Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

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
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Environmental Protection Agency
Application for a Waste Licence

WASTE MANAGEMENT ACTS 1996 to 2003

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ANNEX 1: STANDARD FORMS

INTRODUCTION

A valid application must contain the information prescribed in the Waste Management (Licensing) Regulations 2004 (SI No. 395 of 2004). **The applicant is strongly 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	**Section B.1**	
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	**Section B.3**	
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	**Section B.4**	
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	**Section B.2**	
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	Section B.7 & Attachment B.7	
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	Section B.7 & Attachment B.7	
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	Section B.7, Attachment B.7 & Attachment H.1	
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 G	
CHECKED	Applicant ☒	Official ☐

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

LOCATION	Attachments D, F & H	
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	**Attachments E, F & I**	
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	**Attachments F & I**	
CHECKED	**Applicant** ☒	**Official** ☐

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

LOCATION	**Attachment H.4**	
CHECKED	**Applicant** ☒	**Official** ☐

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

LOCATION	**Attachment H.4**	
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	**Attachments J, K & L**	
CHECKED	**Applicant** ☒	**Official** ☐

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

LOCATION	**Attachment L**	
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	**Section B.8**	
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	**Attachment I**	
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.6**	
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.6**	
CHECKED	**Applicant** ☒	**Official** ☐

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

LOCATION	**Attachment B.3**	
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	**DRAWINGS – Drawing Ref. WLA-01**	
CHECKED	**Applicant** ☒	**Official** ☐

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

LOCATION	**DRAWINGS – Drawing Ref. WLA-27**	
CHECKED	**Applicant** ☒	**Official** ☐

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

LOCATION	**DRAWINGS – Drawing Ref. WLA-27**	
CHECKED	**Applicant** ☒	**Official** ☐

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

INCLUDED Y/N	**Y**	
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** (as per *EPA Instructions for Licence Applicants*)	
CHECKED	**Applicant** ☒	**Official** ☐

CD OF PDF FILES PROVIDED? Y/N	**Y** (as per *EPA Instructions for Licence Applicants*)	
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	**Y**	
CHECKED	**Applicant** ☒	**Official** ☐
3 HARD COPIES OF EIS INCLUDED ? Y/N	**Y** (as per *EPA Instructions for Licence Applicants*)	
CHECKED	**Applicant** ☒	**Official** ☐
16 CD versions of EIS, as PDF files, PROVIDED? Y/N	**Y** (as per *EPA Instructions for Licence Applicants*)	
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**.

Please find Non-technical Summary attached as Attachment A.

SECTION B GENERAL

B.1 Applicant's Details

Name*:	Murphy Environmental Hollywood Limited
Address:	Hollywood Great
	Nag's Head
	Naul
	Co. Dublin
Tel:	01 8433744
Fax:	01 8433747
e-mail:	info@mehl.ie

* 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:	Ms Patricia Rooney
Address:	Murphy Environmental Hollywood Limited
	Hollywood Great
	Nag's Head
	Naul, Co. Dublin
Tel:	01 8433744
Fax:	01 8433747
e-mail:	info@mehl.ie

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

Address:	Murphy Environmental Hollywood Limited
	Hollywood Great
	Nag's Head
	Naul, Co. Dublin
Tel:	01 8433744
Fax:	01 8433747
e-mail:	info@mehl.ie

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:	As Applicant
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:	As Applicant
Address:	
Tel:	
Fax:	
e-mail:	

*Current at the time the application is submitted

B.2 Location of Activity

Name:	Murphy Environmental Hollywood Limited
Address*:	Hollywood Great
	Nag's Head
	Naul
	Co. Dublin
Tel:	01 8433744
Fax:	01 8433747
e-mail:	info@mehl.ie

* Include any townland

National Grid Reference (8 digit 4E,4N)	**E 315810** **N 258015**

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:	**An Bord Pleanála**
Address:	**64 Marlborough Street**
	Dublin 1
Tel:	**(01) 858 8100**
Fax:	**(01) 872 2684**

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:	**06F.PC0087**

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:	Not Applicable (No discharge to sewer)
Address:	
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:	Health Service Executive: Eastern Region, Northern Area
Address:	Swords Business Campus
	Balheary Road,
	Swords, Co. Dublin
Tel:	01 8131800
Fax:	01 8131870

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).	N
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.	N	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.	P	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).	Y	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.	N	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.

Maximum Annual Tonnage (tpa)	**500,000**
Year	**2010**

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 (appropriate disposal activity 1.1 – 3.3)	**€ 30,000**
Recovery of Waste (4)	**€ 10,000**
TOTAL	***€ 40,000***

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
Please see Attachment C.1			

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	N	Not proposed
D.1.q	Any other waste recovery infrastructure	Y	
D.1.r	Composting infrastructure	N	Not proposed
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	Not proposed
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	3 liner systems proposed based on inert, non-hazardous and hazardous landfill cells
D.3.c	**Has a Quality Control Plan been specified?**	Y	
D.3.d	**Has a Quality Assurance Plan been specified?**	Y	
D.3.e	**Have independent, third-party supervision, testing and controls been specified?**	Y	
D.3.f	**Have basal gradients for all cells and access ramps to the cells been designed?**	Y	
D.3.g	**Has a leak detection survey been specified?**	Y	

