Air Quality Monitoring Results

Air Quality Monitoring Results for

Contract No. SPW 07/2020

Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

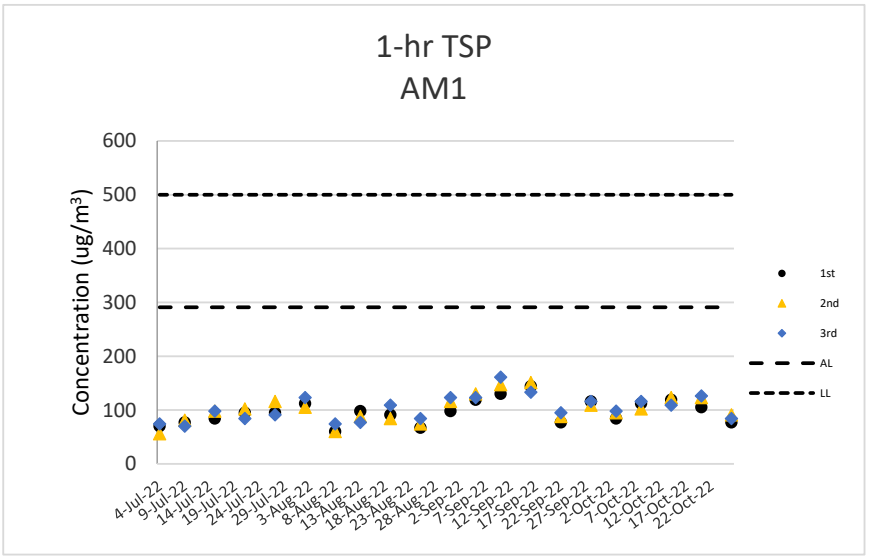
AM1 - Topfine Machinery (China) Co. Ltd.

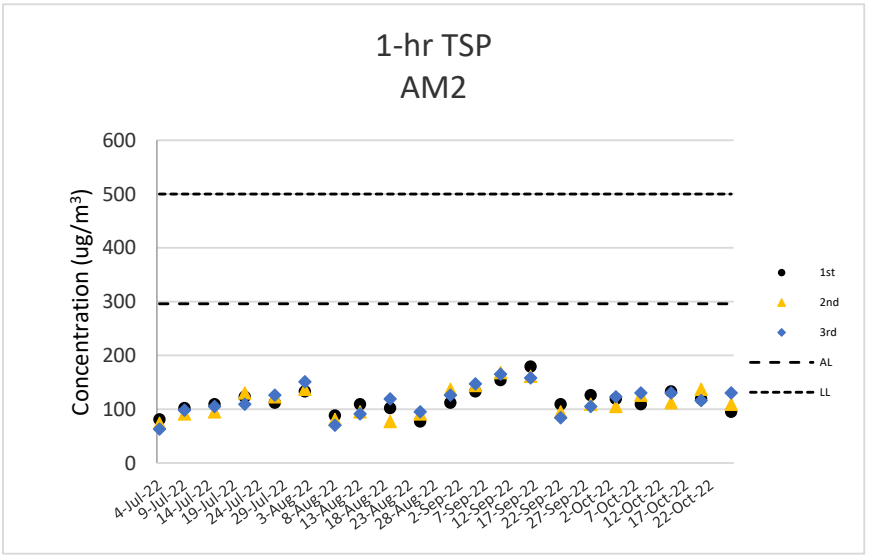
Date	Weather Condition	Start Time	1-hour TSP (µg/m³) 1st Measurement	2nd Measurement	3rd Measurement	Action Level (ug/m^3)	Limit Level (ug/m^3)
3-Oct-22	Cloudy	8:33	84	95	98	291	500
8-Oct-22	Cloudy	8:39	112	102	116		
14-Oct-22	Cloudy	8:35	119	123	109		
20-Oct-22	Fine	8:39	105	123	126		
26-Oct-22	Fine	8:31	77	91	84		
		Min	77				
		Max	126				
		Average	104				

AM2 - Squatter house at the west of Yuen Long STW

Date	Weather Condition	Start Time	1-hour TSP (µg/m³) 1st Measurement	2nd Measurement	3rd Measurement	Action Level (ug/m^3)	Limit Level (ug/m^3)
3-Oct-22	Cloudy	8:43	119	105	123	296	500
8-Oct-22	Cloudy	8:52	109	126	130		
14-Oct-22	Cloudy	8:46	133	112	130		
20-Oct-22	Fine	8:56	119	137	116		
26-Oct-22	Fine	8:40	95	109	130		
		Min	95				
		Max	137				
		Average	120				

Note:
Underline: Exceedance of Action Level
Underline and Bold: Exceedance of Limit Level





Air Quality Monitoring Results

Noise Monitoring Results

Noise Monitoring Results for
Contract No. SPW 07/2020
Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

CM1 - Squatter house to the north of YLSTW

Date	Start Time	L_{eq} 30min dB(A)	L_{10} dB(A)	L_{90} dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
3-Oct-22	10:09	54	57	50	0.2	Cloudy	75
14-Oct-22	10:10	54	57	51	0.1	Cloudy	75
20-Oct-22	11:28	56	59	51	0.2	Fine	75
26-Oct-22	10:01	56	60	52	0.1	Fine	75
	Max	56					
	Min	54					

