5.2
TIME AND MOTION STUDY

5.2.1 Summary Records of the Time and Motion Study (First Survey)

NCC(1/10)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)												Average Collection Time (min/collection point)			Average Transportation Speed(km/hr.)	Daily Average			
							Collection	Transportation	Inside the Dump Site	Total	Collection			Transportation	Inside the Dump Site			Total			Idling	Total	Moving	Loading		Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total										
16/5/97	KAB 292Q	1	1	Jamia Lane	Starehe	8	0	12,000	15,000	27,000	0	0	0	245	5	0	5	250	0	250	0	0.0	0.0	0.0	2.9				
16/5/97	KAB 292Q	2	3	I.C.E.A. Buil. Aga Khan, h.	Kilimani	8	4,000	28,000	0	32,000	127	19	108	120	8	0	8	147	108	255	0	42.3	6.3	36.0	14.0	2	59,000	505	0
16/5/97	KAB 388Q	1	1	Mhotela Mombasa rd.	Starehe	1	0	43,000	4,000	47,000	3	0	3	112	9	1	10	136	4	140	15	3.0	0.0	3.0	23.0				
16/5/97	KAB 388Q	2	2	Drive Inn Thika rd.	Starehe	1	0	24,000	4,000	28,000	11	0	11	54	9	0	9	63	11	74	0	5.5	0.0	5.5	26.7				
16/5/97	KAB 388Q	3	1	OTC Thika road	Starehe	1	0	23,000	4,000	27,000	5	0	5	48	14	0	14	62	5	67	0	5.0	0.0	5.0	28.8				
16/5/97	KAB 388Q	4	1	race cour. rd.	Starehe	1	0	24,000	4,000	28,000	8	0	8	45	11	0	11	56	8	64	0	8.0	0.0	8.0	32.0				
16/5/97	KAB 388Q	5	1	race cour. rd Thika road		1	0	43,000	2,000	45,000	7	0	7	100	14	0	14	138	7	145	24	7.0	0.0	7.0	25.8	5	175,000	490	39
16/5/97	KAB 389Q	1	1	Kaloleni	Kasarani Viwanda	1	0	17,000	2,000	19,000	2	0	2	124	8	0	8	132	2	134	0	2.0	0.0	2.0	8.2				
16/5/97	KAB 389Q	2	2	Thika rd.	Kasarani	1	0	20,000	4,000	30,000	36	17	19	53	13	0	13	83	19	102	0	18.0	8.5	9.5	22.6				
16/5/97	KAB 389Q	3	1	Thika road OTC	Kasarani	1	0	23,000	3,000	26,000	2	0	2	59	7	0	7	66	2	68	0	2.0	0.0	2.0	23.4				
16/5/97	KAB 389Q	4	1		Kasarani	1	0	26,000	2,000	28,000	1	0	1	54	5	0	5	59	1	60	0	1.0	0.0	1.0	28.9				
16/5/97	KAB 389Q	5	1	Thika rd.	Kasarani	1	0	37,000	3,000	40,000	5	0	5	118	10	0	10	128	5	133	0	5.0	0.0	5.0	18.8	5	143,000	497	0
16/5/97	KAB 390Q	1	1	Munyual rd.		5	0	19,000	0	19,000	83	0	83	57	0	10	10	57	93	150	0	83.0	0.0	83.0	20.0				
16/5/97	KAB 390Q	2	1	O.T.C Station		5	0	15,000	0	15,000	5	0	5	65	10	0	10	75	5	80	0	5.0	0.0	5.0	13.8				
16/5/97	KAB 390Q	3	1	O.T.C Station		5	0	15,000	0	15,000	5	0	5	32	2	1	3	34	6	40	0	5.0	0.0	5.0	28.1				
16/5/97	KAB 390Q	4	1	Salvation A.		5	0	33,000	0	33,000	5	0	5	112	2	1	3	114	6	120	0	5.0	0.0	5.0	17.7	4	82,000	390	0
16/5/97	KUL 991	1	8	EAS/SUC II Pangani	Eastleigh Makadara	8	22,100	16,500	1,400	40,000	134	72	62	45	41	0	41	158	62	220	0	16.8	9.0	7.8	22.0				
16/5/97	KUL 991	2	4	Outer ring rd. Thika rd.	Parklands Viwanda	8	37,500	30,600	0	68,100	118	85	33	78	7	0	7	219	33	252	49	29.5	21.3	8.3	23.5	2	108,100	472	49
16/5/97	KUL 993	1	20	Ngumo rd. Chania Ave.	Kilimani	11	34,000	65,000	2,000	101,000	215	70	145	225	8	2	10	303	147	450	0	10.8	3.5	7.3	17.3	1	101,000	450	0
16/5/97	KUL 994	1	0	Jogoo road Outering rd.	Kilimani	8	0	28,600	400	29,000	0	0	0	68	0	0	0	68	0	68	0				25.2				
16/5/97	KUL 994	2	6	Saakali Jogoo rd	Makadara	8	11,600	14,300	4,000	30,300	129	54	75	77	15	0	15	146	75	221	0	21.5	9.0	12.5	11.5				
16/5/97	KUL 994	3	14	Jogoo road Outering rd.	Makadara	8	3,700	42,600	3,700	50,000	78	25	53	78	26	0	26	137	53	190	8	5.6	1.8	3.8	32.8	3	109,300	279	8
16/5/97	KWE 081	1	9	Uhuru H/Way Mombasa rd.	Mugumoini	11	36,000	12,000	2,000	50,000	196	60	136	41	36	0	36	137	136	273	0	21.8	6.7	15.1	17.6				
16/5/97	KWE 081	2	1	Kenya - pipeline E.	Mugumoini	11	0	47,000	0	47,000	67	0	67	205	35	0	35	240	67	307	0	67.0	0.0	67.0	13.8	2	97,000	580	0
16/5/97	KWE 245	1	11	Thika rd. Outering rd.	Raysambu Kasarani	6	9,000	25,000	6,000	40,000	104	21	83	191	11	4	15	228	87	315	5	9.5	1.9	7.5	7.9				
16/5/97	KWE 245	2	13	Komarock rd Jogoo rd	Parklands Ngara	6	16,400	29,500	1,400	47,300	103	35	68	137	6	7	13	178	75	253	0	7.9	2.7	5.2	12.9	2	87,300	368	5
16/5/97 average			4.1			5.0	6,972	27,443	3,574	36,989	60	20	41	96	6	3	14	129	42	170	4	16.1	3.1	13.2	20.0	2.9	106,856	492	11
17/5/97	KAB 292Q	1	0	Jogoo rd Komarock rd			0	13,000	2,000	15,000	0	0	0	32	10	2	12	42	2	44	0				24.4				
17/5/97	KAB 292Q	2	1	Juja rd. Muranga rd		6	0	43,000	3,000	46,000	99	0	99	204	7	2	9	211	101	312	0	99.0	0.0	99.0	12.6	2	61,000	350	0

NCC(2/10)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min/collection point)			Average Transportation Speed (km/hr)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total			Idling	Total	Moving	Loading		Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total									
17/5/97	KAB 388Q	1	1	Lagos	Starehe	2	0	13,000	4,000	17,000	12	0	12	54	8	1	9	62	13	75	0	12.0	0.0	12.0	14.4				
17/5/97	KAB 388Q	2	1	KBS Bus park	Starehe	2	0	27,000	1,000	28,000	0	0	0	32	3	0	3	35	0	35	0	0.0	0.0	0.0	50.6				
17/5/97	KAB 388Q	3	1	KBS Bus park	Starehe	2	0	27,000	2,000	29,000	0	0	0	90	2	0	2	92	0	92	0	0.0	0.0	0.0	18.0				
17/5/97	KAB 388Q	4	1	KBS Bus park	Starehe	2	0	35,000	1,000	36,000	3	0	3	110	0	0	0	110	3	113	0	3.0	0.0	3.0	19.1	4	110,000	315	0
17/5/97	KAB 389Q	1	2	Ring rd Ngara	Starehe	2	200	16,800	4,000	21,000	23	10	13	50	7	0	7	60	30	90	17	11.5	5.0	6.5	20.2				
17/5/97	KAB 389Q	2	1	Thika road Outering rd	Starehe	2	0	28,000	3,000	31,000	7	0	7	64	9	0	9	84	7	91	11	7.0	0.0	7.0	26.3				
17/5/97	KAB 389Q	3	1	Thika road Outering rd	Starehe	2	0	26,000	3,000	29,000	5	0	5	63	3	0	3	66	5	71	0	5.0	0.0	5.0	24.8				
17/5/97	KAB 389Q	4	1	Thika road Outering rd	Starehe	2	0	26,000	3,000	29,000	12	0	12	68	12	0	12	80	12	92	0	12.0	0.0	12.0	22.9				
17/5/97	KAB 389Q	5	1	Thika road Outering rd	Starehe	2	0	37,000	3,000	40,000	6	0	6	77	10	0	10	95	6	101	8	6.0	0.0	6.0	28.8	5	150,000	445	36
17/5/97	KAB 390Q	1	1	Bus Station			0	19,000	0	19,000	5	0	5	60	1	1	2	61	6	67	0	5.0	0.0	5.0	19.0				
17/5/97	KAB 390Q	2	1	Bus Station			0	27,000	0	27,000	11	0	11	62	1	1	2	63	12	75	0	11.0	0.0	11.0	26.1				
17/5/97	KAB 390Q	3	1	Bus Station			0	31,000	0	31,000	2	0	2	81	1	1	2	82	3	85	0	2.0	0.0	2.0	23.0				
17/5/97	KAB 390Q	4	1	Bus Station			0	29,000	0	29,000	5	0	5	81	1	1	2	82	6	88	0	5.0	0.0	5.0	21.5				
17/5/97	KAB 390Q	5	1				0	27,000	0	27,000	5	0	5	60	1	1	2	61	6	67	0	5.0	0.0	5.0	27.0	5	133,000	382	0
17/5/97	KUL 990	1	16	Limuru rd. Forest rd.	Parklands Ngara Starehe	6	30,900	33,000	13,000	76,900	350	111	239	158	57	0	57	326	239	565	0	21.9	6.9	14.9	12.5	1	76,900	565	0
17/5/97	KUL 991	1	5	Park road Thika road	Ngara Starehe	5	15,100	49,200	1,800	66,100	253	112	141	129	25	0	25	266	141	407	0	50.6	22.4	28.2	22.9	1	66,100	407	0
17/5/97	KUL 993	1	56	N.C.C depot Ngong rd.	Kilimani Kangemi	8	63,100	53,900	3,200	120,200	304	171	133	98	11	0	11	298	133	431	18	5.4	3.1	2.4	33.0	1	120,200	431	18
17/5/97	KWE 063	1	5	Pumwani rd	Eastleigh Pumwani	13	3,500	31,000	0	34,500	146	16	130	69	14	1	15	114	131	245	15	29.2	3.2	26.0	27.0				
17/5/97	KWE 063	2	1	Juja rd. Jogoo rd	Starehe Pumwani	3	0	33,000	0	33,000	7	0	7	163	14	1	15	177	8	185	0	7.0	0.0	7.0	12.1	2	67,500	430	15
17/5/97	KWE 070	1	3	Komarock II Infield	Njiru	6	2,000	21,000	0	23,000	86	6	80	111	19	30	49	156	110	266	20	28.7	2.0	26.7	11.4	1	23,000	266	20
17/5/97	KWE 081	1	4	Mombasa rd Imara daima	Mugumoiru Viwanda	11	900	27,000	5,000	32,900	75	52	23	95	24	20	44	171	43	214	0	18.8	13.0	5.8	17.1				
17/5/97	KWE 081	2	16	Mugoya	Mugumoini	11	5,110	47,890	3,000	56,000	93	64	29	117	26	0	26	272	29	301	65	5.8	4.0	1.8	24.6	2	88,900	515	65
17/5/97	KWE 084	1	12	Riverside d. Msangan 1	Kilimani	12	22,000	33,000	4,000	59,000	158	67	91	56	16	0	16	139	91	230	0	13.2	5.6	7.6	35.4				
17/5/97	KWE 084	2	13	Rhapta rd. Myuli rd.	Kilimani Kibera Woodly	12	19,000	56,000	4,000	79,000	126	48	78	121	38	0	38	207	78	285	0	9.7	3.7	6.0	27.8	2	138,000	515	0
17/5/97	KWE 245	1	6	Thika road Agakhan F.	Kawaha	8	33,000	14,000	3,200	50,200	222	81	141	66	10	0	10	172	141	313	15	37.0	13.5	23.5	12.7				
17/5/97	KWE 245	2	4	Westlands Agip	Parklands Ngara	8	5,800	17,500	3,000	26,300	120	13	107	85	15	0	15	183	107	290	7	30.0	3.3	26.8	12.4	2	76,500	603	22
17/5/97 average			5.6			5.8	7,430	30,046	3,460	39,682	85	28	55	88	8	5	15	140	56	187	6	17.6	3.2	14.2	22.4	2.3	92,592	436	15
18/5/97	KAB 292Q	1	2	Thika rd. Kaloleni rd	Mathare Roysambu	9	2,000	21,000	2,000	25,000	222	6	216	68	19	1	20	93	217	310	0	111.0	3.0	108.0	18.5				
18/5/97	KAB 292Q	2	1	Thika rd	Kaloleni Petrol	8	0	36,000	2,000	38,000	41	0	41	110	7	2	9	117	43	160	0	41.0	0.0	41.0	19.6	2	63,000	470	0

NCC(3/10)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Trans-portation	Inside the Dump Site	Total	Time (minutes) Collection Total	Collection Moving	Collection Loading	Trans-portation	Inside the Dump Site Moving	Inside the Dump Site Loading	Inside the Dump Site total	Total Moving	Total Loading	Total Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed(km/hr)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
18/5/97	KAB 388Q	1	1	Thika rd.	Starehe	1	0	17,000	2,000	19,000	8	0	8	60	5	0	5	65	8	73	0	8.0	0.0	8.0	17.0				
18/5/97	KAB 388Q	2	2	KBS bus st	Starehe	1	500	27,500	2,000	30,000	32	2	30	52	18	0	18	72	30	102	0	16.0	1.0	15.0	31.7				
18/5/97	KAB 388Q	3	1	Tom Mboya	Starehe	2	0	26,000	3,000	29,000	0	0	0	49	10	0	10	59	0	59	0	0.0	0.0	0.0	31.8				
18/5/97	KAB 388Q	4	1	City market Ngara	Starehe	2	0	27,000	2,000	29,000	5	0	5	53	5	0	5	58	5	63	0	5.0	0.0	5.0	30.6				
18/5/97	KAB 388Q	5	2	City market City hall	Starehe	2	1,000	38,000	0	39,000	11	0	11	79	5	0	5	84	11	95	0	5.5	0.0	5.5	28.9	5	146,000	392	0
18/5/97	KAB 389Q	1	1	Jogoo rd. Muranga rd	Starehe	1	0	15,400	2,000	17,400	18	0	18	31	10	0	10	41	18	59	0	18.0	0.0	18.0	29.8				
18/5/97	KAB 389Q	2	1	Thika rd. Komarock rd	Starehe	2	0	38,400	2,800	41,200	3	0	3	86	9	0	9	95	3	98	0	3.0	0.0	3.0	26.8	2	58,600	157	0
18/5/97	KAB 390 Q	1	1	Lusaka rd Kaloleni	Starehe	2	0	23,000	500	23,500	3	0	3	57	10	1	11	67	4	71	0	3.0	0.0	3.0	24.2				
18/5/97	KAB 390 Q	2	2	Thika rd Kaloleni	Starehe	2	10,000	22,500	500	33,000	31	20	11	79	0	1	1	89	12	111	0	15.5	10.0	5.5	17.1				
18/5/97	KAB 390 Q	3	1	Forest rd Kaloleni	Starehe	2	0	29,500	500	30,000	15	0	15	53	0	1	1	53	16	69	0	15.0	0.0	15.0	33.4				
18/5/97	KAB 390 Q	4	1	Jogoo rd Kaloleni	Starehe	2	0	42,000	500	42,500	5	0	5	153	0	1	1	153	6	159	0	5.0	0.0	5.0	16.5	4	129,000	410	0
18/5/97	KAB 392Q	1	1	Ring rd. Thika rd	Starehe	1	0	15,300	2,100	17,400	19	0	19	42	5	1	6	47	20	67	0	19.0	0.0	19.0	21.9				
18/5/97	KAB 392Q	2	2	Thika rd. Forest rd	Starehe	1	400	27,400	2,100	29,900	8	6	2	53	7	1	8	66	3	69	0	4.0	3.0	1.0	31.0				
18/5/97	KAB 392Q	3	1	Tom mboya	Starehe	2	0	28,400	1,300	29,700	32	0	32	36	6	2	8	42	34	76	0	32.0	0.0	32.0	47.3				
18/5/97	KAB 392Q	4	1	Thika rd. Muranga rd	Starehe	1	0	34,700	1,100	35,800	4	0	4	74	3	1	4	77	5	82	0	4.0	0.0	4.0	28.1	4	112,800	294	0
18/5/97	KUL 990	1	5	Tubman Rd Parklands	Starehe Parklands	4	14,000	28,000	0	42,000	211	71	140	131	16	44	60	218	184	402	0	42.2	14.2	28.0	12.8	1	42,000	402	0
18/5/97	KUL 991	1	4	Ladhies rd Komarock rd	Starehe	10	900	31,400	4,700	37,000	128	10	118	120	67	0	67	197	168	365	50	32.0	2.5	29.5	15.7	1	37,000	365	50
18/5/97	KUL 993	1	1	Jogoo rd. Lusaka rd.	Starehe Ngara	7	0	51,000	1,900	52,900	124	0	124	144	10	0	10	172	124	296	18	124.0	0.0	124.0	21.3	1	52,900	296	18
18/5/97	KUL 994	1	1	Ladhies rd Juja rd.	Starehe Ngara Kamukunji	3	0	12,000	2,000	14,000	0	0	0	62	8	0	8	70	0	70	0	0.0	0.0	0.0	11.6				
18/5/97	KUL 994	2	1	Ngara rd. Juja rd	Starehe	3	0	24,000	2,000	26,000	42	0	42	57	4	3	7	61	45	106	0	42.0	0.0	42.0	25.3				
18/5/97	KUL 994	3	1	Market st Kninange st	Starehe Mathare Pastlergh	3	0	41,000	2,000	43,000	5	0	5	192	10	2	12	202	7	209	0	5.0	0.0	5.0	12.8	3	83,000	385	0
18/5/97	KWE 063	1	1	KBS Bus/sta. Accra rd.	Starehe	2	0	0	0	0	20	0	20	50	13	2	15	63	22	85	0	20.0	0.0	20.0	0.0				
18/5/97	KWE 063	2	1	Jogoo road	Starehe	2	0	0	0	0	22	0	22	57	11	2	13	68	24	92	0	22.0	0.0	22.0	0.0				
18/5/97	KWE 063	3	1	Ronald Ngala	Starehe	2	0	0	0	0	10	0	10	142	10	1	11	152	11	163	0	10.0	0.0	10.0	0.0	3	0	330	0
18/5/97	KWE 071	1	0	Jogoo rd. Mumias rd		4	0	32,000	3,000	35,000	0	0	0	87	20	0	20	107	0	107	10				22.1	1	35,000	107	10
18/5/97	KWE 081	1	3	Jogoo rd. Lusaka rd.	Starehe	4	900	47,100	5,000	53,000	262	14	248	214	22	10	32	348	258	606	98	87.3	4.7	82.7	13.2	1	53,000	606	98
18/5/97	KWE 084	1	0	Jogoo rd Kaloleni		11	0	5,800	2,200	8,000	0	0	0	18	9	0	9	27	0	27	0				19.3				
18/5/97	KWE 084	2	12	Ngog rd Kaloleni	Kilimani Kibera Kenyatta	11	16,610	70,500	4,000	91,110	209	61	148	40	33	0	33	238	202	440	158	17.4	5.1	12.3	105.8	2	99,110	467	158
18/5/97	KWE 245	1	8	Ngara Hotel Westlands	Ngara Parklands	11	17,400	32,300	2,300	52,000	235	79	156	106	10	0	10	317	156	473	122	29.4	9.9	19.5	18.3	1	52,000	498	198

NCC(4/10)

Date	Vehicle No	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min/collection point)			Average Transportation Speed (km/hr)	Daily Average			
							Collection	Transportation	Inside the Dump Site	Total	Collection			Transportation	Inside the Dump Site			Total			Idling					Trips	Distance (m)	Time (min)	Idling (min)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total		Total	Moving	Loading					
19/5/97 average			2.0			3.8	2,450	30,150	2,348	34,408	66	10	56	92	10	5	14	113	58	167	15	26.3	1.9	24.4	26.2	2.2	74,108	371	38
19/5/97	KAB 292Q	1	3	Bank st Mfankano st	Starehe	9	1,200	43,000	1,000	45,200	88	13	75	208	2	2	4	421	77	498	198	29.3	4.3	25.0	12.4	1	45,200	498	198
19/5/97	KAB 382Q	1	2	Ngara rd Thika rd	Mathare Roysambu	2	100	34,600	6,400	41,100	8	2	6	196	9	0	9	234	6	240	27	4.0	1.0	3.0	10.6	1	41,100	240	27
19/5/97	KAB 300Q	1	0	Luanda Fangroose		3	0	53,000	0	53,000	0	0	0	491	0	0	0	491	0	491	0				6.5	1	53,000	491	0
19/5/97	KAB 389Q	1	4	Thika rd Lumumba rd	Parklands	3	4,000	21,000	2,000	27,000	35	9	26	52	8	1	9	69	27	96	0	8.8	2.3	6.5	24.2				
19/5/97	KAB 389Q	2	5	Ojijo rd Jogoo rd	Parklands Ngara	3	4,000	22,000	4,000	30,000	217	19	198	58	5	2	7	82	200	282	0	43.4	3.8	39.6	22.8	2	57,000	378	0
19/5/97	KUL 990	1	0	Jogoo Rd		6	0	20,000	3,000	23,000	0	0	0	89	38	0	38	127	6	133	6				13.5				
19/5/97	KUL 990	2	17	Dandora Bumbburu	Makadara	6	6,000	28,000	2,000	36,000	184	28	156	82	41	0	41	151	156	307	0	10.8	1.6	9.2	20.5	2	59,000	440	6
19/5/97	KUL 991	1	1	Muoroto Kamunock rd	Starehe	7	0	15,100	100	15,200	150	0	150	72	13	0	13	128	150	278	43	150.0	0.0	150.0	12.6				
19/5/97	KUL 991	2	1	Toni Mboya st Golf course	Starehe	7	0	3,500	900	4,400	32	0	32	22	12	0	12	34	32	66	0	32.0	0.0	32.0	9.5				
19/5/97	KUL 991	3	1	Jogoo rd River rd	Starehe	7	0	23,100	100	23,200	25	0	25	86	24	0	24	121	25	146	11	25.0	0.0	25.0	16.1	3	42,800	490	54
19/5/97	KUL 993	2	3	Bishan	Parklands	7	4,400	23,500	2,000	29,900	73	30	43	57	20	0	20	107	43	150	0	24.3	10.0	14.3	24.7	2	29,900	150	0
19/5/97	KUL 994	1	1	Karobangi south	Dandora	8	0	27,300	2,100	29,400	115	0	115	93	20	0	20	162	115	277	49	115.0	0.0	115.0	17.6				
19/5/97	KUL 994	2	1	Karobangi south	Dandora	8	0	21,800	900	22,700	15	0	15	146	9	0	9	155	15	170	0	15.0	0.0	15.0	9.0	2	52,100	447	49
19/5/97	KWE245	2	1	Jogoo rd Lusaka rd	Viwanda	6	0	46,000	0	46,000	85	0	85	108	1	4	5	109	89	198	0	85.0	0.0	85.0	25.6	2	46,000	198	0
19/5/97	KWE 084	1	10	Uhuru rd Ngong rd	Viwanda	7	6,760	96,240	4,000	107,000	260	147	113	142	7	4	11	409	117	526	113	16.3	9.2	7.1	40.7	1	107,000	526	113
19/5/97	KWE 063	1	3	Masa rd Lumumba rd	Ngara	5	3,250	7,000	0	10,250	18	4	14	120	10	2	12	173	16	189	39	6.0	1.3	4.7	3.5				
19/5/97	KWE 063	2	2	Thika rd Juja road	Starehe Mathare	5	0	0	0	0	127	14	113	143	8	2	10	193	115	310	30	63.5	7.0	56.5	0.0	2	10,250	499	69
19/5/97	KWE 071	1	1	Jogoo rd Forest rd	Kilimani Starehe	6	0	37,000	10,100	47,100	43	0	43	324	3	12	15	433	55	488	106	43.0	0.0	43.0	6.9	1	47,100	488	106
19/5/97	KWE 081	1	2	Daresalam rd Kamonock rd		9	4,500	27,500	2,000	34,000	59	34	25	89	15	0	15	163	25	188	25	29.5	17.0	12.5	18.5				
19/5/97	KWE 081	2	1	Lusaka rd Kamurock rd		9	0	7,200	22,100	29,300	59	0	59	102	6	0	6	108	59	167	0	59.0	0.0	59.0	4.2	2	63,300	355	25
19/5/97	KWE 084	1	16	Forest rd Jogoo rd	Kilimani Kibera	1	7,400	95,600	4,000	107,000	248	122	126	214	7	4	11	396	130	526	53	15.5	7.6	7.9	26.8	1	107,000	526	53
19/5/97	KWE 245	1	3	Dunga rd Lusaka rd	Viwanda	6	1,000	17,000	0	18,000	181	6	175	39	0	2	2	45	177	222	0	60.3	2.0	58.3	26.2	1	18,000	222	0
19/5/97	Z	1	1	Muranga Kamurock	Kilimani Kibera		0	14,000	0	14,000	2	0	2	182	0	2	2	182	4	186	0	2.0	0.0	2.0	4.6				
19/5/97	Z	2	1	Ngara Kamurock	Kenyatta		0	16,000	11,000	27,000	117	0	117	55	5	0	5	60	117	177	0	117.0	0.0	117.0	17.5	2	41,000	363	0
19/5/97 average			3.7			5.5	1,937	29,384	4,317	34,852	95	19	74	117	6	4	13	179	73	253	30	38.3	3.2	35.1	16.7	1.6	51234	394	44
20/5/97	GK 354	1	1	King road Forest road	Parklands	3	0	0	0	0	7	0	7	107	13	1	14	120	8	128	0	7.0	0.0	7.0	0.0	1	0	128	0
20/5/97	KAB 289Q	1	19	Buruburu Lanya lunga	Makadara	8	0	0	0	0	155	26	129	60	1	1	2	87	130	217	0	8.2	1.4	6.8	0.0				
20/5/97	KAB 289Q	2	19	Komorock rd Mumias road	Makadara	8	0	0	0	0	173	58	115	98	1	1	2	157	116	273	0	9.1	3.1	6.1	0.0	2	0	490	0
20/5/97	KAB 388Q	1	1	Kolobot rd Jogoo rd	Parklands	1	0	27,900	1,000	28,900	31	0	31	113	17	0	17	130	31	161	0	31.0	0.0	31.0	14.8				

