Cork County Council

Waste Licence Review Application Form

Derryconnell Landfill Site
Volume 1 of 2

July 2007

TOBIN CONSULTING ENGINEERS

TOBIN
Patrick J. Tobin & Co. Ltd.

Waste Licence Application Form

EPA Ref. Nº: *(Office use only)*	

This document does not purport to be and should not be considered a legal interpretation of the provisions and requirements of the Waste Management Acts 1996 to 2003.

Environmental Protection Agency
P.O.Box 5000, Johnstown Castle Estate, County Wexford
Telephone: 053-60600 Fax: 053-60699

INTRODUCTION

A valid application must contain the information prescribed in the Waste Management (Licensing) Regulations 2004 (SI No. 395 of 2004). **The applicant is <u>strongly</u> advised to read the *Application Guidance Notes* for Waste Licensing, available from the EPA.**

The applicant must conform to the format set out in the guidance notes for applications. Each page of the completed application form must be numbered, e.g. *page 5 of 45*, etc. Also duplicated pages from the application form should be uniquely numbered, e.g. page 5(i) of 45, etc. **The basic information should for the most part be supplied in the spaces given in application form** and any supporting documentation should be supplied as attachments, as specified. Consistent measurement units must be used throughout.

The applicant should note that the application form has been structured so that it requires information to be presented in an order of progressive detail.

When it is found necessary, additional information may be provided on supplementary attachments which should be clearly cross referenced with the relevant sections in the main document.

While all sections in the application form may not be relevant to the activity concerned, the applicant should look carefully through all aspects of the form and provide the required information, in the greatest possible detail.

All maps/drawings/plans must be no larger than A3 size and scaled appropriately such that they are clearly legible. In exceptional circumstances, where A3 is considered inadequate, a larger size may be requested by the Agency.

Information supplied in this application, including supporting documentation will be put on public display and open to inspection by any person. Should the applicant consider information to be confidential, this information should be submitted in a separate enclosure bearing the legend " In the event that this information is deemed not to be held as confidential, it must be returned to .....". In the event that information is considered to be of a confidential nature, then the nature of this information, and the reasons why it is considered confidential (with reference to the " Access to Information on the Environment" Regulations) should be stated in the Application Form, where relevant.

It should be noted that it will not be possible to process or determine the application until the required documents have been provided in sufficient detail and to a satisfactory standard.

CHECKLIST

Articles 12 and 13 of the Waste Management (Licensing) Regulations, 2004 (S.I. No. 395 of 2004) set out the information which must, in all cases, accompany a waste licence application. In order to ensure that the application fully complies with the legal requirements of Articles 12 and 13 of the 2004 Regulations, all applicants should **complete** the following.

In each case, refer to the attachment number(s) of your application which contain(s) the information requested in the appropriate sub-article.

Article 12(1) In the case of an application for a waste licence, the application shall -

(a) give the name, address and, where applicable, any telephone number and telefax of the applicant (and, if different, the operator of the facility concerned), the address to which correspondence relating to the application should be sent and, if the applicant or operator is a body corporate, the address of its registered office or principal office,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(b) give the name of the planning authority in whose functional area the relevant activity is or will be carried on,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(c) in the case of a discharge of any trade effluent or other matter (other than domestic sewage or storm water) to a sewer of a sanitary authority, give the name of the sanitary authority in which the sewer is vested or by which it is controlled,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(d) give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the facility or premises to which the application relates,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(e) describe the nature of the facility or premises concerned, including the proposed capacity of the facility or premises, and in the case of application in respect of a landfill of waste, the requirements specified in Annex 1 of the Landfill Directive,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(f) specify the class or classes of activity concerned, in accordance with the Third and Fourth Schedules of the Act, and in the case of an application in respect of the landfill of waste, specify the class of landfill in accordance with Article 4 of the Landfill Directive,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(g) specify, by reference to the relevant European Waste Catalogue codes as presented by Commission Decision 2000/532/EC of 3 May 2000, the quantity and nature of the waste or wastes which will be treated, recovered or disposed of,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(h) specify the raw and ancillary materials, substances, preparations, fuels and energy which will be utilised in or produced by the activity,

LOCATION	Attachment A & G	
CHECKED	**Applicant** ☒	**Official** ☐

(i) describe the plant, methods, processes, ancillary processes, abatement, recovery and treatment systems and operating procedures for the activity,

LOCATION	Attachment D	
CHECKED	**Applicant** ☒	**Official** ☐

(j) provide information for the purpose of enabling the Agency to make a determination in relation to the matters specified in paragraphs (a) to (g) of section 40(4) of the Act,

LOCATION	Attachment L	
CHECKED	**Applicant** ☒	**Official** ☐

(k) give particulars of the source, location, nature, composition, quantity, level and rate of emissions arising from the activity and, where relevant, the period or periods during which such emissions are made or are to be made,

LOCATION	Attachment E	
CHECKED	**Applicant** ☒	**Official** ☐

(l) give details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than those into which the emissions are, or are to be made, and of proposed measures to prevent or eliminate or, where that is not practicable, to limit or abate such emissions,

LOCATION	Attachment F	
CHECKED	**Applicant** ☒	**Official** ☐

(m) identify monitoring and sampling points and indicate proposed arrangements for the monitoring of emissions and the environmental consequences of any such emissions,

LOCATION	Attachment F	
CHECKED	**Applicant** ☒	**Official** ☐

(n) describe any proposed arrangements for the prevention, minimisation and recovery of waste arising from the activity concerned,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(o) describe any proposed arrangements for the off-site treatment or disposal of solid or liquid wastes,

LOCATION	Attachment E	
CHECKED	**Applicant** ☒	**Official** ☐

(p) describe the existing or proposed measures, including emergency procedures, to prevent unauthorised or unexpected emissions and minimise the impact on the environment of any such emission,

LOCATION	Attachment J	
CHECKED	**Applicant** ☒	**Official** ☐

(q) describe the proposed measures for the closure, restoration, remediation or aftercare of the facility concerned, after the cessation of the activity in question,

LOCATION	Attachment K	
CHECKED	**Applicant** ☒	**Official** ☐

(r) in the case of an application in respect of the landfilling of waste, give particulars of –

(i) such financial provision as is proposed to be made by the applicant, having regard to the provisions of Articles (7)(i) and (8)(a)(iv) of the Landfill Directive and section 53(1) of the Act, and

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(ii) such charges as are proposed or made, having regard to the requirements of section 53A of the Act,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(s) state whether the activity is for the purposes of an establishment to which the European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2000 (S.I. No. 476 of 2000) apply,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

(t) in the case of an activity which gives rise or could give rise to an emission into an aquifer containing the List I and II substances specified in the Annex to Council Directive 80/68/EEC of 17 December 1979, describe the existing or proposed arrangements necessary to give effect to Articles 3,4,5,6,7,8,9 and 10 of the aforementioned Council Directive,

LOCATION	Not Applicable	
CHECKED	**Applicant** ☒	**Official** ☐

(u) include a non-technical summary of information provided in relation to the matters specified in paragraphs (a) to (t) of this sub-article,

LOCATION	Attachment A	
CHECKED	**Applicant** ☒	**Official** ☐

Article 12(4) Without prejudice to Article 13(1) and (2), an application for a licence shall be accompanied by -

(a) a copy of the relevant page of the newspaper(s) in which the notice in accordance with article 6 has been published,

LOCATION	Attachment B	
CHECKED	**Applicant** ☒	**Official** ☐

(b) a copy of the text of the notice or notices erected or fixed in accordance with article 7,

LOCATION	Attachment B	
CHECKED	**Applicant** ☒	**Official** ☐

(c) where appropriate, a copy of the notice given to a local planning under article 9,

LOCATION	Not Applicabl	
CHECKED	**Applicant** ☒	**Official** ☐

(d) a copy of such plans (appropriately scaled and no larger than A3 size), including a site plan or plans and location map or maps, and such other particulars, reports and supporting documentation as are necessary to identify and describe, as appropriate -
(i) the position of the notice in accordance with article 7,

LOCATION	Attachment B	
CHECKED	**Applicant** ☒	**Official** ☐

(ii) the point or points from which emissions are made or are to be made, and

LOCATION	Attachment D	
CHECKED	**Applicant** ☒	**Official** ☐

(iii) the point or points at which monitoring and sampling are undertaken or are to be undertaken,

LOCATION	Attachment F	
CHECKED	**Applicant** ☒	**Official** ☐

(e) such fee as is appropriate having regard to the provisions of articles 40 and 41.

INCLUDED Y/N	Paid by EFT to EPA	
CHECKED	**Applicant** ☒	**Official** ☐

Article 12(5)(a) & (b) An application shall comprise 1 signed original of the application and 2 copies in hardcopy format plus 2 copies of all files in electronic searchable PDF format on CD-Rom.

HARDCOPIES PROVIDED Y/N	Y	
CHECKED	**Applicant** ☒	**Official** ☐

CD OF PDF FILES PROVIDED? Y/N	Y	
CHECKED	**Applicant** ☒	**Official** ☐

Article 13 Where a development requires an Environmental Impact Assessment to be carried out, 1 signed original and 2 copies in hardcopy format of the environmental impact statement plus 16 copies in electronic searchable PDF format on CD-ROM should accompany this application.

EIA REQUIRED ? Y/N	N	
CHECKED	**Applicant** ☒	**Official** ☐
3 HARD COPIES OF EIS INCLUDED ? Y/N	N	
CHECKED	**Applicant** ☒	**Official** ☐
16 CD versions of EIS, as PDF files, PROVIDED? Y/N	N	
CHECKED	**Applicant** ☒	**Official** ☐

PROCEDURES

It is recommended that pre-application consultations with the Agency are undertaken before a formal submission of the waste licence application.

The procedure for making and processing of applications for waste licences, and for the processing of reviews of such licences, appear in the Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) and are summarised below. The application fees that shall accompany an application are listed in the Second Schedule to the Regulations.

Prior to submitting an application the applicant must publish in a local newspaper, and erect on site, a notice of intention to apply. An applicant, other than a local authority in whose functional area the development is located, must also notify the Local Planning Authority, in writing, of their intention to apply.

An application for a licence must be submitted on the appropriate form (available from the Agency) with the correct fee, and should contain relevant supporting documentation as attachments. The application should be based on responses to the form, supporting written text and the appropriate use of tables and drawings. Where point source emissions occur, a system of unique reference numbers should be used to denote each emission point. These should be simple, logical, and traceable throughout the application.

The application form is divided into a number of sections of related information. The purpose of these divisions being to facilitate both the applicant and the Agency in the provision of the information and its assessment. Attachments should be clearly numbered, titled and paginated and must contain the required information as set out in the application form. Additional attachments may be included to supply any further information supporting the application. Any references made should be supported by a bibliography.

All questions should be answered. No waste management facility is exactly the same and hence each application will require different information. It is therefore possible that some of the sections of this application form may not be relevant to the activity concerned. **Where information is requested in the application form, which is not relevant to the application, the words "not applicable" should be clearly written on the form. The abbreviation "N/A" should not be used.**

Additional information may need to be submitted beyond that which is explicitly requested on this form. Any references made should be supported by a bibliography. The Agency may request further information if it considers that its provision is material to the assessment of the application. Advice should be sought from the Agency where there is doubt about the type of information required or the level of detail.

Information supplied in this application, including supporting documentation will be put on public display and be open to inspection by any person. **Should the applicant**

consider information to be confidential, then the nature of this information, and the reasons why it is considered confidential should be clearly stated in an attachment to the Application Form. This information should be submitted in a separate enclosure bearing the legend "In the event that this information is deemed not to be held as confidential, it must be returned to (representative of the applicant)".

Applicants should be aware that a contravention of the conditions of a waste licence is an offence under Section 39 of the Waste Management Acts 1996 to 2003.

The provision of information in an application for a waste licence which is false or misleading is an offence under Section 45 of the Waste Management Acts 1996 to 2003.

Note: Drawings. The following guidelines are included to assist applicants:

- *All drawings submitted should be titled and dated.*
- *They should have a **unique reference number** and should be signed by a clearly identifiable person.*
- *They should indicate a scale and the **direction of north**.*
- *All drawings should, generally, be to a scale of between 1:20 to 1:500, depending upon the degree of detail needed to be shown and the size of the facility. Drawings delineating the boundary can be to a smaller scale of between 1:1000 to 1:10560, but must clearly and accurately present the required level of detail. Drawings showing the site location can be to a scale of between 1:50 000 to 1:126 720. All drawings should, however, be A3 or less and of an appropriate scale such that they are clearly legible. Provide legends on all drawings and maps as appropriate.*

The provision of information in an application for a waste licence, which is false or misleading, is an offence under s45 of the Acts.

