper. "The influence of diet crude protein level on odour and ammonia emissions from finishing pig houses"

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The movement of pig manure fresh from the pig houses will prevent the build up and release of gaseous emissions from under the slats, thereby greatly reducing emissions, as referenced in the BREFF notes.

The development of the anaerobic digester will require the covering of the adjacent open storage tanks, which based on the figures provided in the EIS are the single greatest source of emissions from this pig farm. At present in excess of 20% of all emissions from this pig farm are generated by these open storage tanks, particularly during agitation while filling or mechanical agitation prior to export of pig manure.

The proposed anaerobic digester is a fully enclosed process system. All imported waste/energy crops will be delivered directly into the covered mixing tank, or pumped into the enclosed storage tanks. These products will only be brought on site as required. The pig manure from the adjacent farm will flow via enclosed pipe system to the mixing tank. Any air displacement from the mixing tank will be diverted to a bio filter. There will therefore be no odour generation problem at the anaerobic digester plant. In fact there will only be a proven min 50% odour generation at the site (30% from Low protein diets and >20% from covering tanks & transfer of pig manure fresh to the AD plant). These figures have been calculated using scientifically proven and recognised procedures. AD plants are identified as BAT for the intensive agricultural sites.

Finally we have already stated that anaerobic digestion substantially reduces odours associated with animal slurries by as much as 80%. Compounds associated with offensive odours, including volatile acids and molecules of mercaptans, are degraded into methane and carbon dioxide by the anaerobic bacteria.

9. The planting Schedule submitted indicates that the following Species will be incorporated Common Alder, Leyland Cypress, Monterey Pine, Hybrid Larch

The proposed Planting schedule with the Leyland Cypress at the centre of the burm will provide evergreen screening out of season for the remainder of the species. The anticipated growth rates for the selected plant species are as per the table set out below

Species	(m) Planting	(m) 5 Years	(m) 10 Years
Common Alder	1.1	6	11
Leyland Cypress	1.1	6	11
Monterey Pine	1.1	4.75	8.5
Hybrid Larch	1.1	4.75	8.5

Source www.coford.ie

Attachment 5 contains drawing no 023, showing the approximate screening of the Digester Complex at 1, 5 and 10 years from planting. The drawing with the screening imposed clearly shows that the visual impact from the development can be substantially mitigated. An example of similar screen planting approximately 6 years old is included in the photograph in attachment 5.
The nett result of this planting programme will be an enhancement of the scenic amenities by not only screening the anaerobic digester, but also screening the existing pig farm.

10. The Annual Environmental Report for this pig farm for 2004 was included as Appendix 12 of the EIS Submitted. Section 3.9 of that report set out the details of analyses of the surface water run off from this site for the years 2002, 2003, and 2004. A review of these analylitical results indicates the management of surface water run off from this site is very good. The surface water discharge points at this site are visually inspected weekly, and sampled quarterly. The table below outlines the results of surface water discharge analyses. The storm water outflow from these monitoring points flows via an existing drainage system to the river slaney. Under no circumstances will stormwater be allowed flow out onto the public roadway.
In addition to the inspections outlined above, there are a number of locations throughout the facility where the storm water flow is visually inspected by the staff members on an ongoing basis during the carrying of their normal daily duties. Because of the response procedures already operating on site all staff have been trained to notify management immediately if anything untoward is noticed, which could negatively impact on the environment. During recent site inspections by the EPA on 10/08/05 and 14/09/05 and Wexford County Council and EPA on 11/08/05, resulting from complaints received by both authorities, all of the monitoring points referenced above were found to be clean.

The results on the surface water monitoring of these points are set out in tabular format overleaf;

2002	1st Qtr COD mg/l	2nd Qtr COD mg/l	3rd Qtr COD mg/l	4th Qtr COD mg/l
SWA	4	6	19.2	0.8
SWB	11	12	18.4	5.2
SWC	7	12	18	14.8
SWD	6	10	3.6	0.4
2003	1st Qtr COD mg/l	2nd Qtr COD mg/l	3rd Qtr COD mg/l	4th Qtr COD mg/l
SWA	0.8	12	6	2
SWB	8.8	4	13.6	14
SWC	1.4	8	13.6	1.2
SWD	12	12	6	11.2
2004	1st Qtr COD mg/l	2nd Qtr COD mg/l	3rd Qtr COD mg/l	4th Qtr COD mg/l
SWA	7	18.4	5.2	26
SWB	7	4.4	Dry	14.4
SWC	2	Dry	35.2	30.4
SWD	11	2	Dry	17.2

All foul water generated at this facility is and will continue to be diverted to the storage tanks.

11 The design for the scale of the digester at this site is based on the actual volume of listed materials which it is planned to treat. We have clearly stated at all times that the products to be treated are Pig manure (33000 M3), and 6000 Tonnes of imported material (energy crops, belly grass, floatation sludge from a dairy processing plant etc). Therefore the total volume of material to be treated per annum is 39000 M3 or tonnes per annum. It has always been the intention to have a 15-20 day retention time in Digester 1.
Therefore 39000 Tonnes divided by 365 days/annum = 107 tonnes per day equivalent. A 15 day retention time will require a digester of 1600 M3 capacity, whereas a 20 day retention time will require a digester of 2100 M3 capacity. As a result we agreed on a 2000 M3 capacity digester to simplify the engineering requirements. We again reiterate that this anaerobic digester is clearly designed to treat the volumes of material which we have outlined at all times during this process.

12. Section 5.3.6 of the EIS titled "Traffic Levels", is included in full overleaf, with one slight correction in respect of one movement of weaners per week from Cornwall and sloblands to the killurin fattening unit. This movement was outlined in the text of section 2 (Stock Deliveries), but erroriounusly omitted from the Table set out. However following a full review of this information and that included with the supporting statement submitted with the planning application, we find that they are the same. The types of vehicle and number of weekly and annual movements are clearly set out in the table referenced above, and included hereunder including the correction outlined.

