Midland Waste Disposal Company Ltd.,

Waste Licensing
Waste Recovery/Disposal Activities
(Other than Landfill Sites)

Section D

Infrastructure & Operation

Midland Waste Disposal Company Ltd.,

Waste Licensing

Waste Recovery/Disposal Activities
(Other than Landfill Sites)

Section D1

Infrastructure

D.1 INFRASTRUCTURE

D.1.a *Site Security Arrangement including gates and fencing*

Site security arrangements for the facility remain the same as that given in the original application. As part of the waste licence review, it is proposed to extend the hours of operations from 06:00 to 20:00 Monday to Saturday with waste handling occurring from 07:00 hours onwards. Outside of opening hours all entrances are locked with secure gating.

Entry to the yard area of the site is restricted to employees of Midland Waste Disposal Company Ltd. A separate entrance is used to the office complex with car parking facilities available.

There are three entrance ways into the site (office entrance, general site entrance and weigh-bridge entrance) and these are located along the northern boundary of the site. All entrance ways are fitted with electronic security gates operational only by authorised zapper holders.

All boundaries are fenced with 810m of continuous palisade fencing along the boundary. The south, east and west boundaries are also made up of a mixture of established tree, shrub, hedgerow.

D.1.c *Design of Hardstanding Areas*

Hardstanding type areas (concrete over a hardcore base) is located within the yard area of Midland Waste Disposal facility. To the north of the Recycling Plant Building the entire yard area is covered with hardstanding. To the south of the Recycling Plant Building an area covering ca. 9600 m^2 is hardstanding. The southern most section of the facility consists of construction backfill within the area of a disused quarry (refer to *Drawing MW LR1 Existing Site Works at Midland Waste* and *Drawing MW LR2 Site Works at Midland Waste*). It is proposed to extend the area of hardstanding on an on-going bases. (refer to *Drawing MW LR3 Proposed Site Works at Midland Waste*).

Surface water run-off from all hardstanding areas is directed into the surface water drainage infrastructure as detailed in section D.1.k.

D.1.d *Plant*

Currently waste handling and processing equipment at the facility are capable of handling 2880 tonne/day and 1296 tonne/day respectively.

Ref	Equipment	Standby	Max. Standby Capacity Tonne/Day
1	• 2 no. Industrial compactors	1 no. standby compactor (can be used to compact newsprint and non-recoverable wastes)	22 tonne / load ca. 3 loads/day
2	• Baler	Compactors on site	10 tonne/hr (120 tonnes/day)
3	• Hogger	Compactors on site	10 tonne/hr (120 tonnes/day)
4	• Bobcat	There is 1 Volvo bobcat on site	20 tonne/hr ea. (240 tonnes/day)
5	• Forklift	The bobcats on site are available and can be utilised	20 tonne/hr (240 tonnes/day)
6	• 2 x Hitachi & grab	Bobcats, Samsung grab and the track shovel on site can be utilised	20 tonne/hr (600 tonnes/day)
7	• Samsung grab	Bobcats, Hitachi & grab and the track shovel on site can be utilised	30 tonne/hr (360 tonnes/day)
8	• Conveyor Belt	Floor manual sorting process Bob cat	10 tonne/hr (120 tonnes/day)
9	• 2 x Shredder	Compactors on site	50 tonnr/hr (600 tonne/day)
10	• 2 x Trommell & conveyor system	Compactors on site	30 tonne/hr (360 tonnes/day)
11	• Volvo loading shovel	Floor manual sorting process Bob cat	
12	• Blender unit	Used to mix waste prior to the composting unit	120 tonnes/day
13	• VCU Composting unit*	Used at the site for the composting of waste.	80 tonnes/day

*It is proposed, in the long term, to install a second VCU composting unit at the facility, capable of handling an additional 80 tonnes/day.

Current waste acceptance procedures involve the use an Integrated Waste System. The software is linked to the on-site weighbridge and is used for recording of waste quantities accepted on-site. The vehicle registration number, customer and product is in-putted into the system and from this detail on the source of the waste can be obtained. The computerised system is held within a temporary operational storage hut which is located close to the weighbridge.

