This report has been cleared for submission to the board by Senior Inspector Marie O'Connor.
Signed: Date: 26/2/13

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

OFFICE OF CLIMATE, LICENSING & RESOURCE USE

INSPECTORS REPORT ON A LICENCE APPLICATION

To:	Directors
From:	Loretta Joyce - **LICENSING UNIT**
Date:	26TH FEBRUARY 2013
RE:	Application for an IPPC Licence from Glanbia Ingredients (Ballyragget) Limited, Licence Register P0963-01

Application Details	
Class of activity:	7.2.1 The treatment and processing of milk, the quantity of milk received being greater than 200 tonnes per day (average value on a yearly basis).
Category of Activity under IED Directive (2010/75/EU):	6.4 (c)
Category of Activity under IPPC Directive (2008/1/EC):	6.4 (c)
Licence application received:	13/07/12
EIS received:	13/07/12
Notices under Article 11(2)(b)(ii) issued:	06/09/12
Information under Article 11(2)(b)(ii) received:	01/11/12
Supplementary material submitted by applicant	01/11/12
Notice under Section 87(1I)(g) issued:	28/11/12
Response under Section 87(1I)(g) received:	12/12/12 (Kilkenny County Council) 21/12/12 (An Bord Pleánala)
Planning Decision Made:	20/08/12(Kilkenny County Council) 24/01/13 (An Bord Pleánala)
Submissions received:	6th September 2012 (see Appendix 1)
Site notice inspected:	4th September 2012
Site visits:	4th September 2012

Company

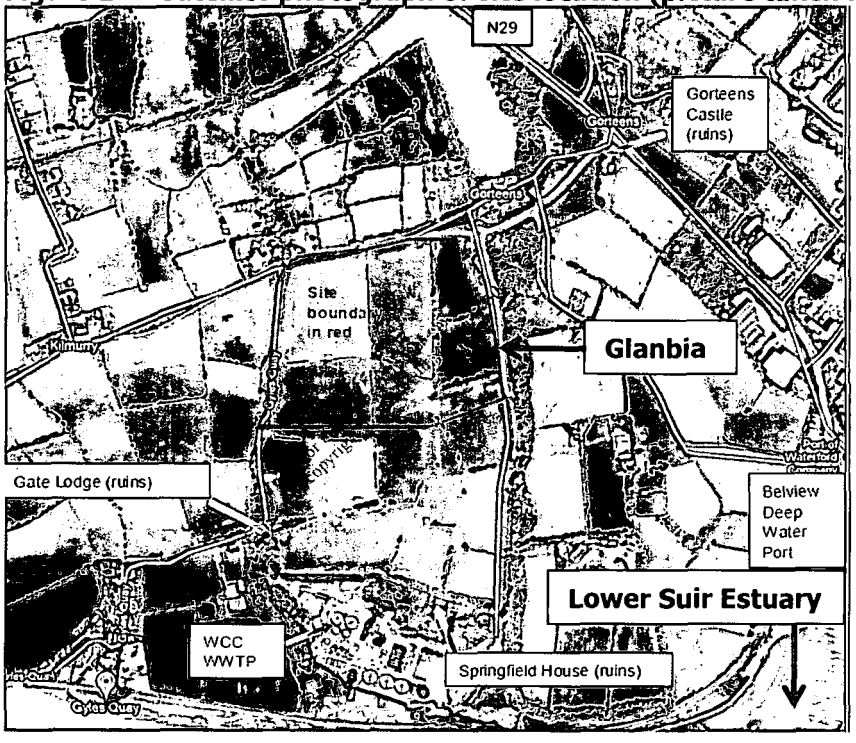
Glanbia Ingredients (Ballyragget) Ltd proposes to operate a new dairy processing plant at IDA Science and Technology Park, Gorteens, Belview, Port Road, Co. Kilkenny with a production capacity of over 1.04 million m^3 of dairy liquids per annum. The installation falls within the scope of category 6.4 (c) *Treatment and processing of milk only, the quantity of milk received being greater than 200 tonnes per day (average value on an annual basis).*

Glanbia Ingredients (Ballyragget) Ltd. is part of Glanbia plc, an international nutritional solutions and cheese group, headquartered in Ireland. Glanbia Ingredients (Ballyragget) Ltd. and Glanbia Ingredients (Virginia) Ltd. operate dairy processing plants at Ballyragget (Reg. No. P0359-02) and Virginia (Reg. No. P0405-02) respectively. Milk quotas introduced under the European Community's Common Agricultural Policy will expire on 31st March 2015. Additional milk processing capacity is required by the applicant to cater for the significant increase in milk production expected from Irish farms.

Glanbia Ingredients (Ballyragget) Ltd. is a legal entity of normal status and the associated companies registration office (CRO) number is 23260. The new installation will employ approx. 51 staff. Production activities will be on a continuous 24-hour basis, seven days per week all year round, allowing for a 10-day planned annual shutdown.

Construction of the proposed facility is scheduled for the period March 2013 to March 2015 with commissioning proposed to start in November 2014. Kilkenny County Council granted planning permission for the development (Planning File Ref. No.12/324) on 20/08/2012. The planning application was accompanied by an Environmental Impact Statement. The planning decision was appealed to An Bord Pleánala (Planning File Reference No. PL10.241077) and was granted on 24/01/2013.

Figure 1 Satellite photograph of site location (picture taken from EIS)



Process Description

The installation will take in deliveries of raw milk in tankers, remove excess cream, dry and evaporate the milk into powder of whole or skimmed milk grade, and bag off the powder for onward distribution. Surplus cream will be generated as a by-product of the process. Vegetable oil and other dairy products, including buttermilk, milk permeate and other pasteurised non-skim milk solids are added as ingredients in the finished product.

Emissions

Air Emissions

There will seven main emissions to air, three from gas-fired boilers (two duty and one standby) and four from two gas-fired dryers (two from the air heater exhausts and two from the main air exhausts) as detailed in Table 1.

Table 1: Emissions to Atmosphere

Ref.	Source of Emissions	Emissions	Description
A1-1	Boiler No.1 11.25MW, 47.5m stack height	NO_x, CO	Natural gas
A1-2	Boiler No.2 11.25MW, 47.5m stack height	NO_x, CO	Natural gas
A1-3	Boiler No.3 11.25MW, 47.5m stack height	NO_x, CO	Natural gas
A2-1	Dryer No.1: air heater exhaust 7.22MW, 47.5m stack height	NO_x, CO	Natural gas
A2-2	Dryer No.2: air heater exhaust 7.22MW, 47.5m stack height	NO_x, CO	Natural gas
A2-3	Dryer No.1: main air exhaust 7.22MW, 47.5m stack height	Particulates	Natural gas, Bag filters
A2-4	Dryer No.2: main air exhaust 7.22MW, 47.5m stack height	Particulates	Natural gas, Bag filters

The exhaust air from each dryer chamber will pass through bag filters in order to remove particulate matter form the exhaust stream.

