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**WASTE LICENCE
PROPOSED DECISION**

Waste Licence	20-1
Register Number:	
Applicant:	Monaghan County Council
Location of Facility:	Scotch Corner Landfill, Letterbane, Annyalla, Castleblaney, Co. Monaghan

INTRODUCTION

This introduction is not part of the licence and does not purport to be a legal interpretation of the licence.

This licence is for the operation and development of an existing non-hazardous landfill at Scotch Corner, Letterbane, Annyalla, Castleblaney, Co. Monaghan. The volume of non-hazardous waste to be deposited is limited to 39,500 tonnes per annum and waste will be deposited in lined areas of the facility. The number of cells planned is five and the lifespan of the facility is considered to be 9-10 years. The final height of the facility will be restricted to 114m O.D. (Malin).

The licence also covers the operation of a Materials Recovery Facility (MRF) at the site. This facility will allow for the storage and processing of pre-segregated recyclable wastes. Such wastes will include paper, cardboard, glass, plastic, metal and some household hazardous wastes such as batteries and oil. The MRF will accept recyclable waste from commercial and private sources for recovery and will also accept unsorted household waste for disposal at the landfill.

The licensee shall manage and operate the facility to ensure that the activities there do not cause environmental pollution or nuisance. The licensee has to carry out regular environmental monitoring and submit all monitoring results and reports on the development, operation and management of the facility to the Agency. The licence sets out in detail the conditions under which Monaghan County Council will operate and manage this facility.

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DECISION & REASONS FOR THE DECISION

The Environmental Protection Agency (the Agency) is satisfied, on the basis of the information available, that the requirements of Section 40(4) of the Waste Management Act, 1996 have been complied with in respect of the application for a waste licence for the activities listed hereunder in Part I.

In reaching this decision the Agency has considered the application and supporting documentation received from the applicant, all submissions received from other parties and the report of its inspector.

Part I Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Environmental Protection Agency) proposes, under Section 40(1) of the said Act to grant this Waste Licence to Monaghan County Council to carry on the waste activities listed below at Scotch Corner Landfill, Letterbane, Annyalla, Castleblaney, Co. Monaghan subject to conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Act 1996

Class 1.	Deposit on, in or under land (including landfill): This activity is limited to landfilling in the existing lined area
Class 2.	Land treatment, including biodegradation of liquid or sludge discards in soils: This activity is limited to the disposal of sludges
Class 4.	Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons: This activity is limited to the collection and storage of leachate in a lagoon
Class 5.	Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment. This activity is limited to the placement of waste into lined cells
Class 11.	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule. This activity is limited to the disposal of waste arising from the operation of the materials recovery facility
Class 12.	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule. This activity is limited to the disposal of waste arising from the operation of the materials recovery facility
Class 13.	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced. This activity is limited to the temporary storage of waste at the facility prior to disposal at the landfill or at an alternative appropriate facility

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Act 1996

Class 1.	Solvent reclamation or regeneration: This activity is limited to the collection and storage of solvents at the materials recovery facility
Class 2.	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes): This activity is limited to the collection, storage and composting of green waste and source separated organic waste, and also the recovery of construction and demolition waste for restoration at the facility. The quantity of biodegradable waste to be composted is subject to a limit of 2,000 tonnes per annum
Class 3.	Recycling or reclamation of metals and metal compounds: This activity is limited to the collection and storage of white goods and other recyclable metals at the materials recovery facility
Class 4.	Recycling or reclamation of other inorganic materials: This activity is limited to the collection, storage and recovery of glass and construction and demolition waste at the materials recovery facility, and also the recovery of construction and demolition waste for restoration at the facility

Class 8.	Oil re-refining or other re-uses of oil: This activity is limited to the collection and storage of waste oil at the materials recovery facility
Class 11.	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule: This activity is limited to the reuse of materials recovered at the facility
Class 13.	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced: This activity is limited to the storage of recyclable and reusable waste at the materials recovery facility pending their collection

INTERPRETATION

All terms in this licence should be interpreted in accordance with the definitions in the Waste Management Act, (the Act), unless otherwise defined in this section.

Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
Condition	A condition of this licence.
Construction and Demolition Waste	All wastes which arise from construction, renovation and demolition activities.
Containment boom	A boom which can contain spillages and prevent them from entering drains or watercourses.
Cover material	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock or other similar natural materials; or other cover material the use of which has been agreed with the Agency.
Daily Cover	Is the term used to describe material spread (about 150mm if soil cover is used) over deposited waste at the end of each day. Synthetic materials may also be used. Its objective is to minimise odour, the amount of litter generated and to control flies and access to the waste by birds and vermin. Where soils are used for daily cover, it is recommended that they be removed at the start of the day and subsequently reused as much as possible.
Daytime	8.00 a.m. to 10.00 p.m.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emergency	Those occurrences defined in Condition 9.4
Emission Limits	Those limits, including concentration limits and deposition levels established in Schedule C: Emission Limits of this licence.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.
Green waste	Waste wood (excluding timber), plant matter such as grass cuttings, and

other vegetation.

Hours of Operation	The hours during which the facility is authorised to be operational. The hours of operation of a facility are usually longer than the hours of waste acceptance to facilitate preparatory and completion works, such as the removal and laying of daily cover. Different activities within the facility, such as the landfill and the Materials Recovery facility, may have different hours of waste acceptance.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste. Different activities within the facility, such as the landfill and the Materials Recovery facility, may have different hours of waste acceptance.
Inert waste	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.
Intermediate Cover	Refers to placement of material (minimum 300mm if soil is used) for a period of time prior to restoration or prior to further disposal of waste.
Landfill	Refers to the area of the facility where the waste is disposed of by placement on the ground or on other waste.
Landfill Gas	Gases generated from the landfilled waste.
LEL (Lower Explosive Limit)	The lowest percentage concentration by volume of a mixture of flammable gas with air which will propagate a flame at 25°C and atmospheric pressure.
Licence	A Waste Licence issued in accordance with the Act.
Licensee	Monaghan County Council.
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter. Any waste tankered to the facility.
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Materials Recovery Facility (MRF)	The recycling building and associated areas of hardstanding used for the collection, processing and storing of recyclable wastes at the facility. The MRF also includes facilities available to members of the public for the deposition of waste.
Mobile Plant	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works.
Monthly	A minimum of 12 times per year, at approximately monthly intervals.
Night-time	10.00 p.m. to 8.00 a.m.
Oil Interceptor	Device installed according to the draft European Standard prEN 858 (installations for the separation of light liquids, e.g. oil and petrol).
Recyclable	Those waste types, such as cardboard, batteries, gas cylinders, etc, which may

Materials	be recycled.
Quarterly	At approximately three monthly intervals.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
Sludge	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment with between 2% and 14% dry matter.
Specified Emissions	Those emissions listed in Schedule C: Emission Limits of this licence.
Specified Engineering Works	Those engineering works listed in Schedule B: Specified Engineering Works of this licence.
Treated Sludge	Sludge which has undergone biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its fermentability and the health hazards resulting from its use.
Trigger Level	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
White Goods	Refrigerators, cookers, ovens and other similar appliances.
EPA Working Day	Refers to the following hours; 9.00 a.m. to 5.30 p.m. Monday to Friday inclusive.
Working Face	The area of the site in which waste other than cover material or material for the purposes of the construction of specified engineering works is being deposited.

