

SECTION E – WASTE ACCEPTANCE AND HANDLING

Sub-Section	Title	Location of Information
E.1	Existing & Proposed Waste Types and Quantities	WLA
E.2	Waste Acceptance Procedures	WLA Attachment E.2 Figure E.2.1: Summary Flowchart for Waste Acceptance at the Whitestown Facility
E.3	Waste Handling Procedures	WLA Attachment E.3
E.4	Hours of Operation	WLA Attachment E.4
E.5	Raw Materials, Substances, Preparations and Energy	WLA Attachment E.5
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E.7	Plant	WLA Attachment E.7

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E. WASTE ACCEPTANCE AND HANDLING

X PROPOSED

E.1 Existing Waste Types and Quantities

A detailed inventory of the types and quantities of wastes currently accepted at the site and proposed to be accepted should be submitted.

TABLE E.1.1 WASTE TYPES AND QUANTITIES

WASTE TYPE	TONNES PER ANNUM (existing)	TONNES PER ANNUM (proposed)	TOTAL (over life of site) tonnes
Household	0	20,000	120,000
Commercial	0	40,000	280,000
Sewage Sludge	0	NIL	NIL
Construction and Demolition	0	60,000	420,000
Industrial Non-Hazardous Liquids	0	0	0
Industrial Non-Hazardous Sludges	0	0	0
Industrial Non-Hazardous Solids		60,000	420,000
Hazardous	0	0	
Waste imported for restoration purposes		60,000	180,000

NOTE: The amounts will vary from year to year.
 Maximum import rate = 180,000 tonnes
 per annum (see EIS, Volume I, Section 2.2.)

TABLE E.1.2 HAZARDOUS WASTE TYPES AND QUANTITIES *

HAZARDOUS WASTE	DETAILED DESCRIPTION	Tonnes Per Annum (Existing)	(Tonnes Per Annum Proposed)
Waste Oil			
Oil filters			
Asbestos			
Oil/Sand Mixtures or Mixtures of Oil and Other Material			
Wood Preservative Waste			
Petroleum and Gas Treatment Wastes			
Inorganic Chemical Processes Wastes			
Organic Chemical Processes Wastes			
Agrochemical Wastes			
Infectious Healthcare Waste			
Chemical Industry Waste			
Photographic Processing Waste			
Paint and Ink			
Batteries			
Fluorescent Light Bulbs			
OTHER HAZARDOUS WASTE (APPLICANT TO SPECIFY)			

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Not Applicable

TABLE E.1.3 NON-HAZARDOUS WASTE TYPES

INERT OR INACTIVE WASTE	Check (if accepted)	Tonnes per Annum	Check (if proposed to be accepted)	Tonnes per Annum	Additional Information
Subsoil	<input type="checkbox"/>		<input checked="" type="checkbox"/>		Not Applicable
Topsoil	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Brickwork	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Stone, Rock and Slate	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Clay	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Natural Sand	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Concrete	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Pottery & China	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Solid Road Planings, Solid Tarmacadam, Solid Asphalt	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
BIODEGRADABLE WASTE	Check (if accepted)		Check (if accepted)		
Wood & Wood Products	<input type="checkbox"/>		<input checked="" type="checkbox"/>		Not Applicable.
Paper & Paper Products	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Vegetable Matter	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
non-infectious Health-Care Waste	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Natural & Manmade Fibres	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Road Sweepings	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Gully Emptyings	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Septic Tank Waste	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Silt & Dredgings	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Ash & Cinders	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Food Stuffs	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Vegetable Oil	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Animal Excrement (including punch contents)	<input type="checkbox"/>		<input type="checkbox"/>		

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E.2 Waste Acceptance Procedures

Note: these must comply with the requirements of the Landfill Directive (1999/31/EC).

Procedures for checking waste loads as they arrive on site and as they are deposited must be included. These should follow the requirements of the Agency's Waste Acceptance Manual. A copy of these procedures and other associated documentation, should be included as Attachment E.2. Additional advice on completing this section is provided in the Guidance Note.

Attachment included	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	not applicable <input type="checkbox"/>
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SEE ATT.* E2

* ATT = Attachment.

