

### Appendix 3.6 Predicted Air Quality Assessment Results

**Table 1 Predicted Air Pollutants Concentrations (Excluding Odour) from OWTF (Operation of Cogen units and Centralized Air Pollution Control Unit) and other emission sources within the study area**

ASR	Description	Floor	X	Y	Z	H	mPD	NO <sub>2</sub>	NO <sub>2</sub>	NO <sub>2</sub>	RSP	RSP	SO <sub>2</sub>	SO <sub>2</sub>	SO <sub>2</sub>	HCL	HCL	HF	HF <sup>^</sup>	VOC
								Hourly Average in ug/m <sup>3</sup> *	Daily Average in ug/m <sup>3</sup> *	Annual Average in ug/m <sup>3</sup> *	Daily Average in ug/m <sup>3</sup> *	Annual Average in ug/m <sup>3</sup> *	Hourly Average in ug/m <sup>3</sup> *	Daily Average in ug/m <sup>3</sup> *	Annual Average in ug/m <sup>3</sup> *	Hourly Average in ug/m <sup>3</sup> *	Annual Average in ug/m <sup>3</sup> *	Hourly Average in ug/m <sup>3</sup> *	Annual Average in ug/m <sup>3</sup> *	Hourly Average in ug/m <sup>3</sup> *
ASR1	Siu Ho Wan Water Treatment Works	G	817827.5	819352.0	28	1.5	29.5	255	140	42.5	122.9	44.9	147.3	57.8	11.9	16.0	0.31	1.60	0.031	2641
			817827.5	819352.0	28	4.5	32.5	259	142	42.6	123.0	45.0	147.7	57.1	11.9	15.3	0.33	1.53	0.033	3466
ASR2	Siu Ho Wan Sewage Treatment Works	G	817619.4	819290.3	6.5	1.5	8	214	128	47.5	98.1	45.2	95.1	49.5	10.4	3.0	0.06	0.30	0.01	470
			817619.4	819290.3	6.5	4.5	11	213	128	47.4	97.8	45.2	95.1	49.5	10.4	3.1	0.06	0.31	0.01	476
ASR3	Siu Ho Wan Vehicle Pound Vehicle Examination Centre and Weight Station	G	817785.4	819576.0	6.5	1.5	8	273	136	51.9	100.4	46.8	117.9	48.9	11.1	11.6	0.25	1.16	0.025	175
ASR4	Bus Depot of Kowloon Motor Bus Ltd.	G	817836.3	819693.6	6.5	1.5	8	272	145	51.6	106.1	47.4	139.5	49.0	10.1	4.2	0.05	0.42	▲	468
			817836.3	819693.6	6.5	4.5	11	271	144	51.3	105.1	47.2	138.2	49.0	10.1	4.2	0.05	0.42	▲	475
ASR5	Bus Depot of City Bus Ltd.	G	817900.3	819615.8	6.5	1.5	8	241	128	43.2	95.5	44.8	100.4	47.8	9.9	5.7	0.01	0.57	▲	436
			817900.3	819615.8	6.5	4.5	11	241	128	43.1	95.3	44.8	99.5	47.8	9.9	5.9	0.02	0.59	▲	444
			817900.3	819615.8	6.5	7.5	14	241	128	42.9	94.9	44.8	100.2	47.8	10.0	6.3	0.02	0.63	▲	501
ASR6	North Lantau Refuse Transfer Station	G	817756.9	819992.8	6.5	1.5	8	253	109	53.3	92.5	46.3	331.7	71.0	11.3	1.9	0.03	0.19	▲	466
			817756.9	819992.8	6.5	4.5	11	253	109	53.0	92.2	46.3	349.7	73.2	11.6	1.9	0.03	0.19	▲	468
			817756.9	819992.8	6.5	7.5	14	252	110	52.4	91.6	46.1	378.9	76.2	12.2	1.9	0.03	0.19	▲	473
<b>Assessment Criteria =</b>								<b>300</b>	<b>150</b>	<b>80</b>	<b>180</b>	<b>55</b>	<b>800</b>	<b>350</b>	<b>80</b>	<b>2100</b>	<b>20</b>	<b>240</b>	<b>14</b>	<b>600000</b>

note: \* cumulative impact contributed from OWTF, marine emissions, traffic emission and background

^ represents the value smaller than 0.005 which is negligible

**Table 2 Odour Impact Assessment Results**

ASR	Description	No. of floor	X	Y	Z	H	mPD	Maximum Cumulative Odour Concentration #			Maximum Odour Concentration (Contributed by OWTF only)
								5-seg Average in OU/m <sup>3</sup>			5-seg Average in OU/m <sup>3</sup>
								OWTF	OTHER	Cumulative results	
ASR1	Siu Ho Wan Water Treatment Works	G 1	817827.5	819352.0	28	1.5	29.5	2.68	0.00	2.7	2.7
			817827.5	819352.0	28	4.5	32.5	3.51	0.00	3.5	3.5
ASR2	Siu Ho Wan Sewage Treatment Works	G 1	817619.4	819290.3	6.5	1.5	8	0.47	0.00	0.5	0.5
			817619.4	819290.3	6.5	4.5	11	0.47	0.00	0.5	0.5
ASR3	Siu Ho Wan Vehicle Pound Vehicle Examination Centre and Weight Station	G	817785.4	819576.0	6.5	1.5	8	0.18	1.18	1.4	0.2
ASR4	Bus Depot of Kowloon Motor Bus Ltd.	G 1	817836.3	819693.6	6.5	1.5	8	0.22	3.26	3.5	0.5
			817836.3	819693.6	6.5	4.5	11	0.17	4.44	4.6	0.5
ASR5	Bus Depot of City Bus Ltd.	G 1	817900.3	819615.8	6.5	1.5	8	0.20	2.51	2.7	0.4
			817900.3	819615.8	6.5	4.5	11	0.15	3.22	3.4	0.4
			817900.3	819615.8	6.5	7.5	14	0.19	3.17	3.4	0.5
ASR6	North Lantau Refuse Transfer Station	G 1	817756.9	819992.8	6.5	1.5	8	0.17	4.11	4.3	0.5
			817756.9	819992.8	6.5	4.5	11	0.18	4.10	4.3	0.5
			817756.9	819992.8	6.5	7.5	14	0.18	4.07	4.3	0.5
								<b>Background=</b>			-
								<b>Assessment Criteria =</b>			<b>5</b>

