

LICENCE REG. NO. W0129-02 HAS BEEN TRNSFERRED

Please note that Licence Reg. No. W0129-02 was Transferred to Integrated Materials Solutions Limited Partnership on 26/06/2017, For further information on this please refer to Transfer Notification on the Agency's website.

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Please note that licence Reg. No. W0129-02 was transferred to Murphy Environmental Hollywood Limited on 01/10/2008. For further information on this please refer to the Transfer Notification on the Agency's website.

This licence was amended on 23rd June, 2011 under Section 42B(1) of the Waste Management Acts, 1996 to 2011. The details of Amendment A must be read in conjunction with this licence. The amendment document is entitled "Clerical Amendment A"



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WASTE LICENCE

Licence Register Number:	W0129-02
Licensee:	Murphy Concrete Manufacturing Limited
Location of Facility:	Hollywood Great, Nags Head, The Naul, County Dublin

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 purpose of an inert landfill at Hollywood Great, Nags Head, The Naul, County Dublin. The site is an active shale and limestone quarry that has been in operation since the 1940's.

The landfill will accept not more than 500,000 tonnes per annum of inert waste arising from construction & demolition activities (e.g. soil & stones, concrete, bricks, tiles, etc.), to infill the quarry void.

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

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Glossary of Terms

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 and 2003/Waste Management Acts 1996 to 2007, unless otherwise defined in this section.

Adequate lighting	20 lux measured at ground level.
AER	Annual Environmental Report.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Agency/EPA	Environmental Protection Agency.
Agreement	Agreement in writing.
Annually	At approximately twelve-monthly intervals.
Application	The application by the licensee for this licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of this licence application.
BAT	Best Available Techniques.
Biannually	All or part of a period of six consecutive months.
Biennially	Once every two years.
BOD	5 day Biochemical Oxygen Demand.
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
COD	Chemical Oxygen Demand.
Construction and demolition (C & D) waste	Wastes that arise from construction, renovation and demolition activities: Chapter 17 of the EWC or as otherwise may be agreed.
Containment boom	A boom that can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
Daily	During all days of plant operation, and in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day	Any 24 hour period.
Daytime	0800 hrs to 2200 hrs.
dB(A)	Decibels (A weighted).
DO	Dissolved oxygen.

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.
EMP	Environmental Management Programme.
Emission limits	Those limits, including concentration limits and deposition rates, established in <i>Schedule B: Emission Limits</i> of this licence.
Environmental damage	Has the meaning given it in Directive 2004/35/EC.
EPA	Environmental Protection Agency.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 2000/532/EC and any subsequent amendment published in the Official Journal of the European Community.
Facility	Any site or premises used for the purposes of the recovery or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
GC/MS	Gas chromatography/mass spectroscopy.
Green waste	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
Heavy metals	This term is to be interpreted as set out in “Parameters of Water Quality, Interpretation and Standards” published by the Agency in 2001. ISBN 1-84095-015-3.
HFO	Heavy fuel oil.
Hours of operation	The hours during which the facility is authorised to be operational.
Hours of waste acceptance	The hours during which the facility is authorised to accept waste.
ICP	Inductively coupled plasma spectroscopy.
Incident	The following shall constitute an incident for the purposes of this licence: <ul style="list-style-type: none"> i. an emergency; ii. any emission which does not comply with the requirements of this licence; iii. any exceedance of the daily duty capacity of the waste handling equipment; iv. any trigger level specified in this licence which is attained or exceeded; and, v. any indication that environmental pollution has, or may have, taken place
Industrial waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2007.

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.
IPPC	Integrated Pollution Prevention & Control.
Landfill Directive	Council Directive 1999/31/EC.
Landfill Footprint	The area of the facility where waste is deposited.
Landfill Gas	Gases generated from landfilled waste.
Leq	Equivalent continuous sound level.
Licensee	Murphy Concrete Manufacturing Limited, Hollywood Great, Nags Head, The Naul, County Dublin.
Liquid waste	Any waste in liquid form and containing less than 2% dry matter.
List I	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.
List II	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.
Local Authority	Fingal County Council.
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to adequately perform its function.
Mass flow limit	An emission limit value, which is expressed as the maximum mass of a substance that can be emitted per unit time.
Mass flow threshold	A mass flow rate above, which a concentration limit applies.
Monthly	A minimum of 12 times per year, at intervals of approximately one month.
Night-time	2200 hrs to 0800 hrs.
Noise-sensitive location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity, which for its proper enjoyment requires the absence of noise at nuisance levels.
Oil separator	Device installed according to the International Standard I.S. EN 858-2:2003 (Separator systems for light liquids, (e.g. oil and petrol) - Part 2: Selection of nominal size, installation, operation and maintenance).
PRTR	Pollutant Release and Transfer Register.

Pre-treatment/ treatment	As per Article 6(a) of the Council Directive 1999/31/EC on the landfill of waste, only waste that has been subject to treatment is landfilled. This provision may not apply to inert waste for which treatment is not technically feasible, or to any other waste for which such treatment does not contribute to the objectives of the Council Directive 1999/31/EC on the landfill of waste, by reducing the quantity of waste or the hazards to human health or the environment.
Quarterly	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
Regional Fisheries Board	Eastern Regional Fisheries Board.
Water Services Authority	Fingal County Council.
Sanitary effluent	Wastewater from facility toilet, washroom and canteen facilities.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
SOP	Standard operating procedure.
Source segregated waste	Waste, which is separated at source. Meaning that the waste is sorted at the point of generation into a recyclable fraction(s) for separate collection (e.g. paper, metal, glass, plastic, bulk dry recyclables, biodegradables, etc) and a residual fraction. And the expression 'separate at source' shall be construed accordingly.
Specified emissions	Those emissions listed in <i>Schedule B: Emission Limits</i> of this licence.
Standard method	A National, European or internationally recognised procedure (eg, I.S. EN, ISO, CEN, BS or equivalent) or an in-house documented procedure based on the above references; a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater" (prepared and published jointly by A.P.H.A., A.W.W.A. & W.E.F.), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or, an alternative method as may be agreed by the Agency.
Storm water	Rain water run-off from roof and non-process areas.
TOC	Total organic carbon.
Trade effluent	Trade effluent has the meaning given in the Water Pollution Acts 1977 and 1990.
Trigger level	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Weekly	During all weeks of plant operation, and in the case of emissions, when emissions are taking place; with at least one measurement in any one week.
WWTP	Waste water treatment plant.

Decision & Reasons for the Decision

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this licence, any emissions from the activity will comply with and will not contravene any of the requirements of Section 40(4) of the Waste Management Acts 1996 to 2007.

In reaching this decision the Environmental Protection Agency has considered the application, supporting documentation and objection received from the applicant, all submissions and objections received from other parties and the reports of its inspectors.

Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Acts 1996 to 2007, the Environmental Protection Agency (the Agency), under Section 46(8)(a) of the said Act hereby grants this reviewed Waste Licence to Murphy Concrete Manufacturing Limited, Hollywood Great, Nags Head, The Naul, County Dublin, to carry on the waste activities listed below at Hollywood Great, Nags Head, The Naul, County Dublin, subject to conditions, with the reasons therefore and the associated schedules attached thereto set out in the licence. For the purposes of Article 48 of the Waste Management Licensing Regulations 2004 (SI 395) this facility is classed as an inert waste landfill.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2007

Class 1.	Deposit on, in or under land (including landfill).
Class 5.	Specially engineered landfill, including placement into lined discrete cells, which are capped and isolated from one another and the environment.
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.

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2007

Class 3.	Recycling or reclamation of metals and metal compounds.
Class 4.	Recycling or reclamation of other inorganic materials.
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.

Part II Schedule of Activities Refused

None of the proposed activities as set out in the licence application have been refused.

Part III Conditions

Condition 1 Scope

- 1.1 Waste activities at this facility shall be restricted to those listed and described in *Part I: Schedule of Activities Licensed*, and shall be as set out in the licence application or as modified under Condition 1.5 of this licence and subject to the conditions of this licence.
- 1.2 Activities at this facility shall be limited as set out in *Schedule A: Limitations* of this licence.
- 1.3 The facility shall be controlled, operated, and maintained and emissions shall take place as set out in this licence. All programmes required to be carried out under the terms of this licence, become part of this licence.
- 1.4 For the purposes of this licence, the facility is the area of land outlined in red on Drawing No. WLR9 (Proposed monitoring locations) of the application. Any reference in this licence to “facility” shall mean the area thus outlined in red. The licensed activities shall be carried on only within the area outlined.
- 1.5 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in:
- (i) a material change or increase in:
 - The nature or quantity of any emission,
 - The abatement/treatment or recovery systems,
 - The range of processes to be carried out,
 - The fuels, raw materials, intermediates, products or wastes generated, or
 - (ii) any changes in:
 - Site management infrastructure or control with adverse environmental significance,
- shall be carried out or commenced without prior notice to, and without the agreement of, the Agency.
- 1.6 This licence is for the purposes of waste licensing under the Waste Management Acts 1996 to 2007 only and nothing in this licence shall be construed as negating the licensee’s statutory obligations or requirements under any other enactments or regulations.
- 1.7 This licence is being granted in substitution for the waste licence granted to the licensee on 4th December 2002 (Register No: W0129-01). The previous waste licence (Register No: W0129-01) is superseded by this licence.
- 1.8 Only inert waste may be recovered and disposed of at the facility subject to the maximum quantities and other constraints listed in *Schedule A.1: Waste Acceptance* of this licence. No liquid wastes or sludges shall be accepted at the facility. No shredded mixed construction and demolition waste may be accepted at the facility.
- 1.9 Waste Acceptance Hours and Hours of Operation
- 1.9.1 Waste may be accepted at the facility, for disposal at the landfill, only between the hours of 0800 and 1800 Monday to Friday inclusive and 0700 and 1600 on Saturdays.
- 1.9.2 The facility may be operated only during the hours of 0700 to 1900 Monday to Friday, inclusive and 0700 to 1700 on Saturdays.
- 1.9.3 Waste shall not be accepted at the landfill on Bank Holidays.

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 or as otherwise required by the Agency.
- 2.1.2 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 site assessment appraisal within twelve months of appointment.
- 2.1.3 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. In addition, the facility manager and his/her deputy shall successfully complete FAS waste management training programme or equivalent agreed by the Agency.

2.2 Environmental Management System (EMS)

- 2.2.1 The licensee shall maintain an Environmental Management System (EMS). The EMS shall be updated on an annual basis.

- 2.2.2 The EMS shall include as a minimum the following elements:

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets

The licensee shall maintain a Schedule of Environmental Objectives and Targets. The schedule shall as a minimum provide for a review of all operations and processes, including an evaluation of practicable options as may be relevant to the licensed activity, for energy and resource efficiency, the use of cleaner technology, cleaner production, and the prevention, reduction and minimisation of waste, and shall include waste reduction targets. The schedule shall include time frames for the achievement of set targets and shall address a five-year period as a minimum. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

2.2.2.3 Environmental Management Programme (EMP)

The licensee shall maintain an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. Once agreed the EMP shall be maintained by the licensee. It shall include:

- (i) designation of responsibility for targets;
- (ii) the means by which they may be achieved;
- (iii) the time within which they may be achieved.

The EMP shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER) (Condition 11.7).

A report on the programme, including the success in meeting agreed targets, shall be prepared and submitted to the Agency as part of the AER. Such reports shall be retained on-site for a period of not less than seven years and shall be available for inspection by authorised persons of the Agency.

2.2.2.4 Documentation

- (i) The licensee shall maintain an environmental management documentation system, which shall be to the satisfaction of the Agency.
- (ii) The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.

2.2.2.5 Corrective Action

The licensee shall establish procedures to ensure that corrective action is taken should the specified requirements of this licence not be fulfilled. The responsibility and authority for initiating further investigation and corrective action in the event of a reported non-conformity with this licence shall be defined.

2.2.2.6 Awareness and Training

The licensee shall maintain procedures for identifying training needs, and for providing appropriate training, for all personnel whose work can have a significant effect upon the environment. Appropriate records of training shall be maintained.

2.2.2.7 Communications Programme

The licensee shall maintain a Public Awareness and Communications Programme to ensure that members of the public are informed, and can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.

2.2.2.8 Maintenance Programme

The licensee shall maintain a programme for maintenance of all plant and equipment based on the instructions issued by the manufacturer/supplier or installer of the equipment. Appropriate record keeping and diagnostic testing shall support this maintenance programme. The licensee shall clearly allocate responsibility for the planning, management and execution of all aspects of this programme to appropriate personnel (see Condition 2.1 above).

2.2.2.9 Efficient Process Control

The licensee shall maintain a programme to ensure there is adequate control of processes under all modes of operation. The programme shall identify the key indicator parameters for process control performance, as well as identifying methods for measuring and controlling these parameters. Abnormal process operating conditions shall be documented, and analysed to identify any necessary corrective action.

Reason: To make provision for 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 Infrastructure and Operation

- 3.1 The licensee shall establish all infrastructure referred to in this licence, to the design set out in the Application documentation or as may be otherwise specified or varied by the conditions of this licence.

