

**ATTACHMENT D**  
**INFRASTRUCTURE & OPERATION**

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## Attachment D.1 Infrastructure

### D.1(a) Site security arrangements

An office within the waste transfer station building will be used to monitor all traffic entering and leaving the site.

All packaged waste will be stored within a secure area of facility. All waste oils will be stored in tanks within the tank farm. There will always be staff present while the plant is in operation. The storage areas will be locked when not in use.

### D.1(b) Design of site roads

Site roads are surfaced with tarmacadam finish on a consolidated sub base. The number of daily deliveries (8-10) will not significantly impact on the criteria used in the design of the roads within the industrial estate.

### D.1(c) Design of hardstanding areas

All surfaces within the site and adjacent to it are finished as described in (b) above with appropriate drainage to storm sewers.

### D.1(d) Plant

#### • **Plant (required for the Existing Operation)**

The plant required for conducting **existing operations** (i.e. the treatment of healthcare waste) at the proposed facility consists of the following:

- Feed system
- Shredder
- Waste Conveyor system
- Heated Augers
- Hot oil heater
- Condensers
- Disinfected waste conveyor
- Air Filter
- Process control system
- Sharps shredder
- Enclosed compactor

As highlighted earlier in the introduction section of this report. All of the above (current) plant will be decommissioned and dismantled for off-site storage for possible reuse in the future. This will permit a gain in floor space for storage.

The plant required for conducting the **proposed operations** (i.e. handling, storage and off-site dispatch of waste oil materials) at the facility will consist of the following:

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- **Plant (required for the proposed operations)**

- SCADA Computer system with volume gauges
- Pressure washer
- Tank gauge
- Oil pump for loading/unloading waste oils
- 3 no. bulk-oil tanks
- 1 no. spill retention tank
- 2 no. forklifts (diesel/gas)

**D.1(e) Wheel wash**

A wheel wash system is not provided, as the nature of the activity will not give rise to the accumulation of mud on vehicles or vehicle wheels.

**D.1(f) Laboratory Facilities**

There are no plans to provide for a laboratory on-site. Atlas Environmental Ireland can access the laboratories at Envirotech in Cork (Ballycureen Industrial Estate) or Shannon Environmental Services if they need waste identification tests carried out.

**D.1(g) Design and location of fuel storage areas**

There will be seven bunded storage bays in total within the Waste Transfer Station. These will be marked clearly with signage as CK 1 to CK7. CK1 will be a dedicated quarantine area for non-conforming waste material. Each bay will be 4.5 m wide and 9.5 m long. All seven bays will be in parallel to each other and will be divided from each other by a separation wall. The entrance to each bay will be ramped. The ramp height will be approximately 300 mm in height. Each bay will have a corner sump which will allow excess solvent/effluent to drain and be conveyed to a central holding/retention tank.

Waste oils will be bulked-up in one of three tanks. This tank farm will be housed within the main waste transfer building but will be separately bunded from the rest the storage facility. A separate diesel fuel storage tank to power the site forklifts will also be sited in the tank farm. A bund wall of approximately 1.5 m will separate this area from the tanker inspection area.

All tank and drum storage areas will, be bunded locally and to a volume not less than the greater of the following:

- 110% of the capacity of the largest tank or drum within the bunded area; or
- 25% of the total volume of the substance, which could be stored within the bunded area.

All drainage from bunded areas will be diverted for collection in a retention tank and periodically taken off site for treatment/disposal.

All drummed/package waste will be stored on the basis of their hazard class and based on the ADR classes and rules of segregation. SOP No. 75 is in place to deal with 'incoming packaged waste'

Site operators will segregate incoming waste into one of the following storage categories and store the waste in the appropriate banded storage bay:

Storage Area	Class of Wastes
Bund CK1	Quarantined wastes
Bund CK2	Class 8 (corrosives – acidic) Batteries
	Non-regulated e.g. cooking oil,
Bund CK3	Class 8 (Corrosive – Alkaline) -Photographic,
	Non-regulated e.g. Fluorescent Tubes,
Bund CK4	Non regulated – Fluorescent Tubes, antifreeze, waste lubricating oils (non-flammable), Brake fluid, Windscreen Washer fluid;
	Class 2 (gases/aerosols)
Bund CK5	Class 7 - Healthcare Wastes –refrigeration facilities will be provided in this location
Bund CK6	Class 4.1 Solid Oily Waste
	Non regulated - Used Oil filters,
Bund CK7	Class 3 Flammable liquids e.g. Mixed fuels, paint thinners etc
	Class 4.1 Solid Oily Waste
	Non Regulated – Used oil filters

**Note:** *Non -regulated relates to ADR/IMDG code for transportation where segregation rules are derived from.*

Inspection approved bulk oil is pumped to a tank with sufficient capacity as deemed by the operations personnel.