SECTION A NON-TECHNICAL SUMMARY

A Non-Technical Summary is to be submitted. The summary should include information on those aspects outlined in the Guidance Note and must comply with the requirements of Article 12 (1) (u) of the Waste Management (Licensing) Regulations, S.I. 395 of 2004.

The Non-Technical Summary should form **Attachment A.1**.

SECTION B GENERAL

B.1 Applicant's Details

Name*:	Cork County Council
Address:	Western Division
	Hume House
	Wolfe Tone Street
	Clonakilty
	Co. Cork
Tel:	023-33328
Fax:	023-34315
e-mail:	

* This should be the name of the applicant which is current on the date this Waste Licence Application is lodged with the Agency. It should be the name of the legal entity (which can be a limited company or a sole trader). A trading/business name is not acceptable.

Name and Address for Correspondence

Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Name:	Olive Downes
Address:	TOBIN Consulting Engineers
	Bedford Place, Howley's Quay,
	Lower Shannon Street, Limerick
Tel:	061 415757
Fax:	061 409378
e-mail:	olive.downes@tobin.ie

Address of registered or principal office of Body Corporate (if applicable)

Address:	not applicable
Tel:	
Fax:	
e-mail:	

If the applicant is a body corporate, the following information must be attached as **Attachment B1**:

a) a Certified Copy of the Certificate of Incorporation or Memorandum and Article of Association;
b) the Company's Registration Number from the Companies Registry Office; and
c) a list of the Company Directors.

State the interest of the applicant in the land which is subject to the application. The applicant is (please check):

Landowner	☒
Lessee	☐
Prospective Purchaser	☐
Other (please specify)	

Name and address of all occupiers of the land on which the Activity is situated (if different from applicant named above).

Name: not applicable
Address:

Tel:
Fax:
e-mail:

Name and address of the current* owner(s) and lessees of the land, buildings and ancillary plant on which the activity is or will be situated (if different from applicant named above).
An appropriately scaled drawing(≤A3) showing the above details should be included in **Attachment B1.**

Name: not applicable
Address:

Tel:
Fax:
e-mail:
*Current at the time the application is submitted

B.2 Location of Activity

Name: Derryconnell Landfill
Address*: Derryconnell
Schull
Co. Cork

Tel: 028 37048
Fax: 028 37742
e-mail: derryconnell@gmail.com
* Include any townland

National Grid Reference (8 digit 4E,4N)	E9627 N3396

Location maps (≤A3), appropriately scaled, with legible grid references should be enclosed in **Attachment B.2.** The site boundary must be outlined on the map in colour.

B.3 Planning Authority

Give the name of the planning authority in whose functional area the activity is or will be carried out.

Name:	Cork County Council
Address:	Norton House,
	Cork Road,
	Skibereen,
	Co. Cork
Tel:	028 40340
Fax:	028 21660

Has the Planning Authority received written notification from the applicant of the application to The Environmental Protection Agency for a Waste Licence under Article 9 of the Waste Management (Licensing) Regulations?

Planning Authority notified	**Yes** ☒
	No ☐

Planning Permission relating to this application:

has been obtained	☐
is being processed	☐
is not yet applied for	☐
is not required	☒

Local Authority Planning File Reference No:	Not Applicable

Attachment B.3 should contain ***the most recent*** planning permission, including a copy of ***all*** conditions, and the required copies of any EIS should also be enclosed. For existing activities, **Attachment B.3** should also contain copies of of the most recent waste licence and any permits in force at the time of submission. Where planning permission is not required for the development, provide reasons, relevant correspondence, *etc.*

B.4 Sanitary Authority

In the case of a discharge of any trade effluent or other matter (other than domestic sewage or storm water) to a sewer of a sanitary authority or other body, give the name of the sanitary authority in which the sewer is vested or by which it is controlled and the waste water treatment plant (if any) to which the sewer discharges.

Name:	Cork County Council
Address:	Bandon Wastewater Treatment Plant
	Bandon
	Co. Cork
Tel:	
Fax:	

The applicant must enclose, as **Attachment B.4,** a copy of any effluent discharge licence and/or agreement between the applicant and the body with responsibility for the sewer.

B.5 Other Authorities

The applicant should tick the appropriate box below to identify whether the activity is located within the Shannon Free Airport Development Company (SFADCo.) area.

Within SFADCo. Area	**Yes** ☐	**No** ☒

The applicant should indicate the **Health Board Region** where the activity is or will be located.

Name:	Southern Health Board
Address:	Administrative Headquarters
	Wilton Road
	Cork
Tel:	021 4544011
Fax:	021 4345638

B.6 Notices and Advertisements

Articles 6 and 7 of the Waste Management (Licensing) Regulations 2004 requires all applicants to advertise the application in a newspaper and by way of a site notice. See *Guidance Note.*

Attachment B.6 should contain a copy of the site notice and an appropriately scaled drawing (≤A3) showing its location on site. **The original application must include the complete newspaper in which the advertisement was placed**. The relevant page of the newspaper containing the advertisement should be included with the original and three copies of the application.

B.7 Type of Waste Activity, Tonnages & Fees

B.7.1 Specify the class or classes of activity in Table B.7.1, in accordance with the Third Schedule or Fourth Schedule to the Waste Management Acts 1996 to 2003, to which the application relates (check the relevant box(es) and mark the principal activity with a 'P').

Attachment B.7 should identify the principle activity and include a brief technical description of each of the other activities specified. **There can only be one principal activity.**

TABLE B.7.1 THIRD AND FOURTH SCHEDULES OF THE WASTE MANAGEMENT ACTS 1996 TO 2003

Waste Management Acts 1996 to 2003			
THIRD SCHEDULE **Waste Disposal Activities**	**Y/N**	**FOURTH SCHEDULE** **Waste Recovery Activities**	**Y/N**
1. Deposit on, in or under land (including landfill).	Y	1. Solvent reclamation or regeneration.	N
2. Land treatment, including biodegradation of liquid or sludge discards in soils.	N	2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).	Y
3. Deep injection of the soil, including injection of pumpable discards into wells, salt domes or naturally occurring repositories.	N	3. Recycling or reclamation of metals and metal compounds.	Y
4. Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.	Y	4. Recycling or reclamation of other inorganic materials.	Y
5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.	Y	5. Regeneration of acids or bases.	N
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 5 or paragraphs 7 to 10 of this Schedule.	N	6. Recovery of components used for pollution abatement.	N
7. Physico-chemical 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 5 or paragraphs 8 to 10 of this Schedule (including evaporation, drying and calcination).	N	7. Recovery of components from catalysts.	N
8. Incineration on land or at sea.	N	8. Oil re-refining or other re-uses of oil.	N
9. Permanent storage, including emplacement of containers in a mine.	N	9. Use of any waste principally as a fuel or other means to generate energy.	N
10. Release of waste into a water body (including a seabed insertion).	N	10. The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.	N
11. Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.	N	11. Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.	N
12. Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.	P	12. Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.	N
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.	Y	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.	Y

TABLE B.7.2 MAXIMUM ANNUAL TONNAGE

The maximum annual tonnage of waste to be handled at the site should be indicated and the year to which the quantity relates indicated.

	Waste for Disposal	Waste for Recovery
Maximum Annual Tonnage (tpa)	14,000	5,000
Year	2033	2033

B.7.3 FEES

State each class of activity for which a fee is being submitted as per Part I of the Second Schedule of the Waste Management (Licensing) Regulations 2004, S.I. No. 395 of 2004. Note: two fees are required if disposal and recovery are to occur.

Waste Activity	**Fee (in €)**
Disposal of Waste (1.4) Review Fee	€5,000
Recovery of Waste (4) Application	€10,000

TABLE B.7.4 (FOR A LANDFILL APPLICATION)

STATE WHICH OF THE FOLLOWING IS RELEVANT TO THE CURRENT APPLICATION.

(a) landfill for hazardous waste	☐
(b) landfill for non-hazardous waste	☒
(c) landfill for inert waste	☐

B.8 SEVESO II DIRECTIVE

State whether the activity is for the purposes of an establishment to which the European Communities (Control of Major Accident Hazards involving Dangerous substances) Regulations, 2000 (S.I. No. 476 of 2000), apply.

Regulations Apply	Yes ☐	No ☒

If yes, **Attachment B.8** should include the relevant details**.** Supporting information, as well as copies of any Hazardous Operation Studies (HAZOP) carried out for the site, should also be included in the attachment.

SECTION C MANAGEMENT OF THE FACILITY

Advice on completing this section is provided in the *Guidance Note*.

C.1 Technical Competence and Site Management

This information should form **Attachment C 1**.

Details of the applicant's experience and qualifications, along with that of other relevant employees, should be summarised as shown below. Statements of duties, responsibilities, experience and qualifications should be submitted for each position named below. Additional information, including the management structure and an organisational chart, should be included in **Attachment C 1.**

Name	Position	Duties and Responsibilities	Experience /Qualifications
Mr. Jerome C. O'Sullivan	Senior Executive Officer	Head of Department	Extensive experience in all areas of Waste Management
Mr. Paudie Hegarty	Senior Executive Engineer	Overall supervision of the development and operation of the landfill site	B.E., FÁS Waste Management Course 25 years experience in general civil engineering and project supervision
Ms. Mairead Hales	Assistant Engineer	Overall supervision of the development and operation of the landfill site	B.E., FÁS Waste Management Course. 10 years experience in Local Authority works including waste management.
Ms Deirdre Williams	Facility Manager	Responsible for day to day operations of the site. Carrying out routine site inspections and environmental monitoring.	BSc, FÁS Waste Management Course 5 years experience in environmental monitoring and facility supervision
Mr. John Hurley	Compactor Operator	Spreading, compacting and covering waste safely and economically, checking waste loads spreading and compacting	Over 20 years experience of work on landfill at Derryconnell

Table continued overleaf

Name	Position	Duties and Responsibilities	Experience /Qualifications
Mr. Joe Newman	Site Caretaker/ Deputy Facility Manager	Site upkeep, collection of charges and maintenance of onsite records and implementation of waste acceptance procedures	Approximately 10 years experience at Derryconnell. Completed Module 4 and 6 of FAS Waste Management training Course. Was present for the day training in the running of the Flare and is responsible for the daily opening of valves and the overall care of the machine. Completed the Waste Management Operative Training.
Mr. Frank Cronin	Deputy Site Caretaker/ Site Operative	Site upkeep, collection of charges and maintenance of onsite records and implementation of waste acceptance procedures.	Approximately 10 years experience at Derryconnel. Completed Module 4 and 6 of FAS Waste Management training Course. Was present for the day training in the running of the Flare and is responsible for the daily opening of valves and the overall care of the machine. Will attend the Waste Management Operative Training in Jan 2007. SafePass Dec 2006
Mr. Jerry McCarthy	General Operative	Site upkeep, collection of charges and maintenance of onsite records and implementation of waste acceptance procedures during holiday periods.	Undergone Safepass course. Attended a course with fetac for the certificate in safety representative. Has also attended the basic computer skills training given by Cork Co Co. Will attend the Waste Management Operative Training in Sept 2007

C.2 Environmental Management System

Attachment C 2 should contain the Environmental Management System (EMS) details required.

C.3 Hours of Operation

Attachment C 3 should contain details of hours of operation for the waste facility, civic waste facilities and other facilities.

(a) Proposed hours of operation.
(b) Proposed hours of waste acceptance/handling.
(c) Proposed hours of any construction and development works at the facility and timeframes (required for landfill facilities).
(d) Any other relevant hours of operation expected.

C.4 Conditioning Plan

Address as **Attachment C 4,** in the case of a LANDFILL Application, and only for the review of a Landfill Waste Licence.

SECTION D INFRASTRUCTURE & OPERATION

D.1 Infrastructure

Complete the following table detailing the site infrastructure. **Attachment D 1** should contain the appropriate documentation. Information provided should follow the sequence, and use the headings, established in Table D.1. Additional advice on completing this section is provided in the application *Guidance Note*.