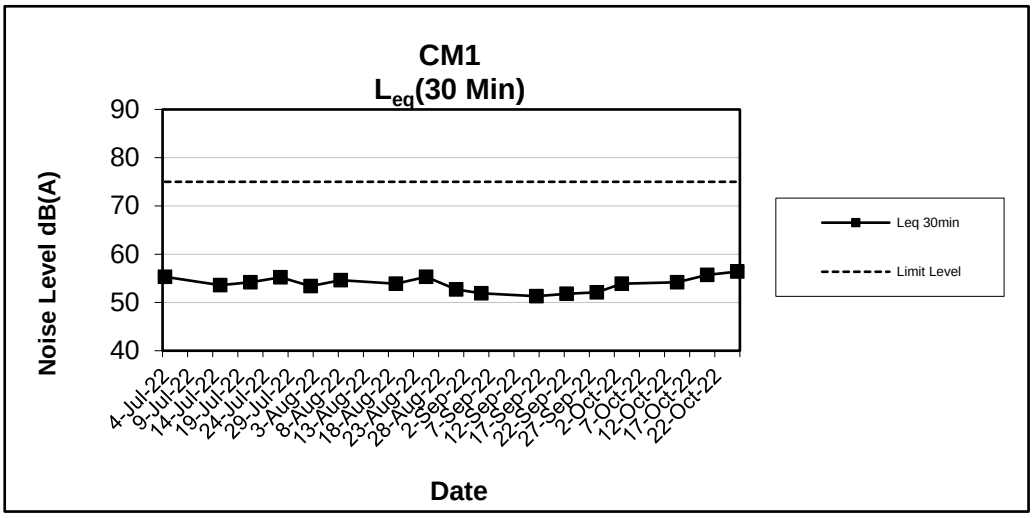
CM2 - Squatter house to the west of YLSTW

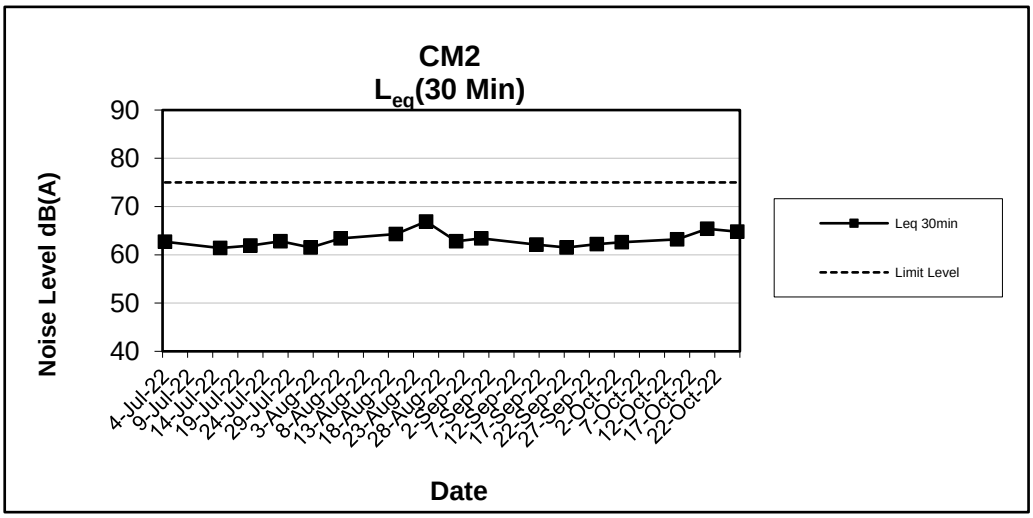
Date	Start Time	L_{eq} 30min dB(A)	L_{10} dB(A)	L_{90} dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
3-Oct-22	8:49	63	65	55	0.2	Cloudy	75
14-Oct-22	8:51	63	66	56	0.2	Cloudy	75
20-Oct-22	9:05	65	69	57	0.3	Fine	75
26-Oct-22	8:46	65	68	57	0.2	Fine	75
	Max	65					
	Min	63					

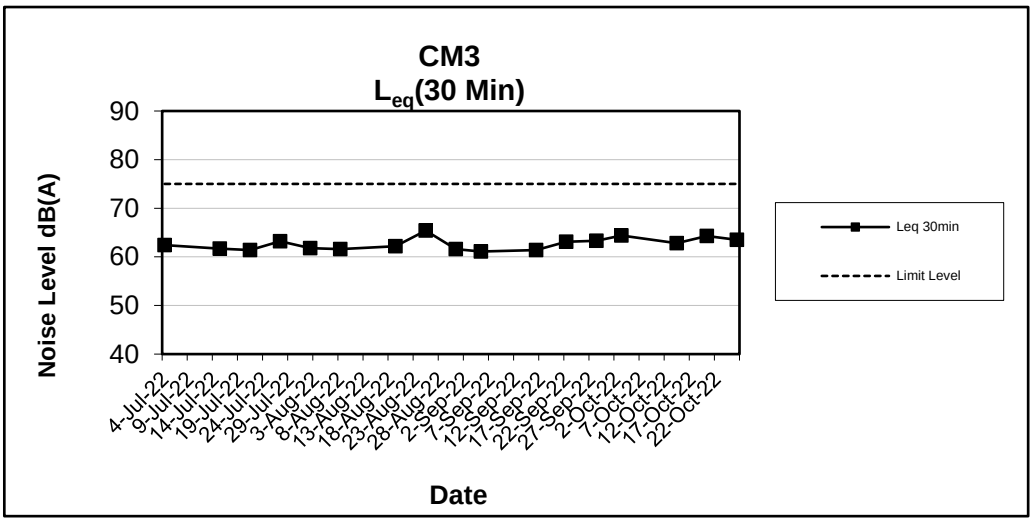
CM3 - Squatter house to the east of YLSTW

