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LA004392	Non-Technical Summary - Packaging Laundry Ltd	Final

Non-Technical Summary for Waste Licence Application

Packaging Laundry Limited

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1 INTRODUCTION

Packaging Laundry Limited, hereafter referred to as Packaging Laundry, is applying for a Waste Licence for their existing waste management facility located in the Oldcourt Industrial Estate, located off the Boghall Road in Bray, County Wicklow (Figure 1). The facility is currently authorised to operate through a waste facility permit issued by Wicklow County Council (Permit No. WFP-WW-18-0043-01) and its primary activity relates to the acceptance and re-conditioning/refurbishment of empty industrial packaging (notably intermediate bulk containers know as IBCs). The permit allows collection of packaging defined under List of Waste Codes 15 01 02 and 15 01 04. The company plans to expand services so that limited packaging defined under List of Waste Code 15 01 10* can be accepted and refurbished. To facilitate this activity, Packaging Laundry has been advised by the Environmental Protection Agency through the article 11 process that a waste licence is required. The primary objective of this summary is to outline, in non-technical language, the details of the waste licence that is being applied for.

The facility operates from an industrial premises that is located within the Oldcourt Industrial Estate (also known as the Oldcourt Business Park). The industrial/commercial park is located just off the Boghall Road in Bray, County Wicklow and features a range of tenants including a vehicle maintenance company, a flooring supply company, a paint and decorating centre and a packaging component company. The Packaging Recycling unit comprises a warehouse/industrial unit (4C) with associated triangular enclosed yard area on its eastern side (Figure 2). The overall site area, including the foreyard and storage yard areas is approximately 0.135 hectares. The premises is located close to the industrial park's sole entrance and exit onto Wurtzburg Avenue.

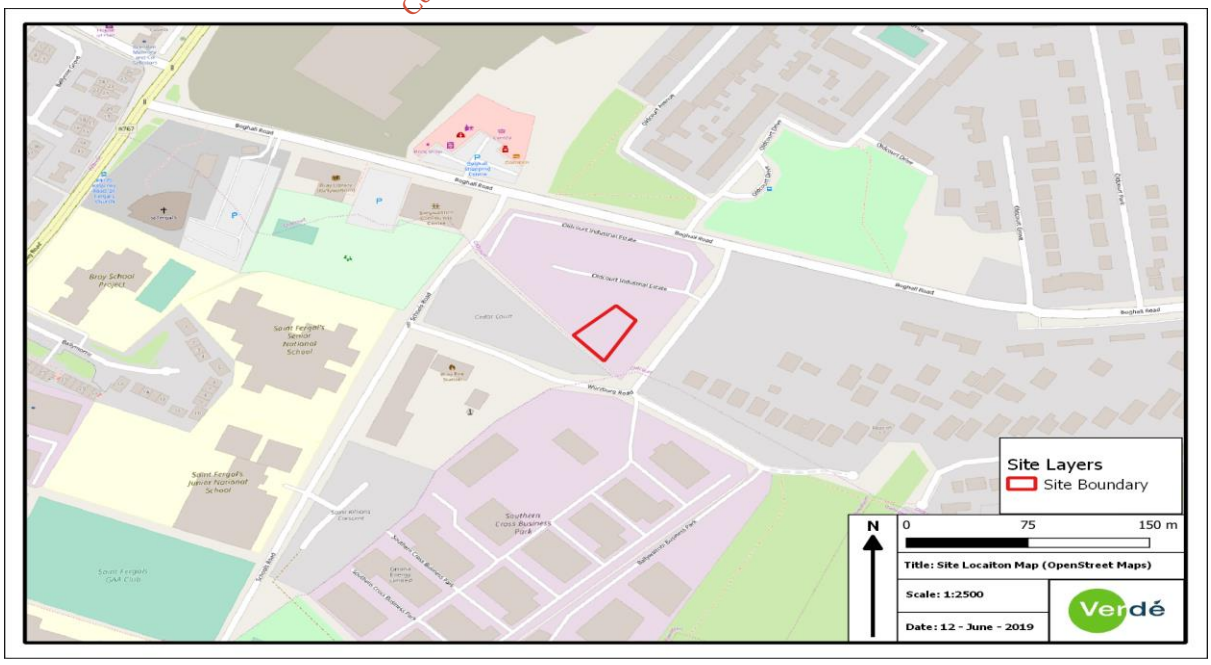

Figure 1. Site Location - Oldcourt Industrial Estate, Boghall Road, Bray, County Wicklow (Open Street Maps 2019)