PART II CONDITIONS

CONDITION 1 SCOPE OF THE LICENCE

- 1.1. Waste activities at the facility shall be restricted to those listed and described in Part I: Activities Licensed and authorised by this licence.
- 1.2. For the purposes of this licence, the facility is the area of land outlined in red on the drawing entitled Mon/EIS/Site Plan of the Environmental Impact Statement (EIS). Any reference in this licence to “facility” shall mean the area thus outlined in red, which also includes the shaded area on the drawing entitled Mon/EIS/Site Plan of the EIS.
- 1.3. This licence is for the purposes of waste licensing under the Waste Management Act 1996 only and nothing in this licence shall be construed as negating the licensee’s statutory obligations or requirements under any other enactments or regulations.
- 1.4. Municipal Waste and Industrial Waste may be recovered and disposed of at the facility subject to the maximum quantities and other constraints listed in *Schedule A: Waste Acceptance* of this licence.
- 1.5. No hazardous wastes or liquid wastes shall be disposed of at the facility.
- 1.6. Waste Acceptance Hours and Hours of Operation
 - 1.6.1. Landfill
 - 1.6.1.1. Waste shall only be accepted at the facility for disposal at the landfill between the hours of 8:30 a.m. and 5:30 p.m. Monday to Saturday inclusive.
 - 1.6.1.2. The landfill at the facility shall only be operated during the hours of 8:00 a.m. and 6:00 p.m. Monday to Saturday inclusive.
 - 1.6.1.3. Waste shall not be accepted at the landfill on Bank Holidays or on Sundays.
 - 1.6.2. Materials Recovery Facility (MRF)
 - 1.6.2.1. Waste shall only be accepted at the Materials Recovery Facility between the hours of 9:00 a.m. and 5:30 p.m. Monday to Sunday inclusive.
- 1.7. The following shall constitute an incident for the purposes of this licence:
 - a) an emergency;
 - b) any emission which does not comply with the requirements of this licence;
 - c) any trigger level specified in this licence which is attained or exceeded; and
 - d) any indication that environmental pollution has, or may have, taken place.
- 1.8. Where the Agency considers that a non-compliance with any condition of this licence has occurred, it may serve a notice on the licensee specifying:
 - 1.8.1. That only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice;
 - 1.8.2. That the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and

1.8.3. That the licensee shall carry out any other requirement specified in the notice.

When the notice has been complied with, the licensee shall provide written confirmation that the requirements of the notice have been carried out. No waste, other than that which is stipulated in the notice, shall be accepted at the facility until written permission is received from the Agency.

1.9. Every plan, programme or proposal submitted to the Agency for its agreement pursuant to any Condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary and shall notify the licensee in writing of any such modification or alteration. Every such plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency. Every such plan, programme or proposal agreed by the Agency shall be covered by the conditions of this licence.

REASON: To clarify the scope of this licence.

CONDITION 2 MANAGEMENT OF THE FACILITY

2.1 Facility Management

- 2.1.1 The licensee shall employ a suitably qualified and experienced facility manager who shall be designated as the person in charge. The facility manager or a nominated, suitably qualified and experienced, deputy shall be present on the facility at all times during its operation.
- 2.1.2 The Materials Recovery Facility (MRF) shall be supervised by an appropriately qualified and competent person at all times while waste may be accepted.
- 2.1.3 Both the facility manager and deputy, and any replacement manager or deputy, shall successfully complete both the FAS waste management training programme (or equivalent agreed with the Agency) and associated on site assessment appraisal within twelve months of appointment.
- 2.1.4 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience, as required and shall be aware of the requirements of this licence.

2.2 Management Structure

- 2.2.1 Within three months of the date of grant of this licence, the licensee shall submit written details of the management structure of the facility including the Materials Recovery Facility to the Agency. Any proposed replacement in the management structure shall be notified in advance in writing to the Agency. Written details of the management structure shall include the following information;
 - a) the names of all persons who are to provide the management and supervision of the waste activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;
 - b) details of the responsibilities for each individual named under a) above; and
 - c) details of the relevant education, training and experience held by each of the persons nominated under a) above.

2.3 Environmental Management System (EMS)

2.3.1 The licensee shall establish and maintain an EMS. Within twelve months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement a proposal for a documented Environmental Management System (EMS) for the facility. Following the agreement of the Agency, the licensee shall establish and maintain such a system. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.

2.3.2 The EMS shall include as a minimum the following elements:

2.3.2.1 Schedule of Environmental Objectives and Targets

The objectives should be specific and the targets measurable. The Schedule shall address a five-year period as a minimum. The Schedule shall include a time-scale for achieving the objectives and targets and shall comply with any other written guidance issued by the Agency.

2.3.2.2 Environmental Management Plan (EMP)

The EMP shall include, as a minimum, the following:

- (i) the items specified to be contained in an Environmental Management Plan in the Landfill Operational Practices Manual published by the Agency;
- (ii) methods by which the objectives and targets will be achieved and the identification of those responsible for achieving those objectives and targets;
- (iii) any other items required by written guidance issued by the Agency.

2.3.2.3 Corrective Action Procedures

The Corrective Action Procedures shall detail the corrective actions to be taken should any of the procedures detailed in the EMS not be followed.

2.3.2.4 Awareness and Training Programme

The Awareness and Training Programme shall identify training needs, for personnel who work in or have responsibility for the licensed facility.

2.4 Communications Programme

2.4.1 The licensee shall establish and maintain a Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility. This shall be established within nine months of the date of granting of the licence.

REASON: To make provision for the proper management of the activity on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the environment.

CONDITION 3 FACILITY INFRASTRUCTURE

- 3.1 The licensee shall establish all infrastructure referred to in this licence as required by the conditions of this licence.
- 3.2 Specified Engineering Works
- 3.2.1 The licensee shall submit proposals for all Specified Engineering Works, as defined in *Schedule B: Specified Engineering Works* of this licence, to the Agency for its agreement at least two months prior to the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.
- 3.2.2 All specified engineering works shall be supervised by a competent person(s) and that person, or persons, shall be present at all times during which relevant works are being undertaken.
- 3.2.3 Following the completion of all specified engineering works, the licensee shall complete a construction quality assurance validation. The validation report shall be made available to the Agency on request. The report shall include the following information;
- a) a description of the works;
 - b) as-built drawings of the works;
 - c) records and results of all tests carried out (including failures);
 - d) drawings and sections showing the location of all samples and tests carried out;
 - e) daily record sheets/diary;
 - f) name(s) of contractor(s)/individual(s) responsible for undertaking the specified engineering works;
 - g) name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;
 - h) records of any problems and the remedial works carried out to resolve those problems; and
 - i) any other information requested in writing by the Agency.
- 3.3 Facility Notice Board
- 3.3.1 The licensee shall provide and maintain a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the board shall be 1200 mm by 750 mm.
- 3.3.2 The board shall clearly show:
- a) the name and telephone number of the facility;
 - b) the normal hours of opening;
 - c) the name of the licence holder;
 - d) an emergency out of hours contact telephone number;
 - e) the licence reference number; and
 - f) where environmental information relating to the facility can be obtained.
- 3.4 Facility Security
- 3.4.1 Within six months of the date of grant of this licence, security and stockproof fencing and gates shall be installed and maintained around the perimeter of the facility according to the specifications in Drawing No. 152-503-018 Rev B1. The fencing along the southern boundary of the facility shall consist of a pallasade fence, while that of the west,

north and eastern boundaries shall consist of a concrete post and chainlink fence (other than where pallisade fencing already exists along the eastern boundary). The base of the fencing shall be set in the ground.

- 3.4.2 The security pallisade fencing which surrounds the Materials Recovery Facility shall be maintained.
- 3.4.3 The licensee shall remedy any defect in the gates and/or fencing as follows:
 - a) a temporary repair shall be made by the end of the working day; and,
 - b) a repair to the standard of the original gates and/or fencing shall be undertaken within three working days.
- 3.4.4 The licensee shall maintain a CCTV camera system at the entrance to the facility. This system shall be operated 24 hours per day, seven days per week.
- 3.5 Facility Roads and Hardstanding
 - 3.5.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.
 - 3.5.2 The facility entrance area, the access road to the Materials Recovery Facility and the Materials Recovery Facility itself shall be paved and maintained.
- 3.6 Facility Office
 - 3.6.1 The licensee shall provide and maintain an office at the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
 - 3.6.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.
- 3.7 Waste Inspection and Quarantine Areas
 - 3.7.1 Within six months of the date of grant of this licence, a Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.
 - 3.7.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other.
 - 3.7.3 Drainage from these areas shall be directed to the leachate collection system.
- 3.8 Weighbridge
 - 3.8.1 The licensee shall provide and maintain a weighbridge at the facility.
- 3.9 Wheel Cleaning
 - 3.9.1 Within three months of the date of grant of this licence, the licensee shall establish and maintain wheel cleaning facilities at the facility.
- 3.10 Waste Water Treatment Plant
 - 3.10.1 The licensee shall provide and maintain a Wastewater Treatment plant at the facility for the treatment of domestic wastewater arising on-site. Any percolation area shall satisfy the criteria set out in the Wastewater Treatment Manual, *Treatment Systems for Single Houses*, published by the Environmental Protection Agency.

3.11 Tank and Drum Storage Areas

3.11.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein.

3.11.2 All tank and drum storage areas, including the waste oil/battery storage area at the MRF, shall as a minimum be banded, either locally or remotely, to a volume not less than the greater of the following:

- (a) 110% of the capacity of the largest tank or drum within the banded area; or
- (b) 25% of the total volume of substance which could be stored within the banded area.

3.11.3 All drainage from banded areas shall be diverted for collection and safe disposal.

3.11.4 All inlets, outlets, vent pipes, valves and gauges must be within the banded area.

3.11.5 The integrity and water tightness of all the bunds and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee and shall be reported to the Agency following their installation and prior to their use as a storage area. This confirmation shall be repeated at least once every three years thereafter and reported to the Agency on each occasion.