4.1.1. Traffic Levels

Traffic (Cornwall/Killurin Unit with Anaerobic Digester)

Details are set out overleaf of the proposed traffic movements of this proposed development. They come under the following headings.

1. Staff transport.
   There will be four movements to and from work daily.
2. Stock Deliveries.
   There will be 13 deliveries of gilts per annum. There will be one movement of weaners weekly from Cornwall and Sloblands pig farm to the Killurin site.
3. Feed Deliveries.
   There will be 11 deliveries of feed per week for all units.
4. Stock sales & Carcasses.
   There will be a maximum of 3 loads of fat pigs delivered to the factory weekly from Killurin. There will be a maximum of a weekly carcass collection.
5. Service staff, sales, inspectors, etc.
   There will be an average of 3 car visits per week for service men, salesmen, and inspectors from all regulatory authotities to this facility.
6. Deliveries of pig manure from Cornwall & Sloblands site to Killurin.
   Fresh pig manure will be delivered every week from Cornwall and Sloblands, by lorry tanker of 6000 gallon (27.3 M3) capacity. The volume to be transported from Cornwall is 3822 M3 and 8372 M3 from Sloblands. This will require 3 loads and 6 loads per week respectively. This lorry will arrive to the killurin site with fresh pig manure and leave with liquid digestate to the pig farms or to be delivered to customer farmers.
7. Deliveries of imported organic waste to anaerobic digester.
   There will be 6000 Tonnes of additional organic waste delivered to the Killurin site annually, which will require 5 to 6 lorry loads per week.
8. Delivery of liquid digestate to customer farmers.
   There will be 34,000 M3 approx of liquid digestate to be delivered to customer farmers per annum. The total volume of pig manure to be treated is 33,350 M3, along with 6000 Tonnes of organic waste imported. The extraction of gas will reduce volume by 8% approx and separation of the fiberous material will further reduce the liquid volume by 6% approx. Therefore the resultant estimated liquid digestate volume is 34,000 M3 approx. This will require 24 lorry loads per week, of which 9 loads are covered in 6 above. Therefore the balance is 15 loads per week.
9. Delivery of solid digestate to customers.

There will be 2360 Tonnes of fiberous material produced per annum, which will require 118 lorry loads to be delivered to customers, or 2 loads per week, on average.

No	Vehicle Type Car/Lorry etc	Details	Capacity	Weekly Units	Annual Units
1	Car	Staff to work		40	2082
2	Lorry	Gilt deliveries		5	234
3	Lorry	Feed deliveries	20 Tonne	22	1144
4	Lorry Lorry	Fat pigs to factory Carcasses to rendering	260 15 Tonne	6 2	312 104
5	Car	Service staff; sales men; Inspectors		6	312
6	Lorry	Fresh pig manure in	27.3 M3	18	936
7	Lorry	Imported Organic waste	20 Tonne	12	624
8	Lorry	Liquid digestate to customer farmers	27.3 M3	30	1560
9	Lorry	Fiberous digestate to Customers	20 Tonne	4	208
Totals				145	7516

This equates to approx 10% of the volume of heavy goods vehicle movements which serviced the Killurin Landfill adjacent to this facility, which is due to close in July 2005.

13 We have inspected all third party submissions made in respect of this application, and would summarise their content thus:

- Reference to the County Developement Plan :
- Reference Made to Odour generation
- Traffic & Road Infrastructure
- Unsuitability of Site Location
- Health and Public Safety
- Historical significance of the area
- Lack of Consultation by the Developers with Neighbours
- Concerns relating to the Water table level.

The majority of these issues have been discussed within our response to the specific requests for additional information set out by Wexford County Council in points 1 to 12 above. However we feel obliged to outline the areas of the County Development Plan, with which we are in compliance, and in particular draw attention to section 14.1 of the Waste Management Plan for the South East, which states "*It is crucial that proposals for new waste facilities are considered positively, where they are environmentally appropriate, and where land use considerations are favourable*".

Having regard for the issues raised, and comments made in respect of compliance with the County Development, we clearly outline hereunder how be believe we are in full compliance, of each of the subsections referenced.

(A) Section 3.1.3 The strategic vision for the future development of the County is based on a number of guiding principles and key themes, which emerged in the public consultation process, and from a review of major planning issues and concerns:

• **Sustainability** – which recognises:
- The interdependence between the environment and economy with the environment providing the source and context for long term social and economic progress. This principle reflects European and National concerns for the preservation of assets for future generations.
Economic and social development must not be to the detriment of environmental quality. A healthy, well-managed environment in County Wexford will play a critical role in:
• *Providing a strong marketing image and focus*
• *Attracting inward investment*
• *Underpinning the tourism and leisure industries*
• *Facilitating the development of fishing, forestry and a strong diversified farming sector*

NRGE COMMENT

The proposed development of an anaerobic digester at this site will enhance the environmental quality of the area, by reducing existing impacts levels, thereby complying with this section of the County Development Plan.

Objectives

(B) 3.1.5 The realisation of this vision requires the identification of key objectives, which underpin the overall planning strategy:

Environmental Objectives:

• *To protect and enhance the natural environment*
• *To protect and enhance the landscape, heritage and built environment*
• *To minimise the pollution of land, air and water and the production of waste*
• *To promote renewal and tackle existing degradation of resources*
• *To encourage wise stewardship and use of renewable and non renewable resources*
• *To provide for a high standard of living and quality of life for the community including local amenity, health and safety*
• *To promote and facilitate high standards and quality of design in the built environment*

NRGE COMMENT

The pig farm adjacent to the proposed anaerobic digester operates under IPC Licence Reg 453, which was issued by the EPA on 19th November 1999. A condition of this licence requires the licensee to carry out an "Investigation of the possibility of alternative treatment technologies such as digestion for the disposal of slurry".