Impact of Air Emissions on Receiving Environment

The applicant completed air dispersion modelling of nitrogen oxides, particulates and carbon monoxide using an AERMOD Version 7.6 air dispersion model. The air dispersion modelling input data consisted of meteorological data, detailed information on the physical environment (including building dimensions and terrain features) and design details from all emission points on-site. Detailed vendor data was not available at the time of modelling, however, data used for the dryers was based on industry norms, data for the air heaters was provided by a prospective vendor and data for the utility boiler was based on similar boilers. The one standby utility boiler was not included in the model and the RD (Condition 3.15) allows a maximum of two out of the three boilers to be operated simultaneously.

Two general scenarios were modelled: Scenario 1: Modelling of the Glanbia installation only for all pollutants and Scenario 2: Cumulative modelling of the Glanbia and Supram installations for all pollutants. Supram, a proposed active pharmaceutical ingredient production installation has been granted planning permission by An Bord Pleanála in 2009 (Planning File Reference PL10.233890) for

a site between Waterford City Council Wastewater Treatment Plant and the southern Glanbia site boundary but has yet to be constructed. Emissions were modelled for all time i.e. 24/7, 365 days per year for all five meteorological years.

Table 2: Air Dispersion Modelling Results – Glanbia installation only

Pollutant	Description	Air Quality Standard Note 1 ($\mu g/m^3$)	Background Conc. ($\mu g/m^3$)	PEC ($\mu g/m^3$) Note 2	PEC as % of Air Quality Standard
Nitrogen Oxides	1 hr NO_x Note 3	200	29.6	67.2	47%
	Annual NO_x	30	14.8 Note 4	19	63%
Particulates	Daily PM_{10}	50	25.5	41.3	83%
	Annual PM_{10}	40	12.8 Note 4	17.4	44%
	Annual $PM_{2.5}$ Note 5	25	12.8	17.4	70%
Carbon Monoxide	8 hour CO	10,000	2,070	2,094.5	21%

Note 1: Clean Air For Europe (CAFÉ) Directive (2008/50/EC), Air Quality Standards Regulations 2011, S.I. 180 of 2011
Note 2: Predicted Environmental Concentration (PEC) consists of Background Concentration and Process Contribution. Modelled predicted environmental concentration/ relative ground level concentrations, using 'worst case' year
Note 3: Ratio of NO_2/ NO_x assumed to be 1, which is conservative.
Note 4: Assumed that long term background concentration is half the short term, which is conservative.
Note 5: Not all of the PM will be $PM_{2.5}$ therefore, this is conservative

Table 3: Air Dispersion Modelling Results – Cumulative assessment of Glanbia and Supram installations

Pollutant	Description	Air Quality Standard Note 1 ($\mu g/m^3$)	Background Conc. ($\mu g/m^3$)	PEC ($\mu g/m^3$) Note 2	PEC as % of Air Quality Standard
Nitrogen Oxides	1 hr NO_x Note 3	200	29.6	98	49%
	Annual NO_x	30	14.8 Note 4	19.6	65%
Particulates	Daily PM_{10}	50	25.5	42.1	84%
	Annual PM_{10}	40	12.8 Note 4	23.4	59%
	Annual $PM_{2.5}$ Note 5	25	12.8	23.4	94%
Carbon Monoxide	8 hour CO	10,000	2,070	2,094.6	21%

Note 1: Clean Air For Europe (CAFÉ) Directive (2008/50/EC), Air Quality Standards Regulations 2011, S.I. 180 of 2011
Note 2: Predicted Environmental Concentration (PEC) consists of Background Concentration and Process Contribution. Modelled predicted environmental concentration/ relative ground level concentrations, using 'worst case' year
Note 3: Ratio of NO_2/ NO_x assumed to be 1, which is conservative.
Note 4: Assumed that long term background concentration is half the short term, which is conservative.
Note 5: Not all of the PM will be $PM_{2.5}$ therefore, this is conservative

NO_x

Modelling of NO_x from the boilers and dryers was carried out at a concentration of 200mg/m^3. The assessment showed that the maximum PEC (Predicted Environmental Concentrations) were well within the AQS. The RD proposes an ELV of 200mg/m^3 NO_x.

Particulates

Modelling of particulates from the dryer exhausts was carried out at a concentration of 35mg/m^3.The assessment showed that the maximum PEC were within the AQS. The assessment indicated that the maximum PEC for PM_{10} would be 83% of the AQS but the contribution from Glanbia represents only 32% of the AQS as background concentration is already high and represents 51% of the AQS. The cumulative assessment of the proposed Glanbia and Supram installations, indicated that the maximum PEC for $PM_{2.5}$ would be 94% of the AQS but it was assumed that all PM_{10} will be $PM_{2.5}$ and so this is highly conservative.

The RD proposes an ELV of 35mg/m^3 particulates. A limit of 5-50mg/m^3 particulates is BAT for the sector.

CO

Modelling of CO from the dryers was carried out at a concentration of 123mg/m^3. The assessment showed that the maximum PEC was just 21% of the AQS. The RD proposes an ELV of 123mg/m^3 CO.

Conclusion

Considering the conservative assumptions adopted for modelling purposes and the requirements included in the RD, it is unlikely that air emissions from the site will have a significant impact on the local environment. The results of the cumulative assessment demonstrate that predicted environmental concentrations (PEC) of nitrogen oxides, particulates and carbon monoxide will not exceed the Air Quality Standards (AQS).

Smartply Europe Ltd. (Reg. No. P0001-02) located approximately 1.3km from the installation, was not included in the cumulative assessment. Contour plots submitted indicate that the predicted 99.8%ile hourly GLC for NO_x from Smartply is within the 'impact area' as defined in *Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)*. Contour plots submitted did not indicate that any other air emission from Smartply is within the 'impact area'. Licence application data from Smartply predicts a maximum 99.8%ile hourly GLC for NO_2 of 59.83 µg/m^3 from the installation. Assuming that the maximum GLC for NO_x, for both Smartply and Glanbia occur in the same location, which is unlikely, the cumulative maximum GLC for NO_x would be 157.83 µg/m^3 (59.83 µg/m^3, Smartply, 98 µg/m^3 Glanbia). It is unlikely that, cumulatively, there will be a breach in air quality standards as 157.83µg/m^3 will comply with the AQS of 200 µg/m^3.

Schedule B of the RD limits emissions to the concentrations requested and modelled by the licensee; 200mg/m^3 NO_x (boilers, A1-1, A1-2, A1-3 and dryers A2-1, A2-2), 35mg/ m^3 Particulates (dryers, A2-3, A2-4) and 123mg/ m^3 carbon monoxide (dryers, A2-1, A2-2). These emission limit values are BAT limits similar to those applied by the Agency to the other licensed installations in the sector. Annual air emission monitoring is BAT for the sector and has been provided for in the RD.

Emissions to Sewer

Process and sanitary effluent will be discharged to sewer for treatment in the Waterford City Council Wastewater Treatment Plant (WCCWWTP) at Springfield House, Gorteens, Co. Kilkenny, located approximately 500m south of the installation. WCCWWTP is operating under Waste Water Discharge Licence Reg. No. D0022-01 and Waste Licence Reg. No. W0244-01 (operation of two anaerobic digesters – sludge bio-cake sent for disposal). It is serving (2011) population equivalent (p.e.) which was reported 63,114 p.e. and has a design capacity for 190,600 p.e. Final treated effluent is discharged to the Lower Suir estuary.