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Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min/collection point)			Average Transportation Speed(km/hr)	Daily Average			
											Collection				From the Dump Site			Total											
							Collection	Trans-portation	Inside the Dump Site	Total	Total	Moving	Loading	Trans-portation	Moving	Loading	total	Moving	Loading	Total	Idling	Total	Moving	Loading		Trips	Distance (m)	Time (min.)	Idling (min.)
20/5/97	KAB 388Q	2	1	Komarock rd Thika rd	Kilimani	1	0	24,000	4,000	28,000	47	0	47	38	13	1	14	51	48	99	0	47.0	0.0	47.0	37.9				
20/5/97	KAB 388Q	3	1	Komarock rd Thika rd	Kilimani	1	0	24,000	4,000	28,000	13	0	13	39	16	0	16	55	13	68	0	13.0	0.0	13.0	36.9				
20/5/97	KAB 388Q	4	2	Ojijo rd Muranga rd	Parklands Ngara	1	2,500	38,300	2,000	42,800	16	5	11	93	9	1	10	107	12	119	0	8.0	2.5	5.5	24.7	4	127,700	447	0
20/5/97	KAB 389Q	1	1	Komarock rd Forest rd	Parklands	1	0	24,800	2,500	27,300	12	0	12	67	14	0	14	112	12	124	31	12.0	0.0	12.0	22.2				
20/5/97	KAB 389Q	2	1		Parklands	1	0	28,600	2,200	30,800	5	0	5	56	10	0	10	66	5	71	0	5.0	0.0	5.0	30.6				
20/5/97	KAB 389Q	3	1	Forest rd Thika rd	Parklands Ngara	1	0	24,000	3,300	27,300	25	0	25	42	12	0	12	54	25	79	0	25.0	0.0	25.0	34.3				
20/5/97	KAB 389Q	4	1	Forest rd Thika rd	Parkland	1	0	44,200	3,700	47,900	36	0	36	78	12	0	12	90	36	126	0	36.0	0.0	36.0	34.0	4	133,300	400	31
20/5/97	KAB 390Q	1	1	Jogoo rd Ojijo rd	Parkland		0	22,000	0	22,000	3	0	3	88	14	1	15	102	4	106	0	3.0	0.0	3.0	15.0				
20/5/97	KAB 390Q	2	1	Thika rd Muranga rd	Parkland		0	32,000	2,000	34,000	6	0	6	55	2	1	3	58	6	64	0	6.0	0.0	6.0	36.9				
20/5/97	KAB 390Q	3	1	Thika rd Muranga rd			0	27,000	1,000	28,000	3	0	3	77	13	1	14	90	4	94	0	3.0	0.0	3.0	21.0				
20/5/97	KAB 390Q	4	1	Komorock rd Thika road	Starehe		0	44,000	0	44,000	5	0	5	108	10	1	11	118	6	124	0	5.0	0.0	5.0	24.4	4	128,000	124	0
20/5/97	KAB 392Q	1	1	Jogoo rd Ngara rd		1	0	21,200	3,300	24,500	10	0	10	68	8	0	8	110	10	120	34	10.0	0.0	10.0	18.7				
20/5/97	KAB 392Q	2	1	Komarock rd Dandora	Parklands	1	0	27,600	2,700	30,300	1	0	1	40	9	0	9	55	1	56	6	1.0	0.0	1.0	41.4				
20/5/97	KAB 392Q	3	1	Forest rd Thika rd	Starehe Kilimani	1	0	25,600	2,400	28,000	34	0	34	43	14	0	14	57	34	91	0	34.0	0.0	34.0	35.7				
20/5/97	KAB 392Q	4	1	Forest rd Lumumba rd	Parklands	1	0	25,400	2,800	28,200	4	0	4	45	7	0	7	52	4	56	0	4.0	0.0	4.0	33.9				
20/5/97	KAB 392Q	5	2	Kolobot rd Lumumba rd	Parklands	1	1,800	30,400	0	32,200	24	5	19	89	0	0	0	231	19	250	137	12.0	2.5	9.5	20.5	5	143,200	573	177
20/5/97	KUL 990	1	0	Jogoo rd Kaloleni rd		1	0	19,000	3,000	22,000	0	0	0	40	27	81	108	87	81	168	20				28.5				
20/5/97	KUL 990	2	1	Jogoo rd	Eastleigh	1	0	26,000	10,000	27,000	140	0	140	89	24	62	86	113	202	315	0	140.0	0.0	140.0	17.5	2	49,000	383	20
20/5/97	KUL 991	1	20	Juja rd Thika rd	Kasarani Mathare	6	80,600	35,400	1,000	117,000	384	185	199	136	25	0	25	366	199	565	20	19.2	9.3	10.0	15.6	1	117,000	565	20
20/5/97	KUL 992	1	4	Kaloleni rd Jogoo rd	Starehe	9	8,000	24,300	4,200	36,500	114	24	90	85	57	0	57	173	90	263	7	28.5	6.0	22.5	17.2	1	36,500	263	7
20/5/97	KUL 994	1	1	Ring rd Ngara rd	Parklands	2	0	22,100	2,500	24,600	4	0	4	60	12	2	14	108	6	114	36	4.0	0.0	4.0	22.1				
20/5/97	KUL 994	2	2	Ring rd Ngara rd	Parklands	2	400	29,800	5,000	35,200	27	4	23	73	20	3	23	97	26	123	0	13.5	2.0	11.5	24.5				
20/5/97	KUL 994	3	1	Thika rd Jogoo rd	Parklands	2	0	25,000	3,900	28,900	6	0	6	38	13	2	15	63	8	71	12	6.0	0.0	6.0	39.5				
20/5/97	KUL 994	4	1	Forest rd Komarock rd	Parklands	2	0	41,100	3,700	44,800	8	0	8	114	14	4	18	128	12	140	0	8.0	0.0	8.0	21.6	4	133,500	448	48
20/5/97	KWE 063	1	28	Jogoo rd Lunaka rd	Parklands	6	0	0	0	0	294	156	138	26	0	0	0	206	138	342	22	10.5	5.6	4.9		1	0	342	22
20/5/97	KWE 071	1	1	Kamunyi rd Uhuru ave	Starehe	1	0	42,500	0	42,500	0	0	0	405	0	0	0	405	0	405	0	0.0	0.0	0.0	6.3	1	42,500	405	0
20/5/97	KWE 081	1	11	Jogoo road Komorock rd	Kaloleni Komukunu	11	0	13,900	1,100	15,000	115	0	115	36	78	0	78	114	115	229	0	115.0	0.0	115.0	23.2				
20/5/97	KWE 081	2	3	Jogoo road Komorock rd	Kariobangi	11	18,400	69,900	1,200	89,500	131	42	89	185	18	0	18	245	89	334	0	43.7	14.0	29.7	22.7	2	104,500	563	0
20/5/97	KWE 245	1	5	Komarock rd Jogoo rd	Kasarani Mathare	6	14,000	41,000	3,000	58,000	220	41	179	217	17	1	18	275	180	455	0	44.0	8.2	35.8	11.3	1	58,000	455	0
20/5/97	KWE 084	1	1	Uhuru rd Thika rd	Kilimani	10	3,500	49,500	3,800	56,800	20	0	20	169	16	0	16	185	20	205	0	20.0	0.0	20.0	17.6				

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Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)												Average Collection Time (min/collection point)			Average Transportation Speed (km/hr)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total			Idling						Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total			Total	Moving	Loading					
20/5/97	KWE 084	2	16	Thika rd Komarock rd	Kilimani	10	21,400	59,900	3,700	85,000	165	64	101	125	15	0	15	214	101	315	10	10.3	4.0	6.3	28.8	2	141,800	520	10
20/5/97 average			4.7			3.7	5,193	31,597	2,862	39,083	70	19	51	81	23	10	22	126	53	178	10	22.5	1.8	20.7	26.0	2.3	101,250	414	22
21/5/97	GK 354X	1	2	Jogoo Rd Uhuru	Kilimani	4	3,000	29,900	0	32,900	100	49	51	141	10	2	12	202	53	255	0	50.0	24.5	25.5	12.7	1	32,900	255	0
21/5/97	KAB 289 Q	1	1	Jogoo Komarock		8	0	0	0	0	10	0	10	135	0	1	1	135	11	146	0	10.0	0.0	10.0	0.0				
21/5/97	KAB 289 Q	2	5	Komaro Buru Buru	Makadara	8	0	0	0	0	125	12	113	74	0	0	0	86	113	199	0	25.0	2.4	22.6	0.0	2	0	345	0
21/5/97	KAB 292 Q	1	2	Lusaka Parliament	Starehe	8	1,000	26,000	3,000	30,000	140	3	137	133	6	1	7	142	138	280	0	70.0	1.5	68.5	11.7				
21/5/97	KAB 292 Q	2	2	Juja Rd Haile Selassie	Starehe	8	2,000	35,000	1,000	38,000	70	8	62	94	5	1	6	107	63	170	0	35.0	4.0	31.0	22.3	2	68,000	170	0
21/5/97	KAB 388Q	1	1	Uhuru Komarock	Starehe	1	0	21,100	3,400	24,500	26	0	26	66	12	1	13	78	27	105	0	26.0	0.0	26.0	19.2				
21/5/97	KAB 388Q	2	1	Komarock Dareesalam	Mathare Eastleigh	1	0	38,500	3,900	42,400	5	0	5	115	11	0	11	142	5	147	16	5.0	0.0	5.0	20.1				
21/5/97	KAB 388Q	3	2	Outering Eastleigh	Mathare Eastleigh	1	1,000	14,700	6,600	22,900	48	21	27	31	25	0	25	77	27	104	0	24.0	10.5	13.5	28.5				
21/5/97	KAB 388Q	4	1	Komarock	Eastleigh	1	0	25,000	3,200	28,200	3	0	3	39	14	0	14	53	3	56	0	3.0	0.0	3.0	38.5	4	118,000	412	16
21/5/97	KAB 389 Q	1	1	Lusaka Uhuru park	Kilimani		0	7,900	0	7,900	36	0	36	89	7	0	7	96	36	132	0	36.0	0.0	36.0	5.3				
21/5/97	KAB 389 Q	2	1	Pangani Komarock	Starehe		0	21,000	1,900	22,900	6	0	6	77	12	0	12	89	6	95	0	6.0	0.0	6.0	16.4				
21/5/97	KAB 389 Q	3	1	Ring Rd Komarock	Starehe Pumwani		0	23,800	4,100	27,900	17	0	17	52	24	0	24	76	17	93	0	17.0	0.0	17.0	27.5				
21/5/97	KAB 389 Q	4	1	Eastleigh Komarock	Pumwani Eastleigh		0	13,900	3,500	17,400	7	0	7	37	11	0	11	48	7	55	0	7.0	0.0	7.0	22.5				
21/5/97	KAB 389 Q	5	1	Komarock Jogoo	Kamkunji Eastleigh		0	28,800	3,500	32,300	2	0	2	64	12	0	12	76	2	78	0	2.0	0.0	2.0	27.0	5	108,400	453	0
21/5/97	KAB 390 Q	1	1	Haile Selassie Ngara	Starehe Ngara		0	20,000	4,000	24,000	3	0	3	116	9	1	10	138	4	142	13	3.0	0.0	3.0	10.3				
21/5/97	KAB 390 Q	2	1	Komarock Eastleigh	Eastleigh		0	24,000	1,000	25,000	4	0	4	138	10	1	11	148	5	153	0	4.0	0.0	4.0	10.4				
21/5/97	KAB 390 Q	3	1	Eastleigh Komarock	Eastleigh dandora		0	28,000	0	28,000	3	0	3	88	13	1	14	101	4	105	0	3.0	0.0	3.0	19.1	3	77,000	400	13
21/5/97	KAB 392Q	1	0	Jogoo Komarock	Dandora Viwanda	1	0	26,000	2,000	28,000	0	0	0	51	7	0	7	82	0	82	24				30.6				
21/5/97	KAB 392Q	2	1	Jogoo Uhuru Park	Ngara Starehe Eastleigh	1	4,000	15,000	3,000	22,000	59	11	48	33	12	0	12	56	48	104	0	59.0	11.0	48.0	27.3				
21/5/97	KAB 392Q	3	1	Mugwena Komarock	Eastleigh Dandora	1	0	21,000	3,000	24,000	6	0	6	36	7	0	7	43	6	49	0	6.0	0.0	6.0	35.0				
21/5/97	KAB 392Q	4	2	Eastleigh Komarock	Eastleigh	1	2,000	14,000	3,000	19,000	23	12	11	51	8	0	8	71	11	82	0	11.5	6.0	5.5	16.5				
21/5/97	KAB 392Q	5	1	Eastleigh Komarock	Eastleigh	1	0	26,000	3,000	29,000	0	0	0	61	10	0	10	71	0	71	0	0.0	0.0	0.0	25.6	5	122,000	388	24
21/5/97	KAB286Q	1	1	Jogoo Kariokoo	Embakasi	1	0	37,000	3,000	40,000	100	0	100	171	14	5	19	205	105	310	0	100.0	0.0	100.0	13.0	1	40,000	310	0
21/5/97	KUL 991	1	8	Jogoo Outering			45,700	37,200	4,400	87,300	320	98	222	123	35	0	35	303	222	525	0	40.0	12.3	27.8	18.1	1	87,300	525	0
21/5/97	KUL 992	1	0	Pumwani Komarock		10	0	12,500	2,000	14,500	0	0	0	36	21	30	51	72	30	102	15				20.8				
21/5/97	KUL 992	2	12	Kipanga Juja	Eastleigh	10	4,300	29,000	2,000	35,300	227	35	192	105	11	29	40	159	221	380	8	18.9	2.9	16.0	16.6	2	49,800	482	23
21/5/97	KUL 994	1	6	Jogoo Outering	Ngara Starehe	9	11,000	16,000	4,000	31,000	207	53	154	42	20	0	20	130	154	284	15	34.5	8.8	25.7	22.9				
21/5/97	KUL 994	2	1	Outering Banda	Starehe	9	0	48,000	1,000	49,000	73	0	73	107	35	0	35	152	73	225	10	73.0	0.0	73.0	26.9	2	80,000	509	25

NCC(7/10)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Moving	Loading	Transportation	Inside the Dump Site Moving	Loading	Total	Total Moving	Loading	Total	Idling	Average Collection Time (min./collection point) Total	Moving	Loading	Average Transportation Speed(km/hr.)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
21/5/97	KUL 995	1	20	3rd Parkland Brookside	Parklands Kilimani	6	110	31,000	2,000	33,110	224	116	108	143	11	58	69	270	166	436	52	11.2	5.8	5.4	13.0	1	33,110	436	52
21/5/97	KWE 070	1	1	Jogoo CityPark	Parklands	2	0	16,400	500	16,900	53	0	53	104	10	0	10	114	53	167	0	53.0	0.0	53.0	9.5				
21/5/97	KWE 070	2	1		Parklands	2	0	1,100	200	1,300	50	0	50	13	8	0	8	21	50	71	0	50.0	0.0	50.0	5.1				
21/5/97	KWE 070	3	1	Limuru Jogoo	Viwanda	2	0	20,700	500	21,200	72	0	72	59	13	0	13	177	72	249	105	72.0	0.0	72.0	21.1	3	39,400	487	105
21/5/97	KWE 073	1	7	Kaloleni	Kaloleni Makongeni	10	600	17,600	3,500	21,700	170	34	136	90	10	2	12	134	138	272	0	24.3	4.9	19.4	11.7				
21/5/97	KWE 073	2	2	Kaloleni Estate	Kaloleni Makongeni	10	4,800	30,500	2,000	37,300	65	5	60	118	15	0	15	138	60	198	0	32.5	2.5	30.0	15.5	2	59,000	470	0
21/5/97	KWE 081	1	8	Lusaka River Rd	Mugumoini	10	3,500	26,500	3,000	33,000	168	25	143	81	14	26	40	149	169	318	29	21.0	3.1	17.9	19.6				
21/5/97	KWE 081	2	2	Komarock Outering	Mugumoini Viwanda	10	16,600	43,400	3,000	63,000	66	3	63	123	8	13	21	134	76	210	0	33.0	1.5	31.5	21.2	2	156,900	528	29
21/5/97	KWE 084	1	20	Ngong Kodhoch	Kilimani	9	16,000	74,400	3,500	93,900	266	92	174	201	20	0	20	317	174	491	4	13.3	4.6	8.7	22.2	1	93,900	491	4
21/5/97	KWE 245	1	53	Kaura Muthaiga lane	Parklands Kilimani	7	23,045	49,455	500	73,000	268	59	209	112	12	1	13	183	210	393	0	5.1	1.1	3.9	26.5	1	73,000	393	0
21/5/97 average			4.6			5.2	3,979	26,399	2,673	32,717	69	16	54	88	12	13	18	127	69	193	8	28.1	3.1	25.1	19.2	2.2	77,419	415	17
22/5/97	GK 354M	1	1	Jogoo rd.		3	0	18,000	4,000	22,000	40	0	40	45	8	0	8	53	40	93	0	40.0	0.0	40.0	24.0				
22/5/97	GK 354M	2	1	River rd. Thika rd.		3	0	33,500	500	34,000	45	0	45	86	16	0	16	102	45	147	0	45.0	0.0	45.0	23.4	2	56,000	240	0
22/5/97	KAB 289Q	1	9	Muratas Rd Jogoo	Makadara		0	0	0	0	80	11	69	80	1	0	1	91	70	161	0	8.9	1.2	7.7	0.0	1	0	161	0
22/5/97	KAB 388Q	1	1	Jogoo TomMboya	Starehe	1	0	25,000	500	25,500	6	0	6	94	1	0	1	145	6	151	0	6.0	0.0	6.0	16.0				
22/5/97	KAB 388Q	2	1	Outering TomMboya	Starehe	1	0	37,000	4,000	41,000	20	0	20	90	10	0	10	120	20	140	20	20.0	0.0	20.0	24.7	2	66,500	291	20
22/5/97	KAB 389Q	1	1	Kaloleni Lagos	Starehe	2	0	28,900	400	29,300	24	0	24	62	5	0	5	94	24	118	27	24.0	0.0	24.0	28.0				
22/5/97	KAB 389Q	2	1	TomMboya Komarock	Starehe	2	0	26,800	400	27,200	6	0	6	55	16	0	16	71	39	110	33	6.0	0.0	6.0	29.2				
22/5/97	KAB 389Q	3	1	Komarock TomMboya	Starehe	2	0	28,000	400	28,400	8	0	8	45	6	0	6	51	36	87	28	8.0	0.0	8.0	37.3				
22/5/97	KAB 389Q	4	1	TomMboya Outering	Starehe	2	0	28,000	500	28,500	4	0	4	50	5	0	5	60	4	64	5	4.0	0.0	4.0	33.6				
22/5/97	KAB 389Q	5	1	Siduberi Komarock	Starehe	2	0	27,900	500	28,400	5	0	5	77	6	0	6	83	5	88	0	5.0	0.0	5.0	21.7	5	141,800	467	93
22/5/97	KAB 390Q	1	1	Lusaka Mboya	Starehe	1	0	22,000	3,000	25,000	11	0	11	83	9	1	10	92	12	104	0	11.0	0.0	11.0	15.9				
22/5/97	KAB 390Q	2	2	Komarock Outering	Starehe	1	1,000	26,000	3,000	30,000	50	11	39	68	8	1	9	87	40	127	0	25.0	3.5	19.5	22.9				
22/5/97	KAB 390Q	3	1	Komarock Outering	Starehe	1	0	37,000	3,000	40,000	7	0	7	95	13	1	14	108	8	116	0	7.0	0.0	7.0	23.4	3	95,000	347	0
22/5/97	KAB 392Q	1	1	Lagos road Moi Lane	Starehe	2	0	22,000	3,000	25,000	5	0	5	60	5	0	5	65	5	70	0	5.0	0.0	5.0	22.0				
22/5/97	KAB 392Q	2	1	Moi Lane Muranga rd.	Starehe	2	0	25,000	3,000	28,000	27	0	27	107	7	0	7	114	27	141	0	27.0	0.0	27.0	14.0				
22/5/97	KAB 392Q	3	1	Nganda lane River rd.	Starehe	2	0	26,000	3,000	29,000	40	0	40	57	8	0	8	65	40	105	0	40.0	0.0	40.0	27.4				
22/5/97	KAB 392Q	4	1	Nganda lane Muranga rd	Starehe	2	0	26,000	3,000	29,000	17	0	9	47	8	0	8	55	9	64	0	9.0	0.0	9.0	33.2				
22/5/97	KAB 392Q	5	1	Nganda lane River rd	Starehe	2	0	37,000	3,000	40,000	19	0	19	71	2	0	2	73	19	92	0	19.0	0.0	19.0	31.3	5	151,000	472	0
22/5/97	KUL 990	1	1	Jogoo Komarock	Starehe	6	0	28,000	2,000	30,000	0	0	0	93	64	0	64	157	0	182	25	0.0	0.0	0.0	18.1				

NCC(S/10)