Table D.1. Infrastructure		**y/n**	**Comments**
D.1.a	**Site security arrangements including gates and fencing**	y	
D.1.b	**Designs for site roads**	y	
D.1.c	**Design of hardstanding areas**	y	
D.1.d	**Plant**	y	
D.1.e	**Wheel-wash**	y	
D.1.f	**Laboratory facilities**	y	
D.1.g	**Design and location of fuel storage areas**	y	
D.1.h	**Waste quarantine areas**	y	
D.1.i	**Waste inspection areas**	y	
D.1.j	**Traffic control**	y	
D.1.k	**Sewerage and surface water drainage infrastructure**	y	
D.1.l	**All other services**	y	
D.1.m	**Plant sheds, garages and equipment compound**	y	
D.1.n	**Site accommodation**	y	
D.1.o	**A fire control system, including water supply**	y	
D.1.p	**Civic amenity facilities**	y	
D.1.q	**Any other waste recovery infrastructure**	y	
D.1.r	**Composting infrastructure**	n	
D.1.s	**Construction and Demolition waste infrastructure**	y	
D.1.t	**Incineration infrastructure (if applicable).** **Provide information to fulfil Article 4 (2) & (3) of the Incineration of Waste Directive**	n	
D.1.u	**Any other infrastructure**	y	

D.2 Facility Operation

In **Attachment D 2** describe the plant, methods, processes and operations of the waste facility, as required by the *Guidance Note*.

Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

LANDFILLS

The following Sections D3 to D7 should only be completed for Landfill Applications. Reference should be made to the Agency landfill manual 'Landfill Site Design (2000)' when completing this section.

D.3 Liner System

Complete the following table regarding the liner system to be used for the landfill/landfill extension and detail the information requested as **Attachment D.3**. ***Items D3c to D3g should only be completed for immediate projects only (ie Years 1 & 2).*** A schedule of Liner construction activities for the medium to long term need only be listed in item D3a below, since Condition 3 of any licences granted will provide reporting requirements for any future projects.

TABLE D.3 LINER SYSTEM

		y/n	Comments
D.3.a	**Provide information to fulfil Annex 1 of the Landfill Directive**	Y	
D.3.b	**What type of liner system is specified?**	Y	
D.3.c	**Has a Quality Control Plan been specified?**		Not applicable – See attachment D.3 for further details.
D.3.d	**Has a Quality Assurance Plan been specified?**		
D.3.e	**Have independent, third-party supervision, testing and controls been specified?**		
D.3.f	**Have basal gradients for all cells and access ramps to the cells been designed?**		
D.3.g	**Has a leak detection survey been specified?**		

D.4 Leachate Management

Complete the following table detailing leachate management arrangements. Further information should be included in **Attachment D.4.**

TABLE D.4.1 LEACHATE MANAGEMENT ARRANGEMENTS

		y/n	Comments
D.4.a	**Is there a Leachate Management Plan?**	Y	
D.4.b	**Have annual quantities of leachate been calculated?**	Y	
D.4.c	**Has the total quantity of leachate been calculated?**	Y	
D.4.d	**Have the size of the cells been specified taking account of the water balance calculations?**	Y	
D.4.e	**Has a leachate collection system been specified?**	Y	
D.4.f	**Has a leachate storage system been specified?**	Y	
D.4.g	**Has a system for monitoring the level of leachate in the waste been designed?**	Y	
D.4.h	**Is leachate recirculation proposed/practised?**	Y	
D.4.i	**Has leachate treatment on site been specified?**	Y	
D.4.j	**Has leachate removal been specified?**	Y	

D 5 Landfill Gas Management

All landfill sites should have suitable arrangements for the management of landfill gas. **Attachment D.5** should contain the appropriate documentation. Information provided should follow the sequence, and use the headings, established in Table D.5. ***Items D5g to D5m should only be completed for immediate or current gas collection projects only (ie Years 1 & 2).*** A schedule of gas management aspects for the medium to long term need only be listed in item D5f below, since Condition 3 of any proposed decision/licence will provide reporting requirements for any future projects.

Table D.5. Landfill Gas Management

		y/n	Comments
D.5a	**Is there a Landfill Gas Management Plan?** **Provide estimates of the volumes of landfill gas which will be produced by the waste disposed of in the site for the next 20 years, and compare to the EPER list for methane:**	Y	
D.5b	**Is there a passive venting system?**	Y	
D.5c	**Does the passive system cover all of the filled area?**	Y	
D.5d	**Have gas alarm systems been installed in the site buildings?**	Y	
D.5e	**Have measures been installed to prevent landfill gas migration (e.g. barriers)?**	Y	
D.5f	**Has a time-scale been proposed for the installation of landfill gas infrastructure?**	Y	
D.5g	**Is gas flaring undertaken at the site?**		Not applicable – See attachment D.5 for further details.
D.5h	**Is there an active (i.e., pumped) landfill gas extraction system?**		
D.5i	**Does the active system cover all of the filled area?**		
D.5j	**Is landfill gas used to generate energy at the site?**		
D.5k	**Have emissions from the flarestack and utilisation plant been assessed for source, composition, quantity and level and rate?**		
D.5l	**Has a maintenance programme for the control system been specified?**		
D.5m	**Has a condensate removal system been designed?**		

D.6 Capping System

Complete the following table detailing the design of the capping system. **Attachment D.6** should contain the appropriate documentation. ***Items D6e to D6k should be completed for immediate projects only (ie Years 1 & 2).*** Condition 10 of any proposed decision/licence will provide reporting requirements for capping requirements beyond this timeframe.

Table D.6 Capping System

		y/n	Comments
D.6a	**Has the daily cover been specified?**	Y	
D.6b	**Has the intermediate cover been specified?**	Y	
D.6c	**Has the temporary capping been specified?**	Y	
D.6d	**Has the Capping System been designed and does it meet the requirements of the Landfill Directive Annex 1 (3.3)?**	Y	
D.6e	**Does the Capping System include a flexible membrane liner?**		Not applicable – See attachment D.6for further details.
D.6f	**Have all capping materials been specified?**		
D.6g	**Has a Method Statement for construction been produced?**		
D.6h	**Has a Quality Control Plan been produced?**		
D.6i	**Has a Quality Assurance Plan been produced?**		
D.6j	**Has a programme for monitoring landfill stability been developed?**		
D.6k	**Has a programme for monitoring landfill settlement been developed?**		

SECTION E EMISSIONS

Give particulars of the source, location, nature, composition, quantity, level and rate of emissions arising from the activity and, where relevant, the period or periods during which such emissions are made or are to be made.

The applicant should address in particular any emission point where the substances listed in the Schedule of S.I. 394 of 2004 are emitted.

E.1 Emissions to Atmosphere

Details of all point emissions to atmosphere should be supplied. Table E.1.(i) (for Landfill Gas Flare emissions) must be completed for all landfills with a flare. Complete Table E.1(ii) and E.1(iii) for all other main emission points, including stack sources (incinerator stacks, landfill gas utilisation plants, air handling unit emissions etc.). Complete Table E.1(iv) for minor/fugitive/ground emission points.

E.2 Emissions to Surface Waters

Attachment E.2 Tables E.2(i) and E.2(ii) should be completed where relevant.

E.3 Emissions to Sewer

Attachment E.3 Tables E.3(i) and E.3(ii) should be completed, where relevant.

E.4 Emissions to Groundwater

Describe the existing or proposed arrangements necessary to give effect to Articles 3,4,5,6, and 7 of Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution by certain dangerous substances.

Table E.4(i) should be completed, as relevant, for each source.

Supporting information should form **Attachment E.4**

E.5 Noise Emissions

Give particulars of the source, location, nature, level, and the period or periods during which the noise emissions are made or are to be made.

Table E.5(i) should be completed, as relevant, for each source.

Supporting information should form **Attachment E.5**

E.6 Environmental Nuisances

Attachment E.6 should contain the appropriate documentation. Information provided should follow the sequence, and use the headings as relevant established in Table D.6. Additional advice on completing this section is provided in the *Guidance Note*.

TABLE E.6 ENVIRONMENTAL NUISANCES

Bird Control	**Control method specified**	**yes** ☒	**no** ☐	**not applicable** ☐
	Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐
Dust Control	**Control method specified**	**yes** ☒	**no** ☐	**not applicable** ☐
	Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐
Fire Control	**Control method specified**	**yes** ☒	**no** ☐	**not applicable** ☐
	Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐
Litter Control	**Control method specified**	**yes** ☒	**no** ☐	**not applicable** ☐
	Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐
Traffic Control	**Control method specified**	**yes** ☒	**no** ☐	**not applicable** ☐
	Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐
Vermin Control	**Control method specified**	**yes** ☒	**no** ☐	**not applicable** ☐
	Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐
Road Cleansing	**Control method specified**	**yes** ☒	**no** ☐	**not applicable** ☐
	Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

SECTION F CONTROL & MONITORING

F.1: Treatment, Abatement and Control Systems

Describe the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the installation/facility. Details of treatment/abatement systems (air and effluent emissions) should be included, together with appropriately scaled schematics (≤A3) as appropriate.

For each Emission Point identified complete Table F.1 of the Annex, and include detailed descriptions and appropriately scaled schematics (≤A3) of all abatement systems.

Attachment F.1 should contain any supporting information.

F.2- F. 9. Monitoring and Sampling Points

Programmes for environmental monitoring should be submitted as part of the application. These programmes should be provided as **Attachments F.2 to F.6** and meet the advice published by the Agency in the relevant BAT Note. For Landfills the additional **Attachments F.7 to F.8** should be completed. Furthermore for a landfill application the applicant must refer to the Agency *Landfill Monitoring Manual (2003)* for further details on monitoring requirements for proposed facilities.

Include details of monitoring/sampling locations and methods.

F.2 Air
- to include Dust, Odour

Monitoring Arrangements specified	**yes** ☒	**no** ☐	**not applicable** ☐
Monitoring points identified, (plus 12-figure grid references)	**yes** ☒	**no** ☐	**not applicable** ☐
Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

F.3 Surface Water

Monitoring of surface water shall be carried out at not less than two points, one upstream from the waste facility and one downstream.

Monitoring Arrangements specified	**yes** ☒	**no** ☐	**not applicable** ☐
Monitoring points identified, (plus 12-figure grid references)	**yes** ☒	**no** ☐	**not applicable** ☐
Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

F.4 Sewer Discharge

Monitoring of sewer discharge shall be carried out at the point specified by the local authority/Agency.

Monitoring Arrangements specified	**yes** ☐	**no** ☐	**not applicable** ☒
Monitoring points identified, (plus 12-figure grid references)	**yes** ☐	**no** ☐	**not applicable** ☒
Attachment included	**yes** ☐	**no** ☐	**not applicable** ☒

F.5 Groundwater

Groundwater monitoring is required at all landfill facilities; and certain other waste facilities depending on waste activities and the underlying aquifer vulnerability.

