# SECTION B - GENERAL

| Sub-Section | Title | Location of Information |
|---|---|---|
| B.1 | Applicant Details | WLA p.13-14 and Attachment B.1 |
| B.2 | Location of Activity | WLA p.14-15 and Attachment B.2 |
| B.3 | Planning Authority | WLA p.15 and Attachment B.3 |
| B.4 | Sanitary Authority | WLA p.16 and Attachment B.4 |
| B.5 | Other Authorities | WLA p.16 |
| B.6 | Notices and Advertisements | WLA p.16 and Attachment B.6 |
| B.7 | Type of Waste Activity | WLA p.17-18 and Attachment B.7 |
| B.8 | Seveso II Regulations | WLA p.18 and Attachment B.8 |

## ATTACHMENT B.1

## APPLICANT DETAILS

# B.1 APPLICANT DETAILS

The following contains details of the applicant.

## B.1.a Copy Certificate of Incorporation

A certified copy of the Certificate of Incorporation is attached.

## B.1.b Company Registration Number

The companies registration number is 79451

## B.1.c List of Company Directors

The company directors are as below:

A. Auer (UK)
B.J. Fitzgerald
R. Gonzalez (Nicaragua)
I. Madridejos (Spain)
R. Kells (UK)
S. Martinez (Mexico)
W. M. McCann
M. Moreno (Mexico)



## B.1.d Ownership Details

Figure WLA-01 attached at the end of this document outlines the lands owned by the applicant.

## ATTACHMENT B.2

## LOCATION OF ACTIVITY

## B.2 LOCATION OF ACTIVITY

Figure WLA-01 attached at the end of this document is a Site Plan for the proposed facility.

Figure WLA-02 attached at the end of this document shows the location of the proposed Facility with a grid reference clearly marked on the Figure.

Figure WLA-03 attached at the end of this document shows the services adjoining the proposed facility.

## ATTACHMENT B.3

## PLANNING AUTHORITY

## B.3 PLANNING AUTHORITY

Planning permission will be required from Kildare County Council for the proposed restoration works . The Environmental Impact Statement (EIS) is included as a separate document. The Planning Application Form for the proposed development and a copy of the newspaper notice for the planning application are included in this Attachment B.3.

The most recent Waste Permit and Planning Permissions are included in Appendices 1 and 2, respectively of Volume 2 of the Environmental Impact Statement for the Proposed Walshestown Pit Restoration, dated December 2008.

# KILDARE COUNTY COUNCIL
# PLANNING APPLICATION FORM

(Form No. 2 of Schedule 3 to the Planning and Development Regulations 2007)

Planning Department, Áras Chill Dara, Devoy Park, Naas, Co. Kildare.
Tel: 045-980840
Fax: 045-980834
E-mail: plandept@kildarecoco.ie
Website: www.kildarecoco.ie

## BEFORE FILLING OUT THIS FORM PLEASE NOTE THE FOLLOWING:

**ALL INFORMATION SUBMITTED WITH A PLANNING APPLICATION WILL BE AVAILABLE TO VIEW ON THE PUBLIC FILE AND ON THE COUNCIL'S WEBSITE**

## APPLICATION FORM AND ACCOMPANYING DOCUMENTATION

Failure to complete this form or attach the necessary documentation, or the submission of incorrect information or omission of required information will lead to the invalidation of your application. Therefore please ensure that each section of this application form is fully completed and signed, entering n/a (not applicable) where appropriate, and that all necessary documentation is attached to your application form.



## SUPPLEMENTARY INFORMATION

It should be noted that each planning authority has its own development plan, which sets out local development policies and objectives for its own area. The authority may therefore need supplementary information (i.e. other than that required in this form) in order to determine whether the application conforms with the development plan and may request this on a supplementary application form.

Failure to supply the supplementary information will not invalidate your planning application but may delay the decision-making process or lead to a refusal of permission. Therefore applicants should contact the relevant planning authority to determine what local policies and objectives would apply to the development proposed and whether additional information is required.

**Kildare County Council Rural Housing Application Form must be completed by the following category of applicant:**

**Application for One off Dwelling house in the open countryside**
**Within Rural Settlements – application for individual dwelling house**
**Within Rural Settlements – application for multiple houses**

## DATA PROTECTION

The planning process is an open and public one. In that context, all planning applications and accompanying documentation, with the exception of certain contact details, are made available for public inspection/purchase and may be made available on the planning authority's website where this is their policy. Planning authorities also publish weekly lists of planning applications received as well as weekly lists of planning decisions in hard copy and, where this is their policy, on their websites.

It has come to our attention that the publication of planning applications by planning authorities can lead to applicants being targeted by persons in the business sector engaged in direct marketing. In response to a request from the Data Protection Commissioner, you are hereby given an opportunity to indicate a preference with regard to the receipt of direct marketing arising from the lodging of a planning application.

*If you are satisfied to receive direct marketing please tick this box* ☐

Direct marketing may be by post, by telephone, by hand or by electronic mail such as email or text message where such details are supplied.

It is the responsibility of those entities wishing to use the personal data on planning applications and decisions lists for direct marketing purposes to be satisfied that they may do so legitimately under the requirements of the Data Protection Acts 1988 & 2003 taking account of the preference outlined above.

# PLANNING APPLICATION FORM

**1. Name of Relevant Planning Authority:**

## KILDARE COUNTY COUNCIL

**2. Location of Proposed Development:**

*Postal Address* **or** *Townland* **or** *Location (as may best identify the land or structure in question)*

Townlands of Walshestown, Tipperkevin, Blackhill & Bawnoge, Naas, Co. Kildare.

*Ordnance Survey Map Ref No (and the Grid Reference where available)*[1]

1:2,500 - 3664-B, 3608-C, 3609-B, 3609-C, 3665-A, 3561-C, 3609-D, 3560-D, 3608-D, 3664-A, 3559-C, 3560-C, 3608-B, 3559-D, 3608-A, 3609-A, 3610-A, 3610-C, 3665-B, 3666-A. 1:1,000 - 3559-17, 3559-12

Grid Reference: E692885 N715953



**3. Type of planning permission (please tick appropriate box):**

[X] Permission

[ ] Permission for retention

[ ] Outline Permission

[ ] Permission consequent on Grant of Outline Permission

**4. Where planning permission is consequent on grant of outline permission:**

Outline Permission Register Reference Number: Not Applicable

Date of Grant of Outline Permission: Not Applicable

(Note: Permission consequent on the grant of Outline Permission should be sought only where Outline Permission was previously sought. Under S.36 3(a) of the Planning and Development Act 2000 Outline permission lasts for 3 years.)

**5. Applicant**[2]**:** (not agent acting on his/her behalf)

| |
|---|
| *Name(s)* Cemex (ROI) Limited. |
| *Address* **must** *be supplied at the end of this form (Question 23)* |

**6. Where Applicant is a Company (registered under the Companies Acts 1963 to 1999):**

| |
|---|
| *Name(s) of company director(s)* Roger Gonzalez, Philomena Doherty, Sergio Martinez |
| *Registered Address (of company)*<br>Block A1, Eastpoint Business Park, Dublin 3 |
| *Company Registration Number* 79451 |
| *Telephone No.* 01 8658700 |
| Email Address (*if any*) Ireland.info@cemex.com |
| Fax No. (*if any*) 01 8556595 |



**7. Person/Agent acting on behalf of the Applicant (if any):**

| |
|---|
| *Name* Mr. Conor Wall |

**8. Person responsible for preparation of Drawings and Plans**[3]**:**

| |
|---|
| *Name* Mr. Conor Wall |

**9. Description of Proposed Development:**

*Brief description of nature and extent of development*[4]

Cemex (ROI) Ltd. is seeking Planning Permission for the continuation of restoration activities at their existing sand and gravel pit in the townlands of Walshestown, Blackhall, Tipperkevin and Bawnogue, Co. Kildare. It is the intention of the Applicant to restore the lands back to eastern Kildare uplands (transition) character, and to meet a Specific Objective of the Kildare County Development Plan 2005 to 2011 (Walshestown Pit No. 9). The site area for development is ca. 68.0 hectares.

**10. Legal Interest of Applicant in the Land or Structure:**

| *Please tick appropriate box to show applicant's legal interest in the land or structure* | ***A.*** *Owner* X | ***B.*** *Occupier* |
|---|---|---|
| | ***C.*** *Other* | |

*Where legal interest is 'Other', please expand further on your interest in the land or structure*

Not Applicable

***If you are not the legal owner****, please state the name of the owner. The owner's address must be included at the end of this form (Question 26) and a letter of consent from the owner to make the application must be supplied as listed in the accompanying documentation*

Not Applicable



**11. Site Area:**

| *Area of site to which the application relates in hectares* | Ha. 68.0 ha. |
|---|---|

**12. Where the application relates to a building or buildings:**

| | |
|---|---|
| *Gross floor space of any existing building(s) in $m^2$ :* | 70 + 448 = 518 |
| *Gross floor space of proposed works in $m^2$ :* | Not Applicable |
| *Gross floor space of work to be retained in $m^2$ (if appropriate):* | Not Applicable |
| *Gross floor space of any demolition in $m^2$ (if appropriate) :* | Not Applicable |

**13. In the case of mixed development (e.g. residential, commercial, industrial, etc), please provide breakdown of the different classes of development and breakdown of the gross floor area of each class of development:**

| *Class of Development* | *Gross floor area in $m^2$* |
|---|---|
| All Industrial | See Tab 2 for areas for each class of development |

**14. In the case of residential development please provide breakdown of residential mix:**

| *Number of* | *Studio* | 1 Bed | 2 Bed | 3 Bed | 4 Bed | 4+ Bed | Total |
|---|---|---|---|---|---|---|---|
| *Houses* | | | | | | | |
| *Apartments* | | | Not Applicable | | | | |
| *Number of car-parking spaces to be provided* | Existing | | Proposed | | Total | | |

**15. Where the application refers to a material change of use of any land or structure or the retention of such a material change of use:**

| | |
|---|---|
| *Existing use*[6] *(or previous use where retention permission is sought)* | (a) 2 No. Vacant sheds<br>(b) 2 No. Vacant Sheds |
| *Proposed use (or use it is proposed to retain)* | (a) Quarantine of Waste<br>(b) Plant Store and Maintenance |
| *Nature and extent of any such proposed use (or use it is proposed to retain)* | External features of structures will not be altered. Use will be changed. |

**16. Social and Affordable Housing**

| ***Please tick appropriate box*** | ***Yes*** | ***No*** |
|---|---|---|
| *Is the application an application for permission for development to which Part V of the Planning and Development Act 2000 applies?*[7] | | |
| If the answer to the above question is "yes" and the development is not exempt (see below), you must specify, as part of your application, the manner in which you propose to comply with section 96 of Part V of the Act.<br>If the answer to the above question is "yes" but you consider the development to be exempt by virtue of section 97 of the Planning and Development Act 2000[8], a copy of the Certificate of Exemption under section 97 must be submitted (or, where an application for a certificate of exemption has been made but has not yet been decided, a copy of the application should be submitted).<br>If the answer to the above question is "no" by virtue of section 96(13) of the Planning and Development Act 2000[9], details indicating the basis on which section 96(13) is considered to apply to the development should be submitted | Not Applicable | |

**17. Development Details**

| *Please tick appropriate box* | *Yes* | *No* |
|---|---|---|
| *Does the proposed development consist of work to a protected structure and/or its curtilage or proposed protected structure and/or its curtilage?* | | X |
| *Does the proposed development consist of work to the exterior of a structure which is located within an architectural conservation area (ACA)?* | | X |
| *Does the application relate to development which affects or is close to a monument or place recorded under section 12 of the National Monuments (Amendment) Act, 1994*[10] | | X |
| *Does the application relate to work within or close to a European Site (under S.I. No.94 of 1997) or a Natural Heritage Area?* | | X |
| *Does the proposed development require the preparation of an Environmental Impact Statement*[11] *?* | X | |
| *Does the application relate to a development which comprises or is for the purposes of an activity requiring an integrated pollution prevention and control licence?* | | X |
| *Does the application relate to a development which comprises or is for the purposes of an activity requiring a waste licence?* | X | |
| *Do the Major Accident Regulations apply to the proposed development?* | | X |
| *Does the application relate to a development in a Strategic Development Zone?* | | X |
| *Does the proposed development involve the demolition of any habitable house*[12] *?*<br><br>**(Note: Demolition of a habitable house requires planning permission.** | | X |

## 18. Site History

Details regarding site history (if known)

Has the site in question ever, to your knowledge, been flooded?

Yes [ ] No [ x ]

If yes, please give details e.g. year, extent.

Not Applicable

Are you aware of previous uses of the site e.g. dumping or quarrying?

Yes [ x ] No [ ]

If yes, please give details.

The Application Site is a worked out sand and gravel pit



Are you aware of any valid planning applications previously made in respect of this land/structure?

Yes [ x ] No [ ]

If yes, please state planning reference number(s) and the date(s) of receipt of the planning application(s) by the planning authority if known:

Reference No.: 8359 Date: 16/12/1969 (Date of Issue of P.P.)

Reference No.: 340 / 76 Date: 25/03/1976 (Date of Lodgement of P.A.)

Reference No.: 96 / 100 (PL 09.098844) Date: 30/01/1996 (Date of Lodgement of P.A.)

If a **valid** planning application has been made in respect of this land or structure in the 6 months prior to the submission of this application, then the site notice must be on a yellow background in accordance with Article 19(4) of the Planning and Development Regulations 2001 as amended.

***Is the site of the proposal subject to a current appeal to An Bord Pleanála in respect of a similar development[13] ?***

Yes [ ] No [ x ]

*An Bord Pleanála Reference No.:* Not Applicable

*(Note: The Appeal must be determined or withdrawn before another similar application can be made).*

## 19. Pre-application Consultation

***Has a pre-application consultation taken place in relation to the proposed development[14]?***

Yes [ x ] No [ ]

If yes, please give details:

Reference No. (if any): Not Applicable

Date(s) of consultation: 04 / 09 / 08

Persons involved: John La Hart (K.C.C), Anita Sweeney (K.C.C), Martin Dowling, Pierce Power (Cemex), Geoff Parker (Golder), Conor Wall (Golder)

## 20. Services

***Proposed Source of Water Supply***

Existing connection [ x ] New connection [ ]

Public Mains [ x ] Group Water Scheme [ ] Private Well [ x ]

Other (please specify): An existing private well will be used for dust suppression

*Name of Group Water Scheme (where applicable)* Not Applicable



***Proposed Wastewater Management/Treatment***

Existing [ x ] New [ ]

Public Sewer [ ] Conventional septic tank system [ x ]

Other on-site treatment system [ ] Please specify Not Applicable

***Proposed Surface Water Disposal***

Public Sewer/Drain [ ] Soakpit [ ]

Watercourse [ ] Other [ x ] Please specify On-Site infiltration trenches, soakpits and swale

## 21. Details of Public Notice

| | |
|---|---|
| *Approved newspaper[15] in which notice was published* | Leinster Leader |
| *Date of publication* | 17th December 2008 |
| *Date on which site notice was erected* | 23rd December 2008 |

## 22. Application Fee

| | |
|---|---|
| *Fee Payable* | € |
| *Basis of Calculation* | See attached spreadsheet |

**I hereby declare that, to the best of my knowledge and belief, the information given in this form is correct and accurate and fully compliant with the Planning & Development Act 2000, as amended, and the Regulations made thereunder:**

*Signed* Brian Dawnes (CEMEX (ROI) Ltd.)
*(Applicant or Agent as appropriate)*

*Date:* 23rd December 2008

***An applicant will not be entitled solely by reason of a planning permission to carry out the development. The applicant may need other consents, depending on the type of development. For example, all new buildings, extensions and alterations to, and certain changes of use of existing buildings must comply with building regulations, which set out basic design and construction requirements.***

**Golder Associates Ireland**
Town Centre House,
Dublin Road, Naas,
Co. Kildare, Ireland

Tel: [353] (0)45 874411
Fax: [353] (0)45 874549
http://www.golder.com

Kildare County Council
Planning Section
Aras Chill Dara
Devoy Park
Naas,
Co. Kildare

18th December 2008
08507150231

## NOTICE OF APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE LICENCE

To whom it may concern,

In accordance with Article 9(1) of the Waste Management (Licensing) Regulations, 2004, we wish to notify the planning authority that our office will submit a Waste Licence Application on behalf of our client Cemex (ROI) Limited for a waste recovery and disposal facility at Blackhall, Walshestown, Tipperkevin and Bawnoge Co. Kildare. This application will be submitted to the EPA's offices in Johnstown Castle Estate, County Wexford.

