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Attachment 6 Non-Technical Summary

Attachment № A1

Non-Technical Summary

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Newmarket Co-Operative Creameries Ltd
Scarteen Lower, Newmarket, Co. Cork

Newmarket Co-Op – IE Licence Review Application
P0793-03

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A.1 - Introduction

A.1.1 General

This is the non-technical summary of the application being made by Newmarket Co-Operative Creameries Ltd (referred to as Newmarket Co-Op throughout the rest of this document) to the Agency for an Industrial Emissions (IED) licence for the current activity taking place on site. The facility is currently licenced for the following Classes of Activity as per the EPA Act 1992 as amended:

- **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).*

A.1.2 Background

Newmarket Co-Op was acquired by the Kerry Group in 2010. Newmarket Co-Op have operated dairy processing facilities in and around Newmarket since 1944.

The primary activity at the facility is the production of cheddar cheese from fresh milk in a modern processing facility. The facility received an Integrated Pollution Prevention and Control (IPPC) Licence from the Environmental Protection Agency (EPA) on 30th September 2009 for the processes undertaken at the site. This licence was reviewed by the applicant and a revised licence (P0793-02) was issued on 01st May 2012 with a Technical Amendment, updating the licence in line with the Industrial Emissions Directive, issued on 16th December 2013. The facility currently operates to the controls and requirements of the Industrial Emissions Licence (IEL) reference number P0793-03, which is available for view on the Agency website (<http://www.epa.ie/licensing>).

Planning permission was granted on 14/03/2017, under planning ref 16/04895, for a WWTP upgrade and extension and installation of a pipeline. A review of the current IEL is being initiated in conjunction with proposed developments of the facility subsequently requiring alterations to the licence. A major component of the proposed development is the upgrade to the WWTP processes and the installation of a discharge pipeline to the River Dalua 4km to the south east of the Creamery site. An Environmental Impact Statement (EIS) assessing the potential impact of the proposed development and alteration to the current effluent discharge regime has been submitted to the Agency as part of this licence review application.

A.1.3 Site and Surrounding Lands Description

The facility is situated on the outskirts of the town of Newmarket and can be accessed directly from Church Street (Regional Road R576, Newmarket to Kanturk Road) and also via Emmet Place as shown on Drawing 1 in Attachment B.2. Newmarket Town is located in North Cork; the town of Kanturk is located approximately 7 kilometres (km) to the south east of Newmarket and houses the Kanturk and District Council. The site is bound by agricultural lands to the north and east and domestic and commercial properties to the south and west.

The topography surrounding the site is classified as rolling hills with Scarteen Upper to the north at an elevation of 265 metres (m) AOD and Ballyduane East to the East at

an elevation of 244m AOD. Land use in the surrounding area of Newmarket is predominantly dairy and beef farming.

Newmarket is located within the catchment of the River Dalua, which rises in Meentiny East approximately 10km to the north west of Newmarket Town. A portion of this river is diverted through the Newmarket Co-Op facility above the town via a man-made weir and channel constructed to form a mill race. The mill race discharges to the Rampart Stream 60m downstream of the Newmarket Co-Op facility and converges with the River Dalua approximately 4km south of Newmarket. The River Dalua flows into the River Allow in Kanturk, Co Cork approximately 8km downstream of the facility.

The Co-Op is one of the main employers in Newmarket town with 53 permanent staff employed at the installation. The proposed development will increase the number of permanent staff employed to 66. Existing operating hours at the installation are normally 24 hours per day, six days per week.

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A.2 – Description of the Operation

A2.1 Facility Management

The current facility is operated in accordance with the requirements of the EPA licence for the site. The activities carried out on site fall within the scope of the Industrial Emissions Directive and therefore the existing licence was amended in December 2013 by the Agency under the European Union (Industrial Emissions) Regulations, 2013. The emissions arising as a result of the facility operating to maximum capacity will be licensed by the Agency through emission limit values (ELVs), and stipulated licence conditions.

Newmarket Co-Op operates an Environmental Management System (EMS) on site covering the following:

- Identification of key environmental impacts of the operational activities;
- The setting of objectives and targets and a programme of improvements;
- Regular monitoring of environmental performance;
- Regular auditing both by internal and external groups;
- Establishment of operational controls to prevent and minimise significant impacts;
- Regular reporting of environmental performance;
- Monitoring and control systems reviewed and amended;
- Environmental procedures including incident reporting, complaints, and emergency procedures established;
- Provision of environmental awareness training and,
- Operation of preventative maintenance programmes.

The Newmarket Co-Op Environmental Management System is accredited to the International Standard ISO14001, which sets out a framework for environmental management at the site. Newmarket Co-Op are an accredited ISO 14001 facility and are audited on an annual basis by an external body (SGS Ireland).

A2.2 Hours of Operation

Processing occurs on a 24 hour per day, 6 days per week timescale during the current peak production period, which the proposed development aims to extend to 7 days per week.