- 3.2 Facility Notice Board
- 3.2.1 The licensee shall 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:
- (i) the name and telephone number of the facility;
 - (ii) the normal hours of operation;
 - (iii) the name of the licence holder;
 - (iv) an emergency out of hours contact telephone number;
 - (v) the licence reference number; and
 - (vi) where environmental information relating to the facility can be obtained.
- 3.2.3 A plan of the facility clearly identifying the location of each storage and treatment area shall be displayed as close as is possible to the entrance to the facility. The plan shall be displayed on a durable material such that it is legible at all times. The plan shall be replaced as material changes to the facility are made.
- 3.3 Specified Engineering Works (SEW)
- 3.3.1 The licensee shall submit proposals for any Specified Engineering Works, to the Agency for its agreement at least two months in advance of the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.
- 3.3.2 All specified engineering works shall be supervised by an appropriately qualified person, and that person, or persons, shall be present at all times during which relevant works are being undertaken.
- 3.3.3 Following the completion of any 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, as appropriate, include the following information:
- (i) A description of the works;
 - (ii) As-built drawings of the works;
 - (iii) Records and results of all tests carried out (including failures);
 - (iv) Drawings and sections showing the location of all samples and tests carried out;
 - (v) Name(s) of contractor(s)/individual(s) responsible for undertaking the specified engineering works;
 - (vi) Records of any problems and the remedial works carried out to resolve those problems; and
 - (vii) Any other information requested in writing by the Agency.
- 3.4 Tank, Container and Drum Storage Areas
- 3.4.1 All tank, container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds should be designed having regard to Agency guidelines '*Storage and Transfer of Materials for Scheduled Activities*' (2004).
- 3.4.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:
- (i) 110% of the capacity of the largest tank or drum within the bunded area; or
 - (ii) 25% of the total volume of substance, which could be stored within the bunded area.

- 3.4.3 All drainage from bunded areas shall be treated as hazardous waste unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal.
- 3.4.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.4.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.
- 3.5 Landfill Lining
- 3.5.1 The landfill footprint (maximum lateral extent of landfilling) shall be as indicated in Drawing Reference WLR3 (“Existing waste licence (W0129-01) boundary and proposed landfill footprint”).
- 3.5.2 The landfill liner shall comprise of the following:
Base and side wall:- A mineral layer of a minimum thickness of 1m with a hydraulic conductivity less than or equal to 1.0×10^{-7} m/s, or similar with equivalent protection to the foregoing.
- 3.5.3 The liner detailed design and its construction shall be in accordance with the guidelines provided in the Agency’s Landfill Manual, *Landfill Site Design*.
- 3.5.4 All boreholes located under the footprint of the landfill shall be adequately sealed prior to the emplacement of the liner.
- 3.5.5 The formation level of the basal liner prior to emplacement of compacted clay shall be constructed at least one metre above the water table and in any event the formation level of the liner shall be no lower than 104.5 mAOD Malin. Any excavations deeper than the formation level shall only be backfilled with granular materials quarried from the facility.
- 3.6 Facility Security
- 3.6.1 Security and stockproof fencing and gates shall be installed and maintained. The base of the fencing shall be set in the ground. Subject to the implementation of the restoration and aftercare plan and to the agreement of the Agency, the requirement for such site security may be removed.
- 3.6.2 Gates shall be locked shut when the facility is unsupervised.
- 3.6.3 The licensee shall remedy any defect in the gates and/or fencing as follows:
- (i) A temporary repair shall be made by the end of the working day; and
 - (ii) A repair to the standard of the original gates and/or fencing shall be undertaken within three working days.
- 3.7 Facility Roads and Hardstanding
- 3.7.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.
- 3.7.2 The facility entrance and hardstanding areas shall be appropriately paved and maintained in a fit and clean condition.
- 3.8 Facility Office
- 3.8.1 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.
- 3.8.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.
- 3.9 Waste Inspection and Quarantine Areas
- 3.9.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.

- 3.9.2 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.
- 3.9.3 Drainage from these areas shall be directed to the leachate management system.
- 3.10 Weighbridge and Wheel Cleaner
- 3.10.1 The licensee shall provide and maintain a weighbridge and wheel cleaners at the facility.
- 3.10.2 The wheel cleaners shall be used by all vehicles leaving the facility as required to ensure that no process water or waste is carried off-site. All water from the wheel cleaning area shall be recycled.
- 3.11 Waste Water Treatment Plant
- In the event that sanitary effluent is to be managed on-site, the licensee shall provide and maintain a Wastewater Treatment plant at the facility for the treatment of such sanitary effluents. 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.
- 3.12 The licensee shall install on all emission points such sampling points or equipment, including any data-logging or other electronic communication equipment, as may be required by the Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems.
- 3.13 In the case of composite sampling of aqueous emissions from the operation of the facility a separate composite sample or homogeneous sub-sample (of sufficient volume as advised) should be refrigerated immediately after collection and retained as required for EPA use.
- 3.14 The licensee shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 3.15 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.
- 3.16 Silt Traps and Oil Separators
- The licensee shall install and maintain silt traps and oil separators at the facility to ensure that all storm water discharges from yard areas of the facility pass through a silt trap and oil separator in advance of discharge. The separator shall be a Class I full retention separator and the silt traps and separator shall be in accordance with I.S. EN 858-2:2003 (separator systems for light liquids).
- 3.17 All pump sumps, storage tanks, lagoons or other treatment plant chambers from which spillage of environmentally significant materials might occur in such quantities as are likely to breach local or remote containment or separator, shall be fitted with high liquid level alarms (or oil detectors as appropriate) within 3 months from the date of grant of this licence.
- 3.18 The licensee shall maintain in a prominent location on the site a wind sock, or other wind direction indicator, which shall be visible from the public roadway outside the site.
- 3.19 The licensee shall provide a minimum of one leachate monitoring borehole (50mm bore) per two hectares of landfill. These boreholes shall be designed to also facilitate landfill gas monitoring.

- 3.20 All groundwater boreholes shall have their Top of Casing (TOC) elevations (mAOD Malin) marked on their respective casings. The licensee shall within three months of the date of grant of this licence submit to the Agency TOC and ground level elevations for all groundwater boreholes.
- 3.21 No hedgerows shall be removed or damaged unless otherwise agreed by the Agency.

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

Condition 4 Interpretation

- 4.1 Emission limit values for emissions to waters in this licence shall be interpreted in the following way:
- 4.1.1 Continuous Monitoring
- (i) No flow value shall exceed the specified limit.
 - (ii) No pH value shall deviate from the specified range.
 - (iii) No temperature value shall exceed the limit value.
- 4.1.2 Composite Sampling
- (i) No pH value shall deviate from the specified range.
 - (ii) For parameters other than pH and flow, eight out of ten consecutive composite results, based on flow proportional composite sampling, shall not exceed the emission limit value. No individual result similarly calculated shall exceed 1.2 times the emission limit value.
- 4.1.3 Discrete Sampling
- For parameters other than pH and temperature, no grab sample value shall exceed 1.2 times the emission limit value.
- 4.2 Where the ability to measure a parameter is affected by mixing before emission, then, with agreement from the Agency, the parameter may be assessed before mixing takes place.
- 4.3 Noise
- Noise from the facility shall not give rise to sound pressure levels (Leq, T) measured at the noise sensitive locations of the facility, which exceed the limit value(s).
- 4.4 Dust
- Dust from the activity shall not give rise to deposition levels, which exceed the limit value(s).

Reason: To clarify the interpretation of limit values fixed under the licence.

Condition 5 Emissions

- 5.1 No specified emission from the facility shall exceed the emission limit values set out in *Schedule B: Emission Limits* of this licence. There shall be no other emissions of environmental significance.
- 5.2 No emissions, including odours, from the activities carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary.

