Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Emission Source Listing in AERMOD

Concrete Batching Plant

												RSP Emission Rate		FSP Emission Rate	
Source ID	**Source**	**Type**	**X**	**Y**	**Base Elevation (m)**	**Release Height (mAG)**	**No. of Vertices**	**Exit Temperature (K)**	**Exit Velocity (m/s)**	**Stack Diameter (m)**	**Working Hour**	**Working hours**	**Non-working hours**	**Working hours**	**Non-working hours**
CBP01	Cement Silo	POINT	843625.06	816758.09	6.00	27.30	-	0	6.91	0.32	07:00 - 19:00	1.8889E-03	0.0000E+00	8.5859E-04	0.0000E+00
CBP02	Cement Silo	POINT	843629.80	816753.35	6.00	27.30	-	0	6.91	0.32	07:00 - 19:00	1.8889E-03	0.0000E+00	8.5859E-04	0.0000E+00
CBP05	Cement Supp Silo	POINT	843618.65	816751.80	6.00	27.30	-	0	6.91	0.32	07:00 - 19:00	3.8519E-03	0.0000E+00	1.7508E-03	0.0000E+00
CBP06	Cement Supp Silo	POINT	843622.84	816747.56	6.00	27.30	-	0	6.91	0.32	07:00 - 19:00	3.8519E-03	0.0000E+00	1.7508E-03	0.0000E+00
CBP07	Cement Supp Silo	POINT	843627.13	816742.93	6.00	27.30	-	0	6.91	0.32	07:00 - 19:00	3.8519E-03	0.0000E+00	1.7508E-03	0.0000E+00
CBP08	Cement Weight	POINT	843614.08	816747.37	6.00	27.30	-	0	6.91	0.32	07:00 - 19:00	3.8519E-03	0.0000E+00	1.7508E-03	0.0000E+00
CBP09	Cement Weight	POINT	843617.55	816743.41	6.00	27.30	-	0	6.91	0.32	07:00 - 19:00	3.8519E-03	0.0000E+00	1.7508E-03	0.0000E+00
CBP10	Mixer	POINT	843599.11	816762.00	6.00	22.00	-	0	24.18	0.32	07:00 - 19:00	5.9179E-03	0.0000E+00	2.6899E-03	0.0000E+00
CBP11	Mixer	POINT	843608.33	816771.55	6.00	22.00	-	0	24.18	0.32	07:00 - 19:00	5.9179E-03	0.0000E+00	2.6899E-03	0.0000E+00
CBP12	Unloading Aggregate to Hopper	AREAPOLY	843582.80	816775.10	6.00	6.00	4	-	-	-	07:00 - 19:00	5.8955E-04	0.0000E+00	1.3810E-04	0.0000E+00
CBP_HR01	Paved Haul Road	AREAPOLY	843648.18	816742.66	6.00	0.50	4	-	-	-	07:00 - 19:00	2.5484E-05	0.0000E+00	6.1656E-06	0.0000E+00

Remarks:

1. The source parameters (exit temperature, velocity, stack diameter, and release height) are confirmed by Project Engineer.

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Location of Vertices for CBP AREAPOLY

	Vertex 1		Vertex 2		Vertex 3		Vertex 4	
Source ID	X	Y	X	Y	X	Y	X	Y
CBP_HR01	843648.18	816742.66	843578.29	816809.91	843582.45	816814.23	843652.34	816746.98
CBP12	843582.80	816775.10	843580.70	816773.00	843576.40	816777.10	843578.40	816779.30

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Concrete Batching Plant

Location	Source	Emission Rates	Unmitigated	Mitigated	Parameters		Remarks
Concrete Batching Plant	Dust Collector on Cement Silo Source ID: CBP01 - CBP02	Exhaust from Dust Collector			Maximum Emission Concentration (mg/m3)	10	by BPM 3/2 (16)
					Flow Rate (m3/hr)	2000	from design engineer
		RSP		**1.89E-03**	Ratio RSP to TSP (Controlled)	0.34	Refer to Table "RSP-to-TSP Ratio of Concrete Batching Process (by Emission Factors)" shown on P. 5 (Particle Size Distribution of Process) of Appendix 3.4
		FSP		**8.59E-04**	Ratio FSP to RSP (Controlled)	0.45	Refer to Table "Dust collector on Cement Silo / Cement Supplement Silo" shown on P. 5 (Particle Size Distribution of Process) of Appendix 3.4
	Dust Collector on Cement Supplement Silo & Weight Hoppers Source ID: CBP05 - CBP09	Exhaust from Dust Collector			Maximum Emission Concentration (mg/m3)	10	by BPM 3/2 (16)
					Flow Rate (m3/hr)	2600	from design engineer
		RSP		**3.85E-03**	Ratio RSP to TSP (Controlled)	0.53	Refer to Table "RSP-to-TSP Ratio of Concrete Batching Process (by Emission Factors)" shown on P. 5 (Particle Size Distribution of Process) of Appendix 3.4
		FSP		**1.75E-03**	Ratio FSP to RSP (Controlled)	0.45	Refer to Table "Dust collector on Cement Silo / Cement Supplement Silo" shown on P. 5 (Particle Size Distribution of Process) of Appendix 3.4
	Dust Collector on Mixer & Weight Hoppers Source ID: CBP10 - CBP11	Exhaust from Dust Collector			Maximum Emission Concentration (mg/m3)	10	by BPM 3/2 (16)
					Flow Rate (m3/hr)	7000	from design engineer
		RSP		**5.92E-03**	Ratio RSP to TSP (Controlled)	0.30	Refer to Table "RSP-to-TSP Ratio of Concrete Batching Process (by Emission Factors)" shown on P. 5 (Particle Size Distribution of Process) of Appendix 3.4
		FSP		**2.69E-03**	Ratio FSP to RSP (Controlled)	0.45	Refer to Table "Dust collector on Mixer & Weigh Hoppers" shown on P. 5 (Particle Size Distribution of Process) of Appendix 3.4
	Unloading of Aggregate to Hopper by Conveyor belt	Spoil handling (g/m^2·s)			Emission Factor (kg/Mg) = k*(0.0016)*(U/2.2)^1.3/(M/2)^1.4		from USEPA AP-42 Section 13.2.4, 11/06 ed.
					TSP Particle size multiplier, k	0.74	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					RSP Particle size multiplier, k	0.35	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					FSP Particle size multiplier, k	0.053	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					Moisture content, M (%)	4	provided by design engineer
					Average wind speed, U (m/s)	3.49	mean wind speed extracted from WRF (Grid 48,30)
					Loading rate of materials (Mg/hr)	255	from design engineer
					Area of the storage (m^2)	18.00	from design engineer
					Dust Suppression Efficiency for PM (6 - 10µm)	90	for dust suppression by water sprays from Table B.2.3, Appendix B.2, USEPA AP-42
					Dust Suppression Efficiency for PM (2.5 - 6µm)	65	
					Dust Suppression Efficiency for PM (0 - 2.5µm)	40	
	Source ID: CBP12				TSP emission factor, E (kg/Mg)	8.17E-04	by formula above
					RSP emission factor, E (kg/Mg)	3.86E-04	by formula above
		RSP		**5.90E-04**	FSP emission factor, E (kg/Mg)	5.85E-05	by formula above
		FSP		**1.38E-04**	Mitigated PM(>10µm) emission factor (kg/Mg)	4.30E-05	
					Mitigated PM(2.5 - 10µm) emission factor (kg/Mg)	1.15E-04	
					Mitigated PM(2.5) emission factor (kg/Mg)	3.51E-05	
					Mitigated PM(>10µm) emission rate (g/s)	3.05E-03	
					Mitigated PM(2.5 - 10µm) emission rate (g/s)	8.13E-03	
					Mitigated PM(2.5) emission rate (g/s)	2.49E-03	

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Surface Haul Roads Assessing Concrete Batching Plant

Location	Source	Emission Rates	Unmitigated	Mitigated	Parameters		Remarks
Surface Quarry	Paved Haul Road inside CBP	Paved Haul Road ($g/m^2 \cdot s$)			Emission factor (g/VKT) = k*(sL)^0.91*(W)^1.02		from USEPA AP-42, Section 13.2.1, 01/11 ed.
	Incoming & outgoing Mixer trucks CBP				RSP Particle size multiplier, k (g/VKT)	0.62	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					FSP Particle size multiplier, k (g/VKT)	0.15	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Road surface silt loading, sL (g/m2)	12	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Average truck weight, W (tons)	25	average of all unladen and laden trucks
					Number of trucks per hour (trucks/hr)	42	from engineer, incoming and outgoing cement tanker and all trucks to/from CBP
					Width of the road (m)	6	from engineer
					Dust removal efficiency (%)	91.7	watering every hour, the removal efficiency estimated based on USEPA Control of Open Fugitive dust sources (EPA-450/3-88-008), 9/92 ed, dust removal efficiency 91.7% refer to ERR of TKO137 Fill Bank under VEP-627/2023.
	Source ID: CBP_HR01						
		RSP	3.07E-04	**2.55E-05**	RSP emission factor, E (g/VKT)	1.58E+02	by formula above
		FSP	7.43E-05	**6.17E-06**	FSP emission factor, E (g/VKT)	3.81E+01	by formula above