Date	Vehicle No	Number of Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m) Collection	Moving Distance (m) Transportation	Moving Distance (m) Inside the Dump Site	Moving Distance (m) Total	Time (minutes) Collection Total	Collection Moving	Collection Loading	Transportation	Inside the Dump Site Moving	Inside the Dump Site Loading	Inside the Dump Site Total	Total Moving	Total Loading	Total Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed(km/hr)	Daily Average Trips	Distance (m)	Time (min)	Idling (min)
22/5/97	KUL 990	2	1	Komarock Outering	Embakasi	6	0	46,000	3,000	49,000	103	0	103	110	60	0	60	175	103	278	5	103.0	0.0	103.0	25.1	2	79,000	460	30
22/5/97	KUL 991	1	6	Lagos rd Jogoo rd	Starche	8	24,700	28,400	700	53,800	347	156	191	95	48	0	48	299	191	490	0	57.8	26.0	31.8	17.9	1	53,800	490	0
22/5/97	KUL 992	1	5	Jogoo Komarock	Pumwani Eastleigh	10	3,000	26,000	3,000	32,000	216	78	138	76	14	53	67	183	191	376	17	43.2	15.6	27.6	20.5	1	32,000	376	17
22/5/97	KUL 993	1	15	Jogoo Brookside	Parklands	4	13,000	22,000	500	35,500	176	46	130	92	9	2	11	147	132	279	0	11.7	3.1	8.7	14.3				
22/5/97	KUL 993	2	7	Parklands Westlands	Parklands	4	6,000	34,000	500	40,500	118	20	98	101	11	2	13	132	100	232	0	16.9	2.9	14.0	20.2	2	76,000	511	0
22/5/97	KUL 995	1	3	Daressalam Baricho	Viwanda	8	1,800	34,600	2,000	38,400	133	14	119	84	8	38	46	309	157	466	203	44.3	4.7	39.7	24.7	1	38,400	466	203
22/5/97	KWE 071	1	1	Ohuru park City park	Starche	1	0	65,500	4,900	70,400	22	0	22	424	20	13	33	444	35	479	0	22.0	0.0	22.0	9.3	1	70,400	479	0
22/5/97	KWE 073	1	1	Lusaka Outering	Kibera Woodly	8	0	47,800	500	48,300	44	0	44	107	6	3	9	174	47	221	61	44.0	0.0	44.0	26.8				
22/5/97	KWE 073	2	14	Ngong Elgeyo	Kilimani Kibera	8	6,190	50,690	500	57,380	95	53	42	125	14	3	17	192	45	237	0	6.8	3.8	3.0	24.3	2	105,680	458	61
22/5/97	KWE 081	1	1	Jogoo Enterprise	Viwanda	11	0	24,000	4,000	28,000	69	0	69	98	12	8	20	185	77	262	75	69.0	0.0	69.0	14.7				
22/5/97	KWE 081	2	1	Wajir Kamburaini	Viwanda	1	0	26,000	3,000	29,000	35	0	35	80	10	0	10	90	35	125	0	35.0	0.0	35.0	19.5				
22/5/97	KWE 081	3	1	Wajir Kamburaini	Viwanda	1	0	40,000	2,000	42,000	30	0	30	131	7	0	7	138	30	168	0	30.0	0.0	30.0	18.3	3	99,000	555	75
22/5/97	KWE 084	1	9	Buruche road Kilimani rd	Kilimani	10	11,900	73,400	3,500	88,800	169	38	131	236	17	0	17	291	156	447	25	18.8	4.2	14.6	18.7	1	88,800	447	25
22/5/97	KWE 245	1	7	Muranga rd. Limuru rd.	Parklands	8	17,900	12,200	3,500	33,600	265	139	126	62	16	0	16	217	126	343	0	37.9	19.9	18.0	11.8				
22/5/97	KWE 245	2	2	Komarock rd. Jogoo rd.	Roysambu	8	500	24,600	500	25,600	100	4	96	67	0	0	0	71	96	167	0	50.0	2.0	48.0	22.0	2	59,200	510	0
22/5/97 average		3.0				3.7	2,529	31,571	2,038	36,348	71	17	53	97	11	11	17	141	59	199	15	27.3	2.7	24.6	21.5	2.1	75,786	421	33
23/5/97	KAB 289Q	1	0	Jogoo rd. Bumburu rd.	Makadara	7	0	0	0	0	0	0	0	90	6	2	8	96	2	98	0				0.0				
23/5/97	KAB 289Q	2	16	Chuka rd. Kongokono rd.	Makadara	16	0	0	0	0	176	14	162	203	3	0	3	220	162	382	0	11.0	0.9	10.1	0.0	2	0	480	0
23/5/97	KAB 389Q	1	1	Thore rd. Lusaka rd.	Viwanda Makadara	2	0	18,000	3,000	21,000	4	0	4	93	11	2	13	104	6	110	0	4.0	0.0	4.0	11.6				
23/5/97	KAB 389Q	2	1	Thore rd. Likoni rd.	Viwanda Makadara	2	0	27,000	3,000	30,000	3	0	3	56	7	1	8	64	3	67	0	3.0	0.0	3.0	28.9				
23/5/97	KAB 389Q	3	1	Enterprise rd Komarock rd.	Viwanda Makadara	2	0	25,000	3,000	28,000	10	0	10	93	10	1	11	103	18	121	7	10.0	0.0	10.0	16.1	3	79,000	298	7
23/5/97	KAB 991	1	1	Jogoo rd. Lusaka rd.	Viwanda	2	0	19,000	3,000	22,000	2	0	2	28	11	0	11	69	2	71	0	2.0	0.0	2.0	19.7				
23/5/97	KAB 991	2	1	Jogoo rd. Lusaka rd.	Viwanda	2	0	27,000	3,000	30,000	5	0	5	64	10	0	10	74	5	79	0	5.0	0.0	5.0	25.3				
23/5/97	KAB 991	3	1	Likoni rd. Jogoo rd.	Viwanda	2	0	26,000	3,000	29,000	53	0	53	57	17	0	17	74	53	127	0	53.0	0.0	53.0	27.4				
23/5/97	KAB 991	4	1	Komarock rd. Jogoo rd.	Viwanda Makadara	2	0	36,000	4,000	40,000	7	0	7	78	10	0	10	88	7	95	0	7.0	0.0	7.0	27.7	1	121,000	372	0
23/5/97	KUL 990	1	2	Muthithi rd Forest rd	Ngara Parklands	2	1,300	24,200	3,400	29,100	165	14	151	105	45	0	45	164	151	315	0	82.5	7.0	75.5	13.8				
23/5/97	KUL 990	2	8	Ngiri rd. Parklands rd	Ngara Parklands	6	14,800	49,200	4,000	68,000	54	38	16	151	28	0	28	217	16	233	0	6.8	4.8	2.0	19.5	2	97,100	548	0
23/5/97	KUL 991	1	14	Chiromo rd Ngong rd.	Eastleigh Starche	6	62,000	16,000	500	78,500	316	161	155	81	30	0	30	272	155	427	0	22.6	11.5	11.1	11.9	1	78,500	427	0
23/5/97	KUL 992	1	1	Thore rd. Enterprise rd.	Viwanda	11	0	38,000	1,000	39,000	20	0	20	81	10	54	64	128	74	202	37	20.0	0.0	20.0	28.1				
23/5/97	KUL 992	2	1	Enterprise rd Lusaka rd.	Viwanda	11	0	35,000	2,000	37,000	29	0	29	110	11	32	43	121	62	183	0	29.0	0.0	29.0	19.1	2	76,000	385	37

NCC(9/10)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Moving Distance(m) Transportation	Moving Distance(m) Inside the Dump Site	Moving Distance(m) Total	Time (minutes) Collection Total	Collection Moving	Collection Loading	Transportation	Inside the Dump Site Moving	Inside the Dump Site Loading	Inside the Dump Site Total	Total Moving	Total Loading	Total Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed(km/hr)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
23/5/97	KUL 993	1	6	Komarock rd Kaloleni	Dandora	10	42,400	33,800	1,800	78,000	291	159	132	144	12	3	15	315	135	450	0	48.5	26.5	22.0	14.1	1	78,000	450	0
23/5/97	KWE 081	1	20	Kariara rd. Gatundu rd.	Kilimani	7	54,000	40,000	500	94,500	383	277	106	87	15	5	20	379	111	490	0	19.2	13.9	5.3	27.6	1	94,500	490	0
23/5/97	KWE 084	1	9	Ngugu rd. Valley rd.	Kilimani	8	15,000	77,300	2,000	94,300	199	46	153	324	9	29	38	379	182	561	0	22.1	5.1	17.0	14.3	1	94,300	561	0
23/5/97	KWE 245	1	14	Parklands rd Komarock rd.	Starehe	7	11,900	21,600	400	33,900	137	60	77	87	10	0	10	157	77	234	0	9.8	4.3	5.5	14.9	1	33,900	234	0
23/5/97 average			6.7			6.9	16,800	35,373	2,050	50,255	137	59	78	106	10	14	24	194	82	277	3	22.2	5.7	16.5	19.4	1.6	70,144	430	5
24/5/97	KAB 389Q	1	1	Jogoo rd. Avenue rd	Starehe	1	0	17,000	3,000	20,000	2	0	2	47	10	1	11	57	3	60	0	2.0	0.0	2.0	21.7				
24/5/97	KAB 389Q	2	1	River rd. Komarock rd	Starehe	1	0	26,000	4,000	30,000	1	0	1	115	8	1	9	123	2	125	0	1.0	0.0	1.0	13.6				
24/5/97	KAB 389Q	3	1	Accra rd. River rd	Starehe	1	0	28,000	2,000	30,000	2	0	2	192	9	1	10	201	3	204	0	2.0	0.0	2.0	8.8				
24/5/97	KAB 389Q	4	1	Ring rd. Thika rd	Starehe	1	0	23,000	4,000	27,000	1	0	1	46	8	1	9	54	2	56	0	1.0	0.0	1.0	30.0				
24/5/97	KAB 389Q	5	1	Race corse rd Thika rd	Starehe	1	0	45,000	3,000	48,000	3	0	3	116	9	1	10	125	4	129	0	3.0	0.0	3.0	23.3	5	155,000	574	0
24/5/97	KAB 880	1	1	Jogoo rd. Lusaka rd.	Viwanda Starehe	2	0	18,000	5,000	23,000	5	0	5	47	13	0	13	60	5	65	0	5.0	0.0	5.0	23.0				
24/5/97	KAB 880	2	1	Komarock rd Thika road	Starehe Kariobangi	2	0	26,000	3,000	29,000	7	0	7	68	15	0	15	83	7	90	0	7.0	0.0	7.0	22.9				
24/5/97	KAB 880	3	1	Komarock rd. Mwanziwa rd	Makadara Starehe	2	0	41,000	4,000	45,000	9	0	9	126	35	0	35	161	9	170	0	9.0	0.0	9.0	19.5	3	95,000	305	0
24/5/97	KUL 915	1	1	Muringa rd. Komarock rd	Starehe	3	0	0	0	0	372	0	372	132	16	50	66	148	222	370	0	372.0	0.0	372.0	0.0	1	0	370	0
24/5/97	KUL 976	1	1	Jogoo rd. Lukuni rd.	Viwanda Embakasi	6	0	40,000	400	40,400	159	0	159	195	10	2	12	205	161	366	0	159.0	0.0	159.0	12.3	1	40,400	366	0
24/5/97	KUL 989	1	4	Accra rd. Banda street	Starehe	7	2,700	40,300	3,000	46,000	142	10	132	182	17	44	61	209	176	385	0	35.5	2.5	33.0	13.3	1	46,000	385	0
24/5/97	KUL 990	1	4	Kingeku road Maswi rd.	Parklands	5	7,000	19,000	500	26,500	157	55	102	119	11	26	37	185	128	313	0	39.3	13.8	25.5	9.6				
24/5/97	KUL 990	2	2	Limuru rd. Forest rd	Parklands	5	3,000	46,500	500	50,000	78	5	73	133	7	21	28	145	94	239	0	39.0	2.5	36.5	21.0	2	76,500	552	0
24/5/97	KUL 993	1	5	Kaloleni Komarock rd	Njuru	5	2,000	24,000	2,000	28,000	72	21	51	93	12	0	12	153	51	204	27	14.4	4.2	10.2	15.5				
24/5/97	KUL 993	2	7	Komarock rd Mwanziwa rd	Njuru Dandora	5	2,100	38,300	1,100	41,500	75	15	60	123	19	3	22	157	63	220	0	10.7	2.1	8.6	18.7	2	69,500	424	27
24/5/97	KWE 073	1	7	Jogoo rd. Komarock rd	Maringo Mbotela	9	600	100	0	700	215	61	154	80	10	0	10	151	154	305	0	30.7	8.7	22.0	0.3	1	700	305	0
24/5/97	KWE 084	1	26	Muringa rd. Kirichwa rd.	Kilimani Muramuru	11	16,020	31,000	0	47,020	202	63	139	223	19	0	19	305	139	444	0	7.8	2.4	5.3	8.3	1	47,020	444	0
24/5/97 average			4.69231			4.5	2,571	31,555	2,136	35,218	85	18	68	128	11	10	19	159	75	235	2	26.6	2.8	23.8	17.3	1.9	62,160	436	4
25/5/97	KAB 389Q	1	1	Ring rd. Thika rd	Ngara	1	0	15,000	2,000	17,000	1	0	1	31	8	1	9	39	2	41	0	1.0	0.0	1.0	29.0				
25/5/97	KAB 389Q	2	1	Muranga rd. Thika rd	Starehe Ngara	1	0	16,000	3,000	19,000	3	0	3	48	8	1	9	56	4	60	0	3.0	0.0	3.0	20.0				
25/5/97	KAB 389Q	3	1	Pumwani rd. Komaro rd	Starehe	1	0	25,000	3,000	28,000	4	0	4	49	7	1	8	56	5	61	0	4.0	0.0	4.0	30.6				
25/5/97	KAB 389Q	4	1	Pumwani rd. Ngara road	Starehe	1	0	26,000	3,000	29,000	1	0	1	56	8	1	9	64	2	66	0	1.0	0.0	1.0	27.9				
25/5/97	KAB 389Q	5	1	Pumwani rd Ring rd.	Starehe	1	0	26,000	3,000	29,000	3	0	3	51	10	0	10	61	3	64	0	3.0	0.0	3.0	30.6				
25/5/97	KAB 389Q	6	1	Pumwani rd. Komarock rd	Starehe	1	0	40,000	3,000	43,000	2	0	2	99	9	0	9	108	2	110	0	2.0	0.0	2.0	24.2	6	165,000	402	0
25/5/97	KAB 390Q	1	1	Kenyange st Komarock rd	Starehe	2	0	36,000	500	36,500	7	0	7	24	6	0	6	30	7	37	0	7.0	0.0	7.0	40.0				
25/5/97	KAB 390Q	2	1	Kenyange st Pumwani rd	Starehe	2	0	27,500	500	28,000	4	0	4	45	5	0	5	50	4	54	0	4.0	0.0	4.0	36.7				

NCC(10/10)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Idling	Average Collection Time (min./collection point)			Average Transportation Speed (km/hr.)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total					Total	Moving	Loading		Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total										
25/5/97	KAB 390Q	3	1	Retail Market	Starehe	2	0	28,500	500	29,000	10	0	10	42	7	0	7	49	10	59	0		10.0	0.0	10.0	40.7				
25/5/97	KAB 390Q	4	1	Ring rd. Wakulima	Starehe	2	0	28,500	500	29,000	8	0	8	42	16	0	16	58	8	66	0		8.0	0.0	8.0	40.7				
25/5/97	KAB 390Q	5	1	Ring rd. Kirichwa rd	Starehe	2	0	0	0	0	5	0	5	37	6	0	6	43	5	48	0		5.0	0.0	5.0	0.0	5	102,500	264	0
25/5/97	KUL 991	1	2	Thika rd. Komaro rd.	Kasarani Mathare	6	3,000	40,000	2,000	45,000	125	10	115	174	13	14	27	197	129	326	0		62.5	5.0	57.5	13.8	1	45,000	326	0
25/5/97	KWE 064	1	17	Ring rd. Kirichwa rd	Kilimani	7	16,500	71,600	3,200	91,300	383	123	260	118	15	2	17	256	262	518	0		22.5	7.2	15.3	36.4	1	91,300	518	0
25/5/97 average			2.3			2.2	1,500	31,282	2,017	35,209	43	10	33	63	10	3	11	82	34	116	0		10.2	0.9	9.3	30.1	3.3	100,950	378	0
26/5/97	KWE 081	1	5	Kalolenu Kilimani	Kilimani	6	400	0	0	400	267	56	211	102	0	0	0	158	211	369	0		53.4	11.2	42.2	0.0	1	400	369	0
26/5/97	KAB 389Q	1	1		Mathare	1	0	15,800	3,000	18,800	2	0	2	105	8	1	9	113	3	116	0		2.0	0.0	2.0	9.0				
26/5/97	KAB 389Q	2	1		Mathare	1	0	19,000	2,900	21,900	4	0	4	65	8	1	9	73	5	78	0		4.0	0.0	4.0	17.5				
26/5/97	KAB 389Q	3	1		Mathare	1	0	21,200	3,000	24,200	5	0	5	140	8	1	9	148	6	154	0		5.0	0.0	5.0	9.1				
26/5/97	KAB 389Q	4	1		Mathare	1	0	3,900	3,000	6,900	5	0	5	13	12	2	14	25	7	32	0		5.0	0.0	5.0	18.0				
26/5/97	KAB 389Q	5	1		Mathare	1	0	7,400	3,000	10,400	0	0	0	55	8	1	9	63	1	64	0		0.0	0.0	0.0	8.1	5	82,200	444	0
26/5/97	KAB 390Q	1	1	Juja rd. Komarock rd	Mathare	2	0	18,000	500	18,500	2	0	2	127	9	0	9	136	2	138	0		2.0	0.0	2.0	8.5				
26/5/97	KAB 390Q	2	1	Juja rd. Komarock rd	Mathare	2	0	9,500	500	10,000	8	0	8	30	9	0	9	39	8	47	0		8.0	0.0	8.0	19.0				
26/5/97	KAB 390Q	3	1	Juja road Komarock rd	Mathare	2	0	9,500	500	10,000	3	0	3	13	10	0	10	23	3	26	0		3.0	0.0	3.0	43.8				
26/5/97	KAB 390Q	4	1	Juja road Komarock rd	Mathare	2	0	8,500	500	9,000	12	0	12	12	10	0	10	22	12	34	0		12.0	0.0	12.0	42.5				
26/5/97	KAB 390Q	5	1	Juja rd. Komarock rd	Mathare	2	0	9,500	500	10,000	2	0	2	15	8	0	8	23	2	25	0		2.0	0.0	2.0	38.0				
26/5/97	KAB 390Q	6	1	Juja road Komarock rd	Mathare	2	0	8,500	500	9,000	4	0	4	16	11	0	11	27	4	31	0		4.0	0.0	4.0	31.9				
26/5/97	KAB 390Q	7	1	Juja rd. Komarock rd	Mathare	2	0	10,000	500	10,500	4	0	4	14	9	0	9	23	4	27	0		4.0	0.0	4.0	42.9	7	77,000	328	0
25/5/97 average			1.3			1.9	0	11,733	1,533	13,267	27	5	22	54	9	1	10	67	21	88	0		9	1	8	24.0	4.3	53200	380	0
Average			3.9			4.5	4,500	29,039	2,697	35,637	75	19	56	91	10	8	16	133	58	188	10		23.5	2.6	20.9	22.0	2.2	78,223	416	22

Bins(1/4)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Trans-portation	Inside the Dump Site	Total	Time (minutes) Collection Total	Moving	Loading	Trans-portation	Inside the Dump Site Moving	Loading	total	Total Moving	Loading	Total	Idling	Average Collection Time (min./collection point) Total	Moving	Loading	Average Transportation Speed(km/hr.)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
16/5/97	KAE341U	1	2	Maua rd. Kitui rd.	Viwanda	5	21,000	43,500	500	65,000	238	91	147	161	10	47	57	282	194	476	20	119.0	45.5	73.5	16.2	1	65,000	464	20
16/5/97	KAE386R	1	64	Gitanga rd. Charles ave.	Kilimani	4	50,000	8,000	0	58,000	357	176	181	31	37	0	37	244	181	425	0	5.6	2.8	2.8	15.5				
16/5/97	KAE386R	2	9	Marcus rd. Gitanga rd.	Kilimani	4	28,000	15,000	0	43,000	141	78	63	39	0	0	0	117	63	180	0	15.7	8.7	7.0	23.1	2	101,000	605	0
16/5/97	KAE441W	1	105	Ngong rd. Kirichwa rd.	Kilimani	5	41,850	18,000	0	59,850	497	250	247	50	0	0	0	324	247	571	24	4.7	2.4	2.4	21.6	1	59,850	571	24
16/5/97	KAE593	1	16	Kitui rd. Factory st.	Viwanda	3	26,000	41,000	1,000	68,000	283	115	168	145	40	0	40	402	168	570	102	12.7	7.2	10.5	17.0	1	68,000	570	102
16/5/97	KAE761R	1	1	Lunga lunga rd.	Viwanda	5	0	22,000	2,000	24,000	74	0	74	81	34	0	34	115	74	189	0	74.0	0.0	74.0	16.3				
16/5/97	KAE761R	2	31			5	32,000	9,000	0	41,000	247	142	105	69	0	0	0	211	199	410	94	8.0	4.6	3.4	7.8	2	65,000	599	94
16/5/97	KQY636	1	4	Changamwe rd. Taxiaka rd.	Viwanda	6	0	0	0	0	235	55	180	135	15	65	80	250	245	495	45	58.8	13.8	45.0	0.0	1	0	445	45
16/5/97	KST976	1	10	Tom mboya st. Harry thuku rd.	Ngara Starehe	4	0	0	0	0	170	65	105	49	11	0	11	125	105	230	0	17.0	6.5	10.5	0.0				
16/5/97	KST976	2	6	Kijabe st. Harry thuku rd.	Ngara Starehe	4	0	0	0	0	193	26	167	91	53	0	31	148	167	315	0	32.2	4.3	27.8	0.0	2	0	545	0
16/5/97	KXF820	1	0		Kilimani Parkland	5	0	14,000	500	14,500	0	0	0	48	10	64	74	58	64	122	0				17.5				
16/5/97	KXF820	2	36	Limuru rd. Taxiaka rd.	Ngara Parkland	5	0	0	0	0	317	95	222	47	0	0	0	172	222	394	30	8.8	2.6	6.2	0.0	2	14,500	484	30
16/5/97	KZV006	1	17	Westlands rd. Forest court	Parkland Ngara Starehe Kilimani	4	89,000	22,000	2,000	113,000	225	115	110	94	49	0	49	298	110	408	40	13.2	6.8	6.5	14.0				
16/5/97	KZV006	2	1	Westlands rd. Kenana house		4	0	26,000	0	26,000	43	0	43	67	0	0	0	67	43	110	0	43.0	0.0	43.0	23.3	2	139,000	518	0
14/6 average			21.6			4.5	31,983	21,850	1,200	51,235	232	93	139	78	12	59	46	194	149	350	25	32.1	8.1	24.0	17.2	1.6	73,193	533	35
17/5/97	KAD 794Y	1	4	Nakuru.Ukay		5	12,000	39,400	2,100	53,500	180	44	136	111	24	70	94	189	226	415	30	45.0	11.0	34.0	21.3	1	0	415	30
17/5/97	KAE 341U	1	2	C & G.Karuco Eng.	Viwanda	5	70	37,700	300	38,070	105	1	104	105	63	0	61	197	104	301	30	52.5	0.5	52.0	21.5	1	38,070	301	30
17/5/97	KAE 761R	1	23	A/Kondek rd Lenana rd	Kilimani	6	25,160	24,000	1,000	50,160	251	115	136	83	101	0	101	299	136	435	0	10.9	5.0	5.9	17.3	1	50,160	435	0
17/5/97	KAE386R	1	4	Lusaka rd Lukuru rd	Kilimani Viwanda	4	16,000	31,000	0	47,000	341	55	286	199	10	52	62	264	338	602	0	85.3	13.8	71.5	9.3	1	47,000	602	0
17/5/97	KAE441W	1	0			5	0	15,000	1,000	16,000	0	0	0	52	25	70	95	77	70	147	0				17.3				
17/5/97	KAE441W	2	2	Lusaka rd. Ngong rd.	Viwanda	5	200	63,000	1,200	64,400	106	1	105	131	12	24	36	152	129	281	81	53.0	0.5	52.5	28.9	2	80,400	428	8
17/5/97	KAE593R	1	4	Kampala rd Lusaka rd.	Viwanda	4	9,000	39,000	1,000	49,000	198	33	165	102	50	0	50	205	190	395	45	49.5	8.3	41.3	22.9	1	46,900	395	45
17/5/97	KSV 976	1	8	NIC. Lonrho hse.	Starehe	4	0	0	0	0	240	103	137	132	30	0	30	265	137	402	0	30.0	12.9	17.1	0.0	1	0	402	0
17/5/97	KTM 206	1	5	Kimathi st Kenda st.	Starehe	3	16,670	43,750	10	60,430	54	23	31	85	14	11	25	133	42	164	0	10.8	4.6	6.2	30.9	1	60,430	164	0
17/5/97	KXF 820	1	0	park rd. Muranga rd		5	0	0	0	0	0	0	0	101	13	42	55	129	42	171	15				0.0				
17/5/97	KXF 820	2	3	University/w Statoft. rd	Kilimani	5	0	0	0	0	129	96	33	72	14	21	35	182	54	236	0	43.0	32.0	11.0	0.0	2	0	407	15
17/5/97	KZV 006	1	0			4	0	33,000	3,000	36,000	0	0	0	85	43	0	43	128	0	128	0				23.3	1	0	128	0
17/5 average			4.6			4.6	11,300	33,181	944	47,320	178	52	126	105	16	41	57	185	122	306	11	42.2	9.8	32.4	21.2	1.2	40,370	368	13

Bins(2/4)