- 5.3 No substance shall be discharged in a manner, or at a concentration, that, following initial dilution, causes tainting of fish or shellfish.
- 5.4 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.
- 5.5 The licensee shall ensure that all or any of the following – mud, dust, litter - associated with the activity do not result in an impairment of, or an interference with amenities or the environment at the facility or beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary. Any method used by the licensee to control or prevent any such impairment/interference shall not cause environmental pollution.
- 5.6 Groundwater Management
- 5.6.1 There shall be no direct emissions of polluting matter to groundwater.
- 5.6.2 Effective groundwater management infrastructure shall be maintained at the facility during construction, operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall be capable of the following:
- (i) The protection of the groundwater resources from pollution by the waste activities; and
 - (ii) The protection of other infrastructure, such as the liner, from any adverse effects caused by the groundwater.

Reason: To provide for the protection of the environment by way of control and limitation of emissions.

Condition 6 Control and Monitoring

- 6.1 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and as in accordance with *Schedule C: Monitoring & Control* of this licence:
- 6.1.1 Analysis shall be undertaken by competent staff in accordance with documented operating procedures;
- 6.1.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics determined;
- 6.1.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses;
- 6.1.4 Where analysis is sub-contracted it shall be to a competent laboratory.
- 6.2 The licensee shall ensure that:
- (i) sampling and analysis for all parameters listed in the Schedules to this licence, and
 - (ii) any reference measurement methods to calibrate automated measurement systems, shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.
- 6.3 Test Programme
- 6.3.1 The licensee shall prepare, to the satisfaction of the Agency, a test programme for abatement equipment installed to abate emissions to atmosphere. This programme shall be submitted to the Agency in advance of implementation.

- 6.3.2 This programme, following agreement with the Agency, shall be completed within three months of the commencement of operation of the abatement equipment.
- 6.3.3 The criteria for the operation of the abatement equipment as determined by the test programme, shall be incorporated into the standard operating procedures.
- 6.3.4 The test programme shall as a minimum:
- (i) Establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in this licence.
 - (ii) Assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.

A report on the test programme shall be submitted to the Agency within one month of completion.

- 6.4 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on unless alternative sampling or monitoring has been agreed in writing by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. Agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.
- 6.5 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission/discharge or ambient conditions.
- 6.6 The licensee shall ensure that groundwater monitoring well sampling equipment is available/installed on-site and is fit for purpose at all times. The sampling equipment shall be to Agency specifications.
- 6.7 All treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.
- 6.8 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the agreement of the Agency following evaluation of test results.
- 6.9 The integrity and water tightness of all underground pipes, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 6.10 The drainage system, bunds, silt traps and oil separators shall be inspected weekly, desludged as necessary and properly maintained at all times. All sludge and drainage from these operations shall be collected for safe disposal.
- 6.11 Storm Water
- A visual examination of the storm water discharge shall be carried out daily. A log of such inspections shall be maintained.
- 6.12 Noise
- The licensee shall carry out a noise survey of the site operations annually. The survey programme shall be undertaken in accordance with the methodology specified in the 'Environmental Noise Survey Guidance Document' as published by the Agency.

6.13 Pollutant Release and Transfer Register (PRTR)

The licensee shall prepare and report a PRTR for the site. The substances and/or waste to be included in the PRTR shall be agreed by the Agency each year by reference to EC Regulation No. 166/2006 concerning the establishment of the European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC. The PRTR shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted electronically in specified format and as part of the AER.

6.14 The licensee shall maintain a Data Management System for collation, archiving, assessing and graphically presenting the environmental monitoring data generated as a result of this licence.

6.15 In dry weather, stockpiles, site roads and any other areas used by vehicles shall be sprayed with water as and when required to minimise airborne dust nuisance.

6.16 Monitoring equipment, 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.

6.17 Operational Controls

6.17.1 The licensee shall ensure that inert waste is subject to pre-treatment off-site (see glossary) where technically feasible.

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

6.17.3 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over, unless with the prior agreement of the Agency.

6.17.4 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 materials.

6.17.5 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 necessary infrastructure or otherwise only with the prior agreement of the Agency.

6.17.6 There shall be no public access to the landfill.

6.17.7 Gates shall be locked shut when the facility is unsupervised.

6.17.8 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.

6.17.9 No smoking shall be allowed at the facility.

6.18 Meteorological Monitoring

The licensee shall maintain a meteorological station at the facility capable of monitoring the parameters listed in *Schedule C.4: Meteorological Monitoring* of this licence, or the licensee shall make arrangements for representative meteorological data to be collated for the facility to fulfil the requirements of *Schedule C.4: Meteorological Monitoring* of this licence.

6.19 Topographical Monitoring

A topographical survey shall be carried out on an annual basis. The survey shall include a measurement of the remaining available void space (broken down into actual available void space and any estimated void space which will be generated by future quarrying activities). The survey shall be in accordance with any written instructions issued by the Agency.

6.20 Stability Assessment

The licensee shall carry out a stability assessment of the side slopes of the facility annually. The results of this assessment shall be reported as part of the Annual Environmental Report (AER).

6.21 Archaeological Assessment

Prior to the development of any undisturbed area, the advice of the Department of the Environment, Heritage & Local Government, (National Monuments Section), 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.

Reason: To provide for the protection of the environment by way of treatment and monitoring of emissions.

Condition 7 Resource Use and Energy Efficiency

- 7.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this licence. The audit shall be carried out in accordance with the guidance published by the Agency, “*Guidance Note on Energy Efficiency Auditing*”. The energy efficiency audit shall be repeated at intervals as required by the Agency.
- 7.2 The audit shall identify all opportunities for energy use reduction and efficiency and the recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2.2.2.2 above.
- 7.3 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into Schedule of Environmental Objectives and Targets.
- 7.4 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.

Reason: To provide for the efficient use of resources and energy in all site operations.

Condition 8 Materials Handling

- 8.1 Disposal or recovery of waste on-site shall only take place in accordance with the conditions of this licence and in accordance with the appropriate National and European legislation and protocols.
- 8.2 Waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor. The waste shall be transported from the site of the activity to the site of recovery/disposal only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.
- 8.3 The licensee shall ensure that waste in advance of transfer to another person shall be classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.

- 8.4 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run-off.
- 8.5 Waste shall be stored in designated areas, protected as may be appropriate against spillage and leachate run-off. The waste is to be clearly labelled and appropriately segregated.
- 8.6 No waste classified as green list waste in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No. 259/1993, as amended) shall be consigned for recovery without the agreement of the Agency.
- 8.7 Waste for disposal/recovery off-site shall be analysed in accordance with *Schedule C: Control & Monitoring* of this licence.
- 8.8 Unless approved in writing by the Agency the licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.
- 8.9 Waste Acceptance & Characterisation Procedures.
- 8.9.1 Waste shall only be accepted at the facility from Local Authority waste collection or transport vehicles or holders of waste permits, unless exempted or excluded, issued under the Waste Management (Collection Permit) Regulations, 2001, or as may be amended.
- 8.9.2 No hazardous or liquid wastes shall be disposed of at the facility.
- 8.9.3 The licensee shall maintain written procedures for the acceptance and handling of all wastes. These procedures shall include –
- (i) details of the pre-treatment of all waste to be carried out in advance of acceptance at the facility and shall also include methods for the characterisation of waste in order to distinguish between inert, non-hazardous wastes.
 - (ii) the requirements of *Schedule A.1: Waste Acceptance*, *Schedule A.2: Acceptable Waste*, *Schedule A.3: Acceptance Criteria* and *Schedule A.4: Limit Values for Pollutant Content for Inert Waste Landfills* of this licence.
- 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 (199/31/EC) on the landfill of waste.
- 8.9.4 *Schedule A.3: Acceptance Criteria* and *Schedule A.4: Limit Values for Pollutant Content for Inert Waste Landfills* of this licence will not apply to inert mineral extraction waste resulting from quarrying activities at the facility which are subsequently disposed of or recovered at the facility.
- 8.9.5 All inert waste accepted at the facility shall comply with the standards establishing in the EU Decision (2003/22/EC).

