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DECOMMISSIONING PLAN

RILTA ENVIRONMENTAL LTD.

SITE 14-A1 GREENOGUE BUSINESS PARK

LICENCE NO. W0185-01

Prepared For: -

RILTA Environmental Ltd,
Site No. 14 A1 Greenogue Business Park,
Rathcoole,
County Dublin.

Prepared By: -

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December 2016

Project	Decommissioning Management Plan			
Client	RILTA Environmental Ltd			
Report No	Date	Status	Prepared By	Reviewed By
161950101	07/12/2016	Initial Client Comment	Neil Sandes BSc	Jim O'Callaghan MSc, CEnv, MCIWM, IEMA
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1. INTRODUCTION

1.1 Activity Details

RILTA Environmental Limited (RILTA) operates a Waste Management Facility at Site No.14A1, Greenogue Business Park, Rathcoole, County Dublin under an Industrial Emissions Licence (W0185-01) granted by the Environmental Protection Agency (Agency).

Condition 4 of the Licence requires the submission of a proposal for a Decommissioning and Aftercare Plan (DAP) for the facility. The Plan was prepared in 2005 and RILTA commissioned O'Callaghan Moran & Associates (OCM) to revise and update the assessment taking into consideration the Agency's current guidance which was issued in 2014.

1.2 Site Description

The facility is located in the Greenogue Business Park, approximately 1.5km east of Newcastle. It encompasses 0.5ha and there are three adjoining buildings-Warehouse, Workshop and the Offices. There is a weighbridge at the site entrance and a covered Tanker Bay. There is a redundant backup generator in a bund in the north-eastern corner of the site. The open yards (2,760m^2) are paved with a 120mm reinforced concrete slab.

It is authorised to accept up to 60,000 tonnes of household, commercial and industrial, construction and demolition wastes, sewage and industrial sludges and hazardous waste. Current waste processing activities are confined to the acceptance and processing of electrical transformers inside the warehouse. Refrigerators collected at WEEE drop of centres arrive in articulated trailers which are temporarily parked pending the completion of the appropriate documentation before they are sent to Northern Ireland for processing.

1.3 Commencement of Operations

The part of the Business Park occupied by the facility was initially developed in around 2003. Prior to development the land had been were used for agricultural purposes. The RILTA facility was constructed and started operations under a Waste Licence issued by the Agency (W0185-01) in December 2004 which allowed the acceptance of 65,000 tonnes per annum (tpa) of a combination of hazardous waste, commercial waste, construction and demolition waste, industrial sludges and industrial waste.

1.4 Closure Scenario and Scope

The facility has no defined lifetime and the risk of closure is low. The commercial viability of the facility will be kept under review and, if market conditions dictate the need to close the facility, the Agency will be notified and the DAP will be implemented. Following a planned closure RILTA may, depending, on the future plans for the facility, apply to surrender the licence.

For the purpose of costing this DAP, it has been assumed, in accordance with the Agency's Guidance, that the plant will close unexpectedly and that the CRAMP will be implemented by third parties contracted by the Agency.

1.5 Restoration and Aftercare Plan

At the time of the preparation of this plan as there was no evidence of any soil or groundwater contamination an Aftercare Plan was not considered necessary.

1.6 Limitations

The assessment of costs associated with the implementation of the DAP is based on the information available at the time of the report preparation, including the Agency's Guidance, and may be subject to amendment based on future investigations.

2. SITE EVALUATION

2.1 Operator Performance

2.1.1 Facility Management

Details of the site management structure are provided in Appendix 1. RILTA has implemented an Integrated Management System (IMS) in accordance with the requirements of Occupational Health and Safety Assessment Series (OHSAS) 18001:2007 and International Standard Organisation (ISO) 14001:2004 in order to manage the Health, Safety and Environmental performance of their business and to control health and safety risk and to minimise their environmental aspects and impacts.