3.12 Landfill Lining:

3.12.1 All future lining of cells at the facility shall comprise:

- (i) a composite liner consisting of a 1m layer of compacted soil with a hydraulic conductivity of less than or equal to 1×10^{-9} m/s, (or equivalent to be agreed with the Agency) overlain by a 2mm thick high density polyethylene (HDPE) layer;
- (ii) a geotextile protection layer placed over the HDPE layer;
- (iii) a 500mm thick drainage layer placed over the geotextile layer with a minimum hydraulic conductivity of 1×10^{-3} m/s, of pre-washed, uncrushed, granular, rounded stone (16 - 32mm grain size) incorporating leachate collection drains;
- (iv) the side walls shall be designed and constructed to achieve an equivalent protection.

3.12.2 The liner's detailed design and construction shall be in accordance with the guidelines provided in the Agency's Landfill Manual, *Landfill Site Design*.

3.13 Buffer Zone

3.13.1 A Buffer Zone, in which no waste shall be landfilled, shall be provided and maintained within the facility. No wastes shall be deposited within 10 metres of the western and eastern boundaries within 20 metres of the northern boundary or within 30 metres of the southern boundary of the facility.

3.13.2 Wastes shall not be disposed of in the northern part of the facility which is shaded and marked as Bufferzone/Landscaping on the drawing entitled Mon/EIS/Site Plan of the EIS.

3.14 Leachate Management Infrastructure

3.14.1 Within nine months of the date of grant of this licence, the licensee shall provide and maintain a lined leachate storage lagoon at the facility to facilitate the storage of leachate abstracted/collected from the waste. The lagoon lining shall be a composite liner equivalent to the landfill liner and constructed using the same methods.

3.14.2 Within six months of the date of grant of this licence, the licensee shall install a leachate interceptor drain around the perimeter of the existing landfill area. All leachate/contaminated water entering the site from the old landfill located to the south of the present facility (as shown on Drawing No. 152-505-01) shall be diverted to the lined leachate lagoon via the interceptor drain.

3.14.3 Within nine months of the date of grant of this licence, the licensee shall provide, as a minimum, three boreholes in the landfilled area, in the waste, at locations to be agreed with the Agency. These boreholes shall be used to facilitate the measurement of leachate levels and for the removal and abstraction of leachate.

3.15 Landfill Gas Management

3.15.1 Within twelve months of the date of grant of this licence, infrastructure for the active collection and flaring of landfill gas shall be installed at the facility. The flare shall be of an enclosed type design.

3.15.2 Flare unit efficiency shall be tested once it is installed and once every three years thereafter.

3.15.3 All buildings constructed on the facility shall have regard to the guidance given in the Department of Environment 1994 publication "Protection of New Buildings and Occupants from Landfill Gas" and any subsequent revisions.

3.15.4 Within twenty four months of the date of grant of this licence, the licensee shall submit an assessment of whether the utilisation of gas as an energy resource is feasible. If feasible, such a system shall be installed within a timeframe to be agreed with the Agency.

3.16 Surface Water Management

3.16.1 Effective surface water management infrastructure shall be provided and maintained at the facility during construction, operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall be capable of the following:

- a) the prevention of contaminated water and leachate discharges into surface water drains and courses; and
- b) the collection/diversion of run off arising from capped and restored areas.

3.17 Groundwater Management

3.17.1 Effective groundwater management infrastructure shall be provided and maintained at the facility during construction, operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall be capable of the following:

- a) the protection of the groundwater resources from pollution by the waste activities; and
- b) the protection of other infrastructure, such as the liner, from any adverse effects caused by the groundwater.

3.17.2 Groundwater management infrastructure shall not compromise the integrity of lined cells or the leachate lagoon.

3.18 Materials Recovery Facility

3.18.1 The licensee shall maintain the Materials Recovery Facility infrastructure referred to in Attachment D of the application.

- 3.18.2 The licensee shall provide and maintain the receptacles at the Materials Recovery Facility as shown in Drawing No. MRF110 “Materials Recovery Site Layout” unless otherwise agreed with the Agency.
- 3.18.3 Within six months of the date of grant of this licence, surface water from hardstanding areas of the Materials Recovery Facility shall pass through a silt trap and a suitable oil interceptor prior to discharge to surface water bodies. The drainage system at the MRF shall include a valve and diversion line to allow for surface water discharges from here to be diverted to the lined leachate lagoon in the event of a spillage. The oil interceptor shall be in accordance with the draft European Standard prEn 858 (installations for the separation of light liquids) or replacement standard.
- 3.18.4 Within six months of the date of grant of this licence, a containment kerb shall be constructed around the compactor for unsegregated domestic waste. Drainage from this area shall be directed to the lined leachate lagoon.
- 3.19 Prior to waste being deposited in the lined cells for phases 2 to 4 (as shown on Drawing No. 152-505-01 rev B), a perimeter berm of at least 3m in height shall be constructed near the southern boundary of the facility as shown on Drawing No. 152-503-006 Rev B1.
- 3.20 Compost facility
- 3.20.1 Appropriate infrastructure for the composting of waste shall be established and maintained at the facility prior to any waste being composted. This infrastructure shall at a minimum comprise the following:
- a) A bunded hardstanding area/composting slab from which all surface water run-off will be directed to the lined leachate lagoon via a pump sump; and
 - b) Netting shall be maintained around the perimeter of the composting slab.
- 3.21 Monitoring Infrastructure
- 3.21.1 Landfill Gas
- (i) Within nine months of the date of grant of this licence, the licensee shall install monitoring points at or near the perimeter of the facility to monitor for off-site migration of landfill gas. Specific monitoring points shall be installed between the facility and the nearest sensitive receptors.
 - (ii) Within three months of the date of grant of this licence, the licensee shall install an effective permanent gas monitoring system in the site office and the Materials Recovery Facility.
- 3.21.2 Groundwater
- (i) Within six months of the date of grant of this licence, the licensee shall install groundwater monitoring points at four locations which shall provide for the sampling and analysis of overburden and bedrock groundwater both upgradient and downgradient of the facility.
- 3.21.3 Replacement of Infrastructure
- (i) Monitoring infrastructure which is damaged or proves to be unsuitable for its purpose shall be replaced within three months of it being damaged or recognised as being unsuitable.
- 3.22 Within 12 months of the date of grant of this licence, the licensee shall decommission the underground fuel storage tank located at the facility.

REASON: To provide appropriate infrastructure for the protection of the environment.

CONDITION 4 RESTORATION AND AFTERCARE

- 4.1. Within eighteen months of the date of grant of this licence, the licensee shall submit to the Agency for agreement a Restoration and Aftercare Plan for the facility. This Plan shall have regard to the guidance published in the Agency's Landfill Manual: "*Landfill Restoration and Aftercare*". Notwithstanding this, the finished level of the facility shall not exceed 114m OD (Malin Head).
- 4.2. The final profile of the facility shall be as shown in Drawing No. 152-505-03 "Final Contour Plan".
- 4.3. Final Capping
- 4.3.1. The final capping shall consist of the following:
- a) top soil (150 -300mm);
 - b) subsoils, such that total thickness of top soil and subsoils is at least 1m;
 - c) drainage layer of 0.5m thickness having a minimum hydraulic conductivity of 1×10^{-4} m/s;
 - d) compacted mineral layer of a minimum 0.6m thickness with a permeability of less than 1×10^{-9} m/s or a geosynthetic material (e.g. GCL) or similar that provides equivalent protection; and
 - e) gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer.
- 4.4. No material or object that is incompatible with the proposed restoration of the facility shall be present within one metre of the final soil surface levels.
- 4.5. Where tree planting is to be carried out above waste-filled areas, a synthetic barrier shall be used to augment the clay cap. Combined topsoil and subsoil depths shall be a minimum of 1m.

REASON: To provide for the restoration of the facility.

CONDITION 5 FACILITY OPERATION AND WASTE MANAGEMENT

- 5.1 Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency.
- 5.2 Waste Acceptance and Characterisation Procedures
- 5.2.1 Within six months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement written procedures for the acceptance and handling of all wastes. These procedures shall include methods, such as sludge, eluate and toxicity testing, for the characterisation of waste in order to distinguish between inert, non-hazardous and hazardous wastes.
- 5.3 All wastes shall be checked at the working face. Any wastes not suitable for acceptance shall be removed for recovery or disposal at an appropriate alternative facility. Such waste shall be

stored in the Waste Quarantine Area only. No waste shall be stored in the Waste Quarantine Area for more than three months.