Date	Vehicle No.	Number of Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(km) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Collection Moving	Collection Loading	Transportation	Inside the Dump Site Moving	Inside the Dump Site Loading	Inside the Dump Site Total	Total Moving	Total Loading	Total Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed(km/hr)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
19/5/97	KAD 794Y	1	30.0	Parklands Chiwa Kiamen	Parkland	5.0	14,465	32,400	2,000	48,865	185	77	108	55	10	25	35	182	178	360	85	4.7	2.0	2.8	35.3				
19/5/97	KAD 794Y	2	37	Lobelia rd. Clarson lane	Roysamba	5	23,225	11,450	2,000	36,675	142	80	62	81	15	25	40	176	87	263	0	3.8	2.2	1.7	8.5	2	36,675	263	85
19/5/97	KAE386R	1	38	Ormaru Est. Duka rd.	Parkland	4	72,000	30,000	0	102,000	265	173	92	211	5	90	95	389	182	571	0	7.0	4.6	2.4	8.5	1	102,000	571	0
19/5/97	KAE761R	1	20	Kampala rd. Tasaka rd.	Viwanda	6	17,100	12,000	0	29,100	415	78	337	26	0	0	0	104	441	545	104	41.5	7.8	33.7	27.7	1	29,100	545	104
19/5/97	KEA441W	1	74	Red Sol drive Gaungo drive	Kilimani	5	7,310	63,000	440	70,750	361	221	140	182	11	29	40	435	169	604	21	4.9	3.0	1.9	20.8	1	70,750	604	21
19/5/97	KEA593R	1	13	Muhanga Thika rd.	Roysamba Kasarani	4	14,000	16,000	1,000	31,000	112	47	65	62	62	0	62	171	133	304	22	8.6	3.6	5.0	15.5				
19/5/97	KEA593R	2	2	Duka rd.	Kasarani	4	0	32,000	1,000	33,000	60	4	56	125	25	0	25	219	86	305	95	30.0	2.0	28.0	15.4	2	64,000	609	117
19/5/97	KQY636	1	1	Langata rd. Mbagathi rd.	Magumoini	6	0	0	0	0	260	0	260	185	70	0	70	255	260	515	0	260.0	0.0	260.0	0.0	1	0	515	0
19/5/97	KST976	1	8	Norfolk hotel Tubman rd.	Starehe	4	0	0	0	0	200	100	100	86	0	35	35	201	100	301	0	25.0	12.5	12.5	0.0				
19/5/97	KST976	2	7	Shell BP Evangelical J	Starehe	4	0	0	0	0	215	21	194	114	30	0	30	165	194	359	0	30.7	3.0	27.7	0.0	2	0	660	0
19/5/97	KXH820	1	5	Enterprise rd. Bunyala rd.	Kenyatta Golf Course	5	0	0	0	0	391	57	334	149	8	127	135	214	461	675	0	78.2	11.4	66.8	0.0	1	0	675	0
19/5/97	KZV006	1	14	BP Court Hill Park		4	18,000	30,000	0	48,000	311	126	185	56	18	46	64	220	231	451	20	22.2	9.0	13.2	32.1				
19/5/97	KZV006	2	4	Ngara Est. Dunya Rev.		4	16,000	9,000	0	25,000	94	59	35	71	0	0	0	130	35	165	0	23.5	14.8	8.8	7.6	2	25,000	616	20
19/5 average			**17.8**			**4.6**	**20,233**	**26,206**	**1,073**	**47,154**	**232**	**80**	**151**	**108**	**11**	**57**	**56**	**220**	**197**	**417**	**27**	**42**	**6**	**36**	**19.0**	**1.4**	**54,588**	**562**	**39**
20/5/97	KAD794Y	1	57	Kiambere rd. crescent rest.	Kilimani	5	20,960	47,800	1,000	69,760	249	125	124	173	20	55	75	348	179	527	30	4.4	2.2	2.2	16.6	1	69,760	527	30
20/5/97	KAE341U	1	90	Kampala rd. Tasaka rd.	Kilimani	5	41,079	18,000	0	59,079	378	250	128	139	0	0	0	399	128	527	10	4.2	2.8	1.4	7.8	1	59,079	527	10
20/5/97	KAE441W	1	93	Kiwaka rd. Gaitana rd.	Kilimani	6	11,230	31,000	800	43,030	375	167	208	95	20	32	52	301	240	541	19	4.0	1.8	2.2	19.6	1	43,030	541	19
20/5/97	KAE593R	1	16	Enterprise Kitui	Viwanda	5	31,000	58,000	1,000	90,000	296	126	170	128	30	0	30	304	180	484	30	18.5	7.9	10.6	27.2	1	90,000	484	30
20/5/97	KAE683R	1	8	Kenyatta Av. Mos Ave.	Kilimani Starehe	4	50,000	20,000	0	70,000	465	142	323	106	17	40	57	265	363	628	0	58.1	17.8	40.4	11.3	1	70,000	628	0
20/5/97	KAE761R	3	2	Kitui rd. Nairobi hse		5	8,000	23,000	2,000	33,000	194	53	141	104	95	0	95	252	185	437	44	97.0	26.5	70.5	13.3	1	33,000	437	44
20/5/97	KQY636	1	2	Bera health C. Lakeru rd.	Viwanda	6	0	0	0	0	267	23	244	196	81	0	81	300	244	544	0	133.5	11.5	122.0	0.0	1	0	544	0
20/5/97	KST976	1	17	Kimathi rd. Tuskys ltd.	Starehe	4	0	0	0	0	292	104	188	110	25	0	25	239	188	427	0	17.2	6.1	11.1	0.0	1	0	427	0
20/5/97	KXH820	1	12	Enterprise rd Jocco rd	Viwanda	5	0	0	0	0	360	134	226	141	14	72	86	289	313	602	20	30.0	11.2	18.8	0.0	1	0	602	20
20/5/97	KZV006	1	14	Mombo Rest. Latyale house		4	70,000	11,000	3,000	84,000	334	198	136	98	73	0	73	437	156	593	88	23.9	14.1	9.7	6.7	1	0	593	88
20/5 average			**31.1**			**4.9**	**33,181**	**29,829**	**1,560**	**64,124**	**321**	**132**	**189**	**129**	**38**	**50**	**64**	**313**	**218**	**531**	**24**	**39.1**	**10.2**	**28.9**	**14.6**	**1.0**	**60,812**	**531**	**24**
21/5/97	KAD794Y	1	75	Langata rd. Kotonos rd.	Ngara	5	85,320	35,000	0	120,320	370	243	127	55	0	0	0	344	127	471	46	4.9	3.2	1.7	38.2	1	0	471	46
21/5/97	KAE341U	1	0	Kampala		5	0	0	13,000	13,000	0	0	0	25	62	0	62	102	0	102	0				0.0				

Bins(3/4)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(Km) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Moving	Loading	Transportation	Inside the Dump Site Moving	Loading	total	Total Moving	Loading	Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed(km/hr)	Daily Average Trips	Distance (m)	Time (min)	Idling (min)
21/5/97	KAE341U	2	8	Kitui rd. Fanzi rd.	Viwanda	5	6,000	39,000	0	45,000	318	41	277	122	33	0	33	196	277	473	0	39.8	5.1	34.6	19.2	2	58,000	575	0
21/5/97	KAE386R	1	21	Lenana rd Mnono Rest.	Kilimani Parkland	4	35,000	29,000	0	64,000	289	157	132	149	65	62	127	371	194	565	0	13.8	7.5	6.3	11.7	1	64,000	565	0
21/5/97	KAE441W	1	31	Enterprise rd. Lusaka rd	Ngara Parkland	5	6,950	3,500	100	10,550	294	121	173	28	11	32	43	167	212	379	7	9.5	3.9	5.6	7.5				
21/5/97	KAE441W	2	8	Ngong rd Lena estate	Njiru	5	2,150	8,800	0	10,950	73	52	21	37	0	0	0	89	21	110	0	9.1	6.5	2.6	14.3	2	21,500	489	7
21/5/97	KAE593R	1	65	Dunga rd Ngong rd	Parkland Mugumoini	4	94,600	28,400	1,000	124,000	444	225	219	70	30	0	30	330	219	549	5	6.8	3.5	3.4	24.3	1	124,000	549	5
21/5/97	KAE761R	1	11	Lusaka rd Machakos rd	Viwanda	5	36,000	3,000	0	39,000	445	108	337	5	0	0	0	113	337	450	0	40.5	9.8	30.6	36.0	1	39,000	450	0
21/5/97	KQY636	1	4	Muguru rd T&B. (k) ltd		0	0	0	0	0	256	109	147	139	55	0	55	303	147	450	0	64.0	27.3	36.8	0.0	1	0	450	0
21/5/97	KST976	1	11	Macdonnas Lukas Ltd		4	0	0	0	0	190	72	118	43	40	0	40	155	118	273	0	17.3	6.5	10.7	0.0				
21/5/97	KST976	2	1	Kijabe str. Muranga rd.		4	0	0	0	0	0	0	0	203	11	0	11	214	0	214	0	0.0	0.0	0.0	0.0	2	0	487	0
21/5/97	KXF820	1	31	Mombasa rd. Simba Colt	Mugumoini	5	0	0	0	0	383	259	124	2	0	0	0	291	154	445	30	12.4	8.4	4.0	0.0	1	0	445	30
21/5/97	KZV006	1	20	Hill par coun Parrview h.	Kenyatta Golf Course	4	36,000	11,000	5,000	52,000	460	215	245	105	5	0	5	355	275	630	30	23.0	10.8	12.3	6.3	1	52,000	630	30
21/5 average			22.0			4.2	33,558	19,713	4,775	53,202	320	134	175	89	38	47	45	247	189	393	9	21.9	7.7	13.5	19.7	1.3	59,750	511	12
22/5/97	KAD794	1	0	Enterprise rd. Kamukunji field		5	0	16,000	1,300	17,300	0	0	0	55	30	30	60	100	30	130	15				17.5				
22/5/97	KAD794	2	78	Pepo rd Kibagare way	Parkland	5	64,750	42,950	1,000	108,700	286	155	131	109	15	40	55	279	171	450	0	3.7	2.0	1.7	23.6	2	126,000	580	15
22/5/97	KAE341U	1	12	Dunga rd Lusaka rd	Viwanda	5	13,000	21,000	0	34,000	427	70	357	88	55	0	55	213	357	570	0	35.6	5.8	29.8	14.3	1	34,000	570	0
22/5/97	KAE386R	1	16	Central bank Fava plaza		4	34,000	59,500	0	93,500	273	129	144	108	5	66	71	242	210	452	0	17.1	8.1	9.0	33.1				
22/5/97	KAE386R	2	14	LabChem rd. Creative Inn.		4	27,000	8,000	0	35,000	121	45	76	86	4	77	81	135	153	288	0	8.6	3.2	5.4	5.6	2	128,500	740	0
22/5/97	KAE441W	1	71	Enterprise rd. Lusaka rd	Kamukunji Ngara	5	5,420	32,000	0	37,420	249	100	149	132	0	0	0	434	149	583	206	3.5	1.4	2.1	14.5	1	37,420	583	206
22/5/97	KAE593R	1	34	Luthuli Kimathi Lane	Parkland	5	66,000	35,000	2,000	103,000	305	226	79	90	39	0	39	395	119	514	40	9.0	6.6	2.3	23.3	1	103,000	514	40
22/5/97	KAE761R	1	0	Kampala rd Enterprise rd.		6	0	10,000	5,000	15,000	0	0	0	60	63	0	63	138	0	138	15				10.0				
22/5/97	KAE761R	2	10	Enterprise rd. Kitui rd	Viwanda Embakasi	6	24,000	31,000	2,000	57,000	294	81	213	114	12	39	51	207	252	459	0	29.4	8.1	21.3	16.3	2	72,000	597	15
22/5/97	KQY636	1	9	Wilson Air/P. Gaitem	Mugumoini	6	3,801	0	0	3,801	287	51	236	243	60	0	60	394	236	630	0	31.9	3.7	26.2	0.0	1	3,801	630	0
22/5/97	KST976	1	12	NK Queen's way	Starehe	4	0	0	0	0	360	105	255	142	30	0	30	277	255	532	0	30.0	8.8	21.3	0.0	1	0	532	0
22/5/97	KXF820	1	0	Enterprise rd Ring rd		5	0	0	0	0	0	0	0	47	9	97	106	56	97	153	0				0.0	1	0	153	0
22/5/97	KXF820	2	0	Outer Ring Thika rd.		5					0	0	0	342	0	0	0	342	0	382	0				0.0				
22/5/97	KZV006	1	14	Mnono Rest. Langata house		4	29,000	8,000	1,000	38,000	345	204	141	65	76	0	76	339	171	510	30	24.6	14.6	10.1	7.4	1	38,000	510	30

Bins(4/4)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Trans-portation	Inside the Dump Site	Total	Time (minutes) Collection Total	Moving	Loading	Trans-portation	Inside the Dump Site Moving	Loading	total	Total Moving	Loading	Total	Idling	Average Collection Time (min./collection point) Total	Moving	Loading	Average Transportation Speed(km/hr.)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
22/5 average			20.8			5.3	29,663	26,345	2,050	49,338	295	117	178	147	13	58	62	276	169	445	24	19.3	6.4	12.9	82.8	1.3	67,840	540.9	30.6
23/5/97	KAD794Y	1	0	Enterprise rd, Jossco rd		5	0	32,000	1,000	33,000	0	0	0	75	25	55	80	100	55	155	0				25.6	1	33,000	155	0
23/5/97	KAE341U	1	7	Enterprise rd, Dalar rd.	Viwanda	5	6,000	77,000	0	33,000	367	25	342	80	58	0	58	163	342	505	0	52.4	3.6	48.9	20.3	1	33,000	505	0
23/5/97	KAE386R	1	36	Gitanga rd Ohaya rd	Kilimani	4	29,000	49,000	0	78,000	363	192	171	184	2	45	47	378	216	594	0	10.1	5.3	4.8	16.0	1	78,000	594	0
23/5/97	KAF441W	1	0	Enterprise rd, Lusaka rd	Kilimani	5	0	18,000	600	18,600	0	0	0	49	15	43	58	64	43	107	0				22.0				
23/5/97	KAB441W	2	24	Thika rd, Murang'a rd		5	2,900	54,000	440	57,340	79	38	41	103	14	32	46	415	73	488	260	3.3	1.6	1.7	31.5	2	75,940	595	260
23/5/97	KAE593R	1	24	A/Kedhek Jabavu rd.	Kilimani	5	4,700	9,000	0	13,700	122	58	64	72	0	0	0	341	64	405	211	5.1	2.4	2.7	7.5	1	13,700	405	211
23/5/97	KAE761R	1	18	Enterprise rd. Lusaka rd	Viwanda Muguongoini	6	32,000	24,000	1,000	57,000	209	134	75	107	48	0	48	309	135	444	40	11.6	7.4	4.2	13.5	1	57,000	444	40
23/5/97	KQY636	1	8	Nbi N/Park H/High Com.	Nairobi National Park	6	0	0	0	0	277	66	211	203	58	0	58	327	211	538	0	34.6	8.3	26.4	0.0	1	0	538	0
23/5/97	KST976	1	8	Lukes ltd. Ruiruni Hse.	Starehe	4	0	0	0	0	128	45	83	97	25	0	25	167	83	250	0	16.0	5.6	10.4	0.0				
23/5/97	KST976	2	4	Ortal's rest. Norfolk T.	Starehe	4	0	0	0	0	94	43	51	144	14	0	14	201	51	252	0	23.5	10.8	12.8	0.0	2	0	502	0
23/5/97	KXH820	1	39	Kampala rd Enterprise rd	Parkland	5	0	0	0	0	467	287	180	118	0	0	0	405	180	585	0	12.0	7.4	4.6	0.0	1	0	585	0
23/5/97	KZV006	1	11	Omars H.P.court		4	20,000	6,000	1,000	27,000	385	172	213	58	17	0	17	247	233	480	20	35.0	15.6	19.4	6.2	1	27,000	480	20
23/5 average			14.9			4.8	15,767	27,375	808	39,705	249	106	143	135	14	44	45	260	141	400	44	20.4	6.8	13.6	17.8	1.2	45,377	480	53
24/5/97	KAE636H	1	43	Wajir rd. Bushera str.	Viwanda	3	33,940	14,600	17,200	65,740	233	99	134	71	5	19	24	175	153	328	0	5.4	2.3	3.1	12.3	1	65,740	328	0
24/5/97	KAE953R	1	3	Upper Hill rd. Fordha hse.	Makarada	5	28,200	42,000	400	70,600	286	97	189	139	47	0	47	283	189	472	0	95.3	32.3	63.0	18.1	1	70,600	472	0
24/5/97	KQY636	1	4	Peroto Carousel Ltd.	Viwanda	6	0	0	0	0	245	43	202	192	52	0	52	287	202	489	0	61.3	10.8	50.5	0.0	1	0	489	0
24/5 average			16.7			4.7	31,070	28,300	8,800	68,170	255	80	175	134	5	19	41	248	181	430	0	54.0	15.1	38.9	15.2	1.0	68,170	430	0
Average			18.9			4.6	25,578	26,758	2,022	50,305	260	102	158	108	15	50	53	241	142	350	22	38.0	9.1	29.3	17.7	1.3	58,481	504	25

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City Bins(1/2)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Moving Distance(m) Transportation	Moving Distance(m) Inside the Dump Site	Moving Distance(m) Total	Time (minutes) Collection Total	Time (minutes) Collection Moving	Time (minutes) Collection Loading	Time (minutes) Transportation	Time (minutes) Inside the Dump Site Moving	Time (minutes) Inside the Dump Site Loading	Time (minutes) Inside the Dump Site total	Time (minutes) Total Moving	Time (minutes) Total Loading	Time (minutes) Total Total	Time (minutes) Idling	Average Collection Time (min./collection point) Total	Average Collection Time (min./collection point) Moving	Average Collection Time (min./collection point) Loading	Average Transportation Speed(km/hr.)	Daily Average Trips	Daily Average Distance (m)	Daily Average Time (min.)	Daily Average Idling (min.)
17/5/97	KAE 636 H	1	0			4	0	14,300	14	14,314	0	0	0	27	7	34	41	34	34	68	0				31.8				
17/5/97	KAE 636 H	2	91	westlands Sports rd.	Kilimani	4	29,220	41,900	10	71,130	331	142	189	66	5	34	39	235	223	458	22	3.6	1.6	2.1	38.1	2	85,444	526	22
17/5/97	KAD 554 J	1	0			3	0	16,100	400	16,500	0	0	0	45	8	21	29	53	21	74	0				21.5				
17/5/97	KAD 554 J	2	81	South B Ras. Mombasa rd.	Mugumoini	3	26,600	29,300	900	56,800	295	150	145	108	8	30	38	276	175	451	10	3.6	1.9	1.8	16.3	2	73,300	525	10
17/5/97 average			43			4	27,910	25,400	331	39,686	313	146	167	62	7	30	37	150	113	263	8	3.6	1.7	1.9	27	2	79,372	526	16
19/5/97	KAE 636 H	1	71	Masabe rd. Upper Hill	Kilimani	4	45,430	41,900	0	87,330	306	165	141	94	72	0	72	331	141	472	0	4.3	2.3	2.0	26.7	1	87,330	472	0
19/5/97	KAD 554 J	1	69	Nairobi west Muthaiti rd.	Kilimani	3	81,100	21,800	15,200	118,100	330	197	133	78	33	30	63	308	163	471	0	4.8	2.9	1.9	16.8	1	118,100	471	0
19/5/97 average			70			4	63,265	31,850	15,200	102,715	318	181	137	86	33	30	68	320	152	472	0	4.5	2.6	2.0	22	1	102,715	472	0
20/5/97	KAE 636 H	1	91	Karuokor Panjani	Mathare	3	36,070	14,500	0	50,570	423	209	214	58	0	0	0	267	214	481	0	4.6	2.3	2.4	15.0	1	50,570	481	0
20/5/97	KAD 554 J	1	89	Mount. View Peroni rd.	Park Land	3	88,000	47,500	1,100	136,600	312	188	124	121	14	26	40	401	150	551	78	3.5	2.1	1.4	23.6	1	136,600	551	78
20/5/97	KAH 850S	1	0			3	0	15,700	0	15,700	0	0	0	43	27	0	22	65	0	65	0				21.9				
20/5/97	KAH 850S	2	94	Westlands H. Lonsana rd.	Kilimani	3	28,100	34,000	0	62,100	379	147	232	27	0	0	0	174	232	406	0	4.0	1.6	2.5	75.6	2	77,800	471	0
20/5/97 average			69			3	50,723	27,925	1,100	66,243	371	181	190	62	14	26	31	227	199	376	20	4.1	2.0	2.1	34	1.3	88,323	501	26
21/5/97	KAE 636 H	1	60	Kasuna Rd Nairobi West	Mugumoini	2	9,210	51,000	0	60,210	134	53	81	117	57	5	62	227	86	313	0	2.2	0.9	1.4	26.2	1	60,210	313	0
21/5/97	KAD 554 J	1	65	Mchumbi rd. Golden Gates	Mugumoini	3	12,300	33,600	500	46,400	183	72	111	70	37	0	32	304	111	415	130	2.8	1.1	1.7	28.8	1	46,400	415	130
21/5/97	KAH 850S	1	5	Kunange st. Biashara st.	Starehe	3	8,000	5,100	800	13,900	52	28	24	47	30	10	40	105	34	139	0	10.4	5.6	4.8	6.5				
21/5/97	KAH 850S	2	5	Muguuni rd. Enterprise rd.		3	17,400	11,200	16,000	44,600	195	55	140	86	12	32	44	153	172	325	0	39.0	11.0	28.0	7.8	2	58,500	464	0
21/5/97 average			34			3	11,728	25,225	4,325	41,278	143	52	89	80	33	16	45	197	101	298	33	13.6	4.6	9.0	37	1.3	55,037	397	43
22/5/97	KAE 636 H	1	72	Masaba rd. Ngong Rd	Kilimani	4	42,140	16,000	22,300	80,440	249	122	127	101	4	17	21	287	144	431	0	3.5	1.7	1.8	6.0	1	80,440	431	0
22/5/97	KAD 554 J	1	72	Dum Hatate Langata rd.	Kilimani	3	76,300	36,300	900	113,500	291	192	99	106	8	19	27	306	118	424	0	4.0	2.7	1.4	20.5	1	113,500	424	0
22/5/97	KAH 850S	1	53	A/ Khadek Kirlingham	Kilimani	3	26,600	17,100	16,000	59,700	241	119	122	64	12	19	31	195	141	336	0	4.5	2.2	2.3	16.0	1	59,700	336	0
22/5/97 average			66			3	48,347	23,133	13,067	84,547	260	144	116	110	8	18	26	263	134	397	0	4.0	2.2	1.8	14	1	84,547	397	0
23/5/97	KAE 636 H	1	114	Karuokor Park rd.	Park Land	4	37,210	31,400	2,000	70,610	407	221	186	58	21	0	21	300	186	486	0	3.6	1.9	1.6	32.5	1	70,610	465	0
23/5/97	KAD 554 J	1	42	Waiyaki way Westlands	Park Land	3	49,500	34,400	0	83,900	416	154	262	73	0	0	0	292	262	554	65	9.9	3.7	6.2	28.3	1	83,900	554	65
23/5/97	KAH 850S	1	83	Ring rd. Lanana rd.	Kilimani	3	36,100	16,200	16,000	68,300	331	154	177	91	12	24	36	257	201	458	0	4.0	1.9	2.1	10.7	1	68,300	458	0
23/5/97 average			80			3	40,937	27,333	9,000	74,270	385	176	208	74	17	12	29	283	216	499	22	5.8	2.5	3.3	24	1	74,270	492	22
24/5/97	KAD 554 J	1	0			3	0	14,500	1,300	15,800	0	0	0	31	12	26	38	43	26	69	0				28.1				
24/5/97	KAD 554 J	2	56	Ridge ways Runda	Park Land	3	57,700	26,300	1,900	85,900	220	142	78	111	10	9	19	263	87	350	0	3.9	2.5	1.4	14.2	2	101,700	419	0

City Bins(2/2)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m)				Time (minutes)											Average Collection Time (min/collection point)			Average Transportation Speed(km/hr.)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total			Idling					Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total		Total	Moving	Loading					
24/5/97	KAH 850S	1	54	Golden Gate Sub re	Mugumoini	3	17,900	25,000	1,600	44,500	219	111	108	77	12	15	27	200	123	323	0	4.1	2.1	2.0	19.5	1	44,500	323	0
24/5/97 average			37			3	37,800	21,933	3,600	48,733	220	127	93	73	11	17	28	369	79	247	0	4.0	2.3	1.7	21	2	73,100	371	0
Average			55.1			3.2	38,152	25,874	5,385	61,605	280	138	142	76	16	21	37	221	138	353	13	6.3	2.7	3.6	23.1	1.3	78,717	450	17

DRDS(1/2)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Moving	Loading	Transportation	Inside the Dump Site Moving	Loading	Total	Total Moving	Loading	Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed (km/hr)	Daily Average Trips	Distance (m)	Time (min)	Idling (min)
16/5/97	KAG975	1	61	Jerusalem	Kirimani	3	17,150	32,000	0	49,150	301	165	136	168	50	0	50	383	136	519	0	4.9	2.7	2.2	11.4	1	49,150	519	0
16/5/97	KUL 647	1	42	Lenana Rd Woodland	Kirimani Kibera	3	16,960	27,500	12,000	56,460	187	95	92	213	55	0	55	363	92	455	0	4.5	2.3	2.2	7.7	1	56,460	455	0
16/5/97	KUL 647	1	5	King Kodhek Syona	Kirimani Kenyatta	3	14,050	28,500	0	42,550	119	31	88	184	12	60	72	227	148	375	0	23.8	6.2	17.6	9.3	1	42,550	375	0
16/5/97	KXX829	1	1	Industrial Area	Viwanda	4	0	13,015	0	13,015	65	0	65	135	20	0	20	325	65	390	170	65.0	0.0	65.0	5.8	1	13,015	390	170
16/5 average			**27.3**			**3.3**	**12,040**	**25,254**	**12,000**	**40,294**	**168**	**73**	**95**	**175**	**12**	**60**	**49**	**325**	**130**	**435**	**43**	**24.5**	**2.8**	**21.8**	**8.6**	**1.0**	**40294**	**435**	**43**
17/5/97	KAG975	1	9	Argwings Jerusalem	Kilimani Embakasi	3	32,000	21,500	0	53,500	361	172	189	81	70	0	70	323	226	512	0	40.1	19.1	21.0	15.9	1	53,500	512	0
17/5/97	KUZ647	1	4	Lenana to Komarock	Kilimani	2	8,070	32,600	2,000	42,670	68	26	42	102	16	17	33	271	59	330	124	17.0	6.5	10.5	18.6	1	42,670	330	124
17/5 average			**6.5**			**3.5**	**20,035**	**27,050**	**2,000**	**48,085**	**215**	**99**	**116**	**93**	**16**	**17**	**52**	**297**	**143**	**421**	**62**	**28.6**	**12.8**	**15.8**	**17.3**	**1.0**	**48085**	**421**	**62**
19/5/97	KAG975	1	37	Wayako Lenana	Parklands Kilimani	4	69,100	35,500	0	104,600	380	194	186	119	70	0	70	383	186	569	0	10.3	5.2	5.0	17.9	1	104,600	569	0
19/5/97	KUL647	1	5	Denis Mongo	Kilimani	3	22,500	38,000	0	60,500	51	31	20	100	65	0	65	257	20	277	61	10.2	6.2	4.0	22.8	1	60,500	277	61
19/5/97	KUS997	1	8	Woodlands Ontering	Kilimani Kenyatta	4	9,897	25,200	2,000	37,097	410	131	279	131	15	38	53	282	317	599	5	51.3	16.4	34.9	11.5	1	37,097	599	5
19/5 average			**16.7**			**3.7**	**33,832**	**32,900**	**2,000**	**67,399**	**280**	**119**	**162**	**117**	**15**	**38**	**63**	**307**	**174**	**482**	**22**	**23.9**	**9.3**	**14.6**	**17.4**	**1.0**	**67399**	**482**	**22**
20/5/97	KAG975	1	55	Lenana Rd Kabaoran	Kilimani Kangemi	3	41,100	27,800	0	68,900	426	230	196	94	80	0	80	404	196	600	0	7.7	4.2	3.6	17.7	1	68,900	600	0
20/5/97	KUL647	1	4	Lenana Woodlands	Kilimani	4	11,500	23,000	0	34,500	165	45	120	145	80	65	145	285	185	470	15	41.3	11.3	30.0	9.5				
20/5/97	KUL647	2	1	Ontering Lenana Rd		4	0	52,000	0	52,000	37	0	37	146	13	9	22	159	46	205	0	37.0	0.0	37.0	21.4	2	84,500	660	15
20/5/97	KUZ647	1	59	Woodlands Drive	Kilimani Starehe	5	48,233	21,000	2,000	71,233	345	140	205	84	46	59	105	238	264	502	0	5.8	2.4	3.5	15.0	1	71,233	502	0
20/5 average			**29.8**			**4.0**	**25,208**	**30,950**	**2,000**	**56,658**	**243**	**104**	**140**	**117**	**46**	**44**	**88**	**272**	**173**	**444**	**4**	**23.0**	**4.5**	**18.5**	**15.9**	**1.3**	**74878**	**587**	**5**
21/5/97	KUZ647	1	25	State House Komarock	Kilimani Kenyatta	5	46,450	20,500	1,000	67,950	405	171	234	50	84	37	121	305	271	576	0	16.2	6.8	9.4	24.6	1	67,950	576	0
21/5/97	KXX829	1	9	Lenana Komarock	Kilimani Viwanda	3	35,100	20,200	0	55,300	251	108	143	257	36	0	36	401	143	544	0	27.9	12.0	15.9	4.7	1	55,300	544	0
21/5 average			**17.0**			**4.0**	**40,775**	**20,350**	**1,000**	**61,625**	**328**	**140**	**189**	**154**	**84**	**37**	**79**	**353**	**207**	**560**	**0**	**22.0**	**9.4**	**12.6**	**14.7**	**1.0**	**61625**	**560**	**0**
22/5/97	KAG975	1	55	Lenana Rd Ontering	Kilimani Parklands	3	51,500	33,500	0	85,000	288	149	139	38	60	0	60	247	139	386	0	5.2	2.7	2.5	52.9	1	85,000	386	0
22/5/97	KUZ647	1	46	Wambugu Lenana Rd	Kilimani Parklands	4	26,100	29,000	1,600	56,700	267	94	173	165	11	34	45	274	207	481	4	5.8	2.0	3.8	10.5	1	56,700	481	4
22/5/97	KXX829	1	15	Lenana Rd North Rd	Kilimani Parklands	5	43,000	51,000	0	94,000	267	130	137	159	6	23	29	465	160	625	170	17.8	8.7	9.1	19.2	1	94,000	625	170
22/5 average			**38.7**			**4.0**	**40,200**	**37,833**	**1,600**	**78,567**	**274**	**124**	**150**	**121**	**9**	**29**	**45**	**329**	**169**	**497**	**58**	**9.6**	**4.5**	**5.1**	**27.6**	**1.0**	**78567**	**497**	**58**
23/5/97	KAG975	1	52	Lenana Rd Woodlands	Kilimani	3	20,220	30,500	0	50,720	219	25	96	198	43	0	41	369	96	465	105	4.2	0.5	1.8	9.2	1	50,720	465	105
23/5/97	KUS997	1	53	Denis Pitt Kilishwa	Kilimani	5	28,430	29,500	2,000	59,930	411	224	187	159	16	34	50	399	221	571	49	7.8	4.2	3.5	11.1	1	59,930	571	49
23/5/97	KXX829	1	16	Lenana Rd Komarock	Kilimani Parklands	4	24,100	24,400	100	48,600	251	105	146	71	9	59	68	185	205	390	0	15.7	6.6	9.1	20.6				
23/5/97	KXX829	2	1	Komarock Enterprise	Viwanda	4	0	51,000	0	51,000	35	0	35	119	39	14	53	158	49	207	0	35.0	0.0	35.0	25.7	2	99,600	597	0
23/5 average			**30.5**			**4.0**	**18,188**	**33,850**	**1,050**	**52,563**	**229**	**89**	**116**	**137**	**21**	**36**	**53**	**278**	**143**	**408**	**39**	**15.7**	**2.8**	**12.4**	**16.7**	**1.3**	**70083**	**544**	**51**

