

13 Appendix

13.1 Continuous Analyser graphs

Figure 13-1 Results of Automatic Monitoring for Nitrogen Dioxide Brighton & Hove 2000 to 2008: Comparison with Annual Mean Objective

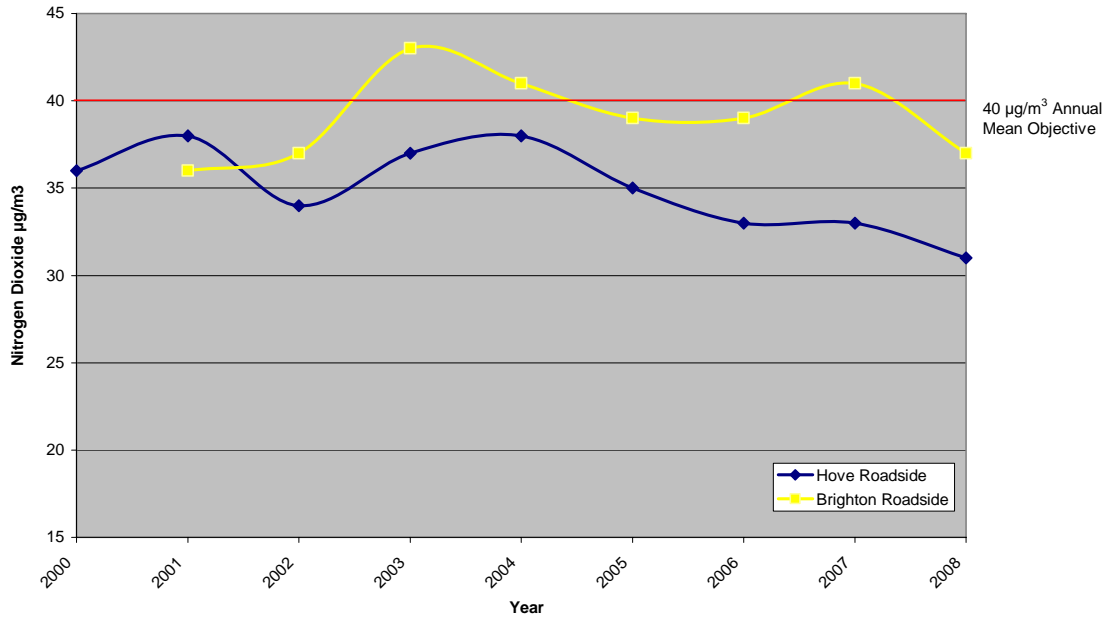
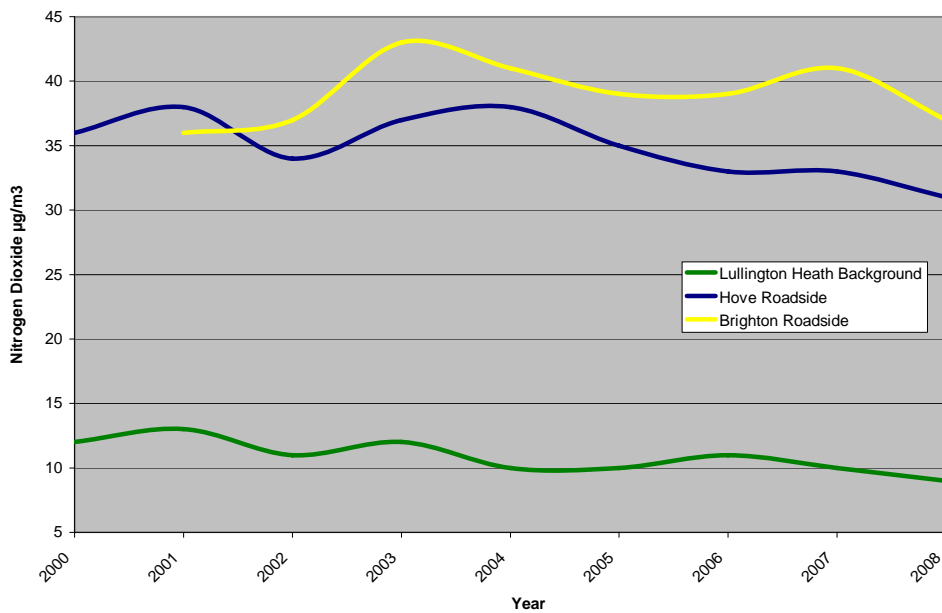


Figure 13-2 Results of Automatic Monitoring for Nitrogen Dioxide Brighton & Hove 2000 to 2008: Comparison with Sussex Background



13.2 AQMA Diffusion Tube Results

Table 13-1 Nitrogen Dioxide Diffusion Tubes 2006-2008 in order of 2008 concentration (Tubes listed measure above 36 $\mu\text{g}/\text{m}^3$ in 2008).

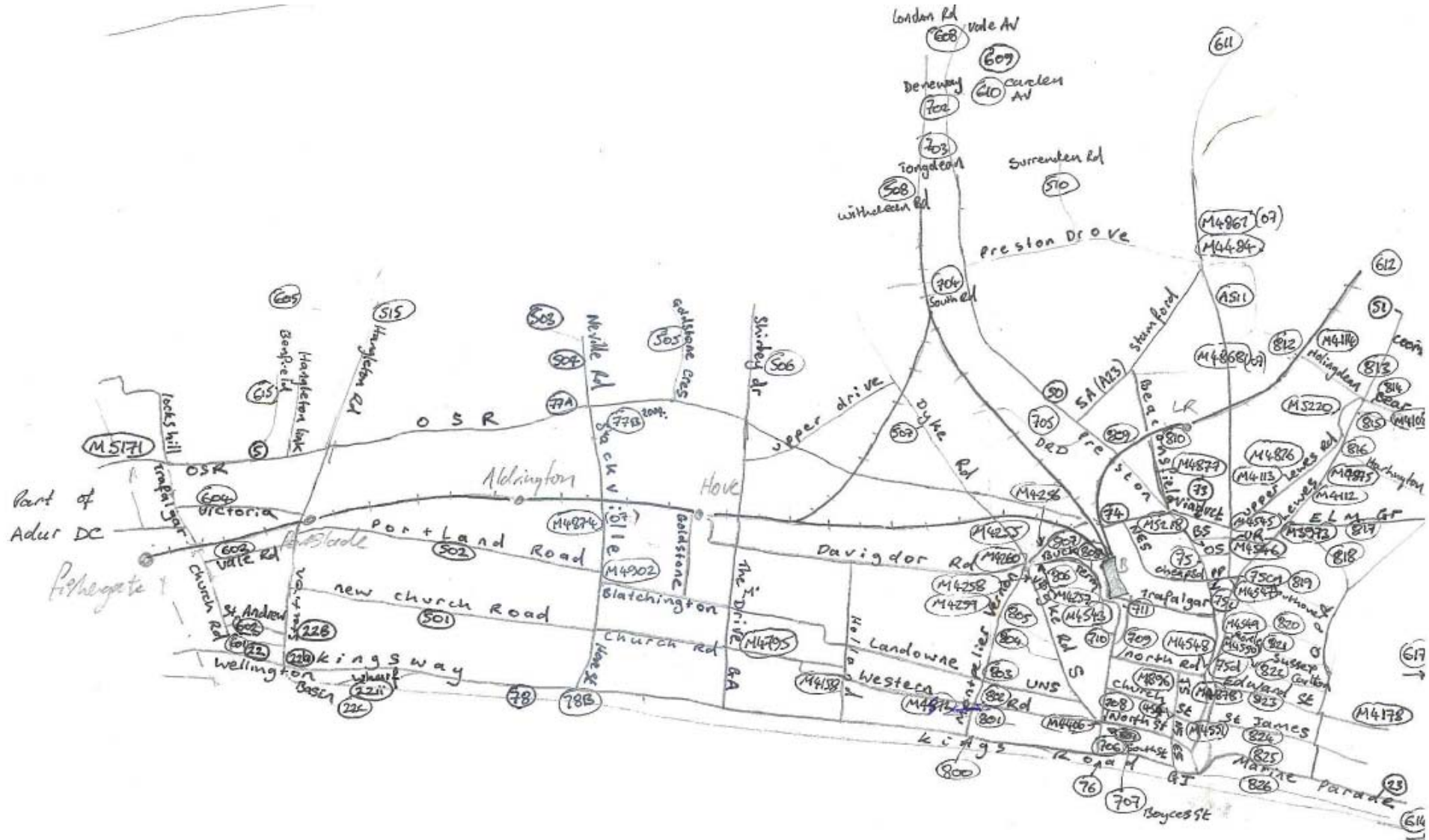
Diffusion Tube (DT) Number	Location	DT Type	Annual mean concentrations ($\mu\text{g}/\text{m}^3$) Adjusted for bias		
			2006	2007	2008
DT 77	North Street	F	73.4	45.9	60.2
DT 30	Lewes Road Central	F	56.9	52.6	53.9
DT 76	Western Road East	F	64.5	54.4	53.1
DT 24	Viaduct Terrace	F	61.5	54.4	50.9
DT 11*	York Place	R	51.8	49.2	49.7
DT 06	Terminus Rd	F	59.1	53.5	49.6
DT 74	Lower Old Shoreham Rd	F	52.9	46.7	49.5
DT 05	Queens Road North	F	57.7	53.4	49.0
DT 17	London Road West	F	60.9	ND	48.0
DT 09	Marlborough Place	F	52.2	53.0	46.6
DT 73	Chatham Place	F	46.9	45.0	45.7
DT 40	St James Street	F	42.3	41.5	43.3
DT 31	Hollingdean Road	F	53.6	44.4	43.1
DT 25	Ditchling Road North	F	49.1	43.6	42.1
DT 16	New England Road	F	52.2	ND	41.8
DT 13	Oxford Place	F	48.0	42.6	41.7
DT 10	Gloucester Place	F	48.3	45.0	41.5
DT 38	Grand Parade North	F	52.6	43.3	41.3
DT 32	Lewes Road North	F	ND	38.9	40.9
DT 69	Buckingham Place	F	47.0	42.2	40.9
DT 08	Grand Parade South	F	52.0	45.0	40.3
DT 27	Ditchling Road Central	F	45.7	42.3	40.0
DT 43	Eastern Rd Hospital	F	ND	41.3	40.0
DT 75	Western Road West	F	44.3	48.6	40.0
DT 04*	Queens Road South	R	43.3	49.6	39.7
DT 29	Lewes Road South	F	43.2	42.8	39.2
DT 18	London Road East	F	44.3	ND	38.9
DT 23	Viaduct Road Central	F	44.4	44.4	38.9
DT 02*	Kings Road	R	41.6	40.1	38.2
DT 59	Wellington Road	R	39.2	38.7	38.2
DT 12	St Peters Place	F	43.8	40.6	36.8
DT 61	Portland Road	S	41.2	35.9	36.7
DT 22	Beaconsfield Road	F	46.2	40.8	36.5
DT 66	Dyke Road/Powis Grove	F	ND	32.7	36.4
DT 19	Preston Road	F	45.5	39.8	36.1
DT 44	Eastern Road Clinic	F	ND	37.2	36.0