D.1.g *Design and Location of Fuel Storage Areas*

The main bulk fuel storage as the facility consists of the following:

- 6000 gallon main diesel tank
- 200 L kerosene storage tank relocated within the wash room
- Hydraulic oil/Engine oil tanks in workshop/diesel shed (2 x 300 gallon)

All tanks and fuel dispensing areas are held within bunded areas. The integrity and water tightness of the bunds on site were undertaken in 2002 & 2004 and all bunds were certified by watertight.

There are 4 no. spill kits, containing absorbent materials and booms, located throughout the facility. In the event of any spillages or leakages occurring at the facility, the spill will be retained with absorbent booms and material. Any used material will be removed and disposed of off site by an appropriate waste contractor.

D.1.h Waste Quarantine Areas

A Waste Quarantine Area was constructed within the Recycling Plant Building. This covers a 5 m^2 area and is contained within a 150 mm bund (Capacity of 0.75 m^3).

D.1.i Waste Inspection Areas

Waste Inspection Areas were installed at the facility within recycling Building/opearation areas. Each waste inspection area is identified by a sign on the wall of the Recycling Plant Building, (marking of recycling plant floor unsuitable due to traffic movements and working in the area). Each driver delivering waste into the Recycling Plant Building was issued with laminated cards illustrating and detailing the waste inspection areas.

D.1.k Sewerage and Surface Water Drainage Infrastructure

Details of the sewerage, dirty water and surface water drainage infrastructure in place at the facility as shown in *Drawing D.1.1: Existing Site Infrastructure*).

Sewerage Drainage Infrastructure

A small scale treatment system (Bord na Móna Puraflo™ system) is installed at the facility to services all domestic wastewaters emanating from the office buildings, canteen and site accommodation. The discharge from the treatment system discharges into the foul water holding tanks which are emptied on a regular basis and discharged into the local authority treatment plant. There is a high level visual alarm attached to the foul water storage tank and Puraflo system to indicate when the level of the water is high to ensure that the overflowing of the tank does not occur.

Dirty Water Drainage Infrastructure

Any waters generated within the Recycling Plant Building, the glass storage bays, composting area, and the washing area are directed through the foul water drainage system into the foul water storage tanks.

Waters emanating from the washing area pass through a silt trap (conforming to BS 8301:1985) prior to entering the foul water holding tanks.

Surface Water Drainage Infrastructure

Surface water run-off from all hardstanding areas is directed into the surface water drainage system. Currently there is one surface water drainage systems at the facility which directs water from the site towards the north-west corner of the site where the water is discharged to the ground through a soakpit via an oil interceptor (refer to *Drawing MW LR1 Existing Site Works at Midland Waste)*. It is proposed to install a second drainage system at the facility to divert the surface water run-off from the southern section of the site is directed towards the eastern boundary, where the water will be discharged to the ground through a soak pit (via an oil interceptor) (refer to *Drawing MW LR3 Proposed Site Works at Midland Waste*).

An oil interceptor (class I separator as described in the European Standards prEN858) was installed at the facility. The oil interceptor was installed in the north-west corner of the site along the clean surface water drainage system after the sedimentation trap and prior to discharge to ground point. Two shut off valves were also fitted to the drainage system, one prior to the sedimentation tank and one after the oil interceptor. It is proposed to install a second oil interceptor into the southern drainage system prior to the discharge into the soak pit. (refer to *Drawing MW LR3 Proposed Site Works at Midland Waste*).

D.1.l *All Other Services*

Water:
Drinking water is supplied to the facility through the Kilsaran groundwater supply source. Rainwater is collected from the roof areas and stored within a storage tank. This water is re-used at the facility wherever possible for truck washing facility and the sprinkler system and topped-up when necessary by the Kilsaran groundwater supply source.

Energy:
The site is serviced by ESB. It is proposed to up-grade the electrical supply at the facility in 2005.