5.4 Working Face

5.4.1 Unless the prior agreement of the Agency is given, the following shall apply at the landfill:

- a) only one working face shall exist at the landfill at any one time for the deposit of waste other than cover or restoration materials; and
- b) the working face of the landfill shall be no more than 2.5 metres in height after compaction, no more than 25 metres wide and 25 metres in length and have a slope no greater than 1 in 3.

5.4.2 All waste deposited at the working face shall be compacted, using a steel wheeled compactor, and covered as soon as is practicable and at any rate prior to the end of the working day.

5.4.3 The working face, or faces, shall each day at the end of the day, be covered with suitable material.

5.5 Daily and Intermediate Cover

5.5.1 Any cover material at any location within the facility which is eroded, washed off or otherwise removed shall be replaced by the end of the working day.

5.5.2 Within three months of the date of grant of this licence, appropriate cover material shall be placed across the whole landfill so that no waste, other than the following is exposed:

- a) waste suitable for specified engineering works; and
- b) waste on the working face during the operational hours of the facility.

5.6 Landscaping

5.6.1 Landscaping of the facility as described in Section 5.4 of Vol. 2 of the EIS shall be carried out within nine months of the date of grant of this licence.

5.6.2 The existing hedgerow network which forms part of the boundary of the facility shall be retained by the licensee as indicated in Fig. 3 "Existing Vegetation" in Vol. 3 of the EIS.

5.7 Operational Controls

5.7.1 All wastes to be deposited at the landfill, other than inert wastes that are to be used for cover, capping or restoration works, shall be deposited in 'Cell 1' and future cells which have been constructed in accordance with Condition 3.12. Following the completion of landfilling in 'Cell 1', the landfill shall be filled in accordance with the five phase sequence outlined in Drawing no. 152-505-01 Rev B.

5.7.2 All large hollow objects and other large articles deposited at the facility shall be crushed, broken up, flattened or otherwise treated.

5.7.3 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over, with the exception of works associated with the construction and installation of the leachate and gas collection/monitoring system, only with the prior agreement of the Agency.

- 5.7.4 Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate. Any depressions arising after profiling shall be rectified by the emplacement of suitable capping or restoration materials.
 - 5.7.5 Filled cells shall be permanently capped within twelve months of the cells having been filled to the required level.
 - 5.7.6 Scavenging shall not be permitted at the facility.
 - 5.7.7 Gates shall be locked shut when the facility is unsupervised.
 - 5.7.8 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
 - 5.7.9 Fuels shall only be stored at appropriately bunded locations on the facility.
 - 5.7.10 All tanks and drums shall be labelled to clearly indicate their contents.
 - 5.7.11 No smoking shall be allowed on the facility other than in the offices of the Materials Recovery Facility and the Administration Block (as shown on Drawing No. 152-505-01 Rev B).
 - 5.7.12 The silt trap and oil interceptor referred to in Condition 3.18 shall be inspected weekly, desludged as necessary and properly maintained at all times.
- 5.8 Waste Handling
- 5.8.1 Sludges
 - 5.8.1.1 Sewage sludge and industrial non-hazardous sludges shall only be accepted at the facility between the hours of 8:30 a.m. and 2.00 p.m. Monday to Friday inclusive. All sludges shall be covered immediately with other waste.
 - 5.8.1.2 From the 1st January 2004, only treated sewage sludge and treated industrial non-hazardous sludges shall be accepted for disposal at the facility.
 - 5.8.1.3 No sludges shall be accepted for disposal at the facility from 1st January 2006.
 - 5.8.1.4 In addition to the characterisation required under the Waste Acceptance Procedures, the licensee shall carry out analyses on a minimum of two samples per annum for all industrial sludges being accepted at the facility. The results of these analyses shall be presented in the Annual Environmental Report (AER).
 - 5.8.2 Compost
 - 5.8.2.1 Prior to the commencement of composting operations, the licensee shall submit to the Agency for agreement, procedures for the operation of the composting area(s) at the facility. These proposals shall include, as a minimum, waste acceptance procedures, nuisance control, surface water management, monitoring of composting process, monitoring of leachate generated within the compost area, monitoring of end product of composting process and proposed end uses for the compost.
 - 5.8.2.2 Unless otherwise agreed with the Agency, only source segregated organic waste, green waste and compost shall be used in the waste composting facility. The quantity of biodegradable waste to be composted at the facility shall not exceed 2,000 tonnes per annum.

- 5.8.2.3 The bulking agent to facilitate the composting process shall be bark mulch or other such similar bulking material agreed in advance with the Agency.
- 5.8.2.4 All wastes accepted to the organic waste composting unit shall be introduced into the compost process within 24 hours of delivery.
- 5.8.2.5 The compost windrows shall be covered with Top Tex Cover or equivalent at all times except when biodegradable waste including bulking agents are being added to the windrows, when moisture content of the windrow is being supplemented or when the compost is being mixed.
- 5.8.2.6 No waste shall be left uncovered in the composting area from the close of operation on Saturday until Monday morning opening unless otherwise agreed with the Agency.
- 5.8.2.7 The licensee shall maintain a daily written record of temperature and turning of the compost.
- 5.8.2.8 Unless otherwise agreed with the Agency, compost shall meet the quality criteria set out in *Schedule F: Standards for Compost Quality* of this licence.

5.9 Off-site Disposal and Recovery

- 5.9.1 Waste sent off-site for recovery or disposal shall only be conveyed by a waste contractor agreed by the Agency.
- 5.9.2 All waste transferred from the facility shall only be transferred to an appropriate facility agreed by the Agency.
- 5.9.3 All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.

5.10 Materials Recovery Facility

- 5.10.1 The Materials Recovery Facility shall only be used for the collection, storage or processing of source separated recyclable wastes, other than domestic waste from private vehicles. The facility shall not be used as a transfer station for the disposal of unsorted waste by commercial waste disposal contractors or local authority waste collection vehicles.
- 5.10.2 All waste accepted at the Materials Recovery Facility shall be either:
 - a) into a skip;
 - b) into the hopper of the compactor for disposal;
 - c) into a receptacle for recovery,
 - d) into a roofed storage area, or
 - e) in the case where inspection is required, into a designated inspection area.
- 5.10.3 The licensee shall assign and clearly label each container at the Materials Recovery Facility to indicate their contents.
- 5.10.4 All unsorted domestic waste accepted at the Materials Recovery Facility for disposal shall be compacted within 12 hours. Such waste shall be removed for disposal within 24 hours, or in the case of waste accepted on a Saturday within 48 hours, or in the case of waste accepted on the last working day prior to a Bank Holiday, during the next working day.
- 5.10.5 At the end of the working day the floor of the hopper and the compactor used for accepting unsorted domestic waste shall be cleared of waste.

- 5.10.6 All processing of waste at the Materials Recovery Facility (including sorting, baling and shredding) shall be done inside the building.
- 5.10.7 Unless otherwise agreed by the Agency, only the following wastes shall be accepted at the Materials Recovery Facility; domestic waste, paper, newspaper, cardboard, glass, timber, rubble, aluminium and steel cans, plastic, textiles/clothes, footwear, white goods, scrap metal, electrical goods (other than printers), waste oil, used cooking oil, fluorescent tubes, batteries, household paint, household chemicals and green waste.

5.11 Waste Handling Plant

- 5.11.1 Items of plant deemed critical to the efficient and adequate processing of waste at the Materials Recovery Facility (including *inter alia* waste loading vehicles and sorting lines) shall be provided on the following basis:
- 100% duty capacity;
 - 50% standby capacity;
 - Provision of contingency arrangements and/or back up and spares in the case of breakdown of critical equipment.
- 5.11.2 Within six months of the date of grant of this licence, the licensee shall provide a report for agreement to the Agency detailing the capacity in tonnes per day, of all waste handling and processing equipment to be used at the MRF. These capacities shall be based on the licensed waste intake, as per *Schedule A: Waste Acceptance* of this licence.
- 5.11.3 The quantity of waste to be accepted at the MRF on a daily basis shall not exceed the duty capacity of the equipment at the MRF. Any exceedance of this intake shall be treated as an incident and reported to the Agency under Condition 11.2.
- 5.11.4 The updated schedule of duty and standby plant shall be agreed with the Agency and reported in the Annual Environmental Report.