Reason: To provide for the appropriate handling of materials and the protection of the environment.

Condition 9 Accident Prevention & Emergency Response

- 9.1 The licensee shall, within six months of date of grant of this licence, ensure that a documented Accident Prevention Procedure is in place, which will address the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.

- 9.2 The licensee shall maintain a documented Emergency Response Procedure, which shall address any emergency situation, which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.
- 9.3 Incidents
- 9.3.1 In the event of an incident the licensee shall immediately:
- (i) carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
 - (ii) isolate the source of any such emission;
 - (iii) evaluate the environmental pollution, if any, caused by the incident;
 - (iv) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
 - (v) identify the date, time and place of the incident;
 - (vi) notify the Agency and other relevant authorities.
- 9.3.2 The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency to:
- (i) identify and put in place measures to avoid reoccurrence of the incident; and
 - (ii) identify and put in place any other appropriate remedial action.

Reason: To provide for the protection of the environment.

Condition 10 Restoration and Aftercare Management

- 10.1 The final profile of the facility shall tie in the facility to the surrounding land levels and shall be as shown on *Figure 4.2 Phasing of Restoration* of the Environmental Impact Statement (March 1999). The final height shall not exceed 149.0 mAOD Malin.
- 10.2 The facility shall be restored as described in Attachment G.1 Restoration Scheme of the application for W0129-01 and Section 4.7 *Landscaping Plan* of the Environmental Impact Statement (March 1999) subject to the following:
- 10.2.1 The final capping shall consist of the following:
- (i) Top soil (150-300mm); and,
 - (ii) Subsoils, such that total thickness of top soil and subsoils is at least 1m.
- 10.3 The licensee shall restore the facility on a phased basis as per *Figure 4.2 Phasing of Restoration* of the Environmental Impact Statement (March 1999). Unless otherwise agreed, filled cells shall be permanently capped within 24 months of the cells having been filled to the required level.
- 10.4 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.
- 10.5 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.
- 10.6 All waste activities at the facility shall cease upon the installation of the final capping unless agreed otherwise by the Agency.

- 10.7 All soils shall be stored to preserve the soil structure for future use.
- 10.8 Closure, Restoration & Aftercare Management Plan (CRAMP)
- 10.8.1 The licensee shall prepare for agreement by the Agency, a fully detailed and costed plan for the closure, restoration and aftercare of the site or part thereof, including details of the final profile.
- 10.8.2 The plan shall be maintained and reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the prior agreement of the Agency.
- 10.9 The National Parks and Wildlife Service shall be consulted as part of the preparation of the CRAMP regarding the presence of peregrine falcon nests at the site. The Agency shall be notified of the outcome of this consultation.
- 10.10 The CRAMP shall include as a minimum, the following:
- (i) A scope statement for the plan.
 - (ii) The criteria, including those specified in this licence, which define the successful closure and restoration of the facility or part thereof, and which ensure minimum impact to the environment.
 - (iii) A programme to achieve the stated criteria.
 - (iv) Where relevant, a test programme to demonstrate the successful implementation of the plan.
 - (v) Details of any proposed or required aftercare supervision, monitoring, control, maintenance and reporting requirements for the restored facility.
 - (vi) Details of the costings for the plan and the financial provisions to underwrite those costs.
- 10.11 A final validation report to include a certificate of completion for the CRAMP, for all or part of the site as necessary, shall be submitted to the Agency within three months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

Reason: To make provision for the proper closure of the activity ensuring protection of the environment.

Condition 11 Notifications, Records and Reports

- 11.1 The licensee shall notify the Agency by both telephone and facsimile, if available, to the Agency's Office of Environmental Enforcement, EPA, McCumiskey House, Richview, Clonskeagh Road, Dublin 14, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:
- (i) Any release of environmental significance to atmosphere from any potential emission point including bypasses.
 - (ii) Any emission, which does not comply with the requirements of this licence.
 - (iii) Any malfunction or breakdown of key control equipment or monitoring equipment set out in *Schedule C: Control & Monitoring* which is likely to lead to loss of control of the abatement system.
 - (iv) Any incident with the potential for environmental contamination of surface water or groundwater, or posing an environmental threat to air or land, or requiring an emergency response by the Local Authority.

The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any emissions.

- 11.2 In the case of any incident which relates to discharges to water, the licensee shall notify the Local Authority and the Eastern Regional Fisheries Board as soon as practicable after such an incident.
- 11.3 The licensee shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to manage the incident, minimise wastes generated and the effect on the environment, and avoid recurrence. The licensee shall, as soon as practicable following incident notification, submit to the Agency the incident record.
- 11.4 The licensee shall record all complaints of an environmental nature related to the operation of the activity. Each such record shall give details of the date and time of the complaint, the name of the complainant, (if provided), and give details of the nature of the complaint. A record shall also be kept of the response made in the case of each complaint.
- 11.5 The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility.
- 11.6 The licensee shall as a minimum keep the following documents at the site:
- (i) the licences relating to the facility;
 - (ii) the current EMS for the facility;
 - (iii) the previous year's AER for the facility;
 - (iv) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility;
 - (v) relevant correspondence with the Agency;
 - (vi) up to date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
 - (vii) up to date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment;
 - (viii) any elements of licence application or EIS documentation referenced in this licence (including that relating to W0129-01).

and this documentation shall be available to the Agency for inspection at all reasonable times.

- 11.7 The licensee shall submit to the Agency, by the 31st March of each year, an AER covering the previous calendar year. This report, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in *Schedule E: Annual Environmental Report* of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.
- 11.8 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall be maintained on a monthly basis and shall as a minimum contain details of the following:
- (i) The tonnages and EWC Code for the waste materials imported and/or sent off-site for disposal/recovery.
 - (ii) The names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number).