The IMS has been developed for the achievement of continual improvement taking into account the requirements of the Waste Licence Conditions. RILTA has prepared and effectively implement documented procedures and instructions in accordance with the requirements of both the OHSAS 18001:2007 and ISO 14001:2004. The facility was recertified in February 2015.

2.1.2 Compliance History

An EPA site inspection carried out in August 2016 identified one non-compliance which related to the absence of labelling on the surface water monitoring location and the groundwater monitoring wells

2.1.3 Enforcement History

In October 2009, the Agency successfully prosecuted RILTA for processing waste oils in a manner not authorised by its (W0192-02) at its Hazardous Waste Treatment Facility that is also located in the Business Park. In April 2016 RILTA pleaded guilty to not inspecting waste arriving at the Hazardous Waste Treatment Facility (W0192-02) and for not having proper records of the waste identification codes and storage locations and for failing to label and segregate waste in accordance with the licence conditions.

2.1.4 Incidents History

There have been no incidents (spills, fires, leaks etc.) since RILTA began operations at the site that had potential to cause environmental pollution.

2.1.5 Complaints History

No complaints were received in 2015 and 2016 from either neighbours or members of the general public.

2.2 Environmental Pathways & Sensitivities

2.2.1 Surface Water

The facility is located in the catchment of the River Griffeen, which is a tributary of the Liffey, and a culverted tributary of the Griffeen runs along the northern site boundary. The Griffeen joins the Liffey at Lucan approximately 8km north of the site. It is part of the Grifeen Lower Water Body (Code IE_EA-09_242) designated under the Eastern River Basin District Management Plan. The Fish and Ecological Status is Bad and the overall water quality status is Bad and the river is 'At Risk' of not meeting the objective of restoration to 'Good'Status by 2027. The site is not in an area that has a history of flooding.

There are two separate internal surface water drainage systems. The first collects the rainwater run-off from the building roof and this is discharged via a 158m^3 flow attenuation tank to the storm sewer serving the Business Park. The second collects rainwater run-off from paved areas and weighbridge and this is passed through a Class 1 oil interceptor before entering the attenuation tank.

2.2.2 Foul Water

Sanitary wastewater is discharged to the foul sewer that serves the Business Park. The warehouse is designed to collect floor wash downs in a 5m^3 sealed sump from where it can be pumped to the foul sewer that serves the industrial estate. However, as putrescible wastes are not accepted at the facility, floor wash downs are not required and the sump is not used. There is a drain gate valve on the foul sewer that can be manually activated to stop the flow in the event of an incident inside the warehouse.

2.2.3 Geology & Hydrogeology

The subsoils beneath the site are between 2.9 to 3.3 m thick and comprise grey silty CLAY with cobbles and boulders. The site is underlain by Calp limestone, which comprises dark, grey fine-grained argillaceous limestone. The limestone aquifer is Locally Important Aquifer that is productive only in local zones (Ll). Although the subsoils are poorly permeable, because the thickness is <3m in some areas, the vulnerability of the bedrock aquifer to contamination from the ground surface is considered to be extreme (E).

2.2.4 Neighbouring Developments

The lands immediately surrounding the facility are commercial in nature comprising a mix of, light industrial and commercial activities, including waste treatment and transfer facilities. The boundary of Casement Aerodrome is approximately 350m to the north of the site. The closest private dwelling is approximately 400m to the west.

2.2.5 Designated Sites

There are no Natura 2001 Sites -Special Area of Conservation (SAC) and Special Protected Areas (SPA)- or National Heritage Areas (NHA) within the licensed area and the closest designated site is the Glenasmole Valley SAC, which is almost 10 km to the south-east.

