Chapter 5 Kandy Waste Collection Analysis

Within KMC Care Kleen 8 6 6 10 11 9 6 4 5 8 7 9 7 8 9 8 10 10 9 10 10 8 9 9 11 9 8 10 8 8 11 261 281 67 73 135 275 2.47 781.3 781.3 1. Deiyanewela 3 3 4 4 2 3 3 1 4 4 4 3 2 3 3 1 4 4 4 4 2 4 3 3 2 4 6 5 5 4 3 4 4 2 2 1 4 4 3 1 10 4 104 104 104 104 104 104 104 104	5.2 1 7.1 7.4 8.1 2 6.9 3.4
Care Kleen 8 6 6 10 11 9 6 4 5 8 7 9 7 8 9 8 10 10 9 10 10 8 9 9 11 9 8 10 8 8 11 261 281 67 73 135 275 2.47 781.3 781.3 LDeiyanewela 3 3 3 4 4 2 3 3 3 1 4 4 3 2 3 1 4 4 4 3 3 2 4 6 5 4 3 4 4 4 2 2 1 4 4 3 3 4 4 104 Setting and a se	7.1 7.4 8.1 2 6.9 3.4
Delyanewela 3 3 4 4 2 3 3 1 4 4 3 3 4 4 3 2 2 3 4 4 4 2 2 3 4 4 4 2 1 4 3 3 4 4 4 4 2 2 2 3 3 4 4 4 4 4 4 4 4	7.1 7.4 8.1 2 6.9 3.4
2. Mahaiyawa 2 4 4 4 3 2 3 1 4 4 4 2 4 3 2 4 6 5 4 3 4 4 2 4 3 2 4 6 5 5 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	7.4 8.1 2 6.9 3.4
3. Peradeniya 3 4 4 4 4 4 3 2 2 3 4 3 3 3 4 4 4 4 4 4	8.1 2 6.9 3.4
4. Katugastota 3 4 3 2 2 3 3 3 3 4 3 3 3 4 3 3 2 2 2 0 1 1 2 2 1 2 1 2 1 2 2 2 2 0 1 0 2 2 2 2	6.9 3.4
5 Aruppola 0 2 2 2 2 2 1 1 2 2 1 2 1 2 2 2 2 2 0 1 0 2 2 2 2	3.4
Central Market 3 4 4 3 2 3 2 3 3 3 3 3 4 4 4 2 3 2 4 4 3 3 4 4 4 1 4 3 4 4 101 101 101 101 247 249 8 249 8 10PX 0 2 4 1 0 2 0 0 0 1 0 0 0 2 1 1 0 0 0 2 1 1 0 0 0 4 1 0 0 0 0 1 1 0 0 0	
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IDPX	8.1
IDPO	2.3
	1.2
Tobacco Co 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 1 0 0 0 1 1 0	0.5
Le Kandyan Hotel 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0	0.1
	o o
Works Dept 0 0 0 0 0 0 0 0 0 2 1 0 0 0 0 0 0 0 1 0 1	3 3
Private	0.1
Sub-total 22 32 32 31 27 27 24 14 25 35 27 26 25 29 30 32 34 31 28 26 31 34 34 35 36 23 13 33 37 33 899 899 999 913 2200 5 2200 5	1.0
Conservancy (bkts) 7 8 7 7 8 0 0 0 7 7 8 6 7 7 5 6 7 5 6 6 7 6 6 8 0 9 7 7 7 6 7 184 184 184 184 184	0.1
Total KM SW trips 23 33 33 32 28 27 24 14 26 36 28 27 26 30 31 33 35 32 29 27 26 30 31 33 35 32 29 27 32 35 35 36 36 24 14 34 34 38 34 926 926 926 940 2203.2 2203.2	1 1
Outside KMC	
Harispattuwa P.S. 0 1 2 2 2 2 0 0 2 3 0 1 0 2 2 2 3 2 0 0 2 3 1 0 1 0 2 2 1 885 40 40 2 21 885	2.9
Bata Shoe Factory 0 1 1 1 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0	0.1
Total SWM disp. 23 35 36 35 30 29 24 14 28 39 28 28 26 33 33 35 38 34 29 27 35 37 36 38 36 25 14 35 35 40 36 971 971 985 2295 4 2295 4	4.0
Liquid wastes Volume (m3) V(r	
KMC gully sucker 0 3 3 4 7 7 5 0 4 5 7 4 2 4 4 7 6 6 6 6 2 2 3 5 4 4 4 5 4 2 6 131 131 131 131 131 131 131 131	/

Notes:

- 1. Difference between daily data and summary monthly vehicle data for Carekleen area Carekleen monthly trip records used
- 2. Peradeniya compactor/tractor breakdown assumed on basis of relative % of compactor to tractor loads over following 11 mths.
- 3. CEB tractor assumed same tonnage as Bata, Works Dept same tonnage as IDPX

Days in mth 31

Jun-01	Jun-01	
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Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	2 2	23	24	25]	26	27	28	29	30	31 5	Sum	Sum	226-9	026 :	227-314	6 47-2	904	Compr	4WT	Total	Ċ.F.	Wt	(T/mt	h)	Wt(T/d)	Notes
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2. Mahaiyawa	4	2	2	4	4	4	4	4	2	2	2	4	3	4	4	2	4	4	4	3	4	4	- 1	2	4	4	4	4	4	1		98		1	ı			ı		98	98	2.21	210	6.9		7.2	
Peradeniya	3	3	4	4] 2	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	2	3	4	3	4	4	4	4	4	- 1	111		i				60		59	119	2.21	26	9.9		9.0	1
 Katugastota 	4	3	3	4	2	3	3	4	2	3	4	4	4	4	4	3	3	3	4	4	4	3	2	3	4	3	3	4	3	2	-1	99			1			- 1		99	99	2.21	219	9.1		7.3	l I
5. Aruppola	2	1	0	2	_1	2	2	2	_1	2	1	2	2	_ 2	2	1	2	2	2	0	0	4	. 1	2	2	2	2	이	2	1	- 1	47	451				Į.	- 1		47	47	2.21	10-	4.0 1	1022.4	3.5	[
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Workshop	0	0	0	0	0	0	0	0	0	0	0	0	0	이	이	이	0	0	이	0	0	0	이	이	o	1	0	이	이	0	ı	1			ı			- 1		1	1	1.89		1.9		0.1	3
Ew Balasuriya	0	0	0	0	0	0	1	0	0	0	0	0	0	이	이	Ð	0	0	이	미	0	0	이	이	미	0	0	이	1	0	- [2						- 1		2	2	2.21		4.4		0.1	4
Private	0	1	0	_0	0	0	0	0	0	0	0	0	O	0	<u>o</u>	의	0	0	<u>o</u>	이	0	0	0	이	0	0	0	0	이	0		1	30							1	1	2.21		2.2	63.9		
Sub-total_			19	31	22		34	36	23	23	25	35	33	36	36	27	28	40	38	32	31	32	22	23	32	31	33	30	34	24		904	904				T				912		225	4.9 2	2254.9	75.2	
Conservancy (bkts)	0			9	•		6			5				_7]	6	5	5	5	ं 6	5	5	б	8	7	7]	0	7	7	이	0		141	141	1			T	П			141	0.015		2.1	2.1	0.1	
Total KM SW trips	31	26	20	32	22	38	35	36	24	24	26	36	33	37	37	28	29	41	39	33	32	33	23	24	33	31 :	34	31	34	24	T	926	926					T			934		225	7.0 2	2257.0	75.2	
Outside KMC		\neg								Г	П			\neg	_	╗	\neg		Ī			7	\neg	╗	\neg		T	T		┰	7						1	ヿ		i e							
Harispattuwa P.S	이	- 1	0	2	0	2	2	0	1	0	2	0	1	2	2	1	0	3	2	3	3	1	- 1	이	2	2	2	3	2	2		42			1					42	42	2.21	93	3.0		3.1	
Bata Shoe Factory	0	_1	0	0	O	_0	ם (0	0	0) o	0	0	이	이	이	0	0	이	이	o	O.	이	이	이	0	0	oÌ	이	이	1	1	43	1	1		1	l] 1	1	0.72) (0.7]	93.7	0.0	1 1
Total SWM disp.	31	28	20	34	22	40	37	36	25	24	28	36	34	39	39	29	29	44	41	36	35	34	24	24	35	33	36	34	36	26	7	969	969				\top	\neg			977		235	0.6	2350.6	78.4	
Liquid wastes										Г				T	_	7	寸	T	7	一	ヿ	7	ヿ゙	┱	_	_	寸	7	ヿ	\neg	T			1			1	_					Volur			V(m3/d)	
Gully sucker	7	6	2	8	1	5	7	6	5	3	7	5	4	6	8	7	5	3	4	6	6	8	4	3	4	6	4	10 1	10	6	1	166	166	l	ľ		1	- 1		Ì	166	5.54			919.9		1 1
Notes:								_	_		_													_		_			_																		

^{1.} Monthly trip data totals used for Peradeniya rather than daily total

^{2.} Works Dept = soil + branches

^{3.} Works Dept and Workshop tractor tonnages assumed same as IDPX

^{4.} EW Balarusiya tonnage assumed same as private (= KMC tractor)

Area	1	2	3	4	5	6	7	8	9 1	Ö 1	1 1	2 13	14	15	16	17	18	9 2	20 2	1 2	2 23	24	25	26	27	28 2	29 3	0 3	1 Sun	n ISi	um	226-9026	227-3146	47-2904	4 Compr	4WT	Tota	IIC F.	Wt (T	/mth)	Wt(T/d)	Notes
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Deiyanewela	2	4	3	4	3	4	3	1	4	2	3	4 4	2	4	2	2	4	4	4	2	2 4	3	4	2	2	2	2	3 :	5 9	94				T		94					6.	
2. Mahaiyawa	0	4	4[4[4	4	2[1[4	3	4	4 4	2	[4[3	2	5	3	4	3 3	2 3	5	4	4	2	2	3	4 4	1 10) I	ľ			ľ	1	101	101				7:	2
Peradeniya	4	4	4	4	4	4	4	4	4	3	3	4 4	4	4	4	3	4	4	4	4 .	4 6	4	5	4	5	3	3	6 6	12	27				77	7	50					9.3	3
 Katugastota 	3	3	. 3	4	3	3	3	3	3	3	3	3 3	3 3	3	4	3	3	4	4	3	3 3	3	4	3	3	2	2	3 4	4 9	97					96	1	97				6.3	
5. Aruppola	1	2	2	2	2	2	1	이	2	2	2	2 0	2	1	2	이	2	2	2	2	2 2	_2	2	2	1	1	2	2 2	2 9	51	470					51	5	1 2.2		1		
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Liquid wastes	Г		┪	┪	_	_	\neg	┪	1	┰	7-	\top	${}^{-}$	┱	┪	\dashv	\neg	十	7	╅	1		\dashv	_	-+	+	1	┰	1	-				_	┿	\vdash	, 50	+-	Volume		V(m3/d)	
KMC gully sucker	3	8	3	5	6	5	3	4	6	2	6	7 7	·l 6	3	4	ol	5	4	зΙ.	ا ا	3l 2	5	4	2	o	4	7	ء اح	5 13	33	133			I	ĺ		133	3 5.54				
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1. Carekleen 4WT loads adjusted to give same no of total trips as daily data (shaded)

2. CEB tractor assumed same tonnage as Bata

- 3. Esala Perahera starts 23 Jul; assume extra loads by KMC tractor
- 4. Esala Perahera loads represent mixture of tractors, compactors and guily suckers

Days in mth 31

Area	1	ন	21	41	ET	eI	∌ I	al	ΛI 4	<u>α</u>	41 44	1 40	44	751	401	4 71	401	401	AT 8		<u> </u>	<u> </u>		1 44			1																
	H	-4		-4		6	4	ᄥ	9 7	0 1	4 72	7 73	74	75	761	77	78	19 2	2013	7 2	2 2	3 2	25	26	27	28	29	30]	31	Sum	Sum	226-902	26 22	7-3146	47-290	Comp	<u>r 4WT</u>	Total	C.F.	Wt (T/	nth)_	Wt(T/d)	Notes
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2. Mahaiyawa	4	4	2	2	1	4	4	4	4 .	4 :	2 3	3 4	4	4	4	4	2	1	4	4	4	4 :	3 2	4	4	4	4	4	3	105		1	- 1			1	105	105	2.21			7.5	
3. Peradeniya	6	[4[4	3[4	4	4	4	4 4	4 4	4 4	1 4	4	4	4	4	3	4	2	4	4	4 4	s i 3	4	4	4	4	4	4	121	ľ	i	- (60	of .	61					8.8	
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Le Kandyan Hotel	4	اما	اہ	ă	ď	2	ă	ĭ	XI :	וֹ וֹה	, I	()		ž	ĭ	긺	ĭ	7	ĭ	ا',	낅	1 :	1 1	ון וו	اړ ا	<u>۷</u>	灯	7	4	10		1	- 1			!	10	10		24.7		0.8	
Private	,	ൃ	긺	긺	ď	Š	٦	X	۲I :	X :	4 2	(1)		9	٦,	낅	낔	끾	4	끾	끾	<u> </u>	1 2	ון וי	9	U	멬	1	4	3						1	3] 3	1.23	3.7		0.1	
Esala Perahera	ار ا	쓸	낅	낅	ď	9	٦	<u>ي</u>	ָ' וְיֵ	<u>۷</u>	ַן וְי	ין ני	וי יו	9	낔	Ŋ	의	9	្ប	악	뗏	9 9	1 9	y y	덱	o	U	9	9	2						1	2	2	2.21	4.4	l	0.1	
	-4	- 2	2	.위-	긞	-21	Ч.	4	4	9 0	4 -	4	-4			븻	9	U.	의 .	9	11	9 () 0	1 9	_9	0	0	9	<u>q</u>	34	49	<u> </u>	Д.,			ـــــ	34				151.6		3,4
Sub-total	44	48	_	_		36 S		_	1 2	9 3	1 24	_		35	_	34	29			3 3	9 3	5 36	24	26	30	37		34]:			1042							1048			2594.9	82.3	3
Conservancy (bkts)		-4		6					8	4	4	6		_6	8	4	8		6	익	<u> 5</u>	5	5 5	6		0	6			187			丄						0.015				1
Total KM SW trips	42	8	33	31	24	37	88 3	6 4	2 3	0 32	2 25	38	41	36	38 :	35	30L	28 3	4 3	3 4	0 3	6 37	25	27	31	37	36	35 3	31	1071	1071	L				\bot	I	1077		2554.2	2597.7	82.4	1
Outside KMC	l	1	- 1	1	- 1	- 1	1	1	1	1	Į.	1 .	1	- 1	J	- 1	丁	1	- []	Ţ	Т	1	T]]	J	Ţ	Ţ	T	7			J	丁			Ţ	1		T				1
Harispattuwa P.S.	1	1	-1]	1	이	2	2	2 3	2 '	1 2	2 0	이	Q	2	2	2	1	0	2	2	2 .	2 1	ı 0	ᅵ아	2	2	2	2	2	41			- 1	- 1		1	41	41	2.21	90.7		2.9	•
Bata Shoe Factory	0	_0	이	이.	Q.	0	0	1	1 .	1	<u>1</u> 0	o lo	0	0	0	이	ol	o	1	ol	이	1 (ol o	네이	ol	0	o	ol	ol	6	47	l	- 1	1		İ	6	6	0.72		95.1		
Total SWM disp.	46	51	34	32	24	39 4	10 3	9 4	5 3	2 3	5 25	38	41	38	40	37	31	28 3	17 3	5 4	2 3	9 3	25	27	33	39	38 :	37	33	1118	1118		\top			-	1	1124		2649.2			
Liquid wastes			T	T		┰	T	Т	1	Τ'''	7	1		\neg	╅	1	-	╅	┰	┰	_	_	1	ш	-+		_	-+	+				1			-	+		┼	Volume		V(m3/d)	
KMC guily sucker	6	8	3	2	2	3	2	3	3 4	4l 6	5 2	7	4	7	5	5	6	6	5	4	3	و او	χĮτ	1 3	3	7	3	7	5	130	130	J	- 1			J	J	130	5.54				
 			_	_					_	_					-	-1				-1	-	`	1 '				~1	•	~		150	•				1		1.70	J.J4	1 / 20.4	1 40.4	23.2	