Date	Start Time	L_{eq} 30min dB(A)	L_{10} dB(A)	L_{90} dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
3-Oct-22	11:28	64	68	58	0.3	Cloudy	75
14-Oct-22	11:26	63	67	56	0.2	Cloudy	75
20-Oct-22	13:07	64	68	57	0.3	Fine	75
26-Oct-22	11:23	64	67	57	0.2	Fine	75
	Max	64					
	Min	63					

Note:
CM1, CM2 and CM3: Free-field measurement (+3dB(A) correction has been applied).
No raining or wind with speed over 5 m/s was observed during noise monitoring according to the onsite observation.







Noise Monitoring Results

Water Quality Monitoring Results

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	1/10/2022	Mid-Flood	Cloudy	Smooth	11:53	2	M	1	1	0.325	292	7.54	7.53	10.53	10.54	28.34	28.35	63.1	63.5	4.58	4.61	18.1	18.4	12	13
M1	1/10/2022	Mid-Flood	Cloudy	Smooth	11:53	2	M	1	2			7.52		10.54		28.35		63.8		4.63		18.8		13	
M2	1/10/2022	Mid-Flood	Cloudy	Smooth	12:11	1.2	M	0.6	1	0.306	319	7.49	7.49	9.34	9.35	28.19	28.19	67.2	66.9	4.92	4.90	24.8	24.3	46	46
M2	1/10/2022	Mid-Flood	Cloudy	Smooth	12:11	1.2	M	0.6	2			7.48		9.35		28.19		66.6		4.88		23.9		45	
M3	1/10/2022	Mid-Flood	Fine	Moderate	11:52	1	M	0.5	1	0.043	75	7.86	7.85	0.32	0.33	27.59	27.60	95.2	95.3	7.50	7.51	36.2	36.2	32	30
M3	1/10/2022	Mid-Flood	Fine	Moderate	11:52	1	M	0.5	2			7.84		0.33		27.60		95.3		7.51		36.2		28	
M1	1/10/2022	Mid-Ebb	Cloudy	Smooth	17:37	2.2	M	1.1	1	0.29	215	7.29	7.30	8.67	8.67	29.63	29.64	57.6	57.4	4.19	4.18	17.0	17.4	28	28
M1	1/10/2022	Mid-Ebb	Cloudy	Smooth	17:37	2.2	M	1.1	2			7.31		8.66		29.64		57.2		4.16		17.8		27	
M2	1/10/2022	Mid-Ebb	Cloudy	Smooth	17:17	1.2	M	0.6	1	0.28	242	7.36	7.37	7.23	7.22	29.46	29.47	60.3	60.1	4.39	4.37	21.2	21.3	35	35
M2	1/10/2022	Mid-Ebb	Cloudy	Smooth	17:17	1.2	M	0.6	2			7.38		7.21		29.48		59.8		4.35		21.4		34	
M3	1/10/2022	Mid-Ebb	Fine	Moderate	17:19	0.9	M	0.45	1	0.065	313	7.85	7.85	0.21	0.22	26.44	26.46	94.1	94.2	7.48	7.49	35.3	35.3	11	11
M3	1/10/2022	Mid-Ebb	Fine	Moderate	17:19	0.9	M	0.45	2			7.84		0.22		26.48		94.3		7.49		35.3		11	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	4/10/2022	Mid-Flood	Fine	Moderate	17:10	1.2	M	0.6	1	0.062	100	7.42	7.42	2.44	2.45	29.44	29.46	72.6	72.5	5.29	5.28	20.6	20.6	24	24
M1	4/10/2022	Mid-Flood	Fine	Moderate	17:10	1.2	M	0.6	2			7.41		2.46		29.48		72.4		5.27		20.6		24	
M2	4/10/2022	Mid-Flood	Fine	Moderate	16:53	1	M	0.5	1	0.045	307	7.39	7.40	2.38	2.39	30.32	30.33	70.2	70.3	5.21	5.22	20.3	20.2	20	21
M2	4/10/2022	Mid-Flood	Fine	Moderate	16:53	1	M	0.5	2			7.41		2.39		30.34		70.4		5.23		20.2		22	
M3	4/10/2022	Mid-Flood	Cloudy	Calm	16:46	0.4	M	0.2	1	0.285	93	7.53	7.52	4.98	4.98	31.24	31.24	66.7	66.4	4.92	4.90	25.8	26.3	41	43
M3	4/10/2022	Mid-Flood	Cloudy	Calm	16:46	0.4	M	0.2	2			7.51		4.97		31.24		66.1		4.88		26.7		44	
M1	4/10/2022	Mid-Ebb	Fine	Moderate	7:53	0.9	M	0.45	1	0.065	76	7.15	7.16	3.22	3.23	30.41	30.42	52.7	52.8	3.89	3.91	23.3	23.4	30	32
M1	4/10/2022	Mid-Ebb	Fine	Moderate	7:53	0.9	M	0.45	2			7.16		3.24		30.42		52.9		3.92		23.4		34	
M2	4/10/2022	Mid-Ebb	Fine	Moderate	8:19	0.8	M	0.4	1	0.054	314	7.29	7.29	3.57	3.57	30.58	30.59	60.7	60.8	4.13	4.14	23.9	23.9	32	33
M2	4/10/2022	Mid-Ebb	Fine	Moderate	8:19	0.8	M	0.4	2			7.28		3.56		30.59		60.8		4.14		23.9		34	
M3	4/10/2022	Mid-Ebb	Cloudy	Calm	7:49	0.8	M	0.4	1	0.327	254	7.27	7.28	3.07	3.08	28.05	28.06	56.3	56.5	4.15	4.17	28.7	29.1	37	37