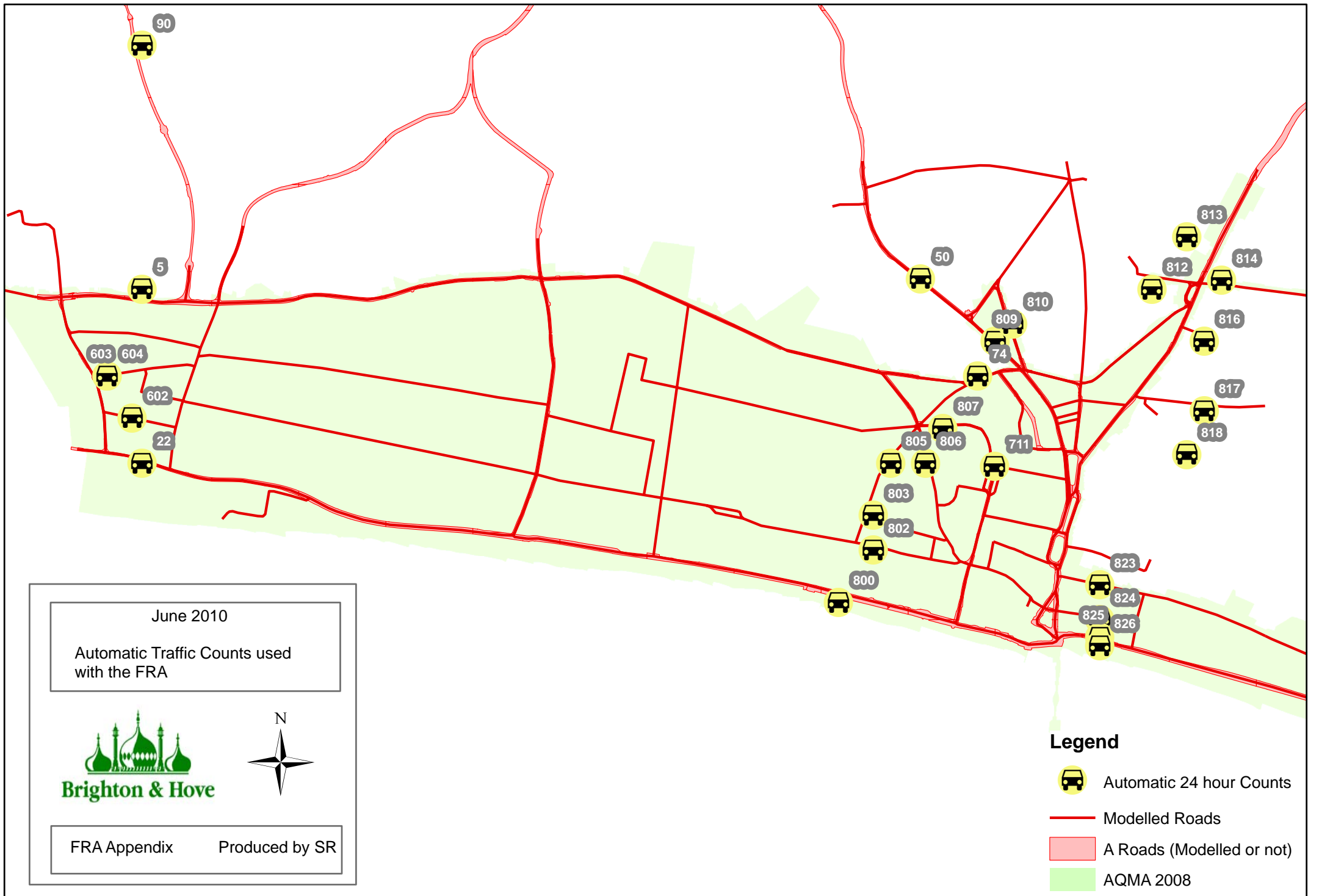
*As there are over sixty tube records in 2008 only those exceeding 36 $\mu\text{g}/\text{m}^3$ are included here. Roadside tubes (advance of the established building line) have been adjusted using the LAQM (TG09) kerbside calculator this applies to 2008 values for; DT02, DT04 and DT11.

Values in bold breach the annual mean objective.

Where: DT Type R = Roadside, F = Façade, S = School and B = Background.

Appendix 13.3 Working Trace of Roads and Traffic Surveys for the 2010 Further Review and Assessment