- 1. Carekleen monthly trip totals agree approximately with KMC daily landfill records no further adjustment made
- 2. Peradeniya monthly 4WT loads adjusted to give same total as daily records (shaded)

- 3. Esala Perahera finishes 6th August
- 4. Esala Perahera loads represent mixture of tractors, compactors and gully suckers

Sep-01

Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14 1	15] 1	6 1	7 18	3 19	20	21	22	23	24	25	26	27	28 2	29 3	30 3	1 Sur	n S	Sum	226-9026	227-3	146 4	17-2904	Compr	4WT	Total	C.F.	Wt (T	mth)	Wt(T/d)	Notes
Within KMC						T			コ	\Box				Т	\top	7	T	T	Т	П		Г				П	_	Т	Т	T	┰											Т	T	\Box
Care Kleen	[11]	6	_ 9	8	<u> 7</u>]	6	8	8	_7]	9]	10	10	11	10] 1	11	7 1	1 1:	2] _ 9	ો) 5	10	6	9	7	10	11	8]	10]	8]] 2	63	263	79	<u> </u>	70		L	114	263	2.4	772.	3 772.3	25,7	'
I. Deiyanewela	2	O	2	4	4	4	4	2	3	4	1	3	4	4	2	2	3 2	2] :	3] 3	4	2	2	4	4	4	4	4	2	1		87				T			87	87	2.2	192.0	3	6.4	1
Mahaiyawa	2	1	3	4	4	4	1	3	2	4	4	4	4	4	2	0	4 4	4 4	4 4	4 إ	2	4	4	4	4	4	3	2	1	93	3.5				- 1			93.5	93.5	2.2	206.	}	6.9)
Peradeniya	3	2	4	4	3	4	4	3	4	4	4	4	4	4	4	4	3 4	4 4	\$ 4	4	3	4	4	4	4	4	4	3	2	1 1	10					58		52	110	2.2	249.	3	8.3	
4. Katugastota	3	2	2	10	6	6	5	4	4	7	7	6.	6	5	4	4	8 :	5 4	1 4	4	5	6	4	4	4	5	5	3	2	1.	44							144	144	2.2	318.	7	10.6	6
5. Aruppola	1	1	2	2	_2	_2	2	1	2	2	2	2	2	2	1	0	2] :	2 3	2 2	2	1	2	_2	2	2	. 2	<u>1</u> L	1	1		50	485						50	50	2.2	110.	1 <u>078.6</u>		
Central Market	4	4	4	4	4	_4	4	4	4	4	4	4	4	4	4	3	4 4	4 3	4	2	4	2	3	4	5	4	4	4	2	1	13	113						113	113	2.4				
IDPX	0	٥	0	0	ंग	0	2	0	্	0	0	3	0	3	0	0	0 :	2 0) 1	1	1	0	0	2	2	0	2	ग	Ö		20				T			20	20	1.8	37.	3	1.3	3
IDPO	1	0	0	0	1	0	0	0	_2	_2	1	0	1		1	0	0 () [<u> </u>	0	1. 1	0	_0	1	1	o	ᅄ	이	0	1	12	32				_		12	12	1.8	22	60.5	0,8	3
Tobacco Co	0	0	0	О	_1	0	0	0	न	ंग	1	1	1	ना	미	0	0 2	2 1	1	0	0	0	0	0	0	1	न	0	0	T	9				1			9	9	2.4	22.	3	0.7	'I
Le Kandyan Hotel	0	0	0	- 1	이	2	0	0	이	이	0	0	0	이	이	0	0 0) () (1	l o	l o	0	0	0	O	이	o	0		4							4,	4	1.2	4.5	9	0.2	2
Private	0	0		- 1	의	2	0	0	0	_0	0	0	0	이	이	미	0 () () (1	0	0	. 0	0	0	0	<u>o</u>]_	이	Ð		4	17						4	4	2.2	8.5	36.0	0.3	
Sub-total	27	16	26	38	32	34	30	25	28	36	34	37	37 :	37 2	29 2	0 3	5 3	7 31	31	28	29	26	30	32	36	35	31 2	26 1	17	9	10	910							910		2227.0	2227.0	74.2	
Conservancy (bkts)	5			- 1	5	5	5	4	5	4	6	7	7	6	5	0	6 7	7 6	5[7	6		6	5	6	7	6	5	7	6	1:	55	155							155	0.01	2.3	2.3	0.1	
Total KM SW trips	28	16	26	39	33	35	31	26	29	37	35	38	38 :	38] 3	30 2	20 3	6 3	3.	? 32	29	30	27	31	33	37	36	32 2	27] 1	18	9	37	937					Γ		937		2229	1 2229.4	74.3	3
Outside KMC					▔▔	Ī	丁		\neg	П		- 1	\neg	Т	┰	7	1	Τ``	Т	1	П				П	П		\neg	\neg	Т	٦										T	T^{T}		
Harispattuwa P.S.	1	0	2	2	2	3	2	-1	이	이	2	3	2	1	2	o	2 () 2	2 2	2	0	0	2	0	1	2	2	o	0		38			1				38	38	2.2	84.	1	2.8	3
Bata Shoe Factory	٥	0	0	0	o	이	0	0	o	0	0	0	1	이	이	0	0 .	1] () c	lo	l o	0	1	0	0	0	1	이	0		4	42						4	4	0.7	2.	87.0	0.1	
Total SWM disp.	29	16	28	41	35	38	33	27	29	37	37	41	41 :	39 3	32 2	0 3	8 39	34	34	31	30	27	34	33	38	38	35 2	27 1	18	9	79	979		\vdash	- 1				979		2316.	2316.3	77.2	
Liquid wastes						T			\neg	┪		T		_	1	7	T	Т	T	I^{-}						T	7	1		Т					i				Г.		Volume	(m3)	V(m3/d)	
KMC gully sucker	3	o	2	3	4	2	5	3	2	5l	4	2	зl	11	7	3	4l 2	zl 3	sl s	4	l١	l 2	3	4	4	2	3	2	ol	1 :	88	88		Į.	- 1			ļ ļ	88	5.5	487.	1	1	1
Police gully	0	0	0	이	이	0	0	0	o	이	0	0	o	이	0	o.	0 0) () (0	0	0	0	0	0	o	o	3	0		3	3						Î i	3	5.5	16.0	504.3	16.8	3
Notes:			_						_									-	_	_	_					_																		

Days in mth 30

Oct-01

Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14 1	5 10	17	18	19	20	21	22	23	24	25	26	27	8 2	9 3	0 3	1 Sü	m	Sum	226-9026	227-31	46 4	7-2904	Compr	4WT	Tota	ıl C	F.	Wt (T/	mth)	Wt(T/d)	Notes
Within KMC	П	T	Т		П	T	П				П	T	T	\Box	Т		Γ"			T		T	Т	Т	丁	Т	Т	Т	Т	Т	П								l	Т					
Care Kleen	10	8	8	8	8	9	7	9	8	_9	7	7	8	7]	9 (11	7	11	8	9	8	9	. 7	7	7	7	7	8 T	7 8	3 2	249	249	109		31			116	2.5	6	2.47	811.6	811.6	26.2	1
I. Deiyanewela	4	3	3	4	4	3	4	2	4	4	3	3	2	3 .	4	3 4	2	4	2	3	4	3	4	4	4	2	3	3 -	4 :	3 1	102				Ĭ			102	10	2 :	2.21	225.8		7.3	
2. Mahaiyawa	3	4	4	4	4	2	3	4	4	3	4	3	3	3 .	4 4	ş 4	4	4	2	3	3	4	4	4	4	2	1	4 .	4 2	2 1	105			ŀ				105	10	5 :	2.21	232.4	l	7.5	.
Peradeniya	4	4	4	4	4	4	4	4	4	4	4	3	3	4 -	4 4	1 4	4	4	3	4	4	4	4	4	4	4	3	4] .	4 3	3 1	119				- 1	60		59	11	9 :	2.21	269.9		8.7	1
4. Katugastota	3	3	5	3	4	2	3	3	3	3	3	3	2	3	3 :	3 3	3	3	2	3	3	3	3	3	3	2	3	3)	3 3	3	92			1	1		89	3	9	2	2.21	184.6	1	6.0	
5. Aruppola	2	1	2	2	2	1	1	2	2	2	2	2	1	1 :	2 :	2 2	2	2	1	1	2:	2	2	2	2	1	1	2 :	2 :	2	53	471		l				53	5	3 3	2.21	117.3	1030.0		
Central Market	5	4	3	3	4	4	3	4	3	4	4	3	4	4	4	1 3	4	3	2	2	4	4	3	4	4	4	3	2	3 :	5 1	110	110			T			110	11	0 :	2.47	272.1	272.1	8.8	3
IDPX	0	0	3	2	_ग	1	0	2	1	2	2	6	3	2	3 4	1 5	1	6	0	2	2	5	3	4	3	2	2	4	4 ()	75				\top			75	7	5	1.89	141.9		4.6	3
IDPO	2	o	2	_2	2	1	1	2	2	_1	_2	0	2	o <u></u>	3 :	3 2	0	2	3	0	0	- 1	0	_0	1	0	0	2 (이 :	:	37	112						37	1 3	7	1.89	70.0	211.8	2.3	
Tobacco Co	ंग	0	0	1	2]	미	0	0	্	미	1	1	0	न -	o o	0	0	0	o	٥	Ő	0	ा	1	0	0	ᅙ	ा	0 (7	6				Т		Г	6	5	6 3	2.47	14.8		0.5	
Le Kandyan Hotel	2	0	0	0	이	이	0	0	0	이	0	0	0	이	이 《	0	0	0	이	1	0	이	이	٥	0	0	이	이	0 0		3							3		3 '	1.23	3.7		0.1	i i
Private	O	0	0	0	<u> </u>	<u> </u>	oj	0	이	_o	이	0	0	이	0) () (0	0	이	0	1	이	_0]_	이	0	0	이_	이	<u>o)</u> (<u> </u>	- 1]	10		1			l	1		1	2.21	2.2			
Sub-total	35	27	34	33	35	27	26	32	31	32	32	31	28 2	7 3	6 3:	3 38	27	39	23	28	31	35	30	33	32	24 2	23 3	2 3	1 2	7 9	352	952					Γ	Ţ	95	9		2346.3	2346.3		
Conservancy (bkts)	6		6	7	<u>-6</u>]	7]	-6	6	6	_5	0	7	6		6 :	'[€	7	6	7	4	5	6	6	5	6	5	6	4 1	6] :	5 1	179	179		Ι-	Т			1	17	9 0.	015	2.7	2.7		
Total KM SW trips	36	28	35	34	36	28	27	33	32	33	32	32	29 2	8 3	7 34	1 39	28	40	24	29	32	36	31	34	33 :	25 2	4 3	3 3	2 28	3 9	982	982			Т		Г		98	9		2349.0	2349.0	75.8	
Outside KMC		╗	Ţ	П	Π	Т	П	T	ヿ	Т	Т			┰	T						T	\neg	Т	Т		7	Т	T	Т	Т	\neg				Т				T	Т					
Harispattuwa P.S.	이	이	2	2	0	2	0	2	2	2	1	1	1	0 1	이 :	2 2	2	2	1	0	2	o	2	2	1	1	이	1]	1 (34			Ī	1			34	3	4 3	2.21	75.3		2.4	I I
Bata Shoe Factory	ᅵᅦ	_0	0	0	ᅄ	_ o	0	0	-1	이	o	0	0	이	미) 0	0	0	이	o	0	o	이	이	0	2	이	1 (ol d		4	38						4	ų.	4 (0.72	2.9	78.1		
Total SWM disp.	[36]	28	37	36	36	30	27	35	35	35	33	33	30 2	28 3	7 3	41	30	42	25	29	34	36	33	36	34 :	28 :	4 3	5 3	3 28	3 10	020	1020			T		Г	I	102	7		2427.1	2427.1	78.3	
Liquid wastes	П	T	7		Т	T	$\neg \tau$	T	7	\neg	T		1	┰	Τ."	Т	П				T	ヿ	┰		T	\neg	┰	Τ‴	T	Т					\top				Г	Т		Volume	(m3)	V(m3/d)	
KMC gully sucker	6	4	3	4	3	이	1	0	5	이	2	2	2	o] :	3 !	5 2	5	6	6	1	2	7	4	3	3	2	5	5 :	5 5	5 1	101	101					1		10	1 !	5.54	559.7			
Police gully	1	1	0	0	이	0	_1	0	0	ᆜ	0	0	0	0 1	0 0	0	0	0	0	0	0	o	0	0	0	0	이	이	0 (o l	3	3		l	- 1		l	l	l	3 :	5. 54	16.6	5 <u>76.3</u>	18.6	
Notes:																						•																							

