

Attachment-4-3-7-2-Conversion/density factors used in calculating tonnage from void, or vice versa.

The existing landfill calculation is based off incoming waste tonnages (weighbridge) and void space filled measured in December 2023.

Permission is sought for the landfilling for a period of 25 years – this is based on a blended density of c. 1.19 tonnes/m³ outlined in the table below:

	Density (tonne/m ³)*	Estimated Quantity (TPA)	% of total	Estimated Volume (m ³ /annum)	Blended Density (tonne/m ³)	Overall Blended Density (tonne/m ³)
External Waste						
C&D Fines	1.40	85,000	34%	60,714	1.22	1.19
MSW	0.80	80,000	32%	100,000		
Soil & Stone	2.00	50,000	20%	25,000		
C&D Rubble	2.00	25,000	10%	12,500		
IBA	1.35	5,000	2%	3,704		
Soils containing invasive species	2.00	3,000	1%	1,500		
Glass Residue	2.00	2,000	1%	1,000		
Total External Waste		250,000	-	204,418		
Internal Waste						
Compost Plant Output	0.80	20,000	50%	25,000	0.90	
New MBT Compost Output	0.80	20,000	50%	25,000		
Permitted MBT Compost Output	0.80	0	0%	0		

	Density (tonne/m3)*	Estimated Quantity (TPA)	% of total	Estimated Volume (m3/annum)	Blended Density (tonne/m3)	Overall Blended Density (tonne/m3)
Permitted MBT Residuals Output	1.40	0	0%	0		
Total Internal Waste		40,000	-	50,000		
Landfill Engineering Materials #						
C&D Rubble	2.00	19,500	39%	9,750	1.40	
C&D Fines	1.40	26,500	53%	18,929		
Biostabilised waste	0.80	0	0%	-		
Glass Residue	2.00	3,000	6%	1,500		
Soil & Stone	2.00	1,000	2%	500		
Woodchip	0.70	0	0%	-		
Total Landfill Engineering Materials		50,000	-	30,679		
TOTAL NON-HAZ LANDFILL		340,000		285,097		

* Compacted density of material placed in-situ

** Density of C&D fines, rubble, glass, soil/stone and woodchip from spreadsheet on cover material volumes produced with BnM in 2018

Breakdown of engineering material types used for haul roads/turning areas/intermediate cover/daily cover taken from spreadsheet on cover material volumes produced with BnM in 2018