Vehicle Movement in Concrete Batching Plant

Type of Vehicles	No. of Trips per Hour	Full load Weight (US ton)	Net Weight (US ton)
Cement tanker	1	46.3	15.4
Mixer Truck	24	33.1	12.1
Aggregate Truck	16	39.7	15.4
PFA Truck	1	43.0	15.4

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Particle Size Distribution of Process

RSP-to-TSP Ratio of Concrete Batching Process (by Emission Factors)

Source	Uncontrolled Emission Factor (kg/Mg)		Controlled Emission Factor (kg/Mg)		Uncontrolled RSP-to-TSP Ratio	Controlled RSP-to-TSP Ratio
	TSP	RSP	TSP	RSP		
Cement unloading to elevated storage silo (pneumatic)	0.36	0.24	0.00050	0.00017	0.6667	**0.3400**
Cement supplement unloading to elevated storage silo (pneumatic)	1.57	0.65	0.0045	0.0024	0.4140	**0.5333**
Weigh hopper loading	0.0026	0.0013	-	-	**0.5000**	-
Mixer loading (central mix)	0.286	0.078	0.0092	0.0028	0.2727	**0.3043**

Remark:

(a) Reference from Table 11.12-1 Emission Factors for Concrete Batching, Chapter 11.12 Concrete Batching, AP-42, USEPA (Version 01/12)

Particle Size Distribution of General Concrete Batching Process (Controlled by Fabric Filter)

Particale Size Range [a]	Average Partical Size [a]	% before Removal [a]	Removal Efficiency % [b]	% after Removal	Normalised Fraction [c]	Normalised Fraction for PM10 [c, d]
≤ 1.0	0.50	4	99.0%	0.04	7%	12%
1.0 - 2.0	1.50	7	99.0%	0.07	12%	21%
2.0 - 2.5	2.25	4	99.0%	0.04	7%	12%
2.5 - 3.0	2.75	3	99.5%	0.015	3%	5%
3.0 - 4.0	3.50	7	99.5%	0.035	6%	11%
4.0 - 5.0	4.50	5	99.5%	0.025	4%	8%
5.0 - 6.0	5.50	4	99.5%	0.02	3%	6%
6.0 - 10	8.00	17	99.5%	0.085	15%	26%
10 - 30	20.00	49	99.5%	0.245	43%	-

Remark:

(a) Derived from Table B.2.2 "Description of Particle Size Categories" for Category 3 “Mechanically Generated Aggregate, Unprocessed Ores”, Page B.2-13 of Appendix B.2 Generalized Particle Size Distributions, AP-42, USEPA (Version 1/95) (see below)

(b) Control efficiency of fabric filter on different size of particle refers to Table B.2-3 Typical Collection Efficiencies of Various Particulate Control Device, Appendix B.2 Generalized Particle Size Distributions, AP-42, USEPA (Version 1/95) (see below)

(c) Normalised Fraction = % after normal of each particale size range / sum of % after removal of all particle size ranges

(d) Sum of normalizsed fraction maintains 100% in air dispersion model by applying percentage in 6 decimal places.

Dust collector on Cement Silo / Cement Supplement Silo		for TSP	for RSP	for FSP
Particale Size Range	Average Partical Size	Percentage	Percentage	Percentage
≤ 1.0	0.50	N/A	12%	27%
1.0 - 2.0	1.50	N/A	21%	47%
2.0 - 2.5	2.25	N/A	12%	27%
2.5 - 3.0	2.75	N/A	5%	-
3.0 - 4.0	3.50	N/A	11%	-
4.0 - 5.0	4.50	N/A	8%	-
5.0 - 6.0	5.50	N/A	6%	-
6.0 - 10	8.00	N/A	26%	-
10.0 - 30.0	20.00	N/A	-	-

Remark:

(a) Size distribution for RSP refers to Normalised Fraction for PM10 of Table "Particle Size Distribution of General Concrete Batching Process (Controlled by Fabric Filter)"

Dust collector on Mixer & Weigh Hoppers		for TSP	for RSP	for FSP
Particale Size Range	Average Partical Size	Percentage	Percentage	Percentage
≤ 1.0	0.50	N/A	12%	27%
1.0 - 2.0	1.50	N/A	21%	47%
2.0 - 2.5	2.25	N/A	12%	27%
2.5 - 3.0	2.75	N/A	5%	-
3.0 - 4.0	3.50	N/A	11%	-
4.0 - 5.0	4.50	N/A	8%	-
5.0 - 6.0	5.50	N/A	6%	-
6.0 - 10	8.00	N/A	26%	-
10.0 - 30.0	20.00	N/A	-	-

Remark:

(a) Size distribution for RSP refers to Normalised Fraction for PM10 of Table "Particle Size Distribution of General Concrete Batching Process (Controlled by Fabric Filter)"

Paved Haul Road		for TSP	for RSP	for FSP
Particale Size Range	Average Partical Size	Percentage	Percentage	Percentage
≤ 2.5	1.25	N/A	24%	100%
2.5 - 10	6.25	N/A	76%	-
10 - 15	12.5	N/A	-	-
15 - 30	22.5	N/A	-	-

Remark: Derived from Table 13.2.1-1, Section 13.2.1, 1/11 ed., AP-42, USEPA

Unpaved Haul Road		for TSP	for RSP	for FSP
Particale Size Range	Average Partical Size	Percentage	Percentage	Percentage
≤ 2.5	1.25	N/A	10%	100%
2.5 - 10	6.25	N/A	90%	-
10 - 30	30	N/A	-	-

Remark: Derived from Page 13.2.2-4, Section 13.2.2, 11/06 ed., AP-42, USEPA

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Emission Source Listing in AERMOD

Tseung Kwan O Area 132 PFTF

											RSP Emission Rate		FSP Emission Rate	
Source ID	**Source**	**Type**	**X**	**Y**	**Base Elevation (m)**	**Release Height (mAG)**	**No. of Vertices**	**Exit Temperature (K)**	**Exit Velocity (m/s)**	**Working Hour**	**Working hours**	**Non-working hours**	**Working hours**	**Non-working hours**
PF01	Material Handling Area	AREAPOLY	843730.53	816901.97	6.00	0.50	5	-	-	08:00 - 20:00	5.2349E-05	1.2749E-06	1.2263E-05	1.9406E-07
PF02	Material Handling Area	AREAPOLY	843802.45	816832.92	6.00	0.50	4	-	-	08:00 - 20:00	1.6996E-05	1.2749E-06	3.9815E-06	1.9406E-07
PF04	Tipping Hall	AREAPOLY	843971.76	816795.13	6.00	25.00	4	-	-	08:00 - 20:00	2.7265E-05	0.0000E+00	6.3870E-06	0.0000E+00
PF05	Tipping Hall	AREAPOLY	843937.13	816759.06	6.00	25.00	4	-	-	08:00 - 20:00	2.7265E-05	0.0000E+00	6.3870E-06	0.0000E+00
PF06	Tipping Hall	AREAPOLY	843895.58	816715.78	6.00	25.00	4	-	-	08:00 - 20:00	2.7265E-05	0.0000E+00	6.3870E-06	0.0000E+00
PF07	Tipping Hall	AREAPOLY	843860.95	816679.71	6.00	25.00	4	-	-	08:00 - 20:00	2.7265E-05	0.0000E+00	6.3870E-06	0.0000E+00
PFTF_HR01	Paved Haul Road	AREAPOLY	843902.56	816741.04	6.00	0.50	12	-	-	08:00 - 20:00	5.0333E-04	0.0000E+00	1.2177E-04	0.0000E+00
PFTF_HR02	Paved Haul Road	AREAPOLY	843827.27	816656.88	6.00	0.50	4	-	-	08:00 - 20:00	1.5717E-04	0.0000E+00	3.8024E-05	0.0000E+00
PFTF_HR03	Paved Haul Road	AREAPOLY	843844.44	816679.27	6.00	0.50	12	-	-	08:00 - 20:00	1.2769E-04	0.0000E+00	3.0893E-05	0.0000E+00

