

Appendix 2-11 – Extract from CRAMP



5. Closure Tasks & Programmes

5.1 Materials Management

Landfill

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 fuel and wastes, to be dealt with when implementing the CRAMP. Capping, collection and treatment of landfill gas and re-profiling works would continue as required for some time post closure.

Diesel in the on-site storage tanks will be used to fuel plant and equipment deployed in the decommissioning works. When these are completed, it should be possible to return some materials e.g. diesel, engine and hydraulic oils to the suppliers either for resale, or reuse. The remaining materials may have to be disposed of as waste, some of which may be deemed hazardous due to their composition e.g. waste oils.

Post closure, the oil interceptor and the leachate collection systems will continue to be managed by Bord na Móna and the contents would be directed for disposal at a suitably licensed facility.

Compost Plant

A planned shutdown of operations would be carried out after the last batches of waste received at the site had been 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 fuel and wastes. Thereafter, would follow a period of cleaning and decommissioning as detailed in Table 1.4.

5.2 Buildings

It is likely that the site administration buildings would remain standing for the duration of the aftercare programme (or at least part of). Given the nature of the waste handled at the facility, specialist decontamination will not be required in and the cleaning will primarily involve the use of a road sweeper to clean the roadways. Decontamination will not be required in the Maintenance Building.

5.3 Plant & Equipment

The plant and equipment will be either be sent to other Bord na Móna facilities, sold for use (with a significant positive revenue), or scrapped at an approved waste recycling/recovery facility. At the time of the preparation of this DMP it is not possible to accurately quantify every item of plant that would be suitable for resale, as this depends on their future condition. Those items of plant that cannot be sold will be scrapped. All the metal items have a scrap value and therefore the removal of the plant and equipment should be cost neutral.

Given the nature of the waste handled at the facility, none of the plant items will require specialist decontamination before being scrapped. The cleaning will be carried out on-site, which will primarily involve power washing inside the buildings, with the wash water collected in the leachate sumps.

5.4 Soil & Groundwater Assessment

The scope of any such assessment, if required, will be agreed in advance with the Agency. Existing site monitoring infrastructure is extensive and would be available for the purposes of sampling and analysis of groundwater. If required, additional soil borings and groundwater monitoring wells could be installed 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 analyses 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.

5.5 Environmental Monitoring

Monitoring will continue following the closure of the facility. 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.

Potential and actual emissions from the facility include the following: -

- Landfill gas;
- Exhaust gases from the Landfill Gas Flares and Utilisation Plant;
- Noise;
- Dust and Particulate Matter;
- Surface Water Run-off;
- Groundwaters;
- Odours.

Schedule B of the Waste Licence sets emission limits for exhaust gases from the landfill gas plant, noise, dust and surface water and concentration limits for landfill gas.

Schedule C specifies a monitoring programme which includes surface water, groundwater, landfill gas, leachate, noise and dust monitoring.

5.6 Raw materials, products and waste disposal and/or recovery

Wastes generated by the disposal operations include leachate, sanitary wastewater, water and sediment from the wheel wash, sediment from the silt traps/interceptors, waste oils, and office and canteen waste.

Leachate will continue to be generated post closure of the landfill and will thus need to be managed and planned for. The landfill cells are designed to minimise leachate generation. Surface water runoff is directed away from the fill area by means of surface water swales installed outside the landfill cells.

The leachate collection system comprises of:-

- A 500mm thick layer of granular material laid on the cell floors;
- Leachate collection pipework laid in a herringbone pattern connecting to a feeder line, that discharges to a collection sump in each cell;
- Cut off valves on the feeder line, which prevents rainfall accumulating in unfilled cells from entering the collection sumps;
- An inclined side slope riser pipe from the cells connecting to a leachate main that runs underground to a sump adjacent to the leachate storage tanks from where the leachate is pumped into the tanks;
- Two above ground leachate storage tanks, each with a capacity of 200 m³ and located on a concrete pad that had a containment capacity of 110% of one of the tanks. The tanks, sumps and pipework are subject to routine inspection and integrity testing every three years.
- Leachate levels are continuously monitored in the collection sumps. The pumps in each sump are controlled by the SCADA system and automatically pump the leachate to the ring main. There are high level alarms on the leachate storage tanks and the levels are continuously monitored.