2 FACILITY OPERATIONS

The primary focus of activity at the facility is the refurbishment/reconditioning of a range of empty industrial packaging that is received from existing customers of Packaging Laundry. The primary packaging accepted is empty IBCs. A permit issued by Wicklow County Council allows the acceptance and treatment of plastic packaging (List of Waste Code 15 01 02) and Metallic Packaging (15 01 04). A Closed Loop IBC Reconditioning service allows Packaging Laundry to provide a reconditioning service for customers, whereby used, empty IBCs are transferred to the facility, refurbished and returned to the customer for same purpose re-use. The process is described in more detail below. Other services include open loop reconditioning, steel packaging reconditioning, IBC dismantling and rebottling and steel drum dismantling. The licence application relates to an expansion in the list of waste codes that will be acceptable at the facility. Packaging Laundry has been advised by the Agency that a Licence is required to accept packaging code 15 01 10* (Packaging containing residues of or contaminated by hazardous substances). The company also plans to include additional waste codes on its licence including composite packaging and wooden packaging.

The type and quantity of wastes to be handled, stored and treated on site are described in Table 2.1 below;

Table 2.1 Summary details of planned, licensed waste types and quantities for proposed facility.

EWC Code (LoW)	Description of Waste	Annual Tonnage
EWC 15 01 02	Plastic Packaging	100
EWC 15 01 04	Metallic Packaging	250
EWC 15 01 05	Composite packaging	400
EWC 15 01 01	paper and cardboard packaging	100
EWC 15 01 03	Wooden Packaging	200
*EWC 15 01 10**	Packaging containing residues of or contaminated by hazardous substances	600
	Total Tonnage PA	1,650

Waste code relating to requirement for EPA Waste License

A summary of current material processing is provided below. These established practices will be retained and applied subject to condition, pending the issuance of waste licence by the Agency. In general, Packaging Laundry accepts empty IBCs and steel drums which are refurbished (through cleaning, drying and leak testing) and prepared for re-use. In certain instances, these packaging containers are dismantled and reconstituted (through the replacement of IBC bottles for example) or where they cannot be re-used, the containers are dismantled (cut into manageable pieces) and prepared for transfer to an authorised waste recovery/recycling facility.

2.1 IBC Reconditioning (Closed-Loop)

This is a popular service that is offered by Packaging Laundry to its regular customer base. As a sustainable alternative to having to discard used containers, Packaging Laundry accepts empty IBCs for reconditioning before return to the same customer for re-use for the same purpose. A number of Irish companies send IBC's to the UK for reconditioning, incurring significant carbon footprint and transport costs. IBC containers are designed to be re-used and the closed loop reconditioning service (and indeed open loop described below) encourages this and complies with the waste hierarchy in encouraging the prevention of waste and the re-use of materials. The service is similar in principal to that of a launderette.

Strict controls are in place prior to entering into a contract with a customer. Before agreeing to accept an IBC, the Safety Data Sheet (SDS) for the former contents of the IBC are reviewed. Customers are made aware of a "Stop List", that is, a list of former material contents that render an IBC unacceptable at the facility.

The customer must also complete a container returns form. IBCs are delivered to site via permitted hauliers usually engaged by the customer and all loads are inspected prior to the acceptance onto the site. Containers are initially inspected to ensure all are empty and that correct labelling of contents are visible on each IBC. Any container found either to be have held an unsuitable compound (listed on the "Stop List") or found to be missing former content detail, is refused entry onto the facility and is returned directly to the customer with explanation for refusal. Each container is also inspected to ensure that they are empty, that is, as empty as practically possible. Non-empty containers are similarly refused entry and are returned to the customer.

Containers external surfaces are cleaned and labelling removed. The inside of the container is then cleaned/washed using a three-stage high pressure/low volume water system. A specialist 360˚ hose is mechanically lowered inside the IBC which cleans the interior of the container using high pressure water spray at 400 Bar pressure. The containers undergo a three-stage washing process before the cleaning water is drained. The wash water is pumped into a 5,000 litre bunded storage tank prior to licensed discharge under controlled conditions (testing prior to discharge) to the municipal sewer.