90

5

603 604

602

22

50

810

809

74

807

805

806

711

803

802

800

813

812

814

816

817

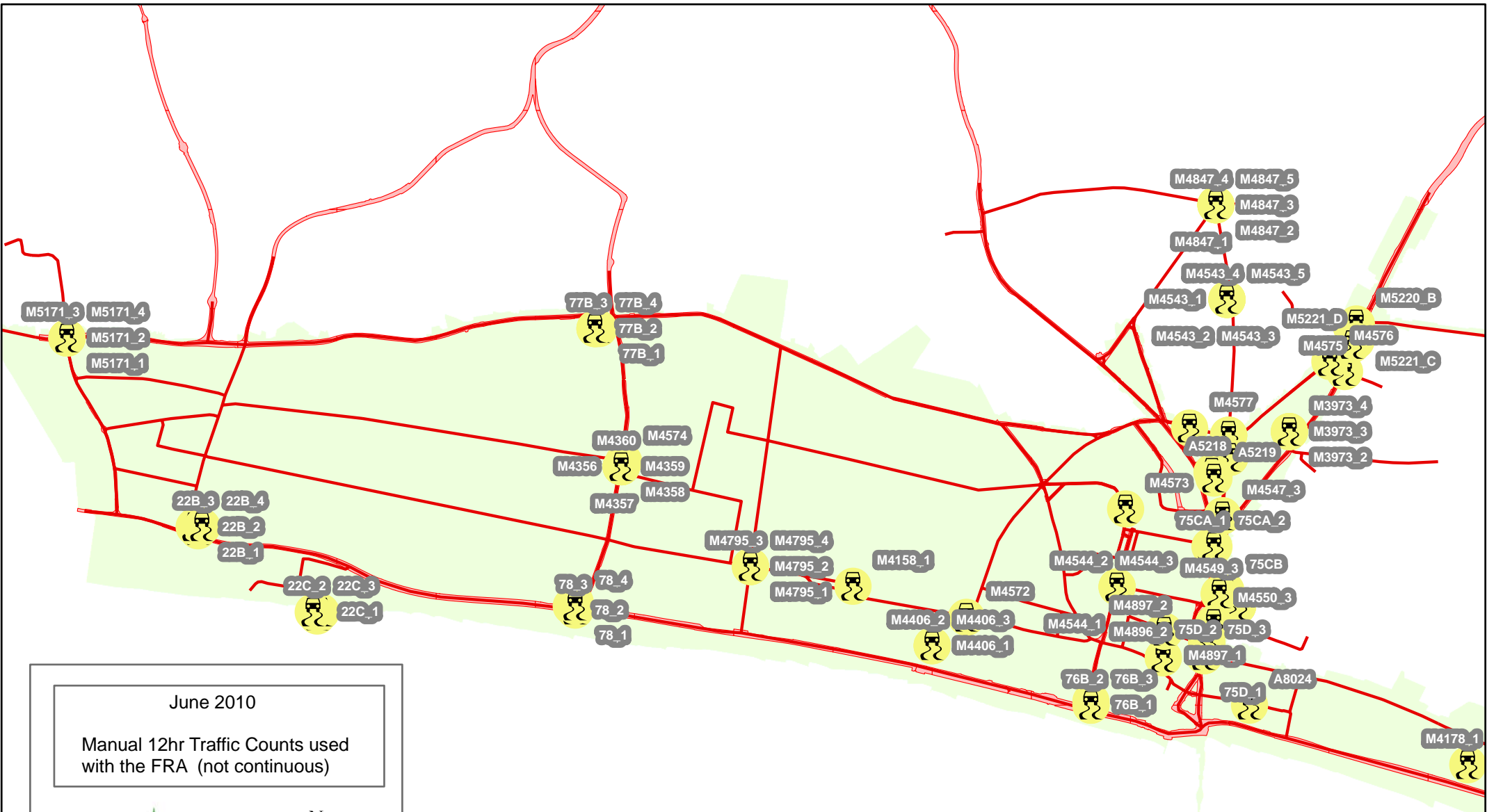
818

823

824

825

826



June 2010





Manual 12hr Traffic Counts used with the FRA (not continuous)



FRA Appendix

Produced by SR

Legend

-  Manual 12 Hour Counts
-  Modelled Roads
-  A Roads (Modelled or not)
-  AQMA 2008

June 2010

Manual 12hr Traffic Counts




Central Area

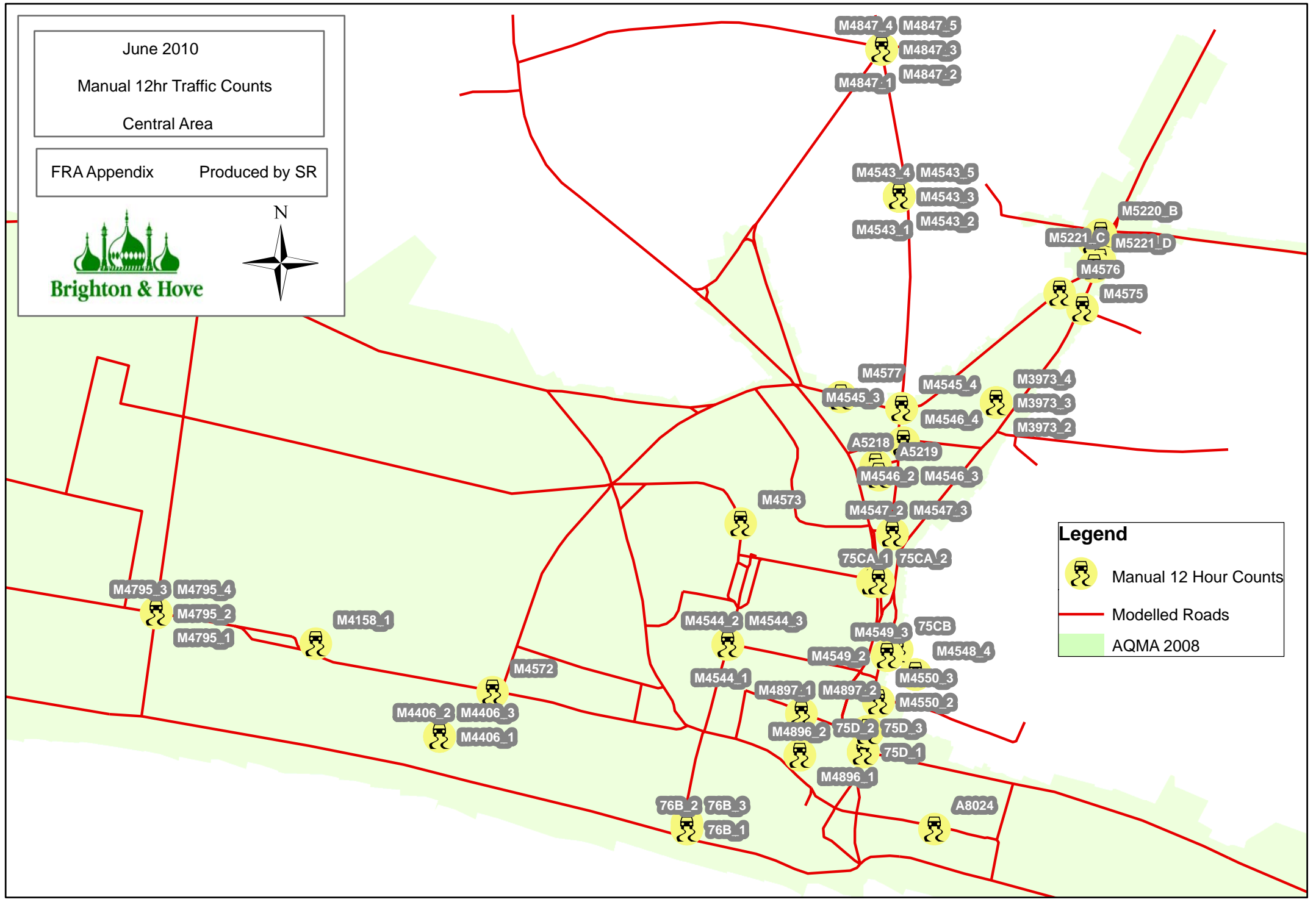
FRA Appendix

Produced by SR



Legend

-  Manual 12 Hour Counts
-  Modelled Roads
-  AQMA 2008

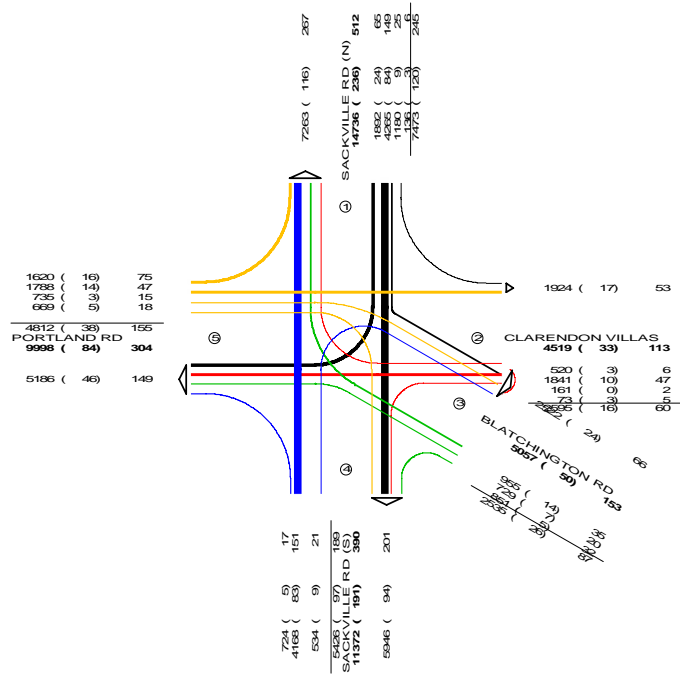


Appendix 13.7 Examples of Manual Turning Counts (Raw Data) Adjusted to 2008 for use with the FRA, Emission Inventory and Dispersion Model