1. Carekleen daily total and monthly totals agree approximately - no further adjustment made.

Area	1	2	3	4	5] (6	7] 8	3 9	10	11	12	13	14	15 1	6 1	7 1	8 1	9 20	21	22	2 23	24	25	26	27 2	8 2	9 3	31	Sum	\$um	226-9026	227-314	47-2904	Compr	4WT	Tota	C.F.	Wt (T/	mth)	Wt(T/d)	Notes
Within KMC		Т		Т	Т		Т	П	П			Т	Т	Т	Т	Т	T	Т	Т	Т				\neg	7		┱	Т				1				_	†	 	<u> </u>	1	
Care Kleen	8	9	9	10	9 1	0	7 1	1 7	9	5	9	9	7	7	9	5	9 1:	2 8	<u>3</u> _9	9 9	8 (6	_8	6	8	_7 1	10	7[]	7	248	248	69	60)	l	119	248	2.4	720.0	720.0	24.0	
Deiyanewela	4	3	2	3	4	4	4] :	2 4	2	4	4	4	2	2	4	2	4	3 4	4 4	1 4	2	2	3	4	4	3	4	4	99						99	99	2.2	219.1		7.3	
2 Mahaiyawa	4	4	3	2	4	3 .	4 .	4 4	2	2	4	4	2	3	4	2 :	2 4	4 4	4 4	i [4	4	2	2	4[4	4	4[:	Zĺ	99	ĺ	ĺ	ĺ	i 1	ĺ	99	99	2.2	219.1	ĺ	7.3	1
3. Peradeniya	4	4	4	4	4 .	4	4 .	4 4	3	4	4	4	3	4	4	3 4	4 4	4 4	4 4	1 4	4	3	4	4	4	4	4	3	115				60		55	115	2.2	261.1	l	8.7	1
Katugastota	3	4	2	3	3 :	3	3 :	3 3	2	3	3	3	3	3	3	2 :	3 :	3 3	3 3	3 4	1 3	2	3	3	3	3	3 :	3	88		Į.	1		88	0	88		176.0		5.9	
5. Aruppola	2	2	1	2	2 :	2	2	2 2	1	1	2	2	1	2	2	1	1	1 2	2 2	2 2	2 2	1	ᅵ이	2	2	2	3	2	51	452		1		} :	51	51	2.2	112.9	988.2		
Central Market	4	4	4	3	3	4	4	4 4	3	2	4	2	2	4	4	3 :	3	5 4	4 4	4 3	3	٥	2	4	4	4	5	4	103	103		1			103	103	2.4	254.8			1
DPX	3	3	2	이	3 (6]	8 :	5 7	4	이	7	5	1	3	4	1 (0	1 4	∮ 6	3	5	4	3	3	3	3	3 :	2	102						102	102	1.89	192.9	T -	6.4	
DPO	. 1	_1L	<u> </u>	0	2 :	2 .	<u> 2</u>	2 2	2	0	_2	_1	0	1	1	<u>2</u> (0 :	3 2	<u>2</u> _2	1_1	1	_0	. 1	_1L	_4	2	1 1) <u> </u>	39	141	I				39	38	1.89	73.8	266.7	2.5	
Tobacco Co	1	-1	이	0	0	0	이	1 0	0	0	-1	미	0	1	이	이크	0 1	0] (भार	1	0	O	Ö	0	0	0	न ।	ग	6						6	ű	2.4	14.8		0.5	
Le Kandyan Hotel	0	이	이	0	0	1	1 1	이	0 (0	0	0	0	0	이	1 1	0 (0] () (oj d	0	0	이	이	O	0	이	ો	3			1			3	3	1.23	3.7	l	0.1	
CEB	0	이	이	이	0 1	ᅊ	1[(기 0	0		이	0(0	0	이	Oį (0 (0 0	기 0	y c	0	0	ં ાં	o(О	0	이)[1		l	1	1 :		1	1	1.89	1.9	i	ł	11
Private	0	_0	0	0	0 1	0	<u> </u>	<u>)</u>	0	0	미	0	0	0	ᆫ	<u> </u>	0 (0 (<u>) </u>		0	_0	0	0]_	0	0	oj (ો	0	10		ļ			0	(2.21	0.0	20.4	0.0	
Sub-total	34	35	27	27] 3	4 3	9 4	0 3	3 37	28	21	40	34	21	30 3	5 2	2 2	5 3	6 3	38	35	32	22	24	33	35 3	35 3	4 2	7	954	954						954	1	2250.0	2250.0	75.0	
Conservancy (bkts)	6		6		6	6	6	7 6	6		_7	6	6				6	7 6		5 €	5	6	6	5	7	6	5	T	179	179	-					179	0.015	2.7	2.7	0.1	
Total KM SW trips	35	36	28	28] 3	5 4	0 <u> </u> 4	1 3	9∫38	29	22	41]	35	22	31 3	6 2	3 2	7 3	7 36	39) 36	33	23	25]	34	36] 3	36 3	5 2	3J	984	984			1			984	ı -	2252.7	2252.7	75.1	$\overline{}$
Dutside KMC	ı I	Т	- 1	Т		1	Т	П	Ι		П		-1-		Т	1-	П	Т	Ţ-'''	Т			П		Т		Т	1					1					1		\vdash	
Harispattuwa P.S.	1	2	이	이	1 :	2	1 :	2 1	1	이	2	2	0	2	2	1 (0 :	2 1	l 1	1	0	3	0	2	1	2	1 ()	34		i				34	34	2.2	75.3	1	2.5	
Bata Shoe Factory	0	_0	0	0	0	1	0] (0	1	.0	이	0	0	0	1	이	0 1	0 (<u> 1</u>		0	_0	이	0	0	1	이 4		4	38		1	1		4	4	0.72				
Total SWM disp.	36	38	28	28	6 4	3 4	2 4	1 39	31	22	43	37	22	33 3	9 2	4 2	7 3	9 3	7 40	37	33	26	25	36	37 3	39 3	6 2	3	1022	1022						1022	1	2330.8	2330.8	77.7	1
iquid wastes	17	Т	T	7	T	T	T	Т	T	Π	7	T	T	Т	7	T	7	Ī	T^{-}	Т	П			ヿ	7	17	7	Т				1						Volume		V(m3/d)	
KMC gully sucker	4	_5	2	이	7	4	4 (3 4	5	2	4	4	3	4	2	7] :	2 4	4 :	3 5	i 4	5	2	4	3	5	4	5 (sl	119	119	ı					119	5.54				1
stat:			_						_		_		_	_	_		_			_	_		_	_	_	_	_														

1. CEB tractor assumed same tonnage as Bata

Days in mth 30

Dec-01

Nov-01

\rea	1	2	3	4	-5	6	7	8	9	10	11	12	13	14	15[16	17	18	19	201	211 2	221 2	3 2	4 2	5 26	27	7 2	8T 29	1 30	J 31	1 Sur	n Iŝ	Suro	226-902	6[22	77-3146	47-29	04lC	OMPE	4WT	Total	CE	11	Wt (T/r	nthì	Wt(T/d	Note
Mithin KMC	Г	Γ											Н	╗		7	┪	+	7	7	+	+		7-	+-	۳	4=	7	Ť	+	7	+	, , , , , , , , , , , , , , , , , , ,	220 002	7	. 0.40	7, -23	7	STIPL	7777	TOTA	-	-	*** (***		***(***	/ INCIE.
Care Kleen	7	<u>∟</u> 8į	8	7	4	0	4	5	5	9	8	8	9	7	10	7	8	9	7	7 1	o	8	7 1	1l :	8 S	ıΙε	8 9	9 8	8 18	ક્રો ક	el 2	32	232	8	37	44		-		101	232	2.4	17	713.2	713.2	23.	n
. Deiyanewela	2	2	2	3	. 2	0	2	2	2	4	4	4	3	4	2	3	O,	3	4	2	2	2	2	4	2 4	1	2	2 -	T	5 4	4	75						1	_	75	75			166.0		5	
2. Mahaiyawa	2	2	3	4	1	0	1	3	2	4	4	4	4	4	2	-1	4	4	2	2	4	3	1	3 :	3 4	1 2	2 :	2 3	s] 1	1 2	2	81			i		1			81	81			179.3		5.	
3. Peradeniya	J 3,	4	4	5	4	2	0	3	3	4	4	4	4]	4	3	4]	4]	4	3	4	4	3	4	4	2 4	د (ا	4 4	4 3	sl a	al a	3 1	07					ł	57		50	107			243.0		7	
l. Katugastota	2	3	2	3	5	0	1	2	3	3	8	6	6	5	4	4	3	4	5	3	5	4	6	5 .	4 5	il 2	2 4	4 5	ş «	\$ E	3 1	21			ſ		ĺ	ſ	i	121	121	•		267.8		8.	6
Aruppola	1	_0	2	2	_1	0	2	1	1	2	2	2	2	2	1	2	2	2	2	O	2	1	0	2	1 (1	1 :	2 0	ol d	o l 2	<u>.</u>	40	424		-			1		40	40			68.5	944.6	2.	9
Central Market	4	4	_2	5	2	0	٦	3	4	4	3	4	4	4	4	3	4	6	4	3	2	3	2	5	7 7	7	4 6	6 4		2 7	7 1	17	117					_		117	117	2.4	17	289.4	289,4		
DPX	3	0	0	1	0	0	0	0	0	4	3	2	3	2	0	ग	0	0	0	0	2	1	0	0	0 0	7	0 (0 (T	5	1	21			┰					21	21			39.7		1.	3
DPO	0	_0	4	4	0	0	٥	0	0	1	1	0	2	0	1	인	<u></u>	O.	0		2 	이	0_1	0 (ol (1.0	ol (0 0	ત્રી હ	ત્રે જ	ą!	15	36		1		ļ	- 1		15	15	1.8	39	28.4	68.1	0.	9
obacco Co	0	0	0	0	0	0	٥	0	0	0	1	c	0	0	0	न	이	0	0	0	ग	ग	0	0 (0 (1	0 (0 0	1	0)	1			丁					1	1	2.4	17	2.5		0.	1
.e Kandyan Hotel	0	1	0	0	Q	0	0	이	0	Q	0	0	이	0	0	이	이	0	0	0	이	이	이	0 (이 0) c	이	1 (oj d	o) ()	2								2	2	1.2	23	2.5		. o.	1
rivate	0	_0	_0	_0	Q	0	0	_0	0	0	0	0	이	0	0	o	0	0	0	0	ol	0	0	0 4	이 이	el c	ol (ol d	ı	ol	3							o	1 0	2.2	21	0.0	4.9	0	ol.
Sub-total	24	24	27	34	16	2	11	19	20	35	38	34	37	32	27	24	25	32	27	21 3	33 2	25 2	2 3	4 2	7 33	23	3 30	0 24	17	7 35	8	12	812					┪			812	1	77	2020.3			2
onservancy (bkts)		6		7	6	-	7	6	}	4	4	6	6	5	6	6	5	6				6		6	5 6	1 6	6 7	7 6	ī	7	1 10	68	168		丁			丁			168	0.01	5	2.5			1
otal KM SW trips	25	25	28	35	17	2	12	20	21	36	39	35	38	33	28	25	26	33	28	22 3	4 2	6 2	3 3	5 2	8 34	24	4 3	1 25	17	7 36	8	41	841		Т			Т			841		7 2	2022.8	2022.8		3
Outside KMC		i T												T		Т	П	\exists	Т	Т	Т	Т	Т	Т	Т	Т	Т	Т	Т	Т	Т	7			1			丁				T	1			î e	1
larispattuwa P.S.	1	이	- 1	1	0	0	0	0	0	1	2	0	3	3	1	이	이	2	2	3	2	1	0 :	3 (이 (1 2	2 (ol d	ol d) 2	2	30								30	30	2.2	21	66.4		2.	1
ata Shoe Factory	1	_0	0	_1	δ	0	Ð	0	٥	Đ	O	1	o	0	0	야	아	o.	D	D	이	이	o .	O I	이 (1	1 (0 1	10	ם וכ	y .	5ļ	35	i	1		ļ	Į		5	1 5	0.7		3.6	70.0	o.	1
otal SWM disp.	27	25	29	37	17	2	12	20	21	37	41	36	41	36	29	25	26	35	30	25 3	6 2	27 2	3 3	8 2	8 34	27	7 3	1 26	17	7 38	8	76	876		丁			\top			876	${}^{-}$	7 2	2092.8	2092.8	67.	5
iquid wastes													- 1		П	Т	Ţ	T	Т	Т	T	T	Т	Т	Т	Т	1	Ţ	Т.	1	1	7			1		1	┰				1	٦v	olume	(m3)	V(m3/d	n
CMC gully sucker	5	_4	4	6	_1.	0	1	1	2	6	5	4	4	4	8	5	3	2	7	6	3	4	8	5 (o[2	: 5	5 3	3 (el d) 2	1	10	110		1		1	- 1			110	5.5		609.6			
votes:				-																							_	-		•	•	_					•					_				•	