Cleaned IBCs are then dried using fan dryers before undergoing a pressure test. Any faulty seals or taps found during pressure testing are replaced. The final inspection can also include painting of the steel cage to improve the appearance and mitigate rust. IBC containers are then labelled to indicate they have been reconditioned and tested before being made available for transport back to their owners. There are several advantages to the close loop system – sustainability, prevention of waste, certainty of re-use and financially preferable to customers who are not required to purchase brand new replacement containers. IBCs are designed for multiple use.

2.2 IBC Reconditioning (Open-Loop)

Open Loop Reconditioning is the process whereby Packaging Laundry collect an IBC either free of charge or for a rebate from a company who has emptied their material out of the IBC and has no further use for it. Once reconditioned using the same process outlined above, these IBCs are sold to customers as certified, reconditioned IBCs.

2.3 Steel Barrel Reconditioning (Open-Loop)

Open-top steel drums arriving to site undergo the same inspection protocol that is implemented for IBCs and must be as empty as practically possible. Labels are removed from the outside of the drum. To remove any residue, the lids are removed, and the drums are inverted and placed over a steel collection bund inside a drum oven which is heated allowing residue to liquefy and flow into the bund. Collected residue is transferred to an IBC for storage prior to collection by Lehane Environmental for recovery. Lids are replaced onto the drums which are palletised for supply to a customer for re-use.

Packaging Laundry also accepts steel tighthead drums. Following an identical acceptance and preparation procedure listed above, the steel is then cleaned for re-use. Once Labels and closures are removed, drums are placed inside a purpose-built drum cleaning cabinet. A spinning wand automatically rotates inside the steel drums for two wash cycles at 200 bar pressure. Wash is pumped from a collection sump in the bottom of the drum washer into the 5,000-litre holding tank. As per above, the effluent is tested prior to discharge to the municipal sewer under conditions contained in a discharge licence issued by Irish Water.

2.4 IBC Dismantling and Rebottling

IBCs with a bottle no longer suitable for reconditioning or that fail the leak test are also accepted onto the site in line with conditions of the current WFP. All end of life IBCs are delivered onto the site following the same acceptance protocol implemented for all containers. IBCs are washed and dried using the same processes as those described above for refurbishment. Following drying, IBCs are removed to a dedicated area where the HDPE bottles are cut into 6 manageable 1m x 1m panels. Cutting of the IBCs is performed by staff on site using

an electrical reciprocating saw. The panels are then stored on site to await authorised transfer to an off-site licenced facility for HDPE regrinding and recycling (current outlet is Leinster Environmental, Permit Ref. No. WFP-LH-11-0002-02). All processes on site are managed in compliance with conditions of the Waste Facility Permit (WFP-WW-18-0043-01) issued by Wicklow County Council. New bottles are then placed into the Reconditioned IBC steel cages and made available for re-use to customers.

2.5 Steel Drum Dismantling

Steel drums which are not suitable for re-use are accepted onto site as per waste acceptance protocols referred to above. The drums are then washed in the steel drum washer and are crushed in preparation for steel recovery at an appropriated licenced facility (currently to Multimetals Recycling in Wicklow Town - Permit Reg. No. WFP-WW-09-0014-05).

An overview of the internal site layout is provided below.