M4902
 site : M4902
 place : SACKVILLE RD/PORTLAND RD/BLATCHINGTO
 date : Thursday, 27/09/2007
 block : 07:00 - 19:00 hrs

G.R.528433 - 105203

- 1 SACKVILLE RD (N)
- 2 CLARENDON VILLAS
- 3 BLATCHINGTON RD
- 4 SACKVILLE RD (S)
- 5 PORTLAND RD

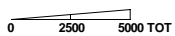


TOT (HGV) OGV

TOT=P/C + M/C + CAR + LGV + RUP + RP + ART + BUS + M/B

HGV=RP + ART

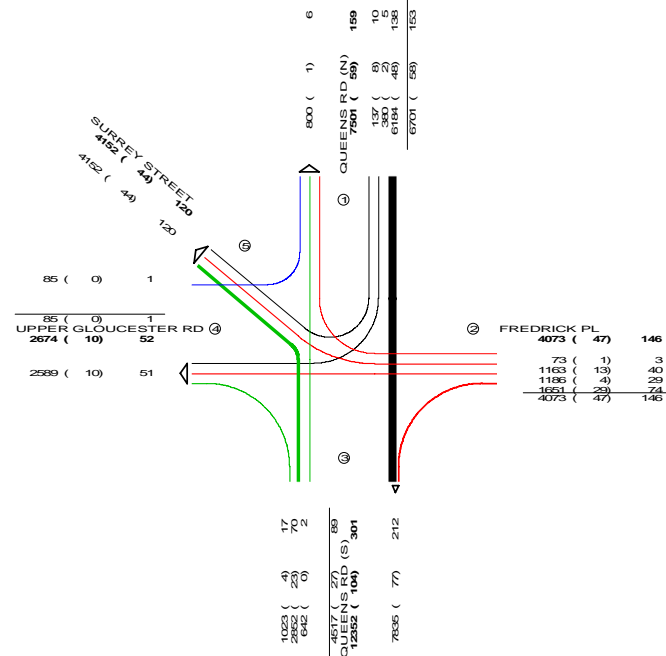
OGV=RUP + RP + ART



M4543
 site : M4543
 place : QUEENS RD/QUEENS RD QUADRANT
 date : Wednesday, 04/05/2005
 block : 07:00 - 19:00 hrs

G.R.531486 - 106047
 MOVEMENT 4 TO 5 NOT COUNTED

- 1 QUEENS RD (N)
- 2 FREDRICK PL
- 3 QUEENS RD (S)
- 4 UPPER GLOUCESTER RD
- 5 SURREY STREET



TOT (HGV) OGV

TOT=P/C + M/C + CAR + LGV + RUP + RP + ART + BUS + M/B

HGV=RP + ART

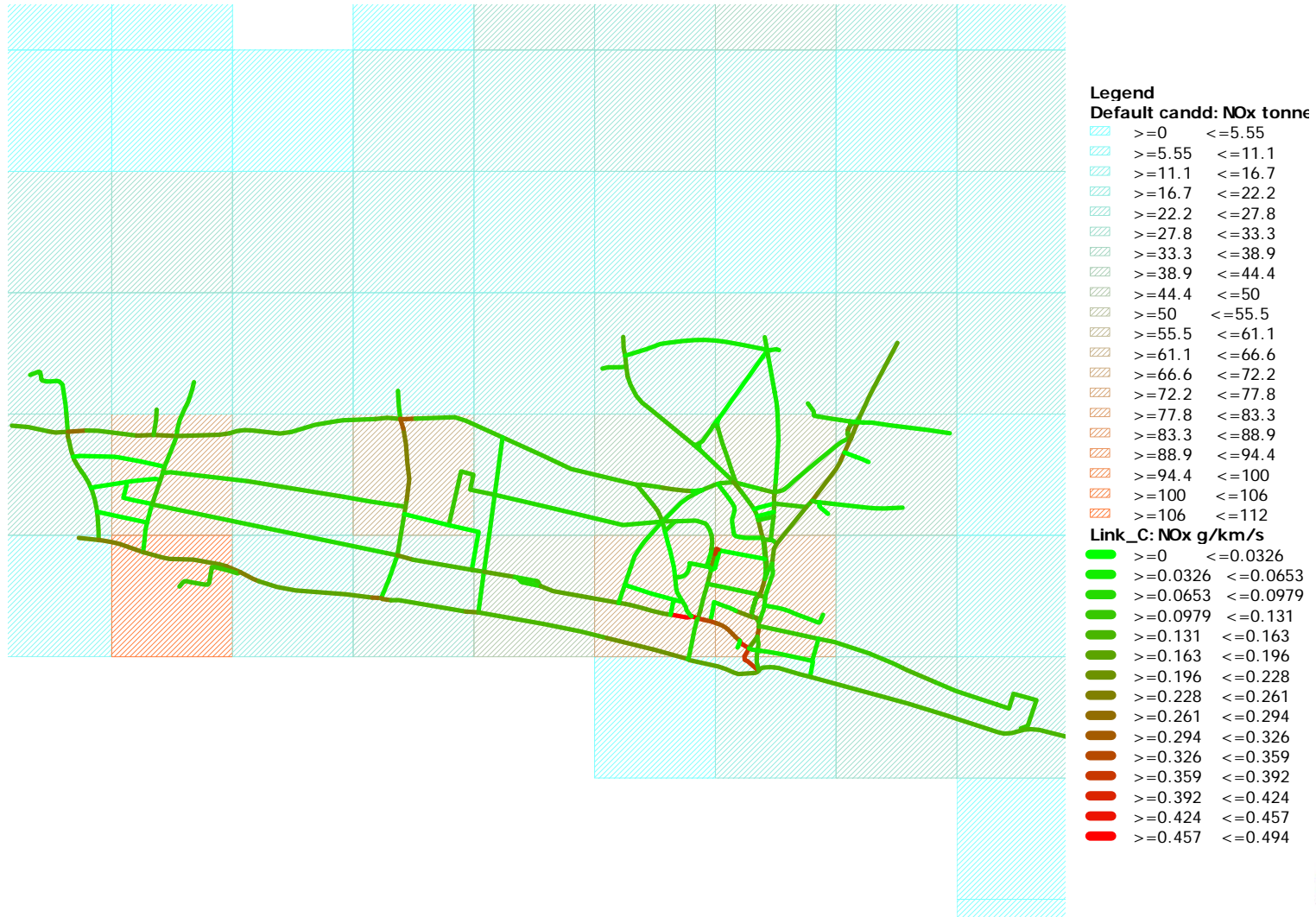
OGV=RUP + RP + ART



Appendix 13.8 Automatic and Continuous Traffic Counts (2008) used with the Further Review and Assessment