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Location of Vertices for PFTF AREAPOLY

	Vertex 1		Vertex 2		Vertex 3		Vertex 4		Vertex 5		Vertex 6		Vertex 7		Vertex 8		Vertex 9		Vertex 10		Vertex 11		Vertex 12	
Source ID	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
PFTF_HR01	843902.56	816741.04	843732.89	816904.22	843696.05	816916.10	843664.30	816883.39	843627.78	816891.32	843598.73	816919.14	843601.50	816922.02	843629.74	816894.99	843662.98	816887.77	843694.91	816920.67	843735.00	816907.74	843905.33	816743.92
PFTF_HR02	843827.27	816656.88	843821.46	816662.39	843963.27	816811.91	843969.08	816806.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFTF_HR03	843844.44	816679.27	843744.68	816773.95	843740.80	816808.83	843686.64	816858.97	843647.22	816865.65	843594.69	816914.91	843597.43	816917.83	843649.07	816869.39	843688.49	816862.71	843744.61	816810.75	843748.49	816775.84	843847.20	816682.17
PF01	843730.53	816901.97	843795.23	816839.85	843754.83	816797.77	843763.72	816835.45	843713.22	816883.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF02	843802.45	816832.92	843876.97	816761.37	843825.03	816707.27	843750.50	816778.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF04	843971.76	816795.13	843993.40	816774.35	843965.70	816745.50	843944.06	816766.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF05	843937.13	816759.06	843958.77	816738.29	843931.07	816709.43	843909.43	816730.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF06	843895.58	816715.78	843917.22	816695.00	843889.52	816666.15	843867.88	816686.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF07	843860.95	816679.71	843882.59	816658.94	843854.89	816630.08	843833.25	816650.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Public Fill Transfer Facility

Location	Source	Emission Rates	Unmitigated	Mitigated	Parameters		Remarks
Public Fill Transfer Facility	**Materials Handling Areas**	Material handling ($g/m^2 \cdot s$)			Emission Factor (kg/Mg) = k*(0.0016)*(U/2.2)^1.3/(M/2)^1.4		from USEPA AP-42 Section 13.2.4, 11/06 ed.
					RSP Particle size multiplier, k	0.35	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					FSP Particle size multiplier, k	0.053	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					Moisture content, M (%)	2	from design engineer
					Average wind speed, U (m/s)	3.49	mean wind speed extracted from WRF (Grid 48,30)
					Handling rate (Mg/hr)	1192	from design engineer
					Area of the storage (m^2)	2500	from design engineer
					Dust Suppression Efficiency for PM (6 - 10µm)	90	for dust suppression by water sprays
					Dust Suppression Efficiency for PM (2.5 - 6µm)	65	from Table B.2.3, Appendix B.2, USEPA AP-42
					Dust Suppression Efficiency for PM (0 - 2.5µm)	40	
	Source ID: PF01						
		RSP		**5.23E-05**	RSP emission factor, E (kg/Mg)	1.02E-03	by formula above
					FSP emission factor, E (kg/Mg)	1.54E-04	by formula above
		FSP		**1.23E-05**	Mitigated PM(2.5 - 10µm) emission factor (kg/Mg)	3.03E-04	
					Mitigated PM(2.5) emission factor (kg/Mg)	9.26E-05	
					Mitigated PM(>10µm) emission rate (g/s)	3.76E-02	
					Mitigated PM(2.5 - 10µm) emission rate (g/s)	1.00E-01	
					Mitigated PM(2.5) emission rate (g/s)	3.07E-02	
	Materials Handling Areas	Material Handling ($g/m^2 \cdot s$)			Emission Factor (kg/Mg) = k*(0.0016)*(U/2.2)^1.3/(M/2)^1.4		from USEPA AP-42 Section 13.2.4, 11/06 ed.
					RSP Particle size multiplier, k	0.35	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					FSP Particle size multiplier, k	0.053	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					Moisture content, M (%)	2	from design engineer
					Average wind speed, U (m/s)	3.49	mean wind speed extracted from WRF (Grid 48,30)
					Handling rate (Mg/hr)	1192	from design engineer
					Area of the storage (m^2)	7700	from design engineer
					Dust Suppression Efficiency for PM (6 - 10µm)	90	for dust suppression by water sprays
					Dust Suppression Efficiency for PM (2.5 - 6µm)	65	from Table B.2.3, Appendix B.2, USEPA AP-42
					Dust Suppression Efficiency for PM (0 - 2.5µm)	40	
	Source ID: PF02						
		RSP		**1.70E-05**	RSP emission factor, E (kg/Mg)	1.02E-03	by formula above
					FSP emission factor, E (kg/Mg)	1.54E-04	by formula above
		FSP		**3.98E-06**	Mitigated PM(2.5 - 10µm) emission factor (kg/Mg)	3.03E-04	
					Mitigated PM(2.5) emission factor (kg/Mg)	9.26E-05	
					Mitigated PM(2.5 - 10µm) emission rate (g/s)	1.00E-01	
					Mitigated PM(2.5) emission rate (g/s)	3.07E-02	
	Unloading of Material at Barging Area	Material handling (g/m2/s)			Emission Factor (kg/Mg) = k*(0.0016)*(U/2.2)^1.3/(M/2)^1.4		from USEPA AP-42 Section 13.2.4, 11/06 ed.
					RSP Particle size multiplier, k	0.35	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					FSP Particle size multiplier, k	0.053	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					Moisture content, M (%)	2	from design engineer
					Average wind speed, U (m/s)	3.49	mean wind speed extracted from WRF (Grid 48,30)
					Handling rate (Mg/hr)	298	from design engineer
					Area of the storage (m^2)	1200	from design engineer
					Dust Suppression Efficiency for PM (6 - 10µm)	90	for dust suppression by water sprays
					Dust Suppression Efficiency for PM (2.5 - 6µm)	65	from Table B.2.3, Appendix B.2, USEPA AP-42
					Dust Suppression Efficiency for PM (0 - 2.5µm)	40	
	Source ID: PF04-PF07						
		RSP		**2.73E-05**	RSP emission factor, E (kg/Mg)	1.02E-03	by formula above
					FSP emission factor, E (kg/Mg)	1.54E-04	by formula above
		FSP		**6.39E-06**	Mitigated PM(2.5 - 10µm) emission factor (kg/Mg)	3.03E-04	
					Mitigated PM(2.5) emission factor (kg/Mg)	9.26E-05	
					Mitigated PM(2.5 - 10µm) emission rate (g/s)	2.51E-02	
					Mitigated PM(2.5) emission rate (g/s)	7.66E-03	
	Wind Erosion during	Wind Erosion ($g/m^2 \cdot s$)			Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100)		
	Source ID: PF01-PF02				TSP emission factor (Mg/hectare/yr)	0.85	AP-42, 5th ed., Table 11.9.4
					Percentage area actively operating (%)	100	
					Emission height (m)	0.5	
		RSP	**1.275E-06**		RSP emission factor (Mg/hectare/yr)	0.4021	
					% fraction of TSP	0.47	from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4
		FSP	**1.941E-07**		FSP emission factor (Mg/hectare/yr)	0.0612	
					% fraction of TSP	0.07	from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Surface Haul Roads assessing PFTF