5.12 Leachate Management

- 5.12.1 Leachate shall be abstracted from waste deposited in unlined areas of the facility by means of the boreholes referred to under Condition 3.14.3. Such leachate shall be tankered off-site for treatment in accordance with Condition 6.6.
- 5.12.2 Leachate levels in the waste shall not exceed a level of 1.0m over the top of the liner at the base of the landfill (as measured at the leachate sump).
- 5.12.3 The frequency of leachate removal/discharge from the leachate lagoon shall be such that a minimum freeboard of 0.75m shall be maintained in the leachate lagoon at all times.
- 5.12.4 All leachate stored in the lined leachate storage lagoon shall be disposed of by tankering off-site in fully enclosed road tankers.
- 5.12.5 Recirculation of leachate or other contaminated water shall not be undertaken without the prior agreement of the Agency and, in any case, shall only be undertaken within cells which have been lined to the satisfaction of the Agency.

5.13 Maintenance

- 5.13.1 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or

installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.

- 5.13.2 All lagoon structures on the facility shall be inspected and certified fit for purpose every three years by an independent and appropriately qualified chartered engineer.
- 5.13.3 The licensee shall maintain and clearly label and name all sampling and monitoring locations.
- 5.13.4 The wheel-wash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheel-wash and disposed of at the working face.

REASON: To provide for appropriate operation of the facility to ensure protection of the environment.

CONDITION 6 EMISSIONS

- 6.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule C: Emission Limits* of this licence. There shall be no other emissions of environmental significance.
- 6.2. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 6.3. Landfill Gas
 - 6.3.1. The following are the trigger levels for landfill gas emissions from the facility measured in any service duct or manhole on, at or immediately adjacent to the facility and/or at any other point located outside the body of the waste:
 - a) Methane, greater than or equal to 1.0% v/v; and
 - b) Carbon dioxide, greater than or equal to 1.5% v/v.
 - 6.3.2. The concentration limits for emissions to atmosphere specified in this licence shall be achieved without the introduction of dilution air and shall be based on gas volumes under standard conditions of :-
 - a) in the case of landfill gas flare:

Temperature 273 K, pressure 101.3 kPa, dry gas at 3% oxygen; and
 - b) in the case of landfill gas utilisation plant (where relevant):

Temperature 273 K, pressure 101.3 kPa, dry gas; 5% oxygen.
 - 6.3.3. Emission limits for landfill gas emissions to atmosphere in this licence shall be interpreted in the following way:-
 - 6.3.3.1. Continuous monitoring
 - (i) No 24 hour mean value shall exceed the emission limit value.

(ii) 97% of all 30 minute mean values taken continuously over an annual period shall not exceed 1.2 times the emission limit value.

(iii) No 30 minute mean value shall exceed twice the emission limit value.

6.3.3.2. Non-Continuous Monitoring

(i) For any parameter where, due to sampling/analytical limitations, a 30 minute sample is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value.

(ii) For all other parameters, no 30 minute mean value shall exceed the emission limit value.

(iii) For flow, no hourly or daily mean value shall exceed the emission limit value.

6.4. Emissions to Surface Water

6.4.1. The trigger levels for surface water discharges from the facility measured at the monitoring points outlined in *Schedule D: Monitoring* of this licence are as follows:

(a) BOD 25mg/l

(b) Suspended Solids 35mg/l

6.4.2. No substance shall be discharged in a manner, or at a concentration which, following initial dilution causes tainting of fish or shellfish.

6.5. There shall be no direct emissions to groundwater.

6.6. Disposal of Leachate

6.6.1. All leachate or contaminated water tankered from the facility shall be tankered off-site for treatment at Ballybay Waste Water Treatment Plant or an alternative appropriate facility agreed in advance by the Agency. No leachate or contaminated water shall be discharged to surface water.

REASON: To control emissions from the facility and provide for the protection of the environment.

CONDITION 7 NUISANCE CONTROL

7.1 The licensee shall ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the facility, or in the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution or endanger protected species of fauna.

7.2 The road network in the vicinity of the facility shall be kept free from any debris caused by vehicles entering or leaving the facility. Any such debris or deposited materials shall be removed without delay.

7.3 Litter Control

- 7.3.1 Litter fencing shall be installed and maintained around the perimeter of the active tipping area. Litter trapped in the netting shall be removed as soon as practicable and in accordance with Condition 7.3.3 below.
- 7.3.2 All litter control infrastructure shall be inspected on a daily basis. The licensee shall remedy any defect in the litter netting as follows:
- a) a temporary repair shall be made by the end of the working day; and,
 - b) a repair to the standard of the original netting shall be undertaken within three working days.
- 7.3.3 All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed, subject to the agreement of the landowners, immediately and in any event by 10.00 a.m. of the next working day after such waste is discovered.
- 7.3.4 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.
- 7.4 Dust Control
- 7.4.1 In dry weather, site roads and any other areas used by vehicles shall be sprayed with water as and when required to minimise airborne dust nuisance.
- 7.4.2 All outdoor stockpiles of waste at the Materials Recovery Facility shall be maintained so as to minimise dust generation.
- 7.5 Prior to exiting the facility, all waste vehicles (excluding those using the MRF) shall use the wheelwash.
- 7.6 Bird Control
- 7.6.1 Birds shall be prevented from gathering on and feeding at the facility by the use of birds of prey and/or other bird scaring techniques. The birds of prey and/or other techniques shall be in place on the facility within three months of the date of grant of the licence.

REASON: To provide for the control of nuisances.

CONDITION 8 MONITORING

- 8.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule D: Monitoring* of this licence and as specified in this licence. Unless otherwise specified by this licence, all environmental monitoring shall commence no later than three months after the date of grant of this licence.
- 8.2. The licensee shall amend the frequency, locations, methods and scope of monitoring as required by this licence only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such alterations shall be carried out within any timescale nominated by the Agency.
- 8.3. Monitoring and analysis equipment shall be operated and maintained in accordance with the manufacturers' instructions (if any) so that all monitoring results accurately reflect any emission, discharge or environmental parameter.

- 8.4. The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 8.5. Landfill Gas
- 8.5.1. The licensee shall carry out monitoring of landfill gas at the monitoring points required under Condition 3.21.1 and those other locations listed in *Schedule D: Monitoring* of this licence.
- 8.5.2. All landfill gas monitoring equipment, other than permanent monitoring systems within buildings, shall be certified as being intrinsically safe.
- 8.6. Noise Monitoring
- 8.6.1. The licensee shall carry out noise monitoring as specified in Schedule F: Monitoring of this licence.
- 8.7. Groundwater Monitoring
- 8.7.1. Subject to the agreement of the well owners, all private wells within 250m of the facility shall be included in the monitoring programme set out in *Schedule D: Monitoring* of this licence.
- 8.7.2. Within six months of the date of grant of this licence, the licensee shall submit a report to the Agency for its agreement on how groundwater upgradient of the facility shall be monitored, with particular emphasis on identifying any impact caused by the old landfill located to the south of the present facility (as shown on Drawing No. 152-505-01).
- 8.8. Leachate Monitoring
- 8.8.1. Leachate levels within the filled waste shall be monitored at the three locations detailed in Condition 3.14.3 of this licence and the other leachate monitoring points listed in *Schedule D: Monitoring* of this licence.
- 8.8.2. The level of leachate in the pump sumps shall be monitored on a weekly basis.
- 8.9. Surface Water Monitoring
- 8.9.1. Within three months of the date of grant of this licence, the licensee shall initiate a monitoring programme for the surface water discharged from the facility. The programme shall, at minimum, fulfil the requirements of *Schedule D.5.1: Surface Water Monitoring* of this licence.
- 8.10. Meteorological Monitoring
- 8.10.1. The licensee shall make arrangements for representative meteorological data to be collated for the facility to fulfil the requirements of *Schedule D.6: Meteorological Monitoring* of this licence.
- 8.11. Topographical Survey
- 8.11.1. A topographical survey shall be carried out within six months of the date of grant of this licence. The survey shall include a measurement of the remaining available void space. It shall be repeated annually thereafter. The survey shall be in accordance with any written instructions issued by the Agency.
- 8.12. Biological Assessment

8.12.1. A biological assessment of the stream to the north of the facility shall be undertaken within six months of the date of grant of this licence and every two years thereafter. This assessment shall use appropriate biological methods such as the EPA Q-rating system for the assessment of rivers and streams. The location of this monitoring point shall be agreed with the Agency.

8.13. Archaeological Assessment

8.13.1. Prior to the development of any undisturbed area, the advice of Dúchas the Heritage Service shall be sought. On completion of such development a report of the results of any archaeological monitoring shall be submitted to Dúchas and to the Agency.

8.14. Nuisance Monitoring

8.14.1. The licensee shall, at a minimum of one week intervals, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust and odours.

REASON: To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions.