Monitoring Arrangements specified	**yes** ☒	**no** ☐	**not applicable** ☐
Monitoring points identified, (plus 12-figure grid references)	**yes** ☒	**no** ☐	**not applicable** ☐
Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

F.6 Noise

Monitoring Arrangements specified	**yes** ☒	**no** ☐	**not applicable** ☐
Monitoring points identified, (plus 12-figure grid references)	**yes** ☒	**no** ☐	**not applicable** ☐
Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

F.7 Meteorological Data

Monitoring Arrangements specified	**yes** ☐	**no** ☒	**not applicable** ☐
Monitoring points identified, (plus 12-figure grid references)	**yes** ☒	**no** ☐	**not applicable** ☐
Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

Application for Landfills require the additional Attachments F.7 to F.8, to be completed:

F.8 Leachate

Monitoring Arrangements specified	**yes** ☒	**no** ☐	**not applicable** ☐
Monitoring points identified, (plus 12-figure grid references)	**yes** ☒	**no** ☐	**not applicable** ☐
Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

F.9 Landfill Gas

Complete each of the following tables to show whether information has been included on aspects of landfill gas monitoring. **Attachment F.9** should also contain information to show whether the data given in Tables F.9.(a) and F.9(b) below represents actual or anticipated data. Complete Table F.9 as follows:

Table F.9 (a) Landfill Gas Monitoring for existing landfill gas flares / utilisation plants

Parameter	Concentration (mg/Nm^3)	Proposed Frequency of Analysis	Information Included Y/N	Method of Analysis	Information Included Y/N
Inlet					
Methane (CH_4) % v/v		Weekly	Y		
Carbon dioxide (CO_2) %v/v		Weekly	Y		
Oxygen (O_2) % v/v		Weekly	Y		
Outlet					
Volumetric Flow Rate		Biannually	Y		
SO_2	6	Biannually	Y		
Nox	36	Biannually	Y		
CO	6	Continuous	Y		
Particulates	2.54	Annually	Y		
TA Luft Class I, II, III organics	<1.90	Annually	Y		
Hydrochloric acid	2.66	Annually	Y		
Hydrogen Fluoride	0.1	Annually	Y		

Table F.9(b) Landfill Gas Monitoring

Parameter	**Proposed Frequency of Analysis**		**Information Included Y/N**	**Method of Analysis**	**Information Included Y/N**
	Gas boreholes / vents/ wells/ perimeter locations	Facility Office			
Methane (CH_4) % v/v	Monthly	Weekly	Y		
Carbon Dioxide (CO_2) % v/v	Monthly	Weekly	Y		
Oxygen (O_2) % v/v	Monthly	Weekly	Y		
Atmospheric Pressure	Monthly	Weekly	Y		
Temperature	Monthly	Weekly	Y		

Table F.9 (c) Landfill Gas Infrastructure

Equipment	**Monitoring Frequency**	**Information Included Y/N**	**Monitoring Action**	**Information Included Y/N**
Gas Collection System	See Table F.9(b)			
Gas Control System	See Table F.9(a)			

Monitoring Arrangements specified	**yes** ☒	**no** ☐	**not applicable** ☐
Monitoring points identified, (plus 12-figure grid references)	**yes** ☒	**no** ☐	**not applicable** ☐
Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

SECTION G RESOURCES USE & ENERGY EFFICIENCY

G.1 Raw Materials, Substances, Preparations and Energy

Attachment G.1 should contain a list of all raw, product and ancillary materials, substances, preparations, fuels and energy which will be utilised in or produced by the activity. Information on any insecticides, herbicides or rat poisons etc. should also be provided with their respective data and safety sheets. The Standard Forms, provided in Annex 1, should be used in the description of these materials, substances, etc., where relevant. Additional advice on completing this section is provided in the *Guidance Note*.

Attachment included	**yes** ☒ **no** ☐ **not applicable** ☐

G.2 Energy Efficiency

A description of the energy used in or generated by the activity must be provided in **Attachment G.2**.

Attachment included	**yes** ☒ **no** ☐ **not applicable** ☐

SECTION H MATERIALS HANDLING

H.1 Waste Types and Quantities – Existing & Proposed

Provide an estimation of the quantity of waste likely to be handled in relation to each class of activity applied for. This information should be included in Table H.1(a).

TABLE H.1(A). QUANTITIES OF WASTE IN RELATION TO EACH CLASS OF ACTIVITY APPLIED FOR

Waste Management Act 3rd Schedule (Disposal) Activities			Waste Management Act 4th Schedule (Recovery) Activities		
Class of Activity Applied For		Quantity (tpa)	Class of Activity Applied For		Quantity (tpa)
Class 1		14,000[1]	Class 1		
Class 2			Class 2		2120
Class 3			Class 3		125
Class 4		7,500m[3]	Class 4		2755
Class 5		14,000	Class 5		
Class 6			Class 6		
Class 7			Class 7		
Class 8			Class 8		
Class 9			Class 9		
Class 10			Class 10		
Class 11			Class 11		
Class 12		14,000[2]	Class 12		
Class 13		14,000	Class 13		5,000

Notes:

[1] Waste will be deposited in the licensed landfill until early 2008 when the landfill will reach capacity and close. Waste will then be accepted onsite for compaction into sealed ejector trailers and transfer to another licensed facility.

[2] Once the landfill closes in early 2008, the waste will be accepted onsite compacted and transferred to another licensed facility

[3] Leachate quantities vary depending on the operational phase of the landfill.

In Table H. 1 (B) provide the annual amount of waste handled/to be handled at the facility. Additional information should be included in **Attachment H.1.** The tonnage per annum should be given of that expected for the life of the licence, with at least the next five years tonnages provided. For Landfill Review applications provide an estimate of the quantity of waste already deposited in (i) lined cells; (ii) unlined cells.

TABLE H.1(B)

ANNUAL QUANTITIES AND NATURE OF WASTE FOR LANDFILL OR TRANSFER TO LANDILL

Year	Non-hazardous waste (tonnes per annum)	Hazardous waste (tonnes per annum)	Total annual quantity of waste (tonnes per annum)
2003			
2004			
2005			
2006			10308
2007			14000
2008			14000
2009			14000
2010			14000
2011			14000
2012			14000

ANNUAL QUANTITIES AND NATURE OF WASTE FOR WASTE RECOVERY FACILITY

Year	Non-hazardous waste (tonnes per annum)	Hazardous waste (tonnes per annum)	Total annual quantity of waste (tonnes per annum)
2008	2280	20	2300
2010	2420	22	2442
2033	4848	152	5000

A detailed inventory of the types and quantities of wastes currently handled at the site and proposed to be handled should be submitted as Table H.1 (C).

TABLE H.1 (C) WASTE TYPES AND QUANTITIES

WASTE TYPE	TONNES PER ANNUM (existing)	TONNES PER ANNUM (proposed)	TOTAL (over life of site) tonnes
Household	10,800	15,765	59,400
Commercial	1,200	1,200	6,600
Sewage Sludge	not applicable	not applicable	not applicable
Construction and Demolition	not applicable	2000	not applicable
Industrial Non-Hazardous Sludges	not applicable	not applicable	not applicable
Industrial Non-Hazardous Solids	not applicable	not applicable	not applicable
Hazardous	not applicable	152	not applicable

***(Specify detail in Table H 1.2)**			
Inert Waste imported for restoration purposes	not applicable	30,000 tonnes for final restoration	30,000 tonnes for final restoration

Note: See attachment H.1 for further clarification.

*** TABLE H.1.2 HAZARDOUS WASTE TYPES AND QUANTITIES**

HAZARDOUS WASTE	DETAILED DESCRIPTION * REFERENCE SHOULD BE MADE TO THE RELEVANT EUROPEAN WASTE CATALOGUE CODES AS PRESENTED BY COMMISSION DECISION 2000/532/EC	Tonnes Per Annum (Existing)	(Tonnes Per Annum Proposed)
Waste Oil	20 01 25 and 13 01 00	0.06	1
Oil filters	13 02 00	1	1
Asbestos	not applicable	not applicable	not applicable
Paint and Ink	20 01 27	not applicable	5
Batteries	20 01 33 and 16 06 00	24	27
Fluorescent Light Bulbs	20 01 21	0.24	1
Contaminated Soils	not applicable	not applicable	not applicable
OTHER HAZARDOUS WASTE (APPLICANT TO SPECIFY)			
Plastic Oil Containers	16 01 99		8

Attachment H.1 should contain any relevant additional information.

It should be noted that an applicant may be issued with a licence which restricts the type of wastes which may be deposited.

H.2 Waste Acceptance Procedures

Procedures for checking waste loads as they arrive at the facility must be included. These should follow the requirements of the Agency's Waste Acceptance Manual. A copy of these procedures and other associated documentation should be included as **Attachment H.2.**

H.3 Waste Handling

Waste handling and the operating procedures used at the facility including waste treatment processes should be described in **Attachment H.3**. Included in the attachment should be information on the plant used on site and on the methods and processes for handling waste on-site. Special requirements hold for contaminated soil facilities, see *Guidance Note*.

In addition, an application for a Landfill requires Section H.3.a to be completed:

H.3a Waste Handling at the Landfill Facility

State whether all waste will be subject to treatment prior to landfilling. Provide information as to the quantities of biodegradable municipal waste and how the targets of the Landfill Directive (1999/31/EC) relating to that waste type are to be achieved. In particular describe how the following will be achieved:

(a) a reduction by 16/07/06 to 75% by weight of the total amount of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available;

(b) a reduction by 16/07/09 to 50% by weight of the total amount of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available;

(c) a reduction by 16/07/16 to 35% by weight of the total amount of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available;

(d) Evidence should be provided to show that energy will be used efficiently.

H.4 Waste Arisings

Waste Arisings should be considered for all contaminated soil applications. Details of all waste materials generated on the site including, name, description and nature as well as the source(s) should be identified. The quantities of each type of waste generated on an annual/monthly basis should be calculated and stated in Tables H.1(i) and H. 1(ii) of the application form. Applicants should also provide conversion factors used to relate volume (m^3) and tonnage (t) for their waste stream.

SECTION I EXISTING ENVIRONMENT & IMPACT OF THE FACILITY

Detailed information is required to enable the Agency to assess the existing environment. This section requires the provision of information on the ambient environmental conditions at the site prior to the commencement of waste management activities or prior to the receipt of a review application.

Where development is proposed to be carried out, being development which is of a class for the time being specified under Article 24 (First Schedule) of the Environmental Impact Assessment Regulations, the information on the state of the existing environment should be addressed in the EIS. **In such cases, it will suffice for the purposes of this section to provide adequate cross-references to the relevant sections in the EIS.**

I.1.Assessment of atmospheric emissions

Describe the existing environment in terms of air quality with particular reference to ambient air quality standards.

Provide a statement whether or not emissions of main polluting substances (as defined in the Schedule of S.I. 394 of 2004) to the atmosphere are likely to impair the environment.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Attachment I.1 should also contain full details of any dispersion modelling of atmospheric emissions from the activity, where required.

I.2. Assessment of Impact on Receiving Surface Water

Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Table I.2(i) should be completed

Provide a statement whether or not emissions of main polluting substances (as defined in the Schedule of S.I. 394 of 2004) to water are likely to impair the environment.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment I.2.**

I.3. Assessment of Impact of Sewage Discharge.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Full details of the assessment and any other supporting information should form **Attachment I.3.**

I.4 Assessment of impact of ground/groundwater emissions

The scope and detail of this assessment will depend to a large extent on the extent and type of ground emissions at any site, which in turn are related to the risk. Details should be included in **Attachment I.4**. Comprehensive guidelines are contained in the *Application Guidance Note,* and include particular requirements for landfill and brownfield facilities.

Describe the existing groundwater quality. Tables I.4(i) should be completed.

I.5 Ground and/or groundwater contamination

Summary details of known ground and/or groundwater contamination, historical or current, on or under the site must be given.

Full details including all relevant investigative studies, assessments, or reports, monitoring results, location and design of monitoring installations, appropriately scaled plans/drawings (≤A3), documentation, including containment engineering, remedial works, and any other supporting information should be included in **Attachment I.5**.

I.6 Noise Impact.

Give details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Ambient noise measurements
Complete Table I.6(i) in relation to the information required below:

(i) State the maximum Sound Pressure Levels which will be experienced at typical points on the boundary of the operation. (State sampling interval and duration)

(ii) State the maximum Sound Pressure Levels which will be experienced at typical noise sensitive locations, outside the boundary of the operation.

(iii) Give details of the background noise levels experienced at the site in the absence of noise from this operation.

Prediction models, appropriately scaled maps (≤ A3), diagrams and supporting documents, including details of noise attenuation and noise proposed control measures to be employed, should form **Attachment I.6.**

I.7 Assessment of Ecological Impacts & Mitigation Measures

The ecology of the site and the surrounding area should be assessed in the vicinity of the largescale waste facilities such as landfill or incinerator developments. An assessment of the ecology should form **Attachment I.7.** Comprehensive guidelines are contained in the *Application Guidance Note*

SECTION J ACCIDENT PREVENTION & EMERGENCY RESPONSE

Describe the existing or proposed measures, including emergency procedures, to minimise the impact on the environment of an accidental emission or spillage.

Also outline what provisions have been made for response to emergency situations outside of normal working hours, i.e. during night-time, weekends and holiday periods.

Describe the arrangements for abnormal operating conditions including start-up, leaks, malfunctions or momentary stoppages.

Supporting information should form **Attachment J.**

Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

SECTION K REMEDIATION, DECOMMISSIONING, RESTORATION AND AFTERCARE

Describe the existing or proposed measures to minimise the impact on the environment after the activity or part of the activity ceases operation, including provision for post-closure care of any potentially polluting residuals.

For Landfill Applications, capping proposals are required, and reference should be made to the *Landfill Manual on 'Restoration and Aftercare'* published by the Agency, when completing this section.

Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

SECTION L STATUTORY REQUIREMENTS

L. 1 Section 40(4) WMA

Indicate how all the requirements of Section 40(4)[(a) to (i)] of the Waste Management Acts 1996 to 2003 will be met.

Applicants should also describe how the proposed facility will comply with the requirements of BAT. In particular reference should be made to the considerations referred to in Annex IV of Council Directive 96/61/EC concerning integrated pollution prevention and control.

Attachment L.1 should contain the documentation requested above, along any relevant additional information.

Attachment included	**yes** ☒	**no** ☐	**not applicable** ☐

L.2 Fit and Proper Person

The WMA in Section 40(4)(d) specifies that the Agency shall not grant a licence unless it is satisfied that the applicant (if the applicant is not a local authority) is a fit and proper person. Section 40(7) of the WMA specifies the information required to enable a determination to be made by the Agency.

- Indicate whether the applicant or other relevant person has been convicted under the Waste Management Acts 1996 to 2003, the EPA Act 1992 and 2003, the Local Government (Water Pollution) Acts 1977 and 1990 or the Air Pollution Act 1987.

- Provide details of the applicant's technical knowledge and/or qualifications, along with that of other relevant employees (Link to Section C.1 of the application).

- Provide information to show that the person is likely to be in a position to meet any financial commitments or liabilities that may have been or will be entered into or incurred in carrying on the activity to which the application relates or in consequence of ceasing to carry out that activity (Link to Section K of the application).

Supporting information should be included as **Attachment L 2** with reference to where the information can be found in the application.

Attachment included	**yes** ☐	**no** ☐	**not applicable** ☒

SECTION M DECLARATION

Declaration

I hereby make application for a licence / revised licence, pursuant to the provisions of the Waste Management Acts 1996 to 2003 and Regulations made thereunder.

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website. This consent relates to this application itself and to any further information, submission, objection, or submission to an objection whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by : _____ **Date :** 28 June 2007
(on behalf of the organisation)

Print signature name: JEROME C. O' SULLIVAN

Position in organisation : SENIOR EXECUTIVE OFFICER

Company stamp or seal:

CORK COUNTY COUNCIL
28 JUN 2007
HUME HOUSE, CLONAKILTY

ANNEX 1 STANDARD FORMS

Standard forms are provided in this section for the recording and presentation of environmental monitoring and site investigation results

TABLE E.1(i) LANDFILL GAS FLARE EMISSIONS TO ATMOSPHERE
Emission Point:

Emission Point Ref. N^{o}:	A1-1
Location :	Landfill Gas Flare
Grid Ref. (12 digit, 6E,6N):	E096216 N033769
Vent Details Diameter: Height above Ground(m):	 1.3m (OD) 8.5m
Date of commencement of emission:	August 2005

Characteristics of Emission:

CO			6 mg/m^3
Total organic carbon (TOC)			<5.70 mg/m^3
NOx			36 mg/Nm^3 0^{o}C. 3% O_2(Liquid or Gas), 6% O_2(Solid Fuel)
Maximum volume of emission			3000 m^3/hr
Temperature	^{o}C(max)	^{o}C(min)	877.2 ^{o}C(avg)

(i) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up/shutdown to be included):*

Periods of Emission (avg)	60 min/hr 24 hr/day 365 day/yr

TABLE E.1(ii) MAIN EMISSIONS TO ATMOSPHERE (1 Page for each emission point)

Emission Point Ref. Nº:	
Source of Emission:	
Location :	
Grid Ref. (12 digit, 6E,6N):	
Vent Details Diameter: Height above Ground(m):	
Date of commencement:	

Characteristics of Emission :

(i) Volume to be emitted:			
Average/day	m^3/d	Maximum/day	m^3/d
Maximum rate/hour	m^3/h	Min efflux velocity	$m.sec^{-1}$
(ii) Other factors			
Temperature	^oC(max)	^oC(min)	^oC(avg)
For Combustion Sources: Volume terms expressed as : ☐ wet. ☐ dry. _____$\%O_2$			

(iii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day _____day/yr

TABLE E.1(iii): MAIN EMISSIONS TO ATMOSPHERE - Chemical characteristics of the emission (1 table per emission point)

Emission Point Reference Number: _____

Parameter	Prior to treatment(1)				Brief description of treatment	As discharged(1)					
	mg/Nm^3		kg/h			mg/Nm^3		kg/h.		kg/year	
	Avg	Max	Avg	Max		Avg	Max	Avg	Max	Avg	Max

1. Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0^{o}C,101.3kPa). Wet/dry should be the same as given in Table E.1(ii) unless clearly stated otherwise.

TABLE E.1(iv): EMISSIONS TO ATMOSPHERE - Minor /Fugitive

Emission point Reference Numbers	Description	Emission details[1]				Abatement system employed
		material	mg/Nm$^{3(2)}$	kg/h.	kg/year	
A2-1	Dust, particulates					Site operating procedures
A2-2	Landfill gas emission from active cells					Daily capping, site operating procedures and landfill gas management

1 The maximum emission should be stated for each material emitted, the concentration should be based on the maximum 30 minute mean.
2 Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0°C101.3kPa). Wet/dry should be clearly stated. Include reference oxygen conditions for combustion sources.

TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point: Storm Water Discharge

Emission Point Ref. N^{o}:	SW7
Source of Emission:	Storm water runoff from the existing site.
Location :	South West corner of the site (see drawing no.2528-2610)
Grid Ref. (10 digit, 5E,5N):	96290E 33810N
Name of receiving waters:	Small stream ultimately discharging into Ballydehob Bay
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	kg/day

Emission Details:

(i) Volume to be emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	10.8m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr 24 hr/day 365 day/yr

TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number: SW7 (96290 33810)

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point: Storm Water Discharge

Emission Point Ref. Nº:	S9
Source of Emission:	Storm water runoff from impermeable areas and diverted via full retention separator and attenuation tanks.
Location :	South East corner of the site (see drawing no.2528-2610)
Grid Ref. (10 digit, 5E,5N):	96235E 33750N
Name of receiving waters:	Small stream ultimately discharging into Ballydehob Bay
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	kg/day

Emission Details:

(i) Volume to be emitted			
Normal/day	0m^3	Maximum/day	259.2m^3
Maximum rate/hour	10.8m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr 24 hr/day 365 day/yr

TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number : S9 (096235 033750)

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
Concentration of oil 5%					5mg/l	5mg/l			

TABLE E.3(i): EMISSIONS TO SEWER (One page for each emission)

Emission Point: not applicable

Emission Point Ref. N^{o}:	
Location of connection to sewer :	
Grid Ref. (10 digit, 5E,5N):	
Name of sewage undertaker:	

Emission Details:

(i) Volume to be emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day _____day/yr

TABLE E.3(ii): EMISSIONS TO SEWER - Characteristics of the emission (1 table per emission point)

Emission point reference number : not applicable

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

TABLE E.4(i): EMISSIONS TO GROUNDWATER (1 Page for each emission point)

Emission Point or Area: not applicable

Emission Point/Area Ref. Nº:	
Emission Pathway: (borehole, well, percolation area, soakaway, landspreading, etc.)	
Location :	
Grid Ref. (10 digit, 5E,5N):	
Elevation of discharge: (relative to Ordnance Datum)	
Aquifer classification for receiving groundwater body:	
Groundwater vulnerability assessment (including vulnerability rating):	
Identity and proximity of groundwater sources at risk (wells, springs, etc):	
Identity and proximity of surface water bodies at risk:	

Emission Details:

(i) Volume to be emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day _____day/yr

Table E.5(i): NOISE EMISSIONS - Noise sources summary sheet

Source	Emission point Ref. No	Equipment Ref. No	Sound Pressure[1] dBA at reference distance	Octave bands (Hz) Sound Pressure[1] Levels dB(unweighted) per band									Impulsive or tonal qualities	Periods of Emission
				31.5	63	125	250	500	1K	2K	4K	8K		
Landfill Gas Flare														Continuous
Power Generator														Continuous
Compactor														Hours of Operation

1. For items of plant sound power levels may be used.

TABLE F.1: ABATEMENT / TREATMENT CONTROL

Emission point reference number :_____

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
Temperature and retention time	Enclosed Flare System	As per manufacturers instruction	As per manufacturers instruction	
	Septic tank	As per manufacturers instruction	As per manufacturers instruction	
Oil levels	Oil Interceptor	As per manufacturers instruction	As per manufacturers instruction	

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration

[1] List the operating parameters of the treatment / abatement system which control its function.
[2] List the equipment necessary for the proper function of the abatement / treatment system.
[3] List the monitoring of the control parameter to be carried out.

TABLE F.2 to F.8 : EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

Emission Point Reference No(s). : Dust (D1, D3, D6, D8, D9, D10, D11, D12)

Parameter	Monitoring frequency	Accessibility of Sampling Points
Dust Deposition	3 times per year	Permanent access is maintained at all monitoring points

Emission Point Reference No(s). : Surface Water (SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, SW9)

Parameter	Monitoring frequency	Accessibility of Sampling Points
Visual Inspection/Odour	Weekly	Permanent access is maintained at all monitoring points
Ammoniacal Nitrogen	Quarterly	
BOD	Quarterly	
COD	Quarterly	
Chloride	Quarterly	
Dissolved Oxygen	Quarterly	
Electrical Conductivity	Quarterly	
pH	Quarterly	
Total Suspended Solids	Quarterly	
Temperature	Quarterly	
Cadmium	Annually	
Calcium	Annually	
Chromium (Total)	Annually	
Copper	Annually	
Iron	Annually	
Lead	Annually	
List I/II organic substances	As required by agency	
Magnesium	Annually	
Manganese	Annually	
Mercury	Annually	
Potassium	Annually	
Sulphate	Annually	
Sodium	Annually	
Total Alkalinity	Annually	
Total Phosphorus / orthophosphate	Annually	
Total Oxidised Nitrogen	Annually	
Zinc	Annually	

Emission Point Reference No(s). : Groundwater (GW1, GW2, GW4, GW5, GW6, GW7, GW8)

Parameter	Monitoring frequency	Accessibility of Sampling Points
Visual Inspection/Odour	Quarterly	Permanent access is maintained at all monitoring points
Groundwater Level	Monthly	
Ammoniacal Nitrogen	Quarterly	
Chloride	Quarterly	
Dissolved Oxygen	Quarterly	
Electrical Conductivity	Quarterly	
pH	Quarterly	
Temperature	Monthly	
Boron	Annually	
Cadmium	Annually	
Calcium	Annually	
Chromium (Total)	Annually	
Copper	Annually	
Cyanide (Total)	Annually	
Fluoride	Annually	
Iron	Quarterly	
Lead	Annually	
List I/II organic substances	Annually	
Magnesium	Annually	
Manganese	Annually	
Mercury	Annually	
Potassium	Quarterly	
Sulphate	Annually	
Sodium	Quarterly	
Total Alkalinity	Annually	
Total Phosphorus / orthophosphate	Annually	
Total Oxidised Nitrogen	Quarterly	
Total Organic Carbon	Quarterly	
Residue on evaporation	Annually	
Zinc	Annually	
Phenols	Quarterly	
Faecal Coliforms	Quarterly	
Total Coliforms	Quarterly	

Emission Point Reference No(s). : Noise (existing points - N1, N6, N8, NSL1 additional points - N9, N10, N11, N12)

Parameter	Monitoring frequency	Accessibility of Sampling Points
L(A)EQ [30 minutes]	Annual	Permanent access is maintained at all monitoring points
L(A)10 [30 minutes]	Annual	
L(A)90 [30 minutes]	Annual	
Frequency Analysis (1/3 Octave band analysis)	Annual	

Emission Point Reference No(s). : Leachate (L1, L2 and Lagoon)

Parameter	Monitoring frequency	Accessibility of Sampling Points
Visual Inspection/Odour	Quarterly	Permanent access is maintained at all monitoring points
Leachate Level	Weekly	
Ammoniacal Nitrogen	Monthly (Leachate Lagoon)	
BOD	Monthly (Leachate Lagoon)	
COD	Monthly (Leachate Lagoon)	
Chloride	Quarterly	
Electrical Conductivity	Quarterly	
pH	Monthly (Leachate Lagoon)	
Temperature	Quarterly	
Boron	Annually	
Cadmium	Annually	
Calcium	Annually	
Chromium (Total)	Annually	
Copper	Annually	
Cyanide (Total)	Annually	
Fluoride	Annually	
Iron	Annually	
Lead	Annually	
List I/II organic substances	As required be Agency	
Magnesium	Annually	
Manganese	Annually	
Mercury	Annually	
Potassium	Annually	
Sulphate	Annually	
Sodium	Annually	
Total Phosphorus / orthophosphate	Annually	
Total Oxidised Nitrogen	Quarterly	
Zinc	Annually	
Faecal Coliforms	Annually	
Total Coliforms	Annually	

