

RECOVERY ACTIVITY CAPACITY

As is noted in the application form and accompanying EIAR, Roadstone Limited is applying for a waste licence review which provides for transfer of waste recovery activities to Huntstown South Quarry and the proposed extension of the licensed site area to include the proposed recovery area on the western side of the South Quarry.

The proposed waste recovery activities are the same as those provided for in the current waste licence, specifically : -

- Activity R03 Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals. This activity provides for the importation and immediate recovery of topsoil, which by definition is considered to be organic matter. Application is made for importation / immediate recovery of up to 1,000 tonnes of topsoil per day, up to a maximum of 40,000 tonnes per annum.
- Activity R05 - Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials. This is the Principal Waste Activity. This activity provides for the importation and immediate recovery of mineral subsoil, stones and broken rock which is deemed to be inorganic. Application is made for importation / immediate recovery of up to 10,000 tonnes of inorganic mineral soil and stone per day, up to a maximum of 1,500,000 tonnes per annum. Application is also made for importation and recovery of up to 600 tonnes of construction and demolition waste per day, up to a maximum of 95,000 tonnes per annum (as previously consented).
- Activity R13 - Storage of waste pending any of the operations numbered R01 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 storage / stockpiling of imported topsoil and/or mineral soil / stone / rock material pending subsequent spreading, placement and compaction in situ at the recovery facility. Application is made for storage of a maximum of 140,000 tonnes of material at the application site at any one time, and for storage of up of to 140,000 tonnes per annum.

Capacity Assessment – Daily Intake

The materials imported to the application site for backfilling and recovery 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 recovery at the application site, other than the amount of earthmoving plant and equipment at the facility.

Established Recovery Activity at North Quarry

At the present time, the North Quarry continues to be backfilled at a rate close to the maximum permitted rate of 1,500,000 tonnes per annum (permitted by Planning Ref. FW16A/0120 and waste licence W0277-03) and it is envisaged that this will continue for the duration of soil the backfilling and recovery activities at the North Quarry (likely up to the end of the 2022 calendar year).

If it is assumed that there are 300 working days in a year, the current permission would suggest an average daily intake rate of approximately 5,000 tonnes per day. However, as there will likely be some variability on the rate of importation over the course of the year, it is considered that rate of importation of any material (topsoil or mineral soil / stone) on any given working day should be limited to approximately double the inferred average importation rate, at 10,000 tonnes per day.

Future Recovery Activity at South Quarry

Following completion of soil import, backfilling and recovery activities at the North Quarry, existing planning permission (Ref. FW012A/0022) provides for soil waste intake and recovery to backfill and restore Huntstown South Quarry at a maximum rate of 750,000 tonnes per annum (for all waste streams combined). This is a key factor constraining future soil waste recovery rates at the extended waste facility at the South Quarry.

If it is assumed that there are 300 working days in a year, the current intake restriction would suggest an average daily intake rate of approximately 2,500 tonnes per day. However, as there will likely be some variability on the rate of importation over the course of the year, it is considered that rate of importation of any material (topsoil or mineral soil / stone) on any given working day should be limited to approximately double the inferred average importation rate, at 5,000 tonnes per day.

Having regard to the different positions at the North and South Quarry outlined above, and in order to maintain a degree of operational flexibility, particularly for a transition period as the market adapts to the reduced waste intake capacity at the Huntstown facility, application is made for continued average daily intake rate of approximately 5,000 tonnes per day (for all waste streams combined) and for a corresponding maximum importation rate of 10,000 tonnes per day.

Within the maximum importation rate of 10,000 tonnes per day, provision is made for importation of up to 1,000 tonnes of topsoil per day, to facilitate importation from a prospective large-scale development project at a greenfield site. Based on experience of operating the soil waste recovery facility to date, this limit is expected to be sufficient to accommodate any requirement for future topsoil intake to the facility.