- (iii) Details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required.
 - (iv) Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site.
 - (v) Details of all wastes consigned abroad for Recovery and classified as 'Green' in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No. 259/1993, as amended). The rationale for the classification must form part of the record.
 - (vi) Details of any rejected consignments.
 - (vii) Details of any approved waste mixing.
 - (viii) The results of any waste analyses required under *Schedule C: Control & Monitoring*, of this licence.
 - (ix) The tonnages and EWC Code for the waste materials recovered/disposed on-site.
- 11.9 The licensee shall submit report(s) as required by the conditions of this licence to the Agency's Office of Environmental Enforcement, EPA, McCumiskey House, Richview, Clonskeagh Road, Dublin 14, or to such other Agency office as may be specified by the Agency.
- 11.10 All reports shall be certified accurate and representative by the facility manager or a nominated, suitably qualified and experienced deputy.

Reason: To provide for the collection and reporting of adequate information on the activity.

Condition 12 Financial Charges and Provisions

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of €16,275, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2007. The first payment shall be a pro-rata amount for the period from the date of this licence to the 31st day of December, and shall be paid to the Agency within one month from the date of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2007, and all such payments shall be made within one month of the date upon which demanded by the Agency.

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 in regard to items not covered by the said annual contribution.

12.2 Environmental Liabilities

12.2.1 The licensee shall as part of the AER provide an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents, as may be associated with the carrying on of the activity.

- 12.2.2 The licensee shall arrange for the completion, by an independent and appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA), which addresses the liabilities from past and present activities. The assessment shall include those liabilities and costs identified in Condition 10 for execution of the CRAMP. A report on this assessment shall be submitted to the Agency for agreement within twelve months of date of grant of this licence. The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every three years following initial agreement: review results are to be notified as part of the AER.
- 12.2.3 As part of the measures identified in Condition 12.2.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities identified in Condition 12.2.2. The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'statement of measures' report identified in Condition 12.2.1.
- 12.2.4 Unless otherwise agreed, any revision to that part of the indemnity dealing with restoration and aftercare liabilities (refer Condition 10.8.1) 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.

12.3 Cost of landfill of waste

In accordance with the provisions of Section 53A of the Waste management Acts 1996 to 2007, the licensee shall ensure the costs in the setting up, operation of, provisions of financial security and closure and after-care for a period of at least 30 years shall be covered by the price to be charged for the disposal of waste at the facility. The statement required under Section 53A(5) of said Acts is to be included as part of the AER.

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

SCHEDULE A: Limitations

A.1 Waste Acceptance

Table A.1 Waste Categories and Quantities

WASTE TYPE ^{Note 1}	MAXIMUM (TONNES PER ANNUM)
Inert Construction and Demolition Waste and inert dredging spoils.	500,000 ^{Note 2}
Inert mineral extraction wastes arising from quarrying activities at the facility.	No limit
TOTAL	500,000

Note 1: Any proposals to accept other compatible waste streams must be agreed in advance by the Agency and the total amount of waste must be within the amount specified.

Note 2: Excluding materials imported for engineering, capping or landscaping purposes.



A.2 Acceptable Waste

Only the inert wastes in Table A.2.1 and Table A.2.2 are acceptable for disposal and recovery respectively at the facility unless otherwise agreed with the Agency. In addition the waste in Table A.2.1 below, unless otherwise specified therein and subject to Conditions 8.9.3 and 8.9.4, must satisfy the criteria in *Schedule A.3: Acceptance Criteria* and *Schedule A.4: Limit Values for Pollutant Content for Inert Waste Landfills* of this licence.

Table A.2.1 Waste for Disposal

EWC CODE	DESCRIPTION	RESTRICTIONS
Waste Resulting from Quarrying and Physical Treatment of Minerals		
010102	Wastes from mineral non-metalliferous excavation	Limited to such waste derived from on-site quarrying activities
010412	Tailings and other wastes from washing and cleaning of minerals other than those mentioned in 010407 and 010411	Limited to such waste derived from on-site quarrying activities
010409	Waste sand and clays	_____
010499	Wastes not otherwise specified	Subject to the prior agreement of the Agency and limited to such inert waste derived from on-site quarrying activities
Construction and Demolition Wastes		
170101	Concrete	Note 1
170102	Bricks	Note 1
170103	Tiles and ceramics	Note 1
170107	Mixture of concrete, bricks, tiles and ceramics	Other than those mentioned in EWC 170106: ^{Note 1}
170202	Glass	Note 1
170302	Bituminous mixtures	Other than those mentioned in EWC 170301
170504	Soil and stones	Other than those mentioned in EWC 170503: ^{Note 2} .
170506	Dredging spoil	Other than those mentioned in EWC 170505
170604	Insulation materials	other than those mentioned in EWC 170601 and 170603
170904	Mixed construction and demolition wastes	Other than those mentioned in EWC 170901, 170902 and 170903, and subject to the prior agreement of the Agency.
Other Inert Wastes		
101006	Casting cores and moulds which have not undergone pouring.	Subject to the prior written agreement of the Agency.
190902	Sludges from water clarification	Subject to the prior written agreement of the Agency .
190904	Spent Activated Carbon	Subject to the prior written agreement of the Agency.

Note 1: These wastes can be accepted without Level 1 or Level 2 testing (see A.3 below) provided

- The waste is a pure, single stream from a single source.
- Different wastes denoted by Note 1 may be accepted together provided they are from the same source.
- In the case of suspicion of contamination (either from visual inspection or from knowledge of the origin of the waste) testing should be applied or the waste should be refused.

Note 2: The terms of Note 1 apply to soil and stones other than topsoil and peat and soil or stones from contaminated sites.

Table A.2.2 Waste for Recovery

EW C C O D E	D E S C R I P T I O N	R E S T R I C T I O N S ^{Note 1}
Waste Resulting from Quarrying and Physical Treatment of Minerals		
010102	Wastes from mineral non-metalliferous excavation	Limited to such waste derived from on-site quarrying activities
010412	Tailings and other wastes from washing and cleaning of minerals other than those mentioned in 010407 and 010411	Limited to such waste derived from on-site quarrying activities
010499	Wastes not otherwise specified	Subject to the prior agreement of the Agency and limited to such waste derived from on-site quarrying activities
Construction and Demolition Wastes		
170101	Concrete	For development works only.
170102	Bricks	For development works only.
170103	Tiles and ceramics	For development works only.
170107	Mixture of concrete, bricks, tiles and ceramics	For development works only. Other than those mentioned in EWC 170106.
170504	Soil and stones	Other than those mentioned in EWC 170503 and excluding peat.

Note 1: In the case of suspicion of contamination (either from visual inspection or from knowledge of the origin of the waste) testing should be applied or the waste should be refused.

A.3 Acceptance Criteria

The general characterisation and testing must be based on the following three level hierarchy:

Level 1: Basic Characterisation

This constitutes a thorough determination, according to standardised analysis and behaviour testing methods, of the short and long-term leaching behaviour and/or characteristic properties of the waste.

Level 2: Compliance Testing

This constitutes periodical testing by simpler standard analysis and behaviour-testing methods to determine whether a waste complies with condition and /or specific reference criteria. The tests focus on key variables and behaviour identified by basic characterisation.

Level 3: On-site verification

This constitutes rapid check methods to confirm that a waste is the same as that which has been subjected to compliance testing and that which is described in any accompanying documents. It may merely consist of a visual inspection of a load of waste before and after unloading at the landfill site.

