# SECTION I

# EXISTING ENVIRONMENT & IMPACT OF THE ACTIVITY

**Section I.1 – *Assessment of atmospheric emissions***

All operational activities associated with the proposed waste transfer station at the site will occur within the confines of the industrial unit. These activities include loading and unloading of waste, bulking-up/repackaging of waste and storing of waste. There will be no on-site processing of waste. Therefore there will be no generation of new waste on site. Furthermore as all waste stored on site will be sealed in drums, IBCs or other specialised containers it is unlikely that there will be any significant emission of pollutants to the atmosphere. The licensee can not envisage the operation of the proposed facility leading to any type of emission that will impair the environment.

Due to the fact that there will not be any substantial emissions to the atmosphere no dispersion modelling to date has been carried out.

Fugitive emissions of waste oil vapours arising from repackaging activities or transferring oils from delivery trucks to bulk tanks shall be passed through an air filtration system before emission to the atmosphere. Exact design specifications of this system have yet to be finalised. All technical aspects of this unit will be forwarded to the Agency prior to commencement of any operations.

The site for the proposed waste transfer station will be at the existing Gleneden facility that is located in the townland of Raffeen, approximately 16km south east of Cork City and 3.5km west of Ringaskiddy. The existing site is licenced to treat hazardous clinical waste using non-burn technology.



**Section I.2 – *Assessment of impacts of surface water discharges on the receiving waters***

There is a surface water stream to the north of the proposed industrial estate. It is a condition of the planning permission that all surface water is to be collected and drained to soakpits thus the stream has no relevance to this application.

**Section I.3 – *Assessment of impact on receiving sewer***

This subsection is not relevant to this waste licence review application, as there will be no discharges to sewer from the proposed development. Any effluents arising from spillages or housekeeping duties will drain over bunded areas to sumps, which will in turn, feed into an appropriate tank. This tank, when full, will be taken off-site for and the contents will be treated and disposed of safely by another licenced facility.

**Section I.4 – Assessment of Impact of ground/groundwater emissions**

It is not envisaged that the proposed waste transfer station will not adversely affect the quality of the groundwater as none of the activities proposed will involve direct discharges of process effluent to ground or groundwater. The site will be all hardstanding. All activities will take place in-doors within the waste transfer station building. All working and storage areas of the building will be bunded. Each storage bay will be ramped at the entrance which will allow for local containment of all spillages/leakages. Each bund will also have a corner sump. This will allow spillages and cleansing solvents to drain to a tank. The contents of this tank, when full, will be taken off-site to be treated and disposed of safely by another licenced facility. Furthermore, all waste will be sealed stored in specifically designed drums, IBCs or other containers. There will be no processing of waste on site and therefore there will be to waste effluents arising from the activities.

The existing domestic effluent treatment plant will comprise an indirect discharge to groundwater.

**Section I.5 – Ground and/or groundwater contamination**

No intrusive investigations have been conducted at the site to study the local regions geology or hydrology. They are not considered necessary in view of the change in activity being proposed.

Due to the fact that the proposed activities will all take place within the confines of the industrial unit over bunded areas there are no plans to install groundwater-monitoring wells. However, if instructed to do so by the Agency the operators of the facility will design a groundwater-monitoring programme. Details on the location and design of monitoring installations aswell as results recorded from the monitoring sessions will be forwarded to the Agency.

**Section I.6 – Noise Impact**

Proposed activities will consists of loading/unloading waste, bulking/repacking waste and temporary storage of waste. All of these activities will be confined within the waste transfer station buildings. As there will be no treatment/processing of waste on-site the only significant noise emissions will be due to heavy vehicle traffic carrying waste consignments onto and off site.

The main source of ambient noise levels will be traffic movements. The facility is located adjacent to the N28 National Road approximately 16 km south east of Cork City and 3.5 km west of Ringaskiddy Harbour. The Annual Average Daily Traffic (AADT) for the N28 road is 6,713 vehicles, with 1,275 of these (19%) representing heavy goods vehicles.

It is estimated that traffic movements to and from the proposed site will not exceed more than 20 per day. This figure includes the movements of waste disposal trucks and tankers and represents a modest increase on the existing licensed situation.

The noise level associated with an event of short duration, such as vehicle drive-by, may be expressed in terms of its Sound Exposure Level (SEL). The Sound Exposure Level can be used to calculate the contribution of an event or series of events to the overall noise level in a given period. The appropriate formula is given below.

$$L_{AeqT} = L_{AX} + 10\log_{10}(N) - 10\log_{10}(T) \quad dB$$

Where: $L_{Aeq}$, is the equivalent continuous sound level over the time period T(s);

$L_{AX}$ is the "A-weighted" Sound Exposure Level of the event under consideration (dB);

**N** is the number of events over the course of time period T.

**T** is the time period of interest

The mean value of Sound Exposure Level for a heavy truck movements, again at low to moderate speeds, is of the order of 78dB $L_{AX}$ at a distance of 5m from the edge of the road.

We assume a "worst-case" projected figure for traffic is 10 heavy goods vehicles during the morning peak, i.e. 08:00hrs to 09:00hrs.

The time period of interest is one hour (3,600 seconds).

The "worst-case" noise level due to additional vehicle movements along the site access road, at a distance of 5m from the road, may therefore be calculated as follows:

$$L_{Aeq,\ 1hr} = 78 + 10\log_{10}(10) - 10\log_{10}(3600)\ dB$$
$$= 52dB$$

The EPA publication 'Guidance Note for Noise in Relation to Scheduled Activities contain the following guideline: 'the noise level at sensitive location should be kept the $L_{ArT}$ value of 55 dB(A) by daytime. At night, to avoid disturbance, the noise level at noise sensitive locations should be kept below an $L_{Aeq}$ value of 45 dB(A).

In support of the original waste licence application for a clinical waste treatment facility at Raffeen Industrial Estate, a noise survey was carried out by Fehily Timoney & Co Consultants on the 16th March 2001 to determine the pre-existing background noise levels at the adjacent sensitive areas. The results of the survey are as follows:

The sensitive area is NS1, a bungalow located to the south of the site. There is a direct line of sight from the house to the site of the facility. The results of the survey are as follows:

**Table 2.1: Ambient Measurements (A – Weighted)**

| Location | $L_{Aeq}$ | $L_{AF10}$ | $L_{AF90}$ |
|---|---|---|---|
| NS1 | 52 | 61.4 | 42.2 |

The existing noise levels at the selected sensitive area are below the EPA guidelines on daytime noise levels (55 dB(A) $L_{Aeq}$).

Passing traffic on the N28 (57dB(A) $L_{AF10}$) was the dominant source of noise at the monitoring location adjacent to the house.



**Section I.7 – Assessment of Ecological Impacts & Mitigation Measures**

The change of activities resulting from the review application will have no ecological impact because all activities will take place indoors.