

DRAFT OPERATING PROCEDURE

EIS

LITTLE ISLAND, CORK

DRAFT
*For inspection purposes only.
Consent of copyright owner required for any other use.*

TABLE OF CONTENTS

LIST OF APPENDICES		PAGE
1.0	INTRODUCTION.....	I
2.0	SCOPE.....	I
3.0	ENVIRONMENTAL MANAGEMENT SYSTEM.....	II
4.0	WASTE ACCEPTANCE AND PROCESSING.....	II
4.1	Controls on Incoming Waste.....	ii
4.2	Waste Reception.....	iii
4.3	Waste Processing.....	iv
4.4	Operating Procedures.....	v

LIST OF APPENDICES

Appendix 1	OP 001 – Waste Acceptance, Handling and Processing, at the Facility
Appendix 2	OP 002 – Criteria for the Acceptance of Material at the Facility
Appendix 3	OP 003 – Segregation and Removal of Unsuitable Wastes Arriving at the Facility
Appendix 4	OP 004 – Procedure for Testing and Storage of Quarantine Material
Appendix 5	OP 005 – Removal of Unsuitable Wastes at the Facility

1.0 INTRODUCTION

Thornbush Holdings Ltd (Thornbush) proposes to build and operate a dedicated Construction Demolition and Excavation (CD&E) Waste Recovery Facility (the proposed Facility) to support the restoration of a 29ha IPPC licensed site (Licence No. P0389-01) that includes process waste lagoons that were constructed and filled by Mitsui Denman between the 1970s and 2003.

The purpose of the proposed Facility is to process construction and demolition wastes and excavated materials to produce Class 1C (as specified in the NRA Specifications for Road Works) for use as a structural fill material that would be used to cap the former Mitsui Denman lagoons and restore the lands within the current IPPC licence site boundary. . The EPA has stated that the capping material must meet the criteria of inert waste, consequently the focus of the proposed operation is on acceptance of wastes and other materials that reflect the quality standards that are required for the capping material.

This document presents a number of draft procedures and controls that are proposed for waste acceptance, handling and testing of materials at the proposed Facility to ensure that all material used in the restoration programme will meet the necessary criteria for use of inert material for land restoration.

Strict procedural controls will be implemented at the proposed Facility to ensure that the recovered inert material used for restoration purposes will meet criteria as set out in the definition of inert waste.

2.0 SCOPE

It is intended to accept approximately 1.2 - 1.4 million tonnes of predominantly inert non hazardous C,D&E waste and like materials over a period of approximately ten years at the proposed Facility. The inert materials produced by the processing plant will be used in the land restoration project at the Thornbush. IPPC licensed site located in the townlands of Inchera and Wallingstown, Little Island, Cork.

3.0 ENVIRONMENTAL MANAGEMENT SYSTEM

Thornbush will put in place a management system and stringent operating procedures to ensure that material delivered to and recovered material leaving the proposed Facility are placed on the IPPC licensed site are subject to the appropriate technical appraisal. The management and reporting system would be monitored by the EPA.

All material utilised as restoration capping within the IPPC licensed site must meet the classification of inert material, the volumes and monitoring of all material must be recorded and information provided to the Regulatory Agency the EPA.

The proposed Facility would operate with standard operating procedures as defined by the European Commission in its publication "Integrated Pollution Prevention and Control Draft Reference Document on Best Available Techniques for the Waste Treatment Industries January 2004". In addition the proposed facility meets level 1 and level 2 construction and demolition waste technologies as specified in the European Commission DG ENV.E.3 Management of Construction and Demolition Waste Working Document No 1.

4.0 WASTE ACCEPTANCE AND PROCESSING

4.1 Controls on Incoming Waste

Incoming material to the C,D&E Facility will include main three sources:

- Soil and Stone from known uncontaminated sources;
- Excavated Material including soil, stones, concrete foundations etc; and
- Construction & Demolition (C&D)Waste.

Inspection, documentation and control procedures will be implemented to ensure that only high quality material will be accepted and processed.

Pre-shipment screening and separation of waste will be undertaken. For this purposes it is proposed that wastes will only be accepted at the proposed Facility from Contractors who practice the Construction Industry initiative aimed at prevention, minimisation and recycling of construction and demolition waste.

Contractors and waste generators who support and practice this initiative are required to have an on site C&D waste management plan that facilitates waste segregation on the construction site. Where this initiative is correctly implemented a significant proportion of unsuitable waste can be diverted and not delivered to the Facility. The initiative will ensure qualitative prevention (reducing the hazards posed by construction and demolition waste) generating a more homogenous mix of waste, separating at source major contaminants and facilitating higher recovery potential of inert material.

Some of the incoming wastes may need to be tested to ensure that they are inert e.g. excavated soil and stones from 'brownfield' sites. These testing procedures will be carried out in accordance with Council Decision 2003/33/ec

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

- Quantity of waste accepted;
- Description of the waste including relevant EWC codes;
- Details of source, origin and carrier of waste;
- Date and times of all waste deliveries to the site; and
- Details of rejected wastes.