In compliance with this requirement a review was undertaken of all treatment technologies, which concluded that Anaerobic Digestion was the only option. This proposed development is BAT for the intensive agriculture sector, and fully complies with each of the 7 objectives set out in the County Development Plan.

Fishing

(C) 5.10 The sea and inland waters are natural assets which are invaluable not only from a fisheries perspective but also as tourism and environmental resources. The Council recognises that it is imperative that these resources are safeguarded in a sustainable manner for present and future generations of County Wexford and the wider international community. In this context the Council will seek to maintain a clean aquatic environment as fundamental to the sustainability of the fisheries resource by means of water quality Objectives and standards. At the same time the Council's aim is to maximize the long term contribution of the sea fishing sector and inland fisheries to the County's economy and to the maintenance of the social fabric of coastal communities.

NRGE COMMENT

The proposed development fully complies with this subsection.
In January 2005 the EPA produced a discussion paper titled "ANAEROBIC DIGESTION: Benefits for Waste Management, Agriculture, Energy, and the Environment", wherein on page 16, paragraph 2, it states "The AD option affords greater water quality benefits than standard slurry storage because AD digestate has lower pollution potential, (Quote from FEC Services Ltd, 2003; Hobson and Robertson, 1997) and its nutrients are more amenable to plant uptake and thus avoid leaching into the soil.

(D) 5.11 The River Slaney is a designated water under the European Communities (Quality of Salmonid Waters) Regulations 1978 and one of the few remaining spring salmon rivers in Ireland. The Council recognises the fishing status of the Slaney and its tributaries and the contribution it can make to tourism. The Slaney Valley is a candidate Special Area of Conservation and supports several species listed in the European Habitats Directive. As such the River Slaney is not only of national conservation significance, but has now been included in European legislation.

NRGE COMMENT

The proposed development fully complies with this subsection. As BAT for the intensive agriculture sector it will help protect water quality.

(E) 5.12 In support of the development of the fisheries sector and in resource protection, the Council will:

- encourage the further development of the aquaculture industry at appropriate locations, having regard to existing and proposed designations for environmental and habitat protection.
- encourage fishing and aquaculture developments that are compatible with existing land/coastal uses such as tourism, amenity and recreation.
- support the development of the processing sector and value added products along with the development of tourism including sea fishing and sea food restaurants.
- support the development of inland fisheries as an important recreational and tourism activity in the rural economy and investigate the development of freshwater aquaculture on the Slaney and Barrow Rivers.
- prepare action plans/management strategies for the Slaney Valley and River Barrow catchments.

NRGE COMMENT

The proposed development fully complies with this subsection. As BAT for the intensive agriculture sector it will help protect water quality.

Introduction

(F) 6.1 A comparative analysis of economic indicators of employment in County Wexford and the rest of the County highlights a number of concerns that require a strategic policy response. In particular there is still a very high dependence on the agriculture sector. The sector has experienced increasingly difficult economic conditions and the likelihood is for significant consolidation and a substantial reduction to take place in the share of
employment, which this sector can support in the medium term. Industrial employment is concentrated in traditional sectors, such as metals and engineering, where productivity growth is weak. Foreign direct investment has been comparatively weak and there has been no investment in internationally traded service activities. Tourism is an important sector.
While there have been significant developments in this sector in the shape of a three year marketing plan and greater cohesion between industry operators, significant weaknesses remain to be overcome in terms of the tourism product and market focus of the sector.

NRGE COMMENT

The proposed development fully complies with this subsection in a number of ways.

(i) As BAT for the intensive agriculture sector it will help protect water quality thereby enhancing tourism potential.

(ii) By protecting the future of the adjacent pig farm it protects a large market for grain produced by local tillage farms. 65% of home grown grain is utilised by pig and poultry production units

(G) 6.3.5 In support of the development of sustainable tourism, the County Council will:

- managing change so that it is sensitive to the quality of the environment and its identity.
- *protecting inland waterways as resources for water based activities including angling and cruising;*
- *encourage the development of green tourism based on the sensitive use of resources in association where possible with national and local agencies and organisations*

NRGE COMMENT

The proposed development fully complies with this subsection. As BAT for the intensive agriculture sector it will help protect water quality.

(H) 7.3 Protecting Water Resources

7.3.1 Wexford is a coastal County dependent to a considerable extent on ground water as a source of supply. The protection and maintenance of the quality and health of coastal, estuarine, ground and surface water resources is critical to the health of the community and economic development. The adequacy of water resources and possible risks to water quality, fisheries, amenity and conservation will assume a high priority in considering development proposals. The County Council is fully committed to protecting these resources and to controlling development which would threaten their integrity.

NRGE COMMENT

The proposed development fully complies with this subsection. As BAT for the intensive agriculture sector it will help protect water quality

(I) 7.12 Recreation, Community Facilities and Services

7.12.2 The County Council will support and facilitate the provision of new and the improvement and upgrading of existing community facilities and will protect and improve amenities and recreation assets in the interests of tourism, enjoyment and education for residents and visitors alike.

- *encourage the use of the County's high quality natural and physical environment, coastal and rural landscapes and amenities for active and passive recreation while avoiding overuse and adverse environmental impact to these resources;*
- *promote the recreational use of the county's rivers and coastal zone while protecting these areas from development which would detract from their amenity value and recreational capacity;*

NRGE COMMENT

The proposed development fully complies with this subsection. As BAT for the intensive agriculture sector it will help protect water quality, and will dramatically reduce existing impacts, from landspreading of pig manure, thereby enhancing recreational enjoyment.