DRDS(2/2)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m)				Time (minutes)											Average Collection Time (min./collection point)			Average Transportation Speed(km/hr.)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total			Idling					Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total		Total	Moving	Loading					
24/5/97	KXX829	1	1	Lenana Rd Komorock	Parklands Stretch	4	0	23,000	0	23,000	43	0	43	112	72	24	96	184	67	251	0	43.0	0.0	43.0	12.3	1	23,000	251	0
Average			24.5			3.8	24,585	30,009	2,838	55,582	233	99	130	132	32	36	63	299	152	448	31	21.6	5.5	16.1	16.3	1.1	60,780	490	33

KRH(1/1)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m)				Time (minutes)												Average Collection Time (min./collection point)			Average Transportation Speed(km/hr.)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total			Idling						Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	Total	Moving	Loading	Total		Total	Moving	Loading						
20/5/97	KIM 206	1	4	Kalyan Kaunda	Starche	2	1,170	43,750	8	44,928	47	9	38	90	33	12	45	162	50	212	30	9.4	2.3	9.5	29.2	1	44,923	212	30
21/5/97	KIM 206	1	4	Kaunda Parliament	Starche	2	1,170	44,250	8	45,428	59	11	48	102	5	7	12	118	64	182	9	11.8	2.8	12.0	26.0	1	45,428	182	9
22/5/97	KIM 206	1	3	Kalyan Kaunda	Starche	2	1,150	43,750	10	44,910	34	5	29	75	19	4	23	154	33	187	55	6.8	1.7	9.7	35.0	1	44,910	187	55
Average			3.7			2.0	1,163	43,917	9	45,089	47	8	38	89	19	8	27	145	49	194	31	9.3	2.2	10.4	30.1	1.0	45,087	194	31

Tacentac(1/1)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(km) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Moving	Loading	Transportation	Inside the Dump Site Moving	Loading	Total	Total Moving	Loading	Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed(km/hr)	Daily Average Trips	Distance (km)	Time (min)	Idling time
16/5/97	1	1	15	Mshoro Mombasa	Vinjatuli	5	0	0	0	0	65	30	35	68	6	37	43	104	78	182	6	13.0	2.0	2.3	0.0				
16/5/97	1	2	12	Belle Vue Mutanawa		5	0	0	0	0	88	33	55	102	36	0	36	171	72	243	17	17.6	2.8	4.6	0.0	2	0.0	425	23
16/5 average			13.5			5.0	0	0	0	0	77	32	45	85	21	19	40	138	75	213	12	15.3	2.4	3.5	0	2	0	425	23
17/5/97	1	1	44	Narok west Mugumoru Far	Mugumoru	5	0	0	0	0	258	144	114	56	48	0	48	311	167	478	106	51.6	3.3	2.6	0.0	1	0.0	478	106
20/5/97	1	1	13	Mombasa Mugumoru Ph	Mugumoru	4	0	0	0	0	94	24	70	23	0	0	0	44	70	117	4	18.8	1.8	5.4	0.0	1	0.0	117	4
21/5/97	1	1	0	Mombasa Muguraiwa	Mugumoru	4	0	0	0	0	0	0	0	32	46	0	46	78	0	78	0	0.0	0.0	0.0	0.0	1	0.0	78	0
21/5/97	1	1	32	Ngobit Rd Mugumoru Far	Mugumoru	5	0	0	0	0	189	8	181	111	55	64	119	209	281	490	71	37.8	0.3	5.7	0.0	1	0.0	490	71
21/5 average			16.0			4.5	0	0	0	0	189	8	181	72	0	32	83	209	281	284	36	37.8	0.3	5.7	0	1	0	284	35.5
23/5/97	1	1	15	Mbogoro Mugoya	Mugumoru	4	0	0	0	0	94	22	72	69	45	0	45	136	72	208	0	18.8	1.5	4.8	0.0				
23/5/97	1	2	12	South End Nanda Hame		4	0	0	0	0	120	26	94	56	34	0	34	167	94	261	51	24.0	2.2	7.8	0.0	2	0.0	469	51
23/5 average			13.5			4.0	0	0	0	0	107	24	83	63	40	0	40	152	83	235	26	21.4	1.8	6.3	0	2	0	469	51
Average			17.9			4.5	0	0	0	0	130	41	89	65.9	6	37	53	163	119	257.1	31.9	25.9	2.0	4.7	0.0	1.3	0	343	43

Envirovclean(1/1)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m)				Time (minutes)											Average Collection Time (min./collection point)			Average Transportation Speed(km/hr.)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total			Idling					Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total		Total	Moving	Loading					
16/5/97	KJY 545	1	2	South B Komarock	Viwanda	4	8900	35100	900	44900	97	23	74	98	17	0	17	138	74	212	0	19.4	11.5	37.0	21.5	1	44,900	212	0
17/5/97	KJY 545	1	23	BuruBuru Rabai	Makadara	6	18300	5900	400	400	122	81	41	23	20	0	20	124	41	165	0	24.4	3.5	1.8	15.4				
17/5/97	KJY 545	2	21	BuruBuru Murinas Rd	Makadara	6	17900	18900	500	37300	243	84	159	76	16	0	16	176	159	335	0	48.6	4.0	7.6	14.9	2	37,700	500	0
17/5 average			**22.0**			**6.0**	**18,100**	**12,400**	**450**	**18,850**	**183**	**83**	**100**	**50**			**18**	**150**	**100**	**250**	**0**	**36.5**	**3.8**	**4.7**	**15.2**	**2**	**37,700**	**500**	**0**
19/5/97	KJY 545	1	1	Kenyatta Komarock	Kilimani	4	0	28900	700	29600	57	0	57	181	0	0	0	198	57	255	0	11.4	0.0	57.0	9.6	2	29,600	255	0
21/5/97	KJY 545	1	1	GmenaOut DhikaOut	Kenyatta Golf Course	4	0	33100	900	34000	64	0	64	116	15	0	15	131	64	195	0	12.8	0.0	64.0	17.1	1	34,000	195	0
23/5/97	KJY 545	1	4	D1 Dome Town Center		6	16400	10300	0	26700	169	70	99	33	0	0	0	103	99	202	0	33.8	17.5	24.8	18.7	1	26,700	202	0
Average			8.7			5.0	10,250	22,033	680	28,817	125	43	82	88	0	0	17	145	82	227	0	25.1	6.1	32.0	16.2	1.4	34,580	273	0

5.2.2 Summary Records of the Time and Motion Study (Second Survey)

NCC(1/9)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Collection Moving	Collection Loading	Transportation	Inside the Dump Site Moving	Inside the Dump Site Loading	Inside the Dump Site Total	Total Moving	Total Loading	Total Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed (km/hr)	Daily Average Trips	Distance (m)	Time (min)	Idling (min)
12/11/97	KAB388Q	1	3	Jogoo Rd	Eastleigh/Street	8	6,500	5,000	0	11,500	333	175	158	77	0	0	0	302	158	460	50	111.0	58.3	52.7	3.9	1	11,500	460	50
12/11/97	KAB389Q	1	1	Likoni Rd	Viwanda	6	0	15,000	2,000	17,000	44	0	44	51	9	1	10	60	45	105	0	44.0	0.0	44.0	17.6				
12/11/97	KAB389Q	2	1	Mutarakwa Rd/Outering Rd	Dandora	6	0	18,000	2,000	20,000	46	0	46	43	8	1	9	52	47	99	0	46.0	0.0	46.0	24.5	2	37,000	204	0
12/11/97	KAB034	1	6	Forest Rd/Limuru Rd	Parklands/Eastleigh	9	6,000	7,000	0	13,000	118	66	52	16	0	0	0	82	52	134	0	19.7	11.0	8.7	26.3	1	13,000	134	0
12/11/97	KAH006Y	1	7	Ngong Rd	Kibera Woodly/Kilimani	8	10,000	79,000	1,000	90,000	223	107	116	130	0	2	2	237	118	355	0	31.9	15.3	16.6	36.5	1	90,000	355	0
12/11/97	KAH013Y	1	6	Argwings Khodeck Rd	Kilimani/Kibera woodly	8	11,900	30,400	800	43,100	133	40	93	63	8	2	10	150	95	245	39	22.2	6.7	15.5	29.0				
12/11/97	KAH013Y	2	4	Lusaka Rd/Nyerere Rd	Kenyatte Golf Course/Kilimani	8	4,000	18,400	0	22,400	35	15	20	35	0	0	0	50	20	70	0	8.8	3.8	5.0	31.5	2	65,500	315	39
12/11/97	KUL313	1	1	Outering Rd	Dandora	4	0	13,000	100	13,100	5	0	5	39	4	4	8	43	9	52	0	5.0	0.0	5.0	20.0				
12/11/97	KUL313	2	1	Gigiri Rd/Muthaiga	Parklands	4	0	20,000	200	20,200	17	0	17	63	8	4	12	71	21	92	0	17.0	0.0	17.0	19.0				
12/11/97	KUL313	3	1	Outering Rd	Embakasi	4	0	20,000	300	20,300	35	0	35	104	11	6	17	154	41	195	39	35.0	0.0	35.0	11.5				
12/11/97	KUL313	4	1	Enterprise Rd	Parklands/Viwanda	4	0	21,000	0	21,000	1	0	1	49	0	0	0	49	1	50	0	1.0	0.0	1.0	25.7	4	74,600	389	39
12/11/97	KUL961	1	4	Jogoo Rd	Makadara/Kanu ukuju	7	2,000	9,000	0	11,000	150	20	130	30	5	0	5	55	130	185	0	37.5	5.0	32.5	18.0				
12/11/97	KUL961	2	4	Outering Rd	Makadara	7	1,500	33,500	0	35,000	85	15	70	45	5	0	5	65	70	135	0	21.3	3.8	17.5	44.7	2	46,000	320	0
12/11/97	KUL989	1	10	Chiwara Rd	Pumwani/Kilimani	7	33,000	39,800	1,200	74,000	191	108	83	106	10	9	19	224	92	316	0	19.1	10.8	8.3	22.5	1	74,000	316	0
12/11/97	KUL992	1	3	Lusaka Rd/Langata Rd	Viwanda/Makongeni	2	12,000	9,000	0	21,000	68	45	23	29	0	0	0	74	23	97	0	22.7	15.0	7.7	18.6	1	21,000	97	0
12/11/97	KUL993	1	2	Limuru Rd/Langata	Kenyatte Golf Course	8	6,000	21,000	1,000	28,000	104	10	94	44	9	14	23	97	108	205	34	52.0	5.0	47.0	28.6				
12/11/97	KUL993	2	1	Limuru Rd/Muthaiga	Kenyatte Golf Course	8	0	46,000	0	46,000	81	0	81	129	4	10	14	142	91	233	9	81.0	0.0	81.0	21.4	2	24,000	438	43
12/11/97	KUL994	1	3	Ngong Rd	Kilimani/Kibera woodly	8	4,000	15,000	0	19,000	108	14	94	95	0	0	0	109	111	220	17	36.0	4.7	31.3	9.5	1	19,000	220	17
12/11/97	KWE075	1	2	Langata Rd/Lusaka Rd	Viwanda/Mugumoini	8	1,000	16,800	200	18,000	135	20	115	147	13	30	43	190	145	335	0	67.5	10.0	57.5	6.9	1	18,000	335	0
12/11/97	KAB388Q	1	4	Parklands Rd/Forest Rd	Parklands	5	6,000	23,000	1,000	30,000	0	40	200	113	14	1	15	167	201	368	0	60.0	10.0	50.0	12.2	1	30,000	368	0
12/11 average		**3.3**				**6.3**	**5,195**	**22,995**	**817**	**28,680**	**96**	**34**	**74**	**70**	**9**	**7**	**14**	**118**	**79**	**197**	**9**	**37**	**8.0**	**29.0**	**21.4**	**1.5**	**44,123**	**303**	**14**
13/11/97	KAB289Q	1	16	Pumwani Rd	Pumwani/Eastleigh	6	14,570	25,000	400	39,970	406	156	250	122	3	2	5	296	252	548	15	25.4	9.8	15.6	12.3	1	39,970	548	15
13/11/97	KAB388Q	1	4	Limuru Rd/Mpaka Rd	Ngara/Mathare	7	5,000	22,000	1,000	28,000	59	17	42	71	23	0	23	111	42	153	0	14.8	4.3	10.5	18.6				
13/11/97	KAB388Q	2	1	Limuru Rd/Thika Rd	Ngara/Mathare	7	0	36,000	1,000	37,000	27	0	27	170	8	0	8	178	27	205	0	27.0	0.0	27.0	12.7	2	65,000	358	0
13/11/97	KAB389Q	1	3	Enterprise Rd/Likoni Rd	Viwanda	8	10,000	21,000	1,000	32,000	105	26	79	63	2	0	2	97	79	176	6	35.0	8.7	26.3	20.0				
13/11/97	KAB389Q	2	4	Enterprise Rd/Likoni Rd	Viwanda	8	5,000	40,000	1,000	46,000	114	24	90	129	13	1	14	166	91	257	0	28.5	6.0	22.5	18.6	2	78,000	433	6
13/11/97	KAB391Q	1	16	Ngara Rd	Ngara	5	2,020	43,040	1,000	46,060	36	13	23	88	6	0	6	177	23	200	70	2.3	0.8	1.4	29.3				
13/11/97	KAB391Q	2	40	Kimomock Rd	Njiru	5	5,000	37,400	1,600	44,000	76	53	23	155	10	1	11	231	27	258	16	1.9	1.3	0.6	14.5	2	90,060	488	86
13/11/97	KAH006Y	1	3	Ngong Rd/Ndemi Lane	Kilimani/Kibera woodly	9	3,000	37,000	2,000	42,000	84	16	68	100	7	1	8	123	69	192	8	28.0	5.3	22.7	22.2				

NCC(2/9)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min/collection point)			Average Transportation Speed (km/hr)	Daily Average			
							Collection	Transportation	Inside the Dump Site	Total	Collection			Transportation	Inside the Dump Site			Total			Idling	Total	Moving	Loading		Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	Total	Moving	Loading	Total									
13/11/97	KAH006Y	2	1	Ngong Rd/Gitanga Rd	Kawangware/Kilimani	9	0	20,000	2,000	22,000	50	0	50	48	2	1	3	50	51	101	0	50.0	0.0	50.0	25.0				
13/11/97	KAH006Y	3	1	Elegeyo Marakwet Rd	Kawangware/Kilimani	9	0	6,000	0	6,000	65	0	65	15	2	1	3	17	66	83	0	65.0	0.0	65.0	24.0				
13/11/97	KAH006Y	4	1	Elegeyo Marakwet Rd	Kilimani	9	0	24,000	1,000	25,000	36	0	36	53	4	1	5	57	37	94	0	36.0	0.0	36.0	27.2	4	95,000	470	8
13/11/97	KAH013Y	1	2	Ngong Rd/Hatile	Kenyatta Golf Course	8	9,000	47,000	1,000	57,000	81	18	63	82	2	0	2	102	83	185	20	40.5	9.0	31.5	34.4	1	57,000	185	20
13/11/97	KUL313	1	1	Mbagathi Rd	Kenyatta Golf Course	2	0	28,000	1,000	29,000	5	0	5	67	5	3	8	72	8	80	0	5.0	0.0	5.0	25.1				
13/11/97	KUL313	2	1			2	0	76,000	1,000	77,000	12	0	12	96	7	0	7	103	12	115	0	12.0	0.0	12.0	47.5				
13/11/97	KUL313	3	1		Viwanda	2	0	45,000	1,000	46,000	11	0	11	70	4	5	9	74	16	90	0	11.0	0.0	11.0	38.6				
13/11/97	KUL313	4	1		Viwanda	2	0	15,000	1,000	16,000	34	0	34	116	7	8	15	123	42	165	0	34.0	0.0	34.0	7.8	4	168,000	450	0
13/11/97	KUL961	1	9	Limuru Rd/Muthaiga	Parklands/Mathare	6	0	24,000	20,000	44,000	130	38	92	49	5	1	6	121	93	214	29	14.4	4.2	10.2	29.4				
13/11/97	KUL961	2	7	Muthaiga Rd/Limuru Rd	Parklands/Kasarani	6	30,056	33,000	2,000	65,056	117	42	75	147	5	1	6	200	76	276	6	16.7	6.0	10.7	13.5	2	109,056	490	35
13/11/97	KUL989	1	10	Juja Rd/Ngong Rd	Starehe/Pumwani	8	42,000	46,000	2,000	90,000	210	108	102	132	7	6	13	247	108	355	0	21.0	10.8	10.2	20.9	1	32	33	0
13/11/97	KUL993	1	8	Outering Rd	Makadara	7	2,000	17,000	250	19,250	83	17	66	40	9	28	37	89	94	183	23	10.4	2.1	8.3	25.5				
13/11/97	KUL993	2	8	Outering Rd/Enterprise Rd	Makadara/Viwanda	7	6,000	29,250	500	35,750	156	23	133	27	37	25	62	87	158	245	0	19.5	2.9	16.6	65.0	2	55,000	428	23
13/11/97	KUL994	1	3	Lome Rd/Pumwani	Ngara/Pumwani	1	2,000	3,000	0	5,000	60	25	35	10	0	0	0	35	35	70	0	20.0	8.3	11.7	18.0	1	5,000	70	0
13/11/97	KUL995	1	5	Enterprise Rd/Hutere Rd	Makongeni/Viwanda	9	2,000	36,000	0	38,000	171	20	151	128	7	29	36	155	180	335	0	34.2	4.0	30.2	16.9				
13/11/97	KUL995	2	1	Enterprise Rd/Lusaka Rd	Makongeni/Viwanda	9	0	27,000	0	27,000	19	0	19	130	3	18	21	133	37	170	0	19.0	0.0	19.0	12.5	2	65,000	505	0
13/11/97	KWE073	1	3	Ngong Rd/Lunga lunga Rd	Kenyatta Golf Course/Viwanda	6	16,000	46,000	1,000	63,000	111	44	67	124	15	33	48	233	100	333	0	22.2	8.8	13.4	15.9	1	63,000	333	0
13/11/97	KWE081	1	7	Komorock Rd/Thika Rd	Mathare/Kasarani	8	10,000	23,200	3,000	36,200	109	32	77	120	5	23	28	195	100	295	38	15.6	4.6	11.0	11.6	1	36,200	295	38
13/11/97	KWE082	1	4	Kayole Rd/Kanjundo Rd	Dandora/Njiru	7	3,000	22,000	2,000	27,000	125	12	113	75	4	0	4	91	113	204	0	31.3	3.0	28.3	17.6				
13/11/97	KWE082	2	8	Motarukwa Rd/Outering Rd	Dandora/Njiru	7	9,000	31,000	2,000	42,000	127	37	90	119	9	2	11	165	92	257	0	15.9	4.6	11.3	15.6	2	69,000	461	0
13/11 average			6.1			6.4	6,505	30,710	2,073	38,760	94	26	68	93	8	9	15	133	75	209	8	23.4	3.7	19.7	22.9	1.9	66,355	368	15
14/11/97	KAB289Q	1	2	Lunga Lunga Rd	Pumwani/Viwanda	7	4,000	18,000	0	22,000	78	14	64	74	32	5	37	120	69	189	0	39.0	7.0	32.0	14.6				
14/11/97	KAB289Q	2	2	Jogoo Rd	Eastleigh/Viwanda	7	500	11,000	0	11,500	140	14	126	19	0	0	0	33	126	159	0	70.0	7.0	63.0	34.7	2	33,500	348	0
14/11/97	KAB388Q	1	1	Jogoo Rd/Outering Rd	Kaloleni/Makadara	2	0	21,000	1,000	22,000	4	0	4	22	4	10	14	26	14	40	0	4.0	0.0	4.0	57.3				
14/11/97	KAB388Q	2	1	Komorock Rd/Outering Rd	Dandora/Bijiru	2	0	10,000	1,000	11,000	4	0	4	54	9	1	10	63	5	68	0	4.0	0.0	4.0	11.1				
14/11/97	KAB388Q	3	1	Komorock Rd/Outering Rd	Dandora/Bijiru	2	0	21,000	1,000	22,000	3	0	3	70	5	2	7	75	5	80	0	3.0	0.0	3.0	18.0	3	55,000	188	0
14/11/97	KAB389Q	1	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	22,000	600	22,600	5	0	5	16	13	1	14	29	6	35	0	5.0	0.0	5.0	82.5				
14/11/97	KAB389Q	2	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	15,400	400	15,800	5	0	5	29	4	1	5	33	6	39	0	5.0	0.0	5.0	31.9				
14/11/97	KAB389Q	3	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	11,600	400	12,000	4	0	4	35	6	1	7	41	5	46	0	4.0	0.0	4.0	19.9				