CONDITION 9 CONTINGENCY ARRANGEMENTS

9.1. In the event of an incident having taken place, the licensee shall immediately:

- a) identify the date, time and place of the incident;
- b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
- c) isolate the source of any such emission;
- d) evaluate the environmental pollution, if any, caused by the incident;
- e) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
- f) provide a proposal to the Agency for its agreement within one month of the incident occurring to:
 - i) identify and put in place measures to avoid recurrence of the incident; and
 - ii) identify and put in place any other appropriate remedial action.

9.2. The licensee shall, within nine months of the date of grant of this licence, submit a written Emergency Response Procedure (ERP) to the Agency for its agreement. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. This shall include a risk assessment to determine the requirements at the facility for fire fighting and fire water retention facilities. The Fire Authority shall be consulted by the licensee during this assessment.

9.3. The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.

9.4. Emergencies

9.4.1. All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects;

- 9.4.2. No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities;
- 9.4.3. In the event that monitoring of local wells indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply, this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected.

REASON: To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions.

CONDITION 10 RECORDS

- 10.1 The licensee shall keep the following documents at the facility office:
- a) the current waste licence relating to the facility;
 - b) the current EMS for the facility;
 - c) the previous year's AER for the facility;
 - d) all written procedures produced by the licensee which relate to the licensed activities.
- 10.2 The licensee shall maintain a written record for each load of waste arriving at the facility, excluding those arriving at the Materials Recovery Facility by private vehicles. The licensee shall record the following:
- a) the date;
 - b) the name of the carrier (including if appropriate, the waste carrier registration details);
 - c) the vehicle registration number;
 - d) the name of the producer(s)/collector(s) of the waste as appropriate;
 - e) the name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
 - f) a description of the waste including the associated EWC codes;
 - g) the quantity of the waste, recorded in tonnes;
 - h) the name of the person checking the load; and,
 - i) where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.
- 10.3 **Written Records**
- The following written records shall be maintained by the licensee:
- a) the types and quantities of waste recovered and disposed of at the facility each year. These records shall include the relevant EWC Codes;
 - b) all training undertaken by facility staff;
 - c) results from all integrity tests of bunds and other structures and any maintenance or remedial work arising from them;
 - d) details of all nuisance inspections; and

- e) the names and qualifications of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.
- 10.4 The licensee shall maintain a written record of all complaints relating to the operation of the facility. Each such record shall give details of the following:
- a) date and time of the complaint;
 - b) the name of the complainant;
 - c) details of the nature of the complaint;
 - d) actions taken on foot of the complaint and the results of such actions; and,
 - e) the response made to each complainant.
- 10.5 A written record shall be kept of each consignment of leachate removed from the facility. The record shall include the following:
- a) the name of the carrier;
 - b) the date and time of removal of leachate from the facility;
 - c) the volume of leachate, in cubic metres, removed from the facility on each occasion;
 - d) the name and address of the Waste Water Treatment Plant to which the leachate was transported;
 - e) any incidents or spillages of leachate during its removal or transportation.
- 10.6 A written record shall be kept for each load of waste departing from the Materials Recovery Facility other than those wastes removed by members of the public. The following shall be recorded:
- a) the name of the carrier;
 - b) the vehicle registration number;
 - c) the destination of the waste (facility name and waste licence/permit number as appropriate);
 - d) a description of the waste (if recovered or rejected waste, the specific nature of the waste);
 - e) the quantity of waste, recorded in tonnes;
 - f) the name of the person checking the load; and,
 - g) the time and date of departure.
- 10.7 A written record shall be kept at the facility of the programme for the control and eradication of vermin and fly infestations at the facility. These records shall include as a minimum the following:
- a) the date and time during which spraying of insecticide is carried out;
 - b) contractor details;
 - c) contractor logs and site inspection reports;
 - d) details of the rodenticide(s) and insecticide(s) used;
 - e) operator training details;
 - f) details of any infestations;
 - g) mode, frequency, location and quantity of application; and,
 - h) measures to contain sprays within the facility boundary.

- 10.8 A written record shall be kept of the inspections, desludging, cleaning, maintenance and performance of the silt trap and oil interceptor referred to in *Condition 3.18: Materials Recovery Facility* of this licence.

REASON: To provide for the keeping of proper records of the operation of the facility.

CONDITION 11 REPORTS AND NOTIFICATIONS

- 11.1 Unless otherwise agreed by the Agency, all reports and notifications submitted to the Agency shall:
- a) be sent to the Agency's headquarters;
 - b) comprise one original and three copies unless additional copies are required;
 - c) be formatted in accordance with any written instruction or guidance issued by the Agency;
 - d) include whatever information as is specified in writing by the Agency;
 - e) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
 - f) be submitted in accordance with the relevant reporting frequencies specified by this licence, such as in *Schedule E: Recording and Reporting to the Agency* of this licence;
 - g) be accompanied by a written interpretation setting out their significance in the case of all monitoring data; and
 - h) be transferred electronically to the Agency's computer system if required by the Agency.
- 11.2 In the event of an incident occurring on the facility, the licensee shall:
- a) notify the Agency as soon as practicable and in any case not later than 10.00 a.m. the following working day after the occurrence of any incident;
 - b) submit a written record of the incident, including all aspects described in Condition 9.1(a-e), to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident; and
 - c) in the event of any incident which relates to discharges to surface water, notify the Eastern Regional Fisheries Board as soon as practicable and in any case not later than 10.00 a.m. on the following working day after such an incident.
 - d) Should any further actions be taken as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.
- 11.3 Waste Recovery Reports
- Within twelve months of the date of grant of this licence, a report examining waste recovery options shall be submitted to the Agency for its agreement. This report shall address methods to contribute to the achievement of the recovery targets stated in national and European Union waste policies.
- 11.4 Reports relating to Facility Operations
- 11.4.1 Leachate Handling Procedures
- 11.4.1.1 The licensee shall submit to the Agency for its agreement, prior to the use of the leachate storage lagoon, Leachate Handling Procedures for the handling

of leachate on the facility and during removal from the lagoon and subsequent transport to the Waste Water Treatment Plant.

11.4.2. Operation in Adverse Wind Conditions

11.4.2.1 Within six months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement proposals for the operation of the facility in adverse wind conditions.

11.5 Vermin and Flies

11.5.1. Within three months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement a proposal for the control and eradication of vermin and fly infestations at the facility. This proposal should include as a minimum, operator training, details on the rodenticide(s) and insecticide(s) to be used, mode and frequency of application and measures to contain sprays within the facility boundary.

11.6 Monitoring Locations

11.6.1. Within three months of the date of grant of this licence, the licensee shall submit to the Agency an appropriately scaled drawing(s) showing all the monitoring locations that are stipulated in this licence. The drawing(s) shall include the reference code of each monitoring point.

11.7 Annual Environmental Report

11.7.1. The licensee shall submit to the Agency for its agreement, within thirteen months of the date of grant of this licence, and within one month of the end of each calendar year thereafter, an Annual Environmental Report (AER).

11.7.2. The AER shall include as a minimum the information specified in *Schedule G: Content of the Annual Environmental Report* and shall be prepared in accordance with any relevant written guidance issued by the Agency.

REASON: To provide for proper report to and notification to the Agency.

CONDITION 12 CHARGES AND FINANCIAL PROVISIONS

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of £13,338 (€16,936) or such sum as the Agency from time to time determines, towards the cost of monitoring the activity or otherwise in performing any functions in relation to the activity, as the Agency considers necessary for the performance of its functions under the Waste Management Act, 1996. The licensee shall in 2002 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Public Sector Average Earnings Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 2001, the licensee shall pay a pro rata amount from the date of this licence to 31st December, 2001. This amount shall be paid to the Agency within one month of the date of grant of this licence.

12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased, the licensee shall contribute such sums as determined by the Agency to defraying its costs.

12.2 Financial Provision for Closure, Restoration and Aftercare

12.2.1 The licensee shall from a date to be set by the Agency establish and maintain a fund, or provide a written guarantee, that is adequate to assure the Agency that the licensee is at all times financially capable of implementing the Restoration and Aftercare Plan required by *Condition 4: Restoration and Aftercare* of this licence. The type of fund established and means of its release/recovery shall be agreed by the Agency prior to its establishment.

12.2.2 Any fund established shall be maintained in an amount always sufficient to underwrite the current Restoration and Aftercare Plan.

12.2.3 The licensee shall revise the cost of restoration and aftercare annually and any details of the necessary adjustments to the fund or guarantee must, within two weeks of the revision, be forwarded to the Agency for its agreement. Any adjustment agreed by the Agency shall be effected within four weeks of said written agreement.

