

ATTACHMENT H1 WASTE TYPES AND QUANTITIES

This Waste Licence Application provides for the restoration of a quarry void in the townlands of Killough Upper and Glencap Commons Upper at Kilmacanogue, Co. Wicklow 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 1,830,000m³. Of this, a relatively small volume, estimated at no more than 12,000m³ will be sourced from on-site stockpiles, perimeter screening berms and general site levelling works required for the final restoration of the quarry. The remainder of the material will need to be imported.

The backfilled materials will be subject to a degree of compactive effort (by tracked bulldozer) and materials placed at the bottom of the quarry will be further compacted by the weight of overlying material. Assuming an average target compaction density of 1.8t/m³ for tonnage assessment purposes, and allowing for approximately 20,000 tonnes of suitable material on site, gives an overall import requirement for approximately 3,280,000 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	250,000 (e) 300,000 (max)	250,000 (e) 300,000 (max)
2018	250,000 (e) 300,000 (max)	250,000 (e) 300,000 (max)
2019	250,000 (e) 300,000 (max)	250,000 (e) 300,000 (max)
2020	250,000 (e) 300,000 (max)	250,000 (e) 300,000 (max)
2021	250,000 (e) 300,000 (max)	250,000 (e) 300,000 (max)

Note (e) = estimate

Note that a minor proportion of inert soil imported to the proposed facility will 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.

The duration of backfilling activities at the quarry void will largely be dictated by the rate at which approximately 1,820,000m³ (3,280,000 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 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. Over the short-to-medium term (the initial 5 years of operation), it is likely significant quantities of inert soil could be sourced from mixed residential and commercial development in the South Dublin, Dun Laoghaire Rathdown and North Wicklow areas.

It is estimated that the rate of importation of inert materials to the quarry void could average around 225,000 tonnes to 275,000 tonnes per annum, with a maximum intake of 300,000 tonnes per annum. If the average importation rate was between 225,000 and 275,000 tonnes per annum, the expected operational life of the facility would be between 12 and 15 years. If however the rate of backfilling is less than anticipated, the recovery facility could be operational for up to 20 years.

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