#### D.1(h) Waste quarantine areas

Storage bay area CK 1 will be a dedicated quarantine area for non-conforming waste material. The waste will temporarily be stored at this bay until the site manager arranges for the customer to collect the waste.

#### D.1(i) Waste Inspection Areas

The waste inspection area will be located adjacent to the tank farm area. This area will be banded. During unloading the truck must be parked so as to locate the unloading valve of the truck. The driver must stay with his truck while the truck is pumping until the tanker is empty and all valves and hoses closed or disconnected as appropriate. Spill trays used during the transfer will be emptied and cleaned of oil by pouring the residue back into the tank. A SOP (No. 40) has been drafted that details the proper procedures for unloading and storage of waste oils.

#### **D.1(j) Traffic Control**

To minimize traffic movements, access to the Gleneden Trading Ltd facility will be restricted to staff, delivery and dispatch vehicles, approved visitors, and approved site service vehicles. Only scheduled waste consignments will be accepted at the facility.

The majority of vehicles arriving at the site are expected to be relatively small panel vans. Articulated vehicles will deliver/collect waste oils at the facility.

To minimise vehicle movements originating from the facility, Gleneden Trading Ltd will, where possible, ensure that all waste shipments off site are at maximum load capacity.

#### **D.1(k) Sewerage and surface water drainage infrastructure**

All hardstanding around the building are connected to a storm water drainage system. Leakage and spill effluent will be contained within the bunded storage areas by draining to sumps connected via a pipe network to a retention tank. The contents of this tank, when full, will be brought off-site for treatment and safe disposal.

#### **D.1(l) All other services**

The following site services are provided:

- Electrical power for office & site lighting
- Natural gas mains for office heating
- Telephone and fax point
- Mains water

#### **D.1(m) Plant sheds, garages and equipment compound**

All activities relating to the operation of the waste transfer station will be carried out within the main building. There are no other sheds, garages or equipment holding compounds.

#### **D.1(n) Site accommodation**

Site accommodation is provided within the main building. This will consist of the following:

- **Office**

The office provides a base for the administration of the facility and has a clear view of the entry to the plant and the area where waste is received. All plant records, logs, plans, information, etc. will be filed here. It will serve as the communication centre for the facility with direct fax and telephone lines.

- **Canteen and Toilet Facilities**

The canteen provides tea/coffee facilities. Ladies and gents toilet and shower facilities are also provided.

**D.1(o) A fire control system, including water supply**

A fire hose reel is provided within the plant building which will be connected to the mains water supply.

The building is fitted with a fire alarm system and heat detectors.

The alarm system will be monitored by a security company.

Fire Extinguishers will be provided as follows:

- 2 No. 5 kg CO<sub>2</sub> extinguishers
- 1 No. 2 kg CO<sub>2</sub> extinguishers
- 2 No. 6 kg Aqueous Film Foaming (AFF) foam extinguishers
- 2 No. dry chemical powder extinguishers
- 1 No. hose reel
- 2 No. fire blankets

**D.1(p) Civic amenity facilities**

No civic amenity areas are proposed within the site

**D.1(q) Any other waste recovery infrastructure**

It is not proposed to have any other waste recovery infrastructure on site. The site will receive, hold, bulk-up and dispatch waste off-site.

**D.1(r) Composting infrastructure**

It is not proposed to have any composting infrastructure on site.

**D.1(s) Construction and Demolition waste infrastructure**

It is not proposed to have any construction and demolition waste infrastructure on site.

**D.1(t) Incineration infrastructure**

This is non-applicable.

**D.1(u) Any other infrastructure**

The principal infrastructural elements of the propose development comprise:

- A main warehousing unit to be used for the receiving and storage of waste materials, including hazardous waste. This is the Waste Transfer (WTS) Building.
- A spill storage tank contained within the WTS building
- A tanker inspection area within the WTS
- Welfare facilities and ancillary offices
- Dispatch assembly area within the WTS
- Car parking

## Attachment D.2 Facility Operation

### Plants, methods, processes and operations of the waste facility

Only properly labelled and authorised waste will be received at the facility. Waste will be accepted at the plant from fully licenced and registered carriers. All personnel will be fully trained in waste oil management safety and in healthcare waste handling.

Deliveries of incoming waste will be scheduled to facilitate prompt unloading and storage of material. On arrival at the facility, the site supervisor will direct vehicles for unloading into a dedicated inspection area. While at the facility all vehicles will come under the control of the site supervisor and be subject to his instructions. A C1 form (or other appropriate documentation) must accompany all consignments of waste. The details of the waste type listed on the C1 form must conform to the waste to be unloaded. Any irregularities in the documents will be immediately reported to the site manager who will treat the matter as an official incident and immediately take appropriate corrective action.