12.2.4 Unless otherwise agreed any revision to the fund shall be computed using the following formula:

$$\text{Cost} = (\text{ECOST} \times \text{WPI}) + \text{CiCC}$$

Where:

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

WPI = Appropriate Wholesale Price Index [Capital Goods, Building & Construction (i.e. Materials & Wages) Index], as published by the Central Statistics Office, for the year since last closure calculation/revision.

CiCC = Change in compliance costs as a result of change in site conditions, changes in law, regulations, regulatory authority charges, or other significant changes.

REASON: To provide for adequate financing for monitoring and financial provisions for measures to protect the environment.

SCHEDULE A : Waste Acceptance

A.1 Waste Acceptance

Table A.1 Waste Categories and Quantities

WASTE TYPE	MAXIMUM TONNES PER ANNUM
Household	12,600
Commercial	5,700
Sewage Sludge ^{Note 1}	5,000
Treated Industrial Non-hazardous Sludges ^{Note 1}	600
Construction and Demolition	2,800
Industrial Non-hazardous	12,800
TOTAL	39,500

Note 1: Subject to the Conditions of the licence.

SCHEDULE B : Specified Engineering Works

Specified Engineering Works
Development of the facility including preparatory works and lining.
Final capping.
Installation of Wheel Cleaning.
Installation of Compost Facility.
Installation of Landfill Gas Management and Monitoring Infrastructure.
Installation of Leachate Management and Monitoring Infrastructure.
Installation of Groundwater Control and Monitoring Infrastructure.
Installation of Surface Water Management Infrastructure.
Any other works notified in writing by the Agency.

SCHEDULE C : Emission Limits

C.1 Noise Emissions: (Measured at the monitoring points indicated in Table D.1.1)

Day dB(A) L _{Aeq} (30 minutes)	Night dB(A) L _{Aeq} (30 minutes)
55	45

C.2 Landfill Gas Concentration Limits: (Measured in any building on or adjacent to the facility or at any other point located outside the body of the waste).

Methane	Carbon Dioxide
20 % LEL (1% v/v)	1.5 % v/v

C.3 Dust Deposition Limits: (Measured at the monitoring points indicated in Table D.1.1).

Level (mg/m ² /day) ^{Note 1}
350

Note 1: 30 day composite sample with the results expressed as mg/m²/day.

C.4 Surface Water Discharge Limits: (Measured at the monitoring points for discharges to surface water indicated in Table D.1.1).

Level (Mineral Oils mg/l)
5

C.5 Emission Limit Values for Landfill Gas Flares

Emission Point reference nos: To be agreed with the Agency.

Location: Landfill Gas flarestack(s).

Volume to be emitted: To be agreed with the Agency.

Minimum discharge height: To be agreed with the Agency.

Parameter	Emission Limit Value
Nitrogen oxides as (NO ₂)	150 mg/m ³
CO	50 mg/m ³
Particulates	130 mg/m ³
TA Luft Organics Class I ^{Note 1}	20 mg/m ³ (at mass flows > 0.1 kg/hr)
TA Luft Organics Class II ^{Note 1}	100 mg/m ³ (at mass flows > 2 kg/hr)
TA Luft Organics Class III ^{Note 1}	150 mg/m ³ (at mass flows > 3kg/hr)
Hydrogen Chloride	50 mg/m ³ (at mass flows > 0.3 kg/h)
Hydrogen Fluoride	5 mg/m ³ (at mass flows > 0.05 kg/h)

Note 1: In addition to the above individual limits, the sum of the concentrations of Class I, II and III shall not exceed the Class III limits.

SCHEDULE D : Monitoring

Monitoring to be carried out as specified below.

D.1 Monitoring Locations

Monitoring locations shall be those as set out in Table D.1.1.

Table D.1.1 Monitoring Locations

LANDFILL GAS	DUST	NOISE	SURFACE WATER	GROUND WATER	LEACHATE
STATIONS	STATIONS	STATIONS	STATIONS	STATIONS	STATIONS
Boreholes as per Conditon 3.21	4 boundary locations (east, west, north and south)	NSL 1 ^{Note 1}	S5 ^{Note 4}	S3 ^{Note 5}	The leachate sump in 'Cell 1'
1 location at Site office (administration block)		NSL 2 ^{Note 1}	S6 ^{Note 4}	RC1 ^{Note 5}	L2 ^{Note 3}
2 locations at MRF building		1 location along northern boundary	S7 ^{Note 4}	Boreholes at 4 locations as per Condition 3.21	The leachate lagoon
		1 location along western boundary	1 location along western boundary	At surface water discharge points	3 boreholes as per Condition 3.14
			At MRF surface water discharge point ^{Note 2}	7 Private wells within 250m of facility ^{Note 6}	

Note 1: Monitoring locations as shown in Figure 1 of Attachment C.8 of the application.

Note 2: Where the collected surface water arising from the Materials Recovery Facility is discharged to surface water, a monitoring location shall be established prior to the point of discharge. This monitoring location will be downstream of the silt trap and oil interceptor and the exact location is to be agreed with the Agency.

Note 3: Leachate sump in unlined cell as shown in Figure 2 "Surface Water Monitoring Points" of Article 16 reply (received 30/1/01).

Note 4: As shown in Figure 2 "Surface Water Monitoring Points" of Article 16 reply (received 30/1/01).

Note 5: As shown in Figure 1 "Groundwater Monitoring Points" of Article 16 reply (received 30/1/01).

Note 6: Private wells: W1, W2, W3, W4, W5, W6 and W7 as shown in Drawing No. 152-505-02 "Existing wells within 250m of landfill" of Article 16 reply (received 30/1/01).

D.2 Landfill Gas

Table D.2.1 Landfill Gas Monitoring Parameters, Frequency and Technique

Parameter	Monitoring Frequency		Analysis Method ^{Note1} /Technique ^{Note2}
	Gas Boreholes/ Vents/Wells	Site Office/MRF	
Methane (CH ₄) % v/v	Monthly	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO ₂)%v/v	Monthly	Weekly	Infrared analyser/ flame ionisation detector
Oxygen(O ₂) %v/v	Monthly	Weekly	Electrochemical cell
Atmospheric Pressure	Monthly	Weekly	Standard
Temperature	Monthly	Weekly	Standard

Note 1: All monitoring equipment used should be intrinsically safe.

Note 2: Or other methods agreed in advance with the Agency.

D.3 Dust

Table D.3.1 Dust Monitoring Frequency and Technique

Parameter (mg/m ² /day)	Monitoring Frequency	Analysis Method/Technique
Dust	Three times a year ^{Note 2}	Standard Method ^{Note 1}

Note 1: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). A modification (not included in the standard) which 2 methoxy ethanol may be employed to eliminate interference due to algae growth in the gauge.

Note 2: Twice during the period May to September.

D.4 Noise

Table D.4.1 Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) _{EQ} [30 minutes]	Annual	Standard ^{Note 1}
L(A) ₁₀ [30 minutes]	Annual	Standard ^{Note 1}
L(A) ₉₀ [30 minutes]	Annual	Standard ^{Note 1}
Frequency Analysis (1/3 Octave band analysis)	Annual	Standard ^{Note 1}

Note 1: "International Standards Organisation. ISO 1996. Acoustics - Description and Measurement of Environmental Noise. Parts 1, 2 and 3."