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?**	**N**	
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:	N	Non-biodegradable wastes only; therefore no landfill gas generation
D.5b	Is there a passive venting system?	N	
D.5c	Does the passive system cover all of the filled area?	N	
D.5d	Have gas alarm systems been installed in the site buildings?	N	
D.5e	Have measures been installed to prevent landfill gas migration (e.g. barriers)?	N	
D.5f	Has a time-scale been proposed for the installation of landfill gas infrastructure?	N	
D.5g	Is gas flaring undertaken at the site?	N	
D.5h	Is there an active (i.e., pumped) landfill gas extraction system?	N	
D.5i	Does the active system cover all of the filled area?	N	
D.5j	Is landfill gas used to generate energy at the site?	N	
D.5k	Have emissions from the flarestack and utilisation plant been assessed for source, composition, quantity and level and rate?	N	
D.5l	Has a maintenance programme for the control system been specified?	N	
D.5m	Has a condensate removal system been designed?	N	

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?**	Y	
D.6f	**Have all capping materials been specified?**	Y	
D.6g	**Has a Method Statement for construction been produced?**	Y	
D.6h	**Has a Quality Control Plan been produced?**	Y	
D.6i	**Has a Quality Assurance Plan been produced?**	Y	
D.6j	**Has a programme for monitoring landfill stability been developed?**	Y	
D.6k	**Has a programme for monitoring landfill settlement been developed?**	Y	

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	NOT APPLICABLE				
Methane (CH_4) % v/v					
Carbon dioxide (CO_2) %v/v					
Oxygen (O_2) % v/v					
Outlet					
Volumetric Flow Rate					
SO_2					
Nox					
CO					
Particulates					
TA Luft Class I, II, III organics					
Hydrochloric acid					
Hydrogen Fluoride					

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	NOT APPLICABLE				
Carbon Dioxide (CO_2) % v/v					
Oxygen (O_2) % v/v					
Atmospheric Pressure					
Temperature					

Table F.9 (c) Landfill Gas Infrastructure

Equipment	Monitoring Frequency	Information Included Y/N	Monitoring Action	Information Included Y/N
Gas Collection System	NOT APPLICABLE			
Gas Control System				

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		**200**	Class 1		
Class 2			Class 2		
Class 3			Class 3		**1,300**
Class 4			Class 4		**600**
Class 5		**445,000**	Class 5		
Class 6			Class 6		
Class 7		**50,000**	Class 7		
Class 8			Class 8		
Class 9			Class 9		
Class 10			Class 10		
Class 11			Class 11		
Class 12			Class 12		
Class 13		**1,300**	Class 13		**1,600**

Please note that anticipated tonnes per annum (tpa) will, in general, be lower than above; however the application seeks to maintain the existing licence (W0129-02) limit of 500,000 tpa (please see Attachment H.1).

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

Year	Inert waste (tonnes per annum)	Non-hazardous waste (tonnes per annum)	Hazardous waste (tonnes per annum)	Total annual quantity of waste (tonnes per annum)
2003 (Actual)	20,750			20,750
2004 (Actual)	173,037			173,037
2005 (Actual)	330,973			330,973
2006 (Actual)	339,753			339,753
2007 (Actual)	433,602			433,602
2008 (Actual)	225,996			225,996
2009 (Actual)	42,206			42,206
2010 (YTD)	30,536			30,536
2011 (Proposed)	60,400	0	122,600	183,000
2012 (Proposed)	60,400	0	122,600	183,000
2018 (Proposed)	60,400	102,300	122,600	285,300

Please note that the application seeks to maintain the existing licence (W0129-02) limit of 500,000 tpa (please see Attachment H.1).

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 [Note 1]
Household			
Commercial			
Sewage Sludge			
Construction and Demolition	500,000	60,400	1,511,000
Industrial Non-Hazardous Sludges			
Industrial Non-Hazardous Solids		102,300	2,317,000
Hazardous *(Specify detail in Table H 1.2)*		122,600	3,037,125
Inert Waste imported for restoration purposes		To be agreed with the	

[Note 1] Landfill site design is based on calculated void capacity. Tonnage has been estimated based on bulk density conversion factors; inert waste estimated at 2.0t/m^3, based on previous study at MEHL; hazardous and non-hazardous waste estimated at 1.75t/m^3.

		Agency as per Restoration Proposals	

*** 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			
Oil filters			
Asbestos			
Paint and Ink			
Batteries			
Fluorescent Light Bulbs			
Contaminated Soils			50,000
OTHER HAZARDOUS WASTE (APPLICANT TO SPECIFY)			
Fly ash containing dangerous substances	19 01 13 *		50,000

Other potential non-biodegradable hazardous wastes detailed in Attachment H.1.

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 : Patricia Rooney **Date :** 17.12.2010
(on behalf of the organisation)

Print signature name: PATRICIA ROONEY

Position in organisation : DIRECTOR & GENERAL MANAGER.

Company stamp or seal:

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. Nº:	**Not Applicable**
Location :	
Grid Ref. (12 digit, 6E,6N):	
Vent Details Diameter: Height above Ground(m):	
Date of commencement of emission:	

Characteristics of Emission :

CO				mg/m^3
Total organic carbon (TOC)				mg/m^3
NOx				mg/Nm^3 0ºC. 3% O_2(Liquid or Gas), 6% O_2(Solid Fuel)
Maximum volume of emission				m^3/hr
Temperature	ºC(max)		ºC(min)	ºC(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)	_____min/hr _____hr/day _____day/yr

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

Emission Point Ref. N^{o}:	**Not Applicable**
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	^{o}C(max)	^{o}C(min)	^{o}C(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: Not Applicable

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	
Not applicable						

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^{o}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: SWD-1

Emission Point Ref. N^{o}:	**SWD-1**
Source of Emission:	**Discharge after flowing through silt trap/oil interceptor at existing site entrance area in west of site**
Location :	**North-west of site**
Grid Ref. (10 digit, 5E,5N):	**315660E, 258522N**
Name of receiving waters:	**Stream at northern site boundary**
Flow rate in receiving waters:	**0.002**_____$m^3.sec^{-1}$ Dry Weather Flow **0.002**_____$m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	**Not measured** kg/day