In accordance with Article 9(2) Waste Management (Licensing) Regulations, 2004 the attached notice is provided in the same form as the newspaper notice that has been published in regard to this application and meets the requirements of Article 6 of the above-mentioned Regulations.



Yours sincerely,
**GOLDER ASSOCIATES IRELAND**

Conor Wall M.Sc., Dip. EIA Man.
Project Manager

Attachments: Text of Newspaper Notice

cc:

GFP/cw

**APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE LICENCE**

Notice is hereby given in accordance with the provisions of the Waste Management Acts, 1996 to 2007 that Cemex (ROI) Limited, Block A1 East Point Business Park, Dublin 3 will submit an application for a waste licence for a proposed Inert Waste Recovery and Disposal Facility in the townlands of Blackhall, Walshestown, Tipperkevin and Bawnoge Co. Kildare (National Grid Reference E292870, N215692).

The principal activity at the site, as specified in the Third Schedule the Waste Management Acts, 1996 to 2007 is as follows:-

> "5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment"

Other activities to be carried out at the site, as specified in the Third Schedule to the Waste Management Acts, 1996 to 2007 are as follows:-

> "1. Deposit on, in or under land (including landfill)."

> "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."

Other activities to be carried out at the site, as specified in the Fourth Schedule to the Waste Management Acts, 1996 to 2007 are as follows:-

> "2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes)."

> "3. Recycling or reclamation of metals and metal compounds."

> "4. Recycling or reclamation of other inorganic materials."

> "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."



The nature of the development is the restoration of a worked out sand and gravel pit over a 15 year period with inert wastes and materials, to meet a specific objective of the Kildare County Development Plan 2005 to 2011 (Walshestown Pits No. 9). The quantities of waste in this application will involve a maximum input of circa 600,000 tonnes per annum for a period of 13 years. This will be followed by approximately 2 years of final restoration work. The nature of the wastes that will be used for the site restoration project will meet the waste acceptance criteria for an inert waste landfill. A purpose-built inert waste processing area with mobile plant will be developed to recover materials to be used for engineering purposes.

The proposed development of an Inert Waste Recovery and Disposal Facility will be accompanied by an Environmental Impact Statement in accordance with Article 13(1) of the Waste Management (Licensing) Regulations 2004.

A copy of the Application for a Waste Licence, Environmental Impact Statement, and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will, as soon as practicable after receipt by the Agency, be available for inspection or purchase at the headquarters of the Agency.

## ATTACHMENT B.4

## SANITARY AUTHORITY

## B.4 SANITARY AUTHORITY

The sanitary authority in question is Kildare County Council. It is proposed that foul sewage will be handled in the existing septic tank/percolation system.

## ATTACHMENT B.6

## NOTICES AND ADVERTISEMENTS

## B.6 NOTICES AND ADVERTISEMENTS

Figure WLA-01 shows the locations where Site Notices have been erected. A copy of both the Site and Newspaper Notice are included in this attachment.

The correspondence notifying the planning authority of this application being made is included in this Attachment B.6.

Leinster Leader

## Planning Notices

**Kildare Co. Council.**

Cemex (ROI) Limited is seeking Planning Permission for the continuation of restoration activities at their existing sand and gravel pit in the townlands of Walshestown, Blackhall, Tipperkevin and Bawnogue, Co. Kildare. It is the intention of the Applicant to restore the lands back to Eastern Kildare Uplands Transition Character, and to meet a Specific Objective (Walshestown Pit No. 9) of the Kildare County Development Plan 2005 to 2011. The application area for restoration works is circa 40.0 hectares, within an overall site area of circa 68.0 hectares. Access to the Application Site will be from the Local Road L6042. The development will consist of:
(a) importation and placement of inert materials over a period of circa. 15 years;
(b) inert materials processing and stockpile area;
(c) processing of inert materials including crushing, screening, and magnetic separation using mobile machinery for the purposes of recovery and recycling of engineering material;
(d) wheelwash (1 no.);
(e) quarantine areas within existing sheds (change of use) and on a concrete hardstand;
(f) provision of vehicle maintenance sheds (change of use);
(g) surface water management features including all ponds, swales, ditches, infiltration trenches and soakholes;
(h) 2 no. bunded fuel tanks (5,000 litre) and associated concrete hardstanding and full retention surface water separator;
(i) ducting and services, piping and manholes;
(j) facility notice board at existing site entrance;
(k) earthworks, site levelling, landscaping berms and other related works; and
(l) fencing, lighting and all other associated ancillary works.
The application relates to a restoration development which comprises or is for the purpose of an activity requiring a waste licence to be issued by the Environmental Protection Agency.
An Environmental Impact Statement will be submitted to the Planning Authority with the Application, and will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy during office hours at the offices of the Planning Authority.That the planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours and that a submission or observation in relation to the application may be made to the authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application.

## Planning Notices

**Kildare Co. Council.**

I Anne Marie Byrne am applying for planning permission for proposed 3 bedroom bungalow type dwelling house with detached garage, new vehicular entrance and driveway, on site waste water treatment system and all associated site works at Calverstown Little, Dunlavin, Co. Kildare.
The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours and that a submission or observation in relation to the application may be made to the authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application.
Signed: Anne Marie Byrne

**Kildare Co. Council.**

I, Liam Domican intend to apply for retention permission for development at this site Blackhill, Kill, Co. Kildare.
The development consists of:- proposed retention permission to retain dwelling as built.
That the planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours and that a submission or observation in relation to the application may be made to the authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application.

**Kildare Co. Council.**

I, Ken Halpin, intend to apply to apply for permission for development at this site: 183 Monread Heights, Naas, Co. Kildare.
The development will consist of: construction of new residence, demolition of garden shed and new boundary treatment.That the planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours and that a submission or observation in relation to the application may be made to the authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application.

**Kildare Co. Council.**

I, Muiris Murphy intend to apply for retention permission for development at this site Flemingstown, Mullacash, Co. Kildare. The development consists of proposed retention of garage as constructed. That the planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours and that a sub-

## Planning Notices

**Kildare Co. Council.**

I, Philomena Grifferty intend to apply for permission for a development on this site at Balyna, Broadford, Co. Kildare. The development consists of erection of a two storey house, garage for domestic use and installation of Septech 2000 effluent treatment system and percolation area. That the planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the planning authority during its public opening hours and that a submission or observation in relation to the application may be made to the authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application.

**Kildare Co. Council.**

Permission is being sought to retain the existing gates and side walls "as Built" along with the security surveillance camera as erected at Balscot, Hazelhatch, Celbridge, Co. Kildare for Niall and Lisa Lawless. That the planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours and that a submission or observation in relation to the application may be made to the authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application.

**Kildare Co. Council.**

Permission sought to erect dormer/storey and half dwellinghouse, waste water treatment system, existing site entrance to be recessed and all associated site development works at Bishopscourt Lower, Straffan.
The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the Planning Authority during its public opening hours. A submission or observation in relation to the application may be made in writing to the Planning Authority on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application. – JAMES CHRISTIAN

**Kildare Co. Council.**

Planning permission sought for retention of attic conversion for bedroom/en-suite with 4 no. velux roof lights to rear at 40 Old Connell Weir, Newbridge, Co. Kildare for Aidan Sharkey.
The planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours and a submis-

## Licence Applications

**APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE LICENCE**

Notice is hereby given in accordance with the provisions of the Waste Management Acts, 1996 to 2007 that Cemex (ROI) Limited, Block A1 East Point Business Park, Dublin 3 will submit an application for a waste licence for a proposed Inert Waste Recovery and Disposal Facility in the townlands of Blackhall, Walshestown, Tipperkevin and Bawnoge Co. Kildare (National Grid Reference E292870, N215692).
The principal activity at the site, as specified in the Third Schedule the Waste Management Acts, 1996 to 2007 is as follows:-
"5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment"
Other activities to be carried out at the site, as specified in the Third Schedule to the Waste Management Acts, 1996 to 2007 are as follows:-
"1. Deposit on, in or under land (including landfill)."
"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."
Other activities to be carried out at the site, as specified in the Fourth Schedule to the Waste Management Acts, 1996 to 2007 are as follows:-
"2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes)."
"3. Recycling or reclamation of metals and metal compounds."
"4. Recycling or reclamation of other inorganic materials."
"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."
The nature of the development is the restoration of a worked out sand and gravel pit over a 15 year period with inert wastes and materials, to meet a specific objective of the Kildare County Development Plan 2005 to 2011 (Walshestown Pits No. 9).The quantities of waste in this application will involve a maximum input of circa 600,000 tonnes per annum for a period of 13 years. This will be followed by approximately 2 years of final restoration work.The nature of the wastes that will be used for the site restoration project will meet the waste acceptance criteria for an inert waste landfill.A purpose-built inert waste processing area with mobile plant will be developed to recover materials to be used for engineering purposes.
The proposed development of an Inert Waste Recovery and Disposal Facility will be accompanied by an Environmental Impact Statement in accordance with Article 13(1) of the Waste Management (Licensing) Regulations 2004.
A copy of the Application for a Waste Licence, Environmental Impact Statement, and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will, as soon as practicable after receipt by the Agency, be available for inspection or purchase at the headquarters of the Agency.

## Planning Notices

**Kildare Co. Council.**

We, NUI Maynooth, intend to apply for permission for retention of 2no. single storey, system-built, academic accommodation buildings. The proposed development comprises two buildings: Logic 01 (c.404.41msquared) and Logic 02 (c.253.91msquared) constructed to replace the previously existing, similar sized, dilapidated pre-fabricated academic buildings erected in this location c.1978. The proposed development is located on lands located to the rear (Southwest) of Logic House ( a protected structure). National University of Ireland Maynooth, South Campus,

## Planning Notices

**Kildare Co. Council.**

Permission for development at this site at Derrinturn, Carbury, Co.Kildare. The development will consist of: Permission for the construction of a two story creche, car parking and all associated site works.
That the planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours and that a submission or observation in relation to the application may be made to the authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application.

# APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE LICENCE

Notice is hereby given in accordance with the provisions of the Waste Management Acts, 1996 to 2007 that Cemex (ROI) Limited, Block A1 East Point Business Park, Dublin 3 will submit an application for a waste licence for a proposed Inert Waste Recovery and Disposal Facility in the townlands of Blackhall, Walshestown, Tipperkevin and Bawnoge Co. Kildare (National Grid Reference E292870, N215692).

The principal activity at the site, as specified in the Third Schedule the Waste Management Acts, 1996 to 2007 is as follows:-

> "5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment"

Other activities to be carried out at the site, as specified in the Third Schedule to the Waste Management Acts, 1996 to 2007 are as follows:-

> "1. Deposit on, in or under land (including landfill)."

> "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."

Other activities to be carried out at the site, as specified in the Fourth Schedule to the Waste Management Acts, 1996 to 2007 are as follows:-

> "2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes)."

> "3. Recycling or reclamation of metals and metal compounds."

> "4. Recycling or reclamation of other inorganic materials."

> "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."



The nature of the development is the restoration of a worked out sand and gravel pit over a 15 year period with inert wastes and materials, to meet a specific objective of the Kildare County Development Plan 2005 to 2011 (Walshestown Pits No. 9). The quantities of waste in this application will involve a maximum input of circa 600,000 tonnes per annum for a period of 13 years. This will be followed by approximately 2 years of final restoration work. The nature of the wastes that will be used for the site restoration project will meet the waste acceptance criteria for an inert waste landfill. A purpose-built inert waste processing area with mobile plant will be developed to recover materials to be used for engineering purposes.

The proposed development of an Inert Waste Recovery and Disposal Facility will be accompanied by an Environmental Impact Statement in accordance with Article 13(1) of the Waste Management (Licensing) Regulations 2004.

A copy of the Application for a Waste Licence, Environmental Impact Statement, and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will, as soon as practicable after receipt by the Agency, be available for inspection or purchase at the headquarters of the Agency.

## ATTACHMENT B.7

## TYPES OF WASTE ACTIVITY

## B.7 TYPE OF WASTE ACTIVITIES

The following sections identify the types of activities related to the proposed Waste Management Facility. The principal activity relates to activity Class 5 of the Third Schedule (Waste Disposal Activities).

### B.7.1 Third Schedule (Waste Disposal Activities)

**Class 1 Deposit on, in or under land (including landfill)**

This includes the placement of inert materials in areas outside of lined cells.

**Class 5 Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment – Principal Activity**

This is the principal activity and involves the construction of engineered cells for accepting processing and depositing of inert wastes. In this regard, inert wastes will be deposited in lined cells to produce a restored contoured landform that is in keeping with the character of the local landscape.



**Class 13 Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.**

Wastes will stored in stockpiles within the lined cells or in inert waste processing areas prior to disposal on site in lined cells or off site in an appropriately permitted or licensed facilities.

### B.7.2 Fourth Schedule (Waste Recovery Activities)

**Class 2 Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).**

The wastes accepted at the Facility for recovery at the Inert Waste Processing Area may from time to time contain organic material such as incidental wood, paper, cardboard and plastic. These materials will be removed from the imported wastes and stored in designated areas for recovery, recycling or landfilling at appropriate facilities off-site. Topsoil deemed to be waste from other external sites will be recovered at the proposed Facility for the purpose of restoration of the landform and external berms etc. as required.

**Class 3 Recycling or reclamation of metals and metal compounds**

The wastes that are imported to the Facility will include reinforced concrete and may also contain incidental metals. These materials will be removed from the imported wastes and stored on the site for further recovery and recycling off site.

**Class 4 Recycling or reclamation of other inorganic materials.**

This will involve processing on an annual basis of up to circa 15% of the maximum annual intake of waste accepted at the Facility. An area of the Site referred to as the Inert Waste Processing Area (IWPA) has been set aside for this purpose. The processed material will be used for restoration purposes or will be sold as secondary processed material. This class will also include the direct importation and recovery of waste soils that are used for engineering purposes such as perimeter bunds and the final capping layer which do no require processing in the IWPA.

**Class 13 Storage of waste intended for submission to any activity referred to in a preceding paragraph of this schedule, other than temporary storage, pending collection, on the premises where such waste is produced.**

Waste will be stored in stockpiles prior to processing, recovery and re-use for engineering purposes on the site or offsite (See Fourth Schedule - Waste Recovery Activity Class 4). It will also involve the storage of materials that my be found in imported waste after tipping. These materials will be stored pending results of testing and collection for transport to appropriate recovery facilities located off-site.

# ATTACHMENT B.8

# SEVESO II REGULATIONS

## B.8 SEVESO II REGULATIONS

This section is not applicable to this particular Application, as the proposed activities are not 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. Also, there are no Seveso sites located near the Application Site.

# SECTION C – MANAGEMENT OF THE FACILITY

| Sub-Section | Title | Location of Information |
|---|---|---|
| C.1 | Site Management | WLA p.19 and Attachment C.1 |
| C.2 | Environmental Management System (EMS) | WLA p.19 and Attachment C.2 |
| C.3 | Hours of Operation | WLA p.19 and Attachment C.3 |
| C.4 | Conditioning Plan | WLA p.19 and Attachment C.4 |

# ATTACHMENT C.1

# SITE MANAGEMENT

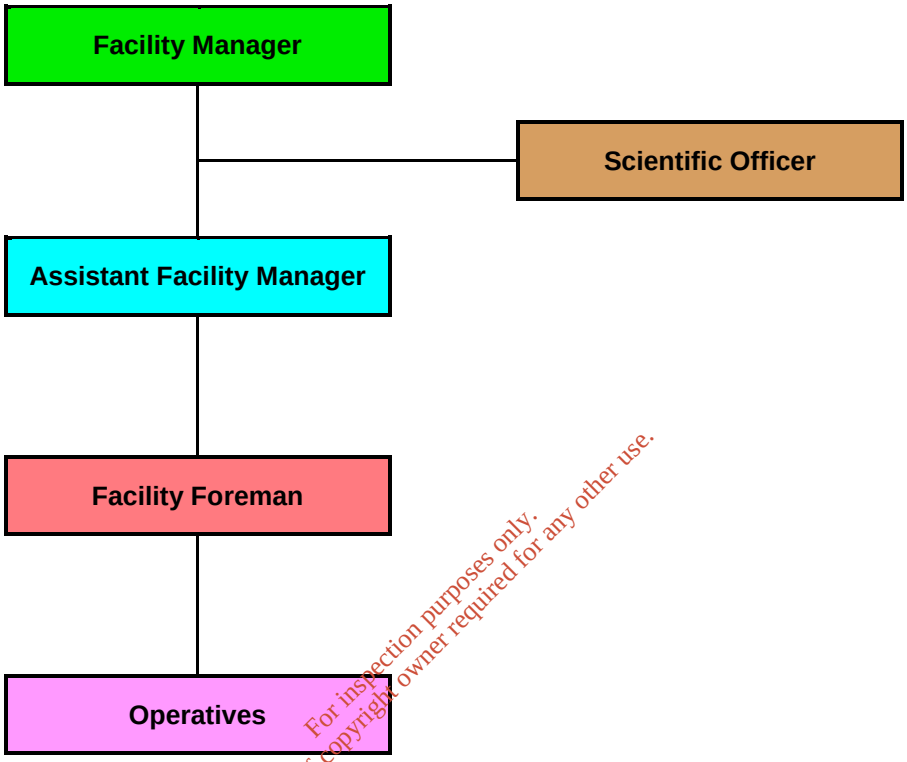
## C.1 SITE MANAGEMENT

It is the objective of Cemex (ROI) Ltd. To put into place a management and staff structure to operate the Facility once planning permission and a waste licence have been secured. It is not possible at this stage to provide details of designated staff at the Facility. The table below sets out competence requirements for key staff during the operation of the Facility. During the initial period of development/construction works additional operative/contractors will be required.