M3	4/10/2022	Mid-Ebb	Cloudy	Calm	7:49	0.8	M	0.4	2			7.28		3.09		28.07		56.7		4.18		29.5		36	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	6/10/2022	Mid-Flood	Fine	Calm	18:38	2	M	1	1	0.394	253	7.62	7.62	9.37	9.37	29.17	29.18	50.5	50.9	3.62	3.65	18.2	18.4	34	35
M1	6/10/2022	Mid-Flood	Fine	Calm	18:38	2	M	1	2			7.61		9.36		29.18		51.3		3.68		18.6		36	
M2	6/10/2022	Mid-Flood	Fine	Calm	18:22	1.2	M	0.6	1	0.341	332	7.81	7.81	9.12	9.13	29.36	29.36	57.1	57.4	4.15	4.17	20.8	20.8	20	20
M2	6/10/2022	Mid-Flood	Fine	Calm	18:22	1.2	M	0.6	2			7.81		9.14		29.35		57.7		4.19		20.7		19	
M3	6/10/2022	Mid-Flood	Fine	Moderate	18:29	1.3	M	0.65	1	0.065	98	8.51	8.52	8.65	8.66	30.38	30.39	47.7	47.7	3.41	3.41	26.3	26.4	41	40
M3	6/10/2022	Mid-Flood	Fine	Moderate	18:29	1.3	M	0.65	2			8.52		8.66		30.39		47.6		3.40		26.4		39	
M1	6/10/2022	Mid-Ebb	Fine	Calm	11:02	2.2	M	1.1	1	0.42	205	7.39	7.40	8.46	8.47	30.86	30.87	54.6	54.9	3.97	3.99	13.7	14.0	28	29
M1	6/10/2022	Mid-Ebb	Fine	Calm	11:02	2.2	M	1.1	2			7.41		8.48		30.88		55.2		4.01		14.3		30	
M2	6/10/2022	Mid-Ebb	Fine	Calm	11:20	1.2	M	0.6	1	0.371	250	7.54	7.54	10.81	10.82	31.29	31.29	68.9	68.5	4.91	4.89	19.0	18.7	43	41
M2	6/10/2022	Mid-Ebb	Fine	Calm	11:20	1.2	M	0.6	2			7.53		10.82		31.29		68.1		4.86		18.4		38	
M3	6/10/2022	Mid-Ebb	Fine	Moderate	10:55	1.1	M	0.55	1	0.046	145	8.78	8.76	13.93	13.94	29.42	29.43	81.5	81.6	6.44	6.47	22.2	22.3	50	52
M3	6/10/2022	Mid-Ebb	Fine	Moderate	10:55	1.1	M	0.55	2			8.74		13.94		29.44		81.7		6.49		22.3		53	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	8/10/2022	Mid-Flood	Fine	Moderate	19:40	1.4	M	0.7	1	0.076	65	8.11	8.13	9.23	9.24	28.74	28.72	64.1	64.2	4.93	4.94	15.1	15.2	9	9
M1	8/10/2022	Mid-Flood	Fine	Moderate	19:40	1.4	M	0.7	2			8.14		9.24		28.70		64.2		4.95		15.2		9	
M2	8/10/2022	Mid-Flood	Fine	Moderate	19:25	1.3	M	0.65	1	0.093	76	8.26	8.27	8.59	8.58	29.07	29.08	69.9	69.7	5.12	5.12	15.7	15.8	13	14
M2	8/10/2022	Mid-Flood	Fine	Moderate	19:25	1.3	M	0.65	2			8.27		8.57		29.08		69.4		5.11		15.8		14	
M3	8/10/2022	Mid-Flood	Cloudy	Calm	19:22	0.6	M	0.3	1	0.356	85	7.85	7.86	9.01	9.02	28.05	28.06	75.5	75.2	5.48	5.46	16.9	16.6	18	17
M3	8/10/2022	Mid-Flood	Cloudy	Calm	19:22	0.6	M	0.3	2			7.86		9.02		28.06		74.8		5.43		16.3		16	
M1	8/10/2022	Mid-Ebb	Fine	Moderate	12:40	0.9	M	0.45	1	0.066	24	8.30	8.31	12.07	12.08	29.15	29.15	63.7	63.8	4.57	4.58	13.2	13.1	11	10
M1	8/10/2022	Mid-Ebb	Fine	Moderate	12:40	0.9	M	0.45	2			8.31		12.08		29.14		63.8		4.59		13.1		9	
M2	8/10/2022	Mid-Ebb	Fine	Moderate	12:54	0.8	M	0.4	1	0.093	265	8.40	8.41	13.12	13.13	29.03	29.04	70.2	70.7	5.28	5.31	13.6	13.6	12	12
M2	8/10/2022	Mid-Ebb	Fine	Moderate	12:54	0.8	M	0.4	2			8.41		13.14		29.04		71.1		5.34		13.6		12	
M3	8/10/2022	Mid-Ebb	Cloudy	Calm	12:39	0.8	M	0.4	1	0.381	263	7.58	7.58	6.14	6.13	29.54	29.55	79.4	79.7	5.95	5.97	12.3	12.5	15	15
M3	8/10/2022	Mid-Ebb	Cloudy	Calm	12:39	0.8	M	0.4	2			7.57		6.12		29.56		79.9		5.98		12.6		14	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	11/10/2022	Mid-Flood	Cloudy	Moderate	8:33	2.2	M	1.1	1	0.407	242	7.83	7.84	6.87	6.88	22.88	22.89	59.3	59.6	4.78	4.80	34.4	34.3	36	38
M1	11/10/2022	Mid-Flood	Cloudy	Moderate	8:33	2.2	M	1.1	2			7.84		6.88		22.90		59.8		4.81		34.2		39	