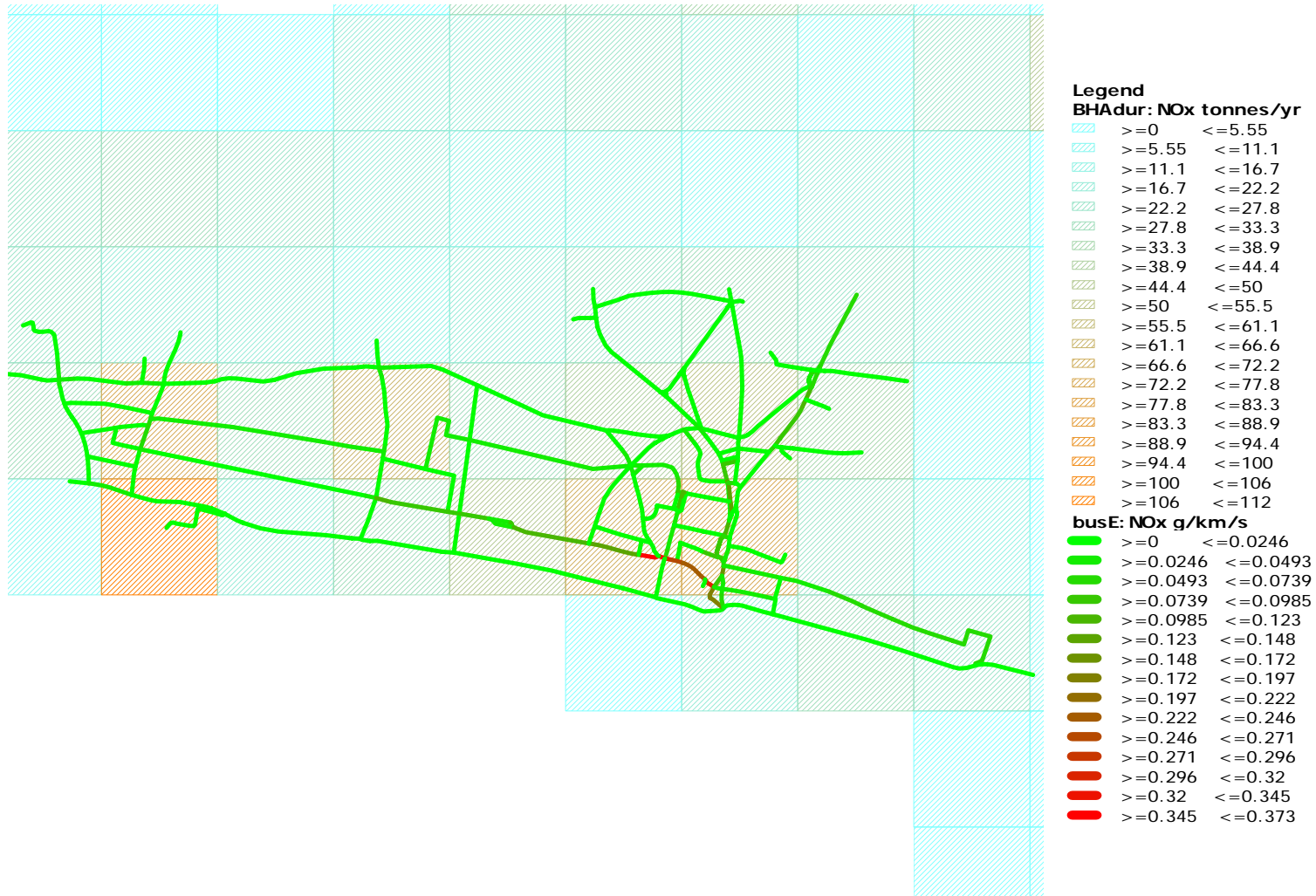
Site No	X	Y	Road No	Road Name	AADT	MC	Cars	Taxis	Busses	LDV (vans)	Ridgid HGV 2ax	Ridgid HGV 3ax	Ridgid HGV 4ax	Artic HGV 3-4Ax	Artic HGV 5Ax	Artic HGV 6Ax
5	526100	105900	A270	Old Shoreham Road	30,257	182	26,457	818	342	1,600	489	74	81	40	85	89
22	526100	104900	A259	Wellington Road	20,909	169	17,512	542	322	1,541	460	70	76	41	86	90
23	535200	102990	A259	Marine Drive	25,183	72	22,493	696	409	1,022	346	52	57	7	14	15
50	530571	105960	A23	London Road	21,144	127	18,490	592	239	1,108	340	52	56	27	59	61
74	530900	105400	A270	New England Road	18,896	221	16,671	516	51	1,087	235	36	39	7	16	17
90	526100	107300	A293	Hangleton Link Road	25,014	90	21,615	669	29	1,741	463	70	77	49	103	108
602	526043	105160		St Andrews Road	2,242	20	1,961	63	170	117	36	5	6	3	6	21
603	525900	105400	C32LR2	Vale Road Portslade	4,593	28	4,261	132	2	130	27	4	5	1	2	2
604	525900	105400	B2914	Victoria Road Portslade	4,483	74	3,962	123	2	228	63	10	10	2	4	5
608	529900	109100	A23	London Road	21,622	1,288	18,086	559	40	895	463	70	77	27	57	60
705	503600	105800	C542	Dyke Road Drive	4,247	16	580	18	5	3,243	289	44	48	1	2	2
711	530996	104881		Trafalger Street	2,483	25	1,862	372	74	130	40	6	7	3	7	2
800	530100	104100	A259	Kings Road	34,502	681	29,895	1,573	64	1,591	481	73	80	12	26	27
802	530300	104400	B2066	Western Road	6,042	144	965	2,896	1,241	285	341	52	56	12	25	26
803	530300	104600		Montpelier Terrace	5,667	97	5,077	157	0	265	47	7	8	2	4	4
805	530400	104900		Clifton Hill	3,528	318	2,967	92	0	118	24	4	4	0	0	0
806	530600	104900	B2121	Dyke Road	4,350	50	3,669	113	75	254	134	20	22	2	5	5
807	530700	105100	A2010	Buckingham Place	10,948	114	9,086	478	387	660	137	21	23	8	17	18
809	531000	105600	A23	Preston Road	13,974	267	11,878	367	271	714	295	45	49	17	35	37
810	531100	105700	A23	Beaconsfield Road	15,856	140	13,842	428	161	753	327	50	54	19	40	42
811	531500	105800	C5060	Ditchling Road	10,004	68	8,840	273	251	462	71	11	12	3	6	7
812	531900	105900	C1060	Hollingdean Road	17,888	77	16,221	502	16	762	191	29	32	11	23	24
813	532100	106200	A270	Lewes Road	29,149	235	25,176	779	912	1,527	295	45	49	25	52	55
814	532300	105950	C4220	Bear Road	11,106	108	10,120	313	14	479	52	8	9	1	2	2
816	532200	105600		Hartington Road	5,246	456	4,441	137	6	162	30	5	5	1	2	2
817	532200	105200	C5380	Elm Grove	11,575	119	10,140	314	185	442	280	42	46	1	2	3
818	532100	104950		Islingwood Road	3,426	264	2,922	90	0	124	19	3	3	0	0	0
823	531600	104200	C5280	Edward Street	18,454	360	15,656	484	620	971	261	40	43	4	8	8
824	531600	104000	B2118	St James Street	2,365	51	1,695	52	330	209	17	3	3	1	2	2
825	531600	103900	A259	Marine Parade	29,569	606	25,720	795	191	1,350	643	97	106	11	24	25
826	531600	103850		Madeira Drive	3,518	244	2,899	90	30	132	75	11	12	4	10	10

Appendix 13.10 All Traffic Commercial and Domestic NOx Emissions Brighton and Hove 2008