### C.1.1 On-Site Management Structure Chart

| Position | Name | Duties and Responsibilities | Experience / Qualifications |
|---|---|---|---|
| Facility Manager | To be confirmed prior to commencement | Supervision of operations on site, management of waste licence conditions, supervisor of site engineering works and overall management of site staff . Responsible for the day-to-day running of the Facility as per licence requirements. This includes the operation and control of all abatement systems on site as per operational and environmental management procedures. | Suitable engineering or similar appropriate qualification. Safe Pass Program, Waste Management Training Programme or equivalent. |
| Assistant Facility Manager | To be confirmed prior to commencement | Supervision of operations on-site, management of waste licence conditions onsite, supervisor of site engineering works and overall management of site staff, weighbridge and facility development. | Suitable engineering or similar appropriate qualification. Safe Pass Program, Waste Management Training Programme or equivalent. |
| Scientific Officer | To be confirmed prior to commencement | Responsible for on site laboratory testing, monitoring and reporting as per the frequency of the waste licence. | Appropriate Scientific Qualification |
| Facility Foreman | To be confirmed prior to commencement | Carry out daily facility operations as per operational and management procedures | Safe Pass Programme FÁS Waste Facility Operative Training Programme or equivalent |
| Site Operatives (3 to 6 No.) | To be confirmed prior to commencement | Operation of plant and equipment and waste inspections at stockpiles | Safe Pass Programme FÁS Waste Facility Operative Training Programme or Equivalent and appropriate training for plant being operated |

## C.1.2 Facilities Operation Management Structure



# ATTACHMENT C.2

# ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

## C.2 ENVIRONMENTAL MANAGEMENT SYSTEM

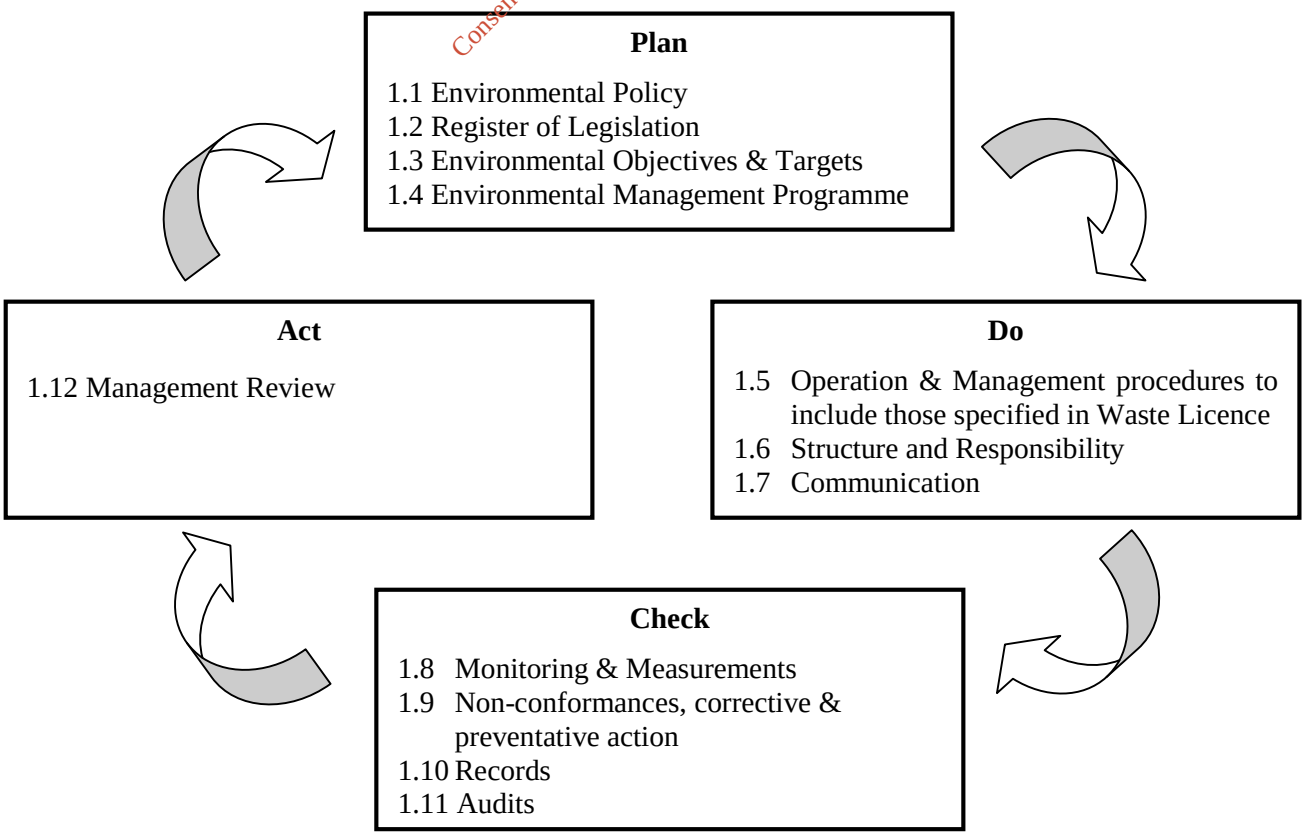
An Environmental Management System (EMS) will be developed for the Facility. An EMS involves the implementation of a system, which forms the basis of continuous, structured and quantifiable improvement in environmental performance. The EMS for the Facility will become part of the overall management system for the site and will deal with the environmental issues relating to the Facility and control potential environmental impacts.

The EMS for the Facility will include as a minimum the elements specified below:

- Schedule of Environmental Objectives and Targets;
- Environmental Management Programme (EMP);
- Corrective Action;
- Awareness and Training;
- Management Structure; and
- Communications.



The EMS is based around the following concept of continuous improvement.



### C.2.1 Environmental Policy Statement

An environmental policy will be developed which is appropriate to the nature and scale of the environmental aspects of the Facility. This document will be implemented and maintained. It will be communicated to all employees and made available to the public if requested. A signed policy will be displayed in the site office.

### C.2.2 Register Of Legislation

The register of legislation includes all relevant legislation, both national and EU including planning, effluent discharge licences and air emissions.

### C.2.3 Objectives And Targets (O&T)

O&T are important in directing and assessing an EMS and help to maintain a high standard of environmental performance. The setting of the O&T will be based on environmental policy and environmental considerations, which are significant. Objectives will be divided into individual targets where appropriate, but which sum to achieve the overall environmental objective.



O&T will be demanding, qualitative, subject to timescale, achievable and fair. O&T will also be reviewed on an annual basis and are contained in the Annual Environmental Report and the Environmental Management Programme.

### C.2.4 Environmental Management Programme

This document will act as a site manual for the future operation of the Facility. The EMP also sets out how the Schedule of O&T will be achieved through:

- A programme for achieving the targets set down in the schedule of O&T;
- Designation of responsibility; and
- Time frame

### C.2.5 Procedures

A procedure should describe the manner of carrying out a relevant activity and should be clear, logical and understandable. Procedures are an essential part of the environmental management system and are divided into two sections:

- Management Procedures
- Operational Procedures

These procedures will be reviewed on an annual basis or as necessary and will be contained in the environmental procedures and programmes manual.

### C.2.6 Structure And Responsibility

Clear management structures will de defined for the Facility. Experienced staff comparable with the level of expertise required will be assigned to each role.

### C.2.7 Communication

A communication programme is important, as it will encourage the licensee to be pro-active by making relevant information available to the public. This programme will be contained in the environmental procedures and programmes manual.



### C.2.8 Monitoring And Measurements

Environmental monitoring at the facility will be undertaken in accordance with the requirements of the Waste Licence. Samples will be analysed at an accredited laboratory. Procedures will be developed to ensure monitoring is carried out.

### C.2.9 Non-Conformances, Corrective And Preventive Action

A corrective action procedure will be established to define who is responsible to investigate non-conformances and to determine corrective action to be taken. This procedure will be contained in the environmental procedures and programmes manual.

### C.2.10 Records

Environmental records are required as:

- Verification of the on-going operation of the EMS;

- To provide information for reporting to the Environmental Protection Agency as per licence requirements; and

- To meet legal and regulatory requirements.

The Environmental Management System will comprise of control documents managed under the following hierarchy approach. Record requirements will be included as part of the individual procedures.

### C.2.11 Audits

Audits of the facility will be undertaken by the Environmental Protection Agency. Internal audits will also be undertaken to ensure that licence requirement are being met and Environmental Management System is being properly implemented and maintained. This procedure will be contained in the environmental procedures and programmes manual.

### C.2.12 Management Review

The purpose of a management review is to reconsider the effectiveness of the Environmental Management System and Objectives set out as a result of changing circumstances, commitment to continual improvement and to initiate any required change.

Management reviews will be undertaken on a minimum yearly basis and following any audits undertaken at the facility to consider recommendations made.

# ATTACHMENT C.3

# HOURS OF OPERATION

# C.3 HOURS OF OPERATION

The proposed operating hours for the Facility are described below.

## C.3.a Proposed Hours of Operation

In keeping with EPA Guidance, activity operations shall be confined to the hours between 07.00 and 18.00, Monday to Friday inclusive (excluding Public Holidays) or as may be agreed with the Planning Authority/EPA, and between 07.00 and 14.00 on Saturdays, with no activities being permitted on Sundays or public holidays. Processing of waste at the Inert Waste Processing Area will take place between the hours of 08.00 – 18.00, Monday to Friday inclusive (excluding Public Holidays), and between 08.00 and 14.00 on Saturdays, with no activities being permitted on Sundays or public holidays.

## C.3.b Proposed Hours of Waste Acceptance / Handling

Waste will be accepted at the Facility between the hours of opening and closing as listed above.



## C.3.c Proposed Hours of Construction and Development Works at the Facility and Timeframes

Hours of construction and development works at the Facility are part of the proposed hours of operation listed above.

## C.3.d Other Relevant Hours of Operation Expected

There are no other relevant hours of operation expected at this time for the Facility.

## ATTACHMENT C.4

## CONDITIONING PLAN

## C.4 CONDITIONING PLAN

A conditioning plan must be submitted under Article 14 of the Landfill Directive (1999/31/EC) for landfills that have been granted a permit, or which are already in operation at the time of transposition of this Directive. As this is an application for a new inert landfill facility it is not subject to submitting a conditioning plan, therefore Not Applicable.

# SECTION D – INFRASTRUCTURE & OPERATION

| Sub-Section | Title | Location of Information |
|---|---|---|
| D.1 | Infrastructure | WLA p.20 and Attachment D.1<br>EIS Section 8.4 |
| D.2 | Facility Operation | WLA p.21 and Attachment D.2<br>EIS Sections 8.10 to 8.14 |
| D.3 | Liner System | WLA p.21 and Attachment D.3<br>EIS Section 8.6.2 |
| D.4 | Leachate Management | WLA p.22 and Attachment D.4<br>EIS Section 8.6.4 |
| D.5 | Landfill Gas Management | WLA p.22-23 and Attachment D.5 |
| D.6 | Capping System | WLA p.24 and Attachment D.6<br>EIS 8.6.5 |

# ATTACHMENT D.1

# INFRASTRUCTURE

# D.1 INFRASTRUCTURE AND OPERATION

This attachment contains the appropriate documentation related to the infrastructure and operation of the Facility associated with the proposed restoration works. The information provided below follows the sequence and headings established in Table D.1 of the waste licence application. Also Refer to sections of the EIS (Volume 1) and Figures WLA-04 to WLA-11 at the end of this document.

## D.1.a Site Security Arrangements Including Gates and Fencing

There is already an appropriate gate and fencing at the entrance to the Facility; however, security around much of the perimeter is not sufficient for a licensed facility. Permanent security will be provided around the Facility itself by enhancing existing dense hedgerows, and installing 1.2 m high post-and-wire fencing where required. A 1.8m high security fence will also be installed adjacent to the western boundary adjacent to the water feature and Punchestown Racecourse.

## D.1.b Site Access and Roads

The Facility will be accessed from an existing entrance located on the Local Road L6042. Some minor cut-and-fill earthworks will be required to improve the surface of the haul roads throughout the Site, in preparation for the construction of the proposed landform.

All haul roads will be engineered and constructed of hardcore material and some of these will be surface treated, in particular at the entrance to the Facility.



## D.1.c Hard-Standing Areas

Hard-standing areas will comprise well-compacted granular fill (hardcore) or, in select areas, concrete and/or macadam surfaces. The purpose of the hardcore is to provide a lay-down area for materials and areas for parking vehicles. The concrete surfaced area will be for waste quarantine, and bunded areas for refuelling plant (Figures WLA-04 and WLA-05). The concrete-surfaced hard-standing areas will be removed upon completion of the project.

## D.1.d Plant- Weighbridge

Two weighbridges currently exists on the Site and these will be maintained in position for the duration of the Restoration Project. This will allow weighing-in of incoming loads and weighing-out of any engineering products and any wastes, which do not meet the acceptance criteria (described later) and are thus rejected and sent off-Site to other licensed facilities.

### D.1.eWheel-Wash

A new purpose-built wheel-wash will be fed by a water supply borehole on-Site (see Figure WLA-06). The wheelwash will be maintained for the duration of the Restoration Project and the effluent from the wheel wash will be recycled.

### D.1.f Laboratory Facilities

There will be a basic materials-testing laboratory on the Site to assess the fill materials used in construction of embankments, liner and the capping system.

### D.1.g Fuel Storage Areas

Diesel fuel and hydraulic oil will be stored on-Site in appropriately bunded areas. Two (2 No.) 5,000 litre diesel tanks are proposed, which will fuel all plant utilised for the duration of the Restoration Project. An appropriately bunded fuel load-out area, will be provided (Figure WLA-07). Mobile plant will be driven to the fuel load-out area for refuelling or a bunded fuel bowser will be used, as required.



### D.1.h Waste Quarantine Areas

In line with best-practice procedures, a waste quarantine area will be provided on-Site to hold, pending removal from Site, inappropriate wastes that are rejected at the Facility during waste placement. Two waste quarantine areas (contained, concrete, hard-standing areas) will be provided on-Site: it is proposed to use a existing sheds near the inert waste processing area for quarantine of smaller waste items, and a concrete surfaced area for skips to quarantine rejected waste (Figures WLA- 08 & WLA-09).

### D.1.i Waste Inspection Areas

All imported materials will be inspected as it is tipped in selected lined cells or fill zones. It will also be inspected when tipped in the Inert Waste Processing Area (Figure WLA-05).

### D.1.j Traffic Control

The operator that is appointed to construct, operate and close the Facility will control traffic in and around the Site. Signage on Site will be used wherever required.

### D.1.k Sewerage Infrastructure

The foul sewage will be handled in the existing septic tank/percolation system (Figure WLA-05) and, as required, approved temporary toilet blocks draining to a sealed holding tank. The tank will be pumped out by an approved contractor on an as-needed basis.

### D.1.l Other Services

The Facility will require power, telephone and a water supply.