Leachate is currently removed from the storage tanks using road tankers and sent for treatment at Kildare County Council (Leixlip Waste Water Treatment Plant (WWTP); Rilta, Greenogue, Ringsend Waste Water Treatment Plant and JFK Environmental Ltd. (JFK Business Park). BnM are currently investigating long term leachate treatment options for the facility. As per licence requirements, any proposal for treatment of leachate treatment would be directed to the Agency.

Sanitary wastewater is treated in an on-site proprietary waste water treatment system, with the treated effluent sent to the foul system for tankering offsite. Water from the wheel wash is recycled and when it needs to be replaced the wash water in the unit is discharged to the leachate collection system. Sediment removed from the oil interceptor and the wheel wash unit is sent off site for treatment/disposal at appropriately licensed facilities.

The facility operates a source segregation policy to maximise the recovery of potential recyclable and recoverable materials from the remaining waste streams. Small quantities of waste oils and batteries generated during the on-site plant maintenance are kept in a dedicated storage container in the Quarantine Area and removed off-site at regular intervals for treatment at appropriately licensed waste treatment facilities. Upon facility closure, all stocks of waste would be directed offsite for appropriate recovery and/or disposal.

Post closure, the annual volume of leachate generation is estimated to be 7,245m³/yr for the complete 15 phases as per table 3.7.1 (page 209) of Drehid WMF Intensification and Extension - EIS.

As of December 2020, there are 13 operational landfill phases, thus the predicted leachate generation for 13 landfill phases (post closure) is 6,279m³/yr. Therefore, 6,279m³/yr X 30 years = 188,370m³ of leachate generated over the 30 year, post closure period.

5.7 Contaminated land treatment, removal and/or disposal

Given the nature of the waste handled at the facility (i.e. non-hazardous), contamination of land is unlikely to result. Nonetheless, any incidence of contamination of land would be treated as an incident and managed accordingly, with proper management and safe disposal.

6. PROGRAMME AND TIMEFRAME FOR DELIVERY

In the event that the landfill facility is closed, operations would switch from waste acceptance to waste capping. It would not be possible to cease site operations owing to the likely continuation of leachate and landfill gas generation, not to mention the obligations of Bord na Móna with respect of the EPA licence.

If the compost facility were to close, it would be possible to cease operations almost immediately, with diversion of incoming wastes to alternative facilities and/or forms of treatment. Decommissioning would take approximately 8 weeks and be undertaken in a number of tasks, some of which would happen concurrently.

Table 1.4 – Tasks Involved in Decommissioning of Compost Plant

Task No.	Description of Task	Duration of Task
1	Removal of consumables and wastes from site buildings	1 week
2	Clean out of site buildings	1 week
3	Cleaning and consignment of plant and equipment	2 weeks
4	Cleaning of yards	3 days
5	Emptying and degassing of the kerosene tank	1 day
6	Emptying and cleaning of the leachate collection system and leachate sumps	1 day
7	Cleaning of the silt trap and emptying of the oil interceptor	1 day
8	Soil and Groundwater Assessment	8 weeks
9	Disconnecting site services	1 week
10	Closure Plan Validation	52 weeks

7. CRITERIA FOR SUCCESSFUL CLOSURE

Successful closure of the landfill facility would entail the completion of the Decommissioning Management Plan as detailed in Table 1 of the Appendices.

Successful decommissioning of the Compost Plant will only be complete when all equipment, materials, infrastructure or any other materials that could result in environmental pollution, are removed from the site and recycled, recovered or disposed in accordance with all regulations in force at the time and there is no soil or groundwater contamination at the site.

8. CLOSURE PLAN VALIDATION

Following the completion of the site clean out, Bord na Móna 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 that 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 Agency will be kept abreast of developments in execution of the Plan.