Once the wastes have been cleared for acceptance they will be stored in an appropriate designated storage bay or bulk oil storage tanks to await further shipment off-site. Every drum, box and container etc. will be given an individual barcode, which is clearly attached to two sides of the container. An "Incoming Waste Form" will then be completed which records the drum number, the waste type, the drum type, the storage area, the UN number, the condition of the drums and if necessary the weight. If re-drumming is required this will be noted and recorded in the waste variation form.

No hazardous waste treatment will be conducted on site and no additional hazardous waste will be produced as a result of the facility's operation.

The proposed unit operations to be conducted at this facility are as follows:

- tanker inspection area
- bulking-up of road tankers
- hazardous chemical storage
- paper & cardboard baling
- storage prior to dispatch off-site

### Tanker Inspection

When the tanker arrives on site the driver will be directed to the inspection area. Documentation will be checked and verified. Detailed visual inspection will be conducted while the tanker is parked in the bunded storage area.

The arrival of the tanker will be recorded and all administration documentation inspected and cross-checked with the cargo. A tanker bay will be provided located adjacent to the hazardous chemical storage area.

Most solid waste accepted on site will be pre-packed and sealed and simply stored. All waste-oil will be collected by tanker and will be stored in steel bulk tanks or IBCs. Drums will be placed on pallets. The palletised drums or IBCs will be transferred to banded storage or the appropriate designated area. All wastes stored on the basis of their hazard class and based on the ADR classes and rules of segregation. The waste tracking system will thus record all waste accepted on-site.

All procedures generated and implemented will form part of the facility's integrated Environmental and Health & Safety Management Systems.

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### **Bulking-up of road tankers**

It is proposed to bulk-up liquids into road tankers on site. Tankers will reverse into the loading bay (adjacent to the tank farm) for loading to commence. Loading will occur by means of a top loading whereby the waste oil/hydrocarbon liquids are pumped by an intrinsically safe pump into the tanker. A dead man system operates whereby the pumping is only continued while a button is continually pressed. This forced the operators to continually observe the loading process and prevent over filling. Any spillages would be contained as the pipework and tanker manifold are all located within a contained area.

### **Hazardous Chemical Storage**

Site personnel, in accordance with procedures, will check all bulk shipments and individual loads delivered by courier arriving on site. A visual inspection of the load will be carried out to ensure there are no leaks/damage to the consignment. The consignment will then be directed to the waste transfer station where waste will be unloaded and inspected to confirm the accuracy of the documentation and determine the appropriate storage area.

Containers of hazardous waste may be bulked up in the designated repackaging/bulking-up area. This compartment will be bunded. Bulking-up will be strictly controlled and tracked with the implementation of procedures.

Contaminated packaging remaining from the bulking up process will be shredded/crushed and drummed. The drums will be placed in the appropriate storage area while the relevant documents are prepared for off site removal.

### **Paper and Cardboard Process**

Paper/cardboard will be accepted at the facility from pre-approved customers only. Preprocessed material such as shredded and/or baled paper/cardboard will also be accepted.

Deliveries of paper/cardboard will be recorded and inspected by site personnel. Suspect material will be rejected or quarantined. Paper/cardboard will be baled. Baled waste will then be stored prior to off site removal.

### **Storage**

The majority of the waste that will be accepted in at the facility at Raffeen will simply require storage prior to dispatch off site. For example waste accepted in drums or in IBCs or ASPs. All waste on site will be store in the appropriate storage areas.