Jan-02

Area	1	2	3	4	; إ	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22 2	23 2	24 2	25 2	6 2	7 28	29	30	31	Sum	Sum	226-	-9026 2	227-314	6 47-2	2904	Compr	4WT	Total	C.F.	Wt (T/	mth)	Wt(T/d)	Note
Within KMC	П			П	Т	Т	Т	T	Т	П	ヿ			T				7	7	T	T	T	T	T	T		T	1	1								T							T	1	Ī
Care Kleen	9	8	10	ű	1	3	9	8	8	11	10	9	10	11	9	10	9	8	10	10	6	9	10	8	14	8 1	이 -	6 7	' 8	8	8	277	27	7	79	5	9			139	277	2.47	808.7	808.7	26.1	1
Deiyanewela	2	4	4	2	1	3	4	2	4	4	2	4	3	2	1	3	4	4	4	2	2	4	3	4	2	4	2	3 (4	4	4	94		T						94	94	2.21	208.0)	6.7	4
2. Mahaiyawa	3	4	4	4	ዛ •	4	1	5	4	4	4	4	2	2	2	4	3	4	4	2	0	4	4	4	3	4	2 .	4 1	4	4	2	100	ıl .	1						100	100	2.21	221.3	3	7.1	4
3. Peradeniya	3	4	4.	4	١ ;	3 .	4	4	4	4	4	4	3	3	3	4	3	4	4	3	4	4	4	4	4	4	3	4 3	3	3	2	111						60		51	111	2.21	252.2	2	8.1	
Katugastota	2	5	6	5	1	4 .	4	4	4	5	4	5	4	2	2	5	5	5	3	3	5	4	5	4	1	5	5 '	6 4	l ∫ 5	5	5	131	l	1				ľ		131	131	2.21	289.9	•	9.4	ŧ.
5. Aruppola	_1	2	2	_2	<u>'L</u>	1	2	3	2	2	2	2	_2	2	2	2	2	2	미	1	1	4	4	2	2	2	3	2 2	2 2	4	2	64	50x	0						64	64	2.21		1113.2		
Central Market	4	4	4	4	٩Ŧ	기	8	4	5	8	7	7	2	2	2	अ	5	3	2	3	2	o	2	2	2	4	2	3 2	3	1.	3	103					T			103			1		8.2	
Menikkumbura mkt	이	0	0	_	<u> </u>	<u>1</u>	4	2	3	<u> </u>	4	4	3	4	3	2	2	0	3	2	2	2	ᇰ	2	2	2	3	3 (2	1	1	56	56	6						56	56	2.47				_
IDPX	3	2	1	1	:	3 (이	3	0	이	이	1	0	이	이	O	0	0	이	1	0	0	o	1	2	0	이	0 0	0	0	0:	18	ſ					ĺ		18	18	1.89			1.1	4
IDPO	1	0	3	3	1	1	0	0	3	2	0	3	1,	이	이	0	0	0	이	0	0	1	0	이	0	2	<u> </u>	<u>ol (</u>	<u>)</u>	1	0	21	39	9						21	21	1.89				
Tobacco Co	0	0	0	1	(기 '	이	0	이	1	0	0	0	이	0	0	0	0	이	0	0	0	이	이	O	0	이	이	0	0	0	2	Ī					Ĩ		2	2	2.47			0.2	2
Le Kandyan Hotel	이	0	0	(기 :	1 1	0	0	이	이	0	0	0	이	이	이	0	1	이	이	0	1	이	이	이	0	이	이 이	0	0	0	3	·							3	3	1.23			0.1	4
Private	0	0	0	_	L	1	0	0	이	0	0	0	0	<u>ા</u>	0	0	0	이	이	이	0	0	이	<u>이</u>	0	0	<u> </u>	<u> </u>	0	0	0		!	5			\bot	1		O.	9	2.21				
	28		38	34	2	3 3	6 3	35	37	41	37	43	30	28	24	33	33	31	30]:	27	22	33	32 3	31[:	32 3	35 3	0 3	1 19	31	31	27	980	980								980			2397.6		
Conservancy (bkts)	6		6						6	6	6	6	6	6	6	6	7	6	7	8	7	6		6	6		6	6 E		6	6	194	194	4								0.015				
	29	34	39	3	25	9[3	7 3	36	38	42	38	44	31	29	25	34	34	32	31[∶	28	23.	34	33[3	32	33 3	36 3	1 3:	2 20	32	32	28	1011	101	1							1011		2400.5	2400.5	77.4	<u>, </u>
Outside KMC	П				Г	Т	Т		Т	П		T	\neg	T	Т	Т		П	П	Т	Т	Т	Т	T	Т			Т																		
Harispattuwa P.S.	0	1	0	2	1	1 1	0	0	2	3	3	2	2	이	이	2	2	1	이	이	0	2	2	2	3	2	1	이 이	2	0	0	35	1	1					j	35	35	2.21	77.5	5	2.5	
Bata Shoe Factory	0	0	0	_1	L		이	0	0	0	0	0	0	0	٥	0	Đ	0	0	0	0	0	0	이	0	0	ىـــاە	<u>oL 0</u>	0	0	0	1	36	6			.L.	1		1	1	0.72				
Total SWM disp.	29	35	39	38	30	3	7 3	36	40	45	41	46	33	29	25	36	36	33	31	28	23	36	35 3	34	36[3	38 3	2 3	2 20	34	32	28	1047	104	7							1047		2478.7	2478.7	80.0	<u> </u>
Liquid wastes	Π				Τ	Т	Т	T	Т	Т	T	T	7		T	$\neg \top$		T	Т	Т	T	T	Т	Т	T		T	T	Г								T						Volume	(m3)	V(m3/d)	
KMC gully sucker	L 1	7	11	€	i 9) :	5	5	3	5	6	8	6	1	2	2	3	8	7	8	3	2	1	2	5	3	1	이 2	3	3	4	132	132	2	- [1			132	5.54	731.5	731.5	23.6	š
Notes:														_			_	_	_		_			_	_								•					_								

1. Monthly summary sheet Care Kleen 4WT loads adjusted from 138 to 139 so that total trips agrees with daily sheet.

Days in mth 31

Feb-02

Area	1 1	2	3 4	41 5	l 6	7	8	9	10] 1	11 1	2 1:	3 14	1 15	16	171	18	19I	201 :	21 :	221 2	31.2	4 2	5 26	1 27	1 28	3 29	30	31 9	Sum	Sum	226-90	26[2	227-3146	147-290	Comp	14WT	ITotal	CF	T Whi	T/mth	וו	Wt(T/d)	Notes
Within KMC			1	1		Ť	Ť	+	-	Ŧ		Ť				-12			-	-	-	+	<u> </u>	-	+=~		-	* 	30,,,					11. 200	.,	1		<u> </u>	1	1	"	,	
Care Kleen	9	9	9 :	5 8	10	8	8	7	6	8	9 13	3 9	12	13	12	13	11	10	12	10	9	7 1	1 1	1 7	14				270	270		37	92	:		141	270	2.4	715	.5	715.5	25.6	1
I. Deiyanewela	2	2	1 2	2 4	3	4	4	2	2	4	4 4	4 4	4	2	4	3	4	4	3	4	2	4	2 4	1 3	4			7	89							89	89	2.2	197	0		7.0	
2. Mahaiyawa	2	3	2 6	이 4	4	2	4	2	2	2	4 4	4 4	4	2	3	4	4	4	4	4	2	2	2 4	ı 2	! 4	:			84						1	84	84	2.2	185	9	- 1	6.6	
Peradeniya	4	3	4 3	2 3	3	4	3	3	4	4	4	4 4	4	3	3	4	4	2	4	4	4	4	4 4	1 1	4				98					4	9	49	98	2.2	222	2.2	- 1	7.9	
 Katugastota 	4	2	3 (이 6	6	6	5	4	6	6	6 6	3 E	3	4	7	4	6	5	6	6	4	5	5 5	5 5	5 5	5			136						1	136	136	2.2	30	.0	- 1	10.8	2
5. Aruppota	0	2	2 :	2 2	2	2	2	1	2	2	4 4	4 4	2	1	2	2	2	2	2	4	2	2	4 2	2 0	1 2	2			60	467						60	60	2.2	132	2.8 10	038.9		
Central Market	2	3	2	2 3	2	3	2	3	2	2	2 2	2] 3	3 2	3	0	2	-3	2	3	2	4	2	2 2	2 3	2				65		I	\top				65	65	1 · · ·				5.7	
Menikkumbura mkt	_2	2	3 (0 2	2	2	2	2	2	2	2 2	2 2	2 2	2	2	2	2	2	2	2	2	2	2 2	2 2	2				55	120						55					296.8	4.9	
IDPX	0	이	이	0 1	이	Đ	이	이	이	이	이 :	2 2	1	2	0	0	2	3	2	4	1	0	٥,	1 0	1				22						T	22		1.89		.6	- 1	1.5	
IDPO	0	0	0 (0 0	미	0	0	0	0	0	3 ′	1] (2	0	0	이	0	2	3	인	1	0	0 0	0 0	1 2	2			14	36				<u> </u>		14	14			3.5	68.1		
Tobacco Co	1	0	0 0) 1	1	1	이	이	이	2	0 0	기 2	2 0	0	٥	2	이	0	0	이	이	이	1 () 0) ()		I	11							11	11	2.4	2	7.2	- 1	1.0	
Le Kandyan Hotei	0	이	0 0	이	1 1	0	이	이	이	0	0 0	이) (이	0	이	미	미	o	이	이	이	0 0) 0	이	1			1						1	1	1	1.23		.2	ł	0.0	
Private	0	0	0 0	0 0		0	0	이	0	0	0 0	1	0	_0	0	이	<u></u>	0	0	의	이	이	0 0	0	1 0				1	13				<u> </u>		1 1	11	2.2		2.2	30.7	0.1	
Sub-total		26 2	6 1	_	_	32	30	_	26 3				36	_	-	\rightarrow	_	36 4	11 4	10 3	31 2	8 3	3 35	-	-	<u>\</u>		_	906		_			<u> </u>			906				150.0		
Conservancy (bkts)	6		8 (0 6		5	6			_		3 6			5	6	5	6	6	7	~1.	6	6 7	6		1		ightharpoonup	152						<u> </u>			0.01		2.3	2.3	0.1	
Total KM SW trips	27	26 2	27 1:	3 35	35	33	31	25 2	27 3	33 3	9 4:	3 42	37	33	34	37	39	37 4	12 4	11 3	32 2	9 3	4 36	24	40)			931	931							931		215	2.3 2	152.3	76.9	
Outside KMC	Į I		1		ΙĒ	- 1			I		Ī	1	Ι "				П					Т	Т												ŀ	T	T	I					
Harispattuwa P.S.	0	이	0 0	이 이	2	2	2	2	이	3	2 2	2] 3	2	이	이	2	2	2	2	이	이	이	2 2	2 0	기 2	?			34					1	Į.	34	34			5.3		2.7	
Bata Shoe Factory	_1	9	0 (<u> </u>	0	0	0	이	이	이	0 (1	1	0	0	이	이	0	0	이	2	0	0 (0 0	1 0	<u> </u>		_	5	39						5	5	0.72		3.6	78.8	0.1	
Total \$WM disp.	28	26 2	27 13	3 35	37	35	33	27 2	27 3	6 4	1 4	5 46	40	33	34	39	41	39 4	14 4	11 3	4 2	9] 3	6 <u></u> 38	24	42	2			970	970]	<u> </u>	970		_	1.1 2		79.7	
Liquid wastes				1	1 1	П			Т		1			ΙŢ	T	T	T		T	T	_[_	Т	T		Τ							T				T		I	Volur		13)	V(m3/d)	
KMC gully sucker	2	3	0 3	3 3	2	7	6	7	이	7	6 5	5 4	2	8	6	3	9	3	4	5	5	3	4 7	' 5	4	<u>ا</u> ا			123	123				ı		1	123						i
Army gulfy	0	0	0 0	O 10	10	3	4	이	이		ol (ol (o to	0	ol	ol	ol	ol	al	ol	ol	ol	ol o	o lo	ol o) I		- 1	7	7		- [1		ı	1 7	5.5	4I 34	8.6	720.4	25.7	

Notes

- 1. Monthly trips summary sheet had 129 trips for 4WT adjusted to give same mthly total
- 2. Monthly trips summary sheet had 111 trips for Katugastota assumed daily sheet total of 136 correct.