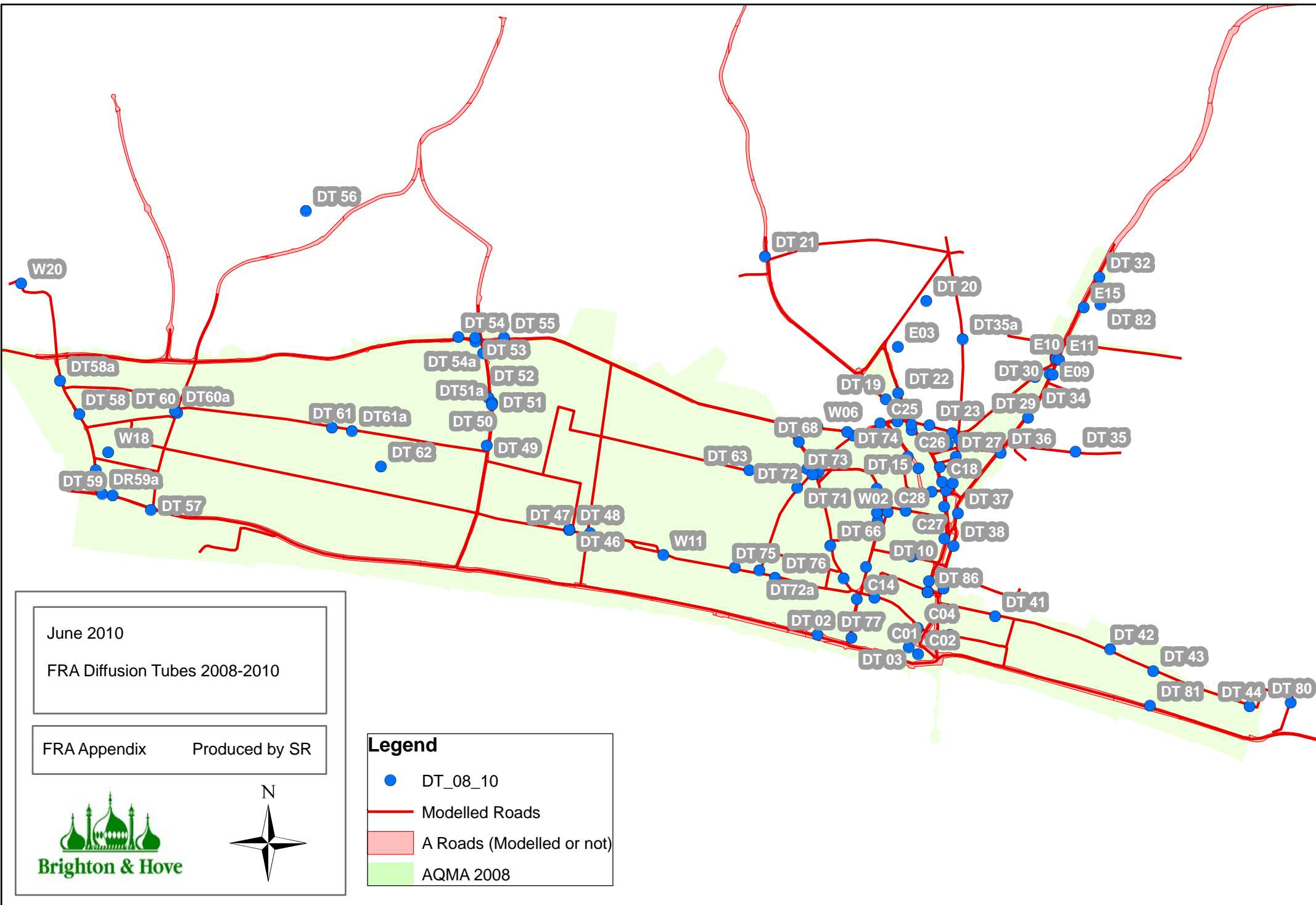


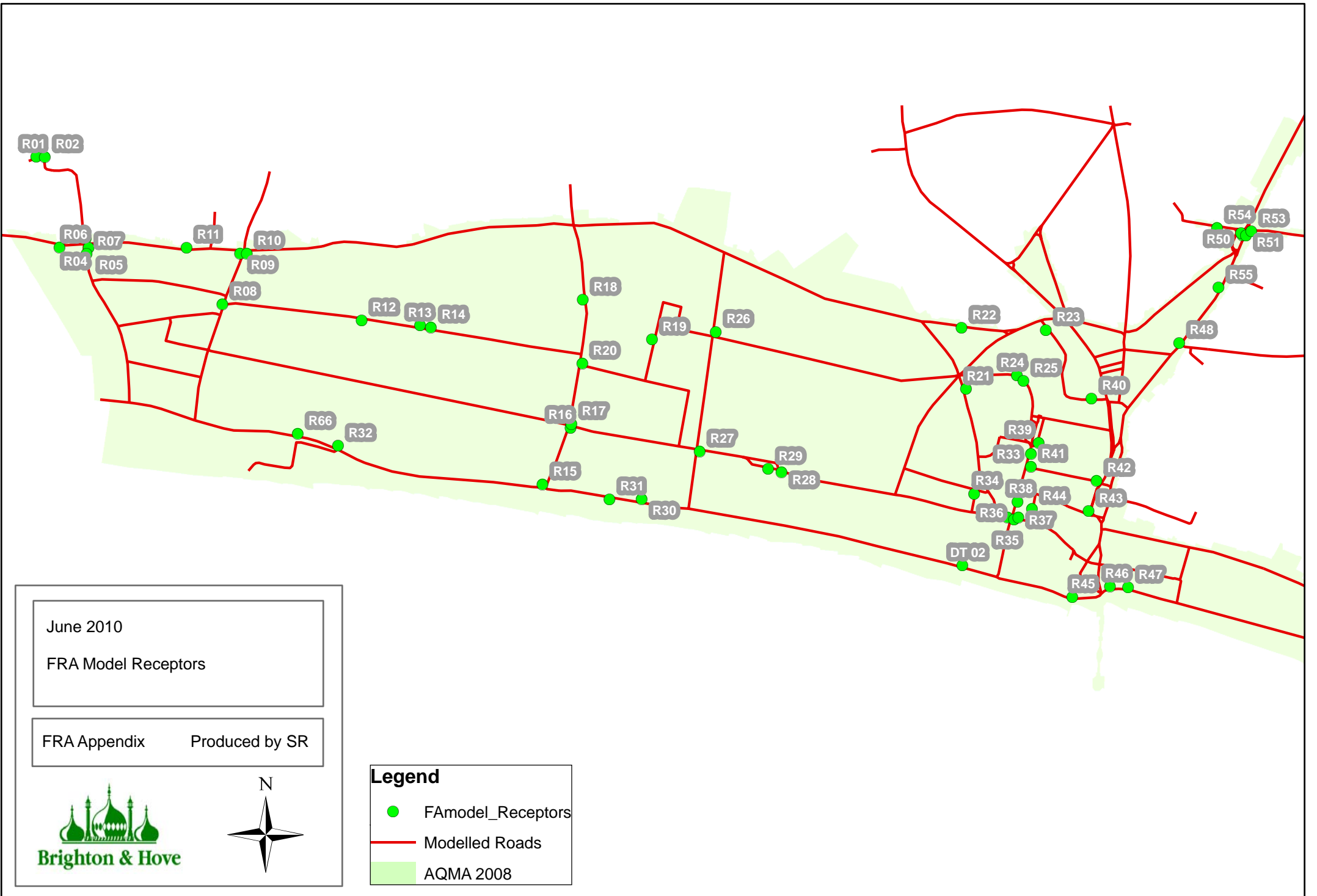
All Vehicle Emissions (Link C) shown as road sources, commercial and domestic sources (CANDD) shown as 1km² grid sources

Appendix 13.11 Bus Commercial and Domestic NOx Emissions Brighton and Hove 2008



Bus emissions (BusE) shown as road sources, commercial and domestic sources (BHA Dur) shown as 1km² grid sources





13.14 Model Adjustment Procedure

Site ID CA Continuous Analyser DT Diffusion Tube	Monitored total NO ₂ 2008	Monitored total NO _x 2008 (Empirical Factor for DT)	Modelled total NO ₂	Urban Background NO ₂ (Rural Level 9.7 µg/m ³ + Commercial Domestic)	Urban Background NO _x (Rural Level 12.6 µg/m ³ + Commercial Domestic)	Monitored road Contribution NO ₂ (Total – Urban Background)	Monitored road Contribution NO _x (Total – Urban Background)	Modelled Road Contribution NO _x (excludes Urban background)	Ratio of Monitored road Contribution NO _x /modelled road Contribution NO _x	Adjusted modelled road contribution NO _x Adjusted by average = *1..94	Adjusted modelled road contribution NO _x + Urban Background (not adjusted)	Modelled total NO ₂ Adjusted based on empirical NO _x /NO ₂ relationshi p
CA PP	19.7	28.8	20.0	18.8	28.2	0.9	2.6	2.0	1.28	3.9	30.1	20.6
CA BH1	38.2	74.5	29.6	21.7	59.9	16.5	40.0	25.4	1.57	49.3	83.8	43.0
CA BH2	30.2	55.2	24.1	19.1	43.4	11.1	27.1	15.3	1.77	29.8	57.9	31.7
DT 02	42.3	84.0	25.9	18.9	51.5	23.4	56.2	23.7	2.37	45.9	73.8	37.1
DT 03	30.2	54.3	24.6	19.1	44.3	11.1	26.1	16.0	1.63	31.1	59.3	33.0
DT 04	42.2	79.7	28.2	22.3	53.2	19.9	43.6	17.1	2.55	33.2	69.3	36.7
DT 05	49.0	98.7	29.6	22.0	59.6	27.0	63.8	24.7	2.58	47.9	82.8	41.1
DT 06	49.6	93.2	26.9	21.7	50.5	27.9	59.5	16.9	3.53	32.7	66.3	35.3
DT 07	32.4	67.5	31.0	22.6	64.7	9.8	30.8	27.9	1.10	54.1	90.9	43.6
DT 08	40.3	79.1	30.0	22.0	58.9	18.3	43.8	23.5	1.86	45.6	81.0	41.2
DT 09	46.6	97.1	31.3	22.2	65.1	24.4	61.3	29.3	2.09	56.9	92.7	44.5
DT 10	41.5	77.4	28.8	22.7	53.8	18.8	40.7	17.0	2.39	33.0	69.8	37.4
DT 11	53.6	108.4	30.2	22.4	61.0	31.2	72.8	25.4	2.86	49.3	84.9	42.0
DT 12	36.8	73.2	30.3	22.2	60.2	14.6	38.2	25.1	1.52	48.7	83.8	42.1
DT 13	41.7	94.2	34.9	22.1	78.8	19.6	59.5	44.1	1.35	85.6	120.3	53.3
DT 14	33.6	63.2	27.4	21.6	51.5	12.0	30.2	18.6	1.63	36.0	68.9	36.7
DT 15	27.4	43.7	24.7	21.8	39.4	5.6	10.0	5.7	1.75	11.1	44.8	28.1
DT 16	41.8	88.8	29.4	21.1	62.5	20.7	57.3	31.0	1.85	60.1	91.7	43.1
DT 17	48.0	89.6	27.4	21.3	51.1	26.7	57.4	18.9	3.04	36.7	68.8	36.9
DT 18	38.9	80.4	29.6	21.2	61.2	17.7	48.5	29.2	1.66	56.7	88.6	42.9
DT 19	36.1	65.6	26.2	20.7	47.6	15.4	35.1	17.1	2.06	33.1	63.6	35.0
DT 20	18.9	27.3	20.8	19.6	30.1	n/a	-0.7	2.1	n/a	4.2	32.2	22.2
DT 22	36.5	72.8	27.9	20.7	55.7	15.8	42.2	25.1	1.68	48.7	79.3	39.8
DT 23	38.9	77.9	29.0	21.4	58.2	17.5	45.6	25.9	1.76	50.2	82.5	41.2
DT 24	50.9	101.4	28.7	21.7	57.2	29.2	68.3	24.1	2.83	46.8	79.9	40.1
DT 25	42.1	87.9	30.4	21.8	63.6	20.3	54.4	30.1	1.81	58.4	91.9	44.0
DT 26	24.4	39.8	25.6	21.8	41.7	2.6	6.4	8.3	0.77	16.1	49.5	30.4
DT 27	40.0	81.3	30.0	22.0	60.9	18.0	47.3	26.9	1.76	52.2	86.2	42.4
DT 28	33.5	61.1	28.4	22.2	51.8	11.3	26.2	17.0	1.55	32.9	67.8	37.2
DT 29	39.2	83.2	29.9	20.8	63.4	18.4	52.4	32.6	1.61	63.3	94.1	44.3
DT 30	53.9	130.2	39.9	20.1	96.3	33.8	101.0	67.1	1.50	130.3	159.4	66.0

