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WASTE LICENCE

REMEDICATION & RESTORATION OF AN UNAUTHORISED LANDFILL

PROPOSED DECISION

Waste Licence	181-1
Register Number:	
Applicant:	Swalcliffe Limited
Location of Facility:	Disused Sand/Gravel Pit, Coolamaddra, Glen of Imaal, County Wicklow

INTRODUCTION

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

This Proposed Decision for a waste licence is for activities associated with the cleanup of an unauthorised landfill of approximately 10,000 tonnes of mixed construction, chemical, municipal, hospital, and hazardous clinical waste emplaced in 2001 at a disused sand and gravel pit of area 0.42ha, in Coolamaddra County Wicklow. The waste licence application by Swalcliffe Limited, arises out of a High Court Judgement on 31 July 2002, issued on 14 August 2002.

The principal activity (3rd Schedule, Class 7) is specifically related to the excavation and recovery of waste by sorting (via a trommel) and its segregation prior to off-site disposal at a licensed facility.

The licence sets out in detail the conditions under which Swalcliffe Limited will operate and manage this facility.

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DECISION & REASONS FOR THE 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 Agency proposes, under Section 40(1) of the said Act to grant this Waste Licence to Swalcliffe Limited to carry on the waste activities listed below at Coolamaddra, Glen of Imaal, County Wicklow 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 the deposit of recovered inert soils at the facility following the excavation and treatment of waste.
Class 4	Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons: This activity is limited to the collection and temporary storage of leachate arising from the waste body during excavation and treatment of waste.
Class 6	Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule: This activity is limited to bioremediation activities at the facility subject to the agreement of the Agency.
Class 7	Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule: This activity is limited to the excavation and recovery of waste by sorting (via a trommel) and its segregation prior to off-site disposal at a licensed facility, and to the chemical treatment and sterilisation of waste in the form of chlorination of potentially hazardous or infectious wastes, prior to dispatch.
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 blending or mixing of waste prior to disposal off site.
Class 12	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule: This activity is limited to compaction and repackaging of waste prior to disposal off site.
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 storage of waste prior to disposal off site.

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

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 storage of organic materials prior to recovery off-site.
Class 3	Recycling or reclamation of metals and metal compounds: This activity is limited to the storage of metals prior to recovery off-site.
Class 4	Recycling or reclamation of other inorganic materials: This activity is limited to the storage of inorganic materials prior to recovery off-site.
Class 10	The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system: This activity is limited to the re-use of inert soils segregated from the excavated waste body.
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 waste prior to recovery.

Part II: Activities Refused

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Act to refuse the following classes of activity.

*Refused waste recovery activities, in accordance with the Fourth Schedule
of the Waste Management Act, 1996*

Class 6	Recovery of components used for pollution abatement: Reason: This activity was applied for in error. No such activity is envisaged.
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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.

Aerosol	A suspension of solid or liquid particles in a gaseous medium.
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.
BAT	Best Available Techniques as defined in Article 2(11) of Council Directive 96/61/EC concerning integrated pollution prevention and control.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
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	0800 hrs to 2200 hrs.
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 <i>Schedule C: Emission Limits</i> , 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 civic waste 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 civic waste 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, or be adversely affected by other matter, including waters, with which it comes into contact in a way likely to give rise to environmental pollution and in particular will 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	Swalcliffe Limited.
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.
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	2200 hrs to 0800 hrs.
Non-hazardous	Includes bonded asbestos, such as tiles, which are not classified as hazardous

Asbestos Waste	waste and which are authorised for disposal at the facility.
Recyclable Materials	Those waste types, such as cardboard, batteries, gas cylinders, etc which may 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.
SCADA system	Supervisory Control and Data Acquisition system.
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 <i>Schedule C: Emission Limits</i> , of this licence.
Specified Engineering Works	Those engineering works listed in <i>Schedule B: Specified Engineering Works</i> , 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.
Treatment	Treatment means the physical, thermal, chemical or biological processes, including sorting, that change the characteristics of the waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery.
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: 0900 hrs to 1730 hrs 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 III 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 Drawing No. Plot ref. 207842_2_1 of the application. Any reference in this licence to “facility” shall mean the area thus outlined in red.
- 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. Wastes may be recovered at the facility and exported from the facility subject to the maximum quantities and other constraints listed in *Schedule A: Waste Handled*, of this licence.
- 1.5. Hours of Operation
 - 1.5.1 Waste activities may be carried out at the facility up to 24 hours a day, seven days a week.
- 1.6. 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.
- 1.7. 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.
 - 1.7.1 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.
 - 1.7.2 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.
- 1.8. 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 is a registered professional with chartered status awarded by a relevant professional body as the designated 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 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.
- 2.1.3 The licensee shall ensure that experienced supervisors are provided at key work areas and at the 'warm and hot areas', specified in the Health & Safety Report – Document 3, to ensure that any medical or hazardous waste materials are handled in a way that minimises risk to site personnel and ensures compliance with the Health and Safety Plan specified in Condition 2.3.1.