Mar-02

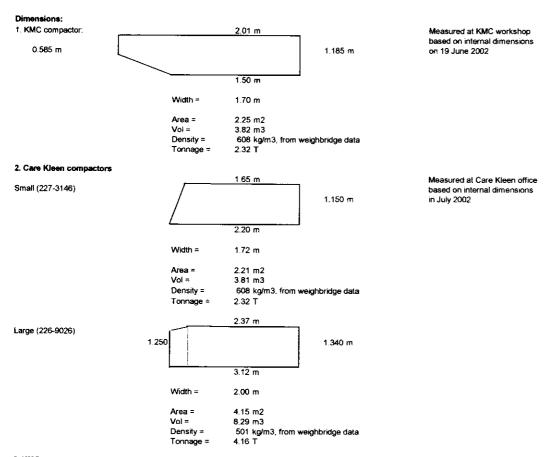
Area	1	2	3	4	5	6	7	8 9	10	11	12	13	14	15[16	17	18	19	20 2	21 :	22] 2	23 2	4 2	25 26	6 2	7 28	B 29	30	31	Sum	Sum	226	-9026	227-31	46 4	7-2904	Compr	4WT	Tota	ıl Ç.f	₹.	Wt (T/	mth)	Wt(T/d)	Notes
Within KMC				Т	Т	Т	Т	T	Т	Т	П	П		T	T			Т	Т	Т	Т	Т	Т	T	Т		1								Т										· ·
Care Kleen	13	11	8	8	9 1	1	8 1	0 6	3 7	/ 10	8	9	9	6	11	8	10	10	6	6	9	8	9	9	7 1	<u> 1 - 8</u>	8 7	9	10			1	71		67			133			47	779.1	779.1		
I. Deiyanewela	[4]	2	4	3	4	4	4	4 2	2 3	3 3	4	3	3	4	2	0	4	4	2	4	4	1	2	4 3	2 4	4 :	2 0	2	1	89			- 1					89	8		.21	197.0		6.4	
2. Mahaiyawa	4	2	1	3	4	4	4	4 2	2 3	3 4	2	4	3	4	2	1	4	4	2	3	4	2	이	4 2	2] 4	4 1	1 4] 2	2 2	89			- 1		- 1		ł	89	8		.21	197.0		6.4	
3. Peradeniya	4	3	3	4	4	4	4	4 :	3 2	2 4	4	4	4	4	3	4	3	4	3	4	4	4	2	4 4	4	4 4	2 4	3	2	109			- 1			58		51	1		.21	247.6		8.0	
4. Katugastota	6	3	6	6	6	6	4	6 4	4 3	3 4	6	3	6	5	4	2	5	5	4	5	6	6	4	5 6	6	7 :	3 4	4	2	146								146	1		.21	323.1		10.4	
5. Aruppola	2	1	2	3	4	4	4	2	1 9	2 2	2 2	2	2	2	1	1	미	2	1	2	2	2	2	2 4	4	<u>2</u>	1 2	1 1	0	58	_	1	1		_			58		_	.21		1093.0	4.1	
Central Market	3	2	2	3	2	3	3	2 :	3 2	2 3	3 2		2	2	3	2	3	3	2	3	2	3	2	3 2	2 :	3 2	2 3	2	2 2	74			- 1					74			.47	183.0		5.9	
Menikkumbura mkt	2	2	2	2	2	2	2 .	2 :	2 2	2 2	2 0	3	_2	2	2	2	2	2	2	1	2	2	2	2 2	2 :	2 (0 2	2	0	56		<u> </u>			_			56			47	138.5	321.6		
IDPX	0	0	0	이	이	이	D .	이	가 0) (0	네 이	이	이	0	아	이	이	이	0	0	이	이	0 (미	이 선	미미	10) 0	(1				- 1			0	1		.89	0.0	1	0.0	
IDPO	0	2	0	0	이	0	0	이 :	3 0) 3	3 2	0	2	0	Đ	0	어	이	Oi	0	1	1	어	0 (0 (<u> </u>	0 0	0	0	14	14	4					L	14	1		B9	26.5	26.5		
Tobacco Co	0	Đ	미	이	1	이	0	2 (이	ગંવ	1 0	이	이	이	0	0	이	이	이	0	미	이	이	1 '	1 (이 🤄	이 이	10	9		il							5	1		47	12.4		0.4	
Le Kandyan Hotel	이	0	이	이	이	1	0	이 (이	ગ	0	비이	이	이	0	이	이	이	이	0	1	이	이	0 (미	이	이 1	0) 0		ᅦ		- 1		- 1		1] 3	1		.23	3.7		0.1	
Private	0	0	0	이	이	이	0	ol (2 .0	2	0 10	니의	의	이	0	의	이	이	이	0	이	의	이	0 (<u> </u>	익	민	10	10		1	8			_			0	!		21	0.0	16.1		
Sub-total	38		$\overline{}$	32 3	_	19 3		6 2	-	_	-		33	29			31	_	22 2	28	_	_	_	34 3	_	-	9 27	•—	_	914					4				91				2236.3		
Conservancy (bkts)	- 6	5	6		6	6		6 (6			6	6	6	.71	6	6	7	6		6	6		<u>-, </u>	6 6		6								ļ	ļ		3 0.0		2.9			
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larispattuwa P.S. 0 0 0 2 1 2 2 2 1 0 2 0 2 2 0 2 0 2 1 1 0 2 1 0 2 1 2 0 2 1 2 0 2 1 2 0 2 1 2 2 1 0 2 0 2																																													
Bata Shoe Factory	ata Shoe Factory 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																																												
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Liquid wastes	uid wastes Volume (m3) V(m3/d)																																												
KMC gully sucker																																													
Notes:																																													

Apr-02

Apr-uz	4																																														
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Sum	Sum	226-902	6 2	27-3146	47-290	4 Comp	r]4WT	Total	C.	F. I	Wt (T/	mth)	W	t(T/d) N	lotes
Within KMC	П		\neg	╗	\neg	T								П											П						Т			1	Т			Ì	Ī	П	T	Т					
Care Kleen	9	9	9	8	8	9	7	10	9	4	7	7	8	2	4	7	6	8	11	9	7	9	7	8	8	7	- 6	8	9	9		229	229	8	15	39			105	229	9 2	.47	703.2	703	2	23.4	
Deiyanewela	3	4	4	4	4	2	0	2	4	4	4	2	1	0	0	2	4	4	3	3	2	4	4	4	4	3	2	2	2	4		85			Т			1	85	85	5 2	.21	188.1	4T		6.3	
Mahaiyawa	4	4	4	4	4	2	1	4	4	4	2	4	2	이	2	2	4	4	4	3	2	4	4	4	2	3	2	2	5	2		92		1	-				92	92	2 2	.21	203.6	١		6.8	
Peradeniya	4	4	4	4	4	3	3	2	4	4	3	4	3	1	이	2	4	4	4	2	3	2	3	4	4	4	4	4	4	4		99		i	1		. 5	5	44	99	9 2	.21	225.1	4		7.5	
Katugastota	6	6	5	6	6	2	5	7	6	5	6	4	4	0	4	5	6	3	3	4	5	5	5	5	6	5	2	5	5	4		140		1	1			i	140	140) 2	.21	309.9)		10.3	
. Aruppola	2	4	2	2	2	2	1	3	4	4	4	4	1	0	이	2	2	2	4	1,	1	2	4	4] 2	0	1	1	2	0		63	479)	Ι.				63	63	3 2	21	139.4	1066	.1	4.6	
entral Market	3	2	4	2	3	3	3	3	3	3	1	1	0	1	3	2	3	5	3	- 3	2	3	2	3	3	3	4	3	2	2		78		T	Т				78	78	3 2	.47	192.9	1		6.4	
Menikkumbura mkt	3	3	2	2	2	2	2	3	2	2	3	2	2	3	3	2	0	3	1	3	2	2	2	2	2	2	2	3	2	2		66	144	ц.	-				68	66	3 2	.47	163.3	356	.2	5.4	
DPX	0	0	0	2	이	0	0	-1	0	Ö	0	0	٥	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		3			Т				3		3 1	.89	5.7	/I		0.2	
DPO	1 2	o	ol	2	이	0	0	3	0	1	1	2	0	이	o	0	Q	0	2	3.	0	2	3	2	1	0	0	0	2	1		27	30)	-				27	27	7 1	.89	51.1	56.	.7 1	1.7	
obacco Co	1	0	ল	া	ं	0	Ō	0	1	0	0	0	0	O	0	0	Ö	0	D	0	0	0	0	0	0	0	0	0	0	0		2			Т				T = 2	7	2 2	47	4.9	7	Т	0.2	
e Kandyan Hotel	0	0	이	0	이	0	0	- 1	0	0	0	0	0	o	o	0	0	0	0	0	0	0	0	1	} o	0	0	0	0	0		2			1				2	1 :	2 1	.23	2.5	اذ		0.1	
Private	0	0	이	이	미	0	0	o	0	0	0	0	0	이	0	0	0	0	0	0	0	0	0	0	0	0	이	0	0	0		0	4	4	ı		L	1	.1	4	2	.21	0.0) 7	4	0.0	
iub-total	37	36	34	36	33	25	22	39	37	31	31	30	21	7	16	24	29	33	35	31	24	33	34	37	32	27	23	28	33	28	T	886	886	3	Т					886	5	П	2189.7	2189	.7	73.0	
Conservancy (bkts)	6	В	7	6	7	6	6	6	6	7	6	6	7	0	0	6	6	6	7	6	6	7	6	6	6	7	6	6	7	0	T	172	172	2	Т				Т	17:	2 0.0	J15	2.6	3 2	6	0.1	
otal KM SW trips	38	37	35	37	34	26	23	40	38	32	32	31	22	7	16	25	30	34	36	32	25	34	35	38	33	28	24	29	34	28		913	913	3	┰					913	3		2192.3	2192	.3	73.1	
utside KMC			\neg	┪	\neg	┪	T								┪			П						Т	Т	П	\Box				┪			î T	╅					T	T -	\neg		${f o}$	T		
larispattuwa P.S.	2	2	2	2	2	0	D	0	0	0	0	0	0	이	0	0	0	2	2	1	0	1 3	2	2	2	1 0	2	0	2	1		29			-1				29	29	9 2	21	64.2	2	1	2.1	
Bata Shoe Factory	0	a	a	ᅦ	o	0	D	0	١٥	0	0	0	lo	o	0	٥	0	0	0	1	١٥	l c	l o	٥	lo	0	0	ا	1	0	ŀ	2	31		-1		1		2	4 :		.72	1.4	4 65	6	0.0	
otal SWM disp.	40	39	37	39	36	26	23	40	38	32	32	31	22	7	16	25	30	36	38	34	25	37	37	40	35	28	26	29	37	29	_	944	944	\$	T				1	944	4	ヿ	2257.9	2257	9	75.3	
iquid wastes	T	\neg	_	┪	_	┪							П	\neg	7						Ħ	f	1		Т		\neg	П			┪			1	\top				1	一	1	_	Volume	(m3)	V(n	m3/d)	
KMC guilly sucker	3	8	3	4	2	5	3	5	3	6	3	6	lo	o	o	4	4	5	5	4	2	1 4	1 2	lэ	ا 4	5	3	5	2	0	ı	109	109	əl	-1		1		1	109	9 l 5	.54				20.1	

^{1.} Monthly tractor/compactor sheet gave total of 232 monthly trips, slightly different from daily sheet total of 229 - mthly 4WT trips adjusted to give same total as daily sheet (I.e. decreased from 108 to 105)
2. Monthly tractor/compactor sheet gave a total of 93 monthly trips, slightly different from daily sheet total of 99 - monthly 4WT trips adjusted to give same total as daily sheet (I.e. increased from 38 to 44)

Days in mth



2. KMC compactor data Care Kleen

	Care Kleen	Care Kleen	KMC	Katugast.	
L	Large	Small	Comp'r	Comp'r	
T/load	4.16	2.32	2.32	2.0	Calculated from actual internal measurements, except for Katugastota compactor - KMC figure assumed correct
Fill factor	100	100	100	100	Estimated by Peter, Landfill Manager
KMC	5.4	3.4	5.4	2	Tonnages per load used by KMC

7. Proportion of gully sucker loads brought by small and large gully suckers

GS	No		GS Capacity	Trips	Avg trips	Avg vol	Vol/trip
			(L)	(No/d)	(No/d)	(L/d)	(L/trip)
Small		1	3500	2 - 3	2.5	8750	
Large		2	7000	3 - 4	3.5	24500	
Total		3	-	1	6	33250	5542

8. Esala Perahera data

	LC	SC	4WT	Sum
Aug 1-5	17	0	23	40
Aug 6-12	17	7	50	
Aug 13-19	· 21	15	56	92
Aug 20-26	26	16	36	78
Aug 27-31		10	25	50

9. General notes:

- 1. Daily sheet data generally considered more accurate than monthly trip summary data hence any discrepancies resolved by adjusting monthly 4WT total to give same total no of trips as daily data except where indicated otherwise.
- 2. Bata shoe company is located outside of Kandy municipal limits at Ambattane.
- 3. Conservancy data relates to number of buckets per load. 0 indicates no trip; non-zero number indicates 1 trip with stated no of buckets (usually 6-8)
- 4. Private vehicles assumed same tonnage as KMC tractor
- 5. Before July 2001, only the total trips was counted without the no of different compactor and tractor trips being specified separately. Separate recording (i.e. additional monthly summary sheet) began in Jul 2001 (when Mr Dissanayake took over management).

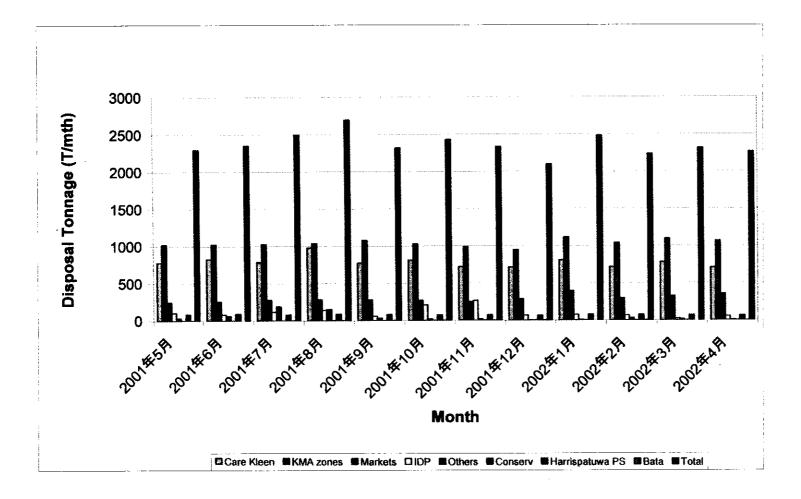
Summary data - No of loads

	Area	Vehicle	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02	Sum	Mth avg	Daily avg
Inside	Care Kleen	Tractor	135	70	119	190	114	116	119	101	139	141	133	105	1482	124	4.1
Kandy		Sm. Comp'r	73	107	114	48	70	31	60	44	59	92	67	39	804	67	2.2
Municipal		Lg. Comp'r	67	98	55	96	79	109	69	87	79	37	71	85	932	78	2.6
area	KMA	Tractor	400	399	297	317	426.5	322	304	367	440	418	433	424	4548	379	12.5
(KMA)	zones	Sm. Comp r	59	60	77	60	58	60	60	57	60	49	58	55	713	59	2.0
		Katu Comp'r		o	96	98	0	89	88	0	0	0	이	O	371	31	1.0
	Markets	Tractors	101	104	113	115	113	110	103	117	159	120	130	144	1429		
	IDP	Tractors	57	44	63	75	32	112	141	36	39	36	14	30	679	57	
	Others	Tractors	21	30	87	49	17	10	10	3	5	13	8	4	257	21	0.7
	Sub-total		913	912	1021	1048	909.5	959	954	812	980	906	914	886	11215	935	30.7
	Conserv	Buckets	184	141	157	187	155	179	179	168	194	152	193	172	2061	172	5.6
	Total		940	934	1045	1077	936.5	989	984	841	1011	931	945	913	11547	962	31.6
Outside	Harrispatuwa PS	Tractors	40	42	38	41	38	34	34	30	35	34	32	29	427	36	1.2
KMA	Bata	Tractors	5	1	4	6	4	4	4	5	1	5	o	2	41	3	0.1
Total to lar	ndfill	No	985	977	1087	1124	978.5	1027	1022	876	1047	970	977	944	12015	1001	32.9
Liquid was	tes	Gully sucker	131	166	133	130	91	104	119	110	132	130	115	109	1470	123	4.0
Daily avg	All KMA loads	No	30.3	31.1	33.7	34.7	31.2	31.9	32.8	27 1	32.6	33.3	30.5	30.4	31.6		
	KMA + other	No	31.8	32.6	35.1	36.3	32.6	33.1	34.1	28.3	33.8	34.6	31.5	31.5	32.9	ı	
	Gully sucker	No	4.2	5.5	4.3	4.2	3.0	3.4	4.0	3.5	4.3	4.6	3.7	3.6	4.0	l	
No of days		days	31	30	31	31	30	31	30	31	31	28	31	30	365	1	