Operational and production personnel rotate on a shift basis. During peak season, shifts consist of three 8-hour shifts in a 24-hour period.

Maintenance personnel work from 8.00am to 4.30pm, with staff also on duty on a rota basis during all other production periods.

Administration and management personnel work from 9.00am to 5.30pm Monday to Friday. Management are on call 24 hours per day based on a rota basis to ensure all aspects of site operation operate efficiently and quality and environmental issues are addressed immediately as they arise.

The proposed extension to the existing peak processing season involving an equivalent increase of 30 million gallons of milk per annum will require 24-hour operation of the site, 7 days per week during the proposed peak period.

A2.3 Infrastructure and Operation

The Newmarket Co-Op facility is a modern cheese manufacturing facility, located within the outskirts of Newmarket Town, northwest Cork County.

The facility is cited upon a 10-ha site as shown on Drawing 2: Existing Site Plan provided in Appendix B.2, with:

- Milk delivery & milk truck wash down area;
- Whey production building;
- Cheese Production building and laboratory;
- Boiler house;
- Air Compressor & Refrigeration buildings;
- Cheese Stores;
- Dispatch Area; and
- WWTP.

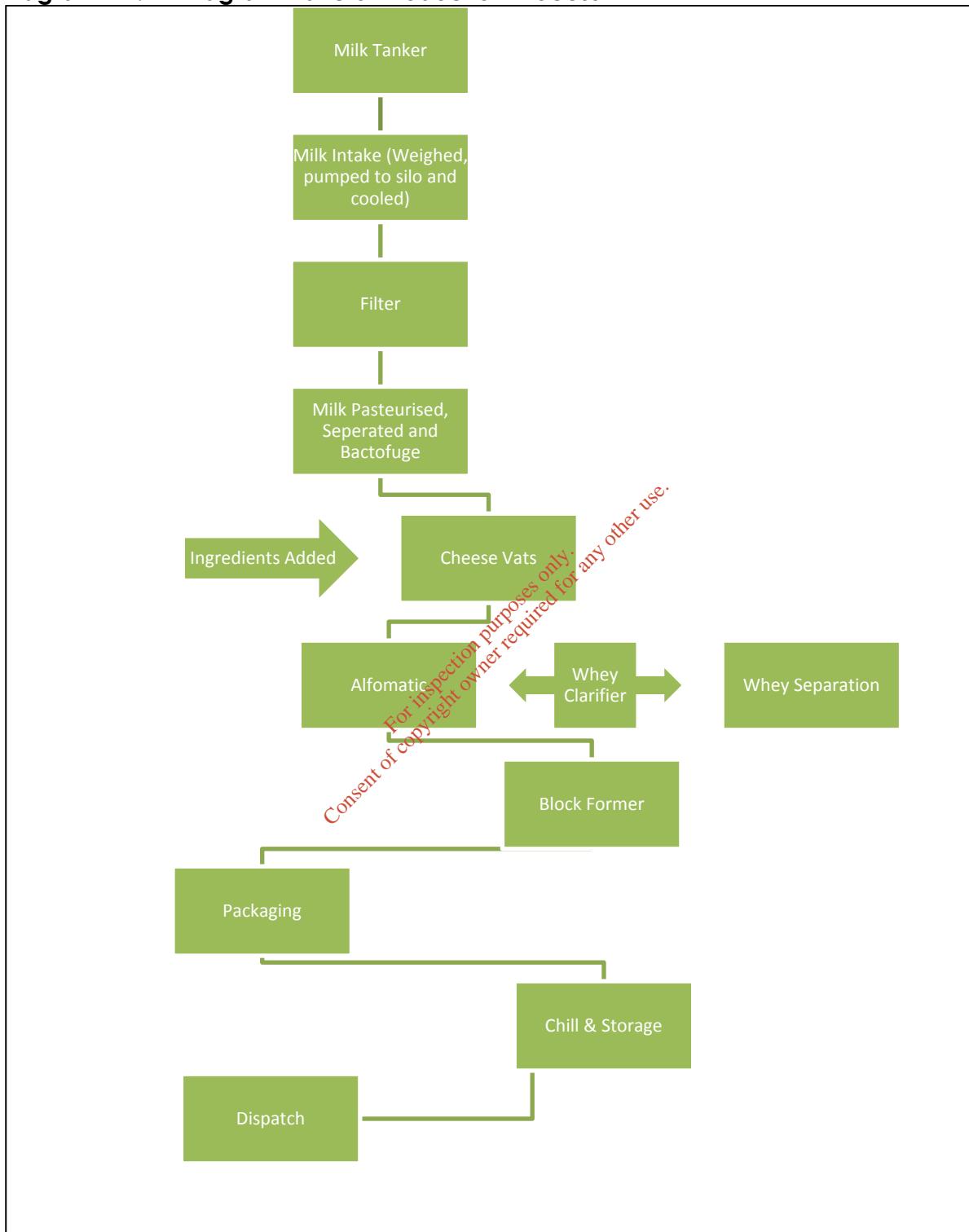
Milk is collected for processing by hauliers in stainless steel bulk tankers from Kerry Group milk suppliers in the region. On arrival at the facility milk is weighed, sampled, cooled and pumped to milk silos. There are 7 insulated milk silos at the site and 2 insulated cream silos.