DT 31	43.1	77.8	24.7	19.8	44.6	23.3	49.3	16.1	3.06	31.3	59.8	33.1
DT 32	40.9	75.3	24.5	18.7	45.2	22.2	49.3	19.2	2.57	37.2	63.2	34.3
DT 33	36.0	58.0	23.4	19.5	37.7	16.5	30.2	9.9	3.03	19.3	47.1	29.2
DT 34	32.1	58.0	25.9	20.3	46.7	11.8	28.5	17.2	1.66	33.3	62.9	34.8
DT 35	30.2	51.8	23.6	20.1	40.5	10.1	22.6	11.3	2.00	21.9	51.2	29.8
DT 36	33.1	61.2	27.6	21.3	50.9	11.8	28.9	18.7	1.55	36.2	68.5	37.1
DT 37	33.4	68.5	31.0	22.6	63.5	10.8	32.4	27.4	1.18	53.1	89.2	43.5
DT 38	41.3	82.0	30.3	22.8	60.1	18.5	44.8	22.9	1.96	44.4	81.6	41.1
DT 39	35.2	68.0	28.0	19.8	54.1	15.4	37.9	24.1	1.58	46.7	76.8	39.7
DT 40	43.3	82.3	28.1	20.2	53.5	23.1	51.3	22.5	2.28	43.6	74.6	39.2
DT 41	35.9	65.9	25.1	20.4	46.1	15.5	34.6	14.9	2.32	28.9	60.2	32.8
DT 42	33.7	61.3	22.7	17.9	41.3	15.8	35.9	16.0	2.25	31.1	56.4	31.0
DT 43	40.0	76.3	22.5	17.4	42.9	22.6	51.9	18.5	2.81	35.9	60.3	31.6
DT 44	36.0	66.2	21.2	16.4	38.9	19.6	43.5	16.2	2.69	31.4	54.1	29.4
DT 46	32.1	60.9	24.9	19.1	47.2	13.0	32.7	19.0	1.72	37.0	65.1	34.3
DT 47	30.3	57.5	24.9	19.1	47.2	11.2	29.3	19.0	1.54	37.0	65.1	34.3
DT 48	32.6	61.8	24.9	19.1	47.2	13.5	33.7	19.0	1.77	37.0	65.1	34.3
DT 49	34.9	65.6	26.2	20.6	49.3	14.3	34.3	18.0	1.90	35.0	66.3	35.3
DT 50	33.7	66.7	27.2	21.0	53.9	12.7	34.5	21.7	1.59	42.1	74.3	37.5
DT 52	31.9	63.6	26.8	19.7	53.5	12.2	34.8	24.6	1.41	47.8	76.7	38.4
DT 53	32.1	58.3	24.5	19.3	44.6	12.8	30.4	16.7	1.82	32.3	60.2	33.2
DT 54	25.8	44.4	23.3	19.1	40.1	6.7	17.2	12.8	1.34	24.9	52.1	30.3
DT 55	26.1	45.5	24.5	19.4	42.8	6.7	17.6	14.8	1.19	28.7	56.6	32.5
DT 56	18.4	24.9	17.4	17.1	23.6	1.3	1.8	0.6	3.29	1.1	24.1	17.8
DT 58	36.2	77.8	25.2	18.9	54.2	17.3	49.7	26.1	1.90	50.6	78.7	36.6
DT 59	38.2	92.2	29.8	19.9	72.1	18.3	61.4	41.2	1.5	79.9	110.8	45.9
DT 60	34.2	70.3	28.3	22.0	58.2	12.2	34.8	22.7	1.5	44.0	79.5	38.7
DT 61	36.7	65.1	23.1	19.1	41.0	17.6	38.0	13.9	2.7	27.0	54.1	30.5
DT 62	20.4	29.2	20.2	18.9	28.9	1.5	2.6	2.3	1.1	4.4	31.1	21.7
DT 63	31.8	61.4	25.1	20.3	48.5	11.5	31.2	18.3	1.7	35.4	65.7	34.0
DT 65	33.6	69.8	28.5	21.0	59.3	12.6	38.0	27.4	1.4	53.2	85.1	40.9
DT 66	36.4	61.1	24.6	21.9	41.4	14.5	26.2	6.4	4.1	12.4	47.4	28.2
DT 67	32.8	64.8	27.6	20.8	54.4	12.0	33.4	23.0	1.4	44.7	76.1	38.5
DT 68	28.2	52.6	25.6	20.4	47.8	7.8	22.4	17.6	1.3	34.1	64.3	34.5
DT 69	40.9	80.1	27.7	21.0	54.2	19.9	48.3	22.3	2.2	43.3	75.2	38.4
DT 70	31.8	56.0	25.5	20.8	44.9	11.0	24.5	13.4	1.8	26.0	57.5	32.7
DT 71	25.8	48.5	26.6	21.0	50.0	4.8	16.7	18.1	0.9	35.2	67.0	35.7
DT 72	26.6	44.5	24.1	21.0	40.2	5.6	12.5	8.2	1.5	15.9	47.9	28.7
DT 73	45.7	86.0	26.8	20.8	50.4	24.9	54.8	19.3	2.8	37.4	68.5	36.4
DT 74	49.5	114.2	32.7	20.7	75.5	28.8	83.3	44.6	1.9	86.5	117.4	50.9
DT 75	40.0	85.9	35.0	20.7	75.0	19.3	53.6	42.8	1.3	83.0	115.2	53.7
DT 76	53.1	116.3	35.6	20.9	77.9	32.2	83.5	45.2	1.8	87.6	120.4	55.0
DT 77	60.2	156.4	42.5	21.1	110.4	39.1	123.4	77.4	1.6	150.2	183.2	70.5