There are single-phase and three-phase power supplies at the existing Cemex Facility. This will be utilised for the duration of the Restoration Project.

There are also telephone lines serving the existing Cemex Facility which again will be utilised for this project.

Fixed wall and overhead pole lighting will be provided in the main reception area and office area/compound of the Site. This lighting will be removed upon completion of the project. Temporary mobile lighting will be used in the areas of major construction and earthworks. Power for this lighting will be provided by diesel generators.

There is mains water available at the gate of the existing Cemex facility, which will be utilised for potable water for the duration of the project. Water for dust suppression and wheel wash will be abstracted from an existing groundwater well on-Site, close to the entrance to the Facility (Figure WLA-05). This is an historical well, and if supply is found to be not suitable an alternative borehole will be drilled.



### D.1.m Plant Sheds, Garages, and Equipment Compound

Equipment will initially be parked on the Site in a compound that will be constructed just south of the inert waste processing area (Figure WLA-05). Plant may also be parked within the base of the existing worked out sand and gravel pit. Major servicing/repairs of mobile plant will take place off-Site. Minor servicing will take place in existing sheds midway along the eastern boundary of the Site (Figure WLA-10).

### D.1.n Site Accommodation

There is an existing office/store alongside the weighbridge (Figure WLA-05). The interior of this building will be refurbished and used. The interior of the existing offices and canteen to the east of the entrance at the Site will be refurbished and used during the land-restoration project.

### D.1.o A fire control system, including water supply

An existing silt settling pond located near the entrance to the Application Site will be used for water supply in case of an emergency. This will be clearly marked by signs and informed to relevant staff at the Facility.

### D.1.p Civic amenity facilities

There will be no civic amenity facilities at the Application Site therefore this sub-section is Not Applicable

### D.1.q Waste Recovery Infrastructure - Inert Waste Processing Area (IWPA) and Plant

The sources of materials to be used for berm construction, lining and capping will be from either on-Site or off-Site sources. Since it is possible that materials with mixed particle sizes may be available from within the Site footprint, or from off-Site sources, these materials will be screened and/or crushed as required to produce some of the berm-material requirements. Furthermore, the Applicant endorses National Waste Management policies and intends to recover inert materials that can be used off-Site in construction of roads and the manufacturing of concrete products. This is considered to be a suitable and sustainable concept that both the planning authority and the Agency support. As such, provision has been made for an inert waste processing area (IWPA) in which suitable and appropriate screening and crushing plant will be set up and operated in the northern part of the Site as shown on Figures WLA-05 and WLA-11.



The area set aside will include a 5 m high noise attenuation berm, hardcore surface area and will be landscaped appropriately (Figure WLA-05). Screening and crushing plant will be employed to process imported materials to produce recycled aggregates for on-Site or off-Site use.

It is expected that the majority of inert waste materials arriving at the Facility will be source-segregated, therefore will be emplaced directly in lined cells with no on-Site segregation/processing. However, it is expected that up to circa. 15% of the inert waste materials will not be source-segregated, thus requiring processing prior to emplacement. As such, the IWPA will be used to sort/process loads, if necessary, of mixed inert waste arriving on Site.

### D.1.r Composting infrastructure

There will be no composting infrastructure at the Application Site therefore this sub-section is Not Applicable

### D.1.s Construction and Demolition waste infrastructure

The infrastructure fro processing construction and demolition wastes will consist of a crusher, screeners, loading shovels, excavators, dump trucks and a tractor and bowser. These will operate in and around the Inert Waste Processing Area (IWPA) to be located in the north-eastern part of the Application Site. It is expected that the majority of inert waste materials

arriving at the Facility will be source-segregated, therefore will be emplaced directly in lined cells with no on-Site segregation/processing. However, it is expected that up to circa. 15% of the inert waste materials will not be source-segregated, thus requiring processing prior to emplacement. As such, the IWPA will be used to sort/process loads, if necessary, of mixed inert waste arriving on Site.

### D.1.t Incineration infrastructure (if applicable).

There will be no Incineration infrastructure at the Application Site therefore this sub-section is Not Applicable

### D.1.u Any other infrastructure

There is no other infrastructure proposed at this time.

# ATTACHMENT D.2

# FACILITY OPERATION

## D.2 FACILITY OPERATION

Details regarding the operation and processes carried out at Facility are discussed below in various sub-sections

### D.2.a Unit Operations;

**Waste Acceptance**

The types of materials to be used to restore the Walshestown Pit will be confined to inert dry waste arising mainly from civil engineering and building construction and demolition projects. The waste types acceptable for restoration purposes under any future Waste Licence will include inert materials such as stone & soils, glass, concrete, brick, tiles, ceramics, etc. Putrescible household and commercial wastes (or 'black bag' waste) will *not* be acceptable at this Facility.

Vehicles entering the Facility will be directed towards the weighbridge for initial inspection and weigh in. If the initial inspection is passed, the necessary paper work will be completed and the driver will be directed towards the cell area or the Inert Waste Processing Area (IWPA) depending on the contents of the load. It is expected that the majority of inert waste materials arriving at the Facility will be source segregated, therefore will be emplaced directly in lined cells with no on-Site segregation or processing.



Analysis testing will constitute laboratory testing for a range of parameters, to be specified in the Waste Licence, and will be in line with tables 2.1.2.1 and 2.1.2.2 of the Annex to the Council Decision 2003/33/EC (reproduced in the EIS Volume 1 as Table 7.5 and 7.6). Some wastes will not require testing, as indicated in Table 7.1 in the EIS, and in accordance with Section 2.1.1 of the Annex to Council Decision 2003/33/EC.

A target of at least one test per 2,000 tonnes of waste is proposed. Even if a consignment of waste from a source is less than 2,000 tonnes it will be subjected to Basic Characterisation testing.

However, it is expected that up to ca.15% of inert waste materials will not be source-segregated, thus requiring processing prior to emplacement. As such loads accepted at the Facility containing this type of waste will be directed to the IWPA where the vehicle driver will be instructed where to tip the load by Facility personnel. If the load passes the detailed inspection on tipping, the driver will exit the Facility driving over the weighbridge to be re-weighed. If the material does not pass inspection on tipping the material will be reloaded if safe to do so onto the vehicle and the driver will be instructed to leave the Facility. If non-conforming material cannot be reloaded, it must be moved away from the immediate operational area pending alternative arrangements for removal to an appropriately authorised facility. Records will be kept of all such occurrences and furnished to the EPA if required.

It is proposed to import ca. 4.2 million cubic metres of inert materials from greenfield and brownfield sites primarily from the Greater Dublin Area, as defined in the Rural Planning Guidelines 2004 to 2016. Using a conversion factor of 1.8 tonnes per cubic metre, this equates to ca. 7.6 million tonnes of inert materials. This equates to approximately 600,000 tonnes per year on average over a 13 year development period. The actual amount imported in any year will depend on market forces.

Also see Section 7.0 of the EIS Volume 1.

**Processing**

Waste requiring processing will be stored in stockpiles around the processing area. These will be sorted into different grades of material to make the processing operation more efficient. Materials such as boulders and concrete that are too big to pass through the crushers will be reduced in size using a rock breaker mounted on a tracked machine. Once reduced in the material they will be stored or processed. Materials of sufficient size will be passed through a crusher and screeners and stored in stockpiles awaiting destination with the extent of processing depending on the type and grade of material required. Any unwanted materials that may be found in stockpiles will be removed and place in designated skips which will we recycled, recovered or disposed of off-Site at an appropriately licensed facility.



**Material Usage**

Materials stored in stockpiles will be loaded onto tipper trucks using loading shovels and transported off-Site for use in other developments or to the lined cells for restoring existing voids.

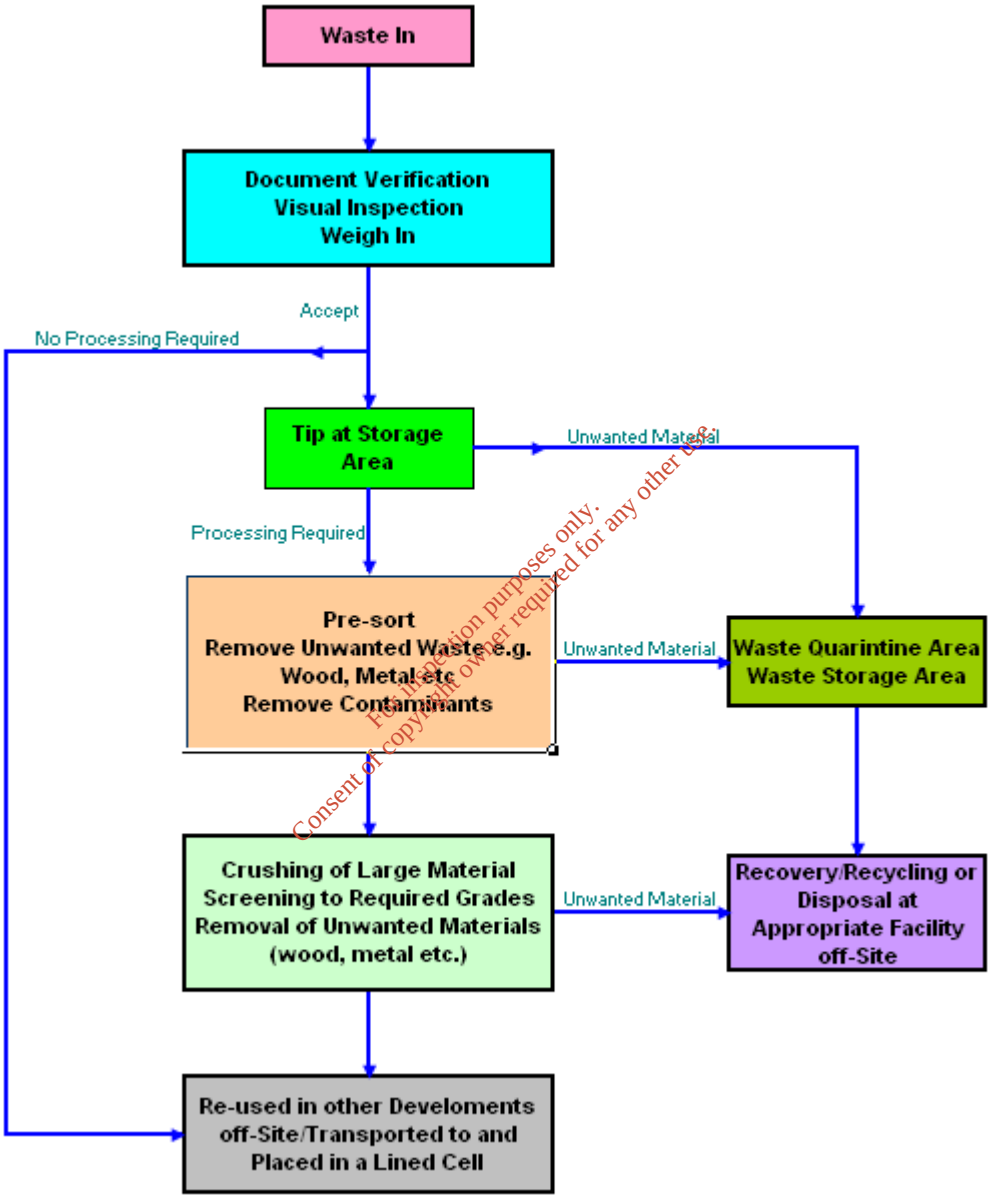
Restoration of the Site will be carried out in agreement with the EPA and in line with best practice. Prior to restoration on works commencing, initial drainage works will be carried out (see WLA-12 and Section 8.5.1.2 Vol. 1) Restoration will be completed on a phased basis and will involve the filling of cells defined within each vertical stage in maximum 2 to 3-metre lifts with fill slopes no steeper than 1V:2H, to ensure the maximum slope stability. Phasing allows progressive filling and restoration to occur simultaneously. As shown on WLA-13 and WLA-14 filling will progress in vertical stages and restoration will proceed from west to east. Each lift will be divided into cells in which surface water drainage will be managed and discharged to ground in soakaways. The size of cells will vary within any given vertical stage, but would typically be 1 to 2 ha in area.

Waste will be deposited, inspected and spread in 2 to 3-metre lifts in each cell, with a bulldozer and compactor on Site ensuring waste is positioned and spread as required to ensure maximum cell stability.

## D.2.b Flow Diagram

The flow diagram below gives an indication of the processes that will be carried out at the Facility.

**Diagram D.2.b: Flow Diagram of Process**






## D.2.c Potential Emissions

The nature of the activities being carried out at the Facility would lead to emissions if not properly mitigated against. The main source of emissions would be from the processing of materials at the Facility with noise and dust being the most prevalent. Other emissions would include emissions to the atmosphere from plant and equipment, emissions to ground and

surface water due to accidental spillages during refuelling. Emissions and abatement are dealt with in detail in the attachments contained in Sections E and F of this application document.

### D.2.d Laboratory Facility Activities

A basic on-site soils laboratory will be used to assess materials used for the construction of embankments, liner and capping system. All other testing such as environmental testing will be carried out off-site at an accredited laboratory.

### D.2.e Incineration Facilities

There will be no Incineration at the Application Site, therefore this sub-section is Not Applicable

# ATTACHMENT D.3

# LINER SYSTEM

## D.3 LINER SYSTEM

### (a) Liner Details

Areas upon which imported liner and materials will be placed will include a base and slope lining system. Best practice for facilities such as that proposed at the Walshestown Pit dictates that a lining system on the base and side slopes will be a mineral liner that will comprise a layer of compacted clayey silt (i.e. a compacted clay liner – CCL) a minimum of 1 m thick. The soil liner will have a co-efficient of permeability of less than or equal to 1 x $10^{-7}$ m/sec. The existing ground surface will be graded and/or excavated to allow construction of the lining system. Suitable existing in-situ soils will be excavated and re-used to form the liner. Some imported materials may be required to form a liner meeting the specifications.

### (b) Quality Assurance Plan for the Liner

A CQA plan will be developed during the final design of the liner prior to construction of the cells and at the time of preparation of the Specified Engineering Work proposals. The CQA plan will be developed based on the guidance provided by the EPA in its Manual on Landfill Design.



A CQA/CQC testing programme for the liner will be carried out under the direction of Golder and will include:

- Testing of the on-site borrow material before and during construction for;
  - Moisture Content;
  - Atterberg Limits;
  - Particle Size Distribution;
  - Compaction Characteristics; and
  - Co-efficient of Permeability
- A level survey of the formation and completed levels of the CCL;
- Verification of the thickness of lifts and overall CCL;
- Field density tests on each lift;
- Triaxial permeability tests on re-compacted samples; and if possible
- Triaxial permeability tests on intact samples recovered from U100 tubes pushed into the CCL.

This testing programme will meet the requirements of the EPA Manual on Landfill Design (EPA, 2000). A CQA/CQC report will be issued following the completion of construction works.

### (c) Third Party Supervision

The name experience and qualifications of third parties will be provided following the design and tendering process for the works.

# ATTACHMENT D.4

# LEACHATE MANAGEMENT

## D.4 LEACHATE MANAGEMENT

As inert waste does not undergo any physical, chemical or biological change, it is not anticipated that the pollutant content of the leachate will be significant. However, during the restoration works a network of trenches and drains will be constructed to manage and collect run-off from the surface and slopes to protect the local surface water.

In keeping with best practice carried out at similar facilities in Ireland, one leachate monitoring point will be installed for every 2 ha. of cell construction. Thus some 20. No. leachate monitoring points will be installed.

Please refer to Sections 8.5 and 8.6 of the EIS (Volume 1) for further information.

# ATTACHMENT D.5

# LANDFILL GAS MANAGEMENT

## D.5 LANDFILL GAS MANAGEMENT

As waste to be placed in lined cells is inert, it is not expected that a landfill gas will be produced and emitted to the atmosphere. Therefore, this section is Not Applicable. However the leachate monitoring points described in Attachment D.4 will be monitored for "landfill" gases i.e. $C0_2$, $CH_4$, $H_2S$ and also $O_2$.

# ATTACHMENT D.6

# CAPPING SYSTEM

## D.6 CAPPING SYSTEM

A capping system will be put in place once the void space is filled. Several different soil materials will be used in the process. The purpose of the cap will be to:

- Shed rainfall and minimize infiltration;
- Isolate inert materials from the terrestrial environment; and
- Ensure there is no dust from the Facility in the post-closure period.

