Contract No. EP/SP/66/ Integrated Waste Manag	12 gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix H	Waste Flow Table	





#### **Monthly Summary Waste Flow Table for** 2018 (year)

Project : In	ntegrated W	aste Manag	gement Faci	lities, Phas	e 1		Contract No.: EP/SP/66/12								
		Actual (	Quantities of	Inert C&D	Materials Ger	nerated Mon	thly		Actual Quantities of C&D Wastes Generated Monthly						
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill (see Note 4)	Fill Sand (see Note 4)	Fill Public fill (see Note 4)	,	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemica	l Waste	Others, e.g. general refuse (see Note 3)	
	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup>	(in ,000m <sup>3</sup> )	(1	in ,000m <sup>3</sup> )	T	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m <sup>3</sup> )	
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub-total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0065	
Sep	0	0	0	0	0	2.9619	0	0	0	0	0	0	0	0	
Oct	0	0	0	0	0	3.0771	0	0	0	0	0	0	0	0.0130	
Nov	0	0	0	0	0	6.7871	0	0	0	0	0	0	0	0	
Dec	0	0	0	0	0	59.0709	0	0	0	0	0	0.2000	0.8700	0	
Total	0	0	0	0	0	71.8970	0	0	0	0	0	0.2000	0.8700	0.0195	

- Broken concrete for recycling into aggregates. (1)
- Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
- Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m<sup>3</sup> by volume.
- Use the conversion factor: sand density =  $1.6T/m^3$ , public fill density =  $1.8T/m^3$  and rock density =  $2T/m^3$
- Materials recycled.





Contract No.: EP/SP/66/12

## Monthly Summary Waste Flow Table for 2019 (year)

Project: Integrated Waste Management Facilities, Phase 1

r roject . n	roject i integrated waste management racinties, i nase r										Contract 110 E1751700/12						
		Actual	Quantities of	f Inert C&D	Materials Ger	Actual Quantities of C&D Wastes Generated Monthly											
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemica	l Waste	Others, e.g. general refuse (see Note 3)			
	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup>	(in ,000m <sup>3</sup> )	(	in ,000m <sup>3</sup> )	I	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m <sup>3</sup> )			
Jan	0	0	0	0	0	82.6139	0	0	0	0	0	0	0	0.0065			
Feb	0	0	0	0	0	46.7821	0	0	0	0	0	0	0	0			
Mar	0	0	0	0	0	97.1000	0	0.7552	0	0.2560	0	0	0	0			
Apr	0	0	0	0	0	58.0413	0	0	0	0	0	0	0	0			
May	0	0	0	0	0	14.5625	0	1.4648	0	0	0	0	0	0.0065			
Jun	0	0	0	0	0	0	0	6.8421	0	0	0	0	0	0			
Sub-total	0	0	0	0	0	299.0998	0	9.0621	0	0.2560	0	0	0	0.0130			
Jul	0	0	0	0	0	0	0	0.4289	0	0	0	0	8.4000	0.0130			
Aug	0	0	0	0	0	2.5775	0	10.5600	0	0	0	0	0	0			
Sep	0	0	0	0	0	6.1081	0	8.4704	0	0.3530	0	0	0	0.0065			
Oct	0	0	0	0	0	9.8875	0	7.1900	0	0	0	0	0	0			
Nov	0	0	0	0	0	38.3088	0	19.3105	0	0	0	0	0	0.0195			
Dec	0	0	0	0	0	54.3469	0	26.9807	0	0	0	0	0	0.0910			
Total	0	0	0	0	0	410.3286	0	82.0026	0	0.6090	0	0	8.4000	0.1430			

- (1) Broken concrete for recycling into aggregates.
- (2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
- (3) Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m<sup>3</sup> by volume.
- Use the conversion factor: sand density =  $1.6T/m^3$ , public fill density =  $1.8T/m^3$  and rock density =  $2T/m^3$
- (5) Materials recycled.