E.3 Waste Handling

Waste handling and site operating procedures should be described in Attachment E.3, this should include information on the methods and processes for handling waste on-site. Additional advice on completing this section is provided in the Guidance Note. Table E.3

For existing facilities Table E.3 should be used to log wastes leaving the site.

Table E.3: Note: for existing facilities only: Standard Form For Each load of Waste Leaving the Facility

Date: / /	EWC Code	Quantity	Recovery, reuse or recycling	Final Disposal
Waste		Tonnes	(undertaker, name of facility, licence Reg. number or permit number)	(undertaker, name of facility, licence Reg. number or permit number)

Attachment included	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	not applicable <input type="checkbox"/>
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SEE ATT. E3.

* ATT = Attachment

E.4 Hours of Operation

Attachment E.4 should contain details of hours of operation for (1) landfill facilities, (2) civic waste facilities and (3) 'other' facilities for each of sections E.4(a) to (d). Refer to Guidance note section E.4 for further details on completing this section.

E.4.(a) Proposed hours of operation

SEE ATT. E.4

E.4 (b) Proposed hours of waste acceptance

E.4.(c) Proposed hours of construction and development works at the facility and timeframes.

E.4.(d) Any other relevant hours of operation expected.

*ATT = Attachment.

E.5 Raw Materials, Substances, Preparations and Energy

Attachment E.5 should contain a list of all raw, product and ancillary materials, substances, preparations, fuels and energy which will be utilised in or produced by the activity. Information on any insecticides, herbicides or rat poisons etc. should also be provided with their respective data and safety sheets. The Standard Forms, provided in Annex I, should be used in the description of these materials, substances, etc., where relevant. Additional advice on completing this section is provided in the *Guidance Note*.

Attachment included yes no not applicable

SEE ATT. E.5

*ATT = Attachment

E.6 Targets

State whether all waste will be subject to treatment prior to landfilling.

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

- (a) a reduction by 16/07/06 to 75% by weight of the total amount of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available;
- (b) a reduction by 16/07/09 to 50% by weight of the total amount of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available;
- (c) a reduction by 16/07/16 to 35% by weight of the total amount of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available;
- (d) Evidence should be provided to show that energy will be used efficiently.

SEE ATT. E.6

*ATT = Attachment.

E.7 Plant

Attachment E.7 should provide information on all plant used at the facility.

Attachment included yes no not applicable

SEE ATT. E.7.

*ATT = Attachment.

ATTACHMENT E.2 – WASTE ACCEPTANCE PROCEDURES

1.0 Introduction

These Waste Acceptance Procedures address the proposed method for the acceptance of waste at the Whitestown facility.

There are a number of different waste streams that will be processed and/or recovered at the facility.

- Previously Deposited Wastes For Excavation, Recovery and/or Disposal
- Imported Wastes for Recovery and/or Disposal

A summary flowchart for waste acceptance is included in Figure E.2.1. attached.

2.0 Excavated Wastes for Recovery and/or Disposal

2.1 Procedures for the Excavation of Waste at the Facility

During the excavation of wastes at the facility the following procedures will apply:

1. All wastes will be inspected during excavation (Inspection Area - IA).
2. All wastes will be processed using the Mobile Recycling Unit - MRU (See EIS Volume I, Section 2).
3. All processed or partly processed wastes will be stockpiled on site pending final recovery.
4. Excavated materials will then be brought to the appropriate recovery/disposal area for further processing, which may include the Resource Recovery Building (RRB), or a permanent Mobile Recycling Unit (MRU) adjoining the RRB.
5. Upon arrival at the appropriate recovery/disposal area the driver will be directed to the inspection area for tipping.
6. Further inspections of these materials will be carried out as the wastes are further processed, reused on site or removed from the site.
7. Materials that cannot be recovered/disposed of on site will be removed to the waste quarantine area to await alternative recovery/disposal.