NCC(3/9)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Collection Moving	Collection Loading	Transportation	Inside the Dump Site Moving	Inside the Dump Site Loading	Inside the Dump Site Total	Total Moving	Total Loading	Total Total	Idling	Average Collection Time (min./collection point) Total	Moving	Loading	Average Transportation Speed (km/hr.)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
14/11/97	KAB389Q	4	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	38,100	500	38,600	60	0	60	45	7	1	8	52	61	113	0	60.0	0.0	60.0	50.8	4	89,000	233	0
14/11/97	KAH013Y	1	1	Jogoo Rd/Kangundo Rd	Kilimani/Eastleigh	2	0	16,700	2,100	18,800	3	0	3	34	11	1	12	47	4	51	2	3.0	0.0	3.0	29.5				
14/11/97	KAH013Y	2	1	Jogoo Rd/Kangundo Rd	Njiru/Kariobangi	2	0	12,700	1,400	14,100	3	0	3	38	8	1	9	46	4	50	0	3.0	0.0	3.0	20.1				
14/11/97	KAH013Y	3	1	Jogoo Rd/Kangundo Rd	Njiru/Kariobangi	2	0	13,800	1,800	15,600	3	0	3	33	7	1	8	40	4	44	0	3.0	0.0	3.0	25.1				
14/11/97	KAH013Y	4	1	Jogoo Rd/Kangundo Rd	Njiru/Kariobangi	2	0	13,200	1,800	15,000	8	0	8	33	10	1	11	56	9	65	13	8.0	0.0	8.0	24.0				
14/11/97	KAH013Y	5	1	Outering Rd/Kangundo Rd	Njiru/Kariobangi	2	0	18,400	2,100	20,500	7	0	7	63	6	1	7	81	8	89	12	7.0	0.0	7.0	17.5	5	84,000	299	27
14/11/97	KUE961	1	1	Jogoo Rd/Outering Rd	Njiru/Dandora	1	0	17,000	1,000	18,000	2	0	2	52	6	2	8	58	4	62	0	2.0	0.0	2.0	19.6				
14/11/97	KUE961	2	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	12,000	1,000	13,000	10	0	10	28	11	1	12	39	11	50	0	10.0	0.0	10.0	25.2				
14/11/97	KUE961	3	1	Komorock Rd/Outering Rd	Njiru/Dandora	2	0	12,000	1,000	13,000	2	0	2	32	8	1	9	40	3	43	0	2.0	0.0	2.0	22.5				
14/11/97	KUE961	4	1	Komorock Rd/Outering Rd	Njiru/Dandora	2	0	12,000	1,000	13,000	5	0	5	30	10	1	11	40	6	46	0	5.0	0.0	5.0	24.0				
14/11/97	KUE961	5	1	Komorock Rd/Outering Rd	Njiru/Dandora	2	0	12,000	1,000	13,000	5	0	5	29	11	1	12	40	6	46	0	5.0	0.0	5.0	24.8				
14/11/97	KUE961	6	1	Komorock Rd/Outering Rd	Njiru/Dandora	2	0	12,000	1,000	13,000	2	0	2	46	10	0	10	56	2	58	0	2.0	0.0	2.0	15.7	6	83,000	305	0
14/11/97	KUL989	1	14	Lenana Rd/Jaja Rd	Kilimani/Eastleigh	4	59,000	33,000	2,000	94,000	216	141	75	95	6	6	12	242	81	323	0	15.4	10.1	5.4	20.8	1	94,000	323	0
14/11/97	KUL992	1	4	Thika Rd/Park Rd	Ngara/Starehe	7	7,000	56,000	2,000	65,000	105	34	71	160	17	29	46	246	100	346	35	26.3	8.5	17.8	21.0	1	65,000	346	35
14/11/97	KUL993	1	18	Limuru Rd/Muindi Rd	Parklands/Roysambu	9	13,500	20,500	3,000	37,000	144	50	94	52	9	29	38	117	125	242	8	8.0	2.8	5.2	23.7				
14/11/97	KUL993	2	1		Starehe	9	0	48,000	1,000	49,000	65	0	65	108	3	16	19	143	81	224	32	65.0	0.0	65.0	26.7	2	86,000	466	40
14/11/97	KUL995	1	5	Enterprise Rd/Ngong Rd	Starehe/Viwanda	9	15,000	70,000	1,000	86,000	178	43	135	247	15	35	50	365	170	535	60	35.6	8.6	27.0	17.0	1	86,000	535	60
14/11/97	KWE031	1	13	Lenana Rd	Makadara/Kahumbu	6	8,000	15,000	1,000	24,000	128	25	103	39	8	32	40	28	135	163	0	9.8	1.9	7.9	23.1				
14/11/97	KWE031	2	10		Makadara	6	7,000	22,000	1,000	30,000	56	37	19	97	9	8	17	143	27	170	0	5.6	3.7	1.9	13.6	2	54,000	333	0
14/11/97	KWE073	1	12	Muguna Rd/Mbaazi Rd	Kilimani/Starehe	8	28,000	35,000	2,000	65,000	194	80	114	107	13	30	43	200	163	363	19	16.2	6.7	9.5	19.6	1	65,000	363	19
14/11/97	KWE082	1	2	Enterprise Rd/Mombasa	Viwanda/Kaloleni	9	4,000	19,000	200	23,200	50	30	20	100	25	10	35	155	30	185	0	25.0	15.0	10.0	11.4				
14/11/97	KWE082	2	4	Lunthus Rd/Enterprise Rd	Kamukunji/Viwanda	9	14,000	28,800	200	43,000	160	115	45	108	14	3	17	237	48	285	0	40.0	28.8	11.3	16.0	2	66,200	470	0
14/11/97		1	1	Kayole Rd/Kangundo Rd	Dandora/Embakasi	2	0	17,000	2,000	19,000	3	0	3	28	10	1	11	38	4	42	0	3.0	0.0	3.0	36.4				
14/11/97		2	1	Kayole Rd/Kangundo Rd	Dandora/Embakasi	2	0	13,000	3,000	16,000	0	0	0	37	11	1	12	48	1	49	0	0.0	0.0	0.0	21.1				
14/11/97		3	1	Kayole Rd/Kangundo Rd	Dandora/Embakasi	2	0	12,000	2,000	14,000	0	0	0	35	8	1	9	43	1	44	0	0.0	0.0	0.0	20.6	3	49,000	135	0
14/11 average			**3.3**			**3.8**	**4,848**	**23,491**	**1,306**	**27,567**	**53**	**18**	**34**	**60**	**10**	**8**	**18**	**92**	**40**	**132**	**5**	**15.9**	**3.2**	**12.7**	**25.5**	**2.5**	**69,977**	**334**	**14**
15/11/97	KAB389Q	1	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	26,000	600	26,600	3	0	3	66	7	1	8	124	4	128	51	3.0	0.0	3.0	23.6				
15/11/97	KAB389Q	2	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	23,400	400	23,800	6	0	6	46	10	1	11	56	7	63	0	6.0	0.0	6.0	30.5				
15/11/97	KAB389Q	3	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	20,600	1,000	21,600	10	0	10	47	14	1	15	61	11	72	0	10.0	0.0	10.0	26.3				

NCC(4/9)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Collection Moving	Collection Loading	Transportation	Inside the Dump Site Moving	Inside the Dump Site Loading	Inside the Dump Site total	Total Moving	Total Loading	Total Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed (km/hr)	Duty Average Trips	Distance (m)	Time (min)	Idling (min)
15/11/97	KAB389Q	4	1	Komorock Rd/Outering Rd	Njiru/Dandora	1	0	39,200	800	40,000	3	0	3	147	6	1	7	153	4	157	0	3.0	0.0	3.0	16.0	4	112,000	420	51
15/11/97	KAB391Q	1	1	Kayole Rd/Kangundo Rd	Dandora/Njiru	2	0	22,000	1,000	23,000	3	0	3	101	8	1	9	109	4	113	0	3.0	0.0	3.0	13.1				
15/11/97	KAB391Q	2	1	Kayole Rd/Kangundo Rd	Dandora/Njiru	2	0	38,000	1,000	39,000	8	0	8	161	7	1	8	168	9	177	0	8.0	0.0	8.0	14.2	2	62,000	290	0
15/11/97	KAH006Y	1	1	Jogoo Rd	Njiru	2	0	21,000	1,000	22,000	3	0	3	122	13	2	15	135	5	140	0	3.0	0.0	3.0	10.3				
15/11/97	KAH006Y	2	1	Outering Rd	Njiru	2	0	17,000	1,000	18,000	3	0	3	47	8	2	10	55	5	60	0	3.0	0.0	3.0	21.7				
15/11/97	KAH006Y	3	1	Outering Rd	Njiru	2	0	17,000	1,000	18,000	3	0	3	47	8	2	10	55	5	60	0	3.0	0.0	3.0	21.7				
15/11/97	KAH006Y	4	1	Outering Rd/Jogoo Rd	Makadara	2	0	27,000	1,000	28,000	3	0	3	450	8	2	10	458	5	463	0	3.0	0.0	3.0	3.6	4	86,000	723	0
15/11/97	KAH013Y	1	1	Outering Rd/Kangundo Rd	Njiru/Kariobangi	2	0	8,500	2,900	11,400	0	0	0	26	11	1	12	41	1	42	4	0.0	0.0	0.0	19.6				
15/11/97	KAH013Y	2	1	Outering Rd/Kangundo Rd	Njiru/Kariobangi	2	0	17,700	2,800	20,500	6	0	6	42	11	1	12	58	7	65	5	6.0	0.0	6.0	25.3				
15/11/97	KAH013Y	3	2	Outering Rd/Kangundo Rd	Njiru/Kariobangi	2	0	16,600	2,400	19,000	1	0	1	41	15	1	16	56	2	58	0	1.0	0.0	1.0	24.3				
15/11/97	KAH013Y	4	1	Outering Rd/Kangundo Rd	Njiru/Kariobangi	2	0	18,100	600	18,700	0	0	0	37	15	1	16	52	1	53	0	0.0	0.0	0.0	29.4	4	69,600	218	9
15/11/97	KUE961	1	1	Komorock Rd/Outering Rd	Njiru/Dandora	2	0	19,000	1,000	20,000	2	0	2	68	13	2	15	81	4	85	0	2.0	0.0	2.0	16.8				
15/11/97	KUE961	2	1	Komorock Rd/Outering Rd	Njiru/Dandora	2	0	12,000	1,000	13,000	3	0	3	48	11	0	11	59	3	62	0	3.0	0.0	3.0	15.0				
15/11/97	KUE961	3	1	Komorock Rd/Outering Rd	Njiru/Dandora	2	0	12,000	1,000	13,000	5	0	5	40	7	1	8	47	6	53	0	5.0	0.0	5.0	18.0	3	46,000	200	0
15/11/97	KUL313	1	1	Landhies Rd/Moi Ave	Kariokangi/Starehe	4	0	26,000	0	26,000	18	0	18	43	6	4	10	49	22	71	0	18.0	0.0	18.0	36.3				
15/11/97	KUL313	2	1	Muranga/Park Rd	Mathare/Starehe	4	0	36,000	0	36,000	14	0	14	66	4	7	11	70	21	91	0	14.0	0.0	14.0	32.7				
15/11/97	KUL313	3	1	Jogoo Rd/Outering Rd	Embakasi	4	0	30,000	0	30,000	56	0	56	110	3	2	5	113	58	171	0	56.0	0.0	56.0	16.4	3	92,000	333	0
15/11/97	KUL989	1	7	Lusaka Rd/Langata Rd	Viwanda/Mugumoini	9	4,000	19,000	2,000	25,000	117	67	50	53	14	39	53	134	89	223	0	16.7	9.6	7.1	21.5				
15/11/97	KUL989	2	2		Mugumoini	9	1,000	46,000	2,000	49,000	60	13	47	112	15	30	45	140	77	217	0	30.0	6.5	23.5	24.6	2	73,000	440	0
15/11/97	KUL992	1	4	Lusaka Rd/Langata Rd	Viwanda/Mugumoini	6	15,000	34,000	2,000	51,000	195	66	129	149	21	69	90	236	198	434	0	48.8	16.5	32.3	13.7	1	51,000	434	0
15/11/97	KUL993	1	15	Lunaru Rd/Thika Rd	Ngara/Parklands	9	10,135	33,200	700	44,035	171	63	108	96	3	48	51	199	156	355	37	11.4	4.2	7.2	20.8	1	44,035	355	37
15/11/97	KUL994	1	4	Outering Rd/Jogoo Rd	Njiru/Dandora	8	2,390	42,110	1,500	46,000	120	12	108	198	4	5	9	330	113	443	116	30.0	3.0	27.0	12.8	1	46,000	443	116
15/11/97	KUL995	1	21	James Gichuru Rd	Kilimani/Kawangware	8	27,000	17,000	0	44,000	224	68	156	38	0	0	0	106	156	262	0	10.7	3.2	7.4	26.8	1	44,000	262	0
15/11/97	KWE031	1	9		Makadara/Pumwani	6	16,000	24,000	1,000	41,000	197	135	62	125	6	32	38	266	94	360	0	21.9	15.0	6.9	11.5	1	41,000	360	0
15/11/97	KWE073	1	22	Kirichwa Rd/Kibera Rd	Kilimani/Streha	10	12,000	63,000	0	75,000	146	63	83	217	9	54	63	289	141	430	4	6.6	2.9	3.8	12.4	1	75,000	430	4
15/11/97	KWE082	1	6	Jogoo Rd/Outering rd	Njiru/Makadara	7	4,000	15,800	200	20,000	230	172	58	85	25	5	30	282	63	345	0	38.3	28.7	9.7	11.2	1	20,000	345	0
15/11/97	KWE245	1	6		Makadara	10	29,000	14,000	200	43,200	326	52	274	34	55	10	65	141	284	425	0	54.3	8.7	45.7	24.7	1	43,200	425	0
15/11 average		**3.9**				**4.1**	**4,017**	**25,174**	**1,204**	**30,195**	**69**	**24**	**44**	**95**	**12**	**12**	**23**	**137**	**52**	**189**	**7**	**15.0**	**3.5**	**11.4**	**20.0**	**2.0**	**60,389**	**379**	**14**
16/11/97	KAB391Q	1	1	Juja Rd/Muranga Rd	Eastleigh/Ngara	7	0	37,000	1,000	38,000	71	0	71	134	8	1	9	142	72	214	0	71.0	0.0	71.0	16.6				

NCC(5/9)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min./collection point)			Average Transportation Speed (km/hr.)	Daily Average			
							Collection	Transportation	Inside the Dump Site	Total	Collection			Transportation	Inside the Dump Site			Total			Idling	Total	Moving	Loading		Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	Total	Moving	Loading	Total									
16/11/97	KAB391Q	2	1	Juja Rd/Murunga Rd	Eastleigh/Ngara	7	0	17,000	1,000	18,000	105	0	105	118	8	0	8	126	105	231	0	105.0	0.0	105.0	8.6	2	36,000	445	0
16/11/97	KAH006Y	1	1	Jogoo Rd/Thika Rd	Pumwani/Eastleigh	4	0	18,000	1,000	19,000	112	0	112	105	8	2	10	113	114	227	0	112.0	0.0	112.0	10.3				
16/11/97	KAH006Y	2	1	Thika Rd/Juja Rd	Eastleigh	4	0	35,000	1,000	36,000	115	0	115	108	8	2	10	116	117	233	0	115.0	0.0	115.0	19.4	2	55,000	460	0
16/11/97	KAH013Y	11	0	Jogoo Rd/Landhies	Kariakoo	2	0	1,400	0	1,400	0	0	0	15	0	0	0	15	0	15	0				5.6				
16/11/97	KUE961	1	0	Landhies Rd/Jogoo Rd	Pumwani/Kariakoo	2	0	7,000	0	7,000	0	0	0	120	0	0	0	120	0	120	0				3.5	1	7,000	120	0
16/11/97	KUL313	1	1	Murunga/Langata Rd	Viwanda/Mathare	4	0	16,000	0	16,000	12	0	12	51	4	8	12	55	20	75	0	12.0	0.0	12.0	18.8				
16/11/97	KUL313	2	1	Outering Rd	Embakasi	4	0	28,000	0	28,000	34	0	34	85	37	3	40	122	37	159	0	34.0	0.0	34.0	19.8	2	44,000	234	0
16/11/97	KUL989	1	4	Enterprise Rd/Lusaka Rd	Viwanda/Kaloleni	8	7,000	21,000	1,000	29,000	100	25	75	60	7	28	35	92	103	195	0	25.0	6.3	18.8	21.0				
16/11/97	KUL989	2	4	Lusaka Rd/Kabete Rd	Viwanda/Mugumoini	8	5,000	39,000	1,000	45,000	102	33	69	88	8	22	30	129	91	220	0	25.5	8.3	17.3	26.6	2	74,000	415	0
16/11/97	KUL993	1	6	Waiyaki way/Muaeni Rd	Ngara/Parklands	8	7,500	23,100	1,600	32,200	82	27	55	32	10	15	25	98	70	168	29	13.7	4.5	9.2	43.3				
16/11/97	KUL993	2	2		Parklands	8	1,800	28,900	2,600	33,300	96	11	85	79	9	16	25	117	101	218	18	48.0	5.5	42.5	21.9	2	65,500	386	47
16/11/97	KUL994	1	1	Lusaka Rd/Langata Rd	Viwanda/Mugumoini	12	0	11,000	0	11,000	0	0	0	260	0	0	0	260	0	260	0	0.0	0.0	0.0	2.5	1	11,000	260	0
16/11/97	KWE031	1	7		Makandara	6	5,000	32,000	1,000	38,000	132	59	73	92	8	45	53	159	118	277	0	18.9	8.4	10.4	20.9	1	38,000	277	0
16/11/97	KWE073	1	11	Argwings Kodhek Rd	Kilimani/Street	9	21,000	13,000	0	34,000	253	53	200	49	0	0	0	102	200	302	0	23.0	4.8	18.2	15.9	1	34,000	302	0
16/11/97	KWE082	1	7	Jogoo Rd/Outering rd	Njiru/Makadara	7	5,000	18,800	200	24,000	140	58	82	120	13	5	20	193	87	280	0	20.0	8.3	11.7	9.4	1	24,000	280	0
16/11/97	KWE245	1	1		Mathare	7	0	12,000	2,000	14,000	200	0	200	95	16	4	20	111	204	315	0	200.0	0.0	200.0	7.6	1	14,000	315	0
16/11 average			**3.1**			**6.6**	**3,487**	**22,300**	**1,218**	**26,406**	**111**	**18**	**92**	**100**	**12**	**13**	**25**	**128**	**103**	**218**	**3**	**58.8**	**3.5**	**55.5**	**16.6**	**1.5**	**38,409**	**318**	**4**
17/11/97	KAB389Q	1	3	Landhies Rd/Ngara Rd	Ngara/Parklands	8	7,000	23,000	150	30,150	100	18	82	75	9	1	10	102	83	185	0	33.3	6.0	27.3	18.4				
17/11/97	KAB389Q	2	1	Forest Rd/Limuru Rd	Parklands/Mathare	8	0	27,850	100	27,950	59	0	59	41	4	1	5	45	60	105	0	59.0	0.0	59.0	40.8				
17/11/97	KAB389Q	3	2	Forest Rd/Park Rd	Parklands/Street	8	1,000	49,700	200	50,900	32	13	19	129	3	1	4	145	20	165	0	16.0	6.5	9.5	23.1	3	109,000	455	0
17/11/97	KAB391Q	1	0	Jogoo Rd/Lusaka Rd	Kaloleni/Viwanda	2	0	14,000	0	14,000	0	0	0	139	0	0	0	139	0	139	0				6.0	1	14,000	139	0
17/11/97	KAH006Y	1	3	Lusaka Rd/Rabai Rd	Viwanda/Makadara	8	5,000	13,000	0	18,000	113	31	82	37	2	0	2	70	82	152	0	37.7	10.3	27.3	21.1				
17/11/97	KAH006Y	2	1	Likoni Rd/Rabai Rd	Viwanda/Makadara	8	0	27,000	0	27,000	75	0	75	71	3	0	3	82	75	157	8	75.0	0.0	75.0	22.8	2	45,000	309	8
17/11/97	KAH013Y	1	15	Argwings Khodeck Rd	Kilimani/Kibera woodly	9	12,400	21,700	400	34,500	149	34	115	55	2	2	4	91	117	208	0	9.9	2.3	7.7	23.7	1	34,500	208	0
17/11/97	KAH019Y	1	3	Jogoo Rd/Outering rd	Njiru/Kariobangi	8	2,000	8,000	1,000	11,000	65	15	50	35	5	5	10	55	55	110	0	21.7	5.0	16.7	13.7				
17/11/97	KAH019Y	2	4	Jogoo Rd/Outering rd	Kariobangi/Dandora	8	3,000	12,000	1,000	16,000	85	41	44	60	10	5	15	111	49	160	0	21.3	10.3	11.0	12.0	2	27,000	270	0
17/11/97	KUL989	1	12	Jogoo Rd/Landhies	Pumwani/Eastleigh	8	40,000	19,800	200	60,000	240	107	133	101	2	20	22	210	153	363	0	20.0	8.9	11.1	11.8	1	60,000	363	0
17/11/97	KUL991	1	1	Likoni Rd/Jogoo Rd	Viwanda/Makadara	9	0	12,000	0	12,000	25	0	25	20	5	2	7	25	27	52	0	25.0	0.0	25.0	36.0				
17/11/97	KUL991	2	1	Likoni Rd/Enterprise Rd	Viwanda/Makadara	9	0	35,000	500	35,500	20	0	20	161	7	8	15	168	28	196	0	20.0	0.0	20.0	13.0	2	47,500	248	0

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Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min./collection point)			Average Transportation Speed (km/hr.)	Daily Average			
							Collection	Transportation	Inside the Dump Site	Total	Collection			Transportation	Inside the Dump Site			Total			Idling					Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total		Total	Moving	Loading					
17/11/97	KUL992	1	6	Jogoo Rd/Forest Rd	Ngara/Parklands	10	10,000	30,000	1,000	41,000	95	28	67	126	9	55	64	163	122	285	0	15.8	4.7	11.2	14.3	1	41,000	285	0
17/11/97	KUL994	1	5	Langata Rd	Mugumoini	8	14,000	27,000	1,000	42,000	110	65	45	53	55	40	95	173	95	268	0	22.0	13.0	9.0	30.6	1	42,000	268	0
17/11/97	KWE073	1	0	Ngong Rd/Juja Rd	Kibera Woodly	8	0	35,000	4,000	39,000	0	0	0	72	21	40	61	103	40	143	10				29.2				
17/11/97	KWE073	2	11	Lenana Rd/Kayahwe	Kibera Woodly	8	10,200	46,000	4,000	60,200	132	57	75	101	22	30	52	180	105	285	0	12.0	5.2	6.8	27.3	2	99,200	428	10
17/11/97	KWE081	1	1			7	0	27,960	40	28,000	215	0	215	83	4	37	41	187	252	439	100	215.0	0.0	215.0	20.2	1	28,000	439	100
17/11/97	KWH245	1	6		Makadara		1,300	14,800	400	16,500	160	27	133	75	20	3	23	122	136	258	0	26.7	4.5	22.2	11.8	1	16,500	258	0
17/11 average			4.2			7.9	6,619	24,656	999	31,317	105	27	77	80	12	17	25	121	88	204	7	39.4	4.8	34.6	20.9	1.5	46,975	306	10
18/11/97	KAB389Q	1	1	Mbagathi Rd/Ngong Rd	Viwanda/Mugumoini	1	0	37,000	100	37,100	50	0	50	78	5	1	6	96	51	147	13	50.0	0.0	50.0	28.5				
18/11/97	KAB389Q	2	1	Ngong Rd/Uhuru highway	Kilimani/Starehe	1	0	34,900	500	35,400	4	0	4	80	7	1	8	87	5	92	0	4.0	0.0	4.0	26.2				
18/11/97	KAB389Q	3	1	Ngong Rd/Uhuru highway	Kilimani/Starehe	1	0	55,300	200	55,500	105	0	105	119	12	1	13	143	106	249	12	105.0	0.0	105.0	27.9	3	128,000	488	25
18/11/97	KAB391Q	1	1	Ngong Rd/Haile	Kilimani/Starehe	2	0	39,000	0	39,000	4	0	4	120	9	0	9	161	4	165	32	4.0	0.0	4.0	19.5				
18/11/97	KAB391Q	2	1	Ngong Rd/Haile	Kilimani/Starehe	2	0	37,000	0	37,000	7	0	7	72	5	0	5	72	7	84	0	7.0	0.0	7.0	30.8	2	76,000	249	32
18/11/97	KAH013Y	1	2	Ngong Rd/University	Starche/Ngara	3	6,200	26,700	500	33,400	32	12	20	54	6	1	7	72	21	93	0	16.0	6.0	10.0	29.7				
18/11/97	KAH013Y	2	1	Uhuru highway	Ngara/Starche	3	0	29,400	2,500	31,900	5	0	5	68	16	1	17	84	6	90	0	5.0	0.0	5.0	25.9				
18/11/97	KAH013Y	3	1	Ngong Rd/Kenyatta Rd	Kibera Woodly/Kilimani	3	0	39,200	2,800	42,000	13	0	13	92	14	1	15	106	14	120	0	13.0	0.0	13.0	25.6	3	107,300	303	0
18/11/97	KAH019Y	1	2	Lusaka Rd/Ngong Rd	Kenyatta Golf Course	2	7,000	33,000	1,000	41,000	11	3	8	67	7	1	8	89	9	98	12	5.5	1.5	4.0	29.6				
18/11/97	KAH019Y	2	1	Jogoo Rd/Ngong Rd	Kibera Woodly/Viwanda	2	0	22,000	500	22,500	0	0	0	50	6	1	7	56	1	57	0	0.0	0.0	0.0	26.4				
18/11/97	KAH019Y	3	2	Jogoo Rd/Ngong Rd	Kenyatta Golf Course/Viwand	2	4,000	24,500	500	29,000	79	9	70	97	8	1	9	114	71	185	0	39.5	4.5	35.0	15.2	3	92,500	340	12
18/11/97	KUE961	1	2	Ngong Rd/Forest Rd	Kilimani/Kibera woodly	1	1,000	22,000	1,000	24,000	101	87	14	114	6	0	6	207	14	221	0	50.5	43.5	7.0	11.6				
18/11/97	KUE961	2	1	Ngong Rd/Forest Rd	Kilimani/Kibera woodly	2	0	26,000	1,000	27,000	10	0	10	64	12	0	12	76	10	86	0	10.0	0.0	10.0	24.4	2	51,000	307	0
18/11/97	KUL989	1	1	Ngong rd/Lusaka Rd	Viwanda/Kenyatta Golf	6	0	42,900	100	43,000	270	0	270	100	26	4	30	126	274	400	0	270.0	0.0	270.0	25.7	1	43,000	400	0
18/11/97	KUL992	1	5	Outering Rd/Jogoo Rd	Kaloleni/nijiru		3,400	43,100	600	47,100	71	29	42	147	2	39	41	208	81	289	30	14.2	5.8	8.4	17.6	1	47,100	289	30
18/11/97	KWE064	1	4		Mugumoini	8	8,000	49,000	1,000	58,000	110	58	52	34	9	6	15	182	58	240	81	27.5	14.5	13.0	86.5				
18/11/97	KWE064	2	2		Viwanda	8	500	22,500	1,000	24,000	92	2	90	178	10	5	15	190	95	285	0	46.0	1.0	45.0	7.6	2	82,000	525	81
18/11/97	KWE074	1	5	Waiyaki way	Parklands/Kangemi	9	12,300	36,700	0	49,000	97	26	71	185	5	40	45	216	111	327	0	19.4	5.2	14.2	11.9				
18/11/97	KWE074	2	5	Waiyaki way/Thika Rd	Parklands/Kangemi	9	5,200	0	0	5,200	36	28	8	36	0	37	37	64	45	109	0	7.2	5.6	1.6	0.0	2	54,200	436	0
18/11/97	KWE081	1	5	Kayole Rd/Kangundo Rd	Dandora/Nijiru	7	7,000	20,000	0	27,000	134	34	100	84	0	0	0	118	100	218	0	26.8	6.8	20.0	14.3	1	27,000	218	0
18/11/97	KWE245	1	5		Makadara/Mangu		17,000	5,000	400	22,400	302	98	204	50	8	2	10	156	206	362	0	60.4	19.6	40.8	6.0	1	22,400	362	0
18/11 average			2.2			3.8	3,410	32,260	856	34,786	77	18	57	90	9	7	16	125	61	187	9	39.1	5.7	33.4	23.4	1.9	66,409	356	16