From the silos, milk is pumped through filters to the pasteuriser and if required through the bactofuges and standardising system. Milk is then pumped to the cheese vat where ingredients are added and curds and whey are formed. From the cheese vat, the curds and whey are pumped to a cheddaring machine to allow the curds and whey to be separated.

The curd is cheddared, milled and salted and is transported to the block formers where 20 kilo blocks of cheese are formed. After the block formers, the cheese is vacuum sealed, passed through a metal detector, boxed and conveyed to the rapid chill area of the plant before being placed in cold storage to allow the cheese

to mature before being dispatched off site. A schematic of the process is provided in Diagram A1.1 below.

Diagram A1.1 - Diagrammatic of Production Process



To facilitate processes to be undertaken at the facility a number of utilities are required. These include steam, air heating, low temperature hot water, refrigeration, chilled water, compressed air and potable water. Process operations are manned by site personnel, however equipment control at the site is modern and in many

cases equipment is linked to Programmable Logic Controllers (PLC's) which are synchronized with Personal Computers which allow data acquisition and system changes to be made remotely.

A2.4 Raw Materials & Materials Handling/Storage

All raw materials and chemicals used on site are listed in Tables G.1(i) and G.1(ii) provided with the application. The raw materials for the facility are predominately milk, which is supplied by dedicated road milk tankers. These tankers collect milk from farmer suppliers, and deliver to the Newmarket Co-Op facility on a daily basis during peak production.

Waste arising from the development is predominately liquids, which are directed to the WWTP for treatment prior to release. Solids collected from this process are land spread in accordance with Nutrient Management Plans and in compliance with restrictions with the EPA.

Chemical Storage

It is noted that IBC's (1,000L) of chemicals are stored locally at clean in place (CIP) stations on mobile type plastic bunds around the site. The most significant chemicals in use at the Newmarket Co-Op site include sodium hydroxide and nitric acid which are stored in adequately bunded facilities.

Product Storage

Milk and part processed milk derivatives are stored in stainless steel silos located at the milk intake area or adjacent the whey processing building. All storage silos are remotely bunded to the waste water treatment plant.

Cheese is stored in three temperature controlled warehouses at the facility. It is noted that a fire water retention facility was installed in 2012 at the facility with the capability of holding firewater in the event of a fire at the facility.

Fuel Storage

Medium Fuel Oil (MFO) is stored in two stainless steel silos which are located within reinforced concrete bunds which were constructed in 2008. The bunds are inspected every three years in accordance with the facilities IE Licence. This was recently completed in May of 2016.

Drip trays are provided at the loading point for the tanks to collect any leaks which may occur during tank filling. A stock of gas oil is stored at the facility in a double skinned tank to supply emergency electrical generators at the site.

A2.4 Proposed WWTP Upgrade Development

Newmarket Co-Op propose the following developments at the Newmarket facility which are discussed further below, with an overview shown on Drawing 3 Proposed Site Layout:

- An upgrade and extension to the existing operational WWTP onsite and an increase in the total discharge of waste water from the facility from 2,000m³ to 2,700m³ per day to further improve the treatment abilities of the waste water

treatment plant technologies, process controls and existing technologies and enable the facility to operate more efficiently within the additional milk processing parameters;

- Installation of an underground pipeline to convey treated water from the facility to a discharge point on the River Dalua, approximately 4 km to the south east of the facility. It is noted that the River Dalua is considered to be the receiving water in the facility's current industrial emissions license;
- Increase in the duration of peak milk processing at the creamery throughout the year from 6 to 7 days per week (80 million gallons of milk equivalent per year) and extend the current peak season to accommodate processing of an increased milk pool.

A2.4.1 Waste Water Treatment Plant Upgrades

Newmarket Co-Op propose to upgrade the existing operational WWTP at the Newmarket facility, the layout of which is shown on Drawing 4: Existing WWTP Site Layout. The proposed WWTP development includes an extended aeration activated sludge plant complete with anaerobic zone and anoxic zones for biological phosphorous and nitrogen removal and aeration zone for Biochemical Oxygen Demand (BOD) removal.