Construction and Demolition (C&D) Waste

Planning and waste licensing consent was previously for importation of up to 95,000 tonnes of construction and demolition (C&D) waste for recovery at the existing licensed facility at Huntstown (in addition to that permitted for soil waste recovery purposes). It is envisaged that this will remain unchanged as a result of this waste licence review.

If it is assumed that there are 300 working days in a year, the current intake limit would suggest an average daily intake rate of approximately 315 tonnes per day. Allowing some variability on the rate of importation over the course of the year, it is considered that rate of importation of C&D waste should be limited to just over double the inferred average importation rate, at 650 tonnes per day.

Capacity Assessment – Storage

Topsoil

The total volume of topsoil required for restoration purposes at the proposed extension to the licensed site to Huntstown South Quarry, assuming a topsoil depth of 150mm across an area of approximately 12 hectares is estimated to be 18,000m³. This is equivalent to approximately 27,000 tonnes, assuming an in-situ density for topsoil of 1.5 tonnes per cubic metre (1.5t/m³).

The equivalent quantities of topsoil required to restore the North Quarry (11.2 hectares) are 16,800m³ and 25,200 tonnes and to restore the West Quarry (12.2 hectares) are 18,300m³ and 27,450 tonnes. The total quantity of topsoil required across the extended licenced site area is therefore 53,100m³ or 79,650 tonnes.

As topsoil can only be recovered by placing it over the backfilled ground surface when it is at or close to final design (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 recovery 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 recovery facility, the timing of the final restoration works and how much will be required to be stockpiled at any one time.

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 40,000 tonnes of imported topsoil across the entire licenced facility **at any one time**, a significant proportion of the total volume required for restoration purposes, in order to

- (i) facilitate intake from major works / development projects should they materialise over the life of the extended soil waste recovery facility; and
- (ii) provide a degree of operational flexibility around phasing of final restoration works across the licenced site.

Mineral Soil

As noted previously, soil and stone waste imported for backfilling and recovery purposes will, for the most part, be recovered 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 provision will also be made for importation and temporary stockpiling (pending recovery) of up to 100,000 tonnes of imported mineral soil and stone 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 waste recovery facility (between topsoil and mineral soil / stone) will therefore be up to 140,000 tonnes.

Capacity Assessment – Annual Intake

As previously noted, the existing planning permission for backfilling and soil recovery at the proposed licence area extension around Huntstown South Quarry (Ref.FW12A/0022) limits soil waste intake to a maximum of 750,000 tonnes per annum (for all waste streams combined). This is the principal restriction on the future annual intake and recovery rate for mineral soil and stone at the South Quarry (assuming no topsoil is imported in any given year).

Notwithstanding this however, and recognising that soil waste intake and recovery will continue at the North Quarry for some time yet, this licence review application provides for the existing maximum soil waste intake rate to continue at the current rate of 1,500,000 tonnes per annum (in accordance with Planning Ref. FW16A/0120 and the existing waste licence (W0277-03).

Construction and Demolition (C&D) Waste

Planning and waste licensing consent was previously for importation of up to 95,000 tonnes of construction and demolition (C&D) waste for recovery at the existing licensed facility at Huntstown (in addition to that permitted for soil waste recovery purposes). It is envisaged that this will remain unchanged as a result of this waste licence review.

Topsoil (R3)

As previously noted, the total volume of topsoil required for restoration purposes across the extended facility is approximately 82,650 tonnes. In order to provide a degree of operational flexibility and to facilitate significant topsoil intake from major works / development projects in a single calendar year (should they ever materialise), application is made for importation of up to 40,000 tonnes of topsoil in any one year.

Storage (R13)

As previously noted, provision is made for storage of up to 140,000 tonnes of topsoil / mineral soil and stone at any one time at the recovery facility. As the distribution and timing of import consignments or operational delays cannot be confidently forecast or predicted, application is made for importation and storage / stockpiling of up to 140,000 tonnes per annum (i.e.. the maximum available storage capacity) in any one year.

*For inspection purposes only.
Consent of copyright owner required for any other use.*