Emission Details:

(i) Volume to be emitted **Variable**			
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)	**Variable** _____min/hr _____hr/day day/yr

Emission Point: SWD-2

Emission Point Ref. Nº:	**SWD-2**
Source of Emission:	**Water pumped from base of quarry – this may be in operation intermittently in preparation for the construction phase of the integrated waste management facility**
Location :	**North-west of site**
Grid Ref. (10 digit, 5E,5N):	**315847E, 258415N**
Name of receiving waters:	**Stream at northern site boundary**
Flow rate in receiving waters:	**0.002**_____$m^3.sec^{-1}$ Dry Weather Flow **0.002**_____$m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	**Not measured** kg/day

Emission Details:

(i) Volume to be emitted **Variable**			
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)	**Variable** _____min/hr _____hr/day day/yr

Emission Point: SWD-3

Emission Point Ref. Nº:	**SWD-3**
Source of Emission:	**Water discharge from settlement ponds – it is proposed to retain the existing settlement ponds in the north-west of the site, and the related surface water discharge point**
Location :	**Northern site boundary**
Grid Ref. (10 digit, 5E,5N):	**315937E, 258366N**
Name of receiving waters:	**Stream at northern site boundary**
Flow rate in receiving waters:	**0.002**_____$m^3.sec^{-1}$ Dry Weather Flow **0.002**_____$m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	**Not measured** kg/day

Emission Details:

(i) Volume to be emitted **Variable**			
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)	**Variable** _____min/hr _____hr/day day/yr

Emission Point: SWD-5

Emission Point Ref. Nº:	**SWD-5**
Source of Emission:	**The proposed surface water discharge from the new constructed stormwater wetland system prior to discharging to the local stream along the northern boundary**
Location :	**North-eastern site boundary**
Grid Ref. (10 digit, 5E,5N):	**316138E, 258262N**
Name of receiving waters:	**Stream at northern site boundary**
Flow rate in receiving waters:	**0.002**_____$m^3.sec^{-1}$ Dry Weather Flow **0.002**_____$m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	**Not measured** kg/day

Emission Details:

(i) Volume to be emitted **Variable**			
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)	**Variable** _____min/hr _____hr/day day/yr

Emission Point: SWD-6A

Emission Point Ref. Nº:	**SWD-6A**
Source of Emission:	**This point will address any surface water discharge to the open ditch from the access road, and discharge from a new detention basin, to the open drain south of the administration building**
Location :	**South-east-west of site**
Grid Ref. (10 digit, 5E,5N):	**316012E, 257661N**
Name of receiving waters:	**Stream at northern site boundary**
Flow rate in receiving waters:	**0.002**_____$m^3.sec^{-1}$ Dry Weather Flow **0.002**_____$m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	**Not measured** kg/day

Emission Details:

(i) Volume to be emitted **Variable**			
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)	**Variable** _____min/hr _____hr/day day/yr

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

Emission point reference number : **SWD-1**

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	
Q2, 2010 Suspended Solids						**Dry**			
Q1, 2010 Suspended Solids						**Dry**			
Q4, 2009 Suspended Solids						**Dry**			
Q3, 2009 Suspended Solids						**Dry**			
PROPOSED GOING FORWARD						**<10**			

Emission point reference number : **SWD-2**

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	
Q2, 2010 Suspended Solids						**Dry**			
Q1, 2010 Suspended Solids						**Dry**			
Q4, 2009 Suspended Solids						**Dry**			
Q3, 2009 Suspended Solids						**Dry**			
PROPOSED GOING FORWARD						**<10**			

Emission point reference number : **SWD-3**

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	
Q2, 2010 Suspended Solids						**Dry**			
Q1, 2010 Suspended Solids						**Dry**			
Q4, 2009 Suspended Solids						**Dry**			
Q3, 2009 Suspended Solids						**Dry**			
PROPOSED GOING FORWARD						**<10**			

Emission point reference number : **SWD-5**

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	
Q2, 2010 Suspended Solids						**Dry**			
Q1, 2010 Suspended Solids						**Dry**			
Q4, 2009 Suspended Solids						**Dry**			
Q3, 2009 Suspended Solids						**Dry**			
PROPOSED GOING FORWARD						**<10**			

Emission point reference number : **SWD-6A**

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	
Q2, 2010 Suspended Solids						**Not on sampling regime**			
Q1, 2010 Suspended Solids						**Not on sampling regime**			
Q4, 2009 Suspended Solids						**Not on sampling regime**			
Q3, 2009 Suspended Solids						**Not on sampling regime**			
PROPOSED GOING FORWARD						**<10**			

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: Raised soil polishing filter

Emission Point/Area Ref. Nº:	**Soil polishing filter**
Emission Pathway: (borehole, well, percolation area, soakaway, landspreading, etc.)	**Percolation area**
Location :	**Facility Control Area in south-east of site**
Grid Ref. (10 digit, 5E,5N):	**315928 E, 257721 N**
Elevation of discharge: (relative to Ordnance Datum)	**CL 127.0**
Aquifer classification for receiving groundwater body:	**Poor aquifer**
Groundwater vulnerability assessment (including vulnerability rating):	**Moderate**
Identity and proximity of groundwater sources at risk (wells, springs, etc):	**No identified risks**
Identity and proximity of surface water bodies at risk:	**No identified risks**

Emission Details:

(i) Volume to be emitted			
Normal/day	**1.0** m^3	Maximum/day	**2.0** m^3
Maximum rate/hour	**0.25** 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)	**60** min/hr **up to 12** hr/day **approx. 300** 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		
Noise sources from various items of plant have been assessed for the purposes of the EIS. Details are contained in WLA Attachment E.5 and EIS Chapter 11.														