2.2 Management Structure

- 2.2.1 Prior to the commencement of waste activities the licensee shall submit written details of the management structure of the 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 Health and Safety Plan

- 2.3.1 The licensee shall establish and maintain the Health and Safety Plan for the facility as specified in the 'Health & Safety Report - Document 3': Response to High Court Order Ref: 2002 No. 25 MCA, September 2002.
- 2.3.2 All personnel must undergo the health and safety induction specified in Condition 2.3.1, prior to any facility access.

2.4 Communications Programme

- 2.4.1 The licensee shall establish and maintain a Communications Programme to inform and involve the local community and 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 one month of the date of grant 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 prior to the commencement of the licensed activities or as required by the conditions of this licence.
- 3.2 Facility Notice Board
- 3.2.1 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.
- 3.2.2 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.
- 3.3 Facility Security
- 3.3.1 Temporary security and stockproof fencing and gates shall be installed and maintained to a height of 2m on the north, east and west sides of the facility.
- 3.3.2 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 Facility Office
- 3.4.1 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.
- 3.4.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.
- 3.5 Waste Storage and Quarantine Area
- 3.5.1 Prior to commencement of recovery operations the waste storage and quarantine area shall be provided and maintained at the facility as described in Section 4.5.2 of the 'Method Statement - Document 1': Response to High Court Order Ref: 2002 No. 25 MCA, September 2002, and specified in Figure 01 Rev A.
- 3.5.2 This area 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.
- 3.5.3 Drainage from this area shall be directed to the leachate collection sump specified in Condition 3.9.1.

3.6 Waste Dispatch Point

3.6.1 The licensee shall provide and maintain a gate house which controls a security barrier at the main entrance to the facility.

3.7 Wheel Cleaning

3.7.1 The licensee shall establish and maintain a portable jetwash/wheelwash at the facility.

3.8 Waste Handling and Processing Plant

3.8.1 Items of plant deemed critical to the efficient and adequate processing of waste at the facility (including *inter alia* trommel unit, hoppers and shaker bars, inclined conveyors) as specified in Section 6.2 of the 'Method Statement - Document 1': Response to High Court Order Ref: 2002 No. 25 MCA, September 2002) shall be provided and maintained.

3.9 Leachate Management Infrastructure

3.9.1 The leachate management infrastructure including a leachate collection tank described in Attachment D4 of the application: Leachate Management Arrangement and specified in Drawing No. Figure 01 Rev A, shall be provided and maintained at the facility.

3.9.2 Prior to the installation of the leachate collection tank, the licensee shall submit water balance calculations to the Agency and obtain its agreement on the size and capacity of the leachate holding tank.

3.9.3 All structures for the storage of leachate shall be fully enclosed except for inlet and outlet piping. The leachate holding tank shall be fitted with a high level visual and audio alarm.

3.10 Surface Water Management

3.10.1 The surface water management infrastructure to include the temporary installation of interlocking sheet piles between the waste body and Coolamaddra Stream described in Attachment D of the application: Facility Design and specified in 'Tab 7' of 'Method Statement - Document 1': Response to High Court Order Ref: 2002 No. 25 MCA, September 2002, shall be provided and maintained at the facility.

3.11 Groundwater Management

3.11.1 The groundwater management infrastructure described in Attachment F of the application: Proposed Environmental Monitoring and specified in *Schedule C: Monitoring*, of this licence shall be provided and maintained at the facility.