Telephone:
The facility is serviced by telecommunication systems (tel/fax).

D.1.n *Site Accommodation*

Site accommodation at the facility consists of an office building, (housing all administration & management offices), port-a-cabin for canteen facilities for the site staff and a mobile home for site security and a weighbridge hut to hold the computerised system. The locations of these are shown in (refer to *Drawing MW LR1 Existing Site Works at Midland Waste).*

D.1.q *Any Other Waste Recovery Infrastructure*

There are 2 no. waste compactors on-site which are used to for the compaction of wastes prior to final disposal/recovery off-site. In addition the following waste recovery infrastructure are present at the facility. The location of all infrastructure is detailed in *Drawing D.1.1: Existing Site Infrastructure*).

Timber Shredding Machine
A timber shredder is located at the facility for the shredding of all wood and timber to be used in the composting system.

Trommel System
A trommel system is in place at the facility for the processing of Construction & demolition wastes, household municipal wastes and commercial wastes. This system is located along

the eastern wall of the Recycling Plant Building and consists of a 30 ft barrel trommel (hourly capacity: 20 tonne), M&J Shredder: 4000 series (hourly capacity: 50 tonne) and Conveyor Belt System including hand picking line.

Composting System
Refer to section D.1.r

In-Floor Baling System
An in-floor baler system is located within the western sections of the Recycling Plant Building. This consists of a 6.3 m x 2.7 m and 1.25 m deep pit with an in floor conveyor system into the on-site baler system.

D.1.r Composting Infrastructure

A VCU composting unit is located on a hardstanding area to the west of the Recycling Plant Buidling. The composting unit consists of 4 chamber units with a capacity of 21 tonne/day. The waste types composted include green waste collected through skip collection (segregated at source and at the facility), the fines generated from the trommel process (from MSW), and shredded wood waste.

It should be noted that there is no leachate generated in the process as all moisture is lost as stream, due to the temperature profile within the units. Surface water run-off from the hardstanding area is collected and directed into the foul water storage chamber on-site for final disposal off-site by an appropriate contactor. A concrete lip has been constructed around the hardstanding area on which the composting unit is located to prevent any unauthorised discharges to ground.

It is proposed, in the long term, to install a second VCU composting unit at the facility, consisting of 4 chamber units. This system will constructed along side the existing unit and shall be fed through the existing blender.

D.1.s *Construction and Demolition Waste Infrastructure*

Construction and demolition wastes are processed at the facility through the trommel system as detailed in section D.1.q

Midland Waste Disposal Company Ltd.,

Waste Licensing

Waste Recovery/Disposal Activities (Other than Landfill Sites)

Section D2

Facility Operation

D.2 FACILITY OPERATION

D.2.a *Unit Operations*

Currently, normal operational hours at the Midland Waste Disposal Ltd. facility are between the hours of 08:00 to 20:00 Monday to Saturday. It is proposed to extend the hours of operation within the facility from 06:00 to 20:00 Monday to Saturday. All wastes accepted at the facility for disposal is removed from the facility within 48 hours of its arrival on-site (during bank holidays/weekends waste removed within 72 hours). Current waste acceptance procedures (refer to Attachment C2 and H2) detail the waste handling procedures in place at the facility.

All wastes entering the site are forwarded to the weighbridge system which records the details and quantities of waste accepted on-site. After weighing, each waste load is brought to the enclosed Recycle Plant Building, where it is deposited on the floor for visual inspection to ensure that all wastes comply with the requirements of the existing Waste Licence, Register No. 131-1. The Waste Segregation Manager (Mr. Bernard Kelly) is responsible for carrying out the waste visual inspections and for maintaining a written record of all inspections. Written records of each inspection is recorded.