All waste loads must provide the following information (if available) :

Waste owner	Amount of waste
Source and origin of waste	Existing data on the waste
Description of the waste	Physical form
Waste Type and EWC code	Colour
Type of process producing the waste	Odour

All wastes accepted for disposal or recovery at the landfill shall undergo the Level 3: On-site verification at a minimum.

In addition to the above a representative load from every excavation/demolition/waste removal/dredging works is subjected to a comprehensive assessment which must satisfy Level 1 characterisation.

The comprehensive assessment must at a minimum include the following:

1. A chemical analysis of a representative sample. At least one sample per 1,500 tonnes or portion thereof must be taken for chemical analysis for each excavation or demolition works. However, if the comprehensive assessment is undertaken prior to the commencement of excavation or clearance activity, the licensee may reduce the number of samples for chemical analysis to one for each 7,500 tonnes or portion thereof. The sampling location must be identified on a sampling grid and enclosed in the comprehensive assessment.
2. An evaluation of the acceptability of the disposal of the waste at the landfill including observance of limits for total pollutants contents in *Schedule A.4: Limit Values for Pollutant Content for Inert Waste Landfills*, of this licence.
3. A statement of any pre-treatment requirement (if any).
4. Evidence that the waste displays no hazardous properties upon disposal.

If as a result of examinations undertaken in the course of excavation or clearance activity, the suspicion of contamination should arise, the type and concentration of the contamination must be determined, and its extent established through additional sampling.

Wastes of unknown origin or with insufficient waste description must be subjected to a chemical analysis.

In addition to the assessment above, representative samples upon delivery of wastes must be taken for compliance testing purposes (Level 2). The tests shall focus on key variables and behaviour identified by the chemical analysis.

A representative sample shall be taken from one in every 100 loads of waste accepted at the facility. This sample shall be subjected to Level 2 testing. Part of this sample shall be retained at the facility for three months and be available for inspection/analysis by the Agency.

A.4 Limit Values for Pollutant Content for Inert Waste Landfills.

Unless otherwise instructed in writing by the Agency, the following leaching limit values apply for waste acceptable at landfills for inert waste. The leaching limit values are calculated at liquid to solid ratios (L/S) of 2 l/kg and 10 l/kg for total release and directly expressed in mg/l for C₀ (the first eluate of percolation test at L/S = 0.1 l/kg).

Table A.4.1: Limit Values for Pollutant Content for Inert Waste Landfills.

Parameter	L/S = 2 l/kg	L/S = 10 l/kg	C ₀ (percolation test)	Total Pollutant Content
	mg/kg dry substance	mg/kg dry substance	mg/l	mg/kg dry substance
Arsenic (as As)	0.1	0.5	0.06	
Barium (as Ba)	7.0	20.0	4.0	
Cadmium (as Cd)	0.03	0.04	0.02	
Total Chromium (as Cr)	0.2	0.5	0.1	
Copper (as Cu)	0.9	2.0	0.6	
Mercury (as Hg)	0.003	0.01	0.002	
Molybdenum (as Mo)	0.3	0.5	0.2	
Nickel (as Ni)	0.2	0.4	0.12	
Lead (as Pb)	0.2	0.5	0.15	
Antimony (as Sb)	0.02	0.06	0.10	
Selenium (as Se)	0.06	0.1	0.04	
Zinc (as Zn)	2.0	4.0	1.2	
Chloride	550.0	800.0	460.0	
Fluoride	4.0	10.0	2.5	
Sulphate ^{Note 1}	560.0	1000.0	1500.0	
Phenol index	0.50	1.0	0.3	
Dissolved Organic Carbon (DOC) ^{Note 2}	240.0	500.0	160.0	
Total Dissolved Solids (TDS) ^{Note 3}	2500.0	4000.0		
Total Organic Carbon (TOC) ^{Note 4}				30,000.0
BTEX ^{Note 5}				6.0
PCB (7 congeners)				1.0
Mineral Oil (C10 – C40)				500.0
Total PAH ^{Note 6}				100.0

Note 1: If the waste does not meet these values for sulphate, it may still be considered as complying with the acceptance criteria if the leaching does not exceed either of the following values: 1500 mg/l as Co at L/S = 0.1 l/kg and 6000mg/kg at L/S = 10 l/kg. It will be necessary to use a percolation test to determine the limit value at L/S = 0.1 l/kg under initial equilibrium conditions, whereas the value at L/S = 10 l/kg may be determined either by a batch leaching test or by a percolation test under conditions approaching local equilibrium.

Note 2: If the waste does not meet these values for dissolved organic carbon (DOC) at its own pH value, it may alternatively be tested at L/S = 10 l/kg and a pH between 7.5 and 8.0. The waste may be considered as complying with the acceptance criteria for DOC, if the result of this determination does not exceed 500 mg/l. (A method based on CEN/TS 14429:2005 is available).

Note 3: The values for TDS (Total Dissolved Solids) can be used alternatively to the values for Sulphate and Chloride.

Note 4: The TOC limit value is complied with as long as the loss on ignition does not exceed 5% per weight. In the case of soils a higher limit value may be admitted by the Agency, provided the Dissolved Organic Carbon at pH 7 (DOC7) value of 500 mg/kg is achieved.

Note 5: Benzene, toluene, ethylbenzene, o-xylene, m-xylene and p-xylene.

Note 6: For determining the total of PAH, the following seventeen compounds must be added to a sum: Fluoranthene C16H10, Benzoic(a)pyrene C20H12, Benzoic(b)fluoranthene C20H12, Benzoic(k)fluoranthene C20H12, Benzoic(g,h,i)perylene C22H12, I, Indenoic(1,2,3-c,d)pyrene C22H1, Napthalene, Acenaphthylene, Acenaphthene, Anthracene, Benzo(a)anthracene, Chrysene, Coronene, Dibenzo(a,h)anthracene, Flourene, Phenanthrene, Pyrene.

Note 7: Any changes to limit values shall be by written agreement in advance with the Agency.

Sampling and Test Methods

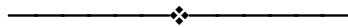
Sampling and testing shall be carried out by independent and qualified persons and institutions. Laboratories shall have proven experience in waste testing and analysis and an efficient quality assurance system. The methods provided in the Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Council Directive 1999/31/EC on the landfill of waste shall be used.



SCHEDULE B: Emission Limits

B.1 Emissions to Air

There shall be no Emissions to Air of environmental significance.



B.2 Emissions to Surface Water

Level (Suspended Solids mg/l)
35



B.3 Emission to Sewer

There shall be no Process Effluent Emissions to Sewer.



B.4 Noise Emissions

Daytime dB(A) L_{Aeq}(30 minutes)	Night-time dB(A) L_{Aeq}(30 minutes)
55 ^{Note 1}	45 ^{Note 1}

Note 1: There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.

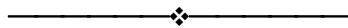


B.5 Dust Deposition Limits

(Measured at the monitoring points indicated in Table C.2.1)

Level (mg/m²/day) ^{Note 1}
350

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



SCHEDULE C: Control & Monitoring

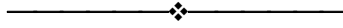
C.1.1 Control of Emissions to Air

There shall be no emissions to air of environmental significance.