3.12 Monitoring Infrastructure

3.12.1 Replacement of Infrastructure

Monitoring infrastructure which is damaged or proves to be unsuitable for its purpose shall be replaced within one month of it being damaged or recognised as being unsuitable.

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

CONDITION 4 RESTORATION AND AFTERCARE

- 4.1. The licensee shall restore the facility utilising the existing sand and gravel deposits and stockpiles of clay. Importation of soils or inert material, shall only occur as part of an approved restoration plan, to be agreed by the Agency.
- 4.2. The surface profile shall be graded to allow the return of the lands for agricultural purposes on completion of the works required by the licence.
- 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.
- 4.4. The restoration of the landfill facility shall be completed within twelve months of the date of grant of this licence.

REASON: To provide for the restoration of the facility.

CONDITION 5 FACILITY OPERATION AND WASTE MANAGEMENT

- 5.1. Wastes shall not be excavated and/or recovered on any part of the facility without the prior agreement of the Agency.
- 5.2. Remediation of the Facility
 - 5.2.1. The remediation of the facility shall be in accordance with:
 - (a) 'Method Statement - Document 1': Response to High Court Order Ref: 2002 No. 25 MCA. September 2002. Prepared by S. M. Bennet & Co. Ltd.
 - (b) 'Health & Safety Report - Document 3': Response to High Court Order Ref: 2002 No. 25 MCA. September 2002. Prepared by S. M. Bennet & Co. Ltd.
 - (c) Attachment D: Facility Design and Attachment E: Waste Acceptance and Handling of the application, prepared by NESAs.
- 5.3. Waste Characterisation Procedures
 - 5.3.1. Prior to commencement of waste activities at the facility, the licensee shall submit to the Agency and obtain its agreement on written procedures for the stockpiling, handling, and classification of all material, waste, or soil arising from the remediation of the facility. These procedures shall include methods for the characterisation of waste in order to distinguish between inert, non-hazardous and hazardous wastes. The procedures shall have regard to the EU decision (2003/33/EC) on establishing the criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive (1999/31/EC) on the landfill of waste.
 - 5.3.2. The excavation of waste will be by section grid (5m x 20m) which will be removed by dumper to main waste processing area.

- 5.3.3 The acceptance of inert waste for recovery shall be as specified in *Schedule E: Acceptance of Inert Waste* of this licence.
- 5.3.4 No wastes shall be disposed of at the facility and no waste shall be imported into the facility for treatment.
- 5.4 Working Face
- 5.4.1 Unless the prior agreement of the Agency is given, the following shall apply at the landfill and point of excavation:-
- a) Only one working face shall exist at the landfill at any one time for the excavation of waste; and
 - b) The working face of the landfill shall be no more than 2.5 metres in height, no more than 25 metres wide and have a slope no greater than 1 in 3.
- 5.4.2 The working face, 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.
- 5.6 Operational Controls
- 5.6.1 The excavation process will be deemed to be completed once excavations have been carried out to a minimum of 1m below the deposited waste.
- 5.6.2 Remediated areas of the landfill shall be profiled so that no depressions exist in which water may accumulate.
- 5.6.3 Scavenging shall not be permitted at the facility.
- 5.6.4 Gates shall be locked shut when the facility is unsupervised.
- 5.6.5 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
- 5.6.6 Fuels shall only be stored at appropriately bunded locations on the facility.
- 5.6.7 All tanks, drums, and waste stockpiles shall be labelled to clearly indicate their contents.
- 5.6.8 No smoking shall be allowed on the facility.
- 5.7 Off-site Disposal and Recovery
- 5.7.1 All wastes other than the inert waste recovered in accordance with Condition 5.3.1 shall be exported from the facility and disposed of or recovered at an appropriate facility or facilities to be agreed in advance with the Agency.
- 5.7.2 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.
- 5.8 Maintenance
- 5.8.1 All waste treatment and sorting 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.
- 5.8.2 The licensee shall maintain and clearly label and name all sampling and monitoring locations.