### D.6a Has the daily cover been specified?

As waste being accepted will be inert, it is not proposed to adopt a daily capping system. However, if problems arise such as dust blow, measures may be taken such as covering the source of the problem. For full details, refer to Section 8.6.5 of the EIS (Volume 1).

### D.6b Has the intermediate cover been specified?

As waste being accepted will be inert, it is not proposed to adopt an intermediate cover. For full details, refer to Section 8.6.5 of the EIS (Volume 1).



### D.6c Has the temporary capping been specified?

As waste being accepted will be inert, it is not proposed to adopt a temporary capping. However, if problems arise such as dust blow, measures may be taken such as covering the source of the problem. For full details, refer to Section 8.6.5 of the EIS (Volume 1).

### D.6d Has the Capping System been designed and does it meet the requirements of the Landfill Directive Annex 1 (3.3)?

The proposed capping system will satisfy the requirements of the Landfill Directive Annex 1 (3.3). In keeping with BAT for inert waste a landfill facilities, the cap will comprise a minimum of 150mm of topsoil/growth medium and no less than 850mm of subsoil.

### D.6e Does the Capping System include a flexible membrane liner?

A flexible membrane liner system will not be employed at the Facility. The capping layer will consist of several different soil materials combined to give a thickness of ca. 1m.

### D.6f Have all capping materials been specified?

The materials will include an initial subsoil layer built in layers to an eventual thickness of ca. 0.85m, followed by a growth of medium of ca. 0.15m in thickness. For full details, refer to Section 8.6.5 of the EIS (Volume 1).

### D.6g Has a Method Statement for construction been produced?

A method statement for construction will be drawn up on receipt of a Waste Licence and Planning Permission. A programme for development works is included in the EIS. For full details, refer to Section 8.9 of the EIS (Volume 1).

### D.6h Has a Quality Control Plan been produced?

Materials used for the liner and capping system will conform to requirements of the Landfill Directive Annex 1 (3.3). An on-Site laboratory will test the quality of materials to be used. A quality control plan will also be out in place on receipt of a Waste Licence and Planning Permission.



### D.6i Has a Quality Assurance Plan been produced?

A quality assurance plan will be drawn up on receipt of a Waste Licence and Planning Permission.

### D.6j Has a programme for monitoring landfill stability been developed?

Visual inspections will be carried out on a daily basis along with annual topographical surveys.

### D.6k Has a programme for monitoring landfill settlement been developed?

There is no programme at this time for monitoring stability as the inert material will not undergo physical or chemical change giving rise to settlement and subsidence in later years. Material tipped in cells areas will be compacted to reduce settlement and subsidence Topographic surveys will be carried out annually to confirm the depth of material placed in cells.

# SECTION E – EMISSIONS

| Sub-Section | Title | Location of Information |
|---|---|---|
| E.1 | Emissions to Atmosphere | WLA p.25 and Attachment E.1<br>EIS Vol.1, Section 9.0 |
| E.2 | Emissions to Surface Waters | WLA p.25 and Attachment E.2<br>EIS Vol.1, Section 8.6.4 |
| E.3 | Emissions to Sewers | WLA p.25 and Attachment E.3 |
| E.4 | Emissions to Groundwater | WLA p.25 and Attachments E.4 and I.4 |
| E.5 | Noise Emissions | WLA p.25 and Attachment E.5<br>EIS Vol.1, Section 15.0 |
| E.6 | Environmental Nuisances | WLA p.26 and Attachment E.6 and<br>EIS Vol. 1 Section 8.17 |

# ATTACHMENT E.1

# EMISSIONS TO ATMOSPHERE

# E.1 EMISSIONS TO ATMOSPHERE

This Attachment contains the appropriate documentation related to emissions to atmosphere and operation of the proposed Facility. Refer to Figure WLA-15 attached for locations of emission points.

## E.1.a Composting Emissions

Composting will not take place at the Facility; therefore this sub-section is not applicable.

## E.1.b Particulates – Waste Storage/Treatment/Handling

The types of materials to be used to restore the Walshestown Pit will be confined to inert dry waste arising mainly from civil engineering and building construction and demolition projects. The waste types acceptable for restoration purposes under any future Waste Licence will include inert materials such as stone & soils, glass, concrete, brick, tiles, ceramics, etc. The majority of the waste accepted at the Facility (ca. 85% to 90%) will be used to restore the Site while the remaining waste will be recycled for use as a secondary fill material.



Loads containing segregated waste accepted at the Facility will be directed in either one of two directions. The majority of loads will be directed towards the lined cells where waste will be deposited, inspected and spread in 2 to 3 metre lifts in each cell, with a bulldozer and compactor. These layers will be built up to an eventual final restoration level.

Dust blow from the cell areas during dry windy conditions could occur if adequate mitigation measures are not put in place.

Waste directed towards the IWPA will be stored in designated stockpiles awaiting processing. Loading, unloading, processing and transport of waste in this area could have the potential to generate dust or particulate emissions. The likelihood of this emission occurring will be reduced by adopting some simple mitigation measures such as spraying stockpiles during dry windy conditions, placing of berms in sensitive areas and reducing residence times of materials in stockpiles. Refer to Section 14.0 of the EIS (Volume 1) for further information. Label A2-1 has been assigned to the restoration area, while label A2-2 has been assigned to the processing area. The area of emissions will not include all of the area labelled A2-1 and will change depending on the area being restored at any one time (Figure WLA-15)

## E.1.c Landfill Gas Emissions

There will be little no emissions to air as all waste accepted will be inert waste.

### E.1.d Landfill Leachate Emissions

There will be no emissions to air from landfill leachate.

### E.1.e Infectious organisms/pathogens (clinical waste handling)

No hazardous waste will be accepted at the Facility. Any waste deemed unfit for processing will be turned away from the Facility or stored in the waste quarantine area on failing the second inspection. Removal of waste from this area will be undertaken by an appropriate contractor.

### E.1.f Thermal oxidizer Emissions

No thermal treatment of waste will take place at the Facility.

### E.1.g Other Emissions

All plant operating at the Facility will emit fumes from the combustion of fuel. All plant and machinery at the Facility will be kept in good working order and serviced regularly in order to avoid abnormal levels of emissions.



### E.1.h Fugitive Emissions

All equipment, plant and services will be maintained and checked regularly to prevent fugitive emissions leaving the Facility. Refer to Section 14.0 of the EIS (Volume 1) for further information.

### E.1.8.1 Dust emissions from solids stored in the open

During dry periods, the potential of dust emission to the atmosphere may be increased. To tackle this, stockpiles will be watered during dry periods to prevent wind blow of particulates. Residence time of waste in stockpiles will be kept to a minimum to reduce dust emissions. Dust emissions may also occur during the restoration works. These emissions will be controlled by water bowsers, and ceasing earthworks during particularly windy conditions. Refer to Section 14.0 of the EIS (Volume 1) for further information. Two areas have been highlighted where potential emissions could occur, these are discussed in sub-section E.1.b.

### E.1.8.2 Loading and unloading operations

Waste will be tipped in specific areas in lined cells and in stockpiles near the processing area subsequent to passing inspection at the weigh bridge. Wheel loaders and excavators will be used to load the processing equipment. The graded material produced by the process will be either stockpiled or removed and used off-Site or for the restoration and capping of the

existing void. Wheel loaders will be used for this process. This material will be wetted during dry periods to reduce dust and particulate emissions. Refer to Section 14.0 of the EIS (Volume 1) for further information. Two areas have been highlighted where potential emissions could occur, these are discussed in sub-section E.1.b.

### E.1.8.3 Cleaning operations

The processing area and haul roads will be watered regularly to reduce particulates and dust blow during dry periods. It is not anticipated that any detergents will be used during cleaning. Any use of detergents will be communicated to the relevant authority.

### E.1.8.4 Emissions from wastewater/leachate treatment (e.g. volatile organics)

No leachate will be treated at the Facility.

### E.1.8.5 Emissions from any pressure release valves on waste liquid tanks

No waste liquid tanks with pressure release valves will be used at the Facility. Two (2 No.) 5,000 litre holding tanks will be used to store fuel required by plant and machinery.



### E.1.8.6 Emissions from composting, including odour and bioaerosols

No composting will take place at the facility.

### E.1.9 Summary of Emissions to Air

The emissions to air are summarised in table E.1.9 below.

**Table E.1.9 Summary of Emissions to Air**

| | |
|---|---|
| **Source** | Earthworks, Stockpiles, Crushing and Screening of Inert Waste |
| **Location** | See Figure WLA-15 - locations A2-1 and A2-2 |
| **Nature** | Dust |
| **Composition** | Inert Mineral Particles |
| **Quantity** | Unknown |
| **Level** | Unknown |
| **Rate** | It will be controlled to be less than 350mg/m2/day at Facility Boundaries |

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

| | |
|---|---|
| Emission Point Ref. N$^{o}$: | |
| Location : | |
| Grid Ref. (12 digit, 6E,6N): | |
| **Vent Details** NOT APPLICABLE<br>Diameter:<br>Height above Ground(m): | |
| Date of commencement of emission: | |

**Characteristics of Emission :**

| | | | | |
|---|---|---|---|---|
| CO | | | | mg/m$^3$ |
| Total organic carbon (TOC) | | | | mg/m$^3$ |
| NOx NOT APPLICABLE | | | | mg/Nm$^3$<br>0$^{o}$C. 3% $O_2$(Liquid or Gas), 6% $O_2$(Solid Fuel) |
| Maximum volume of emission | | | | m$^3$/hr |
| Temperature | | $^{o}$C(max) | $^{o}$C(min) | $^{o}$C(avg) |



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

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

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

| | |
|---|---|
| Emission Point Ref. N$^{o}$: | |
| Source of Emission: | |
| Location : | |
| Grid Ref. (12 digit, 6E,6N): | |
| Vent Details<br>Diameter:<br>Height above Ground(m): | **NOT APPLICABLE** |
| 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 **NOT APPLICABLE** | | | |
| Temperature | $^{o}C$(max) | $^{o}C$(min) | $^{o}C$(avg) |
| For Combustion Sources:<br>Volume terms expressed as : ☐ wet. ☐ dry. _____%$O_2$ | | | |

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

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

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

***Emission Point Reference Number:*** _____

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

NOT APPLICABLE



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

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

| Emission point Reference Numbers | Description | Emission details[1] | | | | Abatement system employed |
|---|---|---|---|---|---|---|
| | | material | mg/Nm$^{3(2)}$ | kg/h. | kg/year | |
| A2-1 | Dust Blow Earthworks Being Carried Out In Cell Area | Dust particles | unknown | unknown | unknown | Water spraying using bowser being |
| A2-2 | Dust Blow From Processing Area. | Dust particles | unknown | unknown | unknown | Water spraying of stockpiles |

# ATTACHMENT E.2

# EMISSIONS TO SURFACE WATERS

## E.2 EMISSIONS TO SURFACE WATERS

Surface water run-off during and post restoration activities will be collected in a network of trenches and infiltration drains located on the surface and perimeter of the restored area. It is expected that in most circumstances water will infiltrate directly to ground from these drains, but during storm events water which does not infiltrate will flow along the drains to finally arrive at the water feature/swale along the western boundary and also the Silt Settling Pond C near the entrance to the Facility.

The system on the western boundary will be designed to accommodate the water expected in a 1 – 100 year storm event. Infiltration of storm water will occur through the base and sides of the swale/pond with provisions for overflow by means of a valved culvert discharging to a local stream (a tributary of the Morell River). This will only discharge during extreme weather conditions when water reaches a height of 144mAOD in the pond. For further details on emissions to surface water on the Site refer to section 8.6.4 of the EIS (Volume I) and FigureWLA-05 WLA-15 an WLA-17.

### E.2.1 Summary of Surface Water Emissions



**Table E.2.1 Summary of Emissions to Surface Water**

| | | |
|---|---|---|
| **Source** | Restored Land Surface | Roads: Hardstands and restored areas of the Facility Reception |
| **Location** | SW 1: Output from surface water feature on western boundary | SW 2: Outlet from settling pond C |
| **Nature** | Surface water run-off | Surface water run-off |
| **Composition** | Water with unknown concentrations of dissolved constituents | Water with unknown concentrations of dissolved constituents |
| **Quantity** | Unknown | Net precipitation from catchments |
| **Level** | Unknown | Unknown |
| **Rate** | Variable – depends on infiltration in perimeter ditches and swail. | Variable, depends on rainfall intensity. |

## TABLE E.2(i)A: EMISSIONS TO SURFACE WATERS

**Emission Point:**

| | |
|---|---|
| Emission Point Ref. N$^{o}$: | SW 1 |
| Source of Emission: | Roads: Hardstands and restored areas of the Facility Reception |
| Location : | North part of Site outlet from Silt Pond C |
| Grid Ref. (10 digit, 5E,5N): | E293257 N215871 |
| Name of receiving waters: | |
| Flow rate in receiving waters: | Unavailable $m^3.sec^{-1}$ Dry Weather Flow<br>Unavailable $m^3.sec^{-1}$ 95%ile flow |
| Available waste assimilative capacity: | kg/day |



**Emission Details:**

| (i) Volume to be emitted – Unknown | | | |
|---|---|---|---|
| Normal/day (estimated) | 15$m^3$/day | | |
| Maximum rate/hour | 150l/sec * | | |

* 30 year return period

(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 200 day/yr |

**TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission**

***Emission point reference number :*** **SW1**

| 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 | |
| Suspended Solids | | | | | | 35 | | | |

## TABLE E.2(i)B: EMISSIONS TO SURFACE WATERS

**Emission Point:**

| | |
|---|---|
| Emission Point Ref. N$^{o}$: | SW 2 |
| Source of Emission: | Restored Land Surface |
| Location : | Northwest Corner of Site |
| Grid Ref. (10 digit, 5E,5N): | E292698 N215982 |
| Name of receiving waters: | Tributary of Morell River |
| Flow rate in receiving waters: | Unavailable $m^3.sec^{-1}$ Dry Weather Flow<br>Unavailable $m^3.sec^{-1}$ 95%ile flow |
| Available waste assimilative capacity: | kg/day |



**Emission Details:**

| (i) Volume to be emitted – Unknown Emission Point is an overflow from infiltration swale/pond | | | |
|---|---|---|---|
| Normal/day (estimated) | | | |
| Maximum rate/hour | | | |

(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.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission**

***Emission point reference number :*** **SW2**

| 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 | |
| Suspended Solids | | | | | | 35 | | | |

# ATTACHMENT E.3

# EMISSIONS TO SEWERS

## E.3 EMISSIONS TO SEWERS

This Attachment contains the appropriate documentation related to emissions to sewers and the operation of the proposed Facility.

### E.3.a On-site or Off-Site treatment envisaged

During the construction phase temporary porta loos will be deployed and will be emptied on an as-needed basis. An appropriately licensed company will be employed to provide and empty port loos. The toilet facilities in the existing Site office will be used once the restoration process commences. These will discharge to the existing septic tank/percolation system. The tank will be pumped out by an approved contractor on an as-needed basis.

### E.3.b If for Off-site: The name of the sewage / WWTP undertaker and a copy of any agreement or permission by the undertaker to accept effluent

An appropriately licensed contractor will be appointed on granting of planning permission and Waste Licence.



### E.3.c Any further treatment by the undertaker, existing or proposed

No further treatment is envisaged at the Facility.

### E.3.d Any problems of sewage treatment associated with the proposed emissions

No problems are envisaged with sewerage treatment from the proposed emission.

### E.3.e Likely effects of the emissions on sewer or sewerage treatment maintenance operations

It is not envisaged that the emission will effect the sewer or sewerage treatment maintenance operation.

### E.3.f Capacity, quality and integrity of the sewer

There will be no discharge to sewers from the Facility.

### E.3.g Likely effects of the emissions on sewer integrity

There will be no discharge to sewers from the Facility.

### E.3.h Possible reactions of the emission with other effluent likely to be in the sewerage system

No reactions are expected between the emission and the sewerage system.

### E.3.i Nature of final emission to the receiving water and the estimated volumetric contribution of the site emissions to the total wastewater treatment plant Dry Weather Flow expressed as a percentage

There will be little or no change to the current discharge rate and composition.