Efficient control on incoming waste has a number of management benefits as follows:

- Maintaining a chain of information on the waste helps avoid information loss or misrepresentation;
- Operators can screen out unsuitable wastes to prevent potential health and safety issues and to remove other unsuitable materials;
- Confirming the composition details, allows identification of a number of verification parameters to test the waste arriving at the site if required;
- It identifies any substances within the waste which might be unaffected by the treatment process and which could therefore be either not accepted or removed from the process;
- It helps to determine the cost of the disposal option identified; and
- It will assist in ensuring regulatory compliance.

4.2 Waste Reception

When wastes arrive on site they will be visually inspected and accompanying documentation will be verified. Where there is evidence from the visual inspection that there may be large quantities of non-inert material in a truck or that it is not appropriately sorted, the load would be turned away from the site. Where the visual inspection confirms appropriate inert material, the truck would be cleared to deliver the load to the heap areas.

Should non-inert material be discovered subsequent to tipping and when processing the C&D waste, it would be transported to a banded concrete quarantine area. This banded concrete quarantine area would contain a covered quarantine container and skip for materials that should be kept dry. The quarantine area is also proposed to drain into the IDA sewer system rather than the storm water sewer.

Standard operating procedures for waste acceptance, rejection, quarantine, testing and removal of unsuitable material from site will be developed and agreed with the EPA. Standard environmental operating practices applied will include:

- Providing a dedicated quarantine waste storage area, so that if the inspection or analysis indicates that the wastes fail to meet the acceptance criteria then the wastes can be safely temporarily stored. Potentially hazardous material will only be stored for a maximum of 5 working days. After acceptance, the waste can be moved to another storage area. Written procedures will be in place for dealing with wastes held in quarantine;
- Defining areas on the site for the inspection, unloading and processing and having a suitable drainage system;
- Immediately assessing the wastes deposited within the unloading area and immediately segregating unsuitable wastes, to remove possible hazards or unsuitable materials;
- Offloading, sampling point/reception and quarantine areas will require an impervious surface with self-contained drainage, to prevent any spillage entering the storage systems or escaping off site;
- Providing absorbents/adsorbents to deal with any spills;
- Training of personnel who are involved in the sampling, checking and analysis procedures. This will need to be updated on a regular basis;
- Weighing/quantifying all incoming loads, and not accepting any load on the site unless sufficient storage capacity exists; and
- Ensuring that all documents that checked and approved are done so, and that any discrepancies need to be resolved before the waste is accepted.

Records will be maintained on-site in order to assist tracking of material from “cradle to grave.”

4.3 Waste Processing

Waste loads will be segregated according to type and transferred to their appropriate tipping area. The stockpiled material will require screening and processing in order to achieve a grade that will be suitable as inert fill for land restoration processes. Screening and processing will be undertaken through the use of a mobile screener and crusher.

Thornbush will process the waste through separation, crushing and screening in order to achieve the required aggregate grades. Temporary plant and equipment that will be utilised on site will include:

- Screener to grade materials with Magnet to remove ferrous materials; and
- Crusher to grade coarse materials.

Initially larger materials will initially be broken up using a tracked excavator rock-breaker which will also facilitate the separation of waste fractions where required. Material of suitable size will be passed through a pre-screener and subsequent crusher/screener to separate out the various fractions and grade sizes. Suitable grades will be stockpiled temporarily to be used for the trial restoration project to commence.

Thornbush proposes to sample and analyse the final product prior to its use in accordance with EPA guidance and requirements.

4.4 Operating Procedures

Draft Operating Procedures (OPs) contain all the proposed criteria and control measures that will be implemented.

Draft Operating Procedures for the following are appended:

- Waste Acceptance, Handling and Processing at the Facility
- Criteria for the Acceptance of Material at the Facility
- Segregation and Removal of Unsuitable Wastes Arriving at the Facility
- Procedure for Testing and Storage of Quarantine Material
- Removal of Unsuitable Wastes at the Facility

The implications of having best practice operating procedures are that generally only suitable material will be accepted and produced at the Facility for the land restoration project and there will be the added benefit of an efficient cost effective environmentally compliant operation.

APPENDICES

DRAFT
For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX 1

OP 001

**WASTE ACCEPTANCE, HANDLING, AND PROCESSING
AT THE FACILITY**

DRY

*For inspection purposes only.
Consent of copyright owner required for any other use.*

TABLE OF CONTENTS

SECTION	PAGE
1.0 PURPOSE.....	1
2.0 SCOPE.....	1
3.0 REFERENCES.....	1
4.0 DEFINITIONS.....	1
5.0 AUTHORITY AND RESPONSIBILITY.....	1
6.0 METHODS	2
6.1 Waste Acceptance and Approval	2
6.2 Waste Handling and Processing	3
7.0 RELATED RECORDS	3

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

OPERATING PROCEDURE – OP 001 WASTE ACCEPTANCE, HANDLING AND PROCESSING, AT THE FACILITY

1.0 PURPOSE

The purpose of this procedure is to provide a process to ensure that the wastes accepted at the Facility can be processed to produce inert material for use in the land restoration project at the Thornbush Holdings Ltd. Site (IPPC Licence No. P0389-01) at Inchera and Wallingstown, Little Island, Cork (the Thornbush Site).