(J) 8.2.2 In seeking to protect the County's archaeological heritage the County Council will:

- *seek to preserve and maintain known existing archaeological monuments as set out in **'The Record of Monuments and Places'** and to safeguard the integrity of the setting of archaeological sites.*
- *have regard to the basic principles of national policy on the protection of the archaeological heritage set out in **'Framework and Principles for the Protection of the Archaeological Heritage'** Department of Arts, Heritage, Gaeltacht and the Islands, 1999.*
- *exercise a presumption in favour of avoidance of development impacts on the archaeological heritage and seek the preservation in situ of archaeological sites and monuments as the preferred option • protect the following areas designated as being of Archaeological Potential, see also, Map No. 2:*

Bannow Ferns Mayglass
Clonmines Ferrycarrig New Ross
Courtown Fethard-on-Sea Old Ross
Edermine Great Island Taghmon
Enniscorthy Gorey Wexford

NRGE COMMENT

The EIS which was submitted in support of this planning application included in Attachment No 9 the archaeological site map (OS Wexford 32), which identified the adjacent archaeological sites. The nearest recorded archaeological site to this proposed development is 300m minimum distance.

Agriculture

(K) 5.6 The County Council recognises the importance of agriculture for sustaining, enhancing and maintaining the rural economy and culture. The County Council will support and facilitate agricultural restructuring and diversification within the framework of **Agenda 2000** in order to integrate the sector more closely with rural development, in pursuit of environmental and social objectives. This approach accords with national policy as set out in the **National Sustainable Development Strategy**. The County Council supports the emphasis in the **National Development Plan 2000 – 2006** on investment on measures for improving farm structures, including farm waste management, animal welfare, food quality and environmental protection, complementing the substantial investment in REPS. The optimum and environmentally sensitive use of land no longer required for agriculture will be a key issue over the plan period particularly with regard to development in

In support of the development of efficient and sustainable agriculture, the County Council will:

- *promote environmentally friendly systems of agricultural production and processing through the continuation of control of farmyard pollution and REPS*
- *support and facilitate farmers who wish to upgrade their facilities to meet market and environmental requirements*
- *co-operate with and be proactive with regard to proposals from the Rural Development Programme and the Rural Development Fund in generating opportunities for off-farm employment*
- *require high standards in the design and maintenance of agricultural structures*

- *encourage persons choosing to reside in the rural area to accept normal agricultural practices*

NRGE COMMENT

The proposed development fully complies with all criteria set out in this section of the County Development Plan.

8.3 Nature Conservation

(L) 8.3.1 County Wexford has a rich heritage of habitats of nature conservation value containing a wide range of plants and animals. This biodiversity is threatened by development pressure, human activity and intervention. A sustainable approach requires that the stock of wildlife habitats and species should be protected for the benefit of present and future generations. The more important and unique habitats are subject to national and European Union designation as proposed Natural Heritage Areas, candidate Special Areas of Conservation and Special Protection Areas. In addition to its rich bio-diversity, County Wexford has several sites of geological and geomorphologic interest which must be protected.

NRGE COMMENT

The proposed development complies with the criteria set out in this section of the County Development Plan, by

(i) Providing a landscaped burn between the AD site and the river.

(ii) Producing an organic fertiliser for agricultural use.

(M) 8.5.3 Areas Designated as Vulnerable (Map No. 3)

These areas include:

- the coastline
- the banks of rivers
- the shorelines of lakes
- the skylines of upland areas
- the headlands and promontories

They represent the County's highest quality scenic landscapes with limited potential to absorb intensive development and need to be given the greatest possible protection. These areas contain the principal features which create and sustain the character and distinctiveness of the surrounding landscape. To be considered for permission, development in the vicinity of these vulnerable areas must be shown not to impinge in any significant way upon their character, integrity or uniformity when viewed from the surroundings. Particular attention should be given to the preservation of the character and distinctiveness of these areas as viewed from scenic routes and the environs of archaeological and historic sites.

NRGE COMMENT

The proposed development complies with the criteria set out in this section of the County Development Plan, by providing a landscaped burn between the AD site and the river, which will not only screen the view of the proposed development, but will

also screen the current view of the pig farm. The current view from all environs is an EXISTING PIG FARM.

(N) 8.5.4 Within or adjacent to these areas:

• any development which would adversely affect the natural beauty of their landscapes will be strongly resisted

• large-scale developments will be strongly resisted unless they are proven to be in the national interest, incapable of being located in another area and designed to do as little damage to the environment as practicable

NRGE COMMENT

A site selection review was undertaken of all potential sites adjacent to Rennard Farms pig units (Cornwall, Killurin, & Sloblands). This site was selected for the following reasons

(i) This is the largest of all three pig farms producing 65% of the total volume of pig manure (33,000M3) to be treated at this facility.

(ii) The mill for all 3 units is located at this site.

(iii)This site has the largest energy demand of all 3 farms.

(iv)This site has the best road infrastructure.

(v)This is the only site of all 3 where the AD facility will be viable.

In conclusion I refer to the Discussion Paper produced by the EPA in January 2005 titled "ANAEROBIC DIGESTION: Benefits for Waste Management, Agriculture, Energy, and the Environment", and in particular to page 16 under the heading "Conclusion" where it states "*AD has the potential to deliver multiple environmental benefits, including reduced water pollution potential, lower greenhouse gases, and reduced odours from agricultural slurries. In places that have high concentrations of animal waste threatening water quality, centralised AD can play a significant role in managing the problem. AD is also unique among policy instruments as it can deliver positive outcomes for multiple policy objectives with respect to global warming, renewable energy and water pollution*".

The proposed development complies with the criteria set out in this section of the County Development Plan,

(O) 8.5.15 Scenic Routes

Scenic routes indicate public roads from which views and prospects of areas of natural beauty and interest can be enjoyed. Sightseeing visitors are more likely to be concentrated along these routes. The onus will be on the applicant/developer seeking permission to develop in the vicinity of a designated scenic route, to demonstrate that the development will not give rise to the destruction or degradation of views towards visually vulnerable features or significant alterations to the appearance or character of sensitive landscapes. Designated scenic routes to which this policy applies are set out below and on **Map 3 Landscape Policy Areas.**

Route 9 (b) Ferrycarrig – N Cross Roads – Ferrycarrig

NRGE COM
The proposec County Deve the river/Ki developmer of this site

GENER
Refere to Dic failec capi farm par car th th

Any individual or group who made a submission or observation to the previous application were provided with an information pack on this proposal and an informative CD on anaerobic digestion. A public meeting was held at IFA offices Enniscorthy, where a number of presentations were made followed by open discussion. All present were told that NRGE would provide access to community representatives, to the proposed facility, to review all processes, monitoring systems and procedures.