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

TABLE F.1: ABATEMENT / TREATMENT CONTROL

Emission point reference number *:* **SWD-1**

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
Silt & oil	**Silt trap and interceptor**	**Inspection and cleaning**	**Not required**	**Not required**

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration
Silt & oil	**Surface water discharge monitoring**	**Not required (grab sampling for laboratory testing)**	**Not required (laboratory-based)**

[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.

Emission point reference number *:* **_SWD-5 _____**

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
Flow/ Sediment	**Stormwater wetland system**	**Visual inspection and maintenance**	**Not required**	**Not required**

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration
Flow/ Sediment	**Surface water discharge monitoring**	**Not required (grab sampling for laboratory testing)**	**Not required (laboratory-based)**

[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.

Emission point reference number *:* **_SWD-6A** _____

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
Silt & oil	**Silt trap and interceptor**	**Inspection and cleaning**	**Not required**	**Not required**

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration
Silt & oil	**Surface water discharge monitoring**	**Not required (grab sampling for laboratory testing)**	**Not required (laboratory-based)**

[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.

Emission point reference number *:* **_Solidification Plant – silo vents**

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
Dust/ particulates	**HEPA filters**	**Inspection and maintenance**	**Not required**	**Spare filters retained on site**

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration
Dust/ particulates	**Visual inspection and routine maintenance programme**	**Not required**	**Not required**

[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). : **SWD-1, SWD-2, SWD-3, SWD-5, SWD-6A**

Parameter	Monitoring frequency	Accessibility of Sampling Points
Surface Water Discharge monitoring for Suspended solids	**Quarterly**	**Accessible**

Emission Point Reference No(s). : **LM1, LM2, LM3, LM4, LM5, LM6, LM7, LM8, LM9, LM10, LM11, LM12, LM13**

Parameter	Monitoring frequency	Accessibility of Sampling Points
Leachate level	**Monthly**	**Accessible**
Leachate quality monitoring suite	**Quarterly**	**Accessible**

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

Monitoring Point Reference No :_**D1, D2, D3A, D5, D6** _____

Parameter	Monitoring frequency	Accessibility of Sampling point
Dust monitoring	**Biannually**	**Accessible**

Monitoring Point Reference No :_**N4, N5, N6, N7** _____

Parameter	Monitoring frequency	Accessibility of Sampling point
Noise monitoring	**Annually**	**Accessible**

Monitoring Point Reference No :_**DM1, DM2, DM3, DM4, DM5, DM6** _____

Parameter	Monitoring frequency	Accessibility of Sampling point
Hazardous cell Leak Detection monitoring (dip)	**Monthly**	**Accessible**

Monitoring Point Reference No :_**BH4A, BH5, BH6, BH8, BH9, BH10A, BH11A, BH12, BH13, BH14**___

Parameter	Monitoring frequency	Accessibility of Sampling point
Groundwater level and groundwater quality monitoring suite	**Quarterly**	**Accessible**

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
RM1	Hydrochloric Acid	7647-01-0	Corrosive	72 max.	7,500 max.	Solidification pre-treatment of flue gas treatment residue	34, 37	(1/2) 26, 45
RM2	Cement	65997-15-1	Irritant	117 max.	7,500 max.	Solidification pre-treatment of flue gas treatment residue	36 / 37 / 38	24/25/ 26, 36/37/ 39

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	Off-site Recovery, reuse or recycling	Off-site Disposal
			Tonnes / month	m^3 / month	(Method & Location)	(Method, Location & Undertaker)	(Method, Location & Undertaker)
Proposed waste types and quantities are variable as detailed in Attachment H.1							

[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] (Method & Location)	Off-site Recovery, reuse or recycling (Method, Location & Undertaker)	Off-site Disposal (Method, Location & Undertaker)
			Tonnes / month	m^3 / month			
Proposed waste types and quantities are variable as detailed in Attachment H.1							

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 4) Monitoring Point/ Grid Reference: __**SW 1__ (315677E 258518N)**_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	17/06/10	26/11/09	28/04/09	29/10/08			
pH	8.2	7.9	7.55	8.45	Grab	0-14 pH	*In situ*
Temperature (°C)	15.1	7.7	9.5	5.6	Grab	0-50 °C	*In situ*
Electrical conductivity EC (mS/cm)	0.86	0.69	0.756	0.642	Grab	>0 (mS/cm)	*In situ*
Ammoniacal nitrogen NH_4-N	0.06	0.3	0.2	<0.2	Grab	>0.03 mg/l	Kone analyser
Chemical oxygen demand	NDP	13	25	19	Grab	>7 mg/l	Dr. Lange Kit
Biochemical oxygen demand	<1	-	-	-	Grab	>1mg/l	5 days ATU
Dissolved oxygen DO	48%	10	9.11	10.16	Grab	>0 mg/l	*In situ*
Calcium Ca	120.7	-	140	-	Grab	>200µg/l	ICP-OES
Cadmium Cd	-	-	-	-	Grab	-	-
Chromium Cr	-	-	-	-	Grab	-	-
Chloride Cl	30	31.9	36	37	Grab	>0.3	Kone analyser
Copper Cu	-	-	-	-	Grab	-	-
Iron Fe	0.015	-	-	-	Grab	>4.7µg/l	ICP-OES
Lead Pb	-	-	-	-	Grab	-	-
Magnesium Mg	13.6	-	11	-	Grab	>100 µg/l	ICP-OES
Manganese Mn	0.009	-	0.46	-	Grab	>1.5 µg/l	ICP-OES
Mercury Hg	-	-	-	-	Grab	-	-