The inert material will be used as an engineering fill and capping material for the restoration of the IPPC licensed area that includes waste lagoons and ponds.

Procedures must identify implementation measures to ensure that wastes accepted for recovery are handled and processed correctly and that the resultant product conforms to the appropriate requirements of inert granular fill as detailed in Operating Procedure 002

2.0 SCOPE

This procedure details acceptance, approval, and handling of predominantly inert (non-hazardous) waste and like materials to be processed at the Facility to produce materials to be used in the land restoration project

This procedure will be implemented for the acceptance of predominantly inert non hazardous wastes and like materials at the Facility.

3.0 REFERENCES

EPA guidance documents.

4.0 DEFINITIONS

N/A

5.0 AUTHORITY AND RESPONSIBILITY

It is the responsibility of the Facility Manager and staff to carry out this procedure.

6.0 METHODS

6.1 Waste Acceptance and Approval

- Only approved contractors will be allowed to bring construction demolition and excavation waste into the CD&E Facility. Details of approved contractors will be provided to the Agency and Planning Authority;
- Prior to the acceptance of CD&E waste and from any customer a description of the constituents of the waste and quantity/weight of material and other relevant documentation must be provided to Thornbush to verify that the waste/material meets the acceptance criteria;
- All third party waste collectors delivering waste on site must have a current Waste Collection Permit and applicable waste tracking forms;
- The customer must complete form WA1, as attached, giving full details of waste producer, carrier and waste description. Records detailing the waste type, quantity by weight, sources and haulier will be kept at the Facility. The registration numbers for all trucks delivering waste on site will also be recorded and any other tracking forms or other applicable records will also be kept;
- Once the waste is received on site there will be a visual inspection of the load before and after unloading;
- Visual inspection will include monitoring via CCTV surveillance cameras and digital recording at the entrance to the Facility;
- If the waste is deemed not suitable for acceptance at the Facility it is returned to the customer;
- Records of such incidents will be maintained on site and reported to EPA and will be made available to Cork County Council;
- Once the waste is deemed suitable for processing, recovery and use the waste can be accepted on site and will be taken directly to the appropriate tipping area and unloaded; and
- If there is any waste in a load which is deemed unsuitable for use in the restoration project it will be segregated, quarantined/stored on site and eventually removed from the Facility.

6.2 Waste Handling and Processing

- All incoming material to the Facility, once approved, will be stockpiled according to type (i.e. soil and stone, excavated material and C&D material) in designated areas on site;
- Processing of material will be required prior to use as engineered fill in the restoration project. Processing will include initial sorting, screening, crushing of material into appropriate grades for land restoration purposes;
- The various grades of processed material will be stored in separate stockpiles and used for land restoration as appropriate;
- Each separate product will be sampled and analysed according to the appropriate standards where required or specified by the Planning Authority or Environmental Protection Agency before it is allowed to be used for land restoration purposes; and
- To ensure operational and quality control only inert waste or engineered products will be used in the capping and restoration of the waste lagoons on the Thornbush Site.

7.0 RELATED RECORDS

In regard to the wastes accepted at the CD&E Facility the following information will be kept on file (on site) for review and administration purposes.

Customer Info	WAI Waste Acceptance Sheet	Waste Collection Permit No	Waste Test Records
---------------	----------------------------	----------------------------	--------------------

In addition the Agency will be provided with a materials balance sheet relating to all materials accepted at the CD&E Facility, processed, stored, removed off site or used as engineering fill within the IPPC site boundary.

This information will be provided in the Annual Environmental Report (AER) for the Facility

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX 2

OP 002

**CRITERIA FOR THE ACCEPTANCE OF MATERIAL
AT THE FACILITY**

DRAFT
*For inspection purposes only.
Consent of copyright owner required for any other use.*

TABLE OF CONTENTS

SECTION	PAGE
1.0 PURPOSE.....	1
2.0 SCOPE.....	1
3.0 REFERENCES.....	1
4.0 DEFINITIONS.....	1
5.0 AUTHORITY AND RESPONSIBILITY.....	1
6.0 METHODS	2
6.1 Waste Acceptance	2
6.2 Waste Identification and Testing	2
7.0 RELATED REFERENCES.....	3

APPENDICES

Appendix A	Waste Acceptable without Testing
Appendix B	Leaching Limit Values as per the Requirements Listed in Section 6.2(B)
Appendix C	Limit Values for Total Content of Organic Parameters

OPERATING PROCEDURE – OP 002 CRITERIA FOR ACCEPTANCE OF MATERIAL AT THE FACILITY

1.0 PURPOSE

The purpose of this procedure is to detail the composition requirements for recovered materials that may be used as “inert fill” in the Thornbush Holdings Ltd. land restoration project. Wastes accepted at the CD&E Facility will be processed to produce an inert engineering fill material Class 1C (as specified in the NRA specification for road works).