Location	Source	Emission Rates	Unmitigated	Mitigated	Parameters		Remarks
Paved Haul Roads	Vehicular Movement on paved Haul Road	Paved Haul Road (g/m2·s)			Emission factor (g/VKT) = k*(sL)^0.91*(W)^1.02		from USEPA AP-42, Section 13.2.1, 01/11 ed.
					RSP Particle size multiplier, k (g/VKT)	0.62	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					FSP Particle size multiplier, k (g/VKT)	0.15	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Road surface silt loading, sL (g/m2)	70	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Average truck weight, W (tons)	33.0	full load weight of typical truck, refer to ERR of TKO137 Fill Bank under VEP-627/2023.
					Number of trucks per hour (trucks/hr)	83	from engineer
					Width of the road (m)	4	from engineer
					Dust removal efficiency (%)	91.7	watering every hour, the removal efficiency estimated based on USEPA Control of Open Fugitive dust sources (EPA-450/3-88-008), 9/92 ed, dust removal efficiency 91.7% refer to ERR of TKO137 Fill Bank under VEP-627/2023.
	Source ID: PFTF_HR01						
		RSP	6.06E-03	**5.03E-04**	RSP emission factor, E (g/VKT)	1.05E+03	by formula above
		FSP	1.47E-03	**1.22E-04**	FSP emission factor, E (g/VKT)	2.54E+02	by formula above
	Vehicular Movement on paved Haul Road	Paved Haul Road (g/m2·s)			Emission factor (g/VKT) = k*(sL)^0.91*(W)^1.02		from USEPA AP-42, Section 13.2.1, 01/11 ed.
					RSP Particle size multiplier, k (g/VKT)	0.62	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					FSP Particle size multiplier, k (g/VKT)	0.15	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Road surface silt loading, sL (g/m2)	70	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Average truck weight, W (tons)	20.8	Average value of full load weight and net weight of typical truck, refer to ERR of TKO137 Fill Bank under VEP-627/2023.
					Number of trucks per hour (trucks/hr)	83	from engineer
					Width of the road (m)	8	from engineer
					Dust removal efficiency (%)	91.7	watering every hour, the removal efficiency estimated based on USEPA Control of Open Fugitive dust sources (EPA-450/3-88-008), 9/92 ed, dust removal efficiency 91.7% refer to ERR of TKO137 Fill Bank under VEP-627/2023.
	Source ID: PFTF_HR02						
		RSP	1.89E-03	**1.57E-04**	RSP emission factor, E (g/VKT)	6.54E+02	by formula above
		FSP	4.58E-04	**3.80E-05**	FSP emission factor, E (g/VKT)	1.58E+02	by formula above
	Vehicular Movement on paved Haul Road	Paved Haul Road (g/m2·s)			Emission factor (g/VKT) = k*(sL)^0.91*(W)^1.02		from USEPA AP-42, Section 13.2.1, 01/11 ed.
					RSP Particle size multiplier, k (g/VKT)	0.62	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					FSP Particle size multiplier, k (g/VKT)	0.15	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Road surface silt loading, sL (g/m2)	70	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Average truck weight, W (tons)	8.6	net weight of typical truck, refer to ERR of TKO137 Fill Bank under VEP-627/2023.
					Number of trucks per hour (trucks/hr)	83	from engineer
					Width of the road (m)	4	from engineer
					Dust removal efficiency (%)	91.7	watering every hour, the removal efficiency estimated based on USEPA Control of Open Fugitive dust sources (EPA-450/3-88-008), 9/92 ed, dust removal efficiency 91.7% refer to ERR of TKO137 Fill Bank under VEP-627/2023.
	Source ID: PFTF_HR03						
		RSP	1.54E-03	**1.28E-04**	RSP emission factor, E (g/VKT)	2.66E+02	by formula above
		FSP	3.72E-04	**3.09E-05**	FSP emission factor, E (g/VKT)	6.43E+01	by formula above

Vehicle Movement at PFTF

Type of Vehicles	**Full load Weight (US ton)**	**Net Weight (US ton)**
Typical Truck	33	8.6

Remark: refer to ERR of TKO137 Fill Bank under VEP-627/2023.

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Emission Source Listing in AERMOD

Tseung Kwan O Area 132 CWHF

													RSP Emission Rate		FSP Emission Rate	
Source ID	**Source**	**Type**	**X**	**Y**	**Base Elevation (m)**	**Release Height (mAG)**	**No. of Vertices**	**Radius (m)**	**Exit Temperature (K)**	**Exit Velocity (m/s)**	**Stack Diameter (m)**	**Working Hour**	**Working hours**	**Non-working hours**	**Working hours**	**Non-working hours**
CW01	Ancillary Building Area / Reception Area	AREAPOLY	843719.38	817032.86	6.00	20.00	4	-	-	-	-	08:00 - 22:00	2.8699E-06	1.2749E-06	6.7230E-07	1.9406E-07
CW02	Barging facility	AREAPOLY	843950.84	816867.20	6.00	0.50	4	-	-	-	-	08:00 - 22:00	1.8103E-06	1.2749E-06	4.2406E-07	1.9406E-07
CW03	Crushing	Point	843837.31	816878.13	6.00	20.00	-	-	0	1.00	0.5	08:00 - 22:00	1.6071E-03	0.0000E+00	2.9762E-04	0.0000E+00
CW04	Screening	Point	843883.18	816836.65	6.00	20.00	-	-	0	1.00	0.5	08:00 - 22:00	2.2024E-03	0.0000E+00	1.4881E-04	0.0000E+00
CWHF_HR01	Paved Haul Road	AREAPOLY	843762.51	816885.34	6.00	0.50	8	-	-	-	-	08:00 - 22:00	3.5149E-05	0.0000E+00	8.5037E-06	0.0000E+00
CWHF_HR02	Paved Haul Road	AREAPOLY	843763.42	816884.79	6.00	0.50	8	-	-	-	-	08:00 - 22:00	2.1951E-05	0.0000E+00	5.3107E-06	0.0000E+00
CWHF_HR03	Paved Haul Road	AREAPOLY	843818.28	816941.66	6.00	0.50	8	-	-	-	-	08:00 - 22:00	8.9169E-06	0.0000E+00	2.1573E-06	0.0000E+00
CWHF_HR04	Paved Haul Road	AREAPOLY	843664.84	816979.39	6.00	0.50	8	-	-	-	-	08:00 - 22:00	8.9169E-06	0.0000E+00	2.1573E-06	0.0000E+00

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Location of Vertices for CWHF AREAPOLY

	Vertex 1		Vertex 2		Vertex 3		Vertex 4		Vertex 5		Vertex 6		Vertex 7		Vertex 8	
Source ID	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
CWHF_HR01	843762.51	816885.34	843758.79	816888.90	843661.05	816982.45	843657.33	816986.01	843664.45	816993.45	843668.17	816989.89	843765.92	816896.34	843769.64	816892.78
CWHF_HR02	843763.42	816884.79	843756.06	816892.00	843759.67	816895.67	843814.79	816951.94	843818.40	816955.62	843825.76	816948.41	843822.15	816944.73	843767.03	816888.47
CWHF_HR03	843818.28	816941.66	843814.57	816945.24	843715.28	817041.06	843711.58	817044.64	843718.73	817052.05	843722.44	817048.48	843821.72	816952.65	843825.43	816949.07
CWHF_HR04	843664.84	816979.39	843657.31	816986.42	843660.82	816990.18	843715.02	817048.28	843718.53	817052.04	843726.06	817045.02	843722.55	817041.25	843668.35	816983.16
CW01	843719.38	817032.86	843806.59	816949.13	843762.69	816903.40	843675.47	816987.13	-	-	-	-	-	-	-	-
CW02	843950.84	816867.20	844063.39	816984.42	844121.10	816929.01	844008.55	816811.79	-	-	-	-	-	-	-	-

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Construction Waste Handling Facility