The proposed development includes the following facilities, shown on Drawing 5: Proposed WWTP Site Layout to be located directly north east of the existing WWTP:

- 3 new forward feed pumps (D/D/S) to Dissolved Air Flotation (DAF) Unit;
- New DAF system complete with recycling pumps, poly dosing system and compressor;
- pH Correction Systems complete with bunded storage tanks;
- 2 additional forward feed pumps (D/S) to Biological treatment;
- New biological treatment stream based on anaerobic, anoxic and aeration tanks;
- New aeration system complete with 3 No. New Air blowers;
- 2 No. Additional iRAS pumps;
- 1 new final settlement tank;
- New tertiary treatment based on Disc filtration;
- 2 new filter backwash pumps;
- Phosphorous polishing removal based on chemical precipitation, incorporating dosing pumps and chemical storage;

- Upgrade of control panel and SCADA system; and
- Instrumentation required for the process.

A2.4.3 Underground Wastewater Pipeline

Newmarket Co-Op propose to install an underground pipeline to convey treated water from the WWTP at the creamery facility to a discharge point on the River Dalua, approximately 4 km to the south-east of the facility shown on Drawing 6 Proposed Discharge Route. The River Dalua is considered to be the receiving water in the facility's current industrial emissions license covering the existing wastewater discharge from the creamery facility. This proposed discharge location amendment will result in a cessation to the current discharge of treated waste water into the Rampart Stream via the Mill Race.

The pipeline will run along the route of the R576 to minimise development impacts on the local area and private property and will avoid any sites designated for ecological, cultural heritage or other conservation purposes. The Pipeline will run for a distance of approximately 3.5km south towards Kanturk along the R576 for before it diverts westward along the public Lower Road southwards to Allen's Bridge.

The discharge will enter the River Dalua at Allen's Bridge. Proposed monitoring locations have been identified upstream of Allen's Bridge, the grid reference for ASW3, is 134007E 104425N. This location has been selected as it is upstream of the pipeline discharge and can be easily accessed via an existing right of way.

In the context of water quality monitoring on this section of the River Dalua, there is an EPA monitoring station (RS18D010500) c. 2.6km downstream of the Allen's Bridge discharge point that shows river quality to have a Good status. Newmarket Co-Op do not currently possess land access rights to enter private lands and establish a water quality monitoring location downstream of the pipeline discharge point. Therefore, Newmarket Co-Op are unable at this time to propose a downstream water quality monitoring location between Allen's Bridge and the EPA monitoring station (RS18O010500).

A2.4.4 Increase in Peak Processing Period Duration

Currently, under the seasonality of milk supply, the Newmarket Co-Op facility utilises less than 50 million gallons of milk equivalent per annum. However, with changing milk quota regulations being implemented in Ireland, Newmarket Co-Op propose to extend the peak season to accommodate processing of an increased milk pool.

The increase in milk processing will be facilitated by increasing the duration of milk processing at the facility and increasing processing timing from six to seven days a week, rather than increasing the existing daily processing levels, which will remain unchanged as part of the proposed development. Existing daily peak time processing techniques and the levels of infrastructure currently utilised at the Newmarket Co-Op facility will not require amending as part of the proposed development.

A.3 Existing Environment

The existing environment in which Newmarket Co-Op is located is described in the following sections in terms of soils, local surface water quality, groundwater, air quality, noise and designations.

A3.1 Soils

The predominant soils in the area are described as Deep Poorly Drained Mineral (AminPD) derived mainly from non-calcareous parent material. They are in the great soil groups of surface water Gleys and groundwater Gleys. These are followed by pockets of deep well drained soils (AminDW) within the surrounding areas of the site.

There is no known evidence to suggest that the soil beneath the site is contaminated and there are no known or recorded releases or incidences at the site thought to have given rise to soil contamination at the site. Furthermore, water drawn from beneath the site is used in processes at the site and is monitored as part of environmental and quality requirements, monitoring results have found good water quality which suggests that there has been no contamination of soil.

A site investigation, to assess the baseline conditions of the underlying ground was conducted in 2014 and is provided in **EIS Volume II, Appendix 5.3.2**.

A3.2 Groundwater

Newmarket Co-Op abstracts water from the aquifer beneath the site for use in onsite processing and washing activities.

The baseline assessment for the facility, carried out in 2014 (**EIS Volume II, Appendix 5.3.2**), suggested that perched groundwater is present underneath the site. On account that the site was found to be underlain by a stiff clay, groundwater was found to be confined above this layer.

The primary underlying aquifer has been classified as an LI (locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones) and the GSI Classification for this bedrock aquifer unit indicates it is capable of supplying locally important abstractions (e.g. smaller public water supplies, group schemes). Groundwater flow occurs predominantly through fractures, fissures and joints.

Currently there are eight abstraction wells at Newmarket Creamery, seven of which are currently in use. Well 4 is not in use due to continued siltation of the well.

The groundwater onsite is tested biannually from three wells (GW2, GW3 and Spring (GW4) as part of compliance monitoring under IEL P0793-03 for the existing facility. Groundwater monitoring has shown good quality results to-date and results are compared to the Groundwater Threshold Values as per Statutory Instrument 09/2010. To date, no influences to groundwater from activities on site have been identified.