#### **Monthly Summary Waste Flow Table for** 2020 (year)

Project : In	ntegrated W	aste Manag	gement Faci	lities, Phas	e 1		Contract No.: EP/SP/66/12										
		Actual	Quantities of	Inert C&D	Materials Ger	nerated Mon	thly		Actual Quantities of C&D Wastes Generated Monthly								
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemica	l Waste	Others, e.g. general refuse (see Note 3)			
	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup>	(in ,000m <sup>3</sup> )	(	in ,000m <sup>3</sup> )	Т	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	$(in,000 \text{ m}^3)$			
Jan	0	0	0	0	0	37.1550	0	25.0812	0	0	0	0	0	0.0065			
Feb	0	0	0	0	0	27.7910	0	18.8300	0	0	0	0	0	0.0065			
Mar	0	0	0	0	0	22.5669	0	26.1586	0	0	0	0	7.2000	0.0065			
Apr	0	0	0	0	0	12.7800	0	10.1825	0	0	0	0	0	0.0195			
May	0	0	0	0	0	16.1138	0	24.3740	0	0.4220	0	0	0	0.0195			
Jun	0	0	0	0	0	31.5177	0	28.3030	0	0	0	0	0	0.0065			
Sub-total	0	0	0	0	0	147.9244	0	132.9293	0	0.4220	0	0	7.2000	0.0650			
Jul	0	0	0	0	0	34.7856	17.0606	35.1800	0	0	0	0	0	0.0195			
Aug	0	0	0	0	0	27.1375	65.5667	27.9335	0	0	0	0	0	0			
Sep	0	0	0	0	0	11.9813	110.1328	43.5435	0	0	0	0	0	0.0195			
Oct	0	0	0	0	0	2.8213	131.6600	22.5415	0	0	0	0	0	0.0130			
Nov	0	0	0	0	0	0	162.1811	44.6475	0	0.4090	0	0	0.4000	0.0130			
Dec	0	0	0	0	0	0	174.9800	57.8380	0	0	0	0	0	0.0130			
Total	0	0	0	0	0	224.6501	661.5812	364.6133	0	0.8310	0	0	7.6000	0.1430			

- Broken concrete for recycling into aggregates. (1)
- Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials. (2)
- Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m<sup>3</sup> by volume.
- Use the conversion factor: sand density =  $1.6T/m^3$ , public fill density =  $1.8T/m^3$  and rock density =  $2T/m^3$
- Materials recycled.





# Monthly Summary Waste Flow Table for 2021 (year)

Project: Integrated Waste Management Facilities, Phase 1 Contract No.: EP/SP/66/12

Project : I	roject : Integrated waste Management Facilities, Phase 1										Contract No.: EP/SP/00/12						
	Actual Quantities of Inert C&D Materials Generated Monthly										Quantities of	C&D Wastes	Generated M	onthly			
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemica	l Waste	Others, e.g. general refuse (see Note 3)			
	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup>	(in ,000m <sup>3</sup> )		(in ,000m <sup>3</sup> )	T	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m <sup>3</sup> )			
Jan	0	0	0	0	0	0	198.1311	36.4775	0	0	0	0	0	0.0065			
Feb	0	0	0	0	0	0	143.9511	20.9960	0	0	0	0	0	0.6305			
Mar	0	0	0	0	0	0	103.1833	23.4510	0	0	0	0	0	0.0130			
Apr	0	0	0	0	0	0	161.2956	27.2810	0	0	0	0	0	0.0130			
May	0	0	0	0	0	0	193.3300	20.5265	0	0	0	0	0	0.0715			
Jun	0	0	0	0	0	0	141.5728	23.7825	0	0.2440	0	0	0	0.0455			
Sub-total	0	0	0	0	0	0	941.4639	152.5145	0	0.2440	0	0	0	0.7800			
Jul	0	0	0	0	0	0	105.1083	30.6065	0	0	0	0	0	0.0195			
Aug	0	0	0	0	0	0	11.1822	7.5180	0	0	0	0	0	0.0130			
Sep	0	0	0	0	0	0	0	5.7575	0	0	0	0	0.6000	0.0390			
Oct	0	0	0	0	0	0	0	6.8885	0	0	0	0	0	0			
Nov	0	0	0	0	0	0	0	6.2975	0	0.1610	0	0	0	0.0130			
Dec	0	0	0	0	0	0	0	5.9235	0	0	0	0	0	0			
Total	0	0	0	0	0	0	1057.7544	215.5060	0	0.4050	0	0	0.6000	0.8645			

- (1) Broken concrete for recycling into aggregates.
- (2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
- (3) Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m<sup>3</sup> by volume.
- Use the conversion factor: sand density =  $1.6T/m^3$ , public fill density =  $1.8T/m^3$  and rock density =  $2T/m^3$ .
- (5) Materials recycled.