Summary Data - Tonnages

	Area	Units	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02	Sum	Mth avg	Daily avg
Inside	Care Kleen	T	781.3	828.1	786.8	980.0	772.3	811.6	720.0	713.2	808.7	715.5	779.1	703.2	9400.0	783.3	25.8
Kandy	KMA zones	T	1022.3	1022.4	1028.2	1036.9	1078.6	1030.0	988.2	944.6	1113.2	1038.9	1093.0	1066.1	12462.5	1038.5	34.1
Municipal	Markets	T	249.8	257.3	279.5	284.5	279.5	272.1	254.8	289.4	393.3	296.8	321.6	356.2	3534.8	294.6	9.7
area	IDP	łΤ	107.8	83.2	119.2	141.9	60.5	211.8	266.7	68.1	73.8	68.1	26.5	56.7	1284.2	107.0	3.5
(KMA)	Others	Įτ	39.2	63.9	191.5	151.6	36.0	20.7	20.4	4.9	8 6	30.7	16.1	7.4	591.1	49.3	1.6
	Sub-total	Т	2200.5	2254.9	2405.2	2594.9	2227.0	2346.3	2250.0	2020.3	2397.6	2150.0	2236.3	2189.7	27272.6	2272.7	74.7
	Conserv	T	2.8	2.1	2.4	2.8	2.3	2.7	2.7	2.5	2.9	2.3	2.9	2.6	30.9	2.6	0.1
	Total	Т	2203.2	2257.0	2407.5	2597.7	2229.4	2349.0	2252.7	2022.8	2400.5	2152.3	2239.2	2192.3	27303.5	2275.3	74.8
Outside	Harrispatuwa PS	T	88.5	93.0	84.1	90.7	84.1	75.3	75.3	66.4	77.5	75.3	70.8	64.2	945.1	78.8	2.6
KMA	Bata	T	3.6	0.7	2.9	4.3	2.9	2.9	2.9	3.6	0.7	3.6	0.0	1.4	29.5	2.5	0.1
	Total	T	2295.4	2350.6	2494.5	2692.7	2316.3	2427.1	2330.8	2092.8	2478.7	2231.1	2310.0	2257.9	28278.1	2356.5	77.5
Liquid was	tes	m3	726.0	919.9	737.0	720.4	504.3	576.3	659.5	609.6	731.5	720.4	637.3	604.0	8146.3	678.9	22.3
Daily avg	All KMA	T/d	71.1	75.2	77.7	83.8	74.3	75.8	75.1	65.3	77.4	76.9	72.2	73.1	74.8		
	KMA + other	T/d	74.0	78.4	80.5	86.9	77.2	78.3	77.7	67.5	80.0	79.7	74.5	75.3	77.5		
	Gully sucker	m3/d	23.4	30.7	23.8	23.2	16.8	18.6	22.0	19.7	23.6	25.7	20.6	20.1	22.3]	
No of days	1	davs	31	30	31	31	30	31	30	31	31	28	31	30	365	1	

^{1.} Conservancy tractor data is for no of buckets, not loads; actual loads obtained from difference between total and sub-total



KMC Monthly Records

Month	Rd	Goha	goda:s							ays abs	ent	Gohag	oda was	ste buri	al system	Special	project	\$	Drain cle	eaning				Gully	sucker trips		ŀ	Gully su	icker inco	me		SWM	WM
	cleaning	Sub-	Minor	Lab-	Work	Sub-	Minor	Lab-	Sub⊦	Minor	Lab-	Daily	Unskill	Days	Waste	special	slum	comm	No of	No of	Days	Stag.	houses	Busi-	Sacred Out-	Total	Houses	Busi-	Sacred	Out-	Total	Income	Total
	dist	sup'r	Sup'r	our-	days	sup'r	sup'r	our-	sup'r	sup'r	our-	labour-	labour-	work-	buckets	clean	clean	part	drains	Home	spray-	H2O	in	ness	places side	1	in	ness	places	side			income
	(km)			ers				ers	sup'r	sup'r	ers	ers	ers	ed	buried	w/s	w/s	w/s	cleaned	gdns cl'd	ing	cov'd	KMA		KMA	i.	KMA	L		KMA			
May-01			2	17	31	1		Ī				17	6	31									41	21	3	70	42150	44700	1500	19410	107760	6681.5	114441.5
Jun-01	985	1	2	16	30	ı	1			1	l	17	16	30	175	4	0	6	35	20	50	ıl .	25	25	2	5 57	31250	62500	1000	20330	115080	2153.5	117233.5
Jul-01	985		2	17	31	i	1	1				18	17	31	159	8	0	10	30	15	45	Į.	50	20	2	77	62500	50000	1000	22950	136450	6500	142950
Aug-01	985	1	2	17	31	28	56	527	3	6	121		17	31	177	10	0	6	40	19	40	lo	50	15	l 8 :	5 78	62500	37500	4000	22350	126350	6450	132800
Sep-01	930	1	2	17	30	26	48	345	4	12	135	17	16	30	155	5	0	5	50	20	30	ŀ	35	5	3	47	43750	12500	1500	13350	71100		
Oct-01	nd	1	2	16	31	31	58	381	0	4	146	16	1	31	179	12	11	8	30	22	40	l 0	45	11	l 7 ;	3 1 66	56250	27500	3500	13950	101200	4534	105734
Nov-01	930			İ	[1				l		[:						J		45	14	2	65	56250	35000	1000	13450	105700	5750	111450
Dec-01	930	1	2	16	31	29	53	374	2	9	153	16	15	31	168	18	10	12	22	18	15	l o	40	10	l ol :	53		25000	o	10200	85200	2750	87950
Jan-02	930	1	2	16	31	28	55	367	3	7	160	16	15	31	193	20	12	20	25	15	18	. 0	61	13	2 1	81	76250	32500	1000	14675	124425	2000	126425
Feb-02	930	1	2	8	28	28	51	176	0	5	20	8	8	176	151	12	8	4	15	8	5	lo	42	10	8 6	66	52500	25000	4000	31200	112700	21650	134350
Mar-02	930	1	2	8	31	nd	nd	nd	nd	nd	nd	8	8	31	56	12	16	15	20	5	20	0	27	8	10	52	29450	18000		24120	76570		
Apr-02	nd	1	2	7	30	4	50	173	26	10	37	7	7	30	164	15	9	6	22	9	24	0	38	10	4	56	37800			13880	73680	8800	
														•												Total	600650	390200	25500	219865	1236215	71419	1307634

Notes:

1. Gully sucker charges:

From	Residence	Bus	Rel
	600&1250	1200&2500	250&500
Jun-01	1250	2500	500
Apr-02	800 & 1000	2000	500

- 2. Typical cost for collecting gully sucker load from outside Kandy is around 3000 Rs/load hence when no outside trip data provided, no of outside trips is estimated based on this figure (shaded in yellow)
- 3. No of gully sucker trips recorded on this sheet is always less than that shown on the Gohagoda daily record sheet, as the Gohagoda data includes public toilet waste collected for free by KMC gully sucker. Also, the army and police gully suckers do not pay.
- 4. Monthly SWM income does not correlate with number of private trips per month. This is because private parties will pay the disposal cost first at the workshop and usually pay for more than one trip at a time. They then use these trips over a longer period, typically covering 2-3 mths.

Kandy MC A. General Notes

1.	SWM	Staff S	Salarv +	allowan	ce costs

1. SYM Start Salary + anowance co	, pira			
Item	Salary	Allowance	Total	Adopted
Driver	4350	2200		and for Parking a
Labourer	3850	2200	6050	6,050

Notes:

a. Basic salary data from KMC paysheets gives average salary of 3,847Rs/mth from 103 workers - say

3850 Rs/mth

b. Collection worker survey gave average salary of 5,121 Rs/mth, including allowances, or 2,921 Rs/mth basic salary - this is too low.

500 Rs/mth to driver's salary as per Matale + c. Use paysheet figure and add

2,200 Rs/mth allowance to get adopted values above.

2. Calculating tyre replacement costs for different vehicles From KMC SWM data, they spend 371050 Rs/yr for 15 4WT/trailers & 1 Comp'r, 3 gully suckers & 1 pickup a 4WT/trailer have 4 sm tyres @ 1500 ea & 2 lg tyres @ 4000 ea, replaced every 1 yrs = 14000 Rs/yr x 15 veh = b. Compactors tyre replacement cost is ~ 27000 (Abans) - 45000 (CMC) giving average of 36000 Rs/yr - increased slightly to: c. Gully suckers - assume same as compactors = 38760 Rs/yr x 3 vehicles = d. Pickup has 4 small tyres @ 1500 ea, replaced every 1 yrs	210000 Rs/yr 38760 Rs/yr 116280 Rs/yr 6000 Rs/yr
Tyre costs based on Galle MC data, but assuming tractor tyres replaced more often than in Galle due to hilly terrain and greater distance to landfill Sum =	371040 Rs/уг
- Compactor tyre cost adjusted so as to give same total as KMC's total tyre cost - slightly greater than average of Abans and CMC data (36000)	
This sum is close enough to above value and the shaded figures have been adopted for cost calculations	
3. Calculating repair and maintenance cost for different vehicles (KMC gave overall costs, individual costs calculated from other data)	
From KMC data, they spend a. In Galle, 4WT R&M cost = 24000 Rs/yr + trailer = 20000 Rs/yr x 15 vehicles x 1.125 factor due to hilly conditions in Kandy =	
This is equivalent to: 349500 Rs/4WT.yr b. Compactors R&M cost = 48000 (Abans) to 322,000 (CMC) Rs/yr; assume R&M cost close to Abans as KMC driver looks after it well = c. Assume gully sucker R&M same as compactors = 50740 x 3 vehicles =	50740 Rs/yr 152220 Rs/yr
d. Assume pickup R&M cost = 40 % of 4WT cost = - assumed this sum does not include bulldozer maintenance costs, as bulldozer has only been used for short time. Sum =	9600 Rs/yr 955060

4. KMC Budget equipment items listed below (but equipment costs calculated based on data given by KMC for different vehicles, rather than this data).

- Uniforms 2002 budget cost =

90000 for

330 tabourers =

273 Rs/labourer.yr

- Mamoti and ekel brooms 2002 budget cost =

This sum is close enough to above value and the

400000 for

330 labourers =

shaded figures have been adopted for cost calculations

1212 Rs/labourer.yr

5. Blue shaded data indicates data given to JICA Study Team by KMC SWM/Workshop staff.

B. Collection vehicle unit costs - existing situation

Handcart (HC)	Unit	Unit	Qty	Cost	Source & Notes	
Item	1	Rate	<u>.</u>	(Rs/yr)		
Labourers	Rs/mth	6050	24	145200	00 See general notes No1; no of lab'rs/HC = 2 (KMC said 2-3 - see note 4 for 3 case)	
Protective equipment (gloves, etc)	Rs/yr	1675	1	1675	75 See note 1	
Tyres, tubes	Rs/yr	2000	1	2000	00 Estimate based on 2 sm tyres @ 1500 Rs ea with 1.5 yr life	
Handcart repair, maintenance	Rs/yr	2000	1	2000	KMC Handcart project estimate	
Insurance	Rs/yr	0	1	0	0	
Rev Licence	Rs/yr	о	1	0	o	
Depreciation	Rs/yr	2125	1	2125	25 See note 2	
Total O&M Costs per HC	Rs/yr			153000	00 per HC	
Avg no of trips per HC per d	trips/d			3.2	2 from Katugastota zone survey information (13 HCs @ 41 trips/d according to supervisor)	
Avg amount collected/HC/yr	T/yr			114	4 See note 3 - total tonnage divided by 13 HCs in Katugastota zone	
Unit HC O&M cost	Rs/T			1342	2 = total O&M costs/HC tonnage per yr (actual data)	
Notes:					<u> </u>	
1. Staff protective equipment based of	on KMC dat	a and curre	nt prices:			
a. Gloves	2	labourers/l	HC x	0	0 sets/yr @ 40 Rs ea = 0 Rs/yr No gloves (KMC)	
b. Uniforms	2	labourers/l	HC x		0 Rs/yr = 0 Rs/yr No uniforms (KMC), although in budget	
c. Mamoti (hoes)		mamoti/H0	C x	0.5	.5 sets/yr @ 350 Rs ea = 175 Rs/yr KMC: 1 mamoti/HC (2yr life)	
d. Ekel brooms	2	labourers/l	HC x	12	2 sets/yr @ 35 Rs ea = 840 Rs/yr KMC: 1 ekel broom/labourer (1mth life)	
e. Baskets	1	basket/HC	x	12	2 sets/yr @ 55 Rs ea =660 Rs/yr KMC: 1 basket/HC (1mth life); 40-70 Rs	
Total labourer protective equipment of	costs				1675 Rs/yr	
2. Handcart capital cost =	8500	with estima	ated life of	***************************************	4 yrs (3-5yrs)	
Straight line depreciation gives	2125	Rs/yr		. 10 14 1 11 11 2 2 2		
3. Total Katugastota HC waste collect	tion in 12 m	nths =	32	trips/d x	13 HCs x 0.12 T/load x 26 days/mth x 12 mths/yr	
gives a total of	1482	T/yr, c.f.			n tractor and compactor data for Katugastota zone or HCs do 49 % of total tonnage -	
this is considered reasonable as this	area has a	lot of bins v	vhich people	e will disch	charge into directly.	
(According to KMC data, there are 1962 Rs/yr) 13 HCs. If the larger no is used, unit cost = 1962 Rs/yr)						
4. If no of labourers =		costs incre			00 as above + extra labour of 72600 + extra brooms of 420 gives	
total cost of	226020	Rs/vr or	1983	Rs/T	-	