Process effluent streams will be collected and sent to waste water balancing tanks (2 x 2,000m^3 in parallel) at the western end of the site. A pH neutralisation system will be provided to mix and dose caustic (sodium hydroxide) or acidic (nitric acid) solution as required bringing the effluent to the pH range 6-9 as agreed for acceptance at WCCWWTP. The process effluent will also be pre-treated to remove oils, fats and greases. The applicant proposes to use a dissolved air flotation (DAF) unit for this purpose.

Waterford City Council through the Section 99(E) response has provided daily mean concentration ranges for a range of parameters. The RD provides for the upper limit of the range. Waterford City Council stated that further discussion is required with the applicant, in respect of two parameters, Nitrogen as N and Total Oxidised Nitrogen as N, to ensure that Waterford City Waste Water Discharge Licence Reg. No. D0022-01, is complied with. The RD requires fortnightly monitoring of these two parameters but no ELV has as yet been provided by the Water Services Authority. It is noted that under Section 96(1)(b) and (c) of the EPA Acts 1992 to 2012, there is provision for the Water Services Authority to request a technical amendment of the licence to include limits for these two parameters.

Sanitary and process effluent combine and are discharged to the connection to the WCCWWTP, at emission point, SE1. Schedule B.3 of the RD sets ELVs at process effluent emission point, SE2 and Schedule C.3.2 of the RD provides for monitoring of emissions to sewer at emission point, SE2, prior to combining with sanitary effluent.

Emissions to Surface Water

The site, located within the South Eastern River Basin District, comprises primarily of green fields, with a wetland area and lagoons at the north-eastern corner. Two streams, one to the east and one to the west of the site, run in a north-south direction outside of the site boundary. The streams feed into the Lower River Suir located approximately 300m south of the site. The Lower River Suir covers a stretch of 6.5km of the Suir Estuary, that extends from Ballynakill on the outskirts of Waterford City, to Cheekpoint, where the Suir meets the River Barrow. The lagoons were constructed so as to provide attenuation for surface water runoff from the new road constructed by IDA Ireland to serve the WCCWWTP, just south of the site.

The transitional water body of the Lower River Suir at Little Island is of Good status, 2011, and risk applied in 2008 is 1a, at risk of not achieving good status.

There are no Q stations nearby but the quality was assessed as intermediate in 2007 to 2009.

There will be no process emission to surface waters from the installation. Uncontaminated stormwater will discharge to the IDA's stormwater drain located at the road to the east of the installation, which directs surface water towards the stream to the east and feeds into the Lower River Suir. There will be no discharge of surface water from the installation to the artificial wetland and lagoon area at the northeast of the site.

Stormwater from road and parking areas will be collected and passed through oil/petrol interceptors and then combined with stormwater from other areas on site (mainly roofed areas).The RD provides for continuous monitoring of pH, temperature and Total Organic Carbon content (TOC) at SW2. The RD (Condition 6) requires that trigger levels for pH, temperature and TOC are established within six months of commencement of the activity, in consultation with IDA Ireland. Stormwater exceeding established trigger levels will be automatically diverted to the firewater retention pond (1,000 m^3 capacity) for interim storage and investigation prior to onward discharge / disposal. The RD requires that no storm water be discharged to the site drainage system downgradient of SW2.

Storm water compliant with established trigger levels will be discharged to the IDA storm drain at emission point, SW1 at a maximum rate of 37.5 L/s (a 1 in 100 year storm event). The RD provides for continuous monitoring of flow at SW1. A hydrobrake system will be provided in the drain to divert flow greater than this to the stormwater attenuation pond. A 2,000 m^3 stormwater attenuation pond will be provided to attenuate large volumes of rainfall during a storm event so that the stream and other areas around do not flood. The stormwater attenuation pond will be lined in order to ensure that the pond does not interfere with the groundwater in the area.

There will be Class I full retention separator servicing the fuel unloading/vehicle wash/reject milk area and a Class I by-pass interceptor servicing the site drainage/surface water outfall area (downstream of hydrobrake flow control device).

All bulk liquid storage tanks and drum stores will be bunded. All milk and whey storage silo areas will drain directly to the effluent collection system through gullies. The RD (Condition 6) requires integrity testing of underground pipes every three years. A 500m^3 firewater supply tank will be provided onsite.

Emissions to ground

There are no emissions to ground from the installation. The applicant states that groundwater at the site is as associated with a typical green field site and is unpolluted. A site investigation carried out by the applicant was restricted to include only geotechnical parameters. The EIS outlines that previous studies did not show any evidence of current or historical groundwater contamination. The aquifer below the site is a Regionally Important Productive Fissured Bedrock Aquifer of the Campile formation and is of low vulnerability. Groundwater status is Good, 2011, and risk applied in 2008 is 1a, at risk of not achieving good status. Permanent groundwater borehole locations have not yet been proposed. The RD (Condition 3.12) requires that three groundwater monitoring points are provided prior to commencement of the activity, at locations to be agreed by the Agency

and shall include one upgradient and two downgradient. Schedule C.5 requires annual ambient groundwater monitoring

Waste

Recyclable wastes will be segregated on site and collected for recycling by permitted waste contractors. Waste milk powder generated through spills, sweepings and laboratory activities is a Category 3 animal by-product and will be collected and sent for disposal or composting in compliance with Regulation (EC) 1069/2009. Hazardous wastes generated on-site include waste oil, batteries, fluorescent light tubes and laboratory reagents. Waste oils, fats and greases (OFG) sludge from the OFG removal unit will be collected by a permitted waste contractor and taken off-site for anaerobic digestion or other appropriate means of treatment. The applicant states that this is the only sludge that will be produced by the waste water treatment unit. All hazardous waste will be labelled appropriately and stored in a contained area before being collected by a permitted waste contractor and brought to a licensed facility for disposal, recovery or recycling.

Noise

A baseline noise survey and modelling report was completed by the applicant. The survey was carried out over a daytime (07:00hrs to 19:00hrs), evening (19:00 to 23:00hrs) and night-time (23:00hrs to 07:00hrs) period in accordance with *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4).*

The ambient noise monitoring results indicate that existing noise levels at three of the five Noise Sensitive Locations (NSLs), NSL3, NSL4 and NSL5, were already high due to a constant drone from the stack at Smartply Europe Ltd. Reg. No. P0001-02 and due to traffic noise. The daytime results for NSL 4 are already equal to the 55dB LAr,T limit. The evening time results for NSL 3 are equal to the 50dB LAr,T limit while the evening time results for NSL 4 are already exceeding the limit by +8dB(A). NSL 5 although not exceeding any limit still remains high during the daytime monitoring period at 54dB(A). During the monitoring period a low audible tone was subjectively discernible at all NSLs as a result of the stack from Smartply Europe Ltd., Reg. No. P0001-02. However, no tonal noise was present at any of the NSLs in line with *ISO 1996-2:2007 Annex D Acoustics – Description and Measurement of Environmental Noise.* Based on the assessment, it is considered that the site of the proposed installation is neither within a Quiet Area nor an Area of Low Background Noise.

A noise modelling study was carried out in order to determine the potential impacts of on-site noise sources to the NSLs. In the absence of detailed design data 'typical' noise source data was used and the assessment is indicative only.