Surface Water Quality (Sheet 2 of 4)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	17/06/10	26/11/09	28/04/09	29/10/08			
Nickel Ni	-	-	-	-	Grab	-	-
Potassium K	7.3	-	-	-	Grab	>0.1 mg/l	ICP-OES
Sodium Na	33.2	-	20	-	Grab	>0.1 mg/l	ICP-OES
Sulphate SO_4	25.75	-	130	-	Grab	>0.05 mg/l	Kone Analyser
Zinc Zn	-	-	-	-	Grab	-	-
Total alkalinity (as $CaCO_3$)	NDP	-	190	-	Grab	>1 mg/l	Metrohm
Total organic carbon TOC	<2	-	-	-	Grab	> 3mg/l	Infra Red
Total oxidised nitrogen TON	-	-	-	-	Grab	-	-
Nitrite NO_2	-	-	-		Grab	-	-
Nitrate NO_3	37.7	-	-		Grab	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	-	-	-	Grab	-	-
Total coliforms (/100mls)	-	-	-	-	Grab	-	-
Phosphate PO_4	1.31	-	<0.08	-	Grab	>0.06 mg/l	Kone Analyser

(Sheet 3 of 4) Monitoring Point/ Grid Reference: __**SW 2__ (317230E 257820N)**_____

Parameter	Results (mg/l)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	17/06/10	26/11/09	28/04/09	29/10/08			
pH	8.4	8.3	6.91	8.5	Grab	0-14 pH	*In situ*
Temperature (°C)	12.7	7.6	10.1	5.6	Grab	0-50 °C	*In situ*
Electrical conductivity EC (mS/cm)	0.82	0.77	0.857	0.767	Grab	>0 (mS/cm)	*In situ*
Ammoniacal nitrogen NH_4-N	<0.03	<0.2	<0.2	<0.2	Grab	>0.03 mg/l	Kone analyser
Chemical oxygen demand	NDP	-	10	16	Grab	>7 mg/l	Dr. Lange Kit
Biochemical oxygen demand	<1	-	-	-	Grab	>1mg/l	5 days ATU
Dissolved oxygen DO	27%	10	9.23	8.93	Grab	>0 mg/l	*In situ*
Calcium Ca	160	-	133	-	Grab	>200µg/l	ICP-OES
Cadmium Cd	-	-	-	-	Grab	-	-
Chromium Cr	-	-	-	-	Grab	-	-
Chloride Cl	23.5	28.9	34	33	Grab	>0.3	Kone analyser
Copper Cu	-	-	-	-	Grab	-	-
Iron Fe	-	-	-	-	Grab	>4.7µg/l	ICP-OES
Lead Pb	-	-	-	-	Grab	-	-
Magnesium Mg	12	-	11	-	Grab	>100 µg/l	ICP-OES
Manganese Mn	0.004	-	0.023	-	Grab	>1.5 µg/l	ICP-OES
Mercury Hg	-	-	-	-	Grab	-	-

Surface Water Quality (Sheet 4 of 4)

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	17/06/10	26/11/09	28/04/09	29/10/08			
Nickel Ni	-	-	-	-	Grab	-	-
Potassium K	-	-	-	-	Grab	>0.1 mg/l	ICP-OES
Sodium Na	16.5	-	18	-	Grab	>0.1 mg/l	ICP-OES
Sulphate SO_4	8.09	-	200	-	Grab	>0.05 mg/l	Kone Analyser
Zinc Zn	-	-	-	-	Grab	-	-
Total alkalinity (as $CaCO_3$)	NDP	-	150	-	Grab	>1 mg/l	Metrohm
Total organic carbon TOC	-	-	-	-	Grab	> 3mg/l	Infra Red
Total oxidised nitrogen TON	-	-	-	-	Grab	-	-
Nitrite NO_2	-	-	-	-	Grab	-	-
Nitrate NO_3	-	-	-	-	Grab	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	-	-	-	Grab	-	-
Total coliforms (/100mls)	-	-	-	-	Grab	-	-
Phosphate PO_4	0.65	-	<0.08	-	Grab	>0.06 mg/l	Kone Analyser

Table I.4(i) GROUNDWATER QUALITY

(Sheet 1 of 20) Monitoring Point/ Grid Reference: __**BH4A (316271E 257891N)**____

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	7.4	7.5	7.3	7.4	Baler	0-14	*In situ*
Temperature (°C)	10.4	10.8	8.8	9.4	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.64	0.66	0.67	0.77	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	<0.03	<0.03	0.13	<0.2	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	2.44	12%	6	6	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-		Baler	-	-
Calcium Ca	104.7	109.7	116	104.1	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	0.0004	<0.0005	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.0001	<0.0015	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	22.3	24.9	26.7	29.1	Baler	>0.3	Kone analyser
Copper Cu	-	<0.003	<0.007	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	<0.04	<0.004	Baler	0.05 mg/l	Colourmetric
Iron Fe	0.02	0.01	<0.02	<0.02	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	0.002	0.005	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	9.7	9.62	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	0.167	0.17	0.165	<0.002	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	<0.001	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	1.3	1.2	1.31	1.12	Baler	>0.1 mg/l	ICP-OES
Sodium Na	10.8	10.7	11.17	10.3	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 2 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	1.31	0.1	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	43.2	48.66	67.23	78.01	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.004	0.004	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	222	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	7	<2	17	<2	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	0.53	2.02	0.97	1.88	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	<0.9	-	<0.0025	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.02	-	<0.003	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	<0.012	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	<0.3	-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	<0.01	<0.01	Baler	>0.18	HPLC
Phosphorus P	-	-	0.056	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	0.01	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.07	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	8.9	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	0	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	<1	-	-	Baler	>0	MPN
Water level (m OD)	91.96	91.96	91.96	91.96	Dip Level	N/A	N/A