M2	11/10/2022	Mid-Flood	Cloudy	Moderate	8:56	1.2	M	0.6	1	0.378	313	7.69	7.70	6.44	6.43	23.12	23.13	57.1	56.8	4.59	4.57	30.2	30.5	34	35
M2	11/10/2022	Mid-Flood	Cloudy	Moderate	8:56	1.2	M	0.6	2			7.71		6.42		23.13		56.5		4.55		30.7		36	
M3	11/10/2022	Mid-Flood	Fine	Moderate	8:39	1.3	M	0.65	1	0.063	92	8.31	8.32	6.66	6.68	23.48	23.49	65.7	65.6	5.37	5.35	38.5	38.6	45	42
M3	11/10/2022	Mid-Flood	Fine	Moderate	8:39	1.3	M	0.65	2			8.32		6.69		23.49		65.4		5.33		38.8		38	
M1	11/10/2022	Mid-Ebb	Cloudy	Moderate	14:45	2.2	M	1.1	1	0.384	176	7.51	7.51	10.31	10.32	28.93	28.94	63.6	63.4	5.23	5.21	32.7	32.8	34	35
M1	11/10/2022	Mid-Ebb	Cloudy	Moderate	14:45	2.2	M	1.1	2			7.51		10.32		28.94		63.1		5.19		32.8		36	
M2	11/10/2022	Mid-Ebb	Cloudy	Moderate	14:26	1.2	M	0.6	1	0.345	228	7.63	7.62	12.04	12.03	28.27	28.28	67.5	67.7	5.49	5.50	27.6	27.5	21	21
M2	11/10/2022	Mid-Ebb	Cloudy	Moderate	14:26	1.2	M	0.6	2			7.61		12.02		28.29		67.8		5.51		27.4		20	
M3	11/10/2022	Mid-Ebb	Fine	Moderate	14:40	1	M	0.5	1	0.092	165	8.08	8.09	6.41	6.42	23.86	23.87	57.5	57.5	4.67	4.67	41.7	41.7	36	35
M3	11/10/2022	Mid-Ebb	Fine	Moderate	14:40	1	M	0.5	2			8.09		6.42		23.87		57.4		4.66		41.7		34	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	13/10/2022	Mid-Flood	Fine	Smooth	9:57	2	M	1	1	0.362	257	8.01	8.02	8.51	8.51	23.71	23.72	70.5	70.1	5.69	5.66	25.5	25.6	30	29
M1	13/10/2022	Mid-Flood	Fine	Smooth	9:57	2	M	1	2			8.03		8.51		23.73		69.6		5.63		25.7		27	
M2	13/10/2022	Mid-Flood	Fine	Smooth	10:16	1	M	0.5	1	0.325	332	7.82	7.83	6.86	6.87	24.02	24.03	57.8	58.1	4.69	4.71	22.1	21.8	26	26
M2	13/10/2022	Mid-Flood	Fine	Smooth	10:16	1	M	0.5	2			7.83		6.88		24.04		58.4		4.73		21.5		25	
M3	13/10/2022	Mid-Flood	Fine	Moderate	9:59	1.1	M	0.55	1	0.075	83	8.19	8.18	7.66	7.65	23.08	23.08	80.2	80.2	6.58	6.58	33.7	33.7	37	36
M3	13/10/2022	Mid-Flood	Fine	Moderate	9:59	1.1	M	0.55	2			8.17		7.64		23.07		80.1		6.57		33.7		34	
M1	13/10/2022	Mid-Ebb	Fine	Smooth	15:51	2.2	M	1.1	1	0.31	163	7.56	7.55	7.23	7.24	29.17	29.18	73.7	73.3	5.97	5.94	26.2	26.5	36	37
M1	13/10/2022	Mid-Ebb	Fine	Smooth	15:51	2.2	M	1.1	2			7.54		7.25		29.18		72.9		5.91		26.9		37	
M2	13/10/2022	Mid-Ebb	Fine	Smooth	15:32	1.2	M	0.6	1	0.283	239	7.32	7.33	7.65	7.64	28.86	28.87	76.6	76.3	6.21	6.19	19.7	19.6	23	24
M2	13/10/2022	Mid-Ebb	Fine	Smooth	15:32	1.2	M	0.6	2			7.33		7.63		28.87		75.9		6.16		19.5		24	
M3	13/10/2022	Mid-Ebb	Fine	Moderate	15:41	1	M	0.5	1	0.048	133	8.21	8.23	6.89	6.89	24.04	24.05	50.6	50.7	4.11	4.15	23.6	23.6	28	28
M3	13/10/2022	Mid-Ebb	Fine	Moderate	15:41	1	M	0.5	2			8.24		6.88		24.06		50.8		4.19		23.6		27	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	15/10/2022	Mid-Flood	Fine	Moderate	11:45	1.1	M	0.55	1	0.057	124	7.91	7.92	6.01	6.03	26.58	26.58	58.1	58.0	4.52	4.51	15.7	15.7	15	16
M1	15/10/2022	Mid-Flood	Fine	Moderate	11:45	1.1	M	0.55	2			7.92		6.04		26.59		57.9		4.49		15.7		16	
M2	15/10/2022	Mid-Flood	Fine	Moderate	12:00	1	M	0.5	1	0.065	91	7.84	7.86	6.19	6.19	27.44	27.46	62.3	62.4	4.72	4.73	15.4	15.4	22	23
M2	15/10/2022	Mid-Flood	Fine	Moderate	12:00	1	M	0.5	2			7.88		6.18		27.48		62.4		4.74		15.4		23	
M3	15/10/2022	Mid-Flood	Fine	Smooth	11:39	0.4	M	0.2	1	0.27	98	7.89	7.89	5.01	5.02	26.95	26.96	63.5	63.7	4.97	4.98	28.4	28.7	30	30
M3	15/10/2022	Mid-Flood	Fine	Smooth	11:39	0.4	M	0.2	2			7.88		5.02		26.97		63.8		4.99		28.9		30	
