

## 1.0 CALCULATION OF RECOVERY CAPACITY FOR INERT SOIL AND STONE

The capacity for each recovery activity detailed in section 4.3 of the application form is based on a number of factors which are outlined for each activity class discussed in 1.1 and 1.2 below.

### *1.1 Activity Class R05 - Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials*

The total void space to restore the Ballinderry Site from existing site conditions to the proposed restoration contours was calculated by creating a design model in the n-force modelling program. Proposed elevations are input into the model and the model uses the existing site contours to create a model that can output the volume between the existing site contours and the proposed site contours. The volume calculated to be required for the restoration of the Ballinderry site was calculated to be 685,742 m<sup>3</sup> (1, 234, 335 tonnes based on a conversion factor of 1.8 t/ m<sup>3</sup>).

A Traffic and Transport Assessment Report was carried out by PMCE Traffic Consultants to inform the Environmental Impact Assessment report (EIAR). The report found that the Link Capacity Analysis carried out on the L1002 determined that the roads will continue to operate within capacity for each of the assessment years 2019, 2024 and 2034. PMCE used an approximate total restoration volume of 1,500,000 tonnes to inform their report. Based on a maximum rate of 160 truck movements (80 return trips) per day, the total volume of imported immaterial was calculated to be 440,000 tonnes based on the following:

- The facility will operate 50 weeks per year;
- The facility will operate 6 days per week (Monday to Saturday) inclusive; and
- The Facility opening times will be between (07.00 and 18.00hrs Monday to Friday and 08.00 and 14.00hrs Saturday).

**Table 1: Traffic Volumes**

Detail	Truck movements/Tonnes
Tonnes of Imported material per annum	440,000
Quantity Per Week	8,800
Loads per week (20t per load)	440
Loads per day (5.5 days/week)	80
Tonnes per day	1,600
Loads per hour (av.10 hrs/day)	8
Tonnes per hour	160

The calculated maximum traffic loading per annum based on the factors above allow for importation of 44,000 tonnes of waste soils per year. With a total tonnage of 1, 234,335 tonnes required to restore the site to the proposed restoration contours, the lifespan of the backfilling operation is estimated to be a minimum of 3 years dependant on market conditions and the economic climate. Should economic development slow down, the time to restore the site could be anywhere in the region of 3 to 10 years.

***R13 - Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)".***

The capacity for recovery activity R13 detailed in section 4.3 of the application form is based on an estimate temporary storage volumes for similar projects. The temporary storage of waste mainly relates to the temporary storage mainly of topsoil pending preparation of final restoration surfaces. The daily temporary storage tonnage of 250 tonnes is based on experience on similar projects whereby the majority of wastes arrive early in the morning for recovery and the on site plant may be temporarily insufficient to place the material as it arrives on site.

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