RECOVERY ACTIVITY CAPACITY

As is noted in the application form, Kilsaran Concrete Unlimited Company is applying for a waste licence in respect of 3 disposal activities and 4 recovery activities at the application site, specifically

- *Class D1 : Deposit in, on or under land.* This activity principally provides for used of inert soil and stone to backfill the former quarry void.
- *Class D5 : Specially engineered landfill, (e.g. placement into lined discrete cells which are capped and isolated from each other and from the environment (Principal Activity).* This is the principal waste activity and references the requirement for basal and side liners as part of the overall phased development of the landfill. Application is made for importation / immediate disposal of up to 4,000 tonnes of inert waste per day, up to a maximum of 750,000 tonnes per annum.
- *Class D15 Storage pending any of the operations numbered D1 to D14 (excluding temporary storage (being preliminary storage according to the definition of "collection" in Section 5(l), pending collection on the site where the waste is produced.* This provides for on-site storage of materials pending disposal to landfill. Application is made for importation and storage of up to 1,000 tonnes of inert waste per day pending disposal, up to a maximum of 100,000 tonnes per annum.
- *Class R3 : Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).* This activity applies to proposed importation and use of topsoil for use in the final restoration of the backfilled landform. Application is made for importation / immediate recovery of up to 1,000 tonnes of topsoil per day, up to a maximum of 25,000 tonnes per annum.
- *Class No. R5 : Recycling and reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials*. This activity applies to the importation and use of soil and stone waste for construction of the landfill liners (up to 100,000 tonnes / annum), importation and processing of inert claybound C&D waste at the soil washing plant (maximum 500,000 t/a) and the processing / recycling (crushing) of inert source-segregated C&D waste to produce secondary (recycled) aggregate (maximum 100,000 t/a). Collectively, for these 3 activities, application is made for importation and recovery of up to 4,000 tonnes of inert soil / C&D waste per day, up to a maximum of 700,000 tonnes per annum.
- *Class No. R12 : Exchange of waste for submission to any of the operations R1 to R11*. This activity provides for the segregation of intermixed C&D waste (prior to removal / transfer to other authorised waste recovery facilities off-site). As much of the solid C&D waste intake to the facility will be source segregated and expected to be readily recoverable as recyclable aggregate, provision is made for segregation of a maximum of 200 tonnes of non-recoverable material per day, up to a maximum of 20,000 tonnes / annum. This is considered to be highly conservative and is equivalent to 20% by weight of the maximum C&D waste intake (of 100,000 tonnes / annum).
- *Class No. R13 : Storage of waste pending any of the operations R1 to R12 (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)*. This activity provides for the temporary storage of imported waste for on-site recovery purposes (e.g. topsoil, claybound C&D waste or source-segregated C&D waste) and transfer of unacceptable wastes to authorised off-site waste disposal or recovery facilities (eg. segregated wood or metal). Collectively, for these activities, application is made for storage of a maximum of 250,000 tonnes of waste material at the application site at any one time, and for storage of up of to 250,000 tonnes per annum.

Capacity Assessment – Daily Intake

The inert waste materials (predominantly soil and stone or particulate, soil-like wastes) imported to the application site for landfilling (deposition) will, for the most part, be recovered immediately through placement on, in or over the ground, without the requirement for any further treatment other than spreading, placement and compaction by earthworks plant. There is essentially no restriction on the rate of inert waste deposition at the landfill, other than the amount of earthmoving plant and equipment at the facility (assuming required basal and sidewall liners are constructed in advance).

The application for Strategic Infrastructure Development currently under consideration by An Bord Pleanála (ABP Ref. No. PA27-309991) limits the annual intake to the proposed waste management facility at Ballinclare Quarry to a maximum of 800,000 tonnes per annum (for all waste streams and activities combined). If it is assumed that there are 260 working days in a year, the proposed intake limits would suggest an *average* intake rate of 3, 077 tonnes per day.

The planning application for the proposed waste facility at Ballinclare Quarry limits the number of HGV traffic movements in (and out) of the facility to 150 per day (in line with the existing quarry planning permission). Assuming all HGVs are articulated trucks carrying a maximum load of 29 tonnes, the absolute maximum cumulative daily waste intake to the facility is limited to 4,350 tonnes. This restriction effectively controls the maximum daily intake to any of the proposed on-site activities.

Given the restriction on traffic movements and annual intake of material, the maximum permitted intake of inert soil and stone / claybound C&D waste in any calendar year will be reduced by the amount of non-waste soil imported (under the Article 27 by-product notification regime) for construction of the basal and sidewall liners and/or processing at the soil washing plant as required.

Inert Waste / Claybound C&D Waste

Given that there will likely be a degree of variability in the rate of inert soil and stone / claybound C&D waste importation and the number of HGV / articulated truck movements over the course of a calendar year, application is made for a maximum rate of importation of up to 4,000 tonnes of these materials on any given working day.