A3.3 Surface Water

Newmarket Co-Op currently discharge surface water runoff and treated process effluent to surface water. All of the discharge points from the site are included in the facility's IE licence.

Emission point reference SW-1 relates to the discharge of treated effluent and discharge point SW-2 is a discharge of water and surface water. Both of these emission points are subject to continuous monitoring in respect of volume and quality. The remaining discharges (SW3-17) from the site are associated with roof and yard areas arising as a result of rainfall. These discharge points are not monitored directly due to their inaccessibility and with agreement of the Agency, monitoring of surface water quality is based on samples taken upstream and downstream of the facility.

The waste water treatment plant currently consists of balance tanks, dissolved air floatation (DAF) unit, bio- tower, an anoxic tank, oxidation ditch, phosphate reduction dosing, clarifier and sand filters. The firewater retention tank drains to the WWTP but if required can be diverted to surface water. It is noted that the surface water from the carpark area of the site passes through a Class 1 bypass separator prior to discharge to a surface water (Mill Race). The surface water from the road accessing the rear of the WWTP also pass through a petrol separator prior to discharge to the Mill Race at SW17.

A3.3.1 Receiving Water Body (Morphology)

The receiving water body for the discharge from SW-1 is the River Dalua as stated in the current IE license. The River Dalua rises in Meentiny East approximately 10 km to the north west of Newmarket Town. Currently, the discharge is conveyed to the Dalua through a short stretch (60m) of a man-made channel (historical mill race) and then into the Rampart Stream which meets the River Dalua approximately 3.5 kilometres south of Newmarket. The proposed development will see the installation of an underground pipeline which will convey the treated water directly to the River Dalua.

The River Dalua flows into the River Allow in Kanturk, Co Cork approximately 11 kilometres downstream of the Newmarket Co-Op facility. The River Allow then converges with the River Blackwater, at a point approximately 2 km north of Banteer, County Cork.

A3.3.2 River Basin Management Requirements

The Newmarket Co-Op facility is located in the South-Western River basin and as a result falls under the South-Western River Basin Management Plan. This plan was developed by the South Western Regional Fisheries Board, which is coordinated by Cork County Council. The river basin management plan sets out a framework for achieving the targets set out under the Water Framework Directive through Water Unit Action Plans. The current plan runs from 2009 to 2015 and is currently under review, the revised plans are not due to be published until 2017, and will run from 2017 to 2021.

A target of 'Good Ecological Status' has been assigned to the River Dalua in the Water Unit Action Plan (WMU). Due to the presence of Freshwater Pearl Mussel populations in the River Allow and Blackwater, a sub region Management Plan has been established for the catchment in which the Newmarket Co-Op facility is located. The management plan currently available is the Freshwater Pearl Mussel Second Draft Allow Sub-Basin Management Plan (March 2010).

A3.3.3 River Water Quality

It is noted that the objective for the River Dalua is to achieve 'Good Ecological Status' by 2021. Surveillance monitoring is typically undertaken every two years by the EPA and the most recent data (2012 monitoring) determined water quality to be at Good Ecological Status (Q4). Furthermore, biological water quality monitoring undertaken by Conservation Services on behalf of Newmarket Co-Op in November 2015 determined that biological water quality was to be at High Ecological Status (Q4-5) in the River Dalua, 2km downstream of the confluence with the Rampart Stream and the proposed discharge location.

Physiochemical monitoring is also undertaken in the River Dalua by the EPA and Cork County Council. The mean of BOD, ammonia and orthophosphate results from records obtained from the EPA are presented in Table A3.1 below (record period January 2010 to December 2014).

Table A3.1: Physiochemical Water Quality Results River Dalua (Location Reference Point 18D01_0200) (Footbridge South West of Lisconghill)

Parameter	Mean (mg/l)	Mean Surface Water Targets S.I. 272 of 2009
BOD	1.2800	2.6
Ammonia (as N)	0.0295	0.065
Orthophosphate	0.0214	0.045

It is noted that mean concentrations of BOD, Ammonia and Orthophosphate are below the mean target levels set out in the Surface Water Regulations (S.I. 272 of 2009).

A3.3.4 Noise Environment

The Newmarket Co-Op facility is located in Newmarket town, a small rural town in northeast Cork with a population of approximately 2,500 people. Agri-businesses and businesses related to those employed within the agricultural sector, such as Newmarket Co-Op predominate in the town. The facility is surrounded by a mix of commercial and residential development.

The local topography is gently undulating, with residential dwellings and commercial enterprises within Newmarket generally located upon a higher elevation than the facility and hence overlooking the facility from the north, northwest and east. The boundaries of private residential properties are located along the facility boundary to the northwest, west, south and southwest of the facility. The Elms, a detached dwelling, is located to the east/southeast and approximately 63m from the R576. It is the nearest Noise Sensitive Location (NSL) in this direction. A number of NSLs are located on the entrance road to the south of the facility at Emmett Place. Palm Grove, another detached dwelling, is located on the Charleville Road (R578) and is

approximately 58m from the northwest boundary of the facility. Agricultural lands bound the facility to the north, northeast and east. The nearest NSLs are identified on Appendix E.5. The R576 is the main route from Newmarket to Kanturk to the east. The route is characterised by detached ribbon development mainly set back from the road.