(Sheet 3 of 20) Monitoring Point/ Grid Reference: ___**BH5 (315796E 258328N)**_____

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	6.9	7.3	6.9	7.9	Baler	0-14	*In situ*
Temperature (°C)	10.4	11.6	6	9.2	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.57	0.70	0.61	0.44	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	0.05	0.11	0.17	<0.2	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	4.6	5%	9	12	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	Baler	-	-
Calcium Ca	78.1	113	91.62	50.52	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	0.0017	<0.0005	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.0009	0.0127	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	20.1	21.9	20.6	21.5	Baler	>0.3	Kone analyser
Copper Cu	-	0.0006	<0.007	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	<0.04	<0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	<0.02	0.007	<0.007	0.087	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	0.0003	0.014	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	8.6	9.44	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	0.12	0.241	0.163	<0.002	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	<0.001	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	1.1	1	1.24	0.9	Baler	>0.1 mg/l	ICP-OES
Sodium Na	29.3	16.2	20.08	14.63	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 4 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	0.65	0.35	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	62.26	55.71	48.58	14.34	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.019	0.008	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	232	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	7	<2	17	11	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	0.22	1	<0.05	<0.05	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	0.0154	-	0.0064	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.04	-	0.014	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	<0.012	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	<0.3	-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	<0.01	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	<0.0012	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.09	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	4.3	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	0	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	20	-	-	Baler	>0	MPN
Water level (m OD)	101.26	101.25	102.42	100.77	Dip Level	N/A	N/A

(Sheet 5 of 20) Monitoring Point/ Grid Reference: ___**BH6 (315644E 258707N)**____

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	7.2	7.2	7.1	7.3	Baler	0-14	*In situ*
Temperature (°C)	11.5	11.3	9.1	9.7	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.66	0.7	0.68	0.72	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	0.27	0.28	0.35	0.40	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	5.2	10%	5	6	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	Baler	-	-
Calcium Ca	93.3	95.9	97.94	82.43	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	<0.0003	<0.0005	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.001	0.0073	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	19.9	21.7	27.8	22.2	Baler	>0.3	Kone analyser
Copper Cu	-	<0.003	<0.007	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	<0.04	<0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	<0.02	0.008	<0.02	0.131	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	0.006	0.001	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	17.9	17.69	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	0.218	0.202	0.204	0.192	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	<0.001	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	5.0	4.8	5.13	4.5	Baler	>0.1 mg/l	ICP-OES
Sodium Na	17	16.9	17.26	15.23	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 6 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	<0.06	0.31	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	27.32	25.75	39.55	25.96	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.003	0.007	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	267	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	8	<2	18	<2	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	<0.05	0.42	0.72	0.09	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	<0.0009	-	0.0044	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.065	-	0.061	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	0.054	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	<0.3	-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	<0.01	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	0.003	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.05	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	3.1	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	0	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	6	-	-	Baler	>0	MPN
Water level (m OD)	117.31	117.31	117.31	117.31	Dip Level	N/A	N/A

(Sheet 7 of 20) Monitoring Point/ Grid Reference: __**BH8 (315479E 258069N)**_____

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	6.7	6.8	6.6	6.7	Baler	0-14	*In situ*
Temperature (°C)	15.1	12.1	7.8	10.1	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.68	0.8	0.79	1.42	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	1.66	0.49	3.54	17.9	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	2.51	6%	9	3	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	Baler	-	-
Calcium Ca	80.7	121.4	85.13	142	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	0.0008	<0.005	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.0013	0.3295	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	51.7	49.7	61.9	21.4	Baler	>0.3	Kone analyser
Copper Cu	-	0.016	0.01	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	<0.04	<0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	1007	0.035	0.123	22.97	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	0.001	<0.005	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	9.9	9.88	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	1.978	1.54	1.934	4.1	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	<0.001	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	4.4	3.9	6.27	14.1	Baler	>0.1 mg/l	ICP-OES
Sodium Na	27.7	32.8	31.93	16.86	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 8 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	-	<0.01	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	113.73	120.28	122.55	361.16	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.005	0.004	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	185	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	13	6	33	26	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	1.16	0.71	0.23	0.44	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	0.0015	-	0.0068	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.071	-	0.118	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	<0.012	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	<0.3	-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	<0.01	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	<0.0012	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.11	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	3.0	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	300	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	630	-	-	Baler	>0	MPN
Water level (m OD)	133.73	133.43	133.77	133.95	Dip Level	N/A	N/A

(Sheet 9 of 20) Monitoring Point/ Grid Reference: ____**BH9 (315560E 258280N)**_____

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	6.9	7	6.8	7	Baler	0-14	*In situ*
Temperature (°C)	10.8	12.8	9.2	10.1	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.53	0.55	0.53	0.55	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	0.11	0.19	0.12	0.3	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	2.31	14%	4	6	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	Baler	-	-
Calcium Ca	86	87.8	86.7	76.21	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	0.0001	<0.005	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.0011	0.0031	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	22.8	19.6	23.9	23.4	Baler	>0.3	Kone analyser
Copper Cu	-	0.004	<0.007	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	<0.04	<0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	<0.020	0.01	<0.02	<0.02	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	0.003	<0.005	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	6.6	4.26	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	0.099	0.093	0.13	0.016	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	<0.001	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	0.6	0.7	0.6	0.5	Baler	>0.1 mg/l	ICP-OES
Sodium Na	14.7	15.5	14.28	12.8	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 10 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	-	<0.06	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	40.28	33.96	33.89	30.61	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.011	0.005	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	201	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	7	<2	17	<2	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	0.08	0.51	<0.05	<0.05	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	0.0077	-	0.0075	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.067	-	0.004	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	<0.012	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	<0.3	-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	<0.01	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	<0.0012	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.05	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	2.2	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	0	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	12	-	-	Baler	>0	MPN
Water level (m OD)	104.59	105.76	107.72	106.02	Dip Level	N/A	N/A