note: # Maximum cumulative odour impact contributed from OWTF, Siu Ho Wan Sewage Treatment Works and North Lantau Refuse Transfer Station when the contribution from OWTF is more than or equal to 0.15 OU/m<sup>3</sup>

^ There is no cumulative odour for ASR 1 and ASR 2 because they are not in the same downwind condition

**Table 3 Predicted Air Pollutants Concentrations (Excluding Odour) from OWTF (Operation of Flaring Gas Unit and Centralized Air Pollution Control Unit) and other emission sources within the study area**

ASR	Description	Floor	X	Y	Z	H	mPD	NO <sub>2</sub> Hourly Average in ug/m <sup>3</sup> *	NO <sub>2</sub> Daily Average in ug/m <sup>3</sup> *	NO <sub>2</sub> Annual Average in ug/m <sup>3</sup> #	RSP Daily Average in ug/m <sup>3</sup> *	RSP Annual Average in ug/m <sup>3</sup> #	SO <sub>2</sub> Hourly Average in ug/m <sup>3</sup> *	SO <sub>2</sub> Daily Average in ug/m <sup>3</sup> *	SO <sub>2</sub> Annual Average in ug/m <sup>3</sup> #	HCL Hourly Average in ug/m <sup>3</sup> *	HCL Annual Average in ug/m <sup>3</sup> #	HF <sup>^</sup> Hourly Average in ug/m <sup>3</sup> *	HF Annual Average in ug/m <sup>3</sup> #	VOC Hourly Average in ug/m <sup>3</sup> *			
ASR1	Siu Ho Wan Water Treatment Works	G 1	817827.5	819352.0	28	1.5	29.5	231	122	-	122.1	-	128.7	66.3	-	10.20	-	1.02	-	2641			
			817827.5	819352.0	28	4.5	32.5	230	122	-	122.1	-	128.9	66.6	-	10.11	-	1.01	-	3466			
ASR2	Siu Ho Wan Sewage Treatment Works	G 1	817619.4	819290.3	6.5	1.5	8	214	128	-	98.1	-	95.1	49.5	-	0.85	-	0.09	-	460			
			817619.4	819290.3	6.5	4.5	11	213	128	-	97.8	-	95.1	49.5	-	0.94	-	0.09	-	465			
ASR3	Siu Ho Wan Vehicle Pound Vehicle Examination Centre and Weight Station	G	817785.4	819576.0	6.5	1.5	8	273	136	-	100.4	-	117.9	48.9	-	3.13	-	0.31	-	175			
ASR4	Bus Depot of Kowloon Motor Bus Ltd.	G 1	817836.3	819693.6	6.5	1.5	8	272	145	-	106.1	-	139.5	49.0	-	1.09	-	0.11	-	460			
			817836.3	819693.6	6.5	4.5	11	271	144	-	105.1	-	138.2	49.0	-	1.11	-	0.11	-	467			
ASR5	Bus Depot of City Bus Ltd.	G 1	817900.3	819615.8	6.5	1.5	8	241	128	-	95.5	-	100.4	47.8	-	0.77	-	0.08	-	424			
			817900.3	819615.8	6.5	4.5	11	241	128	-	95.3	-	99.5	47.8	-	0.86	-	0.09	-	437			
			817900.3	819615.8	6.5	7.5	14	241	128	-	94.9	-	100.2	47.8	-	1.03	-	0.10	-	494			
ASR6	North Lantau Refuse Transfer Station	G 1	817756.9	819992.8	6.5	1.5	8	253	109	-	92.5	-	331.7	71.0	-	0.31	-	0.03	-	459			
			817756.9	819992.8	6.5	4.5	11	253	109	-	92.2	-	349.7	73.2	-	0.32	-	0.03	-	461			
			817756.9	819992.8	6.5	7.5	14	252	110	-	91.6	-	378.9	76.2	-	0.33	-	0.03	-	466			
								<b>Assessment Criteria =</b>			<b>300</b>	<b>150</b>	<b>-</b>	<b>180</b>	<b>-</b>	<b>800</b>	<b>350</b>	<b>-</b>	<b>2100</b>	<b>-</b>	<b>240</b>	<b>-</b>	<b>600000</b>

note: \* cumulative impact contributed from OWTF, marine emissions, traffic emission and background

^ represents the value smaller than 0.005 which is negligible

# Flaring gas unit operated during emergency ONLY, therefore, only have 1-hour and 24 hour average predictions.