We herein respectfully request Wexford County Council to grant planning permission for this development, and allow NRGE and Anaerobic Digestion prove to all stakeholders that this proposed development will enhance the environs adjacent to this site and the customer farms whereupon pig manure is currently being applied.

Yours Sincerely

MICHAEL McEniry
NRGE

MICHAEL SWEENEY
NRGE

Route 9 (b)
Ferrycarrig – North to Killurin via the Deeps Bridge – South to Muchwood Cross Roads – South-east to N11 via Irish National Heritage Park – North to Ferrycarrig

NRGE COMMENT

The proposed development complies with the criteria set out in this section of the County Development Plan, by providing a landscaped burn between the AD site and the river/Killurin bridge, which will not only screen the view of the proposed development, but will also screen the current view of the pig farm. The current view of this site from all environs is an EXISTING PIG FARM.

GENERAL COMMENT

English AD Plants:

Reference is made on a number of occasions throughout the third party submissions to Digesters constructed in the UK in the 1970's and that a high proportion of these failed. The process design of these small scale Digester plants was based upon low capital investment requiring a significant amount of "hands on" expertise by the farmer. The level of routine daily time commitment was significant as all process parameter observations had to be done manually and any corrections would be carried out manually. The time commitment required in early digesters was greater than the developer's were prepared to spend on them and therefore they gave up on the process.

Digester technology like any other technology has advanced considerably since the 1970's and a lot of lessons were learned from those pioneering days. The Biogas process selected for the Killurin Site is a result of 20 years experience gained in Denmark predominantly with the Pig Industry there. The automatic control and monitoring system referred to in the planning application and accompanying EIS has a remote Parameter monitoring and optimization system with the capability of adjusting or compensating parameters on the farm, remotely at NRGE's offices in Tipperary or at Xergi's offices in Denmark. This eliminates the single most common reason for Pioneering Biogas development failures.

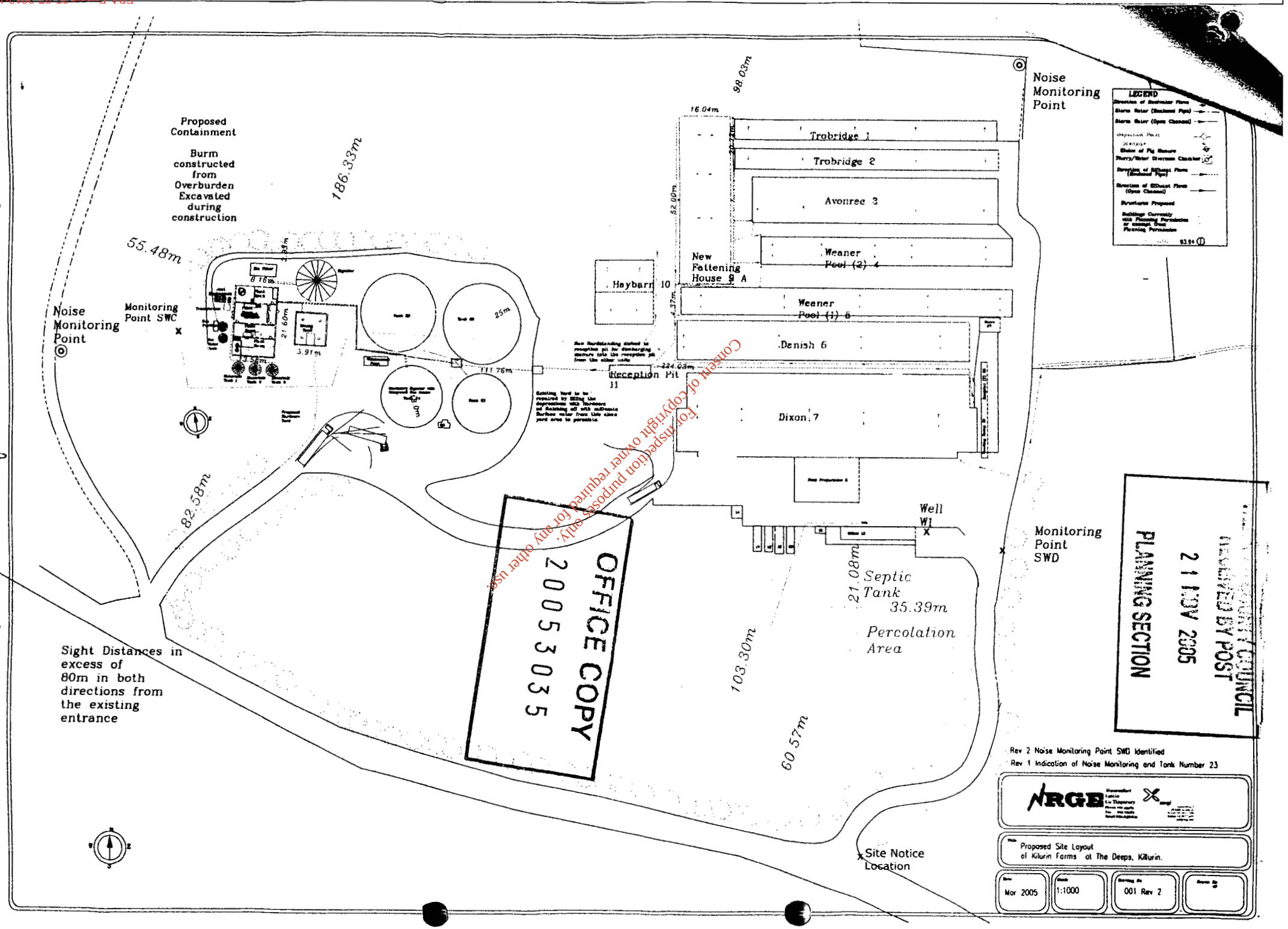
Having fully reviewed all third party submissions we believe that we have responded to all relevant issues in respect of this proposed development at this location. We note comment has been made by third parties on other sites utilizing different technologies and process, which are operated by different companies, and entities. We submit that these comments and observations are irrelevant to this proposed development.