The facility has an excellent compliance history regarding noise arising from site activities. No complaints have been logged directly with Newmarket Co-Op or with the EPA regarding the facility during its many years of operation.

A3.3.5 Air Quality and Odour

The Newmarket Co-Op milk processing facility is currently operating under IEL Licence (P0793-03) issued by the Environmental Protection Agency in May 2012 with a Technical Amendment, updating the licence in line with the Industrial Emissions Directive, issued on 16th December 2013. Schedule B of the Licence specifies air emission limit values for the 2 boiler exhaust stacks (emission points A1-1 and A1-2). These emission limits relate to boiler exhaust concentrations for sulphur dioxide (SO₂), Nitrogen Oxides (as NO₂) and Particulates (PM) and limits on the exhaust volume flow from each of the 2 boilers.

There are no other licenced exhaust stacks at the facility. However, Condition 5.2 of the Licence also specifies 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 boundary or any other legitimate uses of the environment beyond the installation boundary".

This condition covers all activities on-site including the operation of the WWTP.

There have been no reports within the surrounding community of odours arising from the activities within the Newmarket Co-Op facility in recent years.

A3.3.6 Designated Sites

There are three Natura 2000 sites within 15 km of the site which include the Blackwater River Special Area of Conservation (Site Code 0021 70), the Stack's to Mullaghareirk Mountains, West Limerick Hill and Mount Eagle SPA (Site Code 004161), and the Lower River Shannon cSAC (Site Code 002165). Newmarket Co-op does not interact with the Stack's to Mullaghareirk Mountains, West Limerick Hill and Mount Eagle SPA or the Lower River Shannon cSAC, however may interact indirectly with the Blackwater River Special Area of Conservation due to discharges to the River Dalua.

The Blackwater River is a designated Special Area of Conservation (SAC) (assigned Site Code 002170), draining a large proportion of County Cork including five ranges of mountains. The SAC encompasses the River Dalua. The Blackwater SAC commences in the River Dalua 5 kilometres north of the facility and west of the village of Meelin and extends over the entire watercourse.

The site is assigned SAC status on the basis of the presence of alluvial wet woodlands, and Yew wood, both priority habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for floating river vegetation, estuaries, tidal mudflats, Salicornia mudflats, Atlantic salt meadows, Mediterranean salt meadows, perennial vegetation of stony banks and old Oak woodlands, all habitats listed on Annex I of the E.U. Habitats Directive.

The site is also selected for the following species listed in Annex II of the Directive-Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Crayfish, Twaité Shad, Atlantic Salmon, Otter and the Killarney Fern.

The SAC is noted as supporting a number of protected bird species including wintering waterfowl and other bird species such as Heron, Cormorant, Mute Swan and Long-eared Owl.

Maintaining the nutrient balance within watercourses discharging to the SAC form an integral part of ensuring species diversity is not impacted.

It is noted that in the context of the review of the discharge licence undertaken by the Agency in 2011, as well as a Natura Impact Statement and Appropriate Assessment which were produced, see EIS Appendix 5.2.5, determined that the current discharge from Newmarket Co-Op was not considered to have a significant impact on the Blackwater SAC.

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A.4 Environmental Considerations and BAT

The following documents are considered potentially relevant in terms of conclusions on BAT, BREF and BAT guidance:

- BREF document on Best Available Techniques in Food, Drinks and Milk Processing Industries. August 2006;
- BREF document on Best Available Techniques for Energy Efficiency, February 2009;
- BAT guidance notes for the Dairy Processing Industry, 2008.

Please refer to Appendix I.8(c) for detailed assessments of compliance with BAT for each of the above listed BREF and BAT guidance documents.

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A.5 Accident Prevention and Emergency Response

Newmarket Co-Operative actively implement an Accident Prevention and Emergency Response policy which aims to prevent loss or damage resulting from accidents and other emergency situations. This policy identifies the roles and responsibilities of key personnel (EMS team) and the arrangements for emergency tasks, contacts and communications, both in planning for and in managing an accident or emergency.

The proceeding sections of this procedure sets out how Newmarket Co-Op prevent accidents and respond to emergency situations if they arise at the plant.

A.5.1 Accident Prevention

Accident prevention is pursued by Newmarket Co-Op by way of controlling hazards which endanger human health or the environment whether immediate or delayed. Having considered the hazards affecting Newmarket Co-Op and the associated risk that they present, specific procedures were developed to ensure that tasks are undertaken in a systematic way with a focus upon maintaining environmental quality at Newmarket Co-Op to the highest possible standard.