Four wheel tractor (4WT)+trailer	Unit	Unit	Qty	Cost	Source & Notes
tem	1	Rate		(Rs/yr)	
Driver costs	Rs/mth	6550	12	78600	See general notes No1
Labourer costs	Rs/mth	6050	48	290400	See general notes No1; no of labourers/4WT =
Protective equipment (gloves, etc.)	Rs/yr	1328	1	1328	See note 1
Diesel	Rs/mth	6871	12	82448	KMC SWM diesel records, see note 2
Oil	Rs/mth	149	12	1792	KMC SWM staff estimate, see note 3
Tyres and tubes	Rs/yr	14000	1	14000	See general notes No2 - estimated tyres cost based on KMC & Galle data
4WT & trailer repair/maintenance	Rs/yr	49500	1	49500	See general notes No3 - estimated R&M cost based on KMC & Galle data
insurance	Rs/yr	3730	1	3730	KMC: \$7141 for 4WT & 15610 for trailer divided by 15 vehicles
Registration/licence	Rs/yr	360	1	360	KMC: 2700 for 4WT & 2700 for trailer divided by 15 vehicles
Depreciation	Rs/yr	53707	1	53707	See note 4
Total O&M costs per tractor	Rs/yr			575864	per 4WT
Avg no of trips per 4WT per d	trips/d			1.7	
Avg 4WT waste T/yr	T/yr	n/a		10065	Using May 2001 - April 2002 data
Avg No of 4WTs in operation	No			8.67	9 tractors for 8 mths of yr and 8 for 4mths (zones 18-5)
Avg waste T/yr per 4WT	T/yr			1161	See note 5
Unit 4WT O&M cost	Rs/T	-		498	= total O&M costs/4WT tonnage per yr (actual data)
Notes:			•		
1. Staff protective equipment based	on KMC da	ata and curre	ent prices:		
a. Gloves		4 labourers/		4	sets/yr @ 40 Rs ea = 640 Rs/yr KMC supplies gloves; assumed 4 sets/y
b. Gumboots		0 labourer/c	COLU V	2	sets/yr @ 600 Rs ea = 0 Rs/yr No labourers given gumboots (KMC)

a. Giurca	T INDUDICIONTITI A	T SC(S) T (US	40 N3 Ca -	040 (134)	rano supplies gloves, addanted 4 octory.
b. Gumboots	0 labourer/crew x	2 sets/yr @	600 Rs ea ≖	0 Rs/yr	No labourers given gumboots (KMC)
c. Uniforms	4 labourers/4WT x		0 Rs/yr =	0 Rs/yr	No uniforms (KMC), although in budget
d. Shovels	2 shovels/4WT x	0.5 sets/yr @	225 Rs ea =	225 Rs/yr	KMC: 2 shovels per 4WT (2yr life)
e. Mamoti (hoes)	1 mamoti/4WT x	0.5 sets/yr @	350 Rs/yr =	175 Rs/yr	KMC: 1 mamoti per 4WT (2yr life)
f. Forks	2 forks/4WT x	0,6 sets/yr @	287.5 Rs ea =	288 Rs/yr	KMC: 2 forks per 4WT (2yr life)
Total labourer protective equipment	costs		<u> </u>	1328 Rs/yr	
2. Diesel consumption =	3357 L/mth for	15 4WT @	30.7 Rs/L =	6871 Rs/4WT.	mth
3. Oil consumption =	16 L/mth for	15 4WT @	140 Rs/L =	149 Rs/4WT.	mth
4. Four wheel tractor capital cost =	883200 Rs with 17.	5 yr lifetime (15-20yrs) -	capital cost based on av	erage of 9 most re	cent tractors
4WT trailer cost =	132000 Rs with	9 yr lifetime (8-10yrs) - a	verage capital cost of 11	trailers for which of	cost data was available
Straight line depreciation over lifetim	ne of tractor = 3904	0 and trailer =	14667 =	53707 Rs/yr	
5. KMC tractors made	4548 trips from May 2001	- Apr 2002 @	2.21 T/load =	10065 T/yr	
Annual no of trips equates to	1.7 avg trips/d based on	26 working days	s/mth & 8.67 4\	NTs in operation	

Compactor	Unit	Unit	Qty	Cost	Source & Notes			
tem .	\neg	Rate	ľ	(Rs/yr)				
Driver costs	Rs/mth	7050	12	84600	Based on tractor driver salary increased by 500 Rs/mth (see General notes No1)			
Labourer costs	Rs/mth	6050	48	290400	See general notes No1; no of labourers/comp'r =			
Staff equipment (gloves, etc.)	Rs/yr	3568	1	3568	See note 1			
Diesel	Rs/mth	24867	12	298404	KMC SWM diesel records, see note 2			
Oil	Rs/mth	700	12	8400	KMC SWM staff estimate - see note 3			
Tyres and tubes	Rs/yr	38760	1	38760	See general notes No2 - estimated R&M cost based on KMC. Abans and CMC data			
Repair/maintenance	Rs/yr	50740	1	50740	See general notes No3 - estimated R&M cost based on KMC & Abans data			
nsurance	Rs/yr	52718	1	52718	KMC records			
Registration/licence	Rs/yr	2800	1	2800	KMC records			
Depreciation	Rs/yr	340000	1	340000	See note 4			
Total O&M costs per comp'r	Rs/yr			1170390	per compactor			
Avg no of trips per comp'r per d	trips/d			2.3				
Avg comp'r waste T/yr	Т/уг	1	1	1655	Using May 2001 - April 2002 data; see note 5			
Unit comp'r O&M cost	Rs/T	 	Ì	707	= total O&M costs/comp'r tonnage per yr (actual data)			
Notes:		•	<u> </u>	L. marin manistrative state				
1. Staff protective equipment base	d on KMC da	ita and curre	ent prices:					
a. Gloves		labourers :		4	sets/yr @ 40 Rs ea = 640 Rs/yr KMC supplies gloves; assumed 4 sets/yr			
b. Gumboots	(labourer/c	rew x		sets/yr @ 600 Rs ea = 0 Rs/yr No labourers given gumboots (KMC)			
				_	,			

110003.
1. Staff protective equipment based on KMC data and surrent miner.

i. Otali protective equipment bas	sed on ratio data and content prices	1,			
a. Gloves	4 labourers x	4 sets/yr @	40 Rs ea =	640 Rs/yr	KMC supplies gloves; assumed 4 sets/yr
b. Gumboots	0 labourer/crew x	2 sets/yr @	600 Rs ea =	0 Rs/yr	No labourers given gumboots (KMC)
c. Uniforms	4 labourers x		0 Rs/yr =	0 Rs/yr	No uniforms (KMC), but in budget
d. Baskets	4 labourers x	12 sets/yr @	55 Rs ea =	2640 Rs/yr	KMC: 4 baskets per vehicle (1mth life)
e. Forks	2 forks/vehicle x	0.5 sets/yr @	287.5 Rs ea =	288 Rs/yr	KMC: 2 forks/vehicle (2yrs life)
Total staff equipment costs			-	3568 Rs/yr	` '
2. Diesel consumption =	810 L/mth for	1 comp'r @	30.7 Rs/L =	24867 Rs/mth	
3. Oil consumption =	5 Umth for	1 comp'r @	140 Rs/L =	700 Rs/mth	

3. Oil consumption = 140 Rs/L = 700 Rs/mth 12 yr lifetime - increased from KMC estimate of 8-10yrs as compactor is still in good condition after 8yrs operation 4. Compactor capital cost = 4080000 Rs with

Straight line depreciation over lifetime of compactor = 340000 Rs/yr

5. KMC compactor made 713 trips from May 2001 - Apr 2002 @ 2.32 T/load = 1655 T/yr

Annual no of trips equates to 2.3 avg trips/d based on 26 working days/mth & 1 compactor in operation Kandy: Other Collection And Transportation Data

Collection routes and problem areas were mapped for each zone, with the assistance of the Mechanical Engineer, PHIs, Supervisors, drivers and labourers (worker collection survey). Generally, this mapping involved identifying the roads within the city that are provided with a tractor/compactor or handcart garbage collection service, the locations of collection points and the frequency of collection. A detailed analysis was undertaken for Zone 4, where the actual routes followed by handcarts and tractors was mapped. This appendix contains more detailed information on garbage collection/transportation, including details of specific problems identified in each zone.

Example Of Daily Record Sheet (Gohagoda landfill site)

Date: 4 June 2002

Area	Vehicle Registration	Time In – Time out
Zone 1A (Care Kleen)	227-3146	10:20 – 10:30 am
,	49-4917	12:40 – 12:50 pm
	227-3146	1:10 – 1:20 pm
	49-4917	3:45 – 3:50 pm
	49-4917	5:50 – 6:00 pm
	227-3146	8:10 – 8:20 pm
	227-3146	10:30 pm
	49-4917	11:20 - 11:30 pm
	227-3146	2:00 – 2:10 am
Zone 1B (Deiyanewela)	37-7171	10:20 – 10:40 pm
2010 12 (201) 4110 11014)	49-8898	10:40 – 10:40 pm
	49-8898	12:40 – 12:45 pm
	37-7171	2:10 – 2:15 pm
	49-8898	3:10 – 3:20 pm
Zone 2 (Mahaiyawa)	49-8598	10:35 - 10:40 am
2 (manaryumu)	270-1208	10:50 – 11:00 am
	37-8593	2:00 – 2:10 pm
	270-1208	2:15 – 2:25 pm
Zone 3 (Peradeniya)	47-2904	10:25 – 10:30 pm
Zone 3 (i eradeniya)	37-5165	10:35 – 10:40 pm
	37-5165	1:55 – 2:00 pm
	47-2904	2:20 – 2:30 pm
Zone 4 (Katugastota)	270-1207	9:30 – 9:40 am
Zone 4 (Katugastota)	270-1207	10:20 – 10:30 am
	270-1207	12:10 – 12:15 pm
	270-1207	1:20 – 1:25 pm
	37-8577	9:15 – 9:25 am
	37-8577	11:15 – 11:25 am
	37-8577	1:25 – 1:35 pm
7 5 (A 1.)	WID 227 3743	11:05 – 11:10 am
Zone 5 (Aruppola)	49-4626	10:05 – 10:10 am
	49-4625	10:30 – 10:35 am
	49-4626	1:35 – 1:40 pm
	49-4625	2:00 – 2:10 pm
Kandy Central Market	37-8181	9:40 – 9:50 am
	37-8181	11:30 – 11:40 am
	37-8181	1:05 – 1:10 pm
Mennikumbura Market	49-4624	9:45 – 9:55 am
	49-4624	1:50 – 2:00 pm
Gully sucker/conservancy	GI-2578	8:40 - 8:50 am
	49-4578	10:05 – 11:00 am
	GI-2578	11:50 – 12:00 am
	G1-2578	3:00 – 3:10 pm
IDP	37-1528	10:50 – 11:00 am
	37-1528	12:55 – 1:00 pm
Harispattuwa		11:50 - 12:00
		1:10 – 1:20 pm

Date: August 2001

Time And Motion Studies

Zone 2 : Mahaiyawa Vehicle : KMC Tractor

Ti	me	Location	Load	Comments
Arr	Dep		time (min)	
8:15	8:17	Adahanamaluwa Rd, near RDA temporary dump	2	
8:20	8:30	Sumangala Rd (8:24 – junction in front of Sumangala	10	
		College)		
8:31	8:32	Apex class	1	
8:32	8:33	Near Ayurvedic	1	
8:34		After 100m		Before Asgiriya Cooperative
8:40	8:41	From Asgiriya junction to Bahirawakanda Rd	1	
8:42	8:43	Bahirawakanda Rd – after 50m	1	
8:44	8:45	Bahirawakanda Rd – after 100m	1	
8:45	8:47	Veediya Bandara Lane junction	2	
8:47	8:48	Bahirawakanda – Topaz junction (Bahirawakanda lane)	1	
8:48	8:49	Near Anniwatte Community Hall	1	
8:50	8:52	Anniwatte - before Galkanda junction	2	
8:53	8:54	From Galkanda junction, 100m along	1	
8:55	8:56	Near Circle Rd, 100m along	1	
8:57	9:08	After tunnel, Deveni Rajasinghe Rd, first bin	11	
9:10	9:12	Near Kalutharakade, 50m down	2	
9:15	9;16	Near Kalutharakade, 100m down	1	
9:20	9:25	Rosmid junction	5	Turnaround
9:26	9:38	Riverdale junction bin	12	
9:45	9:55	Riverdale hotel bin	10	End of first collection round; time taken = 1h 40min
9:55	10:27	Travel to Gohagoda		32min travel; 8 min at landfill
10:35	10:47	Return from Gohagoda		12min travel
10:47	10:55	RDA near Asgiriya	8	Start of second collection round
10:55	10:57	Ground side junction	2	Departure time estimated (not stated)
11:00	11:20	Asgiriya Bodiya junction bin	20	
11:27	11:30	Bahirawakanda Rd	3	
11:32	11:42	Bahirawakanda junction bin (near Bo tree)	10	
11:45	11:55	Bahirawakanda lane (Dr Millagoda)	10	
11:57	12:05	Topaz junction	8	
12:08	12:11	Topaz hotel bin	3	
12:12	12:25	Upper bin	13	
12:35	12:50	Topaz - Pushpadana School Rd	15	
12:55	13:05	Bin near Kadurata Broadcasting Corporation	10	
13:06	13:07	Pushpadana school bin	1	Departure time estimated (not stated); end of second collection round; time taken = ~2h 20min