Location	Source	Emission Rates	Unmitigated	Mitigated	Parameters		Remarks
Construction Waste Handling Facility	**Unloading of Construction Waste at Ancillary Building Area / Reception Area**	Material handling ($g/m^2 \cdot s$)			Emission Factor (kg/Mg) = k*(0.0016)*(U/2.2)^1.3/(M/2)^1.4		from USEPA AP-42 Section 13.2.4, 11/06 ed.
					RSP Particle size multiplier, k	0.35	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					FSP Particle size multiplier, k	0.053	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					Moisture content, M (%)	2	from design engineer
					Average wind speed, U (m/s)	3.49	mean wind speed extracted from WRF (Grid 48,30)
					Handling rate (Mg/hr)	214	from design engineer
					Area of the storage (m^2)	8200	from design engineer
					Dust Suppression Efficiency for PM (6 - 10µm)	90	for dust suppression by water sprays
					Dust Suppression Efficiency for PM (2.5 - 6µm)	65	from Table B.2.3, Appendix B.2, USEPA AP-42
					Dust Suppression Efficiency for PM (0 - 2.5µm)	40	
	Source ID: CW01						
		RSP		**2.87E-06**	RSP emission factor, E (kg/Mg)	1.02E-03	by formula above
					FSP emission factor, E (kg/Mg)	1.54E-04	by formula above
		FSP		**6.72E-07**	Mitigated PM(2.5 - 10µm) emission factor (kg/Mg)	3.03E-04	
					Mitigated PM(2.5) emission factor (kg/Mg)	9.26E-05	
					Mitigated PM(2.5 - 10µm) emission rate (g/s)	1.80E-02	
					Mitigated PM(2.5) emission rate (g/s)	5.51E-03	
	Loading and unloading of Construction Waste at Barging facility	Material Handling ($g/m^2 \cdot s$)			Emission Factor (kg/Mg) = k*(0.0016)*(U/2.2)^1.3/(M/2)^1.4		from USEPA AP-42 Section 13.2.4, 11/06 ed.
					RSP Particle size multiplier, k	0.35	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					FSP Particle size multiplier, k	0.053	from USEPA AP-42 Section 13.2.4, 11/06 ed.
					Moisture content, M (%)	2	from design engineer
					Average wind speed, U (m/s)	3.49	mean wind speed extracted from WRF (Grid 48,30)
					Handling rate (Mg/hr)	214	from design engineer
					Area of the storage (m^2)	13000	from design engineer
					Dust Suppression Efficiency for PM (6 - 10µm)	90	for dust suppression by water sprays
					Dust Suppression Efficiency for PM (2.5 - 6µm)	65	from Table B.2.3, Appendix B.2, USEPA AP-42
					Dust Suppression Efficiency for PM (0 - 2.5µm)	40	
	Source ID: CW02						
		RSP		**1.81E-06**	RSP emission factor, E (kg/Mg)	1.02E-03	by formula above
					FSP emission factor, E (kg/Mg)	1.54E-04	by formula above
		FSP		**4.24E-07**	Mitigated PM(2.5 - 10µm) emission factor (kg/Mg)	3.03E-04	
					Mitigated PM(2.5) emission factor (kg/Mg)	9.26E-05	
					Mitigated PM(2.5 - 10µm) emission rate (g/s)	1.80E-02	
					Mitigated PM(2.5) emission rate (g/s)	5.51E-03	
	Over-sized Material Crushing	Crushing (g/s)			Handling rate (Mg/hr)	214	from engineer
					Dust removal efficiency (%)	90.0	enclosure with dust collector, with reference to Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities, 3/98 ed, Section 3.3.6 (90% for conservative assumption)
	Source ID: CW03						
		RSP	1.61E-02	**1.61E-03**	RSP emission factor (kg/Mg)	2.70E-04	wet suppression, controlled RSP emission factor for tertiary crushing is used, with reference to USEPA AP-42, Section 11.19.2, 8/04 ed, Table 11.19.2-1
		FSP	2.98E-03	**2.98E-04**	FSP emission factor (kg/Mg)	5.00E-05	wet suppression, controlled FSP emission factor for tertiary crushing is used, with reference to USEPA AP-42, Section 11.19.2, 8/04 ed, Table 11.19.2-1
	Screening and sieving after the Crushing and Shredding Processes	Screening (g/s)			Handling rate (Mg/hr)	214	from engineer
					Dust removal efficiency (%)	90.0	enclosure with dust collector, with reference to Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities, 3/98 ed, Section 3.3.6 (90% for conservative assumption)
	Source ID: CW04						
		RSP	2.20E-02	**2.20E-03**	RSP emission factor (kg/Mg)	3.70E-04	wet suppression, controlled RSP emission factor for screening is used, with reference to USEPA AP-42, Section 11.19.2, 8/04 ed, Table 11.19.2-1
		FSP	1.49E-03	**1.49E-04**	FSP emission factor (kg/Mg)	2.50E-05	wet suppression, controlled FSP emission factor for screening is used, with reference to USEPA AP-42, Section 11.19.2, 8/04 ed, Table 11.19.2-1
	Wind Erosion during non-working hours	Wind Erosion ($g/m^2 \cdot s$)			Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100)		
					TSP emission factor (Mg/hectare/yr)	0.85	AP-42, 5th ed., Table 11.9.4
	Source ID: CW01-CW02				Percentage area actively operating (%)	100	
					Emission height (m)	0.5	
		RSP	**1.275E-06**		RSP emission factor (Mg/hectare/yr)	0.4021	
					% fraction of TSP	0.47	from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4
		FSP	**1.941E-07**		FSP emission factor (Mg/hectare/yr)	0.0612	
					% fraction of TSP	0.07	from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Surface Haul Roads assessing CWHF

Location	Source	Emission Rates	Unmitigated	Mitigated	Parameters		Remarks
Paved Haul Roads	Vehicular Movement on paved Haul Road	Paved Haul Road (g/m2·s)			Emission factor (g/VKT) = k*(sL)^0.91*(W)^1.02		from USEPA AP-42, Section 13.2.1, 01/11 ed.
					TSP Particle size multiplier, k (g/VKT)	3.23	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					RSP Particle size multiplier, k (g/VKT)	0.62	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					FSP Particle size multiplier, k (g/VKT)	0.15	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Road surface silt loading, sL (g/m2)	70	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Average truck weight, W (tons)	33.0	full load weight of typical truck, refer to ERR of TKO137 Fill Bank under VEP-627/2023.
					Number of trucks per hour (trucks/hr)	15	from engineer
					Width of the road (m)	10.3	from engineer
					Dust removal efficiency (%)	91.7	watering every hour, the removal efficiency estimated based on USEPA Control of Open Fugitive dust sources (EPA-450/3-88-008), 9/92 ed, dust removal efficiency 91.7% refer to ERR of TKO137 Fill Bank under VEP-627/2023.
	Source ID: CWHF_HR01						
		RSP	4.23E-04	**3.51E-05**	RSP emission factor, E (g/VKT)	1.05E+03	by formula above
		FSP	1.02E-04	**8.50E-06**	FSP emission factor, E (g/VKT)	2.54E+02	by formula above
	Vehicular Movement on paved Haul Road	Paved Haul Road (g/m2·s)			Emission factor (g/VKT) = k*(sL)^0.91*(W)^1.02		from USEPA AP-42, Section 13.2.1, 01/11 ed.
					TSP Particle size multiplier, k (g/VKT)	3.23	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					RSP Particle size multiplier, k (g/VKT)	0.62	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					FSP Particle size multiplier, k (g/VKT)	0.15	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Road surface silt loading, sL (g/m2)	70	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Average truck weight, W (tons)	20.8	Average value of full load weight and net weight of typical truck, refer to ERR of TKO137 Fill Bank under VEP-627/2023.
					Number of trucks per hour (trucks/hr)	15	from engineer
					Width of the road (m)	10.3	from engineer
					Dust removal efficiency (%)	91.7	watering every hour, the removal efficiency estimated based on USEPA Control of Open Fugitive dust sources (EPA-450/3-88-008), 9/92 ed, dust removal efficiency 91.7% refer to ERR of TKO137 Fill Bank under VEP-627/2023.
	Source ID: CWHF_HR02						
		RSP	2.64E-04	**2.20E-05**	RSP emission factor, E (g/VKT)	6.54E+02	by formula above
		FSP	6.40E-05	**5.31E-06**	FSP emission factor, E (g/VKT)	1.58E+02	by formula above
	Vehicular Movement on paved Haul Road	Paved Haul Road (g/m2·s)			Emission factor (g/VKT) = k*(sL)^0.91*(W)^1.02		from USEPA AP-42, Section 13.2.1, 01/11 ed.
					TSP Particle size multiplier, k (g/VKT)	3.23	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					RSP Particle size multiplier, k (g/VKT)	0.62	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					FSP Particle size multiplier, k (g/VKT)	0.15	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Road surface silt loading, sL (g/m2)	70	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Average truck weight, W (tons)	8.6	net weight of typical truck, refer to ERR of TKO137 Fill Bank under VEP-627/2023.
					Number of trucks per hour (trucks/hr)	15	from engineer
					Width of the road (m)	10.3	from engineer
					Dust removal efficiency (%)	91.7	watering every hour, the removal efficiency estimated based on USEPA Control of Open Fugitive dust sources (EPA-450/3-88-008), 9/92 ed, dust removal efficiency 91.7% refer to ERR of TKO137 Fill Bank under VEP-627/2023.
	Source ID: CWHF_HR03						
		RSP	1.07E-04	**8.92E-06**	RSP emission factor, E (g/VKT)	2.66E+02	by formula above
		FSP	2.60E-05	**2.16E-06**	FSP emission factor, E (g/VKT)	6.43E+01	by formula above
	Vehicular Movement on paved Haul Road	Paved Haul Road (g/m2·s)			Emission factor (g/VKT) = k*(sL)^0.91*(W)^1.02		from USEPA AP-42, Section 13.2.1, 01/11 ed.
					TSP Particle size multiplier, k (g/VKT)	3.23	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					RSP Particle size multiplier, k (g/VKT)	0.62	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					FSP Particle size multiplier, k (g/VKT)	0.15	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Road surface silt loading, sL (g/m2)	70	from USEPA AP-42, Section 13.2.1, 01/11 ed.
					Average truck weight, W (tons)	8.6	net weight of typical truck, refer to ERR of TKO137 Fill Bank under VEP-627/2023.
					Number of trucks per hour (trucks/hr)	15	from engineer
					Width of the road (m)	10.3	from engineer
					Dust removal efficiency (%)	91.7	watering every hour, the removal efficiency estimated based on USEPA Control of Open Fugitive dust sources (EPA-450/3-88-008), 9/92 ed, dust removal efficiency 91.7% refer to ERR of TKO137 Fill Bank under VEP-627/2023.
	Source ID: CWHF_HR04						
		RSP	1.07E-04	**8.92E-06**	RSP emission factor, E (g/VKT)	2.66E+02	by formula above
		FSP	2.60E-05	**2.16E-06**	FSP emission factor, E (g/VKT)	6.43E+01	by formula above

Vehicle Movement in CWHF

Type of Vehicles	Full load Weight (US ton)	Net Weight (US ton)
Typical Truck	33.0	8.6

Remark

[1] The full load weight and net weight of a typical truck refer to ERR of TKO137 Fill Bank under VEP-627/2023.