2.2 Procedures in the event of Excavation of Hazardous Waste Materials

If any suspect hazardous materials are encountered during the excavation of wastes the following procedures will apply:

1. Operators shall inform the Facility Manager or the deputy facility manager.
2. The material will be identified on the ground with tape or cones or other suitable marking devices/measures.
3. The Facility Manager or deputy shall inspect the material and call environmental consultants as required.
4. Samples will be taken and the waste will be characterised by testing or other suitable means, as required.
5. The materials shall be removed from the excavations, (taking into account any precautions that have been specified, as a result of the testing/investigations to protect the environment or the health and welfare of the operatives) and placed in a mobile, temporary fixed or permanently fixed Quarantine Area if further tests/investigations show the material to be unacceptable (See Figure E.2.1).
6. The material shall be removed within 3 months of placement in a Quarantine Area if it is deemed to be unsuitable for recovery or disposal at the facility within the conditions of the Licence. A load or waste rejection form shall be completed.
7. Should further investigation or testing show that the material is deemed to be suitable for recovery or disposal at the facility then a detailed waste inspection report shall be completed outlining all details relating to the discovery and investigations and where the materials was recovered or disposed of on the site.

3.0 Imported Wastes for Recovery and/or Disposal

3.1 Procedures Prior to the Acceptance of Waste at the Facility

Prior to acceptance of wastes at the facility the following procedures will apply:

1. The waste producer/contractor shall contact the Facility Manager to discuss the site's waste acceptance requirements in advance of the intended delivery of a waste to the facility.
2. The waste producer/contractor shall be required to complete a "Waste Acceptance Control Form" to establish the nature of the waste. The 'Waste Acceptance Control Form' will at a minimum contain the following information: waste owner / source and origin of waste / description of waste / waste type and EWC code / type of process producing the waste / amount of waste / existing data of waste / physical form / colour / odour.

3. The waste producer/contractor shall be required to undertake Level 1 Characterisation and accurately inform the Facility Manager on the results of the waste characterisation prior to acceptance / transport to the facility.
4. The Facility Manager will approve or reject the waste producer/contractor's waste.
5. If the waste is acceptable the Facility Manager shall send a Customer Service Agreement to the client for signing.

3.2 Procedures Upon Arrival of Waste at the Facility

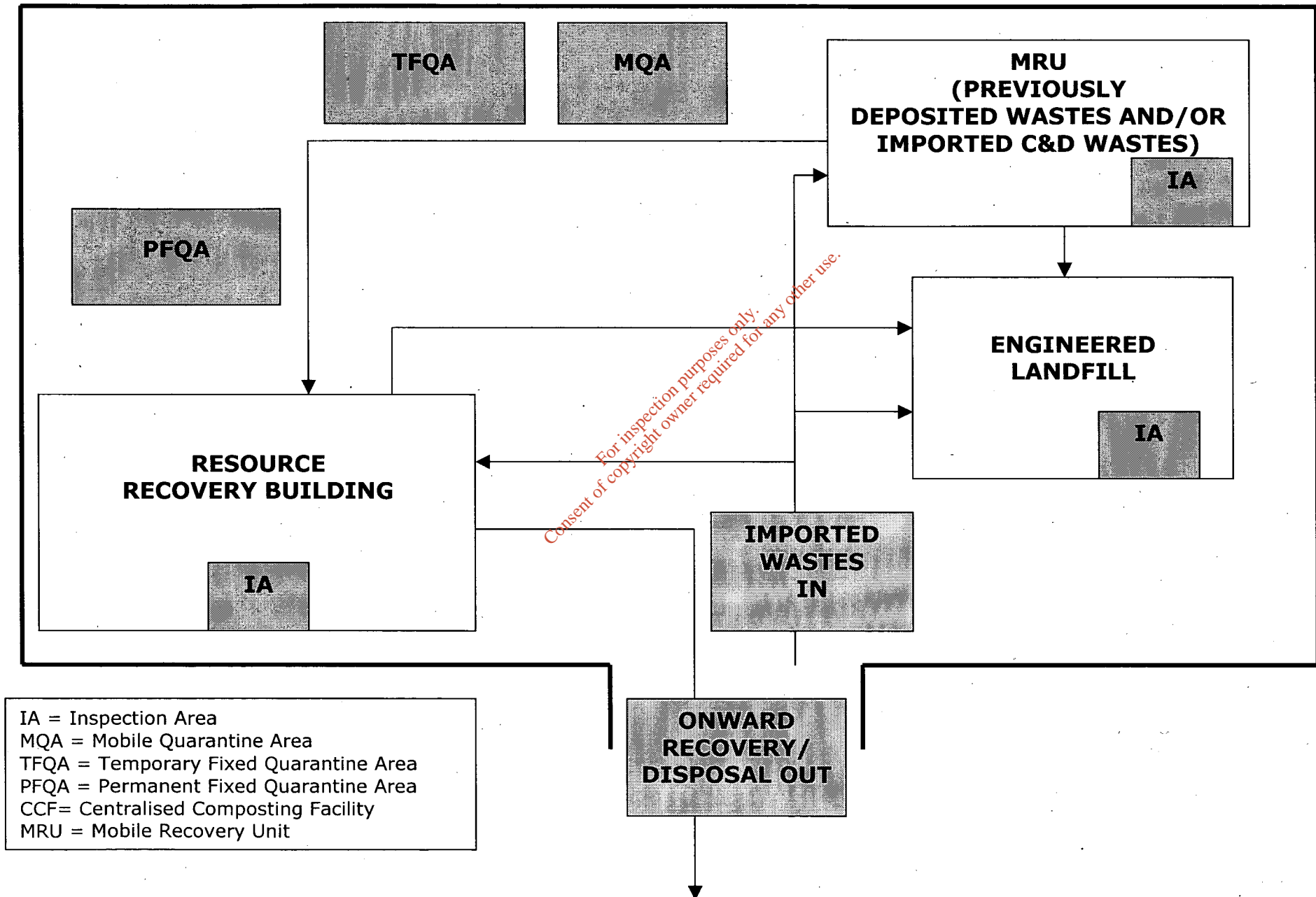
Upon arrival at the facility the following procedures will apply:

1. Only customers arriving at the facility with a contract will be admitted.
2. Lorries will be weighed in.
3. Each load will be logged in at the weighbridge and the following details will be documented:
 - Date
 - Name of the carrier (including registration details)
 - Vehicle registration number
 - Name of the producer of waste
 - Name of the waste facility from which the load originated
 - Waste type
 - Quantity of waste in tonnes
 - Name of the person checking the load
4. Drivers will be directed to the appropriate tipping area to unload. Loads will be inspected where tipped. Tipping will be strictly supervised by a site operative and if any unacceptable material is observed a tracked excavator, operated by site staff, will be used to recover and load the unacceptable material back into a vehicle.
5. The hauler will be directed to one of three tipping areas, depending on the type of waste in the load:
 - Loads of treated wastes, which do not require further processing for waste recovery purposes will be directed to the residual waste disposal facility, where they will be tipped and inspected;
 - Loads of untreated (C&I / Household) wastes will be directed to the Resource Recovery Building, where they will be tipped and inspected. There are a number of waste handling processes that may be carried out inside and around the building;
 - Loads of predominantly inert C&D wastes that require further processing for waste recovery purposes will be directed to a Mobile Recovery Unit, which will be positioned initially near the existing waste zones, or laterally in a lined area or the hardstand adjoining the RRB.

6. The material will be examined for unacceptable or hazardous materials. Should unacceptable waste be discovered in the tipped load, a report will be completed by the site personnel, and redirected for appropriate onward disposal.
7. The waste will be processed for recovery/disposal at the following locations:
 - Resource Recovery Building
 - Central Composting Facility
 - Mobile Recycling Unit
8. Waste acceptance procedures that are outlined in EPA manuals will be reviewed and incorporated into the standard operating procedures for the site. Further details on the plant and processes in the RRB and at the MRU are provided in previous Section 2 of the EIS, Volume I.

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FIGURE E.2.1: SUMMARY FLOWCHART FOR WASTE ACCEPTANCE AT THE PROPOSED BRI FACILITY IN WHITESTOWN LOWER, CO. WICKLOW - MARCH 2004



IA = Inspection Area
 MQA = Mobile Quarantine Area
 TFQA = Temporary Fixed Quarantine Area
 PFQA = Permanent Fixed Quarantine Area
 CCF= Centralised Composting Facility
 MRU = Mobile Recovery Unit

ATTACHMENT E.3 – WASTE HANDLING PROCEDURES

1.0 Introduction

General procedures/guidelines that will be followed with regard to the handling of waste at the facility are provided below.