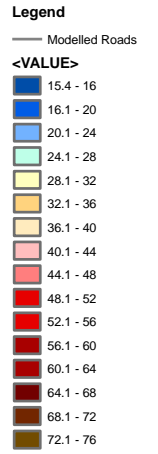


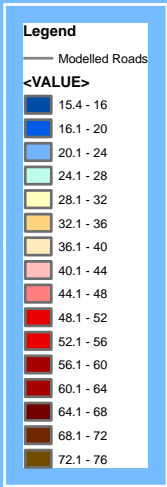
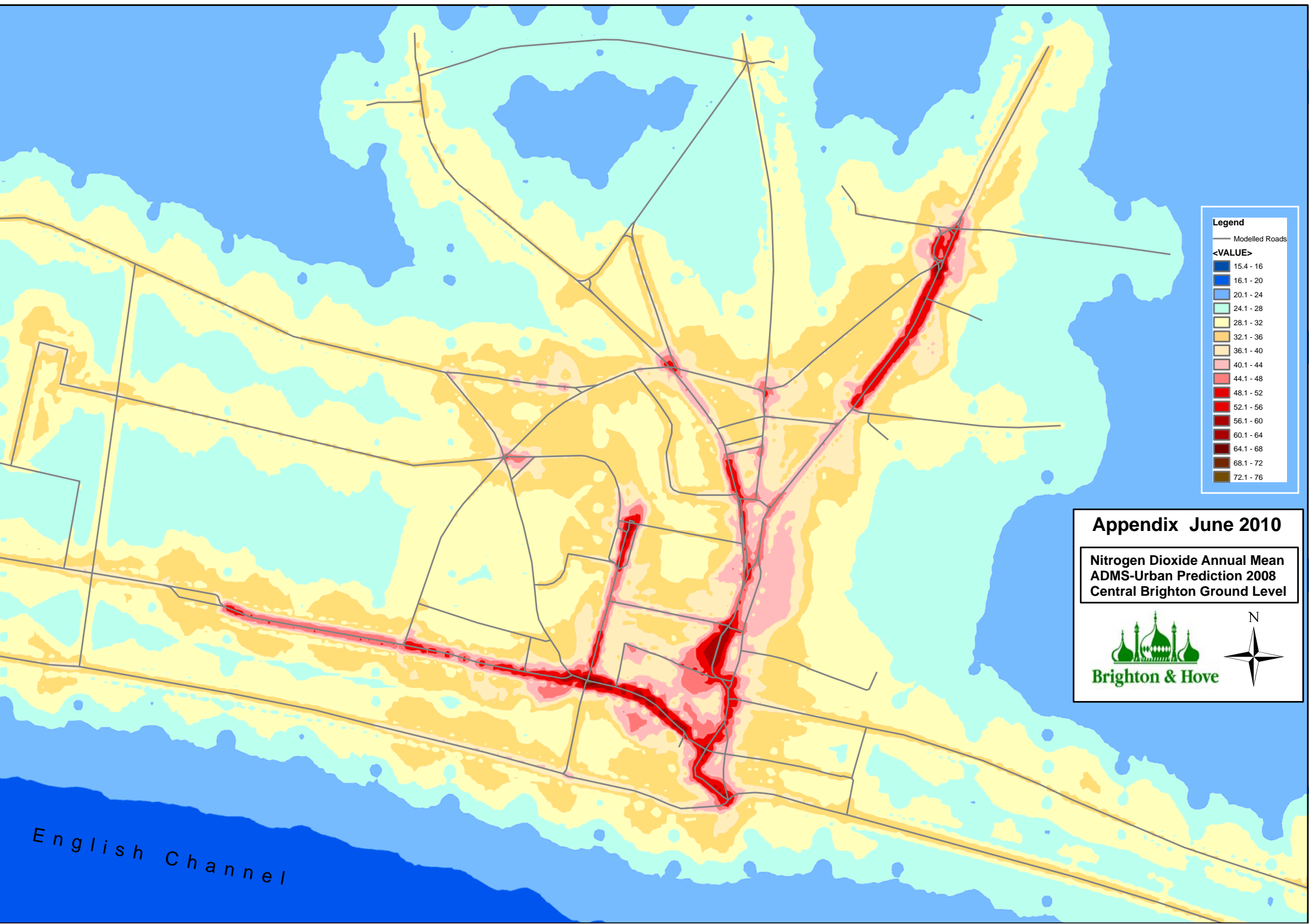
English Channel

Appendix June 2010

**Nitrogen Dioxide Annual Mean
ADMS-Urban Prediction 2008**


Brighton & Hove






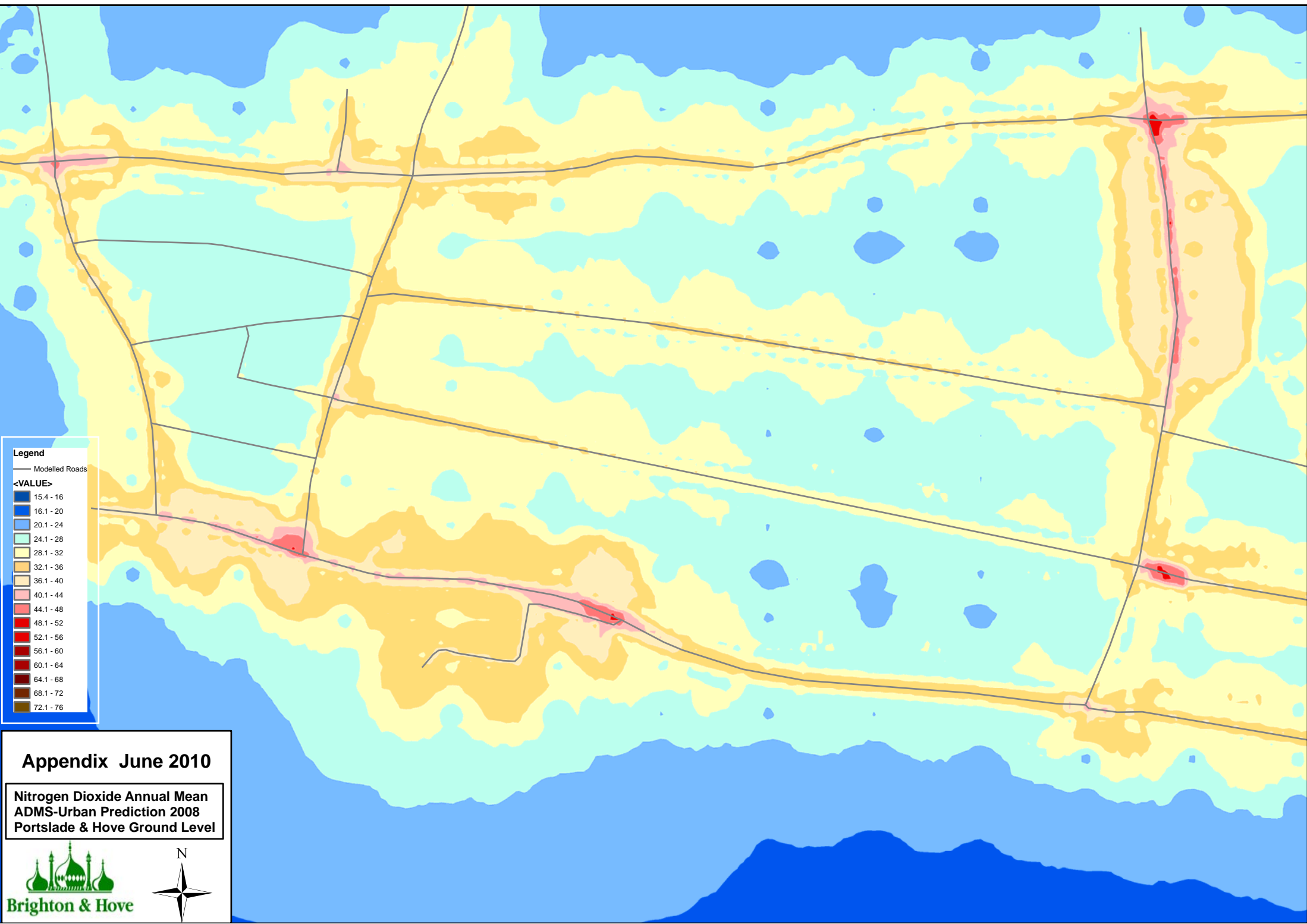
Appendix June 2010

**Nitrogen Dioxide Annual Mean
ADMS-Urban Prediction 2008
Central Brighton Ground Level**



Brighton & Hove





Appendix June 2010

**Nitrogen Dioxide Annual Mean
ADMS-Urban Prediction 2008
Portslade & Hove Ground Level**



Brighton & Hove