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; or
 - b) Carbon dioxide, greater than or equal to 1.5% v/v.
- 6.4. Groundwater
- 6.4.1 There shall be no direct emissions to groundwater.
- 6.5. Emissions to Surface Water
- 6.5.1. No raw leachate, treated leachate or contaminated surface water shall be discharged to the Coolamaddra Stream.
- 6.6. Disposal of Leachate
- 6.6.1. All leachate and wastewater removed from the leachate holding tank shall be disposed of by tankering off-site in fully enclosed tankers to a Waste Water Treatment Plant. Prior to commencement of waste activities, the licensee shall submit written details of the name and location of the Waste Water Treatment Plant.
- 6.6.2. The frequency of removal of leachate shall be such as to avoid spillage or overflow.

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.
- 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 waste excavation and treatment area.

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 10.00am 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.

7.5 Prior to exiting the facility, all waste vehicles shall use the jetwash.

7.6 Odour Control

7.6.1 The maximum height of waste and recovered soil stockpiles is to be 2m high. Stockpiles shall be covered with tarpaulins or an impermeable geotextile progressively, and at the end of each working day, as appropriate.

7.6.2 An anti-bacterial spray, as agreed with the Agency, shall be applied every two hours to uncovered waste stockpiles during the working day.

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 start on commencement of waste activities and continue for a period of one year.

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 Prior to the commencement of waste activities the licensee shall submit to the Agency for its agreement an updated appropriately scaled drawing showing all the monitoring locations stipulated in this licence. The drawing shall include the twelve figure National Grid Reference for the various monitoring points.

8.6 Nuisance Monitoring

- 8.6.1 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 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; and
- e) Identify and execute measures to minimise the emissions/malfunction and the effects thereof.

- 9.2. The licensee shall, prior to commencement of any waste activities, 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.

- 9.4.4. In the event that monitoring of the slide slopes of the facility indicate that there may be a risk of slope failure this will be treated as an emergency.

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) 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 dispatched from the facility. The licensee shall record the following:-

- a) The date;
- b) The name of the carrier (including, the waste carrier permit details);
- c) The vehicle registration number;
- d) The name of the collector(s) of the waste as appropriate;
- e) A description of the waste including the associated EWC codes;
- f) The quantity of the waste, recorded in tonnes or volume in cubic metres;
- g) The name of the person checking the load; and
- h) 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) Details of all nuisance inspections; and
- b) 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; and
- e) Any incidents or spillages of leachate during its removal or transportation.

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 to 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 hrs 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;
- 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 1000 hrs on the following working day after such an incident; and
- 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 Environmental Report

11.3.1 The licensee shall submit to the Agency for its agreement a once off Environmental Report (ER) to be issued one calendar year after the commencement of waste activities or by December 31st 2004, whichever date is soonest.

11.3.2 The ER shall include as a minimum the information specified in *Schedule F: Content of Annual Environmental Report* of this licence and shall be prepared in accordance with any relevant written guidance issued by the Agency.

REASON: To provide for proper reports to and notifications 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 €17,477 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 2004 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 2003 the licensee shall pay a pro rata amount from the date of this licence to 31st December. 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.

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

SCHEDULE A : Waste Handled

A.1 Waste Handled

Table A.1 Waste Categories and Quantities

Waste Type	Maximum (Tonnes)
Hazardous Waste	10,000 ^{Note 1}
Soil *	2,000
TOTAL	12,000

Note 1: Unless otherwise agreed with the Agency
 * To be agreed as part of the approved restoration plan.

SCHEDULE B : Emission Limits

B.1 Noise Emissions:

(Measured at the noise sensitive location indicated in Table C.1.1).

Day Db(A) L _{Aeq} (15 minutes)	Night dB(A) L _{Aeq} (15 minutes)
55	45

B.2 Landfill Gas Concentration Limits:

(Measured in any building on or adjacent to the facility).

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

B.3 Dust Deposition Limits:

(Measured at the monitoring points indicated in Table C.1.1).

Level (mg/m ² /day) ^{Note 1}
350

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

SCHEDULE C : Monitoring

C.1 Monitoring Locations

Monitoring locations shall be those as set out in Table C.1.1 and Figure 3 Rev A of the application.

Table C.1.1 Monitoring Locations

Dust	Noise	Surface Water	Ground Water	Leachate
Stations	Stations	Stations	Stations	Stations
GPS1 GPS2	GPS1 GPS2	Two surface water locations shall be agreed within one month of the date of grant of licence.	MW-1 MW-2 MW-7	One leachate sampling location at main collection sump to west of waste body.