(Sheet 11 of 20) Monitoring Point/ Grid Reference: ___**BH10A (315522E 257697N)**____

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	7.6	7.7	-	7.5	Baler	0-14	*In situ*
Temperature (°C)	11.8	11.8	-	8.7	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.9	0.94	-	1.30	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	<0.2	<0.03	-	<0.03	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	6.48	20%	-	9	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	Baler	-	-
Calcium Ca	158	159.6	-	198	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	0.0002	-	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.0011	-	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	32.5	33.3	-	19.5	Baler	>0.3	Kone analyser
Copper Cu	-	<0.003	-	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	-	<0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	<0.02	0.007	-	<0.02	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	0.001	-	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	9.8	-	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	0.003	<0.0015	-	<0.002	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	-	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	2.6	2.3	-	1.8	Baler	>0.1 mg/l	ICP-OES
Sodium Na	16.5	15.5	-	8.87	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 12 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	-	-	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	293.11	292.66	-	426.8	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.004	-	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	92	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	5	<2	-	<2	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	1.23	2.21	-	1.01	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	0.0011	-	0.0028	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.019	-	26	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	-	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	-	-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	-	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	0.009	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.05	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	9.7	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	-	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	-	-	-	Baler	>0	MPN
Water level (m OD)	99.59	99.73	-	98.22	Dip Level	N/A	N/A

(Sheet 13 of 20) Monitoring Point/ Grid Reference: **BH11A (316112E 258249N)**

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	7.2	7.1	7.1	7.6	Baler	0-14	*In situ*
Temperature (°C)	10.3	11.2	9	9.4	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.62	0.63	0.62	0.65	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	0.21	0.19	0.29	0.5	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	2.62	32%	5	6	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	Baler	-	-
Calcium Ca	91.8	94.9	96.8	84.94	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	0.001	<0.005	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.001	0.0074	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	22.1	23.4	24.5	24.7	Baler	>0.3	Kone analyser
Copper Cu	-	<0.003	<0.07	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	<0.04	<0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	0.3	0.008	<0.02	<0.02	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	<0.005	0.0001	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	12.1	11.53	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	0.358	0.352	0.305	0.321	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	<0.001	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	1.9	1.9	2	1.9	Baler	>0.1 mg/l	ICP-OES
Sodium Na	16.2	16.3	16.38	14.38	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 14 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	-	<0.06	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	11.18	10.35	9.21	9.84	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.016	0.01	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	253	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	8	<2	19	<2	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	0.08	0.43	<0.05	<0.05	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	0.0144	-	0.0051	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.025	-	0.031	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	<0.012	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	0.4	-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	<0.01	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	0.001	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.05	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	1.8	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	0	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	3	-	-	Baler	>0	MPN
Water level (m OD)	98.48	98.49	98.41	98.51	Dip Level	N/A	N/A

(Sheet 15 of 20) Monitoring Point/ Grid Reference: __**BH12 (315439E 257925N)**____

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	7.3	7.8	7.1	7.1	Baler	0-14	*In situ*
Temperature (°C)	10.8	13.3	9.9	9.1	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.16	0.54	0.35	0.31	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	0.03	<0.03	0.04	<0.2	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	8.01	43%	9	9	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	Baler	-	-
Calcium Ca	23.9	84.7	47.26	35.22	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	<0.0005	<0.00003	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.0018	0.0105	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	2.2	30.9	32.5	28.1	Baler	>0.3	Kone analyser
Copper Cu	-	<0.003	<0.007	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	0.04	0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	<0.02	0.007	<0.02	0.151	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	<0.005	0.001	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	4.1	2.71	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	<0.002	<0.0015	<0.002	0.009	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	<0.001	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	3.7	1.9	2.27	2.2	Baler	>0.1 mg/l	ICP-OES
Sodium Na	4.6	15.1	14.81	11.54	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 16 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	-	0.37	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	3.92	25.6	11.91	8.84	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.003	0.003	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	184	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	4	<2	10	7	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	0.77	8.46	9.48	8.85	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	0.0102	-	0.0037	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.004	-	0.015	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	<0.12	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	<0.3	-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	<0.01	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	<0.0012	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.05	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	1.8	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	0	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	<1	-	-	Baler	>0	MPN
Water level (m OD)	99.14	100.6	100.64	100.35	Dip Level	N/A	N/A

(Sheet 17 of 20) Monitoring Point/ Grid Reference: ___**BH13 (315444E 257925N)**___