D.5 Surface Water, Groundwater and Leachate

Table D.5.1 Water and Leachate - Parameters /Frequency

Parameter ^{Note 1}	SURFACE WATER	GROUNDWATER	LEACHATE
	Monitoring Frequency	Monitoring Frequency	Monitoring Frequency
Visual Inspection/Odour ^{Note 2}	Weekly	Quarterly	Quarterly
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Weekly
Ammoniacal Nitrogen	Quarterly ^{Note 6}	Quarterly	Quarterly
BOD	Quarterly ^{Note 6}	Not Applicable	Quarterly
COD	Quarterly	Not Applicable	Quarterly
Chloride	Quarterly	Quarterly	Quarterly
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Electrical Conductivity	Quarterly ^{Note 6}	Quarterly	Quarterly
pH	Quarterly ^{Note 6}	Quarterly	Quarterly
Total Suspended Solids	Quarterly ^{Note 6}	Not Applicable	Not Applicable
Temperature	Quarterly ^{Note 6}	Monthly	Quarterly
Boron	Not Applicable	Annually	Annually
Cadmium	Annually	Annually	Annually
Calcium	Annually	Annually	Annually
Chromium (Total)	Annually	Annually	Annually
Copper	Annually	Annually	Annually
Cyanide (Total)	Quarterly	Quarterly	Quarterly
Fluoride	Not Applicable	Annually	Annually
Iron	Annually	Quarterly	Annually
Lead	Annually	Annually	Annually
List I/II Organic Substances ^{Note 3}	Note 8	Annually	Note 8
Mineral Oils	Quarterly ^{Note 9}	Not Applicable	Not Applicable
Magnesium	Annually	Annually	Annually
Manganese	Annually	Annually	Annually
Mercury	Annually	Annually	Annually
Potassium	Annually	Quarterly	Annually
Sulphate	Annually	Annually	Annually
Sodium	Annually	Quarterly	Annually
Total Alkalinity	Annually	Annually	Annually ^{Note 5}
Total Phosphorus / Orthophosphate	Annually ^{Note 6}	Annually	Annually
Total Oxidised Nitrogen	Annually	Quarterly	Quarterly
Total Organic Carbon	Not Applicable	Quarterly	Not Applicable
Residue on Evaporation	Not Applicable	Annually	Not Applicable
Zinc	Annually	Annually	Annually
Phenols	Not Applicable	Quarterly	Not Applicable
Faecal Coliforms ^{Note 4}	Not Applicable	Quarterly	Annually
Total Coliforms ^{Note 4}	Not Applicable	Quarterly	Annually
Biological Assessment	Annually ^{Note 7}	Not Applicable	Not Applicable

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

Note 2: Where there is evident gross contamination of leachate, additional samples should be analysed.

Note 3: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent),

semi-volatiles (US Environmental Protection Agency method 525 or equivalent), and pesticides (US Environmental Protection Agency method 608 or equivalent).

- Note 4: In the case where groundwater is extracted for drinking water, if there is evidence of bacterial contamination, the analysis at up gradient and downgradient monitoring points should include enumeration of total bacteria at 22°C and 37°C and faecal streptococci.
- Note 5: Only to be analysed in instances of on-site treatment of leachate.
- Note 6: Discharge of diverted surface water/groundwater shall be monitored on a monthly basis for these parameters unless flow in that month does not allow such monitoring.
- Note 7: Appropriate biological methods (such as EPA Q-Rating System to be used for the assessment of rivers and streams).
- Note 8: Once off for List I/II organic substances.
- Note 9: Applicable to surface water discharges from the Materials Recovery Facility.

D.6 Meteorological Monitoring

Data to be obtained from a location to be agreed with the Agency.

Table D.6.1 Meteorological Monitoring - Parameters/Frequency

Parameter	Monitoring Frequency	Analysis Method/Technique
Precipitation Volume	Daily	Standard
Temperature (min/max)	Daily	Standard
Wind Force and Direction	Daily	Standard
Evaporation	Daily	Standard
Evapotranspiration	Daily	Standard
Humidity	Daily	Standard
Atmospheric Pressure	Daily	Standard

D.7 Landfill Gas Flarestack

Monitoring to be carried out at locations to be agreed with the Agency prior to installation of the landfill gas flare.

Table D.7.1 Landfill Gas Flarestack - Parameters/Frequency

Parameter	Monitoring Frequency	Analysis Method ^{Note1} /Technique ^{Note2}
Inlet		
Methane (CH ₄) % v/v	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO ₂)% v/v	Weekly	Infrared analyser
Oxygen (O ₂) % v/v	Weekly	Electrochemical cell / Paramagnetic cell
Outlet		
Volumetric Flow rate	Biannually	Pitot Tube Method
SO ₂	Biannually	Flue gas analyser
NO _x	Biannually	Flue gas analyser
CO	Continuous	Flue gas analyser
Particulates	Annually	Isokinetic/Gravimetric
TA Luft Class I, II, III organics	Annually	Adsorption/Desorption / GC /GCMS ^(Note 3)
Hydrochloric acid	Annually	Impinger / Ion Chromatography
Hydrogen fluoride	Annually	Impinger / Ion Chromatography

Note 1: All monitoring equipment used should be intrinsically safe.

Note 2: Or other methods agreed in advance with the Agency.

Note 3: Test methods should be capable of detecting acetonitrile, dichloromethane, tetrachlorethylene and vinyl chloride as a minimum.

SCHEDULE E : Recording and Reporting to the Agency

Report	Reporting Frequency ^{Note1}	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year being reported on.
Annual Environment Report (AER)	Annually	Thirteen months after the date of grant of the licence and one month after the end of each calendar year thereafter.
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Six months after the date of grant of the licence and one month after the end of the three year period being reported on.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of landfill gas	Quarterly	Ten days after the end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after the end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after the end of the quarter being reported on.
Monitoring of Leachate	Quarterly	Ten days after the end of the quarter being reported on.
Meteorological Monitoring	Annually	One month after the end of the year being reported on.
Dust Monitoring	Three times a year	Ten days after the period being reported on
Noise Monitoring	Annually	One month after the end of the year being reported on.
Topographical Survey	Annually	Within six months of the date of grant of this licence, and at the end of each year thereafter.
Any other monitoring	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency.

SCHEDULE F : Standards for Compost Quality

The following criteria are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, NH₄-N, NO₃-N, pH and dry matter content should also be measured.

Compost shall be deemed unsatisfactory if more than 10% of samples fail the criteria below. No sample shall exceed 1.2 times the quality limit values set.

1. Maturity

Compost shall be deemed to be mature if:
it meets two of the following requirements:

- C/N ratio ≤ 25.
- oxygen uptake rate ≤ 150 mg O₂/kg volatile solids per hour.
- germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
- Elimination of the following test organisms (used to evaluate composting system efficiency in removing plant pathogens and weed seeds during the composting process): *Plasmodiophora brassicae*, tobacco-mosaic-virus (TMV) and tomato seeds.

Guidance on test may be obtained from the German document LAGA M10 'Quality Criteria and Application Recommendations for Compost'.

2. Foreign Matter

Compost must not contain any sharp foreign matter measuring over a 2 mm dimension that may cause damage or injury to humans, animals and plants during or resulting from its intended use.

Foreign matter content as a percentage of oven-dried mass	≤1.5
Foreign matter, maximum dimensions, in mm	25

3. Trace Elements

Maximum Trace Element Concentration Limits for Compost

Trace Elements	(mg/kg, dry mass)
Arsenic (As) ^{Note 1}	15
Cadmium (Cd)	1.5
Chromium (Cr)	100
Copper (Cu)	100
Mercury (Hg)	1
Molybdenum (Mo) ^{Note 1}	5
Nickel (Ni)	50
Lead (Pb)	150
Selenium (Se) ^{Note 1}	2
Zinc (Zn)	350

Note 1: Monitoring of these parameters required if waste from an industrial source.

Note 2: The above alone should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.

4. Pathogens

Pathogenic organism content must not exceed the following limits:

- the quantity of faecal coliforms must be < 1,000 Most Probable Number (MPN)/g of total solids calculated on a dry weight basis; and
- there can be no salmonellae present (< 3 MPN/4g total solids).

5. Monitoring

The licensee shall monitor the compost product at least monthly. The licensee shall submit to the Agency for its agreement, prior to commencement of compost operations, details of methods of analyses and sample numbers.

SCHEDULE G : Content of the Annual Environmental Report

Annual Environmental Report Content

Reporting Period.

Waste activities carried out at the facility.

Quantity and Composition of waste received, disposed of and recovered during the reporting period and each previous year.

Calculated remaining capacity of the facility and year in which final capacity is expected to be reached.

Methods of deposition and recovery of waste.

Summary report on emissions.

Summary of results and interpretation of environmental monitoring.

Resource and energy consumption summary.

Proposed development of the facility and timescale of such development (including plant operating capacity at the MRF, provision of adequate standby capacity and provision of contingency, backup and spares in the case of breakdown).

Volume of leachate produced and volume of leachate transported / discharged off-site.

Report on development works undertaken during the reporting period, and a timescale for those proposed during the coming year.

Report on restoration of completed cells/ phases.

Site survey showing existing levels of the facility at the end of the reporting period.

Estimated annual and cumulative quantities of landfill gas emitted from the facility.

Estimated annual and cumulative quantity of indirect emissions to groundwater.

Annual water balance calculation and interpretation.

Report on the progress towards achievement of the Environmental Objectives and Targets contained in previous year's report.

Schedule of Environmental Objectives and Targets for the forthcoming year.

Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.

Tank, pipeline and bund testing and inspection report.

Reported incidents and Complaints summaries.

Review of Nuisance Controls.

Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information.

Report on training of staff.

Any other items specified by the Agency.

Signed on behalf of the said Agency
on the 12th day of July, 2001

A. Bolger **Authorised Person**