Within the Recycling Plant Building the waste is sorted according to its recycling potential and is either deemed suitable for recycling/recovery or compacted within one of the compactors on-site and transported off-site for final disposal (non-recoverable waste). The categories of waste deemed suitable for segregation and recycling is dependent on available markets for such materials. Materials commonly accepted for recycling include Steel/ Iron, Cardboard/Newsprint, Timber, Construction & Demolition waste, Green Waste, Plastic and Glass and on occasion empty gas cylinders and tyres. All waste not deemed suitable for recycling/recovery is loaded into designated Ro-Ro Bins, or a 40 foot injector trailer or is compacted within one of two compactors on-site. All compacted wastes are sealed within specialised containers and are subsequently transported for authorised disposal. All waste being transported from the facility by Midland Waste Disposal Ltd. is weighed on the weighbridge. An individual weigh docket is printed for each waste load.

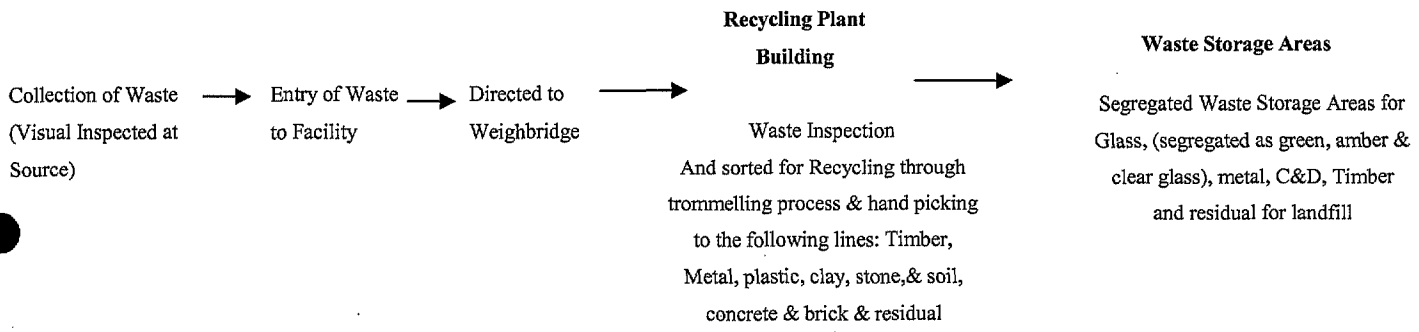
The following operational units are located at the facility (refer to Drawing D1.1 Existing Site Infrastructure for location of activities):

- Trommel including shredder and sorting line;
- In-floor Baler;
- VCU Composting system, including blender;
- 2 no. Compactors;
- Mobile shredder;
- Mobile trommel.

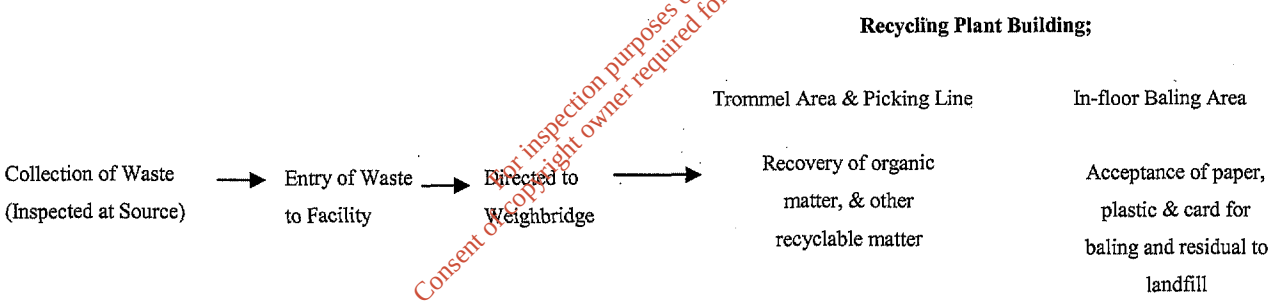
D.2.b *Flow Diagram of the Whole Process*

Midland Waste Disposal Company Ltd., accept the following waste streams: Construction & demolition, Household Municipal waste, and Commercial & Industrial. Waste handling procedures for each process is detailed in attachment H.2.