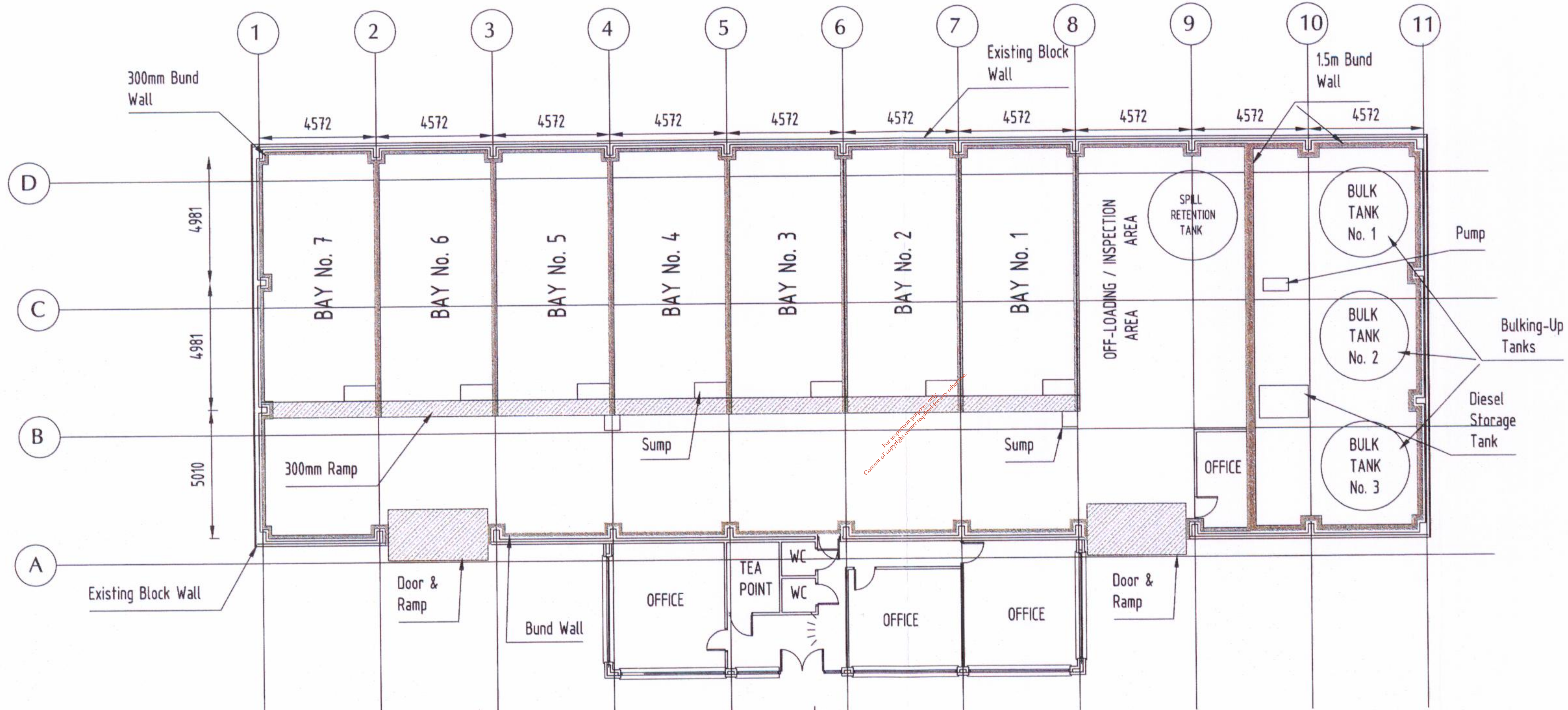
The locations of all the aforementioned activities are shown in Drawing No. 2004-238-01-001 Rev A titled 'Internal Layout of the Gleneden Site at Raffeen Industrial Estate in Attachment D.2.1.

However, this may be subjected to some changes. It may be necessary to reconfigure within the warehouse the location of some designated areas. No relocation of any of these in-house activities will be carried out without first receiving written approval from the Agency. In the event that the Agency does grant the increased scope sought in this licence review, the exact nature of these proposals - including the relevant drawings, equipment specifications etc - will be submitted to the Agency in advance for its agreement. Hence they could fall within the category of 'Specified Engineering Works' in the licence.

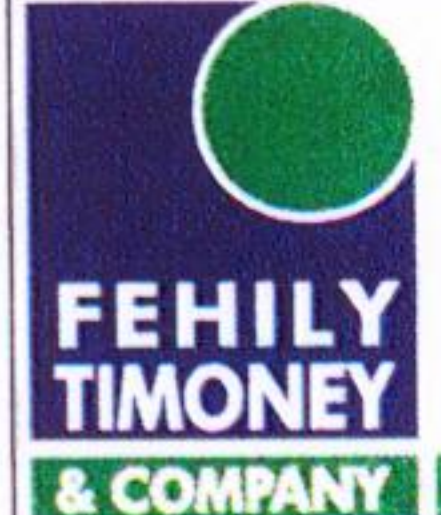
**Attachment D.2.1**  
**Internal layout of Gleneden Site at Raffeen Industrial Estate**

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**FLOOR PLAN**  
Scale 1:100

Rev.	Drawn	MC	Chkd	JDS	Appvd	DOB	Date	Description
							04.11.04	WASTE LICENCE REVIEW APPLICATION
Name of Client GLENEDEN TRADING LTD								
Name of Job WASTE LICENCE REVIEW APPLICATION								
Title of Drawing INTERNAL LAYOUT OF GLENEDEN SITE AT RAFFEEEN INDUSTRIAL ESTATE								
Scales Used A1-1:100, A3-1:200								
Dwg. No. 2004-238-01-001								Rev. A
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