Emission Point Reference No(s). : Landfill Gas (L1, L2, L3, L4, L5, L6, L7, Site Office, New buildings)

Parameter	Monitoring frequency		Accessibility of Sampling Points
	Gas Boreholes/ Vents/Wells	**Site Office**	
Methane (CH4) % v/v	Monthly	Weekly	Permanent access is maintained at all monitoring points
Carbon dioxide (CO2)%v/v	Monthly	Weekly	
Oxygen(O2) %v/v	Monthly	Weekly	
Atmospheric Pressure	Monthly	Weekly	
Temperature	Monthly	Weekly	

Emission Point Reference No(s). : Landfill Gas Flare

Parameter	Monitoring frequency	Accessibility of Sampling Points
Inlet		Permanent access is maintained at all monitoring points
Methane (CH4) % v/v	Monthly	
Carbon dioxide (CO2)%v/v	Monthly	
Oxygen(O2) %v/v	Monthly	
Outlet		
Volumetric Flow rate	Biannually	
SO2	Biannually	
NOx	Biannually	
CO	Continuous	
Particulates	Annually	
TA Luft Class I, II, III organics	Annually	
Hydrochloric acid	Annually	
Hydrogen fluoride	Annually	

TABLE Ff: Fugitive ENVIRONMENT MONITORING AND SAMPLING LOCATIONS (1 table per media)

Monitoring Point Reference No :_____

Parameter	Monitoring frequency	Accessibility of Sampling point

Table G.1 Details of Process related Raw Materials, Intermediates, Products, etc., used or generated on the site

Ref. Nº or Code	Material/ Substance(1)	CAS Number	Danger(2) Category	Amount Stored (tonnes)	Annual Usage (tonnes)	Nature of Use	R(3) - Phrase	S(3) - Phrase
	Water Electricity Diesel Hydraulic oil				 31,390 kWh 48,000 litres 50 litres	 Site equipment Site equipment		

Notes: 1. In cases where a material comprises a number of distinct and available dangerous substances, please give details for each component substance.
2. c.f. Article 2(2) of SI Nº 77/94
3. c.f. Schedules 2 and 3 of SI Nº 77/94

TABLE H.1(i): WASTE - Hazardous Waste Recovery/Disposal

Waste material	EWC Code	Main source[1]	Quantity		On-site Recovery/Disposal (Method & Location)	Off-site Recovery, reuse or recycling (Method, Location & Undertaker)	Off-site Disposal (Method, Location & Undertaker)
			Tonnes / month	m^3 / month			
Waste Oil	20 01 25 and 13 01 00	Delivered to site by public	0.5	n/a	Storage in domestic hazardous waste unit	Recovered and recycled by Atlas Environmental Ireland Ltd, Portlaoise (W0184-01)	n/a
Oil filters	13 02 00	Delivered to site by public	0.4	n/a	Storage in domestic hazardous waste unit	Recovered and recycled by Atlas Environmental Ireland Ltd, Portlaoise (W0184-01)	n/a
Paint and Ink	20 01 27	Delivered to site by public	0.33	n/a	Storage in domestic hazardous waste unit	to be determined	n/a
Batteries	20 01 33 and 16 06 00	Delivered to site by public	2.5	n/a	Storage in domestic hazardous waste unit	Atlas Environmental Ireland Ltd, Portlaoise (W0184-01)	n/a
Fluorescent Light Bulbs	20 01 21	Delivered to site by public	0.2	n/a	Storage in domestic hazardous waste unit	Recycled by Irish Lamp Recycling Ltd., Kildare (CK WMC 57/01)	n/a
Household Gas Cylinders	16 01 16	Delivered to site by public		n/a	Storage in domestic hazardous waste unit	Refilled and reused by Calor Teoranta, Dublin	n/a
Plastic Oil Containers	16 01 99	Delivered to site by public		n/a	Storage in domestic hazardous waste unit	Recovered and recycled by Atlas Environmental Ireland Ltd, Portlaoise (W0184-01)	n/a

[1] A reference should be made to the main activity / process for each waste.

TABLE H.1(ii) WASTE - Other Waste Recovery/Disposal

Waste material	EWC Code	Main source[1]	Quantity		On-site recovery/disposal[2]	Off-site Recovery, reuse or recycling	Off-site Disposal
			Tonnes / month	m^3 / month	(Method & Location)	(Method, Location & Undertaker)	(Method, Location & Undertaker)
Mixed Waste	20 03 01	Domestic and Commercial Waste	1,167		Transferred to active cell of Landfill	n/a	Disposed onsite
Cardboard & Cardboard Packaging	15 01 01	Delivered to site by public	6		Compacted and stored in Baler Basement	Recycled and recovered by Veolia (Ipodec), Cork (W0173-01)	n/a
Clean Plastic Bags	15 01 02	Delivered to site by public	2		Compacted and stored in Baler Basement	Recycled and recovered by Veolia (Ipodec), Cork (W0173-01)	n/a
Mixed Paper	20 01 01	Delivered to site by public	8		Compacted and stored in Baler Basement	Recycled and recovered by Veolia (Ipodec), Cork (W0173-01)	n/a
Plastic Bottles	15 01 02	Delivered to site by public	3		Compacted and stored in Baler Basement	Recycled and recovered by Veolia (Ipodec), Cork (W0173-01)	n/a
Tetra-Paks	15 01 05	Delivered to site by public			Compacted and stored in Baler Basement	To be determined	n/a
Newsprint/ Magazines	20 01 01	Delivered to site by public	7		Compacted and stored in Baler Basement	Recycled and recovered by Veolia (Ipodec), Cork (W0173-01)	n/a
Garden Waste	20 02 01	Delivered to site by public			Stored in dedicated low level containers	To be determined	n/a
Scrap Metal	20 01 40	Delivered to site by public	10		Stored in dedicated low level containers	Cork Metal Ltd, Cork (CK (S) 204/05)	n/a
Timber (untreated Only)	20 01 38	Delivered to site by public			Stored in dedicated low level containers	to be determined	n/a
Electrical Goods	20 01 36	Delivered to site by public	6		Stored in WEEE containers	Recycled by Cedar Resource Management Ltd., Dublin (WL 185-1)	n/a
White Goods	20 01 36	Delivered to site by public	5		Stored in WEEE containers	Recycled by Cedar Resource Management Ltd., Dublin (WL 185-1)	n/a
Drinks and Food Cans	15 01 04	Delivered to site by public	5		Stored in bottle and cans bank	Recovered by Rehab Recycling Partnership, Cork (CK WMC 146/03) and sold for reprocessing	n/a
Glass Bottles & Jars	15 01 07	Delivered to site by public	5		Stored in bottle and cans bank	Recycled by Rehab Recycling Partnership, Cork (CK WMC 146/03)	n/a
Flat Glass	20 01 02	Delivered to site by public	2		Stored in dedicated container on upper level	Recycled by Rehab Recycling Partnership, Cork (CK WMC 146/03)	n/a
Furniture	20 03 07	Delivered to site by public			Stored in reusable building	to be determined	n/a

1 A reference should be made to the main activity/ process for each waste.
2 The method of disposal or recovery should be clearly described and referenced to Attachment H.1