In conclusion I wish to point out that this proposed development will enhance the environment for all stakeholders. We have set out clearly the selection process undertaken in selecting this site, and the scale of the development. We have also clearly listed the volumes of materials which we plan to treat therein. We have made every effort with this application to make all information available to all stakeholders.

ATTACHMENT NO. 1

COLOUR SITE LAYOUT PLAN
SCALE 1:1500

ATT. NOD Colour Site layout plan Scale 1:1500



IPC REGISTRATION NO: 742

ATTACHMENT NO. 2

CROSS SECTIONAL DRAWING OF PROPOSED SURFACES

REVIEW OF IPC REG 453

ATT. (2) Cross Sectional Drawing of Proposed Surfaces

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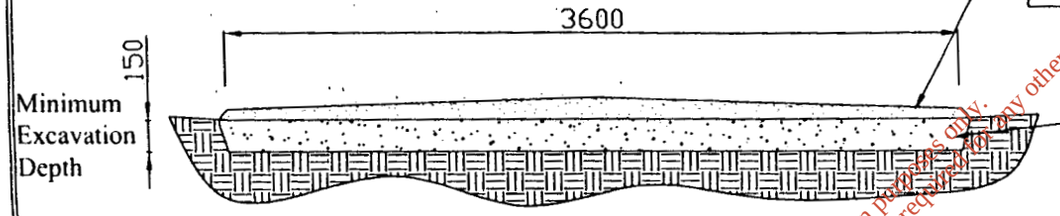

<25mm Screenings with a 2% camber to prevent water lodging on the roadway.
Minimum Depth 40mm
Well consolidated

Crushed Stone Well Consolidated
Minimum Depth
150mm

Typical Section

Farm Development Service SPECIFICATION S127

1. GRAVEL ROADS

1.1 Preparation of Site

All top soil and soft material shall be excavated to a minimum depth of 150mm or down to a solid stratum and the excavated material shall be suitably disposed of. Where slopes are unavoidable they should be kept to a minimum and be as uniform as possible. Provisions shall be made for drainage of the site. In the case of roads, such culverts and drains as may be required for the stability of the roadway or the drainage of adjacent land shall be provided.

1.2 Foundation

The foundation shall consist of 150mm of well compacted hardcore gravel or dryfilling, laid to produce a smooth surface, with gradients corresponding closely to those required in the finished roadway.

1.3 Rubble or Gravel roads

Preparation of site and placing of hardcore foundation shall be as set out under 1.0 and 1.1 above. The foundation shall be covered evenly with not less than 75mm clean course gravel and well consolidated.

1.4 Roadway Widths

Farm roads shall be from 2.75m to 3.6m wide. Vehicular access to the farmyard from a public road may be 3.6m wide but in the event of such road being longer than 200m it shall be constructed to a width of 3.2m, with a section 12m long widened to 4.5m to form a lay-by every 200m. Roadway fences shall be set back at least 1.0m from the edge of the road.

NRGE
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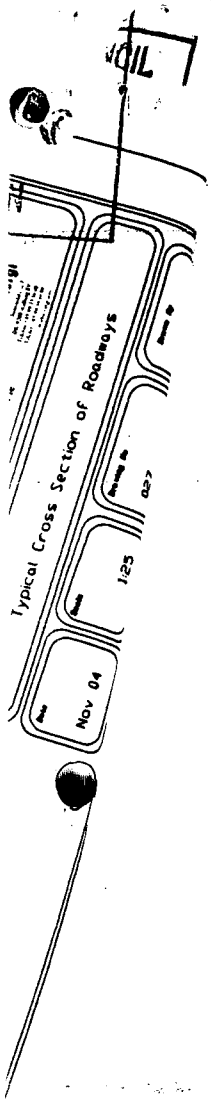
Typical Cross Section of Roadways

Nov 04 | 1:25 | 027



IPC REGISTRATION NO: 742

ATTACHMENT NO. 3

GES REPORT

1. INTRODUCTION

Geotechnical and Environmental Services Limited were requested by MS Farm Services on behalf of Rennard Farms Ltd to prepare a proposal for tank and pipeline integrity testing at a pig enterprise owned and operated by Rennard Farms at Killurin Co Wexford.

2. DESCRIPTION OF ENTERPRISE

The pig unit is located in the townsland Deeps on the Crossabeg to Killurin road, approx 80 m from the public road and 4Km from the main Wexford to Enniscorthy road.

The unit comprises a block of purpose built houses comprising accommodation for the animals, over mass concrete tanks and 4 No overground steel tanks used to collect and store pig manure.

The unit is accessed by a farm roadway of approximately 80m length off the public roadway.

The groundwater flow direction is considered to be mirroring the topography towards the river slaney.

4. RISK MODEL

The HAZARD-PATHWAY-TARGET risk model is proposed.

The hazard being the potentially polluting slurry held in the underground and overground tanks.

The target being the groundwater beneath the site and the adjacent river slaney.

The pathway under consideration is the potential leakage from tanks where the integrity is compromised.

On the basis of the geological setting, it is considered that any breach of the tank integrity would result in contaminants entering the aquifer and the water table.

It is therefore considered that monitoring of groundwater presents the most effective means of confirming the integrity of the tanks.

5. PROPOSED APPROACH

It was noted that there is a well adjacent to the site office.

It is proposed that an additional well should be installed downgradient of the proposed anaerobic digester. It is then proposed that samples are taken for a range of parameters, twice in the first year, and the results are scrutinised to assess, whether there is a noticeable variation from upgradient groundwater quality to downgradient groundwater quality.

