

LANDFILL CAPACITY CALCULATION

The only materials required to landfill and restore the former quarry are inert soil, stone and rock (and other particulate soil-like / sludge wastes). At the present time, it is considered that the principal sources of inert waste intake over the life of the waste facility at Ballinclare Quarry will be construction sites in Counties Wicklow, Dublin and Wexford.

The total volume of inert soil required to create the restored landform is approximately 3,425,000m³. The basal liner and landfill materials will be subject to a degree of compactive effort (by earthworks plant and a tracked bulldozer respectively) and materials placed at the bottom of the landfill will be further compacted by the weight of overlying materials.

An average target compaction density of 1.8tonnes/m³ assumed for tonnage assessment purposes, suggests an import requirement for approximately 6,165,000 tonnes of inert soil and stones (comprising soil (clay) liner materials and inert wastes).

Of the total intake requirement, **at least** 116,000m³ / 208,800 tonnes is required to construct the proposed basal liner, and at least a further 131,000m³ / 235,800 tonnes is required to construct sidewall liners and 25,500m³ / 45,900 tonnes of topsoil is required for final capping purposes .

If the acceptable soils required to construct the landfill liners and cap are recovered and/or imported to site as non-waste materials, the maximum inert waste disposal capacity at the landfill facility is 3,152,500m³, equivalent to 5,674,500 tonnes at an assumed average in-situ density of 1.8 tonnes/m³.