The applicant estimates that the proposed development will increase opening year traffic noise levels by +2dB. The cumulative impact of the predicted noise levels at the NSLs resulting from the proposed installation, Supram facility together with the existing noise levels indicate that there will be no significant cumulative noise effect at the NSLs. The highest predicated increase on ambient noise is +5dB(A) at NSL1 during the evening time. This is considered to be of minor significance with the predicated cumulative value still below the relative limit of 50dB LAr.

The RD imposes the standard daytime/evening/night-time limits of 55 LAr,T /50 LAr,T /45 LAeq,T dB(A) at any noise sensitive location and the applicant indicates that noise attributable solely to onsite activities shall not exceed these limits. One submission was received, relating to noise emissions and is detailed in Appendix 1 to this report. The submitter's residential property, Cuan na Mara has been included as a NSL in the RD. Condition 6 requires the licensee to undertake a noise survey within three months of the date of commencement of the activity, and annually thereafter.

Use of Resources

The applicant estimates natural gas demand at 2,510 Nm^3/hr for dryer operation and at 4,312 Nm^3/hr for boiler operation. Energy efficient measures being implemented on the project include Energy Efficient Design (EED) and use of BAT for steam generation.

2,000m^3 of potable water will be stored in a tank onsite to provide backup in the event of loss of supply from the mains. A separate 500m^3 firewater supply tank will also be provided onsite. The installation will use a Cleaning In Place system which will reduce the need for chemicals and ultimately reduce water consumption at the installation. A reverse osmosis (RO) filter will be used to clean the water generated in the process by the evaporators. The quality of post-RO (filtered) water is not suitable for direct use in the production process, but may be used for cleaning or flushing use.

Greenhouse gas emissions and Climate Change impact

With regard to reducing the Climate impact of the installation under IPPC, the RD requires an energy efficiency audit and an assessment of resource use efficiency. The EMP objectives and targets include use of cleaner production (including production related carbon footprint).

The proposed installation requires a Green House Gas (GHG) Permit in accordance with the European Communities (Greenhouse Gas Emissions Trading) Regulations 2004, (S.I. 437 of 2004 and amendments), from the Agency prior to commencement of the licensable activity.

Compliance with EU Directives

IED Directive (2010/75/EU)

This installation falls within the scope of category 6.4 (c) *Treatment and processing of milk only, the quantity of milk received being greater than 200 tonnes per day (average value on an annual basis)* and Chapter II of the IED applies.

Schedule A limits the total rated thermal input to 50MW in terms of the combustion of fuels in this installation as the installation does not fall within the scope of category 1.1 of Annex I of the IED.

The Recommended Determination (RD) as drafted takes account of the requirements of the IED Directive.

IPPC Directive (2008/1/EC)

This installation falls within the scope of category 6.4(c) *(Treatment and processing of milk, the quantity of milk received being greater than 200 tonnes per day (average value on an annual basis))* of Annex I of Council Directive 96/61/EC concerning integrated pollution prevention and control.

The RD as drafted takes account of the requirements of the Directive. BAT is taken to be represented by the technologies described in the *Reference Document on Best Available Techniques for the Dairy Processing Sector, 2008.* The relevant BREF document for this sector is the IPPC Reference Document on *Best Available Techniques in the Food, Drink and Milk Industries, August 2006.*

Large Combustion Plant Directive (2001/80/EC)

The Large Combustion Plant Directive (LCP) 2001/80/EC does not apply to this installation as the total rated thermal input for the proposed facility is 48.19MW. The LCP Directive applies to combustion plants with a rated thermal input of equal to or greater than 50 MW, irrespective of the fuel used (solid, liquid or gaseous). Schedule A, in terms of combustion of fuels in this installation, limits the total rated thermal input to less than 50MW, irrespective of the fuel used (solid, liquid or gaseous).

Solvents Directive (1999/13/EC)

The installation does not fall within the scope of the Solvents Directive.

Seveso Directive (96/82/EC) as amended by 2003/105/EC

The installation does not fall within the scope of the Seveso Directive.

Air Quality Directives (2008/50/EC)

As outlined above, dispersion modelling of emissions to air was undertaken for the proposed development, which indicated that emissions from the installation will not cause any breaches of relevant Air Quality Standards, as specified in S.I. No. 180 of 2011.

Emissions Trading Directive (2003/87/EC)

The installation will require a Greenhouse Gas Emissions Permit, for the following activity: combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations).

Environmental Liability Directive (2004/35/CE)

The Environmental Liabilities Directive has been transposed into national legislation by European Communities (Environmental Liability) Regulations 2008 (S.I. 547 of 2008).

The location of the proposed installation is at a greenfield site. An Environmental Liabilities Risk Assessment (ELRA) and a Decommissioning Management Plan (DMP) have been provided by the applicant. The applicant has generally followed the *Agency Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision* in preparing and costing the DMP and ELRA.

The maximum estimated cost of an unknown environmental liability relating to the installation was €27,000 (including 20% contingency). The total estimate for decommissioning and closure (including a 25% contingency) is €851,438. Contingency costs are not strictly required by the guidance. The DMP requires review to include insurance and overheads/utilities e.g. water, fuel, electricity. The ELRA requires review with regard to unknown liability cost. Condition 10 and Condition 12 of the RD require the DMP and ELRA to be reviewed in advance of the commencement of the activity.

Regarding financial provision, the licensee states that insurance cover is sufficient to cover all associated costs of potential unknown liabilities identified in the ELRA. The licensee states that based on financial performance of Glanbia plc (total revenues of €2.67 billion, operating profit of €161 million for 2011), the company has more than adequate resources from operations to fund the cost of implementation of the Closure Plan and furthermore, the fixed asset value of the site and installation will far exceed the cost of the Closure Plan. The licensee states that it shall if considered necessary with the agreement of the Agency, make suitable financial provision (e.g. deposit, accumulating fund, escrow account or other acceptable form of provision) to cover the cost of the Closure Plan.

The RD includes conditions and schedules, which require the licensee to control operation of the activity and meet the specified ELVs. The RD includes, under Condition 9, measures to be taken by the licensee in the case of an incident, and under Condition 10 and Condition 12 requires the DMP and ELRA to be reviewed in advance of the commencement of the activity. Condition 12 of the RD as drafted, satisfies all the requirements of the Environmental Liabilities Directive in particular those requirements outlined in Article 3(1) and Annex III of 2004/35/EC.

Water Framework Directive [2000/60/EC], European Communities Environmental Objectives (Surface Water) Regulations, S.I. No. 272 of 2009, as amended, European Communities Environmental Objectives (Ground Water) Regulations, S.I. No. 9 of 2010, as amended, Groundwater Directives 80/68/EEC, 2006/118/EC

There are no process discharges to surface waters or to groundwater. The RL, as drafted, has regard to the requirements of S.I. No. 272 of 2009, as amended.

Regulation (EC) No 1069/2009, Animal by-products Regulation

Waste milk powder generated through spills, sweepings and laboratory activities is a Category 3 animal by-product and will be collected and sent for disposal or composting in compliance with Regulation (EC) 1069/2009. The RD, as drafted, has regard to the requirements of EC No. 1069/2009.