In principle only recovered concrete (including reinforced concrete), masonry, bricks, stones and rocks from excavated works, asphalt from road surfaces and soils and excavated spoils will be processed at the CD&E Facility and then utilized as inert material in the land restoration project..

2.0 SCOPE

This procedure defines “inert waste”, describes what types of material may be defined as inert waste and details limit values and testing procedures which may be required in order that a recovered materials may be deemed inert and suitable for land restoration.

3.0 REFERENCES

Landfill Directive 1999/31/EC
European Council Decision 2003/33/EC
EPA guidance www.epa.ie

4.0 DEFINITIONS

Inert waste as defined in Article 2(e) of the Landfill Directive is “waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes in 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.”

5.0 AUTHORITY AND RESPONSIBILITY

It is the responsibility of the Facility Manager and staff to ensure that all material produced at the Facility and subsequently used for land restoration complies with the requirements of this procedure.

6.0 METHODS

All material arriving at the CD&E Facility must be subject to the complete waste acceptance procedures. All processed waste must meet the criteria as outlined below before it can be used for land restoration. Certain waste streams that are proven to fulfil the required criteria for inert waste may afterwards be accepted and processed following visual assessment and intermittent sampling for quality control. Wastes not coming from a proven source will require more stringent analysis. Details of acceptance and testing requirements are given in this section.

6.1 Waste Acceptance

Waste will be accepted according to three major categories:

- (a) Soil and stone;
- (b) Excavated material, including soil, stone and concrete foundations etc; and
- (c) Construction and demolition material.

In principle, only a high standard material will be accepted for land restoration purposes; it is intended that only recovered waste types requiring the minimum testing requirements be used.

Waste acceptance procedures outlined in OP001 will be followed.

6.2 Waste Identification and Testing

It is intended that the vast majority of waste accepted at the CD&E Facility will be clean inert waste or like materials requiring the minimum processing. Incoming wastes/materials will be stockpiled according to type and only tested as required according to the requirements of the Council Decision 2003/33/EC for land restoration. For example wastes coming from excavations at 'brownfield' sites will require testing prior to acceptance (Level 1 Basic Characterization Testing) and also a certain amount of Level 2 Compliance Testing before this waste is processed at the CD&E Facility.

A) Waste Acceptable without Testing

Council Decision 2003/33/EC (Section 2.1.1) allows for certain materials to be deposited in inert landfill without testing as described below.

- The waste must be a single stream (only one source) of a single waste type. Different wastes contained in the list may be accepted together, provided they are from the same source; and
- If there is a doubt that the waste fulfils the definition of inert waste as per the approved waste type as listed in Appendix A, testing will be applied. The limit values listed in Appendix B and C must be complied with.

B) Limit values for inert waste

Material tested.

Leaching limit values

The leaching limit values listed in Appendix B apply for inert waste, calculated at Liquid to Solid ratios (L/S) of 2 litres/kg and 10l/kg for total release and directly expressed in mg/l for Co (the first eluate of percolation test at L/S = 0.1 litres/kg)

C) Limit values for total content of organic parameters

In addition to the leaching limit values listed in Appendix B, further limit values for organic parameters also apply for inert wastes. These are presented in Appendix C.

7.0 RELATED REFERENCES

- Thornbush Holdings Ltd. Procedure OP 001 Waste Acceptance, Handling; and Processing at the Facility;
- Waste Acceptance Sheet WA1.

APPENDICES

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX A
WASTE ACCEPTABLE WITHOUT TESTING

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX A

WASTE ACCEPTABLE WITHOUT TESTING

EWC CODE	DESCRIPTION	RESTRICTIONS
1011 03	WASTE GLASS-BASED FIBROUS MATERIALS)	ONLY WITH ORGANIC BINDERS
1501 07	GLASS PACKAGING	
1701 01	CONCRETE	SELECTED C & D WASTE ONLY (*)
1 01 02	BRICKS	SELECTED C & D WASTE ONLY (*)
1701 03	TILES AND CERMAICS	SELECTED C & D WASTE ONLY (*)
1701 07	MIXTURES OF CONCRETE, BRICKS, TILES AND CERAMICS	SELECTED C & D WASTE ONLY (*)
1702 02	GLASS	NOT APPLICABLE
1705 04	SOIL AND STONES	EXCLUDING TOPSOIL PEAT EXCLUDING SOIL AND STONES FROM CONTAMINATED SITES
1912 05	GLASS	NOT APPLICABLE
2001 02	GLASS	SEPARATELY COLLECTED GLASS ONLY
2002 02	SOIL AND STONES	ONLY FROM GARDEN AND PARKS WASTE: EXCLUDING TOPSOIL, PEAT

Notes:

(*) 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.