[2] CWHF_HR01 will be used for fully-loaded trucks, so the average truck weight is 33 US tons.

CWHF_HR02 will be used for both fully-loaded trucks and unladen trucks, so the average truck weight is 20.8 US tons.

CWHF_HR03 and CWHF_HR04 will be used for unladen trucks, so the average wieghts are 8.6 US tons.

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
								PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC	HGV9	NFB9	
CBP_HR01	CBP_HR01	-	10	10	Y	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	0700-0800	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	0800-0900	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	0900-1000	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1000-1100	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1100-1200	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1200-1300	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1300-1400	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1400-1500	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1500-1600	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1600-1700	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1700-1800	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1800-1900	42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CBP_HR01	CBP_HR01	-	10	10	Y	1900-2000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	2000-2100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	2100-2200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	2200-2300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CBP_HR01	CBP_HR01	-	10	10	Y	2300-0000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0700-0800	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	0800-0900	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	0900-1000	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1000-1100	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1100-1200	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1200-1300	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1300-1400	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1400-1500	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1500-1600	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1600-1700	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1700-1800	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1800-1900	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	1900-2000	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	2000-2100	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	2100-2200	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
CWHF_HR01	CWHF_HR01	-	10	10	N	2200-2300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR01	CWHF_HR01	-	10	10	N	2300-0000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0700-0800	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	0800-0900	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	0900-1000	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1000-1100	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1100-1200	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1200-1300	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1300-1400	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1400-1500	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1500-1600	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1600-1700	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1700-1800	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1800-1900	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	1900-2000	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	2000-2100	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	2100-2200	15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR02	CWHF_HR02	-	10	10	N	2200-2300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR02	CWHF_HR02	-	10	10	N	2300-0000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
								PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC	HGV9	NFB9	
CWHF_HR03	CWHF_HR03	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	0700-0800	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	0800-0900	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	0900-1000	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1000-1100	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1100-1200	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1200-1300	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1300-1400	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1400-1500	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1500-1600	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1600-1700	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1700-1800	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1800-1900	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	1900-2000	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	2000-2100	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	2100-2200	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR03	CWHF_HR03	-	10	10	N	2200-2300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR03	CWHF_HR03	-	10	10	N	2300-0000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0700-0800	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	0800-0900	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	0900-1000	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1000-1100	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1100-1200	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1200-1300	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1300-1400	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1400-1500	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1500-1600	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1600-1700	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1700-1800	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1800-1900	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	1900-2000	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	2000-2100	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	2100-2200	15	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
CWHF_HR04	CWHF_HR04	-	10	10	N	2200-2300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
CWHF_HR04	CWHF_HR04	-	10	10	N	2300-0000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0700-0800	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	0800-0900	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	0900-1000	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1000-1100	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1100-1200	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1200-1300	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1300-1400	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1400-1500	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1500-1600	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1600-1700	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1700-1800	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1800-1900	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	1900-2000	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100%
PFTF_HR01	PFTF_HR01	-	10	10	N	2000-2100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	2100-2200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	2200-2300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR01	PFTF_HR01	-	10	10	N	2300-0000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
								PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC	HGV9	NFB9	
PFTF_HR02	PFTF_HR02	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	0700-0800	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	0800-0900	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	0900-1000	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1000-1100	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1100-1200	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1200-1300	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1300-1400	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1400-1500	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1500-1600	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1600-1700	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1700-1800	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1800-1900	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	1900-2000	83	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR02	PFTF_HR02	-	10	10	N	2000-2100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	2100-2200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	2200-2300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR02	PFTF_HR02	-	10	10	N	2300-0000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0700-0800	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	0800-0900	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	0900-1000	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1000-1100	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1100-1200	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1200-1300	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1300-1400	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1400-1500	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1500-1600	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1600-1700	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1700-1800	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1800-1900	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	1900-2000	83	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
PFTF_HR03	PFTF_HR03	-	10	10	N	2000-2100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	2100-2200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	2200-2300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
PFTF_HR03	PFTF_HR03	-	10	10	N	2300-0000	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR01	RTS_HR01	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR01	RTS_HR01	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR01	RTS_HR01	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR01	RTS_HR01	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR01	RTS_HR01	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR01	RTS_HR01	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR01	RTS_HR01	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR01	RTS_HR01	-	10	10	N	0700-0800	99	16.16%	0.00%	0.00%	44.44%	16.16%	7.07%	13.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.03%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	0800-0900	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	0900-1000	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1000-1100	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1100-1200	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1200-1300	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1300-1400	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1400-1500	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1500-1600	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1600-1700	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1700-1800	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1800-1900	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	1900-2000	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	2000-2100	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	2100-2200	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	2200-2300	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR01	RTS_HR01	-	10	10	N	2300-0000	87	14.94%	0.00%	0.00%	47.13%	17.24%	5.75%	11.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.45%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR02	RTS_HR02	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR02	RTS_HR02	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
								PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC	HGV9	NFB9	
RTS_HR02	RTS_HR02	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR02	RTS_HR02	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR02	RTS_HR02	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR02	RTS_HR02	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR02	RTS_HR02	-	10	10	N	0700-0800	99	16.16%	0.00%	0.00%	44.44%	16.16%	7.07%	13.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.03%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	0800-0900	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	0900-1000	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1000-1100	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1100-1200	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1200-1300	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1300-1400	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1400-1500	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1500-1600	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1600-1700	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1700-1800	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1800-1900	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	1900-2000	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	2000-2100	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	2100-2200	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	2200-2300	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR02	RTS_HR02	-	10	10	N	2300-0000	87	14.94%	0.00%	0.00%	47.13%	17.24%	5.75%	11.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.45%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR03	RTS_HR03	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR03	RTS_HR03	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR03	RTS_HR03	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR03	RTS_HR03	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR03	RTS_HR03	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR03	RTS_HR03	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR03	RTS_HR03	-	10	10	N	0700-0800	99	16.16%	0.00%	0.00%	44.44%	16.16%	7.07%	13.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.03%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	0800-0900	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	0900-1000	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1000-1100	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1100-1200	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1200-1300	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1300-1400	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1400-1500	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1500-1600	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1600-1700	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1700-1800	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1800-1900	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	1900-2000	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	2000-2100	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	2100-2200	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	2200-2300	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR03	RTS_HR03	-	10	10	N	2300-0000	87	14.94%	0.00%	0.00%	47.13%	17.24%	5.75%	11.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.45%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR04	RTS_HR04	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR04	RTS_HR04	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR04	RTS_HR04	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR04	RTS_HR04	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR04	RTS_HR04	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR04	RTS_HR04	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR04	RTS_HR04	-	10	10	N	0700-0800	99	16.16%	0.00%	0.00%	44.44%	16.16%	7.07%	13.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.03%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	0800-0900	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	0900-1000	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1000-1100	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1100-1200	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1200-1300	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1300-1400	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1400-1500	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1500-1600	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1600-1700	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1700-1800	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1800-1900	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	1900-2000	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	2000-2100	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	2100-2200	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	2200-2300	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR04	RTS_HR04	-	10	10	N	2300-0000	87	14.94%	0.00%	0.00%	47.13%	17.24%	5.75%	11.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.45%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR05	RTS_HR05	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR05	RTS_HR05	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR05	RTS_HR05	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%

Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
								PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC	HGV9	NFB9	
RTS_HR05	RTS_HR05	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR05	RTS_HR05	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR05	RTS_HR05	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR05	RTS_HR05	-	10	10	N	0700-0800	99	16.16%	0.00%	0.00%	44.44%	16.16%	7.07%	13.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.03%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	0800-0900	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	0900-1000	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1000-1100	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1100-1200	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1200-1300	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1300-1400	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1400-1500	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1500-1600	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1600-1700	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1700-1800	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1800-1900	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	1900-2000	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	2000-2100	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	2100-2200	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	2200-2300	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR05	RTS_HR05	-	10	10	N	2300-0000	87	14.94%	0.00%	0.00%	47.13%	17.24%	5.75%	11.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.45%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	0000-0100	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR06	RTS_HR06	-	10	10	N	0100-0200	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR06	RTS_HR06	-	10	10	N	0200-0300	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR06	RTS_HR06	-	10	10	N	0300-0400	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR06	RTS_HR06	-	10	10	N	0400-0500	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR06	RTS_HR06	-	10	10	N	0500-0600	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR06	RTS_HR06	-	10	10	N	0600-0700	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
RTS_HR06	RTS_HR06	-	10	10	N	0700-0800	99	16.16%	0.00%	0.00%	44.44%	16.16%	7.07%	13.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.03%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	0800-0900	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	0900-1000	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1000-1100	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1100-1200	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1200-1300	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1300-1400	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1400-1500	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1500-1600	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1600-1700	201	15.42%	0.00%	0.50%	44.28%	15.92%	6.97%	13.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1700-1800	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1800-1900	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	1900-2000	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	2000-2100	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	2100-2200	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	2200-2300	172	15.12%	0.00%	0.58%	47.67%	16.86%	5.81%	11.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	0.00%	100%
RTS_HR06	RTS_HR06	-	10	10	N	2300-0000	87	14.94%	0.00%	0.00%	47.13%	17.24%	5.75%	11.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.45%	0.00%	100%

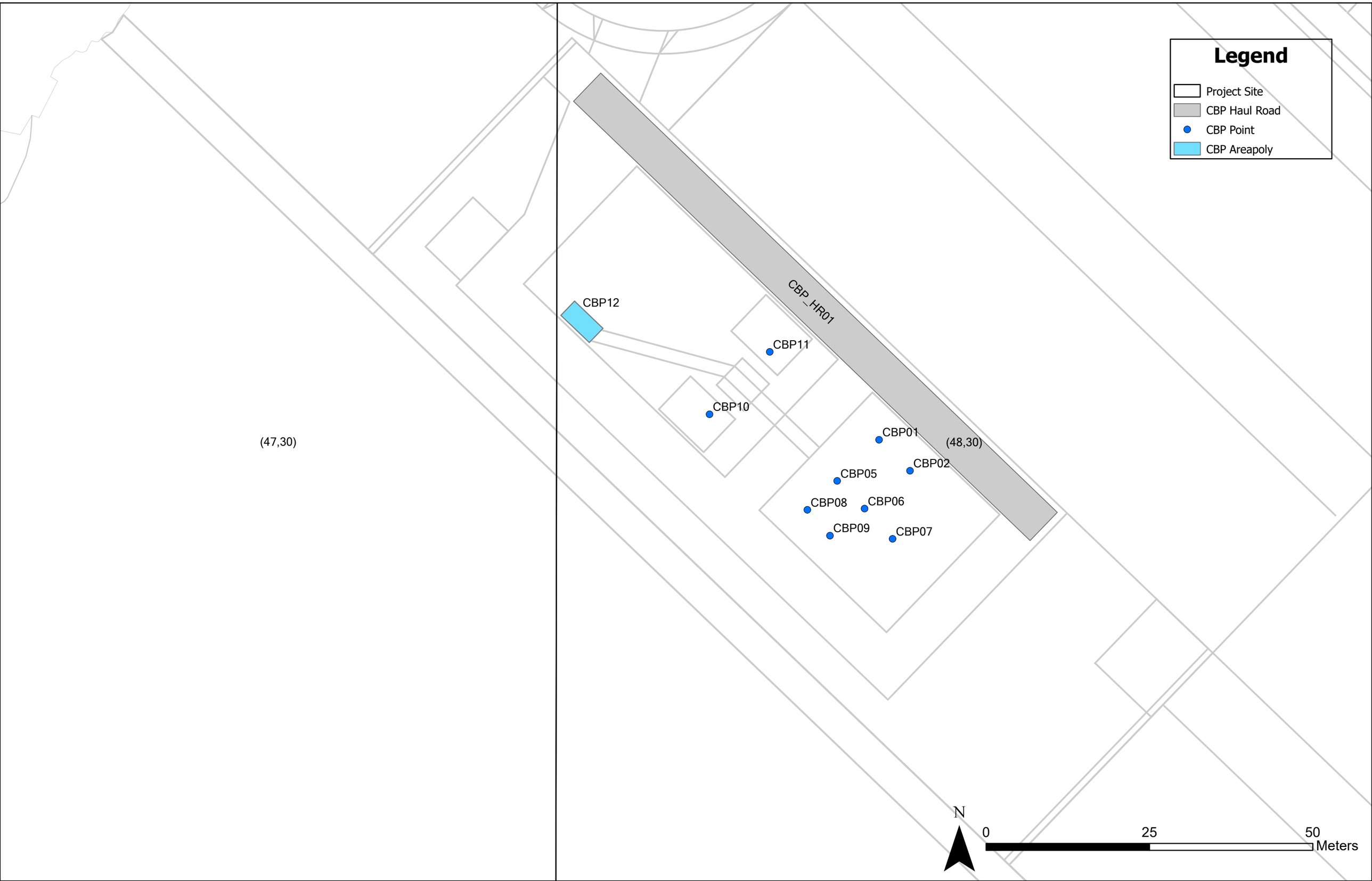
Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Road ID	SegmentID	Xcoordinate ofendpoint1	Ycoordinate ofendpoint1	Xcoordinate ofendpoint2	Ycoordinate ofendpoint2	Road height(mAG)	Physical Road width (m)	Road elevation (m)	Barrier 1 width (m)	Barrier 1 height(m)	Barrier 1 DCL (m)	Barrier 2 width (m)	Barrier 2 height(m)	Barrier 2 DCL (m)
CWHF_HR01	CWHF_HR01	843664.6135	816986.1695	843762.3548	816892.6197	0.00	10.30	6.00						
CWHF_HR02	CWHF_HR02	843818.4725	816948.3353	843763.3465	816892.0698	0.00	10.30	6.00						
CWHF_HR03	CWHF_HR03	843818.1474	816948.9438	843718.8600	817044.7699	0.00	10.30	6.00						
CWHF_HR04	CWHF_HR04	843718.7834	817044.7654	843664.5849	816986.6702	0.00	10.30	6.00						
PFTF_HR01	PFTF_HR01	843601.5569	816919.1971	843628.7597	816893.1592	0.00	4.00	6.00						
PFTF_HR01	PFTF_HR01	843628.7597	816893.1592	843663.6372	816885.5771	0.00	4.00	6.00						
PFTF_HR01	PFTF_HR01	843663.6372	816885.5771	843695.4819	816918.3868	0.00	4.00	6.00						
PFTF_HR01	PFTF_HR01	843695.4819	816918.3868	843733.9437	816905.9798	0.00	4.00	6.00						
PFTF_HR01	PFTF_HR01	843733.9437	816905.9798	843902.5065	816743.8678	0.00	4.00	6.00						
PFTF_HR02	PFTF_HR02	843963.4233	816806.2503	843827.1158	816662.5384	0.00	8.00	6.00						
PFTF_HR03	PFTF_HR03	843844.3690	816682.0949	843746.5833	816774.8962	0.00	4.00	6.00						
PFTF_HR03	PFTF_HR03	843746.5833	816774.8962	843742.7061	816809.7909	0.00	4.00	6.00						
PFTF_HR03	PFTF_HR03	843742.7061	816809.7909	843687.5638	816860.8406	0.00	4.00	6.00						
PFTF_HR03	PFTF_HR03	843687.5638	816860.8406	843648.1457	816867.5180	0.00	4.00	6.00						
PFTF_HR03	PFTF_HR03	843648.1457	816867.5180	843597.5161	816915.0010	0.00	4.00	6.00						
CBP_HR01	CBP_HR01	843648.0900	816746.9000	843582.5300	816809.9900	0.00	6.00	6.00						
RTS_HR01	RTS_HR01	843619.8498	816852.0226	843652.7965	816848.0132	0.00	10.30	6.00						
RTS_HR02	RTS_HR02	843652.7965	816848.0132	843815.7397	816691.8067	0.00	10.30	6.00						
RTS_HR03	RTS_HR03	843815.7397	816691.8067	843763.5305	816636.2292	0.00	10.30	6.00						
RTS_HR04	RTS_HR04	843763.5305	816636.2292	843672.1165	816721.2752	0.00	10.30	6.00						
RTS_HR05	RTS_HR05	843672.1165	816721.2752	843699.1516	816749.4338	0.00	10.30	6.00						
RTS_HR06	RTS_HR06	843699.1516	816749.4338	843615.5118	816829.5075	0.00	10.30	6.00						