**TABLE E.3(A): EMISSIONS TO SEWER**

**Emission Point:**

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

**NOT APPLICABLE**

**Emission Details:**

| (i) Volume to be emitted: | | | |
|---|---|---|---|
| Normal/day | | Maximum/day | |
| Maximum rate/hour | | | |

(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(i): EMISSIONS TO SEWER - Characteristics of the Emission**

***Emission point reference number :_____***

| 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 | |
| | | | | | | | | | |

**NOT APPLICABLE**

# ATTACHMENT E.4

# EMISSIONS TO GROUNDWATER

## E.4 EMISSIONS TO GROUNDWATER

Details of groundwater emissions at the Facility are listed below. LandSim modelling undertaken for the Site found that there will be no discernible discharge of List I substances and no cumulative concentration of non-List I contaminants (chloride or nickel) in the overburden groundwater at the Site boundary beyond their respective Drinking Water Standards (see attachment I.4). Emissions to ground will be of a direct and indirect nature. Direct discharges will be by means of soak holes and infiltration trenches and percolation areas. Indirect discharges will be through the liner beneath the proposed fill materials.

### E.4.1 Infiltration Trenches

A perimeter infiltration trench will be constructed at the foot of the screening berm around the Site perimeter to collect rainfall runoff and allow it to infiltrate to ground. Falls in this trench will be designed such as to feed water which does not infiltrate to ground toward the swale. Infiltration trenches will be collected as required around the office car park.

### E.4.2 French Drains

A french drain will be constructed around the hardcore IWPA to collect surface water run-off. Run-off will either infiltrate into the ground along these trenches or drain towards soakaways which will aid in the infiltration of run-off to the ground. French drains will also be constructed as required along the edge of roads and hardstands in the Facility reception /office area.



### E.4.3 Collector Trenches

To prevent ponding in contours on the restored surface and minimise infiltration to the backfilled body, temporary and/or permanent collector trenches will be constructed within zones, as required, to direct water to the perimeter infiltration trench. Some infiltration will occur through the base of the collector trenches.

### E.4.4 Soakholes

Surface water run-off collected in french drains running along the hardcore IWPA will be directed towards soakaways to aid in the infiltration of groundwater.

### E.4.5 Percolation Areas

Run-off from hardstanding areas will be directed to a full oil interceptor and onto a percolation area to be constructed.

### E.4.6 Others

No other direct discharges to groundwater are anticipated at this time.

### E.4.7 Summary of Emissions to Groundwater

Table E.4.7 below gives a summary of emissions to groundwater

**Table E.4.7 Summary of Emissions to Groundwater**

| | | | |
|---|---|---|---|
| **Source** | Run-off from hardcore surface surrounding the IWPA | Run-off from Hardstanding areas | Run-off from Restored Areas |
| **Location** | GW 1-6: Soakholes located along french drains surrounding the IWPA | GW 7: Percolation area in vegetated area along entrance to the Facility | GW 8: Infiltration Swale and pond on western boundary |
| **Nature** | Surface water run-off | Surface water run-off | Surface water run-off |
| **Composition** | Water with unknown concentrations of dissolved constituents | Water with unknown concentrations of dissolved constituents | Water with unknown concentrations of dissolved constituents |
| **Quantity** | Unknown | Unknown | Unknown |
| **Level** | Unknown | Unknown | Unknown |
| **Rate** | Variable, depends on rainfall intensity. | Variable, depends on rainfall intensity. | Variable, depends on rainfall intensity. |

## TABLE E.4(i)A: EMISSIONS TO GROUNDWATER

**Emission Point or Area:**

| | |
|---|---|
| Emission Point/Area Ref. N$^{o}$: | GW 1 - 6 |
| Emission Pathway: (borehole, well, percolation area, soakaway, landspreading, etc.) | Soakholes (X6) |
| Location : | Boundaries of IWPA – Locations to be confirmed during construction |
| Grid Ref. (10 digit, 5E,5N): | 293140 , 215707 (This grid reference is for the centre of the IWPA) |
| Elevation of discharge: (relative to Ordnance Datum) | Ca. 157mAOD |
| Aquifer classification for receiving groundwater body: | Groundwater in native glacial deposits |
| Groundwater vulnerability assessment (including vulnerability rating): | Moderate |
| Identity and proximity of groundwater sources at risk (wells, springs, etc): | Not within or near a source protection zone |
| Identity and proximity of surface water bodies at risk: | None |



**Emission Details:**

| (i) Volume to be emitted: The emission will consist of surface water run-off from IWPA with the volume emitted being weather dependent | | | |
|---|---|---|---|
| Normal/day | | Maximum/day | |
| Maximum rate/hour | | | |

(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 200 day/yr |

**TABLE E.4(i)B: EMISSIONS TO GROUNDWATER**

**Emission Point or Area:**

| | |
|---|---|
| Emission Point/Area Ref. N$^{o}$: | GW 7 |
| Emission Pathway: (borehole, well, percolation area, soakaway, landspreading, etc.) | Percolation Area |
| Location : | To be constructed in the vegetated area along entrance to the Facility |
| Grid Ref. (10 digit, 5E,5N): | 293240 , 215786 |
| Elevation of discharge: (relative to Ordnance Datum) | Ca. 156mAOD |
| Aquifer classification for receiving groundwater body: | Locally Important Sand/Gravel Aquifer |
| Groundwater vulnerability assessment (including vulnerability rating): | Moderate |
| Identity and proximity of groundwater sources at risk (wells, springs, etc): | Not within or near a source protection zone |
| Identity and proximity of surface water bodies at risk: | The surface water feature which will be located along the north western boundary |



**Emission Details:**

| | | | |
|---|---|---|---|
| (i) Volume to be emitted: The emission will consist of surface water run-off from hardstanding areas with the volume emitted being weather dependent | | | |
| Normal/day | | Maximum/day | |

| | | | |
|---|---|---|---|
| Maximum rate/hour | | | |

(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.4(i)C: EMISSIONS TO GROUNDWATER**

**Emission Point or Area:**

| | |
|---|---|
| Emission Point/Area Ref. Nº: | GW 8 |
| Emission Pathway: (borehole, well, percolation area, soakaway, landspreading, etc.) | Percolation Area |
| Location : | To be constructed in the vegetated area along entrance to the Facility |
| Grid Ref. (10 digit, 5E,5N): | 292697, 215897 |
| Elevation of discharge: (relative to Ordnance Datum) | Ca. 156mAOD |
| Aquifer classification for receiving groundwater body: | Locally Important Sand/Gravel Aquifer |
| Groundwater vulnerability assessment (including vulnerability rating): | Moderate |
| Identity and proximity of groundwater sources at risk (wells, springs, etc): | Not within or near a source protection zone |
| Identity and proximity of surface water bodies at risk: | The surface water feature which will be located along the north western boundary |

**Emission Details:**

| (i) Volume to be emitted: The emission will consist of surface water run-off from hardstanding areas with the volume emitted being weather dependent | | | |
|---|---|---|---|
| Normal/day | | Maximum/day | |
| Maximum rate/hour | | | |

(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 |
|---|---|

## ATTACHMENT E.5

## NOISE EMISSIONS

## E.5 NOISE EMISSIONS

Construction noise will be generated during:

1. The initial earthworks – berm and drainage construction along the western, eastern, northern and southern boundary of the lands to be restored;

2. Earthworks to create the IWPA; and

3. On an ongoing basis during construction of the base liner and capping systems.

Noise emissions at the Facility during operations will emanate from truck driving in and out of the Facility, plant at the processing area when in operation, plant transporting material across the Site for placement in lined cells and the plant associated with the placement and compaction of material.

Noise sources are identified and supplied in Table E.5(i). Details of the baseline surveys and calculations of combined noise levels and anticipated noise levels at NSLs are tabulated in Section 15.0 of the EIS. Refer to FigureWLA-15 attached for details of locations.

## Table E.5(i)A: NOISE EMISSIONS (Construction Works near a sensitive receptor) - Noise source NE-1 summary sheet

| Source | Emission point Ref. No | Equipment Ref. No | Sound Pressure[1] dBA at reference distance @ 10m | 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 | | |
| Tracked Excavator 40t | NE-1 | | 79 | | 85 | 78 | 77 | 77 | 73 | 71 | 68 | 63 | | Operating Hours |
| Tracked Excavator 30t | NE-1 | | 75 | | 82 | 71 | 74 | 73 | 69 | 66 | 63 | 58 | | Operating Hours |
| Dozer | NE-1 | | 79 | | 75 | 79 | 77 | 77 | 74 | 71 | 65 | 57 | | Operating Hours |
| Articulated Dump Truck 23t | NE-1 | | 78 | | 85 | 80 | 77 | 72 | 74 | 70 | 65 | 58 | | Operating Hours |



## Table E.5(i)B: NOISE EMISSIONS (Cell Area) - Noise source NE-2 summary sheet

| Source | Emission point Ref. No | Equipment Ref. No | Sound Pressure[1] dBA at reference distance @ 10m | 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 | | |
| Tracked Excavator 40t | NE-2 | | 79 | | 85 | 78 | 77 | 77 | 73 | 71 | 68 | 63 | | Operating Hours |
| Compactor | NE-2 | | 75 | | 72 | 76 | 76 | 70 | 69 | 67 | 63 | 58 | | Operating Hours |
| Articulated Dump Truck 23t | NE-2 | | 78 | | 85 | 80 | 77 | 72 | 74 | 70 | 65 | 58 | | Operating Hours |

## Table E.5(i)C: NOISE EMISSIONS (IWPA) - Noise source NE-3 summary sheet

| Source | Emission point Ref. No | Equipment Ref. No | Sound Pressure[1] dBA at reference distance @ 10m | 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 | | |
| Tracked Excavator 30t | NE-3 | | 75 | | 72 | 71 | 74 | 73 | 69 | 66 | 63 | 58 | | Operating Hours |
| Tracked Excavator with Breaker | NE-3 | | 90 | | 88 | 88 | 86 | 89 | 83 | 83 | 80 | 76 | | Operating Hours |
| Crusher | NE-3 | | 82 | | 93 | 86 | 79 | 81 | 75 | 71 | 66 | 59 | | Operating Hours |
| Screener | NE-3 | | 81 | | 93 | 86 | 79 | 78 | 75 | 71 | 69 | 62 | | Operating Hours |
| Screener | NE-3 | | 81 | | 93 | 86 | 79 | 78 | 75 | 71 | 69 | 62 | | Operating Hours |
| Wheel Loader | NE-3 | | 76 | | 86 | 82 | 77 | 74 | 70 | 66 | 62 | 55 | | Operating Hours |
| Articulated Dump Truck 23t | NE-3 | | 78 | | 85 | 80 | 77 | 72 | 74 | 70 | 65 | 58 | | Operating Hours |

**Table E.5(ii)A Noise Emission NE-1**

| **Source** | **Operating Equipment (Excavators, Dump Trucks, Dozers etc)** |
|---|---|
| Location | Cell Areas (Construction Phase) NE1 |
| Nature | Unknown |
| Composition | Not Applicable |
| Quantity | Not Applicable |
| Level | 84 dB (This is based on the Combined levels of plant and is a worse case scenario with all plant operating at the one time) |
| Rate | Not Applicable |
| Period or Periods | Operating Hours |

**Table E.5(ii)B Noise Emission NE-2**

| **Source** | **Operating Equipment (Excavators, Compactors, Dump Trucks, etc)** |
|---|---|
| Location | Cell Areas (Restoration Activities) NE2 |
| Nature | Unknown |
| Composition | Not Applicable |
| Quantity | Not Applicable |
| Level | 82 dB (This is based on the Combined levels of plant and is a worse case scenario with all plant operating at the one time) |
| Rate | Not Applicable |
| Period or Periods | Operating Hours |

**Table E.5(ii)B Noise Emission NE-3**

| **Source** | **Operating Equipment (wheel loaders, crusher, screener etc)** |
|---|---|
| Location | IWPA NE3 |
| Nature | Unknown |
| Composition | Not Applicable |
| Quantity | Not Applicable |
| Level | 92 dB (This is based on the Combined levels of plant and is a worse case scenario with all plant operating at the one time) |
| Rate | Not Applicable |
| Period or Periods | Operating Hours |

# ATTACHMENT E.6

# ENVIRONMENTAL NUISANCES

# E.6 ENVIRONMENTAL NUISANCES

The following section describes the relevant emissions not dealt with in the preceding sections of Section E which may cause or contribute to nuisances in the area, where relevant.

## E.6.1 Bird Control

It is unlikely that birds will be attracted at the Facility as putrescible waste will be not accepted. However if it becomes an issue measures will be put in place deal with the problem.

## E.6.2 Dust Control

In order to ensure that no dust nuisance occurs at the facility a series of mitigation measures and good working practices will be implemented as part of a dust minimisation plan. These measures are outlined below:

- Site roads will be regularly maintained as appropriate. Hard surface roads will be swept to remove mud and aggregate materials from their surface;
- Any un-surfaced roads will be restricted to essential site traffic only. Furthermore, any road that has the potential to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions;
- A speed restriction of 15 km/hour will be adhered to at the Facility;
- All vehicles exiting the site will make use of a wheel wash facility, prior to entering onto public roads, to ensure mud and other wastes are not tracked onto public roads;
- Public roads outside the site will be regularly inspected for cleanliness, and cleaned as necessary;
- Water misting or sprays will be used as required if particularly dusty activities, such as capping and crushing/screening, are encountered during dry or windy periods; and
- In partially dry windy conditions giving rise to dust blow, activities will be suspended if other measures are not effective in controlling dust.



## E.6.3 Fire Control

Measures for fire prevention and control will include the following:

- Emergency response contact numbers will be posted on prominent positions on site (fire service, police, ambulance and other agencies);

- A telephone system on site will ensure instant contact with the emergency services;
- A water supply will be available on site;
- Fire hoses and extinguishers will be available on site;
- No burning of waste will be permitted on site;

### E.6.4 Litter Control

Litter arising from the wastes to be received is not expected to be a problem as these wastes are expected to be predominantly mineral soils or broken rock. Litter from construction material packaging and the construction offices is a management responsibility and procedures will be put in place to deal specifically with these materials e.g. bins skips, refuse receptacles etc. Littering on the Site by anyone will not be tolerated and will result in disciplinary action. Litter management will include the operation of a litter patrol, which will inspect the Site boundaries and beyond daily and recover all wind-blown litter. All vehicles transporting waste on public roads will be required to have their loads covered.



### E.6.5 Traffic Control

The entrance will allow movement of traffic into and out of the Site. Traffic signs will be used at the Site entrance and throughout the Site to control traffic. Speed limits will be imposed within the Facility. A traffic and transport assessment (TTA) is given in Section 9.0 (Volume 1) and Appendix 4 (Volume 2).

### E.6.6 Vermin Control

It is not anticipated that vermin will be a problem at the Facility as waste accepted will be inert non-putrescible waste. If vermin does become an issue, measures will be put in place to deal with the problem.

### E.6.7 Road Cleaning

Road cleansing is a management responsibility and procedures will be put in place to deal specifically with this issue. All lorries will go through a wheel-wash prior to exiting the Facility. Road cleansing and sweeping will be carried out as required.

Table E.1: Grid References of Proposed Emission Points (Refer to Figure WLA-15)

| Monitoring Location title | Medium | X (easting) | Y (northing) |
|---|---|---|---|
| NE-1 | Noise | 293208 | 215878 |
| NE-2 | | 292841 | 215565 |
| NE-1 | | 293135 | 215699 |
| A2-1 | Dust | 292841 | 215565 |
| A2-2 | | 293135 | 215699 |
| GW1 | Groundwater | 293206 | 215725 |
| GW2 | | 293140 | 215801 |
| GW3 | | 293106 | 215761 |
| GW4 | | 293125 | 215637 |
| GW5 | | 293169 | 215673 |
| GW6 | | 293219 | 215712 |
| GW7 | | 293243 | 215774 |
| GW8 | | 292697 | 215897 |
| SW-1 | Surface Water | 293257 | 215871 |
| SW-2 | | 292698 | 215725 |

# SECTION F – CONTROL & MONITORING

| Sub-Section | Title | Location of Information |
|---|---|---|
| F.1 | Treatment, Abatement, and Control Systems | WLA p.27 and Attachment F.1 |
| F.2 | Monitoring and Sampling Points - Air | WLA p.27 and Attachment F.2 |
| F.3 | Monitoring and Sampling Points – Surface Water | WLA p.27 and Attachment F.3 |
| F.4 | Monitoring and Sampling Points – Sewer Discharge | WLA p.28 and Attachment F.4 |
| F.5 | Monitoring and Sampling Points – Groundwater | WLA p.28 and Attachment F.5 |
| F.6 | Monitoring and Sampling Points – Noise | WLA p.28 and Attachment F.6 |
| F.7 | Monitoring and Sampling Points – Meteorological Data | WLA p.28 and Attachment F.7 |
| F.8 | Monitoring and Sampling Points – Leachate | WLA p.28 and Attachment F.8 |
| F.9 | Monitoring and Sampling Points – Landfill Gas | WLA p.29 and Attachment F.9 |

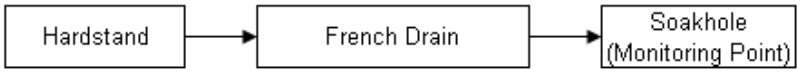
# ATTACHMENT F.1

# EMISSIONS AND ABATEMENT

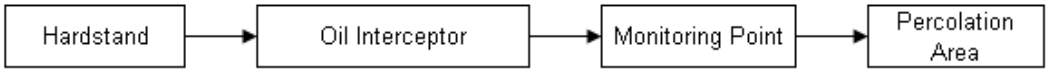
## F.1 MONITORING AND SAMPLING POINTS – EMISSIONS AND ABATEMENT

The flow diagrams below show the paths taken by surface water and foul water from the Facility.