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

—

Waste not appearing on this list must be subject to testing to determine if it fulfils the criteria for inert waste as detailed in Appendix B.

APPENDIX B
LEACHING LIMIT VALUE AS PER THE REQUIREMENTS
LISTED IN SECTION 6.2(B)

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX B

LEACHING LIMIT VALUES AS PER THE REQUIREMENTS LISTED IN
 SECTION 6.2(B)

Component	L/S = 2 l/kg	L/S = 10 l/kg	C _o (percolation test)
	mg/kg dry substance	mg/kg dry substance	mg/l
As	0.1	0.5	0.06
Ba	7	20	4
Cd	0.03	0.04	0.02
Cr Total	0.2	0.5	0.1
Cu	0.9	2	0.6
Hg	0.003	0.01	0.002
Mo	0.3	0.5	0.2
Ni	0.2	0.4	0.12
Pb	0.2	0.5	0.15
Sb	0.02	0.06	0.1
Se	0.06	0.1	0.04
Zn	2	4	1.2
Chloride	550	800	460
Flouride	4	10	2.5
Sulphate	560*	1,000*	1,500
Phenol Index	0.5	1	0.3
DOC**	240	500	160
TDS***	2,500	4,000	—

Notes:

(*) If the waste does not meet these values for sulphate, it may still be considered as complying with the acceptance criteria if the leaching does not exceed either of the following values: 1 500 mg/l as C₀ at L/S = 0,1 l/kg. It will be necessary to use a percolation test to determine the limit value at L/S = 0,1 l/kg under initial equilibrium conditions.

(**) If the waste does not meet these values for DOC at its own pH value, it may alternatively be tested at L/S = 10 l/kg and a pH between 7,5 and 8,0. The waste maybe considered as complying with the acceptance criteria for DOC, if the result of this determination does not exceed 500 mg/kg. (A draft method based on prEN 14429 is available).

(***) The values for total dissolved solids (TDS) can be used alternatively to the values for sulphate and chloride.

APPENDIX C
**LIMIT VALUES FOR TOTAL CONTENT OF ORGANIC
PARAMETERS**

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX C

LIMIT VALUES FOR TOTAL CONTENT OF ORGANIC PARAMETERS

Parameters	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 - C40)	500
PAHs (polycyclic aromatic hydrocarbons)	Member States to set limit value
(*) In the case of soils a higher limit value may be admitted by the competent authority, provided the DOC value of 500/kg is achieved at L/S = 10l/kg either at the soils own pH or at a pH value between 7.5 and 8.0	

DRAFT
For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX 3

OP 003

**SEGREGATION AND REMOVAL OF UNSUITABLE WASTES
ARRIVING AT THE FACILITY**

*For inspection purposes only.
Consent of copyright owner required for any other use.*

TABLE OF CONTENTS

SECTION	PAGE
1.0 PURPOSE.....	1
2.0 SCOPE.....	1
3.0 REFERENCES.....	1
4.0 DEFINITIONS.....	1
5.0 AUTHORITY AND RESPONSIBILITY.....	1
6.0 METHODS	1
7.0 RELATED REFERENCES.....	2

APPENDICES

Appendix A	Risk Assessment Sheet
Appendix B	Potential EWC Codes

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

OPERATING PROCEDURE – OP 003 SEGREGATION AND REMOVAL OF UNSUITABLE WASTES ARRIVING AT THE FACILITY

1.0 PURPOSE

The purpose of this procedure is to provide a process for the segregation and removal of unsuitable wastes arriving at the Facility. It also provides implementation measures to ensure that wastes accepted for recycling or recovery satisfies the design and Waste Licence of the Facility.

2.0 SCOPE

The Facility is designed to process only predominantly inert (non-hazardous), construction demolition and excavation (CD&E) wastes and other like material. Large recoverable/recyclable material may be removed in the initial screening step but it is most important that any potentially hazardous or unsuitable material is removed at the earliest stage. This procedure outlines the control steps required to ensure the complete removal of all such wastes.

3.0 REFERENCES

BAT Guidance Notes for the Waste Sector: Transfer Activities, EPA, Draft April 2003.

4.0 DEFINITIONS

N/A

5.0 AUTHORITY AND RESPONSIBILITY

It is the responsibility of the Facility Manager and staff to carry out this procedure.

6.0 METHODS

Inspection and documentation of all incoming waste the site will be completed at the weighbridge hut according to OP 001. After initial inspection and acceptance, if any waste is deemed unsuitable for recycling, it is to be placed in a quarantine area pending removal offsite. The following steps must be followed to ensure no harmful effects to personnel or the environment:

- Any questionable material must be immediately removed from the waste stream. Items may need to be manually picked out so as to minimise their risk of further contaminating the waste material;
- Appropriate (Personal Protective Equipment) PPE will need to be worn e.g. heavy duty gloves, shoes/boots with protection on the soles and roof, industrial apron or suit, face visor, gas/aerosol mask;
- A bunded area will be provided in the quarantine area for waste oils; and
- Each item must then be appropriately identified and a risk assessment sheet must be completed (attached in Appendix A of this procedure).