M1	15/10/2022	Mid-Ebb	Fine	Moderate	17:04	1	M	0.5	1	0.048	303	7.87	7.86	5.09	5.09	25.41	25.42	68.2	68.3	5.14	5.15	21.5	21.4	24	23
M1	15/10/2022	Mid-Ebb	Fine	Moderate	17:04	1	M	0.5	2			7.84		5.08		25.43		68.3		5.16		21.4		21	
M2	15/10/2022	Mid-Ebb	Fine	Moderate	16:46	0.9	M	0.45	1	0.037	91	7.98	7.99	5.42	5.43	26.21	26.21	60.2	60.3	4.89	4.91	22.5	22.6	22	22
M2	15/10/2022	Mid-Ebb	Fine	Moderate	16:46	0.9	M	0.45	2			7.99		5.44		26.20		60.4		4.92		22.6		21	
M3	15/10/2022	Mid-Ebb	Fine	Smooth	16:44	0.4	M	0.2	1	0.211	250	7.57	7.57	2.78	2.79	30.04	30.05	57.7	57.4	4.57	4.55	41.3	40.8	26	26
M3	15/10/2022	Mid-Ebb	Fine	Smooth	16:44	0.4	M	0.2	2			7.56		2.79		30.06		57.1		4.53		40.2		25	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	20/10/2022	Mid-Flood	Fine	Moderate	17:54	1.4	M	0.7	1	0.083	265	8.18	8.18	12.44	12.43	23.12	23.13	56.8	56.8	4.81	4.80	21.5	21.4	11	11
M1	20/10/2022	Mid-Flood	Fine	Moderate	17:54	1.4	M	0.7	2			8.17		12.41		23.14		56.7		4.79		21.4		11	
M2	20/10/2022	Mid-Flood	Fine	Moderate	17:36	1.2	M	0.6	1	0.055	93	8.20	8.21	12.58	12.59	23.44	23.46	52.4	52.5	4.51	4.52	20.1	20.2	21	20
M2	20/10/2022	Mid-Flood	Fine	Moderate	17:36	1.2	M	0.6	2			8.21		12.59		23.48		52.5		4.53		20.2		19	
M3	20/10/2022	Mid-Flood	Fine	Calm	17:33	0.4	M	0.2	1	0.232	88	7.89	7.89	8.08	8.09	27.23	27.23	59.6	60.0	4.77	4.80	18.5	18.1	22	22
M3	20/10/2022	Mid-Flood	Fine	Calm	17:33	0.4	M	0.2	2			7.88		8.10		27.22		60.4		4.82		17.7		21	
M1	20/10/2022	Mid-Ebb	Fine	Moderate	10:13	1.1	M	0.55	1	0.045	106	7.72	7.73	11.19	11.19	24.28	24.29	49.1	49.2	4.11	4.12	16.0	16.1	21	22
M1	20/10/2022	Mid-Ebb	Fine	Moderate	10:13	1.1	M	0.55	2			7.74		11.18		24.29		49.2		4.13		16.1		22	
M2	20/10/2022	Mid-Ebb	Fine	Moderate	10:35	0.9	M	0.45	1	0.065	90	7.42	7.43	11.14	11.14	24.11	24.12	51.2	51.3	4.17	4.17	15.8	15.8	32	33
M2	20/10/2022	Mid-Ebb	Fine	Moderate	10:35	0.9	M	0.45	2			7.43		11.13		24.13		51.3		4.16		15.8		34	
M3	20/10/2022	Mid-Ebb	Fine	Calm	9:57	0.6	M	0.3	1	0.215	266	7.53	7.54	3.48	3.48	23.84	23.85	52.5	52.2	4.20	4.18	13.6	14.3	13	13
M3	20/10/2022	Mid-Ebb	Fine	Calm	9:57	0.6	M	0.3	2			7.55		3.47		23.86		51.8		4.16		14.9		13	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	22/10/2022	Mid-Flood	Fine	Smooth	18:33	2	M	1	1	0.297	268	7.94	7.95	10.60	10.61	29.25	29.24	49.1	49.4	3.99	4.02	14.0	14.4	15	15
M1	22/10/2022	Mid-Flood	Fine	Smooth	18:33	2	M	1	2			7.96		10.61		29.23		49.7		4.04		14.7		15	
M2	22/10/2022	Mid-Flood	Fine	Smooth	18:16	1.2	M	0.6	1	0.269	296	7.66	7.66	9.65	9.65	28.94	28.93	43.5	44.0	3.53	3.56	13.3	13.1	21	22
M2	22/10/2022	Mid-Flood	Fine	Smooth	18:16	1.2	M	0.6	2			7.65		9.64		28.92		44.4		3.59		12.9		23	
M3	22/10/2022	Mid-Flood	Fine	Smooth	18:16	0.4	M	0.2	1	0.247	95	7.79	7.79	9.46	9.47	28.39	28.39	52.1	52.6	4.02	4.06	23.1	22.3	17	18
M3	22/10/2022	Mid-Flood	Fine	Smooth	18:16	0.4	M	0.2	2			7.78		9.48		28.39		53.1		4.10		21.5		19	
M1	22/10/2022	Mid-Ebb	Fine	Smooth	11:47	2.2	M	1.1	1	0.325	202	7.44	7.45	4.30	4.31	26.13	26.14	67.7	67.6	5.51	5.50	18.7	18.9	27	28
M1	22/10/2022	Mid-Ebb	Fine	Smooth	11:47	2.2	M	1.1	2			7.46		4.31		26.15		67.4		5.49		19.2		29	
M2	22/10/2022	Mid-Ebb	Fine	Smooth	12:06	1.2	M	0.6	1	0.307	265	7.59	7.58	4.76	4.77	27.02	27.03	57.4	57.7	4.67	4.69	20.8	20.9	28	29