2.2.6 Emissions

Surface water monitoring is carried out quarterly at one location (SW1) for pH, electrical conductivity and Chemical Oxygen Demand (COD). There are no emission limit values (ELVs) set in the Licence, but trigger (warning and action) levels have been developed and the monitoring has confirmed that all of the parameters are below respective warning levels

There are two groundwater monitoring wells on site (GW1 and GW2). GW1 is in the southern section of the site and is upgradient of GW2, which is in the northern end of the site. Monitoring is carried out quarterly for electrical conductivity, temperature, dissolved oxygen, chloride, sulphate, Total Organic Carbon and monitoring of List I/II Organic Substances and dissolved metals is carried out annually. Groundwater trigger levels have been developed and all of parameters are within the trigger levels. The groundwater quality is good and there is no significant change in quality between the upgradient and downgradient wells.

An annual noise survey is carried out at three on-site monitoring locations. In the most recent survey, which was completed in 2016, site operations were not audible at any of the monitoring locations and noise emissions were therefore lower than the 55dB daytime limit specified in the licence.

2.3 Site Processes & Activities

Current waste activities are confined to the acceptance and processing of electrical transformers inside the warehouse. The transformers are stored in steel spill containment trays pending the removal of the coolant oil which is stored in IBCs inside the building. The transformer oils do not contain polychlorinated biphenyls (PCB). Where the producer of the transformers considers it possible due to the age of the unit that it contain PCB, the oil is tested and if PCBs are detected the unit is exported directly to overseas treatment and not sent to the RILTA facility.

The transformers are then placed on a steel platform that has integral spill containment where an angle grinder is used to remove the copper components. The metals are stored inside the warehouse pending shipment to overseas smelters.

Refrigerators collected WEEE drop off centres arrive in articulated trailers which are temporarily parked at the facility pending the completion of the appropriate documentation before they are sent to RILTA's sister company in Northern Ireland for processing.

2.4 Plant Inventory

Details of the infrastructure are presented in Table 2.1

Table 2. 1 Site Infrastructure

Infrastructure	Details
Office	Three storey (432m^2), houses reception, office, canteen, toilet, showers
Warehouse	Portal frame with metal cladding side walls and roof (1,560m^2)
Chemical Stores	Occupies 219m^2 and contains three separate compartments
Tanker Bay (Warehouse)	Fully enclosed and occupies 168m^2
Yard	Paved with 120mm concrete slab (2,760m^2).
Underground Storm Water Attenuation Tank	158m^3

There are 2 No. diesel fuelled forklifts, which are refuelled at the RILTA facility on Grant's Drive.

2.5 Inventory of Raw Materials and Wastes

Resources and raw materials consumed at the facility include electricity, water and office supplies. Diesel is not stored at the site. Currently transformer oil is stored in one of the compartments in the Chemical Store, empty packaging is stored in the second compartment, while the third is empty. The Tanker Bay is used to stored clean, empty product drums. The maximum amount materials and wastes on site at any one time are shown in Table 2.2

Table 2.2 – Materials Inventory

Wastes/Products	Quantity Stored
Transformers	300 Tonnes
Ferrous Metals	60 Tonnes
Non-Ferrous Metals	20 Tonnes
Waste Oil	100 Tonnes
Refrigerators	25 Tonnes
Other WEEE	25 Tonnes
Product Drums	100 No
Empty Packaging	2 Tonnes

The quantities given in the table are based on the maximum amounts that can be stored on site at any one time, but in the event of the planned closure, the actual quantities should be considerably smaller, as the shutdown would be preceded by a reduction in the on-site inventory.

3. CLOSURE TASKS & PROGRAMMES

3.1 Closure Tasks

3.1.1 Materials Management

A planned shutdown of operations would be carried out after the last batches of waste received at the site had been processed and consigned. It would be preceded by a scaling down of activities, thereby reducing the quantities of materials, particularly the transformer oil, to be dealt with when implementing the DAP.

The product drums will either be sent to the RILTA installation on Grant's Drive, or returned to the supplier. The ferrous and non-ferrous metals have a monitory value and will be sent for recycling. The remaining materials may have to be disposed of as waste, some of which may be deemed hazardous due to their composition e.g. transformer oil.