Directive 91/676/EEC, Nitrates Directive

The RD, as drafted, has regard to the requirements of European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010, S.I. 610 of 2010.

Habitats Directive (92/43/EC) & Birds Directive (79/409/EEC)

The proposed installation is located on agricultural grassland within an IDA Science and Technology Park that is currently undeveloped with the exception of an access road and wetland/attenuation ponds. Currently the main infrastructure

is a roundabout at the north-eastern corner of the site with a road branching to the west, parallel to the northern boundary, and an access road running south along the eastern boundary of the site. An artificial wetland has been created as part of the Drainage System for the IDA Park in the very north-eastern corner next to a roundabout. The site would be considered to be of high local to county level ecological value[1] based on the habitats present.

The proposed development site is not located within either a SAC or a SPA. The applicant identified the following European Sites (Table 4) within a 15 km radius of the installation.

Table 4 European Sites within a 15km radius of installation

No.	Site Code	Site Name	Designation	Distance (approx.)
1	002137	Lower River Suir	SAC	330m
2	002162	River Barrow and River Nore	SAC	3km
3	000671	Tramore Dunes and Back Strand	SAC	10km
4	004027	Tramore Dunes and Back Strand	SPA	10km
5	000697	Bannow Bay	SAC	15km
6	000455	Bannow Bay	SPA	15km

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on the European Sites.

The screening assessment undertaken demonstrates that the activity is not likely to have significant effects, in terms of maintaining favourable conservation status of the qualifying interests, on four of the European Sites (Nos. 3 - 6 in Table 4) and the need for Appropriate Assessment of these sites can be screened out.

Having regard to the precautionary principle, potential significant impacts on two of the European Sites (Nos. 1 – 2 in Table 4) cannot be ruled out and the applicant undertook and submitted a Natura Impact Statement (NIS), as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011).

The River Suir SAC hosts 16 qualifying interests including freshwater pearl mussel *Margaritifera margaritifera,* and white-clawed Crayfish, *Austropotamobius pallipes* However, these are freshwater species and the estuarine environment of the lower River Suir in proximity to the proposed installation is not suitable for these species. The River Barrow and River Nore SAC hosts 22 qualifying interests including Freshwater Pearl Mussel, *Margaritifera margaritifera,* and Nore freshwater pearl mussel, *Margaritifera durrovensis,* but populations of these species occur upstream of the proposed installation and the confluence of the

[1] The criteria used to assess the ecological value and significance of habitats follows *Guidelines for assessment of Ecological Impacts of National Road Schemes* (Nairn & Fossitt, 2006) and is consistent with the approach recommended in the *Guidelines for Ecological Impact Assessment* (IEEM, 2006).

River Nore and the River Suir and therefore, no impact on these species is predicted.

The Appropriate Assessment demonstrates that the activity will not adversely affect the integrity of the European Sites subject to the mitigation measures proposed. Proposed mitigation measures include provision of a firewater retention pond and stormwater attenuation pond to contain pollutants, storage of potentially polluting materials according to *EPA Guidance Note on the Storage and Transfer of Materials for Licensed activities*, bunding, continuous monitoring of surface water discharge and diversion to the firewater retention pond for containment, use of petrol interceptors, adequate supply and availability of spill kits and trained spill kit operators.

Kilkenny County Council (Planning File Ref. No. 12/324) considered the NIS and concluded that provided the mitigation measures are in place as is proposed, there will be no significant anticipated impact on the River Suir SAC or the conservative objectives of the River Nore/River Barrow SAC. An Bord Pleánala (Planning File Ref. No. 12/324) considered the NIS and found no deficiencies.

- In accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), pursuant to Article 6(3) of the Habitats Directive, the activity will not adversely affect the integrity, in terms of maintaining favourable conservation status of the qualifying interests of the European Sites, having regard to its conservation objectives.

Environmental Impact Assessment Directive(85/337/EEC)

The applicant submitted an Environmental Impact Statement (EIS) which was prepared in support of Planning File Ref. 12/324 (application to Kilkenny County Council). Kilkenny County Council granted planning permission for the development (Planning File Ref. No.12/324) on 20/08/2012. The planning decision was appealed to An Bord Pleánala (Planning File Reference No. PL10.241077) and was granted on 24/01/2013.

I have considered and examined the content of the EIS and other material (information submitted in the licence application, the planning application Ref. 12/324, planning inspectors report, correspondence between the Agency and the planning authorities carried out under Section 87(1I) of the EPA Acts and submissions made by third parties in relation to the EIS). I consider that having examined the relevant documents and with the addition of this Inspector's Report that the likely significant direct and indirect effects of the activity have been identified, described and assessed in an appropriate manner as required in Article 3 and in accordance with Articles 4 to 11 of the EIA Directive as respects the matters that come within the functions of the Agency. I consider that the EIS also complies with the EPA (Licensing) Regulations 1994, as amended.

Environmental Impact Assessment (EIA)

An EIA, as respects the matters that come within the functions of the Agency, has been carried out in accordance with Section 83(2A) of the EPA Acts.

Consultation was carried out between Kilkenny County Council and An Bord Pleánala and the Agency in accordance with Section 87(1I)(g) of the EPA Acts. The submissions and observations exchanged between Kilkenny County Council and An Bord Pleánala and the Agency have been considered as part of this assessment. All third party submissions/observations received which are relevant to impacts on the environment have also been considered and taken into account.

The submitted EIS and the assessment preceding this part of the Inspectors Report address the likely significant direct and indirect effects arising from the activity, as respects the matters that come within the functions of the Agency.

Likely significant effects

The following section identifies, describes and assesses the main likely significant direct and indirect effects of the proposed activity on the environment for each of the following factors: human beings, flora, fauna, soil, water, air, climate, the landscape, material assets and cultural heritage. The main mitigation measures proposed to address the range of predicted significant impacts arising from the activity area are also outlined.

1. Human Beings

Likely significant effect	Description of effect	Mitigation measures proposed
Amenities including walking path amenity, Lower Suir SAC.	Water runoff/ sediment impact on Lower Suir SAC Increase in traffic Noise emissions	Installation of petrol interceptors, attenuation pond, discharge monitoring, regular inspection of surface water drains, petrol interceptors and attenuation tanks. Emergency response plan in the event of a leak of materials on site and during transit off-site Construction traffic management plan Noise impact assessment. Stringent noise level criteria to be specified as part of design and tendering process. Acoustic insulation/enclosures on plant/equipment to be provided as necessary.
Employment	Employment generation	Expansion of employment at the installation during both construction and operation.
Health & safety	Health & safety risks from construction activities and from activities on site	Construction managed as per Construction Safety Regulations. Risk assessment, staff training, safety reviews.