ATT. No (3)
GAS REPORT

IPC REGISTRATION NO: 742

ATTACHMENT NO. 4

FARM STRUCTURES TABLE

ATT (4) Farm Structures Table (A)

FARM STRUCTURES TABLE

Killurin Pig Farm Rev 1 (Incorporating New House9)

*Covered Structures to Stormwater System	3843
~Paved Areas to Stormwater System only	8121
# Paved Areas to Foul/Stormwater System	681
Paved Areas to Foulwater System Only	1496
Unpaved Areas	1770

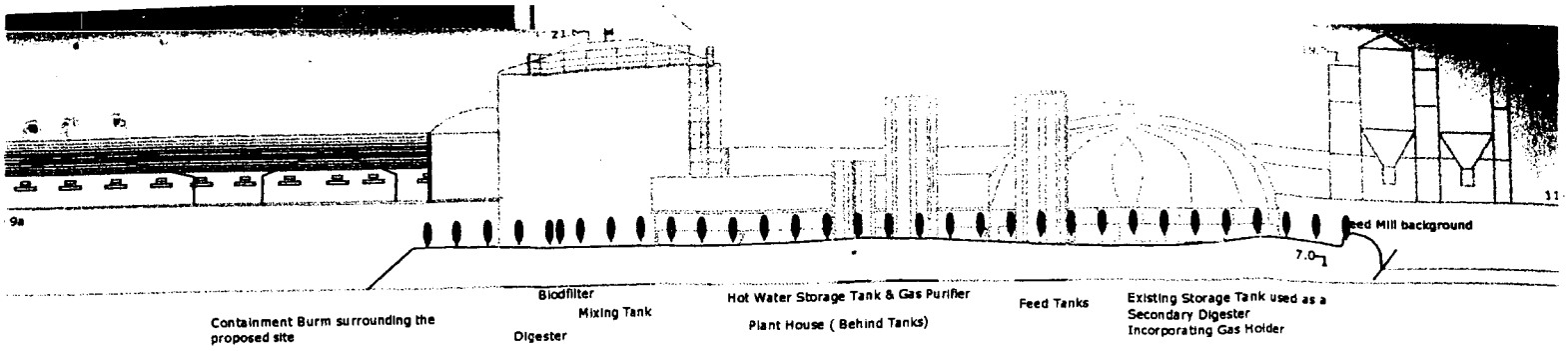
TITLE	STATUS	CLASS	STRUCTURE LGT (M)	WTH (M)	AREA SQ MTS	TOTAL AREA B/F		TANK WIDTH	TANK LENGHT	TANK DEPTH	CAPACITY CUBIC MTS	TOTAL CAPACITY	EFFECTIVE CAPACITY WITH 100 FREE BOARD	TOTAL EFFECTIVE CAPACITY
Trobridge1		6	83.5	6.3	526.1	526.1		3.0	83.5	1.2	300.6	300.6	275.6	275.6
Trobridge 2	Exempt	6	83.5	6.3	526.1	526.1	*	3.0	83.5	1.2	300.6	300.6	275.6	275.6
Avonree 3	Exempt	6	78.0	18.3	1427.4	1953.5	*	1.2	156.0	1.2	224.6	224.6	205.9	205.9
Weaner Pool 4	Exempt	6	80.5	11.1	893.6	2847.0	*	8.5	80.5	0.8	521.9	521.9	453.2	453.2
								0.6	80.5	0.9				
Weaner Pool 5	Exempt	6	135.8	11.1	1507.4	4354.4	*	8.5	80.5	0.8	521.9	1043.7	453.2	906.4
								0.6	80.5	0.9				
Danish 6	Exempt	6	94.0	12	1128.0	5482.4	*	1.2	94.0	1.1	103.6	1147.4	93.8	1000.2
Dixon 7	Exempt	6	89.5	22.4	2004.8	7487.2	*	1.2	267.6	0.8	244.1	1391.4	211.9	1212.1
Feed Mill 8	Exempt	8	20.4	13.8	281.5	7768.7	*							
Hospital 9	Demolish	6	0	0	0.0	7768.7	*							
Sick Pins 26	Exempt	6	23.5	6.7	157.5	7926.2	*							
Loading Bay 21	Exempt		13.5	6.7	90.5	8016.6	*							
OfficeShowerCanteen 13	Exempt	8	23.5	4.07	95.6	8112.2	*							
Weigh Room 14	Exempt	8					*							
Pump House 15	Exempt	8	2.2	4.07	9.0	8121.2	*							
Tank 17	Exempt	8	8	2.5	20.0	20.0								
Tank 18	Exempt	8	8	2.5	20.0	40.0								
Tank 19	Exempt	8	9	2.5	22.5	62.5								
Tank 20	Exempt	8	9	2.5	22.5	85.0								
Weigh Bridge 22	Exempt	8	12	3	36.0	121.0								
Reception Pit 11	Exempt	7	11	3.05	33.6	33.6	~	3.05	11	3.05	102.3	1493.7	99.0	1311.1
Overground Tank 23	Exempt	7	18	18	254.3	287.9	~	18	18	4.5	1144.5	2638.3	1119.1	2430.2
Overground Tank 24	Exempt	7	18	18	254.3	542.2	~	18	18	4.5	1144.5	3782.8	1119.1	3549.3
Overground Tank 29	Exempt	7	24	24	452.2	994.4	~	24	24	5.5	2486.9	6269.7	2441.7	5990.9
Overground Tank 30	Exempt	7	24	24	452.2	1446.6	~	24	24	5.5	2486.9	[illegible]56.6	2441.7	8432.6
Extraction Point 28	Exempt	7	3.6	2.4	4.5	451.1	~							
Extraction Point 31	Exempt	7	3.6	7.6	45.3	1496.4	~							