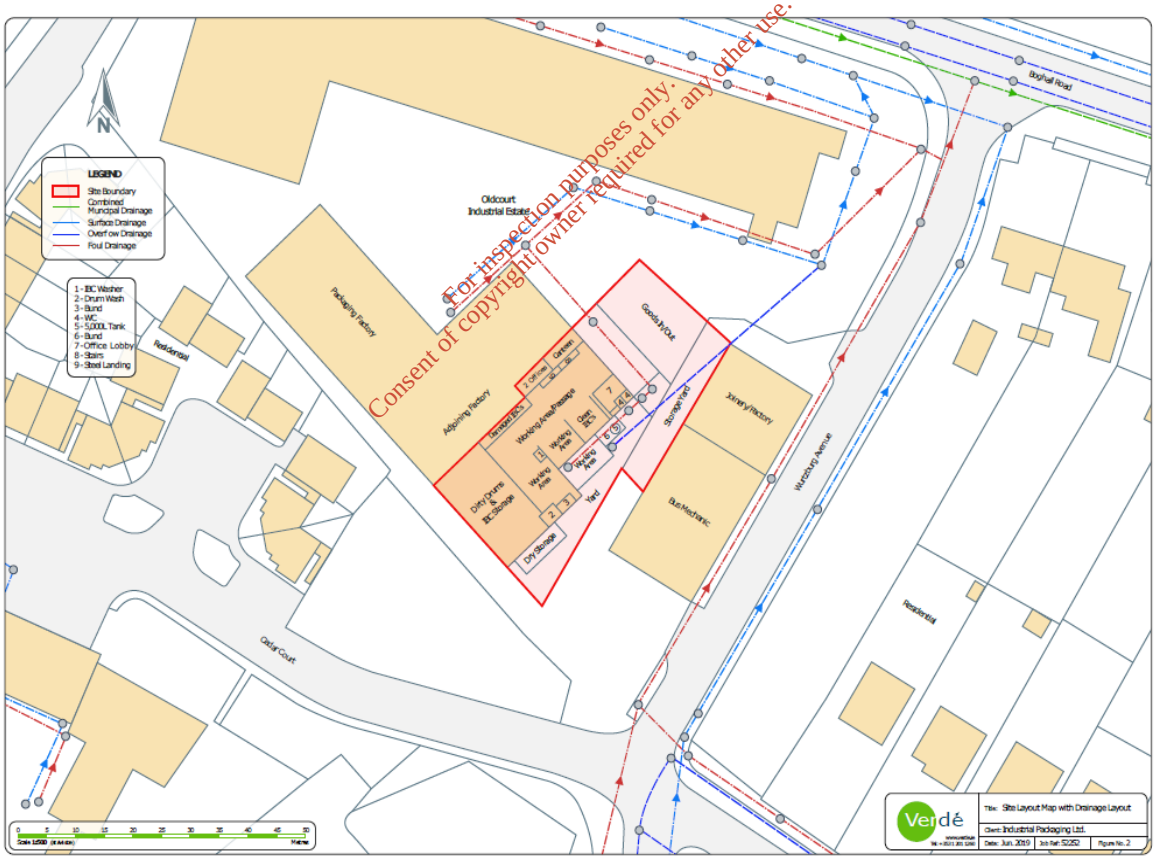

Figure 2. Site Layout – Overview of site layout with areas of work and drainage network illustrated.

3 MATERIALS

Materials used in day to day operations at the facility include the following (referred to also in Attachment-4-6-2-Raw Materials);

- Dilute (HCL) acid for the pH neutralisation of wastewater prior to discharge (1,000L)
- Antifoaming agent to facilitate high pressure washing of containers (80L)
- Alcohols (n-butanol) used in the flushing stages of steel drum cleaning (1,500L)
- Small amounts of assorted paints for reconditioning containers (40L)
- Small amounts of assorted domestic cleaning substances for general use within staff canteen and bathrooms (surface cleaners, bleach etc) (10L)
- Small amounts of pest control product (1kg)
- Small amounts of general-purpose lubricants and solvents (5L)

Given the scale of the operations proposed at the site (maximum 1,650 tonnes per annum), only small amounts of the above listed materials will be retained on site at any one time. Any of these substances/chemicals that are stored on site are kept in appropriately bunded containers which are leak tested and certified as outlined in the current Waste Facility Permit.

4 EMISSION SOURCES

The primary activity at the facility will continue to be the recovery and reconditioning of used packaging comprising plastic, metal or composite materials (mainly IBCs). In terms of waste management facilities, emissions are limited at the Packaging Laundry facility due to the scale of the operation, limited type of material accepted and nature of processing undertaken. The activity does not generate significant dust, noise of odour and there is no discharges to groundwater.

The main source of emissions will continue to be the discharge of wash water to the municipal sewer. This is currently undertaken in compliance with a discharge licence issued by Irish Water under the Local Government (Water Pollution) Acts, 1977 & 1990, as amended. Wash water is contained within a 5,000 litre bunded tank, prior to controlled (see below) discharge to sewer. Other minor emissions are described below.

4.1 Emissions to Air

There are no significant emissions to air associated with the operation of the facility. No significant amounts of Volatile Organic Compounds are stored on site other than the kerosene used to heat the boiler supplying water for the power washer. This kerosene is stored in a tested and certified tank which is stored in a bunded area which will contain any fluids in the event of a leak or breach.

