

ATTACHMENT J
ENVIRONMENTAL MONITORING

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J.1 Dust

Proposed Dust deposition monitoring will be based on the Bergerhoff method, 'Measurement of Dustfall Using the Bergerhoff Instrument (Standard Method)' VDI 2119.

The following table outlines the proposed dust monitoring programme for Joe McLoughlin Waste Disposal. Monitoring points are shown on the attached Figure J.1

Table J.1 Proposed Dust Monitoring Programme

Ref	Monitoring Location	Parameter	Proposed Frequency	Sampling Equipment/Analysis
D1	At site entrance	Mg/m ² /hr	Bi-annually	Dust deposition by Bergerhoff method
D2	site boundary	Mg/m ² /hr	Bi-annually	Dust deposition by Bergerhoff method
D3	site boundary	Mg/m ² /hr	Bi-annually	Dust deposition by Bergerhoff method
D4	site boundary	Mg/m ² /hr	Bi-annually	Dust deposition by Bergerhoff method

Dust monitoring and analysis will be carried out by a suitably qualified external consultant and laboratory. Monitoring results will be recorded and submitted in a format found to be satisfactory to the EPA. The report will highlight any breaches of trigger levels or other limit emission values. In the case of any breach of emission limit, Joe McLoughlin Waste Disposal will investigate the cause of the breach and attempt to rectify the situation.

It is expected that dust emissions from the site will be effectively controlled by existing or proposed mitigation measures described in section H.1.1

J.2 Ecological

Approximately 57% of the site is covered with concrete and the remainder is hardcore surfaced land. The site is located approximately 1 km south west of Drumshanbo town and is surrounded by a mixture of residential and farming land. There is a plant hire company and retail unit adjacent to the site. There is no flora and fauna of any significance on the site. Therefore, Joe McLoughlin Waste Disposal operations do not have a significant negative impact on the ecology of the area.

Joe McLoughlin Waste Disposal do not propose to carry out further ecological monitoring.

J.3 Groundwater

There were no boreholes installed at Joe McLoughlin Waste Disposal as part of this application. A municipal water source (the supply being a group water scheme in the ownership of Leitrim County Council) functions the site.

Hazardous or liquid wastes will not be accepted at the facility and future site infrastructure (bunded storage tanks and increased concrete surface) will include measures for groundwater protection (as detailed in H.6). Furthermore there is no waste disposal at the Joe McLoughlin Waste Disposal site.

Therefore Joe McLoughlin Waste Disposal do not propose to carry out groundwater monitoring.

J.4 Air

Due to the nature of Joe McLoughlin Waste Disposal's operations, apart from dust and odour which have been previously addressed there are no air emissions of any significance from the site.

Burning or incineration of waste does not take place at the facility. A small diesel powered generator is located at the facility and is used to generate electricity on an as needed basis. This generator is also used in the event of an electricity power cut on-site.

Therefore, presently Joe McLoughlin Waste Disposal do not propose to carry out any further air monitoring at the site.

J.5 Sewer Discharge

Joe McLoughlin Waste Disposal do not discharge any effluent or sewage from the site to sewer. All domestic sewage generated on-site will be treated by a waste water treatment system with polishing filter and subsequent percolation area.

Consequently, Joe McLoughlin Waste Disposal do not propose to carry out sewer discharge monitoring.

J.6 Meteorological Data

The Joe McLoughlin Waste Disposal facility is not expected to have an impact on the local climate. However, should Joe McLoughlin Waste Disposal receive complaints from neighbours regarding odours etc, Joe McLoughlin Waste Disposal will take into account meteorological data e.g. wind direction, speed, weather conditions etc during investigations into the cause of the complaint. Data will be obtained from the meteorological office in Glasnevin, Dublin 9 as required. This data can also be used in the unlikely event of a fire at the site. Apart from the above, Joe McLoughlin Waste Disposal do not propose to carry out meteorological data monitoring, or install a weather station at the facility.

J.7 Noise

Proposed noise emissions monitoring will be based on the International Standard ISO 1996/1 'Acoustics – Description & measurement of environmental noise', using appropriate instrumentation.