FARM STRUCTURES TABLE

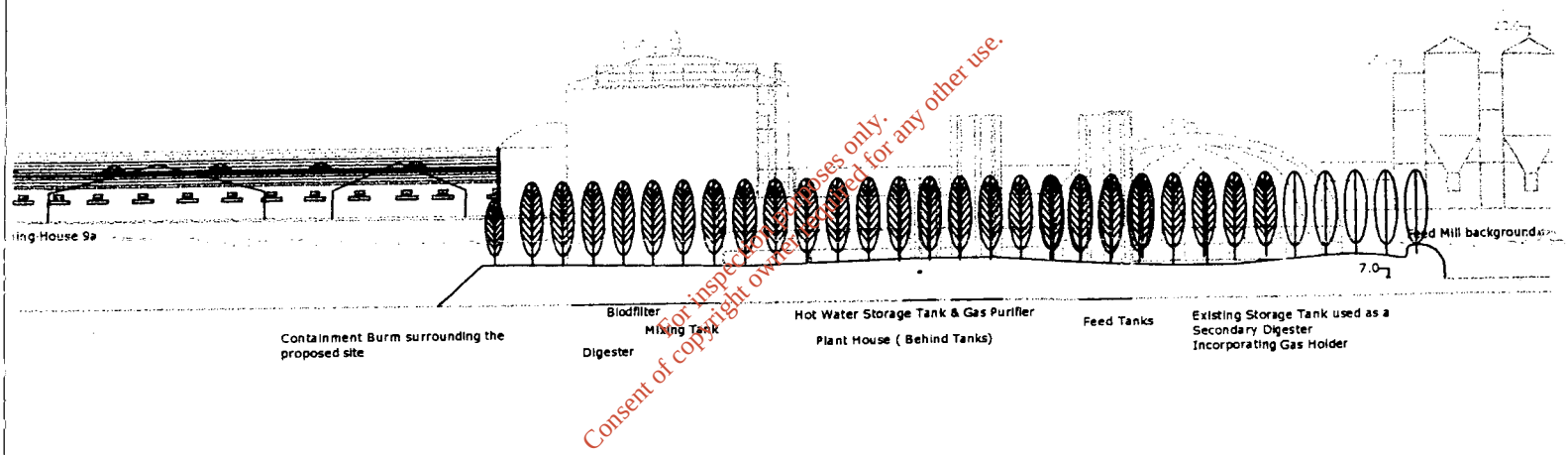
Killurin Pig Farm

TITLE	STATUS	CLASS	STRUCTURE LGT (M)	STRUCTURE WTH (M)	AREA SQ MTS	TOTAL AREA B/F		TANK WIDTH	TANK LENGHT	TANK DEPTH	CAPACITY CUBIC MTS	TOTAL CAPACITY	EFFECTIVE CAPACITY WITH 100 FREE BOARD	TOTAL EFFECTIVE CAPACITY
Mixer Tank	Proposed	8	10.1	10.1	102.0	102.0	*	10.1	10.1	5	510.1	9266.6	499.8	8932.4
Digester	Proposed	8	12.5	12.5	122.7	122.7	*							
Matl Tank 1	Proposed	8	2.5	2.5	4.9	127.6	*							
Matl Tank 2	Proposed	8	2.5	2.5	4.9	132.5	*							
Matl Tank 3	Proposed	8	2.5	2.5	4.9	137.4	*							
Plant Room	Proposed	8	13.6	21.6	293.8	431.1	*							
Gas Purifier	Proposed	8	3.0	1.5	4.5	435.6	*							
Gas Purifier (i)	Proposed		2.0	2.0	3.1	438.8	*							
Hot Water Tank	Proposed	8	3.0	3.0	7.1	7.1								
Tank Yard	Proposed		39.5	10.7	422.3	422.3	#							
BioFilter			8.2	4	32.8	32.8								

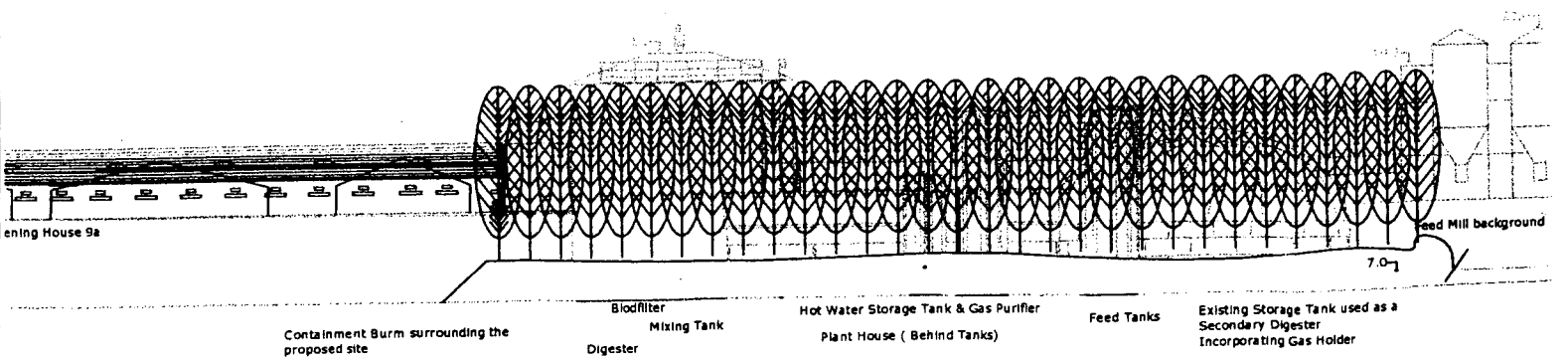
ATT (4) FARM Structures Table (B)



ous View from West looking East
ng Screen Planting approximate
of Planting.
Height approx 1.2 to 1.5m



ous View from West looking East
ing Screen Planting approximate
ears from time of Planting.
approx 5 to 6.5m
h rates approximatly 1m per year



ous View from West looking East
ing Screen Planting estimated

ATT. 5(B)