When the item has been identified (according to relevant EWC code if possible see Appendix B), or it must be labelled and put in a suitable container. It may then be stored in the appropriate section of the quarantine area pending removal.

7.0 RELATED REFERENCES

- OP 004: Procedure for Testing & Storage of Quarantine Material;
- OP 005: Procedure for Removal of Unsuitable Wastes at the Facility;
- Customer Database;
- WA1 Waste Acceptance Sheet;
- Waste Collection Permits; and
- Maintenance

APPENDICES

DRAFT
For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX A
RISK ASSESSMENT SHEET

DRAFT

*For inspection purposes only.
Consent of copyright owner required for any other use.*

RISK ASSESSMENT SHEET

This sheet facilitates the identification and safe storage of quarantine material pending removal.

Source of Incoming Waste _____ ID#: _____

- State: solid liquid volatile liquid (and vapour) gas
 Sludge dust spill clean up material

Label type or details: _____

Uses / Tasks / Process the material(s) came from: _____

Nature of the Safety Hazard (tick all that are applicable or known) :

- Explosive Potentially unstable (see conditions below)
- Highly reactive with _____ (i.e. avoid)
- Flammable Liquid Flammable solid Corrosive
- Reactive when wet Toxic Biological material Infectious

Storage container (required for safe storage):

Material: Glass Reinforced Glass Plastic Metal
Cap: Pressure venting cap non-venting cap other _____

Potential EWC codes: _____

(see Appendix 2)

PROPOSED METHOD/CONTRACTOR FOR REMOVAL: _____

APPENDIX B
POTENTIAL EWC CODES

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

POTENTIAL EWC CODES

This sheet facilitates the identification of quarantine material according to European Waste Catalogue (EWC) classification for CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)

Concrete, Bricks, Tiles and Ceramics

17 01 06* mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances

Wood, Glass and Plastic

17 02 04* glass, plastic and wood containing or contaminated with dangerous substances

Bituminous Mixtures, Coal Tar and Tarred Products

17 03 01 * bituminous mixtures containing coal tar 17 03 03* coal tar and tarred products

Metals (including their alloys)

17 04 09* metal waste contaminated with dangerous substances
17 04 10* cables containing oil, coal tar and other dangerous substances

Soil (including excavated soil from contaminated sites), Stones and Dredging Spoil

1705 03 * soil and stones containing dangerous substances
1705 05 * dredging spoil containing dangerous substances
17 05 07 * track ballast containing dangerous substances

Insulation Materials and Asbestos-Containing Construction Materials

17 06 01 * insulation materials containing asbestos
17 06 03* other insulation materials consisting of or containing dangerous substances
17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 06 05* construction materials containing asbestos (18)

Gypsum-Based Construction Material

17 08 01* gypsum-based construction materials contaminated with dangerous substances

Other construction and demolition waste

1709 01 * construction and demolition wastes containing mercury
1709 02* construction and demolition wastes containing pcb (for example pcb-containing sealants, pcb containing resin-based floorings, pcb-containing sealed glazing units, pcb-containing capacitors)
17 09 03 * other construction and demolition wastes (including mixed wastes) containing dangerous substances

APPENDIX 4

OP 004

**PROCEDURE FOR TESTING AND STORAGE OF QUARANTINE
MATERIAL**

*For inspection purposes only.
Consent of copyright owner required for any other use.*

DRAFT

TABLE OF CONTENTS

SECTION	PAGE
1.0 PURPOSE.....	1
2.0 SCOPE.....	1
3.0 REFERENCES.....	1
4.0 DEFINITIONS.....	1
5.0 AUTHORITY AND REPSONSIBILITY.....	1
6.0 METHODS	1
6.1 Sampling and Testing	2
6.2 Bund Maintenance	2
6.3 Labelling	2
6.4 Storage	2
7.0 RELATED REFERENCES.....	4

LIST OF APPENDICES

Appendix A	Risk Assessment Sheet
Appendix B	Potential EWC Codes

*For inspection purposes only.
Consent of copyright owner required for any other use.*

OPERATING PROCEDURE – OP 004 PROCEDURE FOR TESTING AND STORAGE OF QUARANTINED MATERIAL

1.0 PURPOSE

The purpose of this procedure is to provide details of the procedures in sampling, testing and storage of quarantined material at the Facility

2.0 SCOPE

All material which has been identified as unsuitable for use in the land restoration project will be placed in the quarantine holding area where it will need to be tested prior to quarantine storage. This procedure details the testing requirements for such waste. The aspects of storage (containers, labelling, segregation, separation, location, and environmental conditions) are considered together with handling and transport.

3.0 REFERENCES

BAT Guidance Notes for the Waste Sector: Transfer Activities, EPA, Draft April 2003.