A Nilfisk-alto Neptune 5-57X Hot Power Washer is occasionally used to clean the external surfaces of IBC tanks. This uses an ECoPower diesel boiler, rated to 92% efficiency by the manufacturer. The facility consumes about 1.2 tonnes (1,500 litres) of kerosene annually in the fuelling and usage of this power washer. Using the Sustainable Energy Authority of Ireland's (SEAI) 2019 emission conversion information, it is estimated that approximately 4 tonnes of CO_2 is emitted annually through the use of the power washing device.

As outlined in the Site Condition Report (Attachment-4-8-4), particulate matter arising from the decommissioning of plastic packaging materials, is not expected to occur in any significant quantities. The small scale of decommissioning activity and the maintenance of good housekeeping policies, coupled with the indoor location of such processes, will keep any particulate emissions to a minimum. Whilst no quantitative information is available on on-site plastic particulate generation is available, an EPA ambient air quality monitoring station is located less than 100m from the facility. Results of airborne particulate matter (PM2.5 and PM10) measured at this station indicate that Bray has an AQIH rating of Good.

The facility does not generate significant emissions of dust or particulates to the local atmosphere.

4.2 Emissions to Surface Water

General storm water from the surfaces and roofs on-site is drained via gutters and pipes to the municipal storm water drainage system.

As well as this, IBCs that are accepted onto the site (having been screened and approved as per waste acceptance procedures described) are initially stored in the goods receiving area in front of the facility. If required, the external surfaces of the IBCs are washed using a Nilfisk-alto Neptune 5-57X Hot Power Washer. Containers are washed externally using 12bars of pressure and water set at 80 degrees. The resulting water drains to the local storm water drainage system after going through an installed drain mesh and silt trap. This drainage route is in place as per the current Waste Facility Permit and does not involve the washing or removal of chemical or substances from the containers, but instead is primarily to ensure all labelling is removed and the external surfaces of the containers are aesthetically clean.

4.3 Emissions to Sewer

The main emission source associated with current and future activity at the facility is the licensed discharge to sewer of wash water arising from the internal laundering of containers. Water from the washing process is drained and stored pending release in a 5,000 litre bund protected, water storage tank. The tank is monitored prior to discharge to pubic sewer to ensure compliance with emission limit values contained in Discharge Licence W-DTS-809938-01 issued Irish Water discharge licence in 2017.

Prior to discharge, water within the tank is tested for pH as per condition of the Discharge Licence. If found to be outside the emission limit value (6.0 – 10.0 pH units), the water is neutralised through dosing with dilute Hydrochloric Acid (HCL). Records of pH and flow are measured before every discharge. These records are retained on site. As per Schedule B of the Discharge Licence, the discharge is sampled on a quarterly basis and tested by an accredited laboratory for a range of parameters. Results are forwarded to Irish Water in the annual report due before 31st January each year. The parameters and associated acceptance limits are outlined in Table 2.2 below.

The facility has 3-4 people working on site. Apart from the sewer discharge emissions associated with the wash water produced on site, sanitary wastewater is discharged directly to the municipal foul sewer.

Table 24.1 - Summary of Irish Water Discharge Permit Threshold Parameters

Parameter	Concentration (mg/l)	Load (kg/day)
Biological Oxygen Demand (BOD)	1000	5
Chemical Oxygen Demand (COD)	3000	15
Total Suspended Solids	1000	5
Fats, Oils and Grease	100	0.5
Total Phosphorous	15	0.075
Total Ammonia (As N)	20	0.1
Chloride	1000	5
Sulphate	800	4
Detergents (MBAS)	100	0.5
Flow (m^3/day or m^3/hr)	5.0 or 0.5	
pH	6.0 – 10.0	
Temperature (°C)	35.0	
Toxicity (Toxicity Units)*	10.0	

5 ENVIRONMENTAL CONDITIONS

A Site Condition Report (Attachment-4-8-4) was completed as part of the waste licence application, describing current site conditions at the facility.

In summary there is no historical record of or any evidence of soil, groundwater or surface water contamination at the site. Similarly, there have been no noise, dust or odour nuisance issues attributed to the operation of the facility since operations commenced.

