ATTACHMENT H1 WASTE TYPES AND QUANTITIES

This Waste Licence Review Application provides for the restoration of the North Quarry and West Quarry in the townlands of Huntstown, Johnstown and Kilshane in North Dublin using imported inert waste soils. Where necessary, some imported virgin aggregate will also be imported for construction of temporary haul roads across backfilled soils.

Clean, inert soil and stone is likely to be sourced from greenfield development sites and/or excavations at uncontaminated urban sites. Inert soil with intermixed construction and demolition waste (concrete, brick, ceramic, plastics, timber etc.) will not be accepted at the facility.

The estimated volume of material to be placed at the application site is approximately 9,550,000m^3. Of this, a relatively small volume, estimated at no more than 50,000m^3 will be sourced from on-site stockpiles, perimeter screening berms and general site levelling works required for the final restoration of the two quarries. The remainder of the material will need to be imported.

The backfilled materials will be subject to a degree of compactive effort (by tracked bulldozers) and materials placed at the bottom of the quarries will be further compacted by the weight of overlying material. Assuming an average target compaction density of 1.9t/m^3 for tonnage assessment purposes, and allowing for approximately 100,000 tonnes of suitable material on site, gives an overall import requirement for approximately 9,450,000 tonnes of inert soil and stone.

It is envisaged that the following wastes (EWC codes) will be deposited (or recovered) at the facility:

- 17 05 04 Soil and stones other than those mentioned in 17 05 03.
- 17 05 06 Dredging spoil other than those mentioned in 17 05 05
- 20 02 02 Soil and stone from municipal facilities

The estimated annual quantities to be recovered are indicated for the five year period 2017-2021 below:-

Year	Inert soil / stones for recovery (tonnes / annum)	Total annual quantity of waste (tonnes / annum)
2017	1,500,000 (max)	1,500,000 (max)
2018	1,500,000 (max)	1,500,000 (max)
2019	1,500,000 (max)	1,500,000 (max)
2020	1,500,000 (max)	1,500,000 (max)
2021	1,500,000 (max)	1,500,000 (max)

Note (e) = estimate

Note that a minor proportion of the total volume of inert soil imported to the proposed facility (up to 20,000 tonnes per annum) could comprise organic rich topsoil capable of sustaining vegetation growth. This material will be stockpiled as required pending re-use in restoration of the quarry and the wider site area. As topsoil could arguably be classified as an organic material, provision is made in Table H1A of the application form for recovery of 20,000 tonnes of topsoil per annum under waste activity R3 (Recycling/reclamation of organic substances which are not used as solvents).

Provision is also made in completing Table H1A for temporary stockpiling of up to 100,000 tonnes of the imported soil waste material per annum under waste activity R 13 (storage of waste pending any of the operations numbered R 1 to R 12).

The duration of backfilling activities at the quarry void will largely be dictated by the rate at which approximately 4,975,000m^3 (9,450,000 tonnes) of externally sourced inert soil and stone is imported to the site. There are many factors which will influence this, including, but not limited to:

- Availability of acceptable inert materials from construction sites;
- Prevailing economic climate and related construction industry output;
- Distance of construction projects from the facility (and scale or duration of activity);
- Logistical / programming constraints at sites generating inert materials;
- Climatic conditions (reduced construction activity in wet weather) and
- Disruptions along the existing local and national road network.

In light of these and other variables, calculation of intake rates and duration is not an exact science.

Were the maximum proposed annual intake (of 1,500,000 tonnes) to be accepted at the recovery facility each year, the time required to backfill both the North and West quarries would be of the order of 6 years.

If the average annual intake rate is lower, around the more moderate range of 750,000 to 1,000,000 million tonnes per annum, the time required to achieve this would be of the order of 9.5 to 12 years.