C.1.2 Monitoring of Emissions to Air

There shall be no emissions to air of environmental significance.

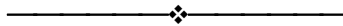


C.2.1 Monitoring Locations

Table C.2.1: Environmental monitoring locations.

Surface Water	Groundwater	Leachate	Dust	Noise
SW1	BH4	LC1	D1	N4
SW2	BH5	LC2	D2	N5
SWD1*	BH6	LC3	D3a	N6
SWD2*	BH9		D5	N7
SWD3*	BH10a			N8
SWD4*	BH11a			
SWD5*	BH12			
SWD6*	BH13			
SWD7*	BH14			

* SWD1-7 to be monitored when there is water flow at these locations.



C.2.2 Monitoring of Emissions to Surface Water, Ground Water and of Leachate

PARAMETER ^{Note 1}	SURFACE WATER Monitoring Frequency	LEACHATE Monitoring Frequency	GROUNDWATER Monitoring Frequency
Visual Inspection/Odour	Weekly	Six Monthly	Quarterly
Groundwater Level	Not Applicable	Not Applicable	Quarterly
Leachate Level	Not Applicable	Six Monthly	Not Applicable
Ammoniacal Nitrogen	Six Monthly	Six Monthly	Quarterly
BOD	As may be required	Not Applicable	Not Applicable
COD	Six Monthly	Six Monthly	Not Applicable
Chloride	Six Monthly	Six Monthly	Quarterly
Dissolved Oxygen	Six Monthly	Not Applicable	Quarterly
Electrical Conductivity	Six Monthly	Six Monthly	Quarterly
pH	Six Monthly	Six Monthly	Quarterly
Total Suspended Solids	Six Monthly	Not Applicable	Not Applicable
Temperature	Six Monthly	Not Applicable	Quarterly
Boron	Not Applicable	Not Applicable	Annually
Cadmium	As may be required	Not Applicable	Annually
Calcium	Annually	Not Applicable	Quarterly
Chromium (Total)	Not Applicable	Not Applicable	Annually
Copper	Not Applicable	Not Applicable	Annually
Cyanide (Total)	Not Applicable	Not Applicable	Annually
Fluoride	Not Applicable	Not Applicable	Annually
Iron	Not Applicable	Not Applicable	Quarterly
Lead	Not Applicable	Not Applicable	Annually
List I/II organic substances ^{Note 2}	As may be required	Annually	Annually
Magnesium	Annually	Not Applicable	Annually
Manganese	Annually	Not Applicable	Quarterly
Mercury	Not Applicable	Not Applicable	Annually
Potassium	Not Applicable	Six Monthly	Quarterly
Sulphate	Annually	Six Monthly	Quarterly
Sodium	Annually	Six Monthly	Quarterly
Total Alkalinity	Annually	Not Applicable	Not Applicable
Total Phosphorus / ortho- P	Annually	Not Applicable	Annually
Total Oxidised Nitrogen	Not Applicable	Six Monthly	Quarterly
Total Organic Carbon	Not Applicable	Not Applicable	Quarterly
Residue on evaporation	Not Applicable	Not Applicable	Annually
Zinc	Not Applicable	Not Applicable	Annually
Phenols	Not Applicable	Six Monthly	Quarterly
Faecal Coliforms ^{Note 3}	Not Applicable	Not Applicable	Annually
Total Coliforms ^{Note 3}	Not Applicable	Not Applicable	Annually

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

Note 2: 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 3: In the case where groundwater is extracted for drinking water and there is evidence of bacterial contamination, the analysis at monitoring points down-gradient of the landfill should include enumeration of total bacteria at 22°C and 37°C and faecal streptococci.



C.2.3. Noise Monitoring

Table C.2.3. Noise Monitoring Frequency & Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) _{EQ} [30 minutes]	Annually	Standard ^{Note 1}
L(A) ₁₀ [30 minutes]	Annually	Standard ^{Note 1}
L(A) ₉₀ [30 minutes]	Annually	Standard ^{Note 1}
Frequency Analysis (½ Octave band analysis)	Annually	Standard ^{Note 1}

Note 1: “International Standards Organisation. ISO 1996. Acoustics – description and measurement of Environmental noise. Parts 1, 2 and 3”.

C.2.4 Dust Monitoring

Table C.2.4. Dust Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust deposition (mg/m ² /day)	Six-Monthly	Standard Method

C.3.1 Control of Emissions to Sewer

There shall be no process effluent emissions to sewer.

C.3.2 Monitoring of Emissions to Sewer

There shall be no process effluent emissions to Sewer.

C.4 Meteorological Monitoring

Data to be obtained from a source agreed by the Agency.

Table C.4.1. Meteorological Monitoring

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

SCHEDULE D: Recording and Reporting to the Agency

Completed reports shall be submitted to:

The Office of Environmental Enforcement,
Environmental Protection Agency,
McCumiskey House,
Richview,
Clonskeagh Road,
Dublin 14. **or** Any other address as may be specified by the Agency

Reports are required to be forwarded as required in the licence and as may be set out below:

Report	Reporting Frequency ^{Note 1}	Report Submission Date
Annual Environment Report (AER)	Annually	By 31st March of each year.
Record of incidents	As they occur	Within five days of the incident.
Specified Engineering Works reports	As they arise	In advance of the works commencing.
Monitoring of surface water quality	Six-Monthly	Within ten days of obtaining results.
Monitoring of groundwater quality	Six-Monthly	Within ten days of obtaining results.
Monitoring of leachate	Six-Monthly	Within ten days of obtaining results.
Dust monitoring	Six-Monthly	Within ten days of obtaining results.
Noise Monitoring	Annually	As part of the AER.
Any other monitoring ^{Note 2}	As they occur	Within ten days of obtaining results.

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

Note 2: Other than nuisance monitoring reports.

SCHEDULE E: Annual Environmental Report

Annual Environmental Report Content ^{Note 1}

Emissions from the facility.
 Waste management record.
 Waste recovery report.
 Remaining void, projected completion date.
 Resource consumption summary.
 Complaints summary.
 Schedule of Environmental Objectives and Targets.
 Environmental management programme – report for previous year.
 Environmental management programme – proposal for current year.
 Pollutant Release and Transfer Register – report for previous year.
 Pollutant Release and Transfer Register – proposal for current year.
 Noise monitoring report summary.
 Dust monitoring report summary.
 Meteorological data summary.
 Current monitoring location reference drawing.
 Tank and pipeline testing and inspection report.
 Reported incidents summary.
 Energy efficiency audit report summary.
 Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.
 Development/Infrastructural works summary (completed in previous year or prepared for current year).
 Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information.
 Review of environmental liabilities.
 Any amendments to the Closure, Restoration & Aftercare Management Plan.
 Any other items specified by the Agency.

Note 1: Content may be revised subject to the agreement of the Agency.

Sealed by the seal of the Agency on this the 21st day of May 2008.

**PRESENT when the seal of the Agency
Was affixed hereto:**

Laura Burke, Director/Authorised Person