6 REDUCTION/ABATEMENT SYSTEMS

The following systems are in place to abate the discharge of certain substance to the municipal foul and storm water draining networks;

- Wastewater arising from internal washing of tanks is collected and stored in a 5,000L bunded storage tank. This tank facilitates the following;
    - Controlled discharge of wastewater to the sewage network
    - pH neutralisation of wastewater prior to discharge
    - Scheduled sampling of wastewater
- Wash water arising from the occasional external washing of IBC tanks at the facility drains to surface water. The abatement of solid material discharge to this network is provided by;
    - Silt traps within the storm drain receiver
    - Particulate & debris trap in the form of mesh drain traps

These abatement features are cleaned as part of the established housekeeping practices to ensure their continued efficacy.

7 WASTE MANAGEMENT

The primary activity at the facility involves the re-conditioning/refurbishment of packaging containers (notably IBCs) for re-use either through a closed loop arrangement where containers are returned directly to their owners or through an open loop whereby refurbished containers are provided to other customers as alternatives to new IBCs.

In terms of residual waste material, defective containers that have reached their end of life are accepted at the site. These are treated through washing, drying, cutting and/or crushing so that they are transferable through an authorised collection service to an appropriate metal or plastic recovery/recycling facility. For example, decommissioned metal drums are sent to Multimetals Recycling in Wicklow Town. Containers requiring decommissioning are subject to the same cleaning and screening procedures as those undergoing reconditioning; at which point the HDPE plastic containers are taken to a designated, indoor area where they are cut into 1m x 1m panels using an electrical reciprocating saw. These panels are stored on site in bails and are then transported to Leinster Environmental (WFP-LH-11-0002-02) in County Louth for HDPE regrinding and recycling. If re-usable, the remaining steel cage from the decommissioned IBC is then reconditioned as per normal procedure and a new/reconditioned IBC plastic tank installed. The nature of this business means that residual waste is prevented where possible. Most of the materials entering the facility are reconditioned for re-use.

Other wastes originating from the operation of the facility include general and recyclable municipal type waste. These wastes are segregated into appropriate 240 litre bins for collection by an authorised waste management company (Greenstar).

8 SPILL MANAGEMENT & ABNORMAL OPERATING CONDITIONS

In compliance with Conditions 7.1 and 7.2 of the current Waste Facility Permit, Packaging Laundry has developed an Emergency Preparedness and Response Plan (MN01). This Plan includes the procedural response to be taken in the event of a chemical or wastewater spill at the facility. With regard to such an event occurring, the Plan outlines the following procedure;

- Immediately report the occurrence to the Operations Manager
- The spill should be contained immediately to prevent pollution to on-site storm water drainage
- Ensure personnel are fully protected through usage of PPE
- Locate the source of the spillage and turn off tap or valve, plug the leak or roll the drum/IBC so that the hole is on the top
- If this is not possible, use containers to catch the escaping liquid.
- In the event where a flood or spillage cannot be contained, contact the Fire Brigade
- Switch off or remove any sources of ignition close to the spill
- Block access to Factory drainage, gullies etc., through the correct use spill containment kits as appropriate
- Do not wash liquid away with water as this may disperse any contaminant off-site
- Contaminated absorbents shall be bagged and skipped and disposed of as special waste
- Seal off the contaminated area
- Clean the contaminated area
- Record the spillage on the waste facility permit compliance log, detailing the circumstances of the incident and the remedial action taken
- Submit report to Wicklow County Council or the Agency

In addition to the above scenario and spill management, the Emergency Preparedness and Response Plan includes Standard Operating Procedures (SOPs) for the following emergency incidents;

- Fires or Explosions
- Electrical Emergencies

Packaging Laundry's Emergency Preparedness and Response Plan aims to reduce, minimise or eliminate the likelihood of negative environmental impacts occurring in the event of an unforeseen event or accident.

9 MONITORING & SAMPLING OF EMISSIONS

Operations at the site are currently undertaken in compliance with conditions of a waste facility permit that was issued by Wicklow County Council in May 2018.

Given the scale of the facility, there are no conditioned monitoring requirements provided for in the Permit.

The facility also operates under a Wastewater Discharge Licence issued by Irish Water (IW-DTS-809938-01). Monitoring is required on a quarterly basis to comply with conditions of that Licence. A list of parameters to be monitored is included in Schedule B of the Licence and is reproduced in Table 4.1 above.