4.0 DEFINITIONS

N/A

5.0 AUTHORITY AND RESPONSIBILITY

It is the responsibility of the Facility Manager and staff to carry out this procedure. It is the responsibility of the Health and Safety Manager to ensure that this procedure is accurate and updated. All personnel must comply with the requirements of this procedure.

6.0 METHODS

All incoming material which has been deemed for removal (according to Procedure OP003:) will be placed in the quarantine area. All items must be clearly labelled and documented before storage. In some cases, the nature of the waste may be obvious (eg waste paint, battery) and thus simple identification and storage procedures will apply. Other cases may require chemical testing and before storage.

6.1 Sampling and Testing

All potentially contaminated material needs to be inspected for obvious physical impurities. These need to be removed and if the remaining material has been contaminated in any way either part or all of this must be held for testing before it can be allowed into the processing stream.

Material must be tested according to the specification outlined in OP:002 (based on Council Decision 2003/33/EC relating to the acceptance of inert waste at landfills).

6.2 Quarantine Area Maintenance

The quarantine area will require regular visual checks to examine its integrity and once a year this will be:

- Tested according to standard procedures;
- The quarantine area must not be over-filled, as a minimum, the largest liquid storage tank should;
- Not exceed 90% of the volume of the bund. Bunded storage areas should also be covered to prevent ingress of rainwater;
- All tanks and containers should be clearly labelled to indicate contents; and
- All tanks and containers should be secured against unauthorised access.

6.3 Labelling

Labels must be clear, weather resistant and must contain (as a minimum) the following information:

- The area/group the material originated from
- Name of material or classification;
- A date (of generation); and
- Specific details.

Certain wastes may require different labelling specifications according to the requirements of waste management contractors. The waste contractor may be contacted (via the Facility Manager or Health & Safety Manager for their specific labelling requirements).

6.4 Storage

All quarantined wastes should be stored at ambient conditions;

The quarantine area will need to be in segregated sections where similar waste types can be stored together (eg separate liquid and solid waste storage areas, oils with oils etc.); and

If any putrescible organic material arrives on site this should be removed within 48 hours to prevent nuisance effects such as odour, vermin or flies.

The container/packaging of a waste material should be:

- Sturdy and made of compatible materials, to prevent deterioration of the packaging;
- Protected from impact and environment hazards, for example excessive light, heat or cold;
- Appropriately sealed or closed;
- Appropriately labelled, with labels clearly visible; and
- In general, not more than 20 kg or 20 L.

If the conditions for safe storage vary from the above, the conditions should be highlighted on the risk assessment form.

Wastes need to be segregated according to their type and stored in separate areas. This will prevent incompatible waste from being stored together but will also facilitate their movement off site.

Dry or Solid Chemicals

Dry chemicals can be placed in glass or plastic containers, smaller quantities may be placed in a clear plastic bag, sealed with tape, and then tagged. All containers should be clearly labelled and stored for removal by an approved contractor.

Paints and their Containers

Disposal of paints and solvents should be via an approved Waste Contractor. The only exception is where small quantities of acrylic or mixed two pack paints can be allowed to dry/harden and then be disposed of in normal rubbish.

Oils

Oil wastes are to be stored in sealed labelled containers and removed by an approved oil/waste disposal contractor.

Light tubes and bulbs (eg Fluorescent light tubes, lamps)

These need to be stored in plastic/ sturdy cardboard containers of and removed by an approved waste management contractor.

Batteries

Batteries should be identified according to type eg (Nickel-Cadmium batteries (NiCd, Lead acetate and lead-acid batteries, alkaline batteries). All batteries should be removed by approved waste management contractors although small Alkaline batteries may be disposed of through the normal rubbish system.

Asbestos and Asbestos Containing Materials

Asbestos (in building materials, laboratory ware, etc.) must be disposed of via an authorised asbestos removalist or waste contractor. If asbestos arrives on site, the Facility Manager and the Health and Safety Manager must be immediately notified.

7.0 RELATED REFERENCES

- OP 003: Segregation and Removal of Unsuitable Wastes Arriving at the Facility;
- OP 005: Procedure for Removal of Unsuitable Wastes at the Facility;
- Customer Database;
- WA1 Waste Acceptance Sheet;
- Waste Collection Permits; and
- Maintenance Records.

DRAFT
For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDICES

DRAFT
For inspection purposes only.
Consent of copyright owner required for any other use.

APPENDIX A
RISK ASSESSMENT SHEET

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

RISK ASSESSMENT SHEET

This sheet facilitates the identification and safe storage of quarantine material pending removal.