A vacuum tanker will empty the oil interceptors and the contents will be sent for disposal at a suitably licensed facility.

3.1.2 Buildings

Following the removal of the residual consumable materials, wastes, plant items and office furniture and equipment, the buildings will be cleaned out. The office equipment and furniture will either be sold or disposed of at appropriately licensed facilities. The buildings are suitable for a number of alternative commercial uses and therefore it is not intended to either seal or demolish them, but they will be cleaned out and left in situ for future use.

Given the nature of the waste handled at the facility, specialist decontamination of the will not be required, and the cleaning will primarily involve the use of a road sweeper to clean the floors. The sump in the floor of the Warehouse will be manually cleaned and the contents will be sent off-site for treatment/disposal.

3.1.3 Plant & Equipment

In the event of a planned closure, the plant and equipment will be either be sent to RILTA's sister facilities, sold for use, or scrapped at an approved waste recycling/recovery facility. Those items of mobile plant that cannot be sold will be scrapped. The fixed plant will remain in situ. All the metal items have a scrap value, and therefore the removal of the plant and equipment should be cost neutral. Due to the presence of oil residues the steel spill pallets will be sent to the Grant's Drive facility or another hazardous waste treatment facility where they will be cleaned and then sold for scrap

3.1.4 Interceptors & Drains

As referred to above, the interceptors will be cleaned and the contents sent off site for treatment. All surface water and foul water drainage pipes will be flushed using water. As there have been no incidents at the site that have contaminated surface water it will not be necessary to either empty, or clean the storm water attenuation tank.

3.1.5 Services

The telecom, electricity and water supply services will be disconnected.

3.1.6 Soil & Groundwater Assessment

The on-going groundwater monitoring programme has established that there is no evidence of groundwater contamination; however a soil and groundwater assessment will be completed to to determine the impact, if any, that licensed activities have had on the soil and groundwater conditions,

The scope of the assessment will be agreed in advance with the Agency, but it may comprise the installation of soil borings and an additional groundwater monitoring well, and the collection and testing of soil and groundwater samples. The investigations will be supervised by an experienced geologist who will log the borings in accordance with BS5930, as amended and adopted by the GSI.

The field observations and results of laboratory results will form the basis for the assessment of the significance of the impact, if any, and the need for and extent of any remedial works. If remedial works are considered necessary, a proposed scope will be submitted to the Agency for approval before implementation.

3.1.7 Environmental Monitoring

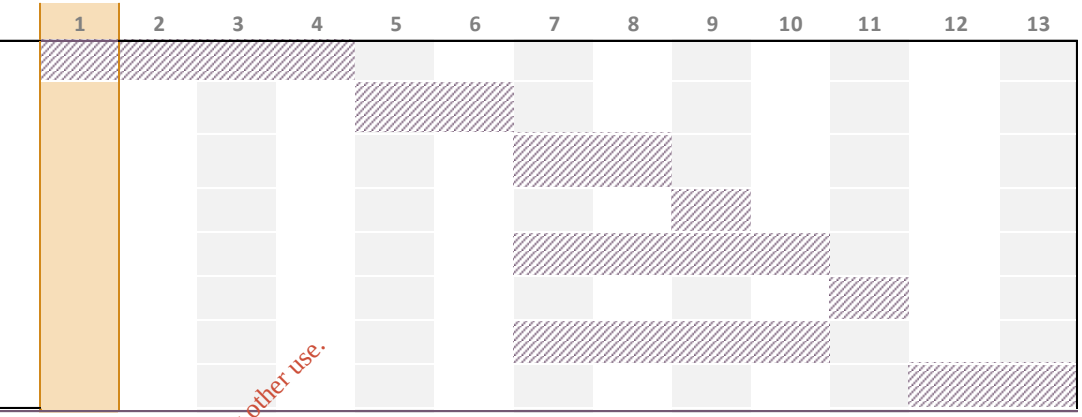
Monitoring will continue following the closure of the facility and pending the surrender of the Permit. The extent of the monitoring and the frequency may be amended, subject to the Agency's approval, to reflect the fact that the facility is closed.