2. Flora & fauna

Likely significant effect	Description of effect	Mitigation measures proposed
Impacts from site clearance and construction activities	Loss of habitat	Construction works in southern wet grassland to be minimised and an area of it to be fenced off. Some treelines to be retained. Prior to vegetation clearance works, a specialised botanist will undertake a survey for the hybrid rush *J.x diffusus*, further mitigation work may be required as a result. Removal of tree, scrub and woodland, vegetation or tree surgery to be undertaken outside of bird breeding season. Loss of hedgerow and treeline habitats to be compensated by provision of alternative native tree species. During clearance works, if any badger setts are found, work will stop immediately and an ecologist contacted. A licence from the NPWS may be required. A bat worker will check the lighting pattern once assembled and will make recommendations.
Impact from operational activities	Light pollution Water pollution	Design of lighting will refer to *Bats & Lighting Guidance Notes for Planners, Engineers, architects and developers (Bat Conservation Ireland, December 2010).* Installation of petrol interceptors, attenuation pond, discharge monitoring, regular inspection of surface water drains, petrol interceptors and attenuation tanks. Emergency response plan in the event of a leak of materials on site and during transit off-site

3. Soil

Likely significant effect	Description of effect	Mitigation measures proposed
Potential for radon gas accumulation in buildlings	Radon gas is harmful to human beings.	The installation will be tested for radon and radon levels reduced as necessary.
Slope instability.	Groundwater	Employment of suitable geotechnical stability

	seepage.	techniques during construction to ensure building and slope stability.

4. Water

Likely significant effect	Description of effect	Mitigation measures proposed
Surface water runoff	Water pollution (suspended solids) by runoff from stockpiles of excavated material	Stockpiles of excavated material will be stored as far as possible from streams at eastern and western boundaries and may be covered with plastic sheeting. Use of bunds, settlement ponds, silt fences and spill containment. Use of water sprays to avoid dust generation in dry weather. Limited construction work in vicinity of streams, raw or uncured waste concrete to be disposed of appropriately.
Surface water run off	Water pollution during operational phase	Monitoring of storm water discharges to establish trigger levels, regular inspection of surface water drains, petrol interceptors, attenuation tanks.
Accidental contamination through spillage during construction works	Discharge of contaminated runoff to soil/water	Refuelling to be carried out in a designated bunded area as far as possible from surface water bodies. Use of spill tray and provision of emergency response spill kit. Trained site personnel. Storage of oils, solvents, paints and chemical materials in bunded areas. Hazardous waste residues e.g. oil and solvent to be stored in covered skips prior to removal. Availability of MSDS for all materials.
Accidental contamination through spillage during operational phase	Discharge of process effluent, chemicals, sewage or runoff to soil/water	All chemical storage tanks to be bunded. Integrity of underground storm water drainage systems, oil interceptors, foul sewer, bunded areas, chemical storage tanks, chemical/waste storage areas to be checked regularly and maintained. Tank farms to be regularly inspected to identify and manage any leaks. Structural integrity of tanks, tank bunds and overground/underground pipework to be checked and maintained.
Impact from	Water	Designated storage locations for excavated

contaminants from construction works entering the River Suir	pollution causing flora and fauna kills	materials, fuels, silt fencing, hydrobrake controls, petrol interceptors, bunding, and emergency response protocol. Works will follow the guidance set out in *Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (Eastern Regional Fisheries Board, 2006).*

5. Air

Likely significant effect	**Description of effect**	**Mitigation measures proposed**
Air quality impact	Emissions to air	Air abatement (bag filters on dryers main exhaust) Air dispersion model carried out. Dust minimisation measures during construction phase including watering of roads during dry/windy conditions, speed restrictions on vehicles, wheel washing facilities, covering of trucks with tarpaulin, sweeping of hard surface roads to remove mud/aggregate materials and access to un-surfaced roads to be restricted to essential site traffic.
Noise	Increase in noise	Noise impact assessment. Stringent noise level criteria to be specified as part of design and tendering process. Acoustic insulation/enclosures on plant/equipment to be provided as necessary.
Traffic	Increase in traffic	Construction Traffic Management Plan

6. Climate

Likely significant effect	**Description of effect**	**Mitigation measures proposed**
Air quality impact	Increase in air emissions	Air abatement. Air dispersion model carried out.
Traffic	Increase in traffic emissions	Construction Traffic Management Plan

7. Landscape, Material Assets & Cultural Heritage

Likely significant effect	Description of effect	Mitigation measures proposed
New buildings	Visibility of buildings	The development includes landscaping. Surrounding landscape is rolling countryside with hedgerows and belts of tree planting.
Removal of soil for disposal/ recovery	Loss of archaeological material	It is recommended that ground disturbance associated with the development is monitoring by an archaeologist.

Assessment of parts 1 to 7

An EIA as regards the functions of the planning authorities was carried out by the planning authorities when granting planning permission for the development (Planning File Refs. 12/324 and PL10.241077). This EIA addressed the significant likely effects of the development. The Planning Authorities did not provide any additional observations under Section 87 of the EPA Acts.

The detailed assessment set out before this section of the report fully considers the range of likely significant effects on human beings, flora, fauna, soil, water, air, climate, landscape, material assets and cultural heritage, as respects the matters that come within the functions of the Agency, with due regard given the mitigation measures proposed to be applied. The potential adverse impacts on human beings associated with the activity relate mostly to interrelated effects, which are covered in the section below.

Some of the main provisions in the RD which address the effects and mitigation measures described above, include the following:

- Condition 3.9 requires the licensee to carry out a risk assessment to determine if the fire-water retention facility has adequate capacity as described in the Firewater Retention section above.
- Standard bunding, silt traps and oil separator conditions have been provided for in Condition 3. Condition 6 requires container integrity testing and water management as described above.
- Air emissions (NO_x from boilers, NO_x and CO from dryers) and noise emissions are discussed in detail above. Schedule B.1 and B.4 specifies emission limit values accordingly.

8. Assessment of interaction of effects and factors

I have considered the interaction between the factors referred to in parts 1-7 above and the interaction of the likely effects identified (as well as cumulative impacts with other developments in the vicinity of the activity). The EIS identifies mitigation measures to address identified potential significant interactions. The RD includes conditions as considered appropriate to key interactions associated with the licensable activity.

I am satisfied that proposed mitigation measures are adequate. I do not consider that the interactions identified are likely to cause or exacerbate any potentially significant environmental effects of the activity.

Overall Conclusion of the EIA

The licence application has been made subject to an EIA as respects the matters that come within the functions of the Agency as outlined above. All matters to do with emissions to the environment from the activity proposed, the licence application documentation and EIS have been considered and assessed by the Agency. The assessments carried out by the planning authorities and the submissions and observations exchanged between the planning authorities and the Agency have been considered as part of this assessment.

It is considered that the mitigation measures as proposed and the licence conditions included in the RD will adequately control any likely significant environmental effects from the licensable activity.

Cross Office Liaison

Extensive communication has taken place between the Environmental Licensing Programme and the Office of Environmental Enforcement (OEE) in relation to the licensing of dairy processing plants. Advice and guidance issued by the OEE co-ordinated Food and Drink Sectoral Working Group was followed in my assessment of this application. Brendan Foley and Stephen McCarthy (OEE) provided advice regarding ELRA and DMP.

Best Available Techniques (BAT)

I have examined and assessed the application documentation and I am satisfied that the site, technologies and techniques specified in the application and as confirmed, modified or specified in the attached Recommended Determination comply with the requirements and principles of BAT. I consider the technologies and techniques as described in the application, in this report, and in the RD, to be the most effective in achieving a high general level of protection of the environment having regard - as may be relevant - to the way the installation is located, designed, built, managed, maintained, operated and decommissioned.