A5.2 Spill / Leak

Should a spillage occur on the premises the following procedure is followed:

1. Quickly check the area concerned to ensure that no staff member is injured, trapped or overcome by fumes etc. Attend to anyone who is injured but only if it is safe to do so and contact the Factory Manager or designee.
2. If the type of material is unknown check the Material Safety Data Sheet (MSDS) to identify the personal protective equipment requirements, storage and spill response information before dealing with the spillage. The MSDS file are located in 4 areas.
 - Wastewater Treatment Plant-Laboratory
 - Maintenance Department
 - Block Former and Packaging Room
 - Laboratory
3. If it is not a serious spillage e.g. small quantities of detergent solution, milk, whey, the spill may be washed to effluent drain. Oil spills should be covered with oil absorbent or a similar material available from the Maintenance Department or in various spill kits around the plant. Once the spill has been soaked up it should be collected and stored in plastic disposable bags to await disposal by a recognised licensed and certified disposal firm. Notify the Environmental Manager or representative.
4. If it is a major spillage, notify both the Factory Manager and the Environmental Manager. Action should be taken immediately to:

- (a) Identify the chemical spilled.
- (b) Stop the leakage at source.
- (c) Contain the spillage at source if possible and safe to do so.
- (d) Neutralise the spill if necessary and flush to Effluent Drain. If the chemical cannot be flushed, it can be pumped to the Effluent Plant.
- (e) An investigation will be carried out by the Environmental Manager to see if the soil or groundwater is contaminated.

A5.3 Material Safety Data Sheets

In the event of a spill or release of a chemical at the site, information on fire-fighting measures and accidental release measures should be consulted in available Material Safety Data Sheets (MSDS's). MSDS's are held at the site at the following locations:

- (a) Waste Water Treatment Plant – Laboratory
- (b) Maintenance Department
- (c) Blockformer and Packaging Room
- (d) Laboratory
- (e) Trading Office

Please refer to Attachment J of this application for further detail on general emergency procedures and measures taken to minimise the impact on the environment following an accidental emission or spillage.

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A.6 Remediation, Decommissioning, Restoration and Aftercare

An updated Environmental Liability Risk Assessment (ELRA) and Decommissioning Management Plan (DMP) was prepared for the facility in December 2016.

The ELRA addresses unknown environmental risks that could give rise to potential liability for the site operator. The mediums through which the site could impact directly or indirectly which are addressed in this assessment include 'land', 'water' including groundwater and surface water', 'atmosphere' and human health.

As defined in the EPA guidance document, the ELRA:

- Identifies and quantifies environmental liabilities at the facility focusing on unplanned but plausible events occurring during operations;
- Estimate the value of financial provisions required to cover unknown liabilities and confirm that existing financial mechanisms and value of same are adequate;
- Encourage environmental improvement and identify areas for potential reduction of risk.

The existing DMP was undertaken in accordance with the EPA Guidance on Environmental Liability Risk Assessment, Residuals Management Plan and Financial Provision (2006), and reference also made to the 2014 Guidance on Assessing and Costing Environmental Liabilities.

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A.7 Statutory Requirements

Section L of the licence application confirms that the facility will comply with the requirements of the relevant statutory legislation.

EIS Summary:

Environmental Factor	Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
Human Beings	<ul style="list-style-type: none"> • Noise • Air Quality • Traffic <p>The supply of longer seasonal working hours and an increase to full time staff on site is seen as a positive impact on human beings under social and economic terms.</p>	<p>Construction phase will result in an elevation of ambient noise levels at noise sensitive locations along the pipeline route on the R576 and those overlooking the WWTP site from the east and northwest.</p> <p>Extension of the WWTP will result in new sources becoming operational on site.</p> <p>The impact of emissions from the boilers will comply with National Air Quality Standards values and emissions of odours from the extended WWTP will be well below levels likely to cause a potential odour nuisance beyond the facility boundary.</p> <p>Traffic related impacts on local residents as a result of the proposed development will not be significant. There will be no change to existing Monday to Saturday operations with the proposed development in place whilst milk intake, whey imports and product exports will increase on Sundays to existing Monday to Saturday levels.</p>	<p>Traffic arising on the local road network as a result of the proposed increase in peak season is considered to be negligible and insignificant in terms of noise impact and effect.</p> <p>No significant impact on the health of the local community or surrounding environment is predicted as a result of the planned intensification programme at Newmarket Co-Op.</p>
Flora and fauna	<p>No current impact identified and no likely significant impact based on current wastewater management and ongoing improvements in storm water management.</p>	<p>Impacts are assessed in relation to impact type (positive, neutral or negative), character and sensitivity of the affected feature, magnitude, duration, timing and frequency.</p>	<p>A licence for WWTP discharge is currently in place and will be maintained under the operation of an EPA licence at the site. In addition, the implementation of an EPA licence and operation of an EMS will ensure management of surface water runoff quality in the future.</p>