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW1_ - 96335E 33841N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	7.4	6.87	6.87	7.1	grab	n/a	Meter
Temperature	8.5	18.3	18.3	8.8	grab	n/a	Meter
Electrical conductivity EC	160	188	188	193	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.34	0.41	<0.2	0.8	grab	<0.2mg/L	Spectro
Chemical oxygen demand	<2	<4	16	21	grab	<15mg/L	Spectro
Biochemical oxygen demand	20	45	4	<2	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	10.7	8.1	8.1	9.2	grab	<0.1mg/L	Meter
Calcium Ca				11.24	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.001	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	26	29	28	33	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				<0.002	grab	<2µg/L	ICP MS
Lead Pb				<0.001	grab	<1µg/L	ICP MS
Magnesium Mg				2.59	grab	<100µg/L	ICP MS
Manganese Mn				<0.001	grab	<1µg/L	ICP MS
Mercury Hg				0.00009	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				3.3	grab	<0.2mg/L	Flame Photo
Sodium Na				20	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				13	grab	<3mg/L	KONE
Zinc Zn				0.015	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				50	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				0.6	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW2_ - 96112E 33883N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	7.2	DRY	DRY	7.4	grab	n/a	Meter
Temperature	8			8.7	grab	n/a	Meter
Electrical conductivity EC	88			148	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.11			<0.2	grab	<0.2mg/L	Spectro
Chemical oxygen demand	127			76	grab	<15mg/L	Spectro
Biochemical oxygen demand	22			5	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	10.4			8.6	grab	<0.1mg/L	Meter
Calcium Ca				1.956	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.001	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	19			23	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				0.595	grab	<2µg/L	ICP MS
Lead Pb				<0.021	grab	<1µg/L	ICP MS
Magnesium Mg				1.833	grab	<100µg/L	ICP MS
Manganese Mn				0.891	grab	<1µg/L	ICP MS
Mercury Hg				0.00012	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				1.7	grab	<0.2mg/L	Flame Photo
Sodium Na				14.5	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				5	grab	<3mg/L	KONE
Zinc Zn				0.027	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				20	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				<0.3	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW3_ - 96507E 33785N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	7.1	7	7	7.5	grab	n/a	Meter
Temperature	8.2	13.4	13.4	8.9	grab	n/a	Meter
Electrical conductivity EC	160	211	211	239	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.21	0.06	<0.2	0.2	grab	<0.2mg/L	Spectro
Chemical oxygen demand	17	35	59	<15	grab	<15mg/L	Spectro
Biochemical oxygen demand	<2	<4	5	2	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	10.6	9.7	9.7	8.8	grab	<0.1mg/L	Meter
Calcium Ca				8.05	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.001	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	29	32	34	31	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				0.033	grab	<2µg/L	ICP MS
Lead Pb				<0.001	grab	<1µg/L	ICP MS
Magnesium Mg				2.320	grab	<100µg/L	ICP MS
Manganese Mn				0.005	grab	<1µg/L	ICP MS
Mercury Hg				0.0001	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				1.6	grab	<0.2mg/L	Flame Photo
Sodium Na				18.5	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				26	grab	<3mg/L	KONE
Zinc Zn				0.015	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				30	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				0.4	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW4_ - 96140E 33651N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	7	6.62	6.62	7.4	grab	n/a	Meter
Temperature	8	19.4	19.4	8.8	grab	n/a	Meter
Electrical conductivity EC	148	177	177	161	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.12	<0.05	<0.2	0.6	grab	<0.2mg/L	Spectro
Chemical oxygen demand	22	19	18	24	grab	<15mg/L	Spectro
Biochemical oxygen demand	<2	<4	5	<2	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	10.3	5.9	5.9	7.7	grab	<0.1mg/L	Meter
Calcium Ca				9.793	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.001	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	27	27	30	33	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				0.026	grab	<2µg/L	ICP MS
Lead Pb				<0.001	grab	<1µg/L	ICP MS
Magnesium Mg				2.47	grab	<100µg/L	ICP MS
Manganese Mn				0.001	grab	<1µg/L	ICP MS
Mercury Hg				0.0001	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				2.8	grab	<0.2mg/L	Flame Photo
Sodium Na				20	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				15	grab	<3mg/L	KONE
Zinc Zn				0.015	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				30	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				<0.3	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW5_ - 96450E 34003N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	7	7.01	7.01	7.6	grab	n/a	Meter
Temperature	8.3	13.6	13.6	8.8	grab	n/a	Meter
Electrical conductivity EC	161	212	212	191	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.13	0.06	0.3	<0.2	grab	<0.2mg/L	Spectro
Chemical oxygen demand	20	34	17	19	grab	<15mg/L	Spectro
Biochemical oxygen demand	<2	<4	5	<2	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	10.5	9.8	9.8	8.9	grab	<0.1mg/L	Meter
Calcium Ca				7.488	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.021	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	29	32	33	31	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				0.037	grab	<2µg/L	ICP MS
Lead Pb				<0.001	grab	<1µg/L	ICP MS
Magnesium Mg				2.465	grab	<100µg/L	ICP MS
Manganese Mn				0.004	grab	<1µg/L	ICP MS
Mercury Hg				0.00007	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				1.2	grab	<0.2mg/L	Flame Photo
Sodium Na				17.5	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				14	grab	<3mg/L	KONE
Zinc Zn				0.016	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				20	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				0.5	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW6_ - 96292E 34064N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	6.9	DRY	DRY	7	grab	n/a	Meter
Temperature	9.2			8.7	grab	n/a	Meter
Electrical conductivity EC	658			345	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	13.2			2.2	grab	<0.2mg/L	Spectro
Chemical oxygen demand	97			37	grab	<15mg/L	Spectro
Biochemical oxygen demand	<4			2	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	9.5			7.1	grab	<0.1mg/L	Meter
Calcium Ca				17.39	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.001	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	49			62	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				0.547	grab	<2µg/L	ICP MS
Lead Pb				<0.001	grab	<1µg/L	ICP MS
Magnesium Mg				3.615	grab	<100µg/L	ICP MS
Manganese Mn				0.045	grab	<1µg/L	ICP MS
Mercury Hg				0.00013	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				5.5	grab	<0.2mg/L	Flame Photo
Sodium Na				22	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				12	grab	<3mg/L	KONE
Zinc Zn				0.017	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				60	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				1.6	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW7_ - 96290E 33810N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	7.2	7.2	7.2	7.3	grab	n/a	Meter
Temperature	8.4	15.2	15.2	8.7	grab	n/a	Meter
Electrical conductivity EC	151	194	194	187	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.21	0.31	<0.2	0.7	grab	<0.2mg/L	Spectro
Chemical oxygen demand	16	53	17	23	grab	<15mg/L	Spectro
Biochemical oxygen demand	<2	<4	5	<2	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	9.8	8.7	8.7	8.8	grab	<0.1mg/L	Meter
Calcium Ca				9.836	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.001	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	25	28	27	34	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				0.008	grab	<2µg/L	ICP MS
Lead Pb				<0.001	grab	<1µg/L	ICP MS
Magnesium Mg				2.415	grab	<100µg/L	ICP MS
Manganese Mn				0.004	grab	<1µg/L	ICP MS
Mercury Hg				0.00013	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				3.2	grab	<0.2mg/L	Flame Photo
Sodium Na				20	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				13	grab	<3mg/L	KONE
Zinc Zn				0.019	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				50	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				0.3	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW8_ - 96187E 33970N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	6.9	DRY	DRY	7.4	grab	n/a	Meter
Temperature	8.2			8.8	grab	n/a	Meter
Electrical conductivity EC	85			142	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.09			1.1	grab	<0.2mg/L	Spectro
Chemical oxygen demand	151			34	grab	<15mg/L	Spectro
Biochemical oxygen demand	22			<2	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	10.4			7.9	grab	<0.1mg/L	Meter
Calcium Ca				2.099	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.001	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	19			23	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				0.193	grab	<2µg/L	ICP MS
Lead Pb				<0.001	grab	<1µg/L	ICP MS
Magnesium Mg				1.551	grab	<100µg/L	ICP MS
Manganese Mn				0.048	grab	<1µg/L	ICP MS
Mercury Hg				0.00014	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				0.9	grab	<0.2mg/L	Flame Photo
Sodium Na				13.5	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				4	grab	<3mg/L	KONE
Zinc Zn				0.018	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				30	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				<0.3	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.2(i) SURFACE WATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _SW9_ - 96086E 33886N_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	29/03/06	27/06/06	30/08/06	24/11/06			
pH	6.6	DRY	DRY	7.4	grab	n/a	Meter
Temperature	8			8.8	grab	n/a	Meter
Electrical conductivity EC	136			156	grab	<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	1			<0.2	grab	<0.2mg/L	Spectro
Chemical oxygen demand	501			33	grab	<15mg/L	Spectro
Biochemical oxygen demand	23			<2	grab	<2mg/L	5 day ATU
Dissolved oxygen DO	8.3			8.8	grab	<0.1mg/L	Meter
Calcium Ca				2.606	grab	<120 µg/L	ICP MS
Cadmium Cd				<0.001	grab	<1 µg/L	ICP MS
Chromium Cr				<0.05	grab	<0.05mg/L	ICP IRIS
Chloride Cl	32			28	grab	<1µg/L	Kone
Copper Cu				<0.001	grab	<1µg/L	ICP MS
Iron Fe				0.248	grab	<2µg/L	ICP MS
Lead Pb				<0.001	grab	<1µg/L	ICP MS
Magnesium Mg				1.94	grab	<100µg/L	ICP MS
Manganese Mn				0.04	grab	<1µg/L	ICP MS
Mercury Hg				0.0012	grab	<0.05µg/L	CV AA

Surface Water Quality (Sheet 2 of 2)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	24/11/06			
Nickel Ni					grab	<1µg/L	ICP MS
Potassium K				0.6	grab	<0.2mg/L	Flame Photo
Sodium Na				17.5	grab	<0.2mg/L	Flame Photo
Sulphate SO_4				8	grab	<3mg/L	KONE
Zinc Zn				0.025	grab	<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				30	grab	<1mg/L	Titration
Total organic carbon TOC					grab	<2 mg/L	IR
Total oxidised nitrogen TON				<0.3	grab	<0.3mg/L	Kone
Nitrite NO_2					grab	<0.5mg/L	Kone
Nitrate NO_3					grab	<0.3mg/L	Kone
Faecal coliforms (/100mls)					grab		MT C121
Total coliforms (/100mls)					grab		MT C121
Phosphate PO_4					grab	<0.03mg/L	Kone

Table I.4(i) GROUNDWATER QUALITY

(Sheet 1 of 2) Monitoring Point/ Grid Reference: GW1 –96302E 33890N

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
pH	7.5	6.44	6.44	6.5		n/a	Meter
Temperature				9.7		n/a	Meter
Electrical conductivity EC	408	432	432	421		<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.19	0.31	0.6	<0.2		<0.2mg/L	Spectro
Dissolved oxygen DO	4.2	1.5	1.5	3.2			Meter
Residue on evaporation (180°C)				220			
Calcium Ca				38.25		<120 µg/L	ICP MS
Cadmium Cd				<0.001		<1 µg/L	ICP MS
Chromium Cr				<0.05		<0.05mg/L	ICP IRIS
Chloride Cl	32	34	32	24		<1µg/L	Kone
Copper Cu				0.003		<1µg/L	ICP MS
Cyanide Cn, total				<0.05		<0.05mg/L	Spectro
Iron Fe	0.05	<0.01	0.93	<0.002		<2µg/L	ICP MS
Lead Pb				<0.001		<1µg/L	ICP MS
Magnesium Mg				4.583		<100µg/L	ICP MS
Manganese Mn				0.014		<1µg/L	ICP MS
Mercury Hg				0.00009		<0.05µg/L	CV AA
Nickel Ni						<1µg/L	ICP MS
Potassium K	1.3	1	1.5	1.4		<0.2mg/L	Flame Photo
Sodium Na	23	24	22	17		<0.2mg/L	Flame Photo

GROUNDWATER QUALITY (SHEET 2 OF 2)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
Phosphate PO_4						<0.03mg/L	Kone
Sulphate SO_4				14		<3mg/L	Kone
Zinc Zn				0.014		<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				100		<1mg/L	Titration
Total organic carbon TOC	4.8	5.4	8	7		<2mg/L	IR
Total oxidised nitrogen TON	1	<0.5	0.9	2.3		<0.3mg/L	Kone
Arsenic As						<1µg/L	ICP MS
Barium Ba						<1µg/L	ICP MS
Boron B				0.03		<3µg/L	ICP MS
Fluoride F				0.1		<0.1mg/L	Kone
Phenol				<0.01			
Phosphorus P				0.12			
Selenium Se						<1µg/L	ICP MS
Silver Ag						<2µg/L	ICP MS
Nitrite NO_2						<0.5mg/L	Kone
Nitrate NO_3						<0.3mg/L	Kone
Faecal coliforms (/100mls)	1	<1	42	<1			MT C121
Total coliforms (/100mls)	31	<1	114	210			MT C121
Water level (m OD)				2.0			Meter

(Sheet 1 of 2) Monitoring Point/ Grid Reference: GW2 –96215E 33822N

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
pH	7.42	6.52	6.52	6.5		n/a	Meter
Temperature				8.9		n/a	Meter
Electrical conductivity EC	475	491	491	611		<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	<0.05	0.07	0.7	<0.2		<0.2mg/L	Spectro
Dissolved oxygen DO	4	2.9	2.9	3.6			Meter
Residue on evaporation (180°C)				156			
Calcium Ca						<120 µg/L	ICP MS
Cadmium Cd				<0.001		<1 µg/L	ICP MS
Chromium Cr				<0.05		<0.05mg/L	ICP IRIS
Chloride Cl	23	20	29	21		<1µg/L	Kone
Copper Cu						<1µg/L	ICP MS
Cyanide Cn, total				<0.05		<0.05mg/L	Spectro
Iron Fe	<0.01	<0.01	0.24	<0.002		<2µg/L	ICP MS
Lead Pb				<0.001		<1µg/L	ICP MS
Magnesium Mg				2.664		<100µg/L	ICP MS
Manganese Mn				0.001		<1µg/L	ICP MS
Mercury Hg				0.00009		<0.05µg/L	CV AA
Nickel Ni						<1µg/L	ICP MS
Potassium K	2.4	2.5	2.7	2.3		<0.2mg/L	Flame Photo
Sodium Na	19	19	22.5	11		<0.2mg/L	Flame Photo

GROUNDWATER QUALITY (SHEET 2 OF 2)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
Phosphate PO_4						<0.03mg/L	Kone
Sulphate SO_4						<3mg/L	Kone
Zinc Zn				0.055		<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				80		<1mg/L	Titration
Total organic carbon TOC	3.6	5.2	6	4		<2mg/L	IR
Total oxidised nitrogen TON	0.8	<0.5	<0.3	<0.3		<0.3mg/L	Kone
Arsenic As						<1µg/L	ICP MS
Barium Ba						<1µg/L	ICP MS
Boron B				0.027		<3µg/L	ICP MS
Fluoride F				0.1		<0.1mg/L	Kone
Phenol				<0.01			
Phosphorus P				0.1			
Selenium Se						<1µg/L	ICP MS
Silver Ag						<2µg/L	ICP MS
Nitrite NO_2						<0.5mg/L	Kone
Nitrate NO_3						<0.3mg/L	Kone
Faecal coliforms (/100mls)	<1	9	8	2			MT C121
Total coliforms (/100mls)	72	2420	12	3600000			MT C121
Water level (m OD)				1.28			Meter

(Sheet 1 of 2) Monitoring Point/ Grid Reference: GW4 –96294E 34110N

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
pH	7.23	6.51	6.51	6.6		n/a	Meter
Temperature				8.8		n/a	Meter
Electrical conductivity EC	374	449	449	428		<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.05	0.22	<0.2	<0.2		<0.2mg/L	Spectro
Dissolved oxygen DO	4.1	2.9	2.9	3.8			Meter
Residue on evaporation (180°C)				277			
Calcium Ca				70.36		<120 µg/L	ICP MS
Cadmium Cd				<0.001		<1 µg/L	ICP MS
Chromium Cr				<0.05		<0.05mg/L	ICP IRIS
Chloride Cl	33	34	32	37		<1µg/L	Kone
Copper Cu				0.006		<1µg/L	ICP MS
Cyanide Cn, total				<0.05		<0.05mg/L	Spectro
Iron Fe	<0.01	0.03	0.81	<0.002		<2µg/L	ICP MS
Lead Pb				<0.001		<1µg/L	ICP MS
Magnesium Mg				3.089		<100µg/L	ICP MS
Manganese Mn				0.23		<1µg/L	ICP MS
Mercury Hg				0.0001		<0.05µg/L	CV AA
Nickel Ni						<1µg/L	ICP MS
Potassium K	0.8	0.8	1.4	0.9		<0.2mg/L	Flame Photo
Sodium Na	22	26	24.5	22.5		<0.2mg/L	Flame Photo