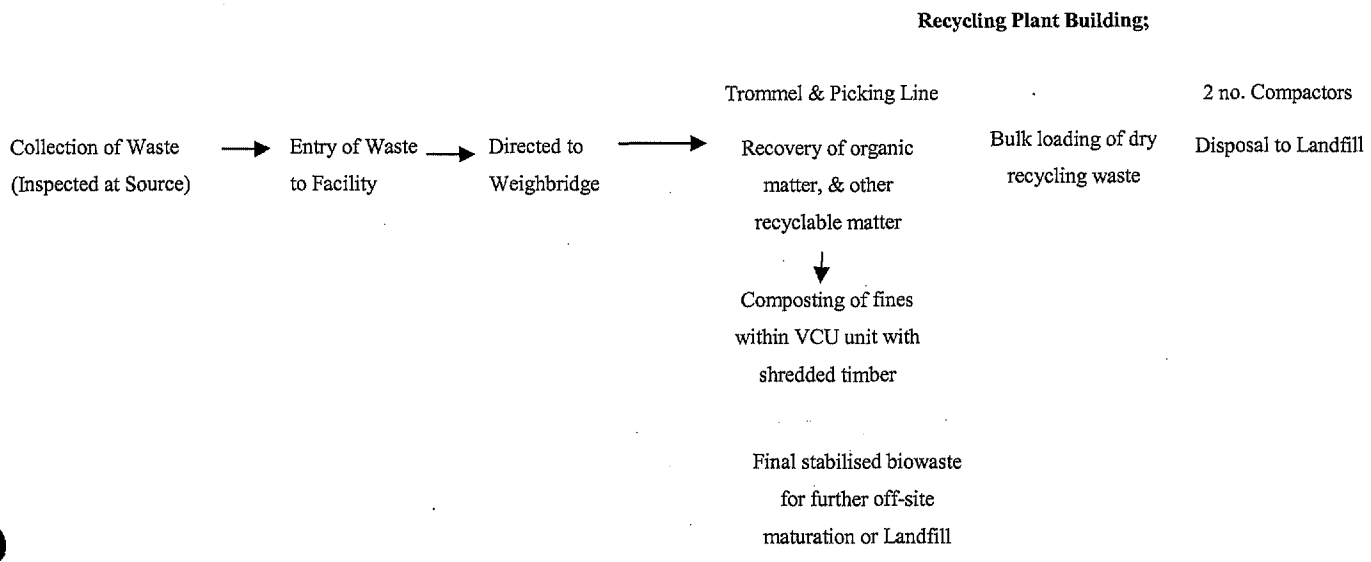
Construction & Demolition Waste



Industrial/Commercial Waste



Household Municipal Waste



D.2.c Emissions to the Environment

The facility operates for the acceptance and handling of waste and as such potential emissions to the environment during normal operation procedures entail the following:

- Dust emanating from the movement of traffic on the hardstanding areas;
- Windblown litter from the recycling plant building and waste storage units;
- Leachate generated;
- Odours from the waste material;

To ensure these emission are minimised the following measures have been put in place:

- Speed restrictions are in place from traffic movement on-site.

- All waste handling and processing is conducted within the Recycling Plant Building in order to prevent dust emanating off-site as a result of waste handling activities and to prevent an increase of noise levels in the vicinity of the facility.

- All dirty waters generated within the waste handling and processing areas (recycling plant building, composting area, waste storage areas) are directed into the foul water storage tank. This tank is emptied on a regular basis and directed off-site to the local authority wastewater treatment plant.

- Nuisance inspections are carried out for litter, noise, vermin, dust, odours and flies. These inspection are carried out by Mr. Francis Flynn, general manager. Any observations were recorded and corrective action procedures carried out where necessary.

- The waste is processed through the system as efficiently as possible in order to prevent odours emanating from the process. The waste fines are removed from the vicinity of the recycling plant building as quickly as possible in order to prevent flies and odours.

- The Composting (VCU) Unit and the trommelling system are inspected on a daily basis to ensure there are no nuisances caused as a result of dust, noise, odours, leachate, debris and/or flies.

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