Fit & Proper Person Assessment

The Fit & Proper Person test requires three elements of examination: Technical Ability, Legal Standing and Financial Standing. Glanbia Ingredients (Ballyragget) Ltd. has demonstrated technical ability as it already operates a dairy processing plant at Ballyragget (Reg. No. P0359-03). Glanbia Ingredients (Ballyragget) Ltd. has never been prosecuted by the Agency in relation to their activities at Ballyragget. Financial standing is discussed in detail above. It is my view, having regard to the provisions of Section 84(5) of the EPA Acts and the Conditions of the RD, that the applicant can be deemed a Fit & Proper Person for the purposes of this licence review.

Submissions

One valid submission was received in relation to this application and it is detailed in Appendix 1 to this report. The contents of the submission and the first party responses have been taken into consideration in the determination of this recommendation and the drafting of conditions in the RD. In this context, I wish to advise that the applicant is required to control all emissions from the installation including noise, dust and odour in order that these emissions will not cause environmental pollution. On-going monitoring of emissions is required under Condition 6 and Schedule C of the RD.

Recommended Determination (RD)

In preparing this report and the Recommended Determination I have consulted with Agency technical and sectoral advisor Mr. Patrick Byrne. The RD, in terms of combustion of fuels in this installation, limits the total rated thermal input to less than 50MW. The RD gives effect to the requirements of the EPA Acts 1992 - 2012. The RD has regard to submissions made.

Charges

The proposed charge in the RD is **€14,692.26** calculated on the basis of the anticipated enforcement effort required for the installation.

Recommendation

I recommend that a Proposed Determination be issued subject to the conditions and for the reasons as drafted in the RD.

Signed

Loretta Joyce

Loretta Joyce

Procedural Note

In the event that no objections are received to the Proposed Determination of the application, a licence will be granted in accordance with Section 87(4) of the Environmental Protection Agency Acts 1992 and 2012 as soon as may be after the expiration of the appropriate period.

Appendix 1: Submission

One valid submission received from Byrne Environmental Consulting Ltd., made on behalf of Mr. Chris Ogilvie-White, was received in relation to this application. The main issues raised in the submission are summarised below and where appropriate under various different headings. However, the original submission should be referred to at all times for greater detail and expansion of particular points. For clarity, the issues raised by the submitter are followed by the first party comment and thereafter by the Inspector's response.

The main issues raised are as follows:

1. Noise impacts

1.1 Selection of Noise Monitoring Locations

The Byrne Environmental Report (BER) states that the EIS baseline noise survey was flawed as it did not include Cuan Na Mara as a monitoring location

- First party comment: Noise Sensitive Location (NSL1) was chosen as a representative location for this specific area and is nearer to the installation than Cuan Na Mara. The applicant notes that Kilkenny County Council indicated that it was satisfied with the contents of the EIS as it issued a decision to grant planning permission.
- Response: The selection of noise monitoring locations is considered appropriate. NSL1 is approximately 50m closer to the installation than Cuan na Mara. Cuan na Mara has nonetheless been included as a NSL in the RD. The NSLs were chosen in accordance with *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4).*

1.2 Description of noise sources during baseline noise survey

A baseline noise survey was conducted by Byrne Environmental, on behalf on the submitter, on 3rd and 4th September 2012, at NSL1 and at Cuan Na Mara. The observation of noise sources by Byrne Environmental differs from observations made in the EIS baseline noise survey. The Byrne Environmental Report states that the Smartply Europe Ltd. (Reg. No. P0001-02) installation was not audible and the WCCWWTP was occasionally faintly audible during the noise survey.

- First party comment: The EIS baseline noise survey report describes in detail the noise sources heard and noise from the Smartply installation was the most prominent noise source and therefore the Byrne Environmental noise survey does not describe in detail the noise sources heard on 3rd and 4th September 2012.
- Response: The EIS baseline noise survey describes noise sources adequately and standard limit values are specified in the RD.

1.3 Classification of Area of Low Background Noise

The report concludes that Cuan Na Mara and NSL1 are both located in a Low Background Noise Area.

- First party comment: The Byrne Environmental Report carried out noise monitoring at only 2 locations, at NSL1 and Cuan Na Mara. The EIS baseline noise survey carried out noise monitoring at five NSLs and none of these qualified as an 'Area of Low Background Noise'.
- Response: The EIS baseline noise survey indicates that it is not an Area of Low Background Noise as it does not meet the criteria[2] specified in the *NG4* guidance note. The standard noise limits are proposed in the RD (daytime/evening/night-time limits of 55 $L_{Ar,T}$ /50 $L_{Ar,T}$ /45 $L_{Aeq,T}$ dB(A) at any noise sensitive location).

1.4 Construction Phase Noise

The report concludes that 'the EIS does not include a noise impact assessment of the relatively lengthy (24 month) construction phase nor does it include any specific noise mitigation details for the construction phase.'

The report states that the EIS provides a brief assessment of Construction Noise impacts and notes that the EIS states that the construction phase will occur for a 'limited period of 24 months'. The report states that it is considered disingenuous to suggest that a 24 month construction period which has the potential to significantly increase ambient noise levels 6 days a week is a 'limited period'.

The report notes that the reference in the EIS to compliance with accepted standards and relevant regulations to prevent / minimise construction noise is meaningless until it is demonstrated how the various aspects shall actually be implemented at the site.

The report states that no detail is provided in the EIS on how noise from construction activities and construction related traffic has been identified, predicted or assessed. Furthermore, the report contends that appropriate noise limit values at receptor properties for the construction phase have not been considered or suggested in the EIS and there is no requirement to actually monitor noise levels at local residential receptors or what measures must be implemented should noise levels be exceeded. The report notes that Condition 5 of the Planning Permission granted by Kilkenny County Council specifies construction noise limit values but that there is no noise monitoring requirement or measures specified that must be implemented should noise levels be exceeded.

- First party comment: The EIS states that the construction period is a limited period of works as they will cease once the facility becomes operational and will not be carried out indefinitely. Therefore the construction period is limited.

  The EIS states *BS 5228:2009 – Noise and Vibration Control on Construction and Open Sites* and EPA guidelines will be used as guidance to minimise noise levels during construction and that the construction plant will comply with the relevant regulations on plant and equipment noise, namely the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) (Amendment) Regulations, 1996 (S.I. No. 359 of 1996) and the European Communities (Noise Emission by Equipment for Use Outdoors) Regulations, 2001 (S.I. No. 632 of 2001) and 2006 (Amendment) (S.I. No. 242 of 2006).

[2] Average Daytime Background Noise Level ≤40db L_{AF90}, and Average Evening Background Noise Level ≤ 35dB L_{AF90}, and Average Night-time Background Noise Level ≤ 30dB L_{AF90}.

These standards and regulations were specified in the EIS as they are the most appropriate and relevant for the control of construction noise. The detailed measures to control noise in compliance with these standards and regulations will form part of the Construction Management Plan for the proposed facility. Compliance with the relevant standards, regulations, and noise limits specified by Kilkenny County Council will be a requirement specified in the construction tender contract and the detailed noise control measures will form part of the Construction Management Plan.