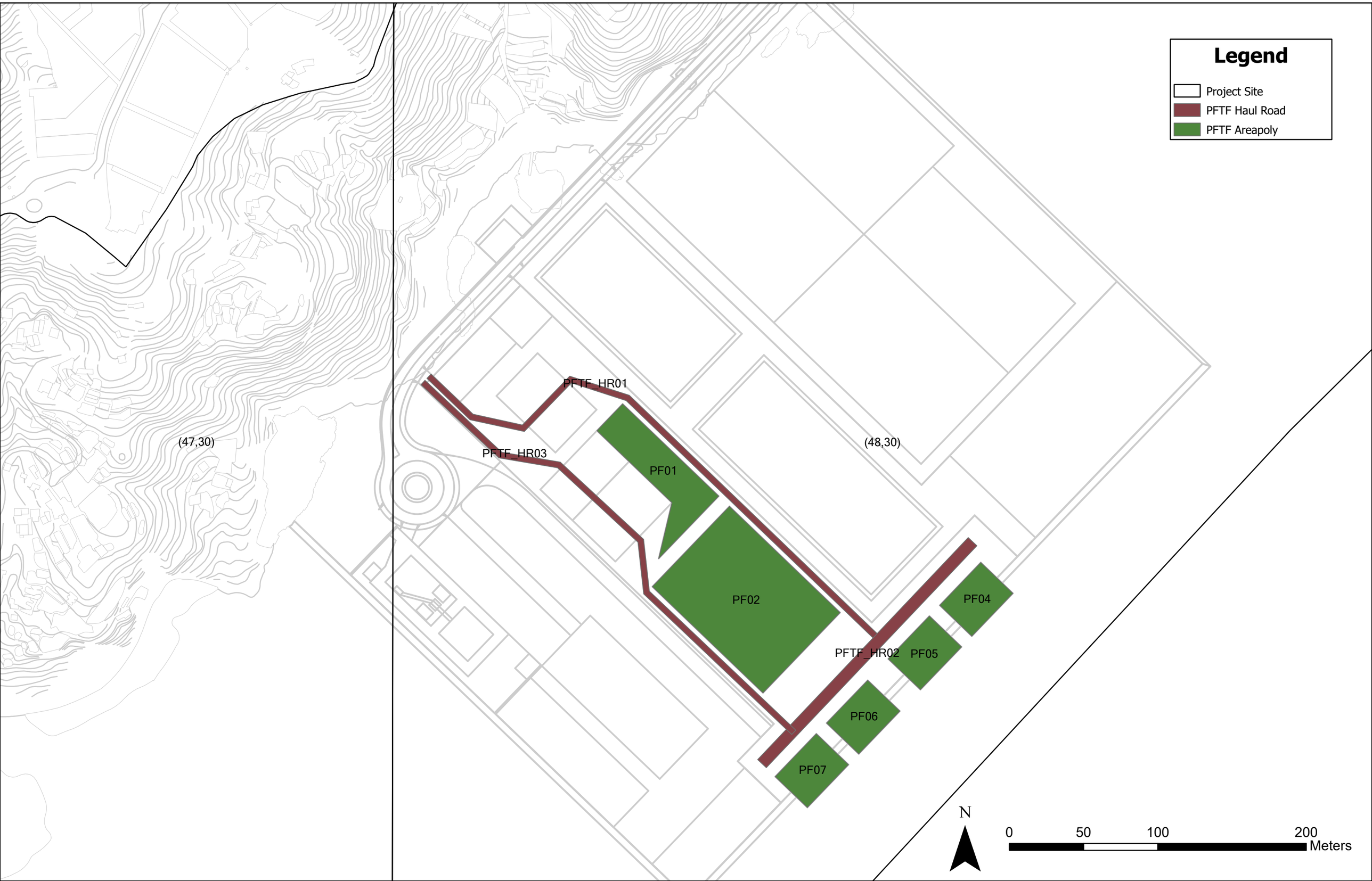
Appendix 3.4 Calculation of TKO132 CBP, PFTF, CWHF and RTS

Start Profile	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t
	PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC	HGV9	NFB9
Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

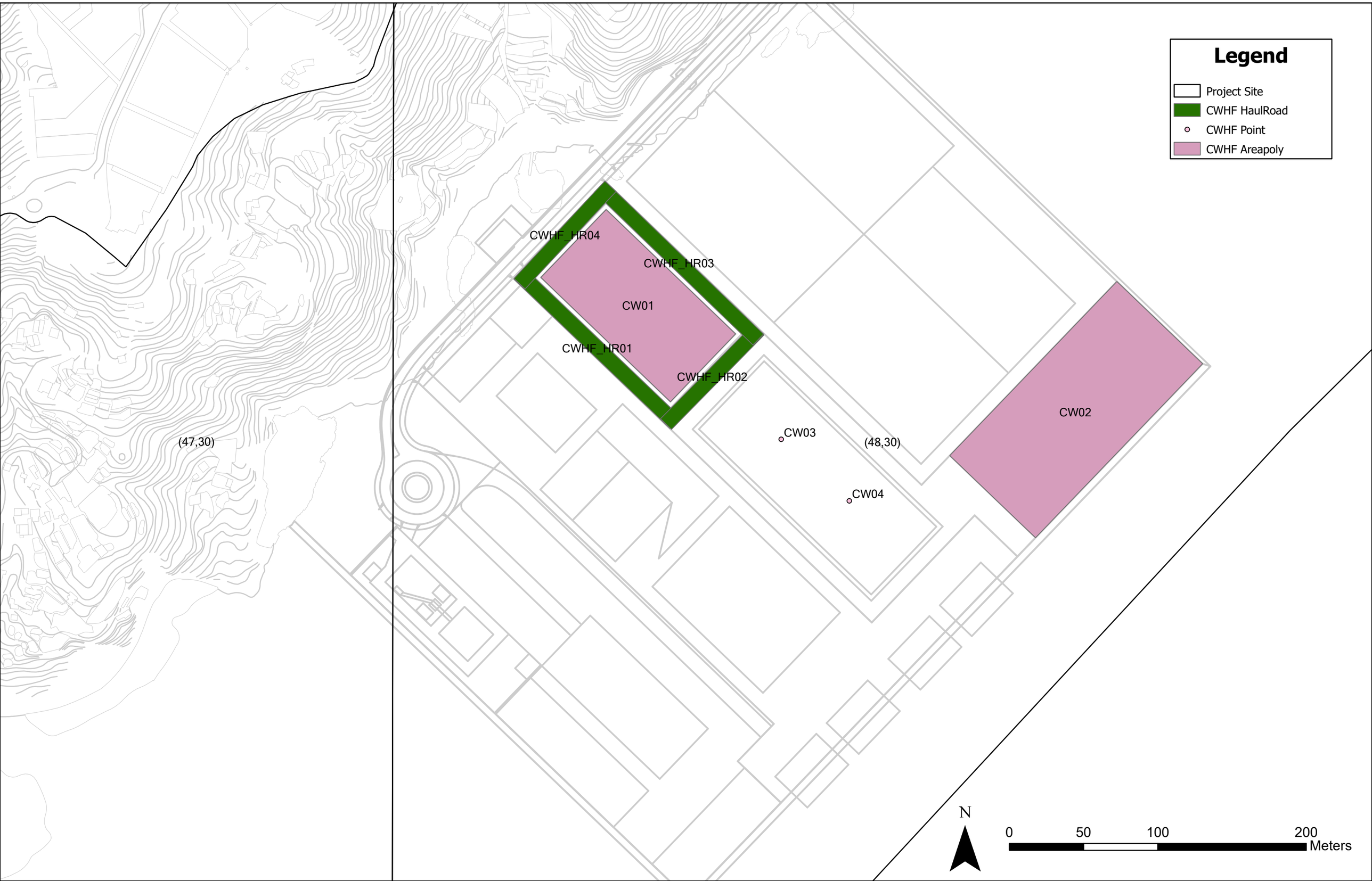
Location of TKO132 Concrete Batching Plant



Location of TKO132 Public Fill Transfer Facility



Location of TKO132 Construction Waste Handling Facility



Location of TKO132 Refuse Transfer Station