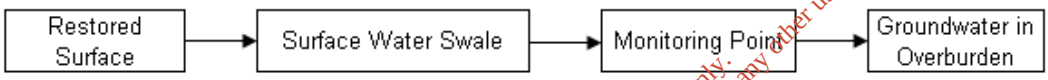
**Stormwater from Inert Waste Processing Area: GW 1 - GW 6**




**Stormwater From Concrete Hardstands: GW 1**

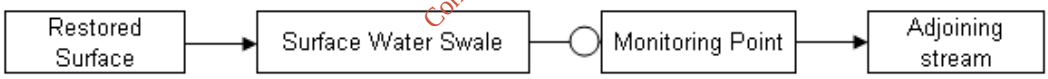



**Stormwater Run-off from Restored Surface: GW 8**




**Surface Water from Reception Area: SW 1**


**Surface Water From Swale/Pond: SW 2**




◯ = Shut Off Valve

# ATTACHMENT F.2

# MONITORING AND SAMPLING POINTS - AIR

## F.2 MONITORING AND SAMPLING POINTS – AIR

In preparation for the EIS, 6 no. dust sampling locations were used to monitor baseline dust deposition rates (namely D1 to D6 inclusive), which are situated around the Facility boundary. Refer to Figure WLA-15 attached for locations.

In addition, baseline dust deposition rates will be monitored at the Inert Waste Processing Area, namely A2-1.

**TABLE F2: Fugitive ENVIRONMENT MONITORING AND SAMPLING LOCATIONS**

***Monitoring Point Reference No*** : D1, D2, D3, D4, D5, D6, A2-1

| Parameter | Monitoring frequency | Accessibility of Sampling point |
|---|---|---|
| German TA Luft Air Quality Standards 350 mg/m$^2$/day | Quarterly | Fully accessible with dust poles placed around the Site |

# ATTACHMENT F.3

# MONITORING AND SAMPLING POINTS – SURFACE WATER

## F.3 MONITORING AND SAMPLING POINTS – SURFACE WATER

During the preparation of the EIS, a tributary of the Morell River located to the north of the Application Site was monitored at 2 no. locations, namely ST01 (upstream of the Site) and ST02 (located immediately downstream of the Site). These two locations will continue to be monitored for the duration of the licence.

The two emissions points SW1 and SW2 will be monitored at the same frequency and for the same parameters as ST 01 and ST 02.

## TABLE F3.1 : EMISSIONS MONITORING AND SAMPLING POINTS

***Emission Point Reference No(s). :*** ST01, ST02, SW1, SW2

| Parameter | Monitoring frequency | Accessibility of Sampling Points |
|---|---|---|
| pH | Quarterly | Streams or Ponds or End of Pipe |
| Conductivity | Quarterly | Streams or Ponds or End of Pipe |
| DO | Quarterly | Streams or Ponds or End of Pipe |
| Temperature | Quarterly | Streams or Ponds or End of Pipe |
| Colour | Quarterly | Streams or Ponds or End of Pipe |
| Odour | Quarterly | Streams or Ponds or End of Pipe |
| TSS | Quarterly | Streams or Ponds or End of Pipe |
| Total Oxidised | Quarterly | Streams or Ponds or End of Pipe |
| Calcium | Quarterly | Streams or Ponds or End of Pipe |
| Magnesium | Quarterly | Streams or Ponds or End of Pipe |
| Potassium | Quarterly | Streams or Ponds or End of Pipe |
| Fluoride | Quarterly | Streams or Ponds or End of Pipe |
| Chloride | Quarterly | Streams or Ponds or End of Pipe |
| Orthophosphate | Quarterly | Streams or Ponds or End of Pipe |
| Sulphate | Quarterly | Streams or Ponds or End of Pipe |
| Copper | Quarterly | Streams or Ponds or End of Pipe |
| Iron | Quarterly | Streams or Ponds or End of Pipe |
| Manganese | Quarterly | Streams or Ponds or End of Pipe |
| Lead | Quarterly | Streams or Ponds or End of Pipe |
| Mercury | Quarterly | Streams or Ponds or End of Pipe |
| Nickel | Quarterly | Streams or Ponds or End of Pipe |
| Zinc | Quarterly | Streams or Ponds or End of Pipe |

# ATTACHMENT F.4

# MONITORING AND SAMPLING POINTS – SEWER DISCHARGE

## F.4 MONITORING AND SAMPLING POINTS – SEWER DISCHARGE

There will be no discharges to sewer from the proposed activities.

# ATTACHMENT F.5

# MONITORING AND SAMPLING POINTS - GROUNDWATER

# F.5 MONITORING AND SAMPLING POINTS – GROUNDWATER

## F.5.1 Groundwater Monitoring Boreholes

In preparation for the EIS, 8 no. boreholes were drilled in 2007 both in the overburden and bedrock across the Application Site (BH1-07 to BH8-07 inclusive). 3 no. additional wells were also monitored during the 2007/08 period outside the Application Site boundary, namely BHBally, BHLawlor and BHA.

As the proposed works will include the restoration of the Site, monitoring locations BH5-07 and BH6-07 will have to be removed. It is proposed however to install an additional 4 no. monitoring locations in 2009, namely BH9-09 to BH12-09 inclusive.

These will be monitored quarterly in accordance with the conditions of waste licence for the Facility.

## F.5.2 Surface Water Emissions to Ground

Surface water will be discharged to ground through a number of systems. (See Attachment E.4). The discharges will be monitored at emission monitoring points G1, G3, G4, G7 and G8.

## TABLE F.5.1a: ENVIRONMENT MONITORING AND SAMPLING LOCATIONS

***Monitoring Point Reference No*** : BHBally, BHLawlor, BHA, BH1-07, BH2-07, BH3-07, BH4-07, BH7-07, BH8-07, BH9-09, BH10-09, BH11-09, and BH12-09, GW1, GW3, GW4, G7 and G8.

| Parameter | Monitoring frequency | Accessibility of Sampling point |
|---|---|---|
| pH | Quarterly | Monitoring Wells or Manholes |
| Conductivity | Quarterly | Monitoring Wells or Manholes |
| BOD | Quarterly | Monitoring Wells or Manholes |
| Temperature | Quarterly | Monitoring Wells or Manholes |
| Colour | Quarterly | Monitoring Wells or Manholes |
| Odour | Quarterly | Monitoring Wells or Manholes |
| TSS | Quarterly | Monitoring Wells or Manholes |
| Total Oxidised Nitrogen | Quarterly | Monitoring Wells or Manholes |
| Ammoniacal Nitrogen | Quarterly | Monitoring Wells or Manholes |
| Calcium | Quarterly | Monitoring Wells or Manholes |
| Magnesium | Quarterly | Monitoring Wells or Manholes |
| Potassium | Quarterly | Monitoring Wells or Manholes |
| Fluoride | Quarterly | Monitoring Wells or Manholes |
| Chloride | Quarterly | Monitoring Wells or Manholes |
| Orthophosphate | Quarterly | Monitoring Wells or Manholes |
| Sulphate | Quarterly | Monitoring Wells or Manholes |
| Copper | Quarterly | Monitoring Wells or Manholes |
| Iron | Quarterly | Monitoring Wells or Manholes |
| Manganese | Quarterly | Monitoring Wells or Manholes |
| Cadmium | Quarterly | Monitoring Wells or Manholes |
| Lead | Quarterly | Monitoring Wells or Manholes |
| Mercury | Quarterly | Monitoring Wells or Manholes |
| Nickel | Quarterly | Monitoring Wells or Manholes |
| Zinc | Quarterly | Monitorin Monitoring Wells or Manholes g Wells or Manholes |

## ATTACHMENT F.6

## MONITORING AND SAMPLING POINTS NOISE

## F.6 MONITORING AND SAMPLING POINTS – NOISE

6 no. noise monitoring locations were used in the preparation of the EIS for baseline noise monitoring, namely N1 to N6 inclusive. Refer to the attached Figure WLA-15 for locations. Monitoring will be carried out at these locations on an annual basis.

# ATTACHMENT F.7

# MONITORING AND SAMPLING POINTS – METEORLOGICAL DATA

## F.7 MONITORING AND SAMPLING POINTS – METEOROLOGICAL DATA

Monitoring of meteorological conditions will not be carried out at the Facility. The closest synoptic station to the Facility is Casement Aerodrome in Baldonnel located 17km north-east of the proposed Facility. Data from this station and rainfall gauges at Naas will be assembled.

## ATTACHMENT F.8

## MONITORING AND SAMPLING POINTS – LEACHATE

## F.8 MONITORING AND SAMPLING POINTS – LEACHATE

As the Site is a proposed inert waste landfill, leachate collection is not proposed at the Facility. However, in keeping with best practice at similar facilities in Ireland, leachate will be monitored at one location for each 2 ha. of landfill footprint. This means there will be circa. 20 No. leachate monitoring points across the restored area. The locations of these monitoring points will be determined at the time of Specified Engineering Works proposals being made to the Agency. It is noted that a detailed groundwater monitoring programme is proposed, as described in Attachment F.5 of the WLA.

## ATTACHMENT F.9

## MONITORING AND SAMPLING POINTS – LANDFILL GAS (NA)

## F.9 MONITORING AND SAMPLING POINTS – LANDFILL GAS

There will be no monitoring of Landfill gas at the Facility as waste accepted will not undergo any physical or chemical change which would lead to the production of a 'landfill' gas.

'Landfill' gas $C0_2$, $CH_4$, $0_2$ and $H_2S$ will be monitored in the leachate monitoring boreholes.

Table E.1: Grid References of Proposed Emission Points (Refer to Figure WLA-15)

| Monitoring Location title | Medium | X (easting) | Y (northing) |
|---|---|---|---|
| NE-1 | Noise | 293208 | 215878 |
| NE-2 | | 292841 | 215565 |
| NE-1 | | 293135 | 215699 |
| A2-1 | Dust | 292841 | 215565 |
| A2-2 | | 293135 | 215699 |
| GW1 | Groundwater | 293206 | 215725 |
| GW2 | | 293140 | 215801 |
| GW3 | | 293106 | 215761 |
| GW4 | | 293125 | 215637 |
| GW5 | | 293169 | 215673 |
| GW6 | | 293219 | 215712 |
| GW7 | | 293243 | 215774 |
| GW8 | | 292697 | 215897 |
| SW-1 | Surface Water | 293257 | 215871 |
| SW-2 | | 292698 | 215725 |

# SECTION G – RESOURCES USE & ENERGY EFFICIENCY

| Sub-Section | Title | Location of Information |
|---|---|---|
| G.1 | Supplementary Information: Raw Materials, Substances, Preparations, and Energy | WLA p.30 and Attachment G.1<br>EIS Section 8.15 |
| G.2 | Energy Efficiency | WLA p.30 and Attachment G.2<br>EIS Section 8.15 |

# ATTACHMENT G.1

# RAW MATERIALS AND PRODUCT

# G.1 RAW MATERIALS, SUBSTANCES, PREPARATIONS AND ENERGY

## G.1.1 Diesel

The annual diesel consumption of the plant proposed for use at the Facility is not currently available as all plant has not been selected. Details will be provided to the EPA upon letting of the contract for the works. Two (2 No.) 5,000 litre bunded holding tanks will be constructed on-Site to store fuel required by plant and machinery.

## G.1.2 Electricity

Electricity consumption is not currently available as all plant has not been selected. Details will be provided to the EPA upon letting of the contract for the works.

## G.1.3 Water

Potable water will be obtained from the existing mains water supply. Water for dust suppression and replenishing the wheel wash will be abstracted from an existing groundwater well on-Site, close to the Facility entrance (see Figure WLA-05). This is an historical well, and if supply is found to be not suitable an alternative borehole will be drilled. There will be a number of demands on the Facility. They will be as follows:



- Drinking Water and water for the canteen, toilets etc. – 90 litres/employee/day. It is expected that approximately five people will be employed on a daily basis.
- Wheel wash – The proposed wheel wash will be an closed system with water being recycled. However, water will have to be topped up on a regular basis for the wheel wash to be effective. The quantity required will depend on weather conditions and traffic movements at the Facility.
- Dust suppression – This will involve the use of sprinkling systems and bowsers to dampen dust generated from processing, haul roads and earthworks being carried out at the Facility. This will also be weather dependent.

## G.1.4 Vermin Control

Vermin control is not expected to be required as none of the wastes are putrescible. The Licencee will furnish to the Agency the nature and quantities of chemicals, if and when they are used.

### G.1.5 Product

Waste accepted at the plant will be consist of waste types as stated in H.1. with some loads containing residual amounts of unwanted materials such as wood and metal etc. These components will be separated out and sent to an appropriate Facility off-Site for re-use, recovery or disposal with an emphasis being placed on re-use or recovery. It is important to note that loads consisting primarily of these products will be turned away and not accepted at the Facility. The processed product will consist of varying grades of material depending on supply and demand used in other developments off-Site as well as the restoration project.

# ATTACHMENT G.2

# ENERGY EFFICIENCY

# G.2 ENERGY EFFICIENCY

## G.2.1 Diesel

The annual diesel consumption of the plant proposed for use at the Facility is not currently available as all plant has not been selected. All plant operating at the Facility will be kept in good working order and serviced regularly to reduce fuel consumption.

## G.2.2 Electricity

Electricity consumption will be monitored at the Facility to conserve electricity. Lighting will only be used where required with security lighting being adjusted seasonally so as to only switch on during night time hours. All lighting and appliances in the office buildings and canteen will be switched off when not in use to conserve energy. Energy audits will be conducted to evaluate electricity usage and to identify areas where savings can be made.

## G.2.3 Water

All pipes supplying water, will be checked for leakages to reduce water loss. Water required for processing, dust suppression and cleaning will be supplied from the existing groundwater well so as to reduce wasting potable water.



## G.2.4 Energy Audits

Energy audits will be conducted at the Facility as part of the Environmental Management System for the Facility. Reference to the appropriate guidance material and reporting of recommendations of the audit will be included in the Annual Environmental Report which will be a requirement under a Waste Licence issued by the Agency.

# SECTION H – MATERIALS AND HANDLING

| Sub-Section | Title | Location of Information |
|---|---|---|
| H.1 | Waste Types and Quantities – Existing & Proposed | WLA p.31-33 and Attachment H.1<br>EIS Section 7.2 & 7.3 |
| H.2 | Waste Acceptance Procedures | WLA p.33 and Attachment H.2<br>EIS Section 7.5 |
| H.3 | Waste Handling | WLA p.33 and Attachment H.3 |
| H.4 | Waste Arisings | WLA p.33-34 and Attachment H.4 |

## ATTACHMENT H.1

## WASTE TYPES AND QUANTITIES – EXISTING & PROPOSED

## H.1 WASTE TYPES AND QUANTITIES – EXISTING & PROPOSED

The types of materials to be used to restore the Walshestown Pit will be confined to inert dry waste arising mainly from civil engineering and building construction and demolition projects. The waste types acceptable for restoration purposes under any future Waste Licence will include inert materials such as stone & soils, glass, concrete, brick, tiles, ceramics, etc. Putrescible household and commercial wastes (or 'black bag' waste) will *not* be acceptable at this Facility.

Inert waste is defined by the Landfill Directive (1999/31/EC) as: *"waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater"*.

The types of waste proposed for acceptance are shown in Table H.1(i).