Condition 5 of the planning permission granted by Kilkenny County Council clearly specifies noise limits which must not be exceeded at noise sensitive locations during the construction phase and "Any deviation from these limits required for specific works of limited duration shall be agreed in advance in writing with the Planning Authority". Furthermore, Section 9.3 of the EIS clearly states that and monitoring of noise / vibration levels will be carried out as appropriate during the construction phase. Monitoring of noise levels will also form part of the Construction Management Plan.

Accurately modelling the impact of construction noise can be very difficult as construction works and phases, equipment routes and activities can be very complex and difficult to represent accurately in a model, and therefore it is accepted that modelling has a limited use. The EPA guidance for EIA does not specify a requirement for the modelling and detailed assessment of construction noise. A commitment to comply with BS5228 is considered more pragmatic and effective and is commonly recommended by local authorities for preventing/minimising the impact of construction noise. The developer has committed to adhering to this standard, with the relevant regulations on construction plant, and the construction noise limits specified by Kilkenny County Council, and therefore compliance with these requirements will prevent/minimise any significant noise impact during the construction phase.

- Response: Noise monitoring is required by Condition 9 of the planning permission granted by An Bord Pleánala. Noise monitoring and noise controls measures will form part of the Construction Management Plan as detailed previously by the applicant. Noise limits proposed in the RD will not apply until the dairy processing activity has commenced.

1.5 Operational Phase Noise

The report states that the EIS does not include specific details on actual noise that will occur at the installation and that the entire assessment of operational noise is based on assumptions. The report questions why a lower noise level is predicted for the night-time period. The report contends that no consideration or proposed mitigation measure has been suggested in the EIS for HGV noise close to residential receptors especially during the more acoustically sensitive evening, night-time and weekend periods. The report notes that the Ferrybank/Belview Local Area Plan 2008 states that a zoning of Belview Residential Amenity has been included 'to protect existing residential amenity enjoyed by persons living in the vicinity of Belview Port by creating indicative buffer zones around existing residences'.

- First party comment: The EIS contains details of the actual noise sources that will occur at the site. Preliminary design data used was conservative. Actual noise source data for individual pieces of equipment will only be available during the equipment procurement stage. A lower noise level is predicted for the night-time period due to the fact that some of the noise sources will not be operational during the night-time. The operation of the facility including

vehicles on site will be managed to comply with EPA noise limits specified for noise sensitive locations including restrictions on impulsive or tonal noise. By managing the operation to comply with EPA noise limits, no significant adverse impact is expected at noise sensitive locations.

- Response: The RD proposes standard noise limits and the applicant is required to ensure noise emissions from the installation are compliant with these limits. The RD requires the licensee to carry out a noise survey of the site operations within three months of the date of commencement of activity, and annually thereafter. The survey programme shall be undertaken in accordance with the methodology specified in the *'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)'* as published by the Agency.

2. Air Quality

2.1 Dust generation during Construction Phase

The report states dust generation during the construction phase should have been assessed in a dispersion modelling study and that the EIS dust minimisation plan includes general non-specific mitigation measures.

- First party comment: The EPA guidance for EIA does not specify a requirement for the modelling and detailed assessment of dust emissions from the construction phase of a project. Modelling of dust emissions can be very limited and inaccurate in terms of predicted impact due to the dispersive and transient nature of the emissions during the construction phase of a project and also the complex movements of earth moving vehicles and other equipment. Modelling of dust emissions for the construction phase is not standard practice in Ireland particularly with regard to the scale of the proposed development and a dust minimisation plan is standard practice in order to address potential impacts due to construction dust. Mitigation measures were outlined in the EIS (Section 10.8.1) and a detailed Dust Minimisation Plan will form part of the overall Construction Management Plan.
- Response: The Agency does not require that dust emissions from the construction phase of a project are modelled. A Construction Management Plan, including measures for monitoring dust, is required by Condition 9 of the planning permission granted by An Bord Pleánala. The proposed RD (Condition 5.4), requires that the applicant ensures that dust associated with the activity will not result in an impairment of, or an interference with, amenities or the environment at the installation or beyond the installation boundary.

2.2 Operational Phase Odour

The report questions why detailed odour impact assessment was not included in the EIS and states that it is a fact that other milk processing facilities are significant sources of odours. The report contends that no specific detail on the aspects of BAT for the specific industry have been detailed in the EIS.

- First party comment: The EPA BAT Guidance Note on Best Available Techniques for the Dairy Processing Sector states odours from waste water treatment plant operations may be an issue and that odour emissions are usually related to effluent treatment operations or leaks of ammonia used in

cooling systems. Other than on-site hydraulic balancing, fats, oils and grease removal and pH correction, wastewater from the facility will be treated off-site in the local authority waste water treatment plant. Therefore wastewater at the facility is not expected to be a significant source of odour or 'likely' impact on air quality and therefore has not undergone a detailed assessment as part of the EIA. The EPA in conjunction with Waterford City Council will specify maximum hydraulic and organic loading limits from Glanbia on the local authority waste water treatment plant which will ensure the plant is not overloaded and prevent potential odour issues.

The waste water pre-treatment at the site will not lead to odour emission of significance as the treatment will be pH balancing, from which no odour are expected and for the fats, oils and grease removal, this will be carried out in covered vessels which will be vented through air filters in order to prevent odour release. Ammonia used in the refrigeration system will be carefully controlled through the design, installation, and inspection/maintenance of a sealed system by specialist contractors. Any leaks if they do occur will be minor, will be quickly dispersed in the atmosphere and will not cause any off-site odour impact. Impacts which are not associated with this facility are not addressed in an EIS as the purpose of an EIS is to address 'likely' and 'significant' impacts as per EPA Guidance.

The only other potential source of odour associated with the facility would be sour or 'gone-off' dairy products including milk and cream. Facility process control including careful raw material and product management, refrigerated and sealed containment systems will prevent/minimise the possibility of occurrence of sour materials and the release of any associated odours. Thus potential odour from this source is not considered a likely impact and therefore a detailed assessment was not included in the EIS.

Odours from other milk processing facilities are generally associated with biological treatment in the site waste water treatment systems. It is noted that biological treatment is not proposed for the facility at Belview, therefore potential odours are not likely.

With regards to Best Available Techniques (BAT) being employed at the proposed facility this has been detailed in the IPPC licence application and submitted to the EPA as part of the application.

In summary, odours are not considered a 'likely' impact from the facility and therefore a detailed assessment of odours was not included in the EIS. Furthermore, there is limited evidence from industry to suggest that the nature of operations at the proposed facility is a significant potential source of odours.

- Response: The proposed RD (Condition 5) requires that *'No emissions, including odours, from the activities carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the installation or any other legitimate uses of the environment beyond the installation.'* The RD (Schedules B and C) sets limits on the discharge from the waste water treatment plant and requires monitoring of emissions to sewer. BAT has been detailed in the application (Section I.8) and the RD has regard to BAT. BAT is taken to be represented by the technologies described in the *Reference Document on Best Available Techniques for the Dairy Processing Sector, 2008.* The relevant BREF document for this sector is the IPPC Reference Document on *Best Available Techniques in the Food, Drink and Milk Industries, August 2006.*