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Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Transportation	Inside the Dump Site	Total	Time (minutes) Collection Total	Moving	Loading	Transportation	Inside the Dump Site Moving	Loading	total	Total Moving	Loading	Total	Idling	Average Collection Time (min/collection point) Total	Moving	Loading	Average Transportation Speed(km/hr.)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
19/11/97	KAB389Q	1	3	Ngong Rd/Uhuru Highway	Kilimani/Starch e	6	2,000	37,000	500	39,500	120	48	72	72	2	1	3	128	73	201	6	40.0	16.0	24.0	30.8				
19/11/97	KAB389Q	2	2	State house Rd/Forest Rd	Parklands/Kilimani	6	3,000	70,500	1,000	74,500	55	20	25	133	10	1	11	163	26	189	0	22.5	10.0	12.5	31.8	2	114,000	390	6
19/11/97	KAB391Q	1	1	North Airport Rd	Nairu/Embakasi	2	0	47,000	0	47,000	80	0	80	132	7	0	7	139	80	219	0	80.0	0.0	80.0	21.4	1	47,000	219	0
19/11/97	KAH006Y	1	4	Thika Rd	Mathare/Starch e		11,000	44,000	2,000	57,000	200	45	155	152	13	2	15	213	157	370	3	50.0	11.3	38.8	17.4	1	57,000	370	3
19/11/97	KAH013Y	1	3	Lenana Rd	Kilimani/Kibera woodly	8	9,000	36,000	1,000	46,000	129	35	94	70	12	1	13	130	95	225	13	43.0	11.7	31.3	30.9				
19/11/97	KAH013Y	2	3	Lenana Rd Thika Rd	Kilimani/Kenyatta Golf Course	8	5,000	50,200	800	56,000	90	27	63	126	9	1	10	162	64	226	10	30.0	9.0	21.0	23.9	2	102,000	451	23
19/11/97	KAH019Y	1	3	Mutarakwa Rd	Makadara/Dandora	7	1,000	17,000	1,000	19,000	75	20	55	75	4	1	5	99	56	155	0	25.0	6.7	18.3	13.6				
19/11/97	KAH019Y	2	4	Outer Rd/Mutarakwa	Makadara/Dandora	7	2,000	22,500	400	25,000	68	10	58	77	14	1	15	101	59	160	0	17.0	2.5	14.5	17.6	2	44,000	315	0
19/11/97	KUL961	1	1	Enterprise Rd/Jogoo Rd	Viwanda/Makadara	9	0	13,000	1,000	14,000	75	0	75	70	6	2	8	76	77	153	0	75.0	0.0	75.0	11.1				
19/11/97	KUL961	2	2	Lunga Lunga Rd	Viwanda/Makadara	9	3,000	19,000	1,000	23,000	90	20	70	77	8	2	10	105	72	177	0	45.0	10.0	35.0	14.8				
19/11/97	KUL961	3	1	Mombasa Rd	Viwanda/Makadara	9	0	30,000	1,000	31,000	20	0	20	88	10	2	12	98	22	120	0	20.0	0.0	20.0	20.5	3	68,000	450	0
19/11/97	KUL989	1	5	Lenana Rd/Rose Ave	Kilimani/Starch e	4	6,000	31,800	300	38,100	73	26	47	49	33	0	33	115	47	162	9	14.6	5.2	9.4	38.9				
19/11/97	KUL989	2	2	Lusaka Rd/Ngong Rd	Viwanda/Makadara	4	13,200	39,000	2,100	54,300	44	25	19	105	6	4	10	136	23	159	0	22.0	12.5	9.5	22.3	2	92,400	321	9
19/11/97	KUL992	1	1	Enterprise Rd/Outering Rd	Bahati/Viwanda	9	0	62,000	0	62,000	220	0	220	74	6	22	28	158	242	400	78	220.0	0.0	220.0	50.3	1	62,000	400	78
19/11/97	KUL994	1	1	Langata Rd/Lusaka Rd	Viwanda	7	0	0	0	0	8	0	8	658	0	0	0	658	8	666	0	8.0	0.0	8.0	0.0				
19/11/97	KWE064	1	6	Lusaka Rd/Muranga Rd	Kamukunji/Starehe	4	8,000	16,000	1,000	25,000	99	32	67	80	6	2	8	118	69	187	0	16.5	5.3	11.2	12.0				
19/11/97	KWE064	2	5	Thika Rd/Muthaiga	Pumwani/Koyambu	4	5,000	25,000	500	30,500	95	33	62	90	5	2	7	128	64	192	0	19.0	6.6	12.4	16.7	2	55,500	379	0
19/11/97	KWE073	1	0	Ngara Rd/Landhies	Ngara/Kamukunji	6	0	47,000	2,000	49,000	0	0	0	291	6	0	6	297	0	297	0				9.7	1	49,000	297	0
19/11/97	KWE081	1	7	Enterprise Rd/Langata Rd	Viwanda/Mugumoini	8	42,000	36,000	4,000	82,000	369	162	207	77	15	30	45	254	237	491	0	52.7	23.1	29.6	28.1	1	82,000	491	0
19/11/97	KWE245	1	5		Pumwani/Eastleigh	10	1,700	10,000	2,000	13,700	278	53	225	32	13	2	15	98	227	325	0	55.6	10.6	45.0	18.8	1	13,700	325	0
19/11 average			3.1			6.7	6,217	34,374	1,271	41,400	121	31	90	98	9	5	14	143	94	232	6	47.1	7.4	39.3	22.7	1.6	65,550	367	10
20/11/97	KAB246Q	1	0	Thika Highway	Ngara	7				0	0						0			0									
20/11/97	KAB389Q	1	1	Lusaka Rd/Langata Rd	Viwanda	7	0	23,000	1,000	24,000	91	0	91	89	8	2	10	97	93	190	0	91.0	0.0	91.0	15.5				
20/11/97	KAB389Q	2	1	Enterprise Rd/Lusaka Rd	Viwanda/Mugumani	7	0	42,000	1,000	43,000	67	0	67	116	8	2	10	124	69	193	0	67.0	0.0	67.0	21.7	2	67,000	383	0
20/11/97	KAB391Q	1	11	Enterprise Rd/Lukoni Rd	Viwanda/Makongeni	5	0	24,700	1,000	25,700	79	0	79	58	7	1	8	65	80	145	0	79.0	0.0	79.0	23.6				
20/11/97	KAB391Q	2	1	Langata/Lusaka Rd	Viwanda/Makongeni	6	0	19,900	1,000	20,900	32	0	32	73	3	2	5	76	34	110	0	32.0	0.0	32.0	16.4	2	46,600	255	0
20/11/97	KAE843Q	1	11	Lunga Lunga Rd/Lukoni Rd	Viwanda/Makadara	4	0	15,000	0	15,000	2	0	2	55	13	0	13	68	2	70	0	2.0	0.0	2.0	16.4				
20/11/97	KAE843Q	2	1	Thika Rd/Muthaiga	Kenyatta Golf Course	4	0	11,000	0	11,000	1	0	1	135	0	0	0	135	1	136	0	1.0	0.0	1.0	4.9	2	26,000	206	0
20/11/97	KAH006Y	1	1	Lusaka Rd/Jogoo Rd	Kenyatta Golf Course/Viwandi	8	0	36,000	500	36,500	75	0	75	135	8	2	10	143	77	220	0	75.0	0.0	75.0	16.0	1	36,000	220	0

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Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (Minutes)												Average Collection Time (min./collection point)			Average Transportation Speed (km/hr.)	Daily Average			
							Collection	Transportation	Inside the Dump Site	Total	Collection			Transportation	Inside the Dump Site			Total			Idling						Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	total	Moving	Loading	Total		Total	Moving	Loading						
20/11/97	KUL991	1	1	Muranga Rd	Kenyatta Golf Course/Mathare	7	0	50,000	0	50,000	190	0	190	198	4	3	7	202	193	395	0	190.0	0.0	190.0	15.2	1	50,000	395	0
20/11/97	KUL993	1	2	Uhuru highway	Ngara/Mugumoini	8	1,000	51,000	4,000	56,000	358	7	151	221	19	25	44	303	176	479	56	79.0	3.5	75.5	13.8	1	51,000	479	56
20/11/97	KUL994	1	1	Jogoo Rd/Uhuru	Makadara/Mugumoini	8	0	40,900	200	41,100	220	0	220	168	4	8	12	172	228	400	0	220.0	0.0	220.0	14.6	1	40,900	400	0
20/11/97	KWE073	1	2	Mbagathi Rd/Ngong Rd	Makadara	8	500	11,400	0	11,900	310	47	263	30	0	0	0	77	263	340	0	155.0	23.5	131.5	22.8	1	11,400	340	0
20/11 average			**1.2**			**6.5**	**136**	**29,536**	**1,243**	**30,464**	**111**	**5**	**106**	**116**	**8**	**6**	**13**	**133**	**111**	**243**	**5**	**90.1**	**2.5**	**87.6**	**16.6**	**1.4**	**41,113**	**335**	**7**
21/11/97	KAB389Q	1	0	Jogoo Rd	Makada	2	0	8,000	0	8,000	0	0	0	120	0	0	0	120	0	120	0				4.0	1	8,000	120	0
21/11/97	KAH006Y	1	11	Jogoo Rd	Ngara/Makadara	5	9,800	38,300	1,000	49,100	122	35	87	213	3	8	11	251	95	346	0	11.1	3.2	7.9	10.8	1	49,100	346	0
21/11/97	KUL961	1	0			3	0	0	0	0	0	0	0	5	0	0	0	5	0	5	0				0.0				
21/11/97	KUL993	1	3	Chambers Rd/Shulungi Rd	Ngara	7	2,000	18,000	2,000	22,000	85	10	75	30	15	20	35	55	95	150	0	28.3	3.3	25.0	36.0				
21/11/97	KUL993	2	2	Ngara Rd/Muranga Rd	Ngara/Mathare	7	9,000	12,000	0	21,000	180	115	65	35	0	0	0	150	65	215	0	25.7	16.4	9.3	20.6	2	43,000	365	0
21/11/97	KWE064	1	3	Kombock Rd/Jogoo Rd	Makadara/Dandora	8	2,000	16,000	5,000	23,000	104	7	97	57	22	1	23	95	98	193	9	34.7	2.3	32.3	16.8				
21/11/97	KWE064	2	3	Outering Rd	Bujuru/Dandora	8	2,000	26,000	2,000	30,000	67	6	61	76	10	1	11	92	62	154	0	22.3	2.0	20.3	20.5	2	53,000	347	9
21/11 average			**4.5**			**6.2**	**4,960**	**19,717**	**2,500**	**25,517**	**112**	**35**	**77**	**89**	**13**	**8**	**20**	**127**	**83**	**196**	**2**	**24.4**	**5.5**	**19.0**	**18.1**	**1.5**	**38,275**	**295**	**2**
22/11/97	KAB389Q	1	2	Outering Rd	Embakasi	2	2,000	38,000	1,000	41,000	80	20	60	107	8	0	8	135	60	195	0	40.0	10.0	30.0	21.3	1	41,000	195	0
22/11/97	KAB391Q	1	5	Limuru Rd/Mawan Rd	Parklands	6	2,800	16,600	300	19,700	129	30	99	74	12	0	12	116	99	215	0	25.8	6.0	19.8	13.5	1	19,700	215	0
22/11/97	KAH006Y	1	3	Dunga Rd/Mombasa	Viwanda/Mugumoini	7	3,500	22,100	1,200	26,800	64	32	32	49	8	2	10	89	34	123	0	21.3	10.7	10.7	27.1				
22/11/97	KAH006Y	2	3	Dunga Rd/Lusaka Rd	Viwanda/Eastleigh	7	2,200	34,900	1,300	43,400	88	22	66	96	9	1	10	127	67	194	0	29.3	7.3	22.0	21.8	2	70,200	317	0
22/11 average			**3.3**			**5.5**	**3,875**	**27,900**	**950**	**32,725**	**90**	**26**	**64**	**82**	**9**	**2**	**10**	**117**	**65**	**182**	**0**	**29.1**	**8.5**	**20.6**	**20.9**	**1.3**	**43,633**	**242**	**0**
23/11/97	KAB389Q	1	2	Jogoo Rd/Landhies	Kamukunji/Pumwani	2	3,000	15,000	900	18,900	20	8	12	32	2	1	3	42	13	55	0	10.0	4.0	6.0	28.1				
23/11/97	KAB389Q	2	1	Jogoo Rd	Kamukunji	2	0	41,500	1,500	43,000	5	0	5	88	2	0	2	90	5	95	0	5.0	0.0	5.0	28.3	2	61,900	150	0
23/11/97	KAH006Y	1	1	Jogoo Rd	Kamukunji	3	0	18,100	1,500	19,600	6	0	6	41	10	2	12	59	8	67	8	6.0	0.0	6.0	26.5				
23/11/97	KAH006Y	2	1	Jogoo Rd	Kamukunji	3	0	28,500	1,500	30,000	8	0	8	43	8	1	9	51	9	60	0	8.0	0.0	8.0	39.8				
23/11/97	KAH006Y	3	1	Jogoo Rd	Kamukunji	3	0	42,400	3,500	45,900	6	0	6	71	9	0	9	80	6	86	0	6.0	0.0	6.0	35.8	3	95,500	213	8
23/11/97	KGL993	1	6	Lusaka Rd	Mugumoini/Viwanda	9	1,600	34,600	1,100	37,300	176	75	101	71	11	1	12	157	102	259	0	29.3	12.5	16.8	29.2	1	37,300	259	0
23/11 average			**2.0**			**3.7**	**767**	**30,017**	**1,667**	**32,450**	**37**	**14**	**23**	**58**	**8**	**1**	**8**	**80**	**24**	**104**	**1**	**10.7**	**2.8**	**8.0**	**31.3**	**2.0**	**64,900**	**207**	**3**
24/11/97	KAB388Q	1	2	Muranga Rd/Jogoo Rd	Makadara/Starehe	3	1,500	25,900	1,500	28,900	18	5	13	113	4	1	5	122	14	136	0	9.0	2.5	6.5	13.8				
24/11/97	KAB388Q	2	1	Ngong Rd	Makadara	2	0	38,700	1,500	40,200	8	0	8	89	7	2	9	101	10	111	5	8.0	0.0	8.0	26.1	2	69,100	247	5
24/11/97	KAB389Q	1	4	Jogoo Rd	Makadara/Starehe	1	14,000	12,000	1,000	27,000	24	41	33	51	2	0	2	94	33	127	0	18.5	10.3	8.3	14.1				
25/11/97	KAB389Q	2	3	Jogoo Rd	Makadara	1	5,000	10,000	0	15,000	53	33	20	0	0	0	0	40	20	60	7	17.7	11.0	6.7		2	42,000	187	7

NCC(9/9)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min./collection point)			Average Transportation Speed (km/hr)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total			Idling					Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	Total	Moving	Loading	Total		Total	Moving	Loading					
24/11/97	KAH019Y	1	6	Jogoo Rd	Eastleigh	3	1,400	34,800	1,700	37,900	141	19	122	149	8	2	10	176	124	300	0	23.5	3.2	20.3	14.0	1	37,900	300	0
24/11 average			**3.2**			**2.4**	**4,380**	**24,280**	**1,425**	**29,800**	**59**	**20**	**39**	**101**	**6**	**2**	**7**	**107**	**40**	**147**	**2**	**15.3**	**5.4**	**10.0**	**17.0**	**1.7**	**49,667**	**245**	**4**
25/11/97	KAB389Q	1	6	Jogoo Rd	Makadara	2	15,000	11,000	1,000	27,000	39	33	6	38	2	0	2	99	23	122	0	6.5	5.5	1.0	17.4				
25/11/97	KAB389Q	2	2	Jogoo Rd	Makadara	1	6,000	14,000	1,000	21,000	16	15	1	79	3	0	3	97	1	98	0	8.0	7.5	0.5	10.6				
25/11/97	KAB389Q	3	2		Makadara	1	4,000	17,000	1,000	22,000	20	15	5	50	2	0	2	72	5	77	0	10.0	7.5	2.5	20.4				
25/11/97	KAB389Q	4	1		Makadara	1	0	16,000	1,000	17,000	3	0	3	41	6	0	6	47	3	50	0	3.0	0.0	3.0	23.4	4	87,000	347	0
25/11/97	KAH013Y	1	1	Makadara Ave	Makadara	2	0	11,500	1,600	13,100	7	0	7	30	9	1	10	59	8	67	20	7.0	0.0	7.0	23.0				
25/11/97	KAH013Y	2	1	Nanyuki Rd	Viwanda	2	0	16,300	700	17,000	4	0	4	70	18	2	20	92	6	98	4	4.0	0.0	4.0	14.0				
25/11/97	KAH013Y	3	1	Nanyuki Rd	Makadara/Viwanda	2	0	19,000	800	19,800	3	0	3	54	13	2	15	68	5	73	1	3.0	0.0	3.0	21.1				
25/11/97	KAH013Y	4	1		Makadara	2	0	14,400	600	15,000	6	0	6	46	5	0	5	51	6	57	0	6.0	0.0	6.0	18.8	4	64,900	295	25
25/11/97	KAH019Y	1	1	Nanyuki Rd	Makadara/Viwanda	1	0	15,600	1,500	17,100	5	0	5	50	7	2	9	60	7	67	3	5.0	0.0	5.0	18.7				
25/11/97	KAH019Y	2	1	Outering Rd/Nanyuki Rd	Makadara/Viwanda	1	0	22,400	5,500	27,900	18	0	18	87	10	1	11	105	19	124	8	18.0	0.0	18.0	15.4				
25/11/97	KAH019Y	3	1	Outering Rd/Nanyuki Rd	Makadara/Viwanda	1	0	32,000	12,000	44,000	7	0	7	83	9	1	10	92	8	100	0	7.0	0.0	7.0	23.1	3	89,000	291	11
25/11 average			**1.6**			**1.5**	**2,273**	**17,200**	**2,427**	**21,900**	**12**	**6**	**6**	**57**	**11**	**2**	**9**	**77**	**8**	**85**	**3**	**7.0**	**1.9**	**5.2**	**18.7**	**3.7**	**80,300**	**311**	**12**
26/11/97	KAB389Q	1	0			1				0	0						0			0									
26/11/97	KAB389Q	1	4	Lunga Lunga Rd	Makadara/Viwanda	1	6,000	17,000	1,000	24,000	43	29	14	73	5	0	5	107	14	121	0	10.8	7.3	3.5	14.0				
26/11/97	KAB389Q	2	2		Makadara	1	4,000	17,000	1,000	22,000	21	17	4	59	5	0	5	81	4	85	0	10.5	8.5	2.0	17.3	2	46,000	206	0
26/11/97	KAH013Y	1	1		Makadara	2	0	36,800	1,600	38,400	5	0	5	38	5	0	5	48	5	53	5	5.0	0.0	5.0	58.1				
26/11/97	KAH013Y	2	1		Makadara	2	0	18,100	500	18,600	5	0	5	48	4	0	4	62	5	67	10	5.0	0.0	5.0	22.6				
26/11/97	KAH013Y	3	1		Makadara	2	0	14,000	0	14,000	13	0	13	34	4	0	4	38	13	51	0	13.0	0.0	13.0	24.7	3	71,000	171	10
26/11 average			**1.8**			**1.6**	**2,000**	**20,580**	**1,025**	**23,400**	**17**	**9**	**8**	**50**			**5**	**67**	**8**	**75**	**3**	**8.9**	**3.2**	**5.7**	**27.3**	**2.5**	**58,500**	**189**	**5**
Average			**3.4**			**5.1**	**4,428**	**25,998**	**1,378**	**31,324**	**81**	**22**	**60**	**84**	**10**	**9**	**17**	**119**	**65**	**183**	**6**	**31.0**	**4.5**	**26.5**	**21.7**	**1.8**	**56,268**	**330**	**11**

Bins(1/3)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min./collection point)			Average Transportation Speed (km/hr)	Daily Average			
							Collection	Trans-portation	Inside the Dump Site	Total	Collection			Trans-portation	Inside the Dump Site			Total			Idling	Total	Moving	Loading		Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	Total	Moving	Loading	Total									
12/11/97	KAE386R	1	108			4	2,759	21,000	0	23,759	539	300	239	52	0	0	0	352	239	591	0	5.0	2.8	2.2	24.2	1	23,759	591	0
12/11/97	KAE953R	1	57	Langata Rd/Quarry Rd	Mugumoini/Starehe	4	82,200	60,100	0	142,300	0	259	116	200	0	0	0	519	116	635	0	6.6	4.5	2.0	13.9	1	142,300	635	0
12/11/97	KWP600	1	13	Thika Rd	Viwanda	5	28,040	33,700	3,900	65,640	327	107	220	127	29	64	93	319	284	603	56	25.2	8.2	16.9	15.9	1	65,640	603	56
12/11 average			**59**			**4**	**37,666**	**38,267**	**3,900**	**77,233**	**289**	**222**	**192**	**146**	**29**	**64**	**93**	**397**	**213**	**610**	**19**	**12.2**	**5.2**	**7.1**	**18.0**	**1**	**77,233**	**610**	**19**
13/11/97	KAE341U	1	0	Enterprise Rd	Dandora	4	0	15,000	0	15,000	0	0	0	22	5	17	22	27	17	44	0				40.9				
13/11/97	KAE341U	2	1	Mbagathi Rd		4	0	42,500	0	42,500	150	0	150	98	3	30	33	101	180	281	0	150.0	0.0	150.0	26.0				
13/11/97	KAE341U	3	1	Baba Dogo Rd		4	0	30,100	200	30,300	92	0	92	73	3	27	30	76	119	195	0	92.0	0.0	92.0	24.7	3	87,800	520	0
13/11/97	KAE386R	1	90			4	29,666	40,250	20	69,936	418	255	163	135	15	15	30	405	178	778	0	4.6	2.8	1.8	17.9	1	69,936	778	0
13/11/97	KAE441W	1	36	Waiyaki way	Kilimani	6	6,530	16,500	400	23,430	135	64	71	55	9	33	42	128	104	232	0	3.8	1.8	2.0	18.0				
13/11/97	KAE441W	2	56	Lower Kabete Rd	Kilimani/Parklands	6	12,450	27,000	0	39,450	237	108	129	73	0	0	0	207	129	336	26	4.2	1.9	2.3	22.2	2	62,880	568	26
13/11/97	KAE953R	1	0			4	0	15,100	2,000	17,100	0	0	0	38	26	51	77	64	51	115	0				23.8				
13/11/97	KAE953R	2	60	Pepent Rd/Kitusuru Rd	Parklands	4	50,500	49,800	2,000	102,300	300	185	115	145	4	41	45	334	156	490	0	5.0	3.1	1.9	20.6	2	119,400	605	0
13/11/97	KWP600	1	7	Lunga Lunga Rd/Bunyala Rd	Viwanda/Kenyatta Golf	5	34,000	44,500	500	79,000	271	110	161	183	13	40	53	366	201	567	80	38.7	15.7	23.0	14.6	1	79,000	567	80
13/11 average			**38**			**4**	**24,614**	**33,371**	**1,289**	**55,996**	**247**	**139**	**146**	**108**	**14**	**38**	**52**	**253**	**153**	**421**	**14**	**33.5**	**4.1**	**29.4**	**21.6**	**1**	**80,883**	**609**	**20**
14/11/97	KAE341U	1	11	Muthaiga Rd	Parklands/Mathare	5	10,030	33,000	300	43,330	339	101	238	140	3	32	35	244	270	514	4	30.8	9.2	21.6	14.1	1	43,330	514	4
14/11/97	KAE441W	1	0			6	0	18,000	300	18,300	0	0	0	50	8	33	41	127	33	160	69				21.6				
14/11/97	KAE441W	2	53	Galana Rd	Kilimani	6	9,180	30,000	0	39,180	340	159	181	75	0	0	0	259	181	440	25	6.4	3.0	3.4	24.0	2	57,480	600	94
14/11/97	KAE953R	1	29	Loresho Ridge/Bosio Rd	Parklands/Viwanda	4	77,050	2,500	0	79,550	390	271	119	10	0	0	0	281	119	400	0	13.4	9.3	4.1	15.0	1	79,550	400	0
14/11/97	KQY636	1	8			6	12,000	29,250	20	41,270	218	69	149	117	0	90	90	186	239	425	0	27.3	8.6	18.6	15.0	1	41,270	425	0
14/11/97	KST976	1	8	University way/Loita St	Starehe	3	6,600	41,300	200	48,100	221	27	194	158	3	14	17	420	208	628	232	27.6	3.4	24.3	15.7	1	48,100	628	232
14/11/97	KWP600	1	2	Mushembi Rd/Likoni Rd	Ngara/Viwanda	5	12,200	39,800	1,000	53,000	267	37	230	181	13	37	10	321	267	588	90	133.5	18.5	115.0	13.2	1	53,000	588	90
14/11/97	KXF820	1	22	Kose Ave/Ruaraka Rd	Kilimani/Kiruta	6	46,000	28,000	0	74,000	415	95	320	80	3	102	105	178	422	600	0	18.9	4.3	14.5	21.0	1	74,000	600	0
14/11 average			**17**			**5**	**24,723**	**27,731**	**364**	**49,591**	**313**	**108**	**204**	**101**	**6**	**44**	**50**	**252**	**217**	**469**	**53**	**36.8**	**8.0**	**28.8**	**17.5**	**1**	**56,676**	**536**	**60**
15/11/97	KAE441W	1	13	Thika Rd	Kasarani/Parklands/Kilimani	6	2,250	41,000	440	43,690	119	55	64	125	16	34	50	196	98	294	0	9.2	4.2	4.9	19.7	1	43,690	294	0
15/11/97	KAE761R	1	2	Westlands Rd/Chiromo Rd	Parklands	2	3,000	41,000	0	44,000	321	10	311	244	5	65	70	259	376	635	0	160.5	5.0	155.5	10.1	1	44,000	635	0
15/11/97	KAE953R	1	2	Enterprise Rd		4	1,000	20,000	2,000	23,000	75	12	63	95	9	70	79	281	133	414	165	37.5	6.0	31.5	12.6	1	23,000	414	165
15/11/97	KQY636	1	3			6	3,250	33,000	20	36,270	205	12	193	134	0	90	90	146	283	429	0	68.3	4.0	64.3	14.8	1	36,270	429	0
15/11/97	KST976	1	10	Ronald Ngala St/Loita St	Starehe	3	7,000	40,000	1,000	48,000	164	33	131	84	21	4	25	251	135	386	113	16.4	3.3	13.1	28.6	1	48,000	386	113
15/11/97	KWP600	1	5	Changamwe Rd	Viwanda	5	6,600	47,200	900	54,700	228	50	178	169	10	49	59	261	227	488	32	45.6	10.0	35.6	16.8	1	54,700	488	32