C.2 Landfill Gas

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

Parameter	Monitoring Frequency		Analysis Method ^{Note1} /Technique ^{Note2}
	Gas Boreholes/ Vents/Wells	Site Office	
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.

C.3 Dust Monitoring

Table C.3.1 Dust Monitoring Frequency and Technique

Parameter (mg/m ² /day)	Monitoring Frequency	Analysis Method/Technique
Dust	Weekly during Waste Activities	Standard Method ^{Note 1}

Note 1: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). Any modifications to eliminate interference due to algae growth in the gauge should be reported to the Agency.

C.4 Noise

Table C.4.1 Noise Monitoring Frequency and Technique

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

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

C.5 Surface Water, Groundwater and Leachate

Table C.5.1 Water and Leachate - Parameters / Frequency^{Note 6}

Parameter ^{Note 1}	SURFACE WATER ^{Note 2}	GROUNDWATER	LEACHATE ^{Note 3}
	Monitoring Frequency	Monitoring Frequency	Monitoring Frequency
Visual Inspection/Odour ^{Note 2}	Monthly	Monthly	Monthly
Groundwater Level	Not Applicable	Monthly	Not Applicable
Ammoniacal Nitrogen	Quarterly	Annually	Annually
BOD	Quarterly	Not Applicable	Annually
COD	Quarterly	Not Applicable	Annually
Chloride	Quarterly	Quarterly	Annually
Dissolved Oxygen ^{Note 5}	Quarterly	Annually	Not Applicable
Electrical Conductivity ^{Note 5}	Quarterly	Quarterly	Annually
PH ^{Note 6}	Quarterly	Quarterly	Annually
Total Suspended Solids	Quarterly	Not Applicable	Not Applicable
Temperature ^{Note 5}	Quarterly	Quarterly	Quarterly
Metals / non metals ^{Note 3}	Annually	Annually	Annually
Cyanide (Total)	Not Applicable	Annually	Annually
Fluoride	Not Applicable	Annually	Annually
List I/II organic substances ^{Note 4}	Annually	Bi-annually	Once off
Mercury	Annually	Annually	Annually
Sulphate	Annually	Annually	Annually
Total Alkalinity	Annually	Annually	Not applicable
Total P/orthophosphate	Annually	Annually	Annually
Total Oxidised Nitrogen	Annually	Annually	Annually
Total Organic Carbon	Not Applicable	Quarterly	Not Applicable
Biological Assessment	Annually ^{Note 5}	Not Applicable	Not Applicable
Volume (M ³) Leachate by Tanker			Per shipment

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: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.

- Note 4:** 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 (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).
- Note 5:** For groundwater and surfacewater these parameters should be measured on-site with a portable electronic meter.
- Note 6:** Frequency. Where the table specifies annually this should be annually and once off up to one year after the waste activities cease.

SCHEDULE D : Recording and Reporting to the Agency

Report	Reporting Frequency ^{Note1}	Report Submission Date
Environment Report (ER)	Once Off	Submit AER one calendar year after the commencement of waste activities or by December 31st 2004, whichever date is soonest.
Record of incidents	As they occur	Within five days of the incident.
Monitoring of landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate	As they occur	Ten days after end of the quarter being reported on.
Dust Monitoring	Quarterly	Ten days after the period being reported on
Noise Monitoring	Quarterly	One month after end of the year being reported on.
Any other monitoring	As they occur	Within ten days of obtaining results.

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

SCHEDULE E : Criteria for the Acceptance of Inert Waste

E.1 Acceptable Waste for Recovery

Only the wastes listed below are acceptable for recovery at the facility, unless otherwise agreed with the Agency.

WASTE	
Topsoil	Solid Road Planings, Solid Tarmacadam, Solid Asphalt
Subsoil	Brickwork
Stone, Rock and Slate	Natural Sand
Clay, Pottery and China	Concrete

SCHEDULE F : 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.

Methods of treatment of waste.

Summary of results and interpretation of environmental monitoring.

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

Report on restoration of completed cells/ phases.

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

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

Reported incidents and Complaints summaries.

Review of Nuisance Controls.

Report on training of staff.

Any other items specified by the Agency.

Signed on behalf of the said Agency
on the 30th day of April, 2003

Patrick J. Nolan, Authorised Person