#### **Monthly Summary Waste Flow Table for** 2022 (year)

Project: Integrated Waste Management Facilities, Phase 1 Contract No.: EP/SP/66/12

I Toject . II	Toject i integrated waste Management Facilities, Flase 1										Contract No.: EF/SF/00/12						
	Actual Quantities of Inert C&D Materials Generated Monthly										Actual Quantities of C&D Wastes Generated Monthly						
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects (see Note 4)	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemica	l Waste	Others, e.g. general refuse (see Note 3)			
	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup>	(in ,000m <sup>3</sup> )		$(in,000m^3)$	1	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m <sup>3</sup> )			
Jan	0	0	0	0	0	0	4.9389	2.7070	0	0.1550	0	0	0	0.0715			
Feb	0	0	0	0	0	0	3.2478	4.0290	0	0	0	0.4000	0.2250	0			
Mar	0	0	0	0	0	0	2.3422	2.7820	0	0	0	0	0	0.0780			
Apr	0	0	0	0	0	0	18.2189	5.8100	0	0.3120	0	0	0	0.1495			
May	0.0648	0	0	0	0.0648	0	16.7711	17.2320	0	0	0	0	0	0.0975			
Jun	0.0037	0	0	0	0.0037	0.2115	1.1128	14.1470	36.3000	0.3890	0	0	1.7250	0.0975			
Sub-total	0.0685	0	0	0	0.0685	0.2115	46.6317	46.7070	36.3000	0.8560	0	0.4000	1.9500	0.4940			
Jul	25.7183	0	0	25.7183	0	0.1125	0.8333	17.5210	0	0.6400	0.0060	0	0	0.1235			
Aug	13.2494	0	0	13.2494	0	0	0	24.5210	76.0300	1.8870	0	0	0	0.1170			
Sep	24.9072	0	0	24.8494	0.0578	0	0	16.2815	72.0600	0.3060	0	0	0	0.1885			
Oct	13.3139	0	0	13.3006	0.0133	0	0	11.8665	78.1000	0.5800	0	0	0	0.2405			
Nov	26.5583	0	0	26.5583	0	0	0	7.2055	0	0	0	0	0	0.1105			
Dec	29.1411	0	0	29.1411	0	0	0	3.5174	0	0	0	0	0	0.2535			
Total	132.9567	0	0	132.8171	0.1396	0.3240	47.4650	127.6199	262.4900	4.2690	0.0060	0.4000	1.9500	1.5275			

- Broken concrete for recycling into aggregates. (1)
- Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials. (2)
- Use the conversion factor: 1 full load of dumping truck being equivalent to  $6.5 \,\mathrm{m}^3$  by volume. Use the conversion factor: sand density =  $1.6 \,\mathrm{T/m}^3$ , public fill density =  $1.8 \,\mathrm{T/m}^3$  and rock density =  $2 \,\mathrm{T/m}^3$ .
- (5) Materials recycled.





#### **Monthly Summary Waste Flow Table for** 2023 (year)

Project : In	ntegrated W	aste Manag	gement Faci	lities, Phas	e 1		Contract No.: EP/SP/66/12								
		Actual	Quantities of	of Inert C&I	Materials Go	enerated Mo	nthly		Actual Quantities of C&D Wastes Generated Monthly						
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects (see Note 4)	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemica	l Waste	Others, e.g. general refuse (see Note 3)	
	(in ,000m <sup>3</sup> )	$(in ,000m^3)$	(in ,000m <sup>3</sup> )	(in ,000m <sup>3</sup>	$(in ,000m^3)$	,	(in ,000m <sup>3</sup> )	1	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m <sup>3</sup> )	
Jan	24.6728	0	0	24.6728	0	0	0	1.3545	0	0.3150	0	0	0	0.1365	
Feb	26.7206	0	0	26.7206	0	0	0	1.8990	11.1501	0	0.0007	0	0	0.1235	
Mar	22.1089	0	0	22.1089	0	0	0	0.9025	0	0	0	0	0	0.1105	
Apr	36.0011	0	0	36.0011	0	0	0	0	0	0.2150	0	0	0	0.1365	
May	21.8900	0	0	21.8900	0	0	0	0	0	0.3160	0	0	0	0.1495	
Jun															
Sub-total	131.3934	0	0	131.3934	0	0	0	4.1560	11.1501	0.8460	0.0007	0	0	0.6565	
Jul															
Aug															
Sep															
Oct															
Nov															
Dec															
Total	131.3934	0	0	131.3934	0	0	0	4.1560	11.1501	0.8460	0.0007	0	0	0.6565	

- Broken concrete for recycling into aggregates. (1)
- Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials. (2)
- Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m<sup>3</sup> by volume.
- Use the conversion factor: sand density =  $1.6T/m^3$ , public fill density =  $1.8T/m^3$  and rock density =  $2T/m^3$ .
- (5) Materials recycled.