There are a number of different waste streams that will be handled at the facility;

- Excavated Waste for Recovery and/or Disposal
- Imported Wastes for Recovery and/or Disposal

2.0 General Procedures for the Handling of Waste at the Facility

1. Any homogeneous loads of clean soil (and the like) will be placed at designated locations, inspected and stockpiled prior to reuse on the site for engineering or restoration purposes.
2. Any homogeneous loads of concrete, bricks etc. will be unloaded in a designated area, inspected and stockpiled pending crushing and screening. Some of these products will be reused on the site for engineering or restoration purposes.
3. Loads of mixed wastes that are excavated from the previously deposited wastes, or imported for processing, shall be stored temporarily in designated areas prior to being subjected to recovery activities at the facility (RRB or MRU). Processed or partially processed wastes shall be stockpiled in designated areas prior to recovery or transportation off-site to markets and/or appropriate recovery facilities. A grab or excavator will separate any bulky or unacceptable materials. The balance of the wastes will be fed into the processing system.
4. Loads of unacceptable waste, which has been imported, will be rejected and turned away from the facility. Rejected loads will be documented. Any unacceptable wastes noted after waste unloading will be removed and quarantined in a designated waste quarantine area. Quarantined wastes will be stored for less than three months.
5. Any potentially unacceptable previously deposited waste that is encountered in excavations or in feed stockpiles at the processing areas will be investigated/tested and proven to be unacceptable prior to removal for quarantine in accordance with the following procedures:
 - Samples will be taken and the waste will be characterised by testing or other suitable means.

- If the wastes are deemed to be unacceptable by testing/further investigation, the unacceptable materials shall be removed from the excavations, (taking into account any precautions that have been specified, as a result of the testing/investigations to protect the environment or the health and welfare of the operatives) and placed in a Quarantine Area.
 - The material shall be removed within 3 months of placement in a Quarantine Area if upon further testing/investigation it is deemed to be unsuitable for recovery or disposal at the facility, within the conditions of the Licence. A load or waste rejection form shall be completed.
 - Should further testing or investigation show that the material is deemed to be suitable for recovery or disposal at the facility then a detailed waste inspection report shall be completed outlining all details relating to the discovery and investigations and where the materials was recovered or disposed of on the site.
6. All stockpiles shall be maintained to minimise dust generation which will be accomplished by spraying the stockpiles.
7. All waste activities associated with the handling of waste at the Resource Recovery Building shall be carried out on an impermeable hardstanding area inside the building. All wastes destined for onward disposal shall be stored inside the building. Wastes destined for recovery off-site will only be stored outside the building.

3.0 Procedures for Wastes at Resource Recovery Building (RRB)

1. The following wastes will be received at the RRB:
- Recovery of previously deposited wastes following the initial screening/separation activities carried out using the MRU
 - Processing and treating imported C&I and C&D wastes for recovery purposes
 - Processing and treating imported household wastes for recovery purposes
 - Receipt and processing of imported source separated organic waste for composting
 - Receipt and processing of imported source separated recyclable wastes
2. The RRB will contain various plant and other infrastructure, which is detailed in Attachment E.7. It is intended that it will be multi-

functional, that is the plant and infrastructure can be used for a variety of applications.

3. It will be used for processing previously deposited wastes, which cannot be processed in the MRU. As well it will be used to receive and process various imported wastes. It will also include infrastructure to process imported source separated wastes, as detailed in Section 2 of the EIS.

4.0 Procedures at the On-site Residual Waste Disposal Facility

- Wastes will be tipped and inspected
- Wastes will be placed in lifts of 3.0 metres and then compacted with a compactor
- Compacted waste will be covered with daily cover, which may be inert fill or artificial materials
- The width of the daily working area will be 30 metres.