GROUNDWATER QUALITY (SHEET 2 OF 2)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
Phosphate PO_4						<0.03mg/L	Kone
Sulphate SO_4				8		<3mg/L	Kone
Zinc Zn				0.016		<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				190		<1mg/L	Titration
Total organic carbon TOC	5.1	5.3	7	8		<2mg/L	IR
Total oxidised nitrogen TON	0.6	<0.5	0.3	<0.3		<0.3mg/L	Kone
Arsenic As						<1µg/L	ICP MS
Barium Ba						<1µg/L	ICP MS
Boron B				0.026		<3µg/L	ICP MS
Fluoride F				0.3		<0.1mg/L	Kone
Phenol				<0.01			
Phosphorus P				0.22			
Selenium Se						<1µg/L	ICP MS
Silver Ag						<2µg/L	ICP MS
Nitrite NO_2						<0.5mg/L	Kone
Nitrate NO_3						<0.3mg/L	Kone
Faecal coliforms (/100mls)	<1	<1	6	<1			MT C121
Total coliforms (/100mls)	13	19	24	480			MT C121
Water level (m OD)				0.55			Meter

(Sheet 1 of 2) Monitoring Point/ Grid Reference: GW5 –96336E 33922N

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
pH	7.1	6.62	6.62	6.7		n/a	Meter
Temperature				9.2		n/a	Meter
Electrical conductivity EC	475	506	506	566		<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.05	0.11	0.3	<0.2		<0.2mg/L	Spectro
Dissolved oxygen DO	6.6	1.6	1.6	6.1			Meter
Residue on evaporation (180°C)							
Calcium Ca				61.67		<120 µg/L	ICP MS
Cadmium Cd				<0.001		<1 µg/L	ICP MS
Chromium Cr				<0.05		<0.05mg/L	ICP IRIS
Chloride Cl	33	36	44	28		<1µg/L	Kone
Copper Cu				<0.005		<1µg/L	ICP MS
Cyanide Cn, total				<0.05		<0.05mg/L	Spectro
Iron Fe	0.07	0.08	0.45	0.148		<2µg/L	ICP MS
Lead Pb				<0.001		<1µg/L	ICP MS
Magnesium Mg				2.944		<100µg/L	ICP MS
Manganese Mn				0.011		<1µg/L	ICP MS
Mercury Hg				0.00012		<0.05µg/L	CV AA
Nickel Ni						<1µg/L	ICP MS
Potassium K	1.2	0.9	1.4	1.3		<0.2mg/L	Flame Photo
Sodium Na	22.5	23	27.5	14.5		<0.2mg/L	Flame Photo

GROUNDWATER QUALITY (SHEET 2 OF 2)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
Phosphate PO_4						<0.03mg/L	Kone
Sulphate SO_4				8		<3mg/L	Kone
Zinc Zn				420		<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				130		<1mg/L	Titration
Total organic carbon TOC	11.5	7.2	8	29		<2mg/L	IR
Total oxidised nitrogen TON	0.5	<0.5	<0.3	2.6		<0.3mg/L	Kone
Arsenic As						<1µg/L	ICP MS
Barium Ba						<1µg/L	ICP MS
Boron B				0.03		<3µg/L	ICP MS
Fluoride F				0.1		<0.1mg/L	Kone
Phenol				<0.01			
Phosphorus P				0.18			
Selenium Se						<1µg/L	ICP MS
Silver Ag						<2µg/L	ICP MS
Nitrite NO_2						<0.5mg/L	Kone
Nitrate NO_3						<0.3mg/L	Kone
Faecal coliforms (/100mls)	6	3	<1	<1			MT C121
Total coliforms (/100mls)	770	1986	110	420			MT C121
Water level (m OD)				0.88			Meter

(Sheet 1 of 2) Monitoring Point/ Grid Reference: GW6 –96135E 33674N

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
pH	6.96	5.81	5.81	6.1		n/a	Meter
Temperature				9.8		n/a	Meter
Electrical conductivity EC	336	330	330	371		<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	1.8	1.5	2.7	<0.2		<0.2mg/L	Spectro
Dissolved oxygen DO	3.7	3.7	3.7	3.6			Meter
Residue on evaporation (180°C)				215			
Calcium Ca				22.15		<120 µg/L	ICP MS
Cadmium Cd				<0.001		<1 µg/L	ICP MS
Chromium Cr				<0.05		<0.05mg/L	ICP IRIS
Chloride Cl	41	39	43	44		<1µg/L	Kone
Copper Cu				0.002		<1µg/L	ICP MS
Cyanide Cn, total				<0.05		<0.05mg/L	Spectro
Iron Fe	0.00284	5.480	7.8	0.993		<2µg/L	ICP MS
Lead Pb				<0.001		<1µg/L	ICP MS
Magnesium Mg				5.27		<100µg/L	ICP MS
Manganese Mn				3.524		<1µg/L	ICP MS
Mercury Hg				0.00007		<0.05µg/L	CV AA
Nickel Ni						<1µg/L	ICP MS
Potassium K	2.8	2.2	1.1	3.9		<0.2mg/L	Flame Photo
Sodium Na	29	27	29.5	30		<0.2mg/L	Flame Photo

GROUNDWATER QUALITY (SHEET 2 OF 2)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
Phosphate PO_4						<0.03mg/L	Kone
Sulphate SO_4				4		<3mg/L	Kone
Zinc Zn				0.028		<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				120		<1mg/L	Titration
Total organic carbon TOC	11.5	9.5	14	12		<2mg/L	IR
Total oxidised nitrogen TON	<0.5	<0.5	<0.3	<0.3		<0.3mg/L	Kone
Arsenic As						<1µg/L	ICP MS
Barium Ba						<1µg/L	ICP MS
Boron B				0.029		<3µg/L	ICP MS
Fluoride F				0.2		<0.1mg/L	Kone
Phenol				<0.01			
Phosphorus P				0.21			
Selenium Se						<1µg/L	ICP MS
Silver Ag						<2µg/L	ICP MS
Nitrite NO_2						<0.5mg/L	Kone
Nitrate NO_3						<0.3mg/L	Kone
Faecal coliforms (/100mls)	<1	<1	<1	<1			MT C121
Total coliforms (/100mls)	1	<1	96	<1			MT C121
Water level (m OD)				0.35			Meter

(Sheet 1 of 2) Monitoring Point/ Grid Reference: GW7 –96104E 33739N

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
pH	7.21	6.76	6.76	6.4		n/a	Meter
Temperature				9.5		n/a	Meter
Electrical conductivity EC	1184	852	852	954		<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	15.5	4.3	5.5	3.4		<0.2mg/L	Spectro
Dissolved oxygen DO	3.2	4.8	4.8	3.1			Meter
Residue on evaporation (180°C)				565			
Calcium Ca				124.6		<120 µg/L	ICP MS
Cadmium Cd				<0.001		<1 µg/L	ICP MS
Chromium Cr				<0.05		<0.05mg/L	ICP IRIS
Chloride Cl	81	57	59	51		<1µg/L	Kone
Copper Cu				0.005		<1µg/L	ICP MS
Cyanide Cn, total				<0.05		<0.05mg/L	Spectro
Iron Fe	0.03	<0.01	2.67	<0.002		<2µg/L	ICP MS
Lead Pb				<0.001		<1µg/L	ICP MS
Magnesium Mg				9.609		<100µg/L	ICP MS
Manganese Mn				5.607		<1µg/L	ICP MS
Mercury Hg				0.00009		<0.05µg/L	CV AA
Nickel Ni						<1µg/L	ICP MS
Potassium K	13.5	4.4	2.2	13		<0.2mg/L	Flame Photo
Sodium Na	68	43	44.5	42		<0.2mg/L	Flame Photo

GROUNDWATER QUALITY (SHEET 2 OF 2)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
Phosphate PO_4						<0.03mg/L	Kone
Sulphate SO_4				96		<3mg/L	Kone
Zinc Zn				1.687		<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				320		<1mg/L	Titration
Total organic carbon TOC	16.2	11.2	15	15		<2mg/L	IR
Total oxidised nitrogen TON	<0.5	1.2	<0.3	0.8		<0.3mg/L	Kone
Arsenic As						<1µg/L	ICP MS
Barium Ba						<1µg/L	ICP MS
Boron B						<3µg/L	ICP MS
Fluoride F				0.7		<0.1mg/L	Kone
Phenol				<0.01			
Phosphorus P				0.19			
Selenium Se						<1µg/L	ICP MS
Silver Ag						<2µg/L	ICP MS
Nitrite NO_2						<0.5mg/L	Kone
Nitrate NO_3						<0.3mg/L	Kone
Faecal coliforms (/100mls)	<1	<1	6	2			MT C121
Total coliforms (/100mls)	1	<1	72	144			MT C121
Water level (m OD)				full			Meter

(Sheet 1 of 2) Monitoring Point/ Grid Reference: GW8 –96085E 33868N

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
pH	7.8	6.52	6.52	6.8		n/a	Meter
Temperature				9.4		n/a	Meter
Electrical conductivity EC	206	210	210	573		<0.014µs/cm	Meter
Ammoniacal nitrogen NH_4-N	0.09	<0.05	1.1	<0.2		<0.2mg/L	Spectro
Dissolved oxygen DO	7.1	4.6	4.6	6.3			Meter
Residue on evaporation (180°C)				138			
Calcium Ca						<120 µg/L	ICP MS
Cadmium Cd				<0.001		<1 µg/L	ICP MS
Chromium Cr				<0.05		<0.05mg/L	ICP IRIS
Chloride Cl	41	35	43	36		<1µg/L	Kone
Copper Cu				0.008		<1µg/L	ICP MS
Cyanide Cn, total				<0.05		<0.05mg/L	Spectro
Iron Fe	0.27	0.31	0.09	0.20		<2µg/L	ICP MS
Lead Pb				<0.001		<1µg/L	ICP MS
Magnesium Mg				2.133		<100µg/L	ICP MS
Manganese Mn				0.011		<1µg/L	ICP MS
Mercury Hg				0.0001		<0.05µg/L	CV AA
Nickel Ni						<1µg/L	ICP MS
Potassium K	0.4	0.5	0.3	0.3		<0.2mg/L	Flame Photo
Sodium Na	24	23	32.5	23		<0.2mg/L	Flame Photo

GROUNDWATER QUALITY (SHEET 2 OF 2)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	22/03/06	27/06/06	30/08/06	24/11/06			
Phosphate PO_4						<0.03mg/L	Kone
Sulphate SO_4				15		<3mg/L	Kone
Zinc Zn				0.03		<1µg/L	ICP MS
Total alkalinity (as $CaCO_3$)				20		<1mg/L	Titration
Total organic carbon TOC	16.1	2.9	3	19		<2mg/L	IR
Total oxidised nitrogen TON	<0.5	<0.5	<0.3	<0.3		<0.3mg/L	Kone
Arsenic As						<1µg/L	ICP MS
Barium Ba						<1µg/L	ICP MS
Boron B						<3µg/L	ICP MS
Fluoride F				0.1		<0.1mg/L	Kone
Phenol				<0.01			
Phosphorus P				0.1			
Selenium Se						<1µg/L	ICP MS
Silver Ag						<2µg/L	ICP MS
Nitrite NO_2						<0.5mg/L	Kone
Nitrate NO_3						<0.3mg/L	Kone
Faecal coliforms (/100mls)	<1	<1	1	30			MT C121
Total coliforms (/100mls)	<1	<1	28	160			MT C121
Water level (m OD)				0.81			Meter

Table I.6(i) Ambient Noise Assessment

Third Octave analysis for noise emissions should be used to determine tonal noises

	National Grid Reference	Sound Pressure Levels		
	(5N, 5E)	$L(A)_{eq}$	$L(A)_{10}$	$L(A)_{90}$
1. SITE BOUNDARY				
Location 1: N1	E96279 N34068	43	44	35
Location 2:N6	E96098 N33811	46	48	38
Location 3:N8	E96343 N33831	64	59	47
Location 3:N9	E96124 N33730	45.4	48.8	38.7
Location 3:N10	E96157 N33672	47.2	50.2	40.4
Location 3:N11	E96246 N33771	46.7	49.7	40.5
Location 3:N12	E96375 N33748	69.4	72.4	40.4
2. NOISE SENSITIVE LOCATIONS				
Location 1: NSL1		49	52	42

NOTE: All locations should be identified on accompanying drawings.