Within this quantum, it is assumed for licensing purposes that

(i) Up to 4,000 tonnes / day could be directed to the landfill for disposal purposes;

(ii) Up to 4,000 tonnes / day could be directed to different areas for recovery / recycling purposes, for construction of engineering liners, aggregate recovery at the soil washing plant or aggregate production (crushing) at the C&D waste recovery / recycling facility;

(iii) Up to 1,000 tonnes of topsoil per day could be stockpiled pending future recovery in site restoration works.

Source Segregated C&D Waste

Given that *source segregated* C&D waste (with a relatively small proportion of non-recyclable waste) is likely to be consigned to the proposed C&D waste recovery / recycling facility and conservatively assuming that 20% of the imported C&D waste materials cannot be recovered or recycled by processing activities at this facility, provision is made for on-site segregation of up to 20% of the maximum daily intake on any given working day (equivalent to a maximum of 200 tonnes per day).

Capacity Assessment – Storage

Topsoil

The total volume of topsoil required for final landfill capping purposes at the application site is estimated to be around 25,500m^3, which is equivalent to approximately 45,900 tonnes in total (assuming an average density of 1.8 tonnes/m^3). As topsoil can only be recovered by placing it over the landfilled waste when it is at or close to final design level (i.e. original ground level), it will be necessary to stockpile it on site pending its use in final restoration works.

While it is envisaged that the landfill facility will be restored in an ongoing, progressive manner which will require topsoil to be available for intermittent use, it is not possible to predict how and when it will become available for import over the life of the facility, the timing of the final restoration works and how much will be required to be stockpiled at any one time.

Given the landfill area (c. 17 hectares) and surrounding land-use, it is considered that there is considerable capacity for on-site temporary storage / stockpiling of imported materials. Provision will therefore be made for temporary stockpiling of up to 25,000 tonnes of imported topsoil ***at any one time***, a significant proportion of the total volume required for restoration purposes, in order to

(i) facilitate intake from major works projects should they materialise over the operational lifetime of the inert landfill and

(ii) provide a degree of operational flexibility around phasing of the final restoration works.

Inert Soil and Stone Waste

Inert soil and stone waste and particulate (sludge / soil like) wastes imported for disposal and backfill at the landfill facility will, for the most part, be disposed of immediately upon arrival at the application site, with little or no requirement for on-site storage. Notwithstanding this, it is conceivable that operational delays could arise at the facility requiring imported materials to be temporarily stockpiled while earthmoving plant is removed off-site for repair / servicing purposes or periodically diverted to final restoration works. As such, for licensing purposes, provision is made for temporary stockpiling (pending disposal / placement or recovery in liner construction) of up to 100,000 tonnes of imported inert waste at any one time.

Claybound C&D Waste

The available throughput capacity of the soil washing plant is up to 2,000 tonnes per day. In order to even out potential fluctuation in the intake of potentially recoverable claybound C&D waste and ensure availability of waste material for ongoing processing / recovery, provision is made for licensing purposes for temporary stockpiling (pending recovery) of up to 100,000 tonnes of imported claybound C&D waste for recovery at the soil washing facility at any one time.

Provision is also made for stockpiling of up to 25,000 tonnes of (non-waste) processed material / recycled aggregate (pending off-site dispatch) at any one time

Source-Segregated C&D Waste

This waste licence application in respect of the proposed waste facility at Ballinclare Quarry provides for recovery / recycling of up to 100,000 tonnes of source segregated C&D waste per annum at a dedicated on-site facility.

In order to even out potential fluctuation in the intake of source-segregated C&D waste and ensure availability of waste material for processing (recovery / recycling), on a regular, albeit intermittent basis, provision is made for licensing purposes for temporary stockpiling (pending recovery / recycling) of up to 25,000 tonnes of source-segregated C&D waste at any one time.

Provision is also made for stockpiling of up to 25,000 tonnes of processed (non-waste) material / recycled aggregate (pending off-site dispatch) at any one time

Total Storage Requirement

Having regard to the requirements outlined above means that the total storage / stockpiling capacity to be provided at the proposed waste facility at Ballinclare Quarry will therefore be up to 250,000 tonnes.

Capacity Assessment – Annual Intake

The planning (SID) application in respect of the proposed inert landfill and materials recovery / recycling at Ballinclare Quarry (ABP Ref. No. PL27.309991) provides for a maximum combined maximum waste intake to the facility of 800,000 tonnes per annum.

Within the annual intake limit, provision is made in this licence application for importation of up to 400,000 tonnes of potentially recoverable claybound C&D waste to be supplied as feedstock to the soil washing plant and up to 100,000 tonnes of source segregated C&D waste.

As previously noted, the total volume of topsoil required for restoration purposes is up to 45,900 tonnes. In order to provide a degree of operational flexibility and to facilitate topsoil intake from major works projects in a single calendar year (should they ever materialise), provision is made for licensing purposes for importation of up to 25,000 tonnes of topsoil in any one year.