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	7.2	7.1	7.9	6.3	Baler	0-14	*In situ*
Temperature (°C)	12.5	12.6	5.8	8.6	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.39	0.42	0.33	0.34	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	0.04	0.05	0.04	<0.2	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	6.48	37%	10	10	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	Baler	-	-
Calcium Ca	51.7	59.6	27.5	27.81	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	<0.0005	0.0001	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.0017	0.0237	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	35.3	37.4	39.6	41.1	Baler	>0.3	Kone analyser
Copper Cu	-	<0.003	<0.007	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	<0.04	<0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	<0.02	0.024	<0.02	0.121	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	0.002	<0.005	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	4	3.91	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	0.005	<0.0015	0.005	0.012	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.001	<0.0005	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	2.1	2	1.94	1.9	Baler	>0.1 mg/l	ICP-OES
Sodium Na	16.5	17.1	18.51	18.09	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 18 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-	-	0.68	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	12.22	10.3	11.53	14.2	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.003	0.009	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	168	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	4	<2	5	6	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	9.81	11.48	9.97	11.41	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-		-		Baler	>0.9 µg/l	ICP-OES
Barium Ba	-		-		Baler	>1.8 µg/l	ICP-OES
Boron B	-	-		-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-		-	Baler	>0.3 mg/l	Dionex
Phenol	<0.18	<0.18	<0.01	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-		-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.002	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	50.8	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	0	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	<1	-	-	Baler	>0	MPN
Water level (m OD)	108.78	108.38	113.14	97.76	Dip Level	N/A	N/A

(Sheet 19 of 20) Monitoring Point/ Grid Reference: _**BH14 (315938E 257631N)**____

Parameter	Results (mg/l)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
pH	6.6	6.1	6.5	7.2	Baler	0-14	*In situ*
Temperature (°C)	11.4	12.6	8.6	9.4	Baler	0-50°C	*In situ*
Electrical conductivity EC (mS/cm)	0.31	0.35	0.24	0.23	Baler	>0 mS/cm	*In situ*
Ammoniacal nitrogen NH_4-N	<0.03	<0.03	0.04	<0.2	Baler	>0.03 mg/l	Kone analyser
Dissolved oxygen DO	6.51	17%	9	9	Baler		*In situ*
Residue on evaporation (180°C)	-	-	-	-	-	-	-
Calcium Ca	35.5	41.1	29.28	20.64	Baler	>200 µg/l	ICP-OES
Cadmium Cd	-	0.004	0.0011	-	Baler	>0.03 µg/l	ICP-OES
Chromium Cr	-	0.0009	0.0037	-	Baler	>0.20 µg/l	ICP-OES
Chloride Cl	18.8	25.5	13.3	14.3	Baler	>0.3	Kone analyser
Copper Cu	-	0.007	0.009	-	Baler	>3 µg/l	ICP-OES
Cyanide Cn, total	-	-	<0.04	<0.04	Baler	0.05 mg/l	Colourmetric
Iron Fe	<0.02	0.008	<0.002	0.065	Baler	>4.7 µg/l	ICP-OES
Lead Pb	-	0.002	<0.005	-	Baler	>0.4 µg/l	ICP-OES
Magnesium Mg	-	4.8	2.79	-	Baler	>100 µg/l	ICP-OES
Manganese Mn	0.01	0.012	0.014	0.037	Baler	>1.5 µg/l	ICP-OES
Mercury Hg	-	<0.0005	<0.001	-	Baler	>0.5 µg/l	ICP-OES
Nickel Ni	-	-	-	-	Baler	>0.2 µg/l	ICP-OES
Potassium K	2.7	2.2	3.26	4.4	Baler	>0.1 mg/l	ICP-OES
Sodium Na	11.5	12.7	7.99	7.6	Baler	>0.1 mg/l	ICP-OES

GROUNDWATER QUALITY (SHEET 20 OF 20)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	27/09/10	17/06/10	11/02/10	26/11/09			
Phosphate PO_4	-		<0.06	-	Baler	>0.06 mg/l	Kone Analyser
Sulphate SO_4	51.99	59.98	40.31	33.63	Baler	>0.05 mg/l	Kone Analyser
Zinc Zn	-	0.015	0.025	-	Baler	>1.5 µg/l	ICP-OES
Total alkalinity (as $CaCO_3$)	-	65	-	-	Baler	>1 mg/l	Metrohm
Total organic carbon TOC	3	<2	11	12	Baler	> 3mg/l	Infra Red
Total oxidised nitrogen TON	5.55	7.31	3.7	5.43	Baler	>0.05 mg/l	Kone Analyser
Arsenic As	-	<0.0009	-	<0.00025	Baler	>0.9 µg/l	ICP-OES
Barium Ba	-	0.011	-	0.0046	Baler	>1.8 µg/l	ICP-OES
Boron B	-	-	0.036	-	Baler	>12 µg/l	ICP-OES
Fluoride F	-	-	<0.3	-	Baler	?	?
Phenol	<0.18	<0.18	<0.01	<0.1	Baler	>0.18	HPLC
Phosphorus P	-	-	-	-	Baler	>5 µg/l	ICP-OES
Selenium Se	-	7.0	-	-	Baler	>1.2 µg/l	ICP-OES
Silver Ag	-	-	-	-	Baler	>1 µg/l	ICP-OES
Nitrite NO_2	-	0.04	-	-	Baler	>0.02 mg/l	Kone Analyser
Nitrate NO_3	-	32.3	-	-	Baler	>0.02 mg/l	Kone Analyser
Faecal coliforms (/100mls)	-	1	-	-	Baler	>0	MPN
Total coliforms (/100mls)	-	50	-	-	Baler	>0	MPN
Water level (m OD)	98.73	98.81	98.54	97.76	Dip Level	N/A	N/A

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:				
Location 2:				
Location 3:				
Location 4:				
2. NOISE SENSITIVE LOCATIONS				
Location 1: N4	315817E, 258637N	52	52	36
Location 2: N5	314900E, 257852N	58	57	33
Location 3: N6	315571E, 257670N	55	54	31
Location 4: N8	315952E, 257527N	62	90	37

NOTE: All locations should be identified on accompanying drawings.