3.2 Closure Programme

In the event that the entire facility is closed, all the operational areas will be decommissioned. The decommissioning will take approximately 13 weeks (Figure 3.1) and will be carried out in a number of tasks, some of which will happen concurrently.

TABLE 3.1 DECOMMISSIONING PLAN SCHEDULE

Tasks	PLAN START	PLAN DURATION
Task 1: Appointment of Management Team	1	4
Task 2: Removal of Consumables and Wastes	5	2
Task 3: Clean out of all Buildings	7	2
Task 4 : Clean out Drains and Interceptors	9	1
Task 5: Site Investigation	7	4
Task 8 Disconnect Services	11	1
Task 7 : Site Investigation	7	4
Task 8: Closure Audit	12	2



4. CRITERIA FOR SUCCESSFUL CLOSURE

Successful closure will only be complete when:

- All consumables, wastes, end of waste and residual materials have either been treated onsite, or consigned to appropriately authorised recovery/disposal facilities;
- Records of all wastes, materials and plant removed from the site have been prepared;
- All buildings have been cleaned out and services disconnected;
- A site investigation, if required, confirms that soil and groundwater conditions present no significant human health or environmental risk;
- The environmental monitoring confirms no impact associated with the closure and decommissioning works;
- A Closure Audit has been completed and approved by the Agency.

5. CLOSURE PLAN VALIDATION

5.1 Closure Audit & Validation Report

In a planned closure following the completion of the site clean out, RILTA will appoint an experienced independent environmental auditor, who will be approved by the Agency, to carry out a Closure Audit, and produce a Validation Report in accordance with Condition 11.2 of the Permit, which demonstrates the successful implementation of the Plan. The Closure Audit will address: -

1. Disposal of raw materials;

2. Disposal of wastes;

3. Decommissioning of plant and equipment;

4. Disposal of obsolete equipment;

5. Results of monitoring and testing during the decommissioning period;

6 Soil & Groundwater Assessment, and

7 The need for on-going monitoring, remedial actions or aftercare management.

The Validation Report will describe all of the activities carried out during the Closure Audit, and will contain records of the destinations of all wastes and materials consigned from the site during decommissioning. The Report will be submitted to the Agency within one month of execution of the Plan.

6. CLOSURE PLAN COSTING

The costs of a planned closure will be met in full by RILTA. The costs of implementing the DAP in an unplanned closure scenario, where RILTA is not in a position to meet the cost are presented in Table 6.1. The costs are based on the following assumptions:

- The closure will be unforeseen and unexpected with no advance warning that would allow an orderly wind down of activities.

- The entire facility will be decommissioned and cleaned, with all wastes, end of waste and consumables and office equipment removed from the site. The buildings and storage tanks will not be demolished.

- The decommissioning and building and plant cleaning will be carried out by appropriately trained and experienced Temporary Site Management Team appointed by the Agency and will be completed in weeks. The Team will include a Site Manager and 3 No operatives to implement the decommissioning and clean out. It has been assumed it will take 4 weeks to appoint the Team.

- As the full labour costs for the contract staff that will decommission and clean the facility are covered in the management fees, unit rate costs for the clean out of individual buildings are not considered necessary. The building/storage area clean out will only involve the removal of materials and wastes and the cleaning of the storage areas and, as these are covered in the contractor labour costs, it is not necessary to provide a detailed inventory of the waste, drums, racking etc inside the building.

- Specialised contractors will be hired in to empty and clean the interceptors and all associated drainage pipework and this is costed separately. The costs are based on those for the decontamination of storage tanks in the Agency's Guidance on Assessing and Costing Environmental Liabilities: Unit rate costs for verification.

- The quantity of materials and wastes on site will be as listed in Table 2.3. As a precaution RILTA assumes an average disposal cost of €150 per tonne for non-hazardous waste based on current charges for the removal and disposal of such wastes.