Source of Incoming Waste _____ ID#: _____

State: solid liquid volatile liquid (and vapour) gas
 Sludge dust spill clean up material

Label type or details: _____

Uses / Tasks / Process the material(s) came from: _____

Nature of the Safety Hazard (tick all that are applicable or known) :

- Explosive Potentially unstable (see conditions below)
- Highly reactive with _____ (i.e. avoid)
- Flammable Liquid Flammable solid Corrosive
- Reactive when wet Toxic Biological material Infectious

Storage container (required for safe storage):

Material: Glass Reinforced Glass Plastic Metal
Cap: Pressure venting cap non-venting cap other _____

Potential EWC codes: _____

(see Appendix 2)

PROPOSED METHOD/CONTRACTOR FOR REMOVAL: _____

APPENDIX B
POTENTIAL EWC CODES

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

POTENTIAL EWC CODES

This sheet facilitates the identification of quarantine material according to European Waste Catalogue (EWC) classification for CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)

Concrete, Bricks, Tiles and Ceramics

17 01 06* mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances

Wood, Glass and Plastic

17 02 04* glass, plastic and wood containing or contaminated with dangerous substances

Bituminous Mixtures, Coal Tar and Tarred Products

17 03 01 * bituminous mixtures containing coal tar 17 03 03* coal tar and tarred products

Metals (including their alloys)

17 04 09* metal waste contaminated with dangerous substances

17 04 10* cables containing oil, coal tar and other dangerous substances

Soil (including excavated soil from contaminated sites), Stones and Dredging Spoil

17 05 03 * soil and stones containing dangerous substances 17

05 05 * dredging spoil containing dangerous substances 17 05

07 * track ballast containing dangerous substances

Insulation Materials and Asbestos-Containing Construction Materials

17 06 01 * insulation materials containing asbestos

17 06 03* other insulation materials consisting of or containing dangerous substances

17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03

17 06 05* construction materials containing asbestos (18)

Gypsum-Based Construction Material

17 08 01* gypsum-based construction materials contaminated with dangerous substances

17 09 other construction and demolition waste

17 09 01 * construction and demolition wastes containing mercury

17 09 02* construction and demolition wastes containing pcb (for example pcb-containing sealants, pcb-containing resin-based floorings, pcb-containing sealed glazing units, pcb-containing capacitors)

17 09 03 * other construction and demolition wastes (including mixed wastes) containing dangerous subst

APPENDIX 5

OP 005

**REMOVAL OF UNSUITABLE WASTES
AT THE FACILITY**

*For inspection purposes only.
Consent of copyright owner required for any other use.*

TABLE OF CONTENTS

SECTION	PAGE
1.0 PURPOSE.....	1
2.0 SCOPE.....	1
3.0 REFERENCES.....	1
4.0 DEFINITIONS.....	1
5.0 AUTHORITY AND RESPONSIBILITY.....	1
6.0 METHODS	1
7.0 RELATED REFERENCES.....	2
8.0 LIST OF WASTE CONTRACTORS.....	2

DRAFT

For inspection purposes only.
Consent of copyright owner required for any other use.

OPERATING PROCEDURE – OP 005 REMOVAL OF UNSUITABLE WASTES AT THE FACILITY

1.0 PURPOSE

This procedure provides details of the removal of quarantined material and the employment of waste management contractors.

2.0 SCOPE

Quarantined material will be stored on site for the minimum duration which will be dependent on the nature of the waste. Unstable, hazardous or odourous wastes will be removed as a priority by approved contractors. Other unsuitable wastes may be stored until sufficient quantities are gathered to allow bulk removal. Procedures employed will be required to ensure that minimum environmental and health and safety risks exist while also considering efficient facility management.

3.0 REFERENCES

BAT Guidance Notes for the Waste Sector: Transfer Activities, EPA, Draft April 2003

4.0 DEFINITIONS

N/A

5.0 AUTHORITY AND RESPONSIBILITY

It is the responsibility of the Facility Manager and Health and Safety Manager to ensure that this procedure is enforced and updated. It is the responsibility of all staff to operate under this procedure.

6.0 METHODS

All potentially hazardous or dangerous waste must be immediately reported to the Facility Manager (and the Health and Safety Manager if required).

Putrescible organic waste or odourous material that may arrive on site should be contained immediately and removed from the facility as soon as possible. It is unlikely that large quantities of putrescible material is found but if so, it should be removed from the facility within 48 hours.

All quarantined material will be removed by approved waste management contractors.

All removal or loading of materials by contractors should be conducted within the bunded area or on an impermeable surface.

Adsorbent kits need always to be available in case of liquid spills. These may be of the synthetic type or sawdust or similar may be used for minor spills. Oil booms should also be employed to prevent the spread of large spills.

The correct PPE must always be worn when handling quarantine material. This includes gloves, face masks, protective apron or suit, heavy duty shoes/boots.

7.0 RELATED REFERENCES

OP004 Procedure for Testing and Storage of Quarantine Material

OP005 Removal of Unsuitable Wastes at the Facility

8.0 LIST OF WASTE CONTRACTORS

Waste Type	EWC Code	Waste Contractor	Licence/Permit No.
Quarantine Material	Various	Greenstar Ltd	WL 136-2
Waste Oils	Various	Atlas Environmental Ltd	WL 184 -1
Asbestos	17 06 05*	AVR Safeway Ltd	WL 50-1