Bins(2/3)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Trans-portation	Inside the Dump Site	Total	Time (minutes) Collection Total	Moving	Loading	Trans-portation	Inside the Dump Site Moving	Loading	Total	Total Moving	Loading	Total	Idling	Average Collection Time (min./collection point) Total	Moving	Loading	Average Transportation Speed(km/hr.)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
15/11/97	KXF820	1	7	Langata Rd/Valley Rd	Mugumoini/Kilimani	6	17,000	29,000	0	46,000	180	40	140	65	10	50	60	115	190	305	0	25.7	5.7	20.0	26.8	1	46,000	305	0
15/11/97	KZV006	1	13	Kalana Rd/Lenana Rd	Kilimani	5	4,950	39,700	600	45,250	156	76	80	117	6	40	46	199	120	319	0	12.0	5.8	6.2	20.4	1	45,250	319	0
15/11/97	KAE341U	1	1			4	0	49,000	0	49,000	91	0	91	111	5	19	24	231	110	341	115	91.0	0.0	91.0	26.5	1	49,000	341	115
15/11 average			6			5	5,006	37,767	709	43,323	171	32	139	127	10	41	56	215	186	401	47	51.8	4.9	46.9	19.6	1	43,323	401	47
17/11/97	KAE341U	1	40	Thigiri Ridge Rd/Red Hill Rd	Parklands/Kilimani	6	14,910	36,000	600	51,510	260	157	103	120	11	55	66	288	158	446	0	6.5	3.9	2.6	18.0	1	51,510	446	0
17/11/97	KAE441W	1	3	Enterprise Rd/Thika Rd	Viwanda	6	300	13,500	400	14,200	231	2	229	48	13	24	37	63	253	316	0	77.0	0.7	76.3	16.9				
17/11/97	KAE441W	2	0			6	0	16,000	0	16,000	0	0	0	221	0	0	0	242	0	242	21				4.3	2	30,200	558	21
17/11/97	KAH761R	1	40	Garden Estate Rd	Parklands	5	63,000	35,000	1,000	99,000	395	208	187	178	47	70	117	438	257	695	5	9.9	5.2	4.7	11.8	1	99,000	695	5
17/11/97	KAE953R	1	16	Moska Rd/Waiyaki way	Parklands	4	21,050	42,000	2,500	65,550	440	149	291	175	10	40	50	334	331	665	0	27.5	9.3	18.2	14.4	1	65,550	665	0
17/11/97	KQY636	1	7			6	62	45,000	20	45,082	237	17	220	108	5	85	90	130	305	435	0	33.9	2.4	31.4	25.0	1	45,082	435	0
17/11/97	KST976	1	12	Muindi Mbingu St	Starehe	3	7,400	24,600	1,400	33,400	189	52	137	71	5	10	15	128	147	275	0	15.8	4.3	11.4	20.8				
17/1 7	KST976	2	8		Starehe	3	6,100	42,500	2,000	50,600	135	25	110	135	2	10	12	162	120	282	0	16.9	3.1	13.8	18.9	2	84,000	557	0
17/11/97	KWP600	1	6	Kitui Rd/Mwanzi Rd	Viwanda/Parklands/Ngara	5	20,000	32,000	1,000	53,000	404	128	276	203	5	73	78	336	349	685	0	67.3	21.3	46.0	9.5	1	53,000	685	0
17/11/97	KXF820	1	11	Gigiri Rd	Parklands	6	26,000	34,000	0	60,000	285	67	218	105	60	0	60	232	218	450	0	25.9	6.1	19.8	19.4	1	60,000	450	0
17/11/97	KZV006	1	0	Likoni Rd	Viwanda	5	0	11,600	0	11,600	0	0	0	108	5	15	20	140	15	155	27				6.4	1	11,600	155	27
17/11 average			12			5	17,647	30,200	1,125	45,449	286	89	197	134	11	42	55	227	196	422	5	31.2	6.3	24.9	15.0	1	55,849	516	6
18/11/97	KAE341U	1	5	Langata Rd	Mugumoini	5	2,850	45,500	300	48,650	343	68	275	74	9	34	43	186	309	495	35	68.6	13.6	55.0	36.9	1	48,650	495	35
18/11/97	KAE441W	1	56	Mashangan Rd/Hospital Main Rd	Kilimani/Kangemu/Kawangware	6	8,360	47,000	400	55,760	340	229	111	115	11	29	40	395	140	535	40	6.1	4.1	2.0	24.5	1	55,760	535	40
18/11/97	KAH761R	1	8	Witu Rd/Bunche Rd	Viwanda	5	7,000	18,000	0	25,000	353	114	239	102	0	0	0	266	239	505	50	44.1	14.3	29.9	10.6	1	25,000	505	50
18/11/97	KAE953R	1	30	Riverside Drive/Hospital Rd	Kilimani/Kenyatta Golf Course	4	34,000	31,500	1,000	66,500	312	168	144	103	8	67	75	354	211	565	75	10.4	5.6	4.8	18.3	1	66,500	565	75
18/11/97	KQY636	1	6		Mugumoini	6	380	90,000	20	90,400	300	65	235	105	10	55	65	180	290	470	0	50.0	10.8	39.2	51.4	1	90,400	470	0
18/11/97	KST976	1	9	Haile Selassie Ave	Starehe	3	8,000	41,000	3,000	52,000	218	42	176	106	7	13	20	155	189	344	0	24.2	4.7	19.6	23.2	1	52,000	344	0
18/11/97	KWP600	1	9	Wendany Rd	Viwanda/Kilimani	5	17,000	8,000	0	25,000	378	146	232	47	0	0	0	206	232	438	33	42.0	16.2	25.8	10.2	1	25,000	438	33
18/11/97	KXF820	1	10	Kanagundo Rd/Siaya Rd	Kilimani	6	23,000	12,000	0	35,000	230	57	173	50	0	0	0	107	173	280	0	23.0	5.7	17.3	14.4	1	35,000	280	0
18/11/97	KZV006	1	16	Enterprise Rd/Hombe Rd	Viwanda/Starehe	5	12,800	33,100	0	45,900	224	107	117	269	12	25	37	388	142	530	0	14.0	6.7	7.3	7.4	1	45,900	530	0
18/11 average			17			5	12,599	36,233	944	49,357	300	111	189	108	10	37	47	249	214	462	26	31.4	9.1	22.3	21.9	1	49,357	452	26
19/11/97	KAD794Y	1	4	Waiyaki Rd/David Osieli	Kilimani	6	1,700	36,000	800	38,500	92	12	80	121	27	22	49	160	102	262	0	23.0	3.0	20.0	17.9	1	38,500	262	0
19/11/97	KAE341U	1	20	Muinoa Rd/Red Hill Rd	Kilimani/Parklands	7	8,000	18,000	0	26,000	323	161	162	54	0	0	0	215	162	377	0	16.2	8.1	8.1	20.0	1	26,000	377	0
19/11/97	KAE761R	1	10	Thika Rd/Limuru Rd	Parklands	5	24,000	39,000	0	63,000	312	112	200	231	7	30	37	350	275	625	45	31.2	11.2	20.0	10.1	1	63,000	625	45
19/11/97	KAE953R	1	11	Mbagathi Rd/Ngong Rd	Kenyatta Golf Course	4	25,000	59,000	2,000	86,000	179	81	98	109	7	35	42	247	133	380	50	16.3	7.4	8.9	32.5	1	86,000	380	50

Bins(3/3)

Date	Vehicle No	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m)				Time (minutes)											Average Collection Time (min/collection point)			Average Transportation Speed (km/hr)	Daily Average			
							Collection	Transportation	Inside the Dump Site	Total	Collection			Transportation	Inside the Dump Site			Total			Idling	Total	Moving	Loading		Trips	Distance (m)	Time (min.)	Idling (min.)
											Total	Moving	Loading		Moving	Loading	Total	Moving	Loading	Total									
19/11/97	KQY636	1	2			6	500	20,400	20	20,920	252	10	242	124	5	90	95	139	332	471	0	126.0	5.0	121.0	9.9	1	20,920	471	0
19/11/97	KST976	1	7	Kenyatta Ave	Starehe	3	3,100	26,400	700	30,200	199	24	175	83	16	15	31	136	190	326	13	28.4	3.4	25.0	19.1				
19/11/97	KST976	2	5	Muranga Rd	Starehe	3	6,900	42,000	2,200	51,100	152	23	129	125	4	6	10	152	135	287	0	30.4	4.6	25.8	20.2	2	81,300	613	13
19/11/97	KST976	3	4	Davis Ostelli Rd	Kilimani	5	0	49,000	1,700	50,700	0	0	0	548	19	46	65	567	46	613	0	0.0	0.0	0.0	5.4				
19/11/97	KWP600	1	4	Magetta Rd/Jacaranda	Kilimani	6	19,000	16,000	0	35,000	520	30	490	33	0	0	0	63	490	553	0	130.0	7.5	122.5	29.1	1	35,000	553	0
19/11/97	KXF820	1																											
19/11/97	KZV006	1								0	0						0			0									
19/11 average			8			5	11,025	32,100	1,144	43,840	254	57	197	110	11	33	44	183	227	410	14	50.2	6.3	43.9	19.8	1	50,103	469	15
20/11/97	KAE761R	1	30	Mombasa Rd	Kawangware	5	45,000	44,000	0	89,000	460	280	180	100	5	35	40	400	215	615	15	15.3	9.3	6.0	26.4	1	89,000	615	615
20/11/97	KAE953R	1	0	Jogoo Rd/Njara Rd	Viwanda/Njara	5	0	14,000	1,000	15,000	0	0	0	77	7	24	31	84	24	108	0				10.9				
20/11/97	KAE953R	2	0	Parklands Rd	Parklands	5	0	16,000	0	16,000	0	0	0	121	0	0	0	306	0	306	185				7.9	2	31,000	414	185
20/11/97	KST976	1	13	Monrovia St/Wabera St	Starehe	3	9,100	42,300	700	52,100	244	66	178	107	6	17	23	195	195	390	16	18.8	5.1	13.7	23.7	1	52,100	390	390
20/11/97	KWP600	1	9	Road A/Enterprise Rd	Viwanda	6	8,300	40,800	400	49,500	292	54	238	124	13	24	37	191	262	453	0	32.4	6.0	26.4	19.7	1	49,500	453	0
20/11/97	KXF820	1	0		Dandora	7	0	16,000	0	16,000	0	0	0	65	10	25	35	75	25	100	0				14.8				
20/11/97	KXF820	2	7	Parklands 2nd Ave/Ngong Rd	Parklands	7	29,000	32,000	0	61,000	250	35	215	55	7	43	50	97	258	355	0	35.7	5.0	30.7	34.9	2	77,000	455	0
20/11/97	KZV006	1	4	Kitui Rd/Dunga Rd	Viwanda	5	5,800	59,100	0	64,900	103	30	73	408	8	17	25	446	90	536	0	25.8	7.5	18.3	8.7	1	64,900	536	536
20/11 average			8			5	19,440	33,025	700	45,437	270	93	177	132	8	26	34	224	153	358	27	25.6	6.6	19.0	18.4	1	60,583	477	288
21/11/97	KST976	1	13	Monrovia St/Wabera St	Starehe	3	8,700	42,300	200	51,200	201	52	149	161	11	18	29	224	167	391	0	15.5	4.0	11.5	15.8	1	51,200	391	0
21/11/97	KWP600	1	9	Langata Rd/Park Rd	Mugumoini/Viwanda	6	38,000	43,000	0	81,000	270	118	152	184	7	43	50	309	240	549	45	30.0	13.1	16.9	14.0	1	81,000	549	45
21/11/97	KZV006	1	8	King Rd/Kilimani Rd	Kilimani	4	23,500	51,000	0	74,500	196	81	115	349	6	17	23	436	132	568	0	24.5	10.1	14.4	8.8	1	74,500	568	0
21/11 average			10			4	23,400	45,433	200	68,900	222	84	139	231	8	26	34	323	180	503	15	23.3	9.1	14.2	12.9	1	68,900	503	15
22/11/97	KAE953R	1	4	Parliament Rd	Starehe	4	8,200	38,400	0	46,600	225	45	180	153	8	25	33	206	205	411	0	56.3	11.3	45.0	15.1	1	46,600	411	0
22/11/97	KWP600	1	7	Ngong Rd/Mwanzi Rd	Viwanda/Parklands	6	22,000	36,000	0	58,000	371	116	255	136	4	48	52	256	303	559	0	53.0	16.6	36.4	15.9	1	58,000	559	0
22/11 average			6			5	15,100	37,200		52,300	298	81	218	145	6	37	43	231	254	485	0	54.6	13.9	40.7	15.5	1	52,300	485	0
Average			15.4			4.9	16,488	33,533	914	48,672	260	90	176	123	10	36	47	232	191	424	24	37.6	6.7	30.9	18.8	1.2	57,119	496	52

City Bins (1/2)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance (m) Collection	Trans-portation	Inside the Dump Site	Total	Time (minutes) Collection Total	Collection Moving	Collection Loading	Trans-portation	Inside the Dump Site Moving	Inside the Dump Site Loading	Inside the Dump Site Total	Total Moving	Total Loading	Total Total	Idling	Average Collection Time (min./collection point) Total	Moving	Loading	Average Transportation Speed (km/hr.)	Daily Average Trips	Distance (m)	Time (min.)	Idling (min.)
12/11/97	AH850S	1	0	Shimo La Tewa Rd/Komorock Rd	Viwanda/Dandora	3	0	15,000	0	15,000	0	0	0	30	9	31	40	39	31	70	0				30.0				
12/11/97	AH850S	2	41	Latmata Rd/Mutari Rd	Parklands/Kilimani	3	50,500	14,800	0	65,300	414	182	232	35	0	0	0	217	232	449	0	10.1	4.4	5.7	25.4	2	80,300	519	0
12/11/97	KAD554J	1	67	Ole Sangale Rd/Muthangari Rd	Mugumoini	3	25,700	31,500	700	57,900	293	166	127	62	59	0	59	292	127	419	0	4.4	2.5	1.9	28.2	1	57,900	419	0
12/11/97	KAE636H	1	51	2nd Ave Parklands	Parklands/Dandora	3	12,200	23,500	600	36,300	150	77	73	64	5	55	60	160	128	288	14	2.9	1.5	1.4	22.0				
12/11/97	KAE636H	2	4	Komorock Rd/Enterprise	Viwanda/Dandora	3	5,400	37,200	500	43,100	84	18	66	74	6	15	21	120	81	201	22	21.0	4.5	16.5	30.2	2	79,400	489	36
12/11 Average			**32.6**			**3**	**23,450**	**24,400**	**600**	**43,520**	**188**	**111**	**125**	**54**	**7**	**34**	**45**	**166**	**120**	**285**	**7**	**9.6**	**3.2**	**6.4**	**27.2**	**2**	**72,533**	**476**	**12**
13/11/97	AH850S	1	0	Shimo La Tewa Rd	Viwanda/Dandora	3	0	13,700	0	13,700	0	0	0	29	2	34	36	31	34	65	0				28.3				
13/11/97	AH850S	2	61	Njong Rd/Kiara Rd	Kenyatta Golf Course/Kilimani	3	20,300	51,400	300	72,000	273	141	132	114	4	19	23	260	151	411	1	4.5	2.3	2.2	27.1	2	85,700	476	1
13/11/97	KAD554J	1	26	Argwings Khodek Rd	Kilimani/Kawangware	3	88,500	38,400	800	127,700	338	214	124	86	31	0	31	331	124	455	0	6.0	3.8	2.2	26.8	1	127,700	455	0
13/11/97	KAE636H	1	58	Masaba Rd/Mandera Rd	Kenyatta Golf Park/Kilimani	3	40,700	43,200	400	84,300	247	142	105	91	1	41	42	267	146	413	33	4.3	2.4	1.8	28.5	1	84,300	413	33
13/11 Average			**43.8**			**3**	**49,833**	**36,675**	**500**	**74,425**	**286**	**166**	**120**	**80**	**2**	**31**	**33**	**222**	**114**	**336**	**9**	**4.9**	**2.9**	**2.1**	**27.7**	**1**	**99,233**	**448**	**11**
14/11/97	AH850S	1	88	General Mathenge Drive	Kilimani/Parklands	3	35,100	56,400	500	92,000	398	188	210	62	9	31	40	259	241	500	0	4.5	2.1	2.4	54.6	1	92,000	500	0
14/11/97	KAD554J	1	70	General Mathenge Rd	Parklands	3	93,300	24,100	1,000	118,400	411	269	142	52	22	0	22	343	142	485	0	5.9	3.8	2.0	27.8	1	118,400	485	0
14/11/97	KAE636H	1	109	1st/2nd Parklands Ave	Eastleigh/Madiare	3	34,600	8,900	0	43,500	443	212	231	35	0	0	0	282	231	513	35	4.1	1.9	2.1	15.3	1	43,500	513	35
14/11 Average			**89.0**			**3**	**54,333**	**29,800**	**750**	**84,633**	**417**	**223**	**194**	**50**	**9**	**31**	**31**	**295**	**205**	**499**	**12**	**4.8**	**2.6**	**2.2**	**32.5**	**1**	**84,633**	**499**	**12**
15/11/97	AH850S	1	0	Enterprise Rd/Westland Rd	Viwanda/Starehe	4	23,100	37,200	900	61,200	267	61	206	101	7	80	87	169	286	455	0	29.7	6.8	22.9	22.1	1	61,200	455	0
15/11/97	KAE636H	1	2	Pate Rd/Lunga Lunga Rd	Viwanda/Dandora	3	600	15,800	300	16,700	13	3	10	65	6	43	49	74	53	127	0	6.5	1.5	5.0	14.6				
15/11/97	KAE636H	2	80	Ole shapara Ave/Kodi Rd	Viwanda/Mugumoini	4	25,000	41,500	1,200	67,700	250	138	112	89	9	23	32	236	135	371	0	3.1	1.7	1.4	28.0	2	84,400	498	0
15/11 Average			**30.3**			**4**	**16,233**	**31,500**	**800**	**48,533**	**177**	**67**	**109**	**85**	**7**	**49**	**56**	**160**	**158**	**318**	**0**	**13.1**	**3.3**	**9.8**	**21.6**	**2**	**72,800**	**477**	**0**
17/11/97	AH850S	1	78	Kirichwa Rd/Muhoho Rd	Mugumoini/Kariua/Kilimani	4	85,600	37,800	500	123,900	401	273	128	89	5	39	44	367	167	534	0	5.1	3.5	1.6	25.5	1	123,900	534	0
17/11/97	KAE636H	1	123	Masaba Rd/Ngong Rd	Kenyatta Golf Course	4	55,500	35,100	700	91,300	439	237	202	82	4	50	54	351	252	603	28	3.6	1.9	1.6	25.7	1	91,300	603	28
17/11 Average			**100.5**			**4**	**70,550**	**36,450**	**600**	**107,600**	**420**	**255**	**165**	**86**	**5**	**45**	**49**	**359**	**210**	**569**	**14**	**4.4**	**2.7**	**1.6**	**25.6**	**1**	**107,600**	**569**	**14**
18/11/97	AH850S	1	51	Spare Rd/Waiyaki way	Viwanda/Parklands	4	28,900	11,500	0	40,400	463	216	247	24	0	0	0	240	247	487	0	9.1	4.2	4.8	28.7	1	40,400	487	0
18/11/97	KAD 554J	1	45	General Mathenge Rd	Parklands	3	42,400	22,600	0	65,000	244	145	99	22	0	0	0	233	99	332	16	5.4	3.2	2.2	18.8	1	65,000	332	16
18/11/97	KAE636H	1	110	Waiyaki Rd/2nd Parklands Ave	Eastleigh/Madiare	3	38,700	9,600	0	48,300	502	212	290	52	0	0	0	264	290	554	0	4.6	1.9	2.6	11.1	1	48,300	554	0
18/11 Average			**69**			**3**	**36,667**	**14,567**	**0**	**51,233**	**403**	**191**	**212**	**49**	**0**	**0**	**0**	**246**	**212**	**458**	**5**	**6.4**	**3.1**	**3.2**	**19.6**	**1**	**51,233**	**458**	**5**
19/11/97	AH850S	1	0	Shimo La Tewa Rd	Viwanda/Dandora		0	24,900	0	24,900	0	0	0	53	6	34	40	59	34	93	0				28.2				
19/11/97	AH850S	2	34	Masan Rd/Ngao Rd	Parklands		12,300	44,500	0	56,800	306	115	191	89	0	0	0	224	191	415	20	9.0	3.4	5.6	30.0	2	83,700	208	20
19/11/97	KAD554J	1	35	Sungura Rd	Viwanda/Mugumoini	3	26,300	26,600	7,000	59,900	238	161	77	113	22	0	22	316	77	393	20	6.8	4.6	2.2	14.1	1	59,900	393	20

City Bins (2/2)

Date	Vehicle No.	Trip	Number of Collection Point	Route	Location	Number of Crew	Moving Distance(m) Collection	Moving Distance(m) Trans-portation	Moving Distance(m) Inside the Dump Site	Moving Distance(m) Total	Time (minutes) Collection Total	Time (minutes) Collection Moving	Time (minutes) Collection Loading	Time (minutes) Trans-portation	Time (minutes) Inside the Dump Site Moving	Time (minutes) Inside the Dump Site Loading	Time (minutes) Inside the Dump Site Total	Time (minutes) Total Moving	Time (minutes) Total Loading	Time (minutes) Total Total	Time (minutes) Idling	Average Collection Time (min./collection point) Total	Average Collection Time (min./collection point) Moving	Average Collection Time (min./collection point) Loading	Average Transportation Speed(km/hr.)	Daily Average Trips	Daily Average Distance (m)	Daily Average Time (min.)	Daily Average Idling (min.)
19/11/97	KAE636H	1	0	Komorock	Dandora	3	0	14,500	400	14,900	0	0	0	31	5	65	70	36	65	101	0				28.1				
19/11/97	KAE636H	2	48	Ole Shapara Ave/Kodi Rd	Kilimani	3	16,800	43,100	10,900	70,800	274	83	191	111	8	47	55	202	238	440	0	5.7	1.7	4.0	23.3	2	85,700	541	0
19/11 Average			**23.4**			**3**	**18,467**	**30,720**	**6,100**	**45,460**	**273**	**120**	**153**	**79**	**6**	**49**	**47**	**167**	**121**	**288**	**8**	**7.2**	**3.2**	**3.9**	**24.7**	**2**	**75,767**	**481**	**13**
20/11/97	KAH850S	1	0			3	0	13,800	700	14,500	0	0	0	27	54	0	54	81	0	81	0				30.7				
20/11/97	KAH850S	2	67	Langata Rd/Argwings Khodek Rd	Mugumoini/Kibera Woodly	3	86,700	22,700	0	109,400	376	268	108	46	0	0	0	314	108	422	0	5.6	4.0	1.6	29.6	2	123,900	503	0
20/11 Average			**33.5**			**3**	**86,700**	**18,250**	**700**	**61,950**	**376**	**268**	**108**	**37**	**27**	**0**	**27**	**198**	**108**	**252**	**0**	**5.6**	**4.0**	**1.6**	**30.1**	**2**	**123,900**	**503**	**0**
21/11/97	KAD554J	1	42	Waiyaki way	Kilimani/Parklands	3	35,600	44,800	7,000	87,400	174	115	59	118	45	0	45	278	59	337	0	4.1	2.7	1.4	22.8	1	87,400	337	0
Average			47.5			3.2	38,426	28,718	1,911	61,511	292	158	146	68	6	40	42	216	147	358	7	7.2	3.1	4.1	25.9	1.3	82,014	477	9