- The ferrous and non-ferrous metals and batteries have significant asset value. Assuming there are 100 tonnes of ferrous and 25 tonnes of non-ferrous metals on site at the time of closure, the asset value would be approximately €6,000 for the ferrous metals (€100/tonne), €20,000 (€1,000/tonne) for the non-ferrous metals. However the EPA guidance recommends that the asset value of the materials on-site at the time of closure should not be considered in the costings, apart from assigning a zero sum to the removal of these materials.

- Electricity costs are in the region of €1000 per month, but this is linked to the daily operations. Water costs are in the region of €60 per month which is also linked to the operation.

- A soil and groundwater assessment will be carried out. At the time of the preparation of this report there was no evidence of any significant contamination that would require remedial works. It is assumed that any incidents that occur when the site is operational will be investigated and remediated as part of on-going operations. RILTA will not be responsible for any contamination caused by incidents that may occur during the implementation of the DAP by third parties.

- The rates applied are a combination of those currently incurred by RILTA and the costs in the EPA's guidance.

- Given the environmental sensitivity of the surrounding area, a contingency of 25% is made.

Table 6.1 Costs

Task	Description	Quantity (No.)	Measurement Unit	Unit Rate (€)	Cost (€)	Source of unit rates
Facility Management	1 No. Site Manager, 3 No Operatives (5 days/week for 5 weeks) Site Security[1] Utility Bills (electricity, water)	25 9 2	Day Week Monthly	1,950 1,000 2064	48,750 9,000 4,128	EPA Guidance
Materials/Waste Disposal/Recovery	Removal and off-site recovery of Ferrous Metal[2]	60	Tonne	0	0	EPA Guidance
	Removal and off- site recovery of Non-Ferrous Metals	20	Tonne	0	0	EPA Guidance
	Removal and off-site recovery of Transformers	300	Tonne	0	0	RILTA
	Removal and off-site disposal of residual non-hazardous waste[3]	20	Tonne	150	3,000	RILTA
	Removal and off-site recovery of Transformer Oil[4]	100	Tonne	120	12,000	RILTA
Building Plant & Equipment Clean Out	Clean out of all Buildings (Included in Facility Management Costs)[5] plus hire of road sweeper to clean floors	4	Daily Hire	400	1,600	Current sweeper rate
	Cleaning plant and equipment (Included in Facility Management Cost)	Item		0	0	OCM
	Removal of plant and equipment[6]	Item		0	0	OCM
	Removal and disposal of office equipment	Item			500	OCM
	Cleaning of oil interceptors and power washing[7]	1	Day Rate	1,000	1000	RITLA
Yard Cleaning	Cleaning open yard (Roadsweeper)	1	Daily Hire	400	400	RILTA
Environmental Monitoring	Dust , surface water monitoring including labour and analysis	Consultant	Fees	1000	1,000	OCM
Site Investigation[8]	Site Investigation supervision and assessment and report	Consultant	Fees	-	10,000	OCM
Services Disconnection	Disconnect electricity and telecoms	1	Day		500	OCM

[1] No need for security after all wastes and consumables removed from the site
[2]The ferrous and non-ferrous metals have a significant asset value, but a very conservative 0 cost has been assumed for the removal from the site.
[3] Includes for transport and disposal at non-hazardous landfill
[4] This is suitable for treatment at the Grant's Drive facility, but it is assumed it will be sent to another treatment facility. Includes for transport and off-site treatment
[5] The clean out of the buildings will not require any specialist decontamination
[6] Labour cost included in Facility Management Costs, scrap value will cover transport costs
[7] Includes cleaning and removal and off site treatment of the contents
[8] Assessment of impacts on soil and groundwater quality caused by the permitted activities.

Closure Audit	Report (Consultant)	Consultant			3000	OCM
Sub Total					**94,878**	
Contingency (25%)					**23,719.50**	
Total Provision					**118,597.50**	