<p>Soil</p>	<p>No likely significant impacts on the geological or hydrogeological environment associated with the operation of the site as no direct discharges to ground.</p>		<p>Preventive measures include:</p> <p>Integrity testing of all storage tanks regularly and all fuel storage tanks should be double skinned and/or suitably banded.</p> <p>An adequate supply of containment booms and/or suitable absorbent material (spill kits) are maintained on site at all times.</p> <p>A visual inspection is completed every week during operations to ensure that there is no evidence of contamination around the storage tanks</p> <p>In the unlikely event of a spill or leak, any leachate shall be removed and deposited in a contaminated waste container and disposed of by licensed waste hauliers.</p> <p>Any below ground waste or process lines should be regularly tested for integrity.</p>
<p>Water</p>	<p>Discharge from WWTP & stormwater run-off to Rampart Stream is not impacting on overall water quality status i.e adequate assimilative capacity shown from downgradient sampling of the WWTP.</p> <p>Potential, as in any plant, for an accidental spill or leak not being fully mitigated, leading to a discharge to Rampart Stream.</p>	<p>Long term, Imperceptible to slight Impact, with a Neutral Impact on quality.</p> <p>Accidental spillages which are not adequately mitigated may result in contamination of drainage channels and have an impact on the water quality of the Rampart Stream.</p>	<p>Continue to maintain compliance with current effluent discharge licence conditions.</p> <p>Mitigation measures which should be implemented to minimise potential of a spill or leak include:</p> <p>Integrity of the CIP and detergent storage tanks should be tested regularly</p> <p>All fuel storage tanks are double skinned and/or suitably banded.</p> <p>An adequate supply of containment booms and/or suitable absorbent material (spill kits) are maintained on site at all times</p> <p>A visual inspection is completed every week.</p>
<p>Air</p>	<p>There have been no reports within the surrounding community of odours arising from the activities within the Newmarket Co-Op facility in recent years.</p>	<p>Non-compliance with ambient air quality standards.</p>	<p>None required.</p>

Climate	Boiler emissions for the following gases: Carbon Monoxide (CO), Nitrous oxide (N2O).	Newmarket Co-Op's individual contribution to global warming in terms of the amount of greenhouse gases produced by an individual and is measured in units of carbon dioxide equivalent.	Results of the air quality modelling study demonstrate that the predicted ambient concentrations within the locality comply with the Air Quality Standards for both short-term and annual average limit values specified in the 2011 Regulations.
Landscape	Have an adverse effect on landscape quality through a loss of naturalness, aesthetics and regional identity.	Retain the identity of towns, to prevent sprawl, and to ensure a distinction in character between built up areas and the open countryside by maintaining a Greenbelt around all individual towns.	The Newmarket Co-Op facility is not within an environmentally sensitive location, designated ecological or landscape interest site and will not result in adverse impacts on local views, blending into the background of the existing milk processing facility, with the proposed pipeline being installed underground in an existing road corridor.
Material Assets	<p>Material assets, including the architectural and archaeological heritage, and the cultural heritage.</p> <p>The likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets.</p>	<p><u>Construction Impacts:</u> direct moderate negative impact on Allen's Bridge (CO022-271).</p> <p>Ground disturbance associated with the proposed WWTP.</p> <p>Negative impact on previously unrecorded archaeological features such as enclosures (SAP 1) or further burnt mound remains.</p> <p>Proposed pipeline will be strapped to the external eastern façade of Bridge 'A', a 20th century single arch road bridge.</p>	<p>Full written and photographic record be maintained of the bridge section to be impacted following vegetation clearance. Also recommended that all groundworks be monitored by an archaeologist.</p> <p>Programme of archaeological testing be carried out in advance of WWTP construction.</p>
Cultural Heritage	<p>The presence of known archaeological/architectural heritage sites that may be affected by the proposed development.</p> <p>The likelihood of finding previously unrecorded archaeological remains during the construction programme.</p>	<p><u>Construction Impacts:</u> direct moderate negative impact on Allen's Bridge (CO022-271).</p> <p>Ground disturbance associated with the proposed WWTP.</p> <p>Negative impact on previously unrecorded archaeological features such as enclosures (SAP 1) or further burnt mound remains.</p> <p>Proposed pipeline will be strapped to the external eastern façade of Bridge 'A', a</p>	<p>Prior to construction it is recommended that a programme of archaeological test trenching is carried out to assess the potential for previously unrecorded archaeological remains.</p> <p>Monitored by a suitably qualified archaeologist.</p> <p>Full written and photographic record be made of the eastern façade of Bridge 'A' prior to construction but following vegetation clearance.</p>

		<p>20th century single arch road bridge.</p> <p>The proposed pipeline traverses Stoneville Bridge, 18th/19th century Road Bridge under the R576. Also Park Bridge, a previously modified 19th century Road Bridge under the R576.</p>	
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