Loading time = 169min; Total time = 292 min; loading time = 58% of total time

Zone 3 : Peradeniya

Vehicle: KMC Compactor Date: 23 August 2001

Time		Location	Load	Comments	
Arr	Dep		time (min)		
	7.15	Leave Workshop			
7:25	7:30	Suduhumpola Office		Four labourers	
7:32	7:38	Peradeniya Rd, in front of Girls High School; bin near Wasantha Stores	6	Start of 1 st round – collect some households' garbage from Pronoto Rd	
7:40	7:44	Hindu Centre bin	4		
7:45	7:47	South Depot bin	2		
7:48	7:52	In front of Regal	4		
7:54	7:55	In front of Dharmawickrama School	1	New bin needed	
7:56	7:57	In front of Piasso Garden Rd	1		
7:58	7:59	Near Estate Development Board	1		
8:01	8:09	Suwasewana bin	8		
8:11	8:15	Mulgampola bin, in front of J.M.W.	4		
8:17	8:21	Bin in front of Mulgampola National	4		
8:24	8:35	Heerassagala Rd, William Gopallawa Rd, Royal Supermarket bin	11	New bin needed	
8:39	8:40	Close to Water Board	1		
8:45	8:47	Rajawatha Cooperative	2		
8:49	8:50	In front of Peradeniya Hospital	1		
8:50	8:53	Peradeniya Resthouse	3		
3:54	9:00	In front of Peradeniya Botannical Garden bin	6		
9:02	9:04	Old Galaha Rd, external exam section	2		
9:05	9:06	Peoples Bank	1		
9:13	9:23	Bin near Sarasaviuyana Railway station	10		
9:25	9:35	Tea break	10		
9:37	9:40	Petroleum bin	3		
9:41	9:44	Beginning of Sarasaviuyana Railway station rd	3	Return from Peradeniya	
10:02	10:03	Mahanama School, Gatambe	1		
10:06	10:09	Near Hemachandra Jewellery bin	3		
10:10	10:13	PS Petrol shed	3		
10:15	10:16	In front of Colombo Commercial company	1	End of 1 st round; time taken =3h 1min	
10:18	10:35	Travel to Gohagoda		17min travel via Gannonuwa; 10min at landfill	
10:45	11:05	Return from Gohagoda – Katugastota – Peradeniya Rd – Girls High School		20min travel	
11:07	11:09	Near South Depot	2	Start of 2 nd round	
11:10	11:11	Hameedia	1		
11:12	11:24	Swarnamali bin	12		
11:25	11:27	Swarnamali school	2		
11:28	11:35	Piyazo Garden	7		
11:38	11:46	Danasiri Supermarket bin	8		
11:47	12:06	Mugampola Isuru bin I	19	(2 nd time today)	
12:08	12:18	In front of Mugampola National bin	10		
12:19	12:28	Kingswood bin	9		
12:31	12:37	Hemachandra bin	6		
12:42	12:50	In front of Botannical Garden bin	8		
12:53	13:30	Peradeniya Hospital bin and canteen	37	End of 2 nd round; time taker = 2h 23min	

Loading time = 217min; total time = 375min; loading time = 58% of total time

Garbage Collection Routes Problems and Constraints

Zone	Description	Problems/Constraints
1A	Central city area (mainly commercial)	 Heavily congested area (people and traffic) during daytime making garbage collection and transportation difficult. Includes many large waste generators (e.g. Bogambara prison, Sacred Tooth Temple, Ceybank House, Goodshed Bus stand, Second Singha Regiment Quarters, Queens Hotel). Garbage collection is difficult around Bogambara Prison on Pola days. Garbage collection in Attupattiya (shanty/slum area) is very difficult (narrow streets, steps, illegal kiosks blocking access). Simonwatta and Baldiwatta include narrow streets with some steps. Access for garbage collection is difficult. Some small traders improperly discharge of their garbage, ignoring bins/trailers located close by (e.g. Torrington Rd).
1B	Deiyannewela: Around Kandy Lake (flat) and to the south and east (hilly to very hilly)	 Most of this zone is hilly to very hilly. Difficult to clean drainage around the Lake. Large number of institutions (schools, temples, hospitals) and some hotels. Most of Ampitiya is not provided with a garbage collection service, due to the steepness of the roads in this area (main reason) and as most properties have large gardens and can dispose of their own garbage on site. Deiyannewela housing scheme – poor public cooperation, difficult access.
2	Mahaiyawa: Along the Mahaweli Ganga and inland hilly to very hilly areas.	 Hilly through the middle of this zone. Very poor public cooperation in Mahaiyawa (low income area). Residents tend to discharge their garbage into drains, while human excrement is commonly discharged in plastic bags for garbage collection due to a shortage of public toilets in the area. Children also commonly play in the streets, creating a hazard for tractor drivers. Sharp corner difficult to negotiate with tractor/trailer. Steep areas with very narrow, often unsealed streets and low population density. Garbage collection is by handcart and baskets. Large amounts of garden waste are discharged by residents for collection – at least 2T/wk. Handcarts have to travel long distances in places between community collection points (concrete bins).

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Zone	Description	Problems/Constraints
3	Peradeniya: Along either side of Peradeniya Rd,	17. Southern section of George E de Silva Mw comprises a gravel road with steps at the end down to Peradeniya Rd. 18. Western end of Primrose Rd comprises steps.
	extending to the Mahaweli Ganga and Peradeniya	19. Most of Mulgampola is not provided with a garbage collection service as it is a very steep, low population density area where most houses have large gardens.
	University in the west/south.	20. RDA are responsible for William Gopalluwa Rd from near the Peradeniya Rd junction to near the Heerassagala Rd junction.
		 21. Peradeniya University is responsible for garbage collection along Sri Amarawansa Rd, near the Faculty of Dental Sciences. 22. Gangawatta Korale PS is responsible for garbage collection along 2-3 roads leading out of the city (Hantane Rd, rd past cemetery, Augusta Estate Rd).
		23. Garden and some construction waste is dumped by KMC in this area, off the side of the road.
		24. The Botannical Gardens at Peradeniya are responsible for garbage collection and disposal within their grounds.
		25. Peradeniya University is responsible for garbage collection and disposal within its grounds.
		26. Some housing schemes on southern side of William Gopalluwa Rd, with narrow roads and some steps where garbage collection is difficult (e.g. Kamatha Rd, Polwatta).
4	Katugastota: Katugastota	27. Mixed residential and commercial area; mainly flat.
	Rd from Wewelpitiya,	28. Some steep roads (Burket lane, Galagedara Lane, Mapanawathura)
	Katugastota township and	
	along the northern section of the Mahaweli Ganga	-
5	Arrupola: Eastern side of	29. Garbage collection is difficult in the Uplands Housing scheme.
	city, bordered by Mahaweli Ganga.	30. Many monkeys along Dharmasoka Mw, making collection difficult as they scatter garbage discharged to the community collection points (concrete bins).
		31. Uyanawatte: footpath with some steps - labourers collect from houses in area using plastic bags.
		32. Some steps along this road.
		33. Residents are asked to bring their garbage to Dharmashoka Mw for collection.
		34. A lack of community bins in some areas, meaning handcarts must travel a long way before discharging their load.
		35. Ceylon Tobacco Co. looks after garbage collection in this area round their factory.

Zone IV: Katugastota - Collection Route Analysis

Veh-	Collection Route	Collection area	Dist.
icle			(km)
Н	S: Matale Rd/Madawela Rd jn → Madawela Rd (hospital, Post office) → Railway station (F1) or Jambugahapitiya near PWD Officers Quarters (F2) (alternating days) (2-3 loads/d @ 0.9-1.5km/trip)	Residential, commercial and institutional, including Katugastota District Hospital, Post Office and railway station, some government offices and Training Centre.	1.8 4.5
H2	S1: Matale Rd/Madawela Rd jn → Matale Rd → Galwatta HS → CP (F1)	Residential and commercial.	0.46
	S2: Galwatte HS CP → north-east along un-named road → Madawela Rd → hospital trailer CP (F2)		0.56
Н3	S: Matale Rd/Madawela Rd jn → Ranawana Rd → TA → Madawela Rd → Burket Ln (steep) → CP (TA) → Madawela Rd → Gohagoda Rd → CP near city limits (F) (4-5 loads/d @ 1.0km/trip)	Katugastota commercial area; some residential.	4.0 – 5.0
Н4	S: Katugastota Bridge → Galagedara Rd → Kondadeniya Rd jn (TA) → Galagedara Rd → Gohagoda Rd → CP near city limits (F) (3-4 loads/d @0.6km/trip)	Katugastota commercial area; some residential; Sri Ruhula school.	1.8 – 2.4
Н5	S: Kondadeniya jn → Galagedara Rd → Galagedara Ln (steep; every 2 nd day) → TA → Galagedara Rd → Sri Rajasingharamaya (every 2 nd day) → TA → Galagedara Rd → bin by city limits (F) (~3 loads/d @ 1.0-1.4 km/trip)	Residential and commercial.	3.0 – 4.2
IDP	S: Galagedara Ln → Galagedara Rd → Gohagoda Rd → CP near city limits (F) (every 2 weeks)		0.80
T1	S1: Jambugahapitiya → Madawela Rd → Railway station (every 2 nd day) → Madawela Rd → Matale Rd → Galwatta HS → CP near Education Office (+ Matale Rd → CP by Police Station (TA) → Matale Rd → CP by Education Office (every 2 nd day)) (F1)	Residential, commercial and institutional; collects H1 + H2 garbage and empties KMC trailer parked by hospital every 2 nd day.	1.9 (+1.4)
	S2: CP near Education Office → Matale Rd → Madawela Rd → Galagedara Rd → CP near city limits (TA) → Galagedara Rd → Gohagoda Rd → CP near city limits (F2)	Mainly residential and commercial; collects H3, H4 + H5 garbage.	3.1
	S3: St Anthonys CP → Katugastota Rd → bridge → Gohagoda Rd → CP near city limits (F3)	Residential and commercial; collects part of H9 garbage.	0.75
Н6	S1: Kandy Rd jn → Srimath Kuda Ratwatte (SKR) Mw → small lane (every 2 nd day) → TA → SKR Mw → Samagi Ln (every 2 nd day) → CP (F1)	Mainly residential.	0.80 (+0.20)
	S2: Samagi Ln CP \rightarrow Samagi Ln \rightarrow SKR Mw \rightarrow Bakery Ln (every 2 nd day) \rightarrow Wattarantenna Jn (TA) \rightarrow SKR Mw \rightarrow small lane (every 2 nd day) \rightarrow TA \rightarrow SKR Mw \rightarrow Kovari Ln CP (F2)		1.4 (+0.5)
	S3: Kovari Ln CP → Kovari Ln (every 2 nd day) → Wattarantenna Jn (TA) → SKR Mw → Kosmi Mw → Cosmi Gardens CP (F3)		0.7 (+0.4)
	S4: Cosmi Gardens HS (loop) back to CP (F4) (every 2 nd day) (F4)		0.20
H7	S1: Katugastota Rd jn → Wattarantenna Mw → Samagi Ln CP (F1)	Mainly residential.	0.44
	S2: Samagi Ln CP → Wattarantenna Mw → CP near Bakery Ln (F2)		0.21
	S3: CP near Bakery Ln → Wattarantenna Mw → Cosmi Gardens CP (F3)		0.50

Veh- icle	Collection Route	Collection area	Dist. (km)
Н8	S: Mapanawathura CP → Mapanawathura Rd → Samagi Ln CP (F) (2-3 loads/d @1.1km/trip) Mainly residential.		2.2 – 3.3
Н9	S1: Katugastota bridge → Katugastota Rd → St Anthonys CP (F1) S2: St Anthonys Rd CP → Katugastota Rd → CP (F2) S3: CP → Katugastota Rd → zone boundary (TA) → CP (F3)	Residential and commercial.	0.40 1.4 0.63
Н10	S1: Mawamada Jn → CP near small lane (F1) S2: CP → Mawamada Rd → unnamed lane (RHS) → TA → Mawamada Rd → Bobby Ln → CP → 1 st and 2 nd lanes (every 2 nd day) (F2) S3: Bobby Ln CP → Mawamada Rd → School Mw jn → School CP (F3)	Mainly residential.	0.70 0.56 (+0.1)
H11	S1: Nittawela Jn \rightarrow Nittawela Rd \rightarrow Sportsground (TA) \rightarrow CP (F1) S2: CP \rightarrow Nittawella HS loop \rightarrow CP (F2)	Mainly residential.	1.0 0.25
H12	S1: CTC jn → Nagaha Ela (south) → Mawamada Rd → School CP (F1) S2: CTC jn → Nagaha Ela (north) → CP (F2) S3: CP → Nagaha Ela (north) → CP (F3) S4: Adamsa Niwarsa jn → Nagaha Ela (south) → CP (F4)	Mainly residential.	0.40 0.15 0.50 0.10
Н13	S1: Katugastota Rd jn → Siyabalagastenna Rd → CP near church (F1) S2: CP near church → Siyabalagastenna Rd → small lanes (RHS, every 2 nd day) → CP (F2) S3: CP → Siyabalagastenna Rd → Temple CP (F3) S4: Temple CP → Siyabalagastenna Mw (Mahaweli Reach hotel, convent) → Railway crossing (TA) → CP near Mahaweli Reach Hotel (F4)	Mainly residential; some commercial, including Mahaweli Reach Hotel) and institutional (temple, convent).	0.12 0.18 (+0.30) 0.15 0.10
T2	S1: Kandy Rd jn → SKR Mw → Kosmi Mw → Wattarantenna Mw → Samagi Ln CP (F1) S2: Samagi Ln bin → Wattarantenna Mw → Mapanawathura Rd → CP (TA) → Katugastota Rd (towards city) → CP (TA) → Dr CDL Mw (every second day) → Katugastota Rd → Silverin (every 2 nd day) → Nittawela Mw → CP (TA) → Katugastota Rd → Siyabalagastenna Mw (temple, Mahaweli Reach Hotel, convent) → railway crossing (F2)	Mainly residential; collects H6 + H7 garbage Residential, commercial (e.g. Mahaweli Reach Hotel) and institutional (temple, school, Carmelite convent); collects H8, H9 (majority), H11 + H13 garbage.	5.1 (+1.2)
	S3: Katugastota Rd jn → Mawamada Rd → Bobby Ln → CP (TA) → Mawamada Rd → Nagaha Ela → Adarsa Nivarsa Mw → Wallamulla → Adarsa Nivarsa HS (TA) → Adarsa Nivarsa Mw → Nagaha Ela → Mawamada Rd → Siyabalagastenna Mw (F3).	Mainly residential; collects H10 + H12 garbage.	3.4

Notes: H = handcart, HS = housing scheme, jn = junction, T = tractor, TA = turn around; All handcarts have two labourers except H11. Distance in brackets indicates additional distance every second day.