The following table outlines Joe McLoughlin Waste Disposal's proposed noise monitoring programme. Monitoring points are shown on the attached Figure J1.1

Table J.7 Proposed Noise Monitoring Programme

Ref	Monitoring Location	Parameter	Proposed Frequency	Sampling Equipment/Analysis
N1	Site entrance	LA _{eq} (dB)*	Annually	ISO 1996/1 (as above)
N2	Northern border of site	LA _{eq} (dB)*	Annually	ISO 1996/1 (as above)
N3	Southern border of site	LA _{eq} (dB)*	Annually	ISO 1996/1 (as above)
N4	Eastern border of site	LA _{eq} (dB)*	Annually	ISO 1996/1 (as above)
N5	McLoughlin Dwelling, west of site	LA _{eq} (dB)*	Annually	ISO 1996/1 (as above)
N6	Mullvey Dwelling, north- north east of site	LA _{eq} (dB)*	Annually	ISO 1996/1 (as above)

* = L5, L10, L50, L90, LA_{eq}, L_{max} and L_{min} to be measured.

Noise monitoring and analysis will be carried out by a suitably qualified external consultant and laboratory. Monitoring results will be recorded and submitted in a format that is to the satisfaction of the EPA. The report will highlight any breaches of trigger levels or other limit emission values. In the case of any breach of emission limit, Joe McLoughlin Waste Disposal will investigate the cause of the breach and strive to rectify the situation.

It is expected that noise emissions from the site will be effectively controlled by existing and proposed mitigation measures described in section H.8 of this application.

J.8 Odours

Odours may arise from the facility due to the handling of industrial/commercial municipal solid waste which may contain organic fractions. Odours generally become a problem if residents take issue to certain smells. For this reason odour analysis is carried out by a subjective method called olfactometry. However, as detailed in attachment H.1.2 odours are not expected to be a problem with the site and historically have not been an issue with the site. For this reason Joe McLoughlin Waste Disposal do not propose to carry out odour monitoring.

Nevertheless, in the case of any odour problem arising, Joe McLoughlin Waste Disposal will investigate the cause of the odour problem and attempt to rectify the situation.

It is expected that potential odour from the site will be effectively controlled by mitigation measures described in section H.1.2.

J.9 Surface Water

All storm water run-off from the areas covered with concrete will be diverted via gullies, which will direct the flow into a retention tank (capacity 200m³ followed by a silts/oils interceptor unit) before discharge to an open land drain in the direction of the lake (Ardcolum Lough). Roof rainwater from the administration, store and paint-spray buildings will be directed underground to a drainage pipeline system and subsequently flows into a separate soak-away area in the direction of the lake. Roof rainwater from the transfer station is directed to a separate soak-away system along the east boundary of the site. A waste water system will deal with domestic sewerage. The effluent from the treatment plant will then be subject to a polishing filter before release to soak-away at the most southern boundary point of the site. The wash down liquid spills present from operations in the transfer station, and the effluent generated at the truck wash bay, will be treated by a three chamber silt separator, followed by three stage interceptor unit (oil separator and sludge trap). The resultant treated water will be discharged to soak-away in the direction of the lake.

As part of future site developments, Joe McLoughlin Waste Disposal will install a sampling point downstream of the storm water interceptor and the waste water treatment plant to ensure that regular surface water sampling can occur and the quality of the water discharges are monitored for quality.

The following table outlines the Joe McLoughlin Waste Disposal proposed surface water monitoring programme. Monitoring points are shown in the attached Figure J1.1

Table J.7 Proposed Surface Water Monitoring Programme

Ref	Monitoring Location	Parameter	Proposed Frequency	Sampling Equipment/Analysis
SW1	Discharge downstream of surface water interceptor and flowing to open drain.	pH BOD COD Ammoniacal nitrogen Chloride Suspended solids Conductivity Minerals/oils Oils, fats & greases Temperature	Quarterly	Standard methods acceptable to the EPA
SW2	Discharge downstream of waste water treatment plant and flowing to soak-away.	pH BOD COD Ammoniacal nitrogen Chloride Suspended solids Conductivity Minerals/oils Oils, fats & greases Temperature	Bi-annually	Standard methods acceptable to the EPA

The Joe McLoughlin Waste Disposal proposed monitoring programme, location points and grid references are summarised below.

Monitoring Point	Description	Grid Reference
D1	Dust	E195930 N310312
D2	Dust	E196020 N310287
D3	Dust	E195990 N310240
D4	Dust	E196025 N310220
N1	Noise	E195930 N310317
N2	Noise	E196025 N310287
N3	Noise	E196002 N310240
N4	Noise	E196025 N310225
N5	Noise	E195905 N310317
N6	Noise	E196072 N310342
Sw1	Surface water (outflow from interceptor unit)	E195950 N310152
Sw2	Waste water (outflow from waste water treatment plant)	E196000 N310174

A summary of all proposed monitoring locations are shown on the attached figure J1.1

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