In summary, all wastes used for the restoration of the Site will be considered inert and will meet the proposed leaching and total pollutant limit values indicated in Section 7.6 of the EIS Volume 1. All wastes arriving at the Facility will be:

- From pre-authorised sites;
- Biologically stable, non-reactive and therefore, unlikely to produce emissions to generate landfill gas; and
- Not likely to cause instability in the restored areas after deposition at the Site.



The materials to be accepted at the Walshestown Facility will be sourced from wastes generated by construction, demolition and excavation projects in the Greater Dublin Area in the first instance, and in Leinster in general. All incoming material will undergo rigorous acceptance procedures to ensure that suitable materials are used for restoration purposes.

Non-inert materials that may be contained in loads delivered to the Site (such as wood, plastics, metals etc that are not removed at source) will be separated out and removed at the Inert Waste Processing Area, to be recovered/recycled or disposed by authorised and approved waste management contractors at appropriately authorised waste management facilities.

It is proposed to import ca. 4.2 million cubic metres of inert materials from greenfield and brownfield sites primarily from the Greater Dublin Area, as defined in the Rural Planning Guidelines 2004 to 2016. Using a conversion factor of 1.8 tonnes/$m^3$, this equates to ca. 7.6 million tonnes of inert materials. This equates approximately to 600,000 tonnes per year on

average over a 13 year development. The actual amount imported in any year will depend on market forces.

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

| Waste material | EWC Code | Main source[1] | Quantity | | On-site Recovery/Disposal (Method & Location ) | Off-site Recovery, reuse or recycling (Method, Location & Undertaker) | Off-site Disposal (Method, Location & Undertaker) |
|---|---|---|---|---|---|---|---|
| | | | Tonnes / month | $m^3$ / month | | | |
| Waste gravel and crushed rocks other than those mentioned in 01 04 07 (uncontaminated) | 01 04 08 | Development Sites | | | Processing at Facility and used for restoration | Processed material used in other construction projects off-Site. | |
| Waste sand and clays (uncontaminated) | 01 04 09 | " " | | | " " | " " | |
| Tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11 | 01 04 12 | " " | | | " " | " " | |
| Concrete | 17 01 01 | " " | | | " " | " " | |
| Bricks | 17 01 02 | " " | | | " " | " " | |
| Tiles and Ceramics | 17 01 03 | " " | | | " " | " " | |
| Mixture of concrete, bricks, tiles and ceramics | 17 01 07 | " " | | | " " | " " | |
| Soil and stones other than | 17 05 04 | | | | | | |

| Waste material | EWC Code | Main source[1] | Quantity | | On-site Recovery/Disposal (Method & Location ) | Off-site Recovery, reuse or recycling (Method, Location & Undertaker) | Off-site Disposal (Method, Location & Undertaker) |
|---|---|---|---|---|---|---|---|
| | | | Tonnes / month | $m^3$ / month | | | |
| those mentioned in 17 05 03 | | | | | | " " | |
| Dredging spoil other than those mentioned in 17 05 05 | 17 05 06 | " " | | | " " | | |
| Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 | 17 09 04 | " " | | | " " | " " | " " |
| Soil and stones | 20 02 02 | " " | | | " " | " " | " " |

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

## ATTACHMENT H.2

## WASTE ACCEPTANCE PROCEDURES

# H.2 WASTE ACCEPTANCE

## H.2.1 Overview

Incoming material to the Walshestown Facility will be limited to the wastes listed in Table H.1(i). Prior to acceptance of waste from a specific source, Basic Characterisation of the waste will be carried out in accordance with the Annex to Council Decision 2003/33/EC (Council Decision 2003). Inspection, documentation and control procedures will be implemented to ensure that only high-quality material will be accepted and processed. The proposed leaching limit values and total pollutant content limit values of the materials to be used to restore the site are presented in Section 7.7, Tables 7.5 and 7.6 of Volume 1 of the EIS. Tables 7.5 and 7.7 are reproduced herein as Tables H.2.1 and H.2.2. Groundwater risk assessment modelling using site specific hydrogeological data supports the use of the limit values indicated in Tables H.2.1 and H.2.2 for the Walshestown inert waste landfill facility. Attachment I.4 contains a report on the risk assessment modelling.

**Table H.2.1 Proposed Leaching Limit Values to be met at Walshestown**



| Component | L/S = 2 l/kg | L/S = 10 l/kg | $C_0$ (percolation test) |
|---|---|---|---|
| | mg/kg dry substance | mg/kg dry substance | mg/l |
| As | 0.2 | 1 | 0.12 |
| Ba | 14 | 40 | 8 |
| Cd | 0.06 | 0.08 | 0.04 |
| Cr total | 0.4 | 1 | 0.2 |
| Cu | 1.8 | 4 | 1.2 |
| Hg | 0.006 | 0.02 | 0.004 |
| Mo | 0.6 | 1 | 0.4 |
| Ni | 0.4 | 0.8 | 0.24 |
| Pb | 0.4 | 1 | 0.3 |
| Sb | 0.04 | 0.12 | 0.2 |
| Se | 0.12 | 0.2 | 0.08 |
| Zn | 4 | 8 | 2.4 |
| Chloride | 1,100 | 1,600 | 920 |
| Fluoride | 8 | 20 | 5 |
| Sulphate | 1,120 | 2,000 | 3,000 |
| Phenol index | 1 | 2 | 0.6 |
| DOC | 480 | 1,000 | 320 |
| TDS | 5,000 | 8,000 | - |

**Table H.2.2 Proposed Limit Values for Total Content of Organic Parameters to be met at Walshestown**

| Parameter | Value mg/kg |
|---|---|
| TOC (total organic carbon) | 30,000 |
| BTEX (benzene, toluene, ethylbenzene and xylenes) | 6 |
| PCBs (polychlorinated biphenyls, 7 congeners) | 1 |
| Mineral oil (C10 to C40) | 500 |
| PAHs (polycyclic aromatic hydrocarbons) (*) | 100 |

* For determining the total of PAHs, seventeen PAH compounds will be added to a sum, as was provided for in the Murphy Environmental Hollywood Waste Licence W0129-02.

Waste shipments will arrive by truck at the Facility Reception. Scheduled and documented shipments will be directed to the weighbridge where the load is weighed and visually checked by CCTV cameras. The Walshestown Facility will have established procedures for verification of waste. Subject to the waste being suitable, the Facility operator will sign a declaration and will give a copy to the waste contractor.

Any waste streams resulting from recovery or processing of material that do not meet the specification of the required restoration materials will be removed and disposed or recovered off-Site.



Records will be maintained on all consignments of waste, providing information on:

- The tonnage and European Waste Catalogue (EWC) Code for the waste materials imported and/or sent off-Site for disposal/recovery;
- The names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number); and
- Details of the ultimate disposal/recovery destination facility for any rejected waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required.

### H.2.2 Waste Characterisation

The criteria and procedures for the characterisation and acceptance of waste at the proposed Facility will operate in conformance with Council Decision 2003/33/EC (Council Decision 2003), procedures which include a series of tests based on the following hierarchy:

**Level I - Basic Characterisation**

Basic Characterisation is the first step in the acceptance procedure and constitutes a full characterisation of the waste by gathering all necessary information for a safe disposal of waste in the long term. Basic information on the waste such as type and origin, composition, consistency and leachability will be collected.

The fundamental requirements for Basic Characterisation are listed in Section 1.1.2 of the Annex to Council Decision 2003/33/EC (Council Decision 2003).

Basic Characterisation will be carried out on the wastes prior to acceptance at the Walshestown Facility. In general, the waste contractor will be required to carry out Basic Characterisation and supply it to the Facility operator. Analysis testing will constitute laboratory testing for a range of parameters, to be specified in the Waste Licence, and will be in line with tables 2.1.2.1 and 2.1.2.2 of the Annex to the Council Decision 2003/33/EC). Some wastes will not require testing, as indicated in Table 7.1 in Volume 1 of the EIS, which is reproduced as Table H.2.3 herein, and in accordance with Section 2.1.1 of the Annex to Council Decision 2003/33/EC.

A target of at least one test per 2,000 tonnes of waste is proposed. Even if a consignment of waste from a source is less than 2,000 tonnes it will be subjected to Basic Characterisation testing.



**Level II – Compliance Testing**

Level II Compliance Testing comprises periodical testing by simpler standard analysis and behaviour-testing methods to determine whether a waste complies with specific reference criteria. The tests focus on key variables and behaviours identified from Level I (Basic Characterisation) testing. Thus Level II (Compliance Testing) acts as an independent verification of Level I laboratory results.

Compliance testing will be conducted randomly for at least 1 in every 5,000 tonnes received over the weighbridge, even if a full Basic Characterisation test has already been carried out on that load. In addition one sample from each waste type/source will be tested. In the case that a Basic Characterisation has not already been carried out on the load in question, a complete testing schedule (at a frequency of 1 test per 2,000 tonnes) will be undertaken.

The compliance check will also include the following:

- Review of the Level I Basic Characterisation data;
- If appropriate, a review/audit of source site to ascertain the nature of waste being generated at that site and to ensure that it is unlikely to contain constituents or materials of concern; and
- Representative sampling and chemical analysis of waste to confirm key constituents of the waste stream indicated by the basic characterisation data.

If samples are taken for chemical analysis, they will be despatched to an INAB and UKAS-accredited laboratory for analysis. Level II checks will be documented and records retained on-Facility at the proposed Site offices.

**Level III - On Site Verification of Wastes**

Level III constitutes rapid check methods to confirm that a waste is the same as that which has been subjected to Basic and Compliance testing and that which is described in any accompanying documents. This Level III will consist of a visual and odour inspection of a load of waste, first at the weighbridge and again at the tipping face. If any material is visible that is not permitted for disposal at the Facility, or does not match the description, the consignment will be deemed unauthorised and the Procedure for Rejected Waste Loads will be followed (see Section 7.8 of the EIS Volume 1).

At the weighbridge a member of the Facility staff will conduct a visual inspection of every load of incoming waste, to the extent practical, for non-conforming waste and to confirm that the consignment matches the description of the waste provided. Where there is suspicion of non-conforming waste the weighbridge transaction will not be permitted to proceed and the load will be rejected. Visual and odour inspection will be recorded as satisfactory or otherwise at the weighbridge.



The load will again be inspected at the tipping face and any unacceptable waste will be removed and quarantined until it is shipped off-Site to an appropriate waste recovery or disposal facility. Also, if any materials such as steel or timber can be recovered/recycled it will be removed from the tipped load and contained in the quarantine area until such time that there is sufficient quantity of like material to be despatched to an appropriate and permitted waste recovery facility.

A further inspection will be made by the plant operators at the disposal face when the vehicle has unloaded.

**Table H.2.3 Materials to be Accepted at the Facility**

| EWC code (#) | Description | Restrictions |
|---|---|---|
| **01 04** | **Wastes from physical and chemical processing of non-metalliferous minerals** | |
| 01 04 08 | Waste gravel and crushed rocks (uncontaminated) | Testing required |
| 01 04 09 | Waste sand and clays (uncontaminated) | Testing required |
| 01 04 12 | Tailings and other wastes from washing and cleaning of non-metalliferous minerals | Testing required |
| **17 01** | **Concrete, bricks, tiles and ceramics** | |
| 17 01 01 | Concrete | Selected C & D waste only (*). No testing required |
| 17 01 02 | Bricks | Selected C & D waste only (*). No testing required |
| 17 01 03 | Tiles and ceramics | Selected C & D waste only (*). No testing required |
| 17 01 07 | Mixtures of concrete, bricks, tiles and ceramics | Selected C & D waste only (*). No testing required |
| **17 05** | **Soil (including excavated soil from contaminated sites), stones and dredging spoil** | |
| 17 05 04 | Soil and stones | Testing required |
| 17 05 06 | Dredging spoil | Testing required |
| **17 09** | **Other Construction & Demolition Waste** | |
| 17 09 04 | Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 | Testing required |
| **20 02** | **Garden and park wastes** | |
| 20 02 02 | Soil and stones | Including topsoil and peat. Testing required |



**Notes:**

(#) See EPA (2002) for full list of European Waste Catalogue (EWC) Codes

(*) Selected construction and demolition waste (C & D waste): with low contents of other types of materials (like metals, plastic, soil, organics, wood, rubber, etc). The origin of the waste must be known.

— No C & D waste from constructions, polluted with inorganic or organic dangerous substances, e.g. because of production processes in the construction, soil pollution, storage and usage of pesticides or other dangerous substances, etc., unless it is made clear that the demolished construction was not significantly polluted (i.e. <100mg/kg for PAH, which is a key indicator parameter.)

— No C & D waste from constructions, treated, covered or painted with materials, containing dangerous substances in significant amounts.

# ATTACHMENT H.3

# WASTE HANDLING

# H.3 WASTE HANDLING

## H.3.1 Waste Reception

All wastes will be accepted via the Site entrance. Upon arrival, all delivery vehicles shall be directed to the Facility check-in office and weighbridge where the arrival of each load will be recorded. All documentation accompanying the waste and the waste carrier will be inspected, and the nature of the waste will be confirmed by the Weighbridge Operator/Check in Person. A waste transfer note containing the details of the load delivery time, date, tonnage, and carrier's details will be produced at the weighbridge.

An inspection of the haulier's consignment documents will be made by the Weighbridge Operator/Check in Person. If paper work is incomplete the Weighbridge Operator/Check in Person will retain the load until further information is provided. When the Weighbridge Operator/Check in Person is satisfied with the paper work and the origin of the wastes he/she will inform the driver of relevant Site Safety information and direct the driver to the tipping area.



## H.3.2 Waste Handling Procedures

Restoration of the Site will be carried out in agreement with the EPA and in line with best practice. Restoration will be completed on a phased basis and will involve the filling of cells defined within each vertical stage in maximum 2 to 3-metre lifts with fill slopes no steeper than 1V:2H, to ensure the maximum slope stability. Phasing allows progressive filling and restoration to occur simultaneously. As shown on Figures 8.8 and 8.9 filling will progress in vertical stages and restoration will proceed from west to east. Each lift will be divided into cells in which surface water drainage will be managed. The size of cells will vary within any given vertical stage, but would typically be 1 to 2 ha in area.

Each landfill cell will be notionally subclassified into grids, identified by a unique reference number, in order to identify the specific deposition area of each waste load and build up a 3-D model of each landfill cell. The grid location of each incoming load will be recorded.

Waste will be deposited, inspected and spread in 2 to 3-metre lifts in each cell, with a bulldozer and compactor on Site ensuring waste is positioned and spread as required to ensure maximum cell stability.

### H.3.3 Summary

A summary of the proposed waste placement procedure is provided below:

1. Cell construction will involve:
    - Preparation of the cell;
    - Laying of cell liner;
    - Testing of the cell liner; and
    - Validation that the cell meets EPA requirements.
2. The cell will be divided into sub-grids and an appropriate referencing system assigned (e.g. C1/D1 refers to cell 1, grid reference D, level 1);
3. Incoming loads will be directed to cell sub-grid;
4. Waste will be deposited by the delivery contractor;
5. Deposited waste will be compacted;
6. Cell will be filled to a height of 2 to 3 m and then the next lift in the cell will be constructed until the entire cell has been filled; and
7. Upon completion of the final lift, capping will be applied and the cell restored.

## ATTACHMENT H.4

## WASTE ARISINGS

## H.4 WASTE ARISINGS

Other than construction waste that will be generated during the construction of the Facility infrastructure, no waste shall be produced on-Site other than canteen and office wastes. Waste produced from the canteen and office buildings will be source segregated and place in wheelie bins for collection. An agreement will be made with a waste contractor holding a valid and appropriate waste collection permit to make collection on a regular basis.

The quantities of commercial waste generated at the Facility during operations is expected to be insignificant (less than 400kg/worker per annum).

Inert waste received at the Facility will be stored on or near the processing area. This will be segregated into different grades of materials to make the processing more efficient. Any unwanted materials such as wood plastic glass etc., found in stockpiles will be removed and stored in the quarantine shed. These skips will be collected when almost full by an appropriately licensed contractor and transported off-Site to a licensed facility for re-use or recycling if possible. Some waste may not be fit for further use and may require disposal as a result. An emphasis will be placed on recovering and recycling as much material as possible, therefore diverting waste away from landfill.

Waste engine oil and lubrication oil will be generated during the servicing of plant and equipment at the Facility. All waste oils will be stored in the quarantine shed until collection by the contractors carrying out the servicing or by an appropriately licensed contractor for disposal off-Site.