M2	22/10/2022	Mid-Ebb	Fine	Smooth	12:06	1.2	M	0.6	2			7.57		4.78		27.03		57.9		4.71		21.1		29	
M3	22/10/2022	Mid-Ebb	Fine	Smooth	11:41	0.6	M	0.3	1	0.261	276	7.51	7.51	3.97	3.98	25.65	25.66	60.7	60.4	4.96	4.94	17.2	17.7	43	44
M3	22/10/2022	Mid-Ebb	Fine	Smooth	11:41	0.6	M	0.3	2			7.51		3.99		25.67		60.1		4.92		18.1		45	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	25/10/2022	Mid-Flood	Cloudy	Smooth	7:48	2.2	M	1.1	1	0.339	283	7.84	7.85	18.24	18.25	22.15	22.16	80.3	79.9	6.03	6.00	20.3	19.7	25	24
M1	25/10/2022	Mid-Flood	Cloudy	Smooth	7:48	2.2	M	1.1	2			7.85		18.26		22.17		79.4		5.97		19.1		23	
M2	25/10/2022	Mid-Flood	Cloudy	Smooth	8:06	1.2	M	0.6	1	0.302	328	7.89	7.90	16.37	16.37	22.69	22.70	76.2	76.4	5.74	5.76	22.9	23.2	32	32
M2	25/10/2022	Mid-Flood	Cloudy	Smooth	8:06	1.2	M	0.6	2			7.91		16.36		22.71		76.6		5.77		23.5		31	
M3	25/10/2022	Mid-Flood	Fine	Moderate	7:41	1.4	M	0.7	1	0.05	105	8.04	8.05	20.29	20.29	24.58	24.57	82.7	82.3	6.14	6.12	21.2	21.3	51	50
M3	25/10/2022	Mid-Flood	Fine	Moderate	7:41	1.4	M	0.7	2			8.06		20.28		24.55		81.9		6.09		21.4		49	
M1	25/10/2022	Mid-Ebb	Cloudy	Smooth	13:53	2.2	M	1.1	1	0.33	215	7.78	7.78	14.98	14.98	26.25	26.26	64.7	65.1	4.91	4.94	18.2	17.8	18	18
M1	25/10/2022	Mid-Ebb	Cloudy	Smooth	13:53	2.2	M	1.1	2			7.77		14.97		26.26		65.4		4.96		17.4		17	
M2	25/10/2022	Mid-Ebb	Cloudy	Smooth	13:35	1.2	M	0.6	1	0.286	246	7.61	7.62	13.69	13.69	25.84	25.83	73.9	73.6	5.57	5.55	16.3	15.9	38	37
M2	25/10/2022	Mid-Ebb	Cloudy	Smooth	13:35	1.2	M	0.6	2			7.63		13.68		25.82		73.2		5.52		15.5		36	
M3	25/10/2022	Mid-Ebb	Fine	Moderate	13:44	1.2	M	0.6	1	0.048	71	8.27	8.27	16.56	16.50	25.06	25.07	75.1	75.3	5.65	5.67	17.1	17.1	21	22
M3	25/10/2022	Mid-Ebb	Fine	Moderate	13:44	1.2	M	0.6	2			8.26		16.44		25.08		75.4		5.69		17.1		23	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	27/10/2022	Mid-Flood	Fine	Moderate	9:23	1.2	M	0.6	1	0.062	94	7.69	7.68	10.28	10.28	24.89	24.89	50.7	50.7	4.11	4.10	28.1	28.1	41	42
M1	27/10/2022	Mid-Flood	Fine	Moderate	9:23	1.2	M	0.6	2			7.66		10.27		24.88		50.6		4.08		28.1		43	
M2	27/10/2022	Mid-Flood	Fine	Moderate	9:47	1	M	0.5	1	0.055	81	7.72	7.73	10.56	10.57	23.77	23.77	54.2	54.5	4.29	4.33	27.4	27.5	51	51
M2	27/10/2022	Mid-Flood	Fine	Moderate	9:47	1	M	0.5	2			7.74		10.58		23.76		54.8		4.37		27.5		50	
M3	27/10/2022	Mid-Flood	Cloudy	Calm	9:11	0.6	M	0.3	1	0.298	91	7.84	7.85	10.61	10.60	24.02	24.03	79.3	78.9	6.32	6.29	36.9	37.1	40	41
M3	27/10/2022	Mid-Flood	Cloudy	Calm	9:11	0.6	M	0.3	2			7.86		10.59		24.03		78.4		6.25		37.3		41	
M1	27/10/2022	Mid-Ebb	Fine	Moderate	15:15	1	M	0.5	1	0.063	58	7.75	7.74	11.41	11.42	25.92	25.93	63.4	63.6	4.67	4.67	24.0	24.0	39	41
M1	27/10/2022	Mid-Ebb	Fine	Moderate	15:15	1	M	0.5	2			7.73		11.42		25.93		63.8		4.66		24.0		43	
M2	27/10/2022	Mid-Ebb	Fine	Moderate	14:56	0.9	M	0.45	1	0.058	77	7.81	7.82	12.34	12.34	25.11	25.12	58.7	58.6	4.41	4.40	26.1	26.1	28	28
M2	27/10/2022	Mid-Ebb	Fine	Moderate	14:56	0.9	M	0.45	2			7.82		12.33		25.13		58.4		4.39		26.1		28	
M3	27/10/2022	Mid-Ebb	Cloudy	Calm	14:57	0.6	M	0.3	1	0.255	251	7.49	7.49	7.43	7.43	28.61	28.62	65.2	64.8	5.08	5.05	42.9	42.2	28	28
M3	27/10/2022	Mid-Ebb	Cloudy	Calm	14:57	0.6	M	0.3	2			7.48		7.42		28.62		64.4		5.02		41.4		28	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Water Quality Monitoring Results