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ATTACHMENT E.4 – HOURS OF OPERATION

The proposed operating hours for the facility are as follows:

1. Opening Times

Monday	7:00 am to 6:30 pm
Tuesday	7:00 am to 6:30 pm
Wednesday	7:00 am to 6:30 pm
Thursday	7:00 am to 6:30 pm
Friday	7:00 am to 6:30 pm
Saturday	7:00 am to 5:00 pm
Sunday	Closed all Day

2. Hours of Waste Acceptance

Monday	8:00 am to 5:30 pm
Tuesday	8:00 am to 5:30 pm
Wednesday	8:00 am to 5:30 pm
Thursday	8:00 am to 5:30 pm
Friday	8:00 am to 5:30 pm
Saturday	8:00 am to 4:00 pm
Sunday	Closed all Day

Hours of construction may include an earlier start time and finish time Monday to Friday (i.e. 7.00 am to 7.00 pm) and/or Saturday (i.e. 7.00 am to 2.00 pm).

The facility will also be closed for Bank Holidays.

ATTACHMENT E.5 – RAW MATERIALS, SUBSTANCES, PREPARATIONS AND ENERGY

- Diesel** The annual diesel consumption of the proposed facility equipment is not currently available as all plant has not been selected. Details will follow.
- Electricity** Electricity consumption is not currently available as all plant has not been selected. Details will follow.
- Water** Site water will be obtained from a water main, which is fed by the Edestown Spring group water supply. Water will be used for dust suppression, wheel wash, toilets and a small canteen.
- An employee rate of consumption of 60 litres per day is assumed. There will be possibly up to 10 employees on the site when the waste management facility water usage by employees is estimated to be in the range of 165 m³/year.
- Vermin Control** Vermin controls will be employed. Specific details of these will be provided by the company contracted to implement a vermin control plan if and when required. Brownfield Restoration Ireland Ltd. will furnish to the Agency the nature and quantities of chemicals, if and when they are used.
- Herbicides** Brownfield Restoration Ireland Ltd. will furnish the nature and quantities of chemicals if and when they are used.

ATTACHMENT E.6 – TARGETS

All waste will be subject to physical, mechanical and biological treatment prior to disposal.

A Central Composting Facility is being provided to ensure that Biodegradable Municipal Waste is being treated before landfill. The intent of this facility is to recover all biodegradable waste, where possible. The biodegradable wastes will be treated in the composting facility, prior to onward use.

10,000 tonnes per annum of Biodegradable Municipal Waste (Domestic) will be accepted at the facility. Picking Lines/Plant will be used to remove paper, cardboard, wood etc.

The reduction targets of the Landfill Directive (1999/31/EC) relating to that waste type are to be achieved by providing the aforementioned infrastructure (See Section 2, Volume I and Appendix 3, Volume II of the March 2004 EIS – Composting Report).

In terms of energy reduction, the following will be implemented at the Brownfield Restoration Ireland site:

- Gas Utilisation - Landfill gas from the facility will be utilised to provide electricity for the facility
- Leachate Flow - Where possible, gravity flow of the leachate will be used to reduce the need for pumping systems
- Truck Movements - Trucks will not be left idling
- Lighting - Energy saving lighting will be used
- Water - Water use will be kept to a minimum

ATTACHMENT E.7 – PLANT

The Mobile Waste Recovery Unit (MRU) will include some or all of the following plant:

- 20 tonne (minimum) excavator(s),
- 25 to 40 tonne dumpers,
- Finger screen(s),
- Mobile picking station
- Shredder,
- Trommel screen,
- Crushing plant,
- Magnet to remove metals, and
- Air compressor with blower to remove light wastes.

The plant inside the Resource Recovery Building (RRB) will comprise some or all of the following:

- Excavator (s)/ Grabs
- Wheeled Loader
- Fingerscreen(s)
- Trommel Screen
- Shredder
- Various hoppers and conveyors
- Picking lines
- Magnet to remove metals
- Eddy Current (aluminium)
- Air compressor with Blower to remove light wastes
- Baler
- Fork-lift

Possible plant and equipment to be used in the Centralised Composting Facility (CCF) attached to the RRB include:

- Feedstock Mixer
- In-vessel composter (as designed by Wright Environmental Management Inc.)
- Other equipment available in the RRB

Plant related to waste disposal and covering in the lined landfill will include:

- Waste Compactors
- Excavator
- Bull dozer
- 25-30 tonne dump truck
- JCB / Road Sweeper
- Farm tractor and bowser

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