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	29/10/2022	Mid-Flood	Fine	Moderate	11:10	1.1	M	0.55	1	0.049	91	7.66	7.65	9.71	9.74	25.93	25.94	58.7	58.6	4.67	4.65	22.3	22.4	30	32
M1	29/10/2022	Mid-Flood	Fine	Moderate	11:10	1.1	M	0.55	2			7.64		9.77		25.94		58.4		4.63		22.4		33	
M2	29/10/2022	Mid-Flood	Fine	Moderate	11:26	0.9	M	0.45	1	0.057	325	7.61	7.62	9.83	9.84	25.43	25.44	60.2	60.3	4.81	4.83	21.4	21.4	33	32
M2	29/10/2022	Mid-Flood	Fine	Moderate	11:26	0.9	M	0.45	2			7.62		9.84		25.44		60.4		4.84		21.4		31	
M3	29/10/2022	Mid-Flood	Cloudy	Smooth	11:09	0.4	M	0.2	1	0.314	96	7.84	7.84	9.66	9.67	25.96	25.97	64.1	63.7	4.92	4.89	36.1	35.7	49	48
M3	29/10/2022	Mid-Flood	Cloudy	Smooth	11:09	0.4	M	0.2	2			7.83		9.68		25.97		63.2		4.86		35.4		47	
M1	29/10/2022	Mid-Ebb	Fine	Moderate	16:42	1.1	M	0.55	1	0.045	266	7.81	7.82	9.38	9.38	25.32	25.36	57.7	57.6	4.51	4.50	20.6	20.7	26	25
M1	29/10/2022	Mid-Ebb	Fine	Moderate	16:42	1.1	M	0.55	2			7.82		9.37		25.39		57.4		4.49		20.7		24	
M2	29/10/2022	Mid-Ebb	Fine	Moderate	16:28	0.8	M	0.4	1	0.08	94	7.67	7.66	9.25	9.21	26.23	26.24	53.8	53.9	4.40	4.41	21.0	21.0	22	22
M2	29/10/2022	Mid-Ebb	Fine	Moderate	16:28	0.8	M	0.4	2			7.64		9.16		26.24		53.9		4.42		21.0		21	
M3	29/10/2022	Mid-Ebb	Cloudy	Smooth	16:28	0.6	M	0.3	1	0.241	271	7.56	7.56	7.52	7.52	28.74	28.75	71.6	72.0	5.61	5.64	23.2	23.0	29	29
M3	29/10/2022	Mid-Ebb	Cloudy	Smooth	16:28	0.6	M	0.3	2			7.55		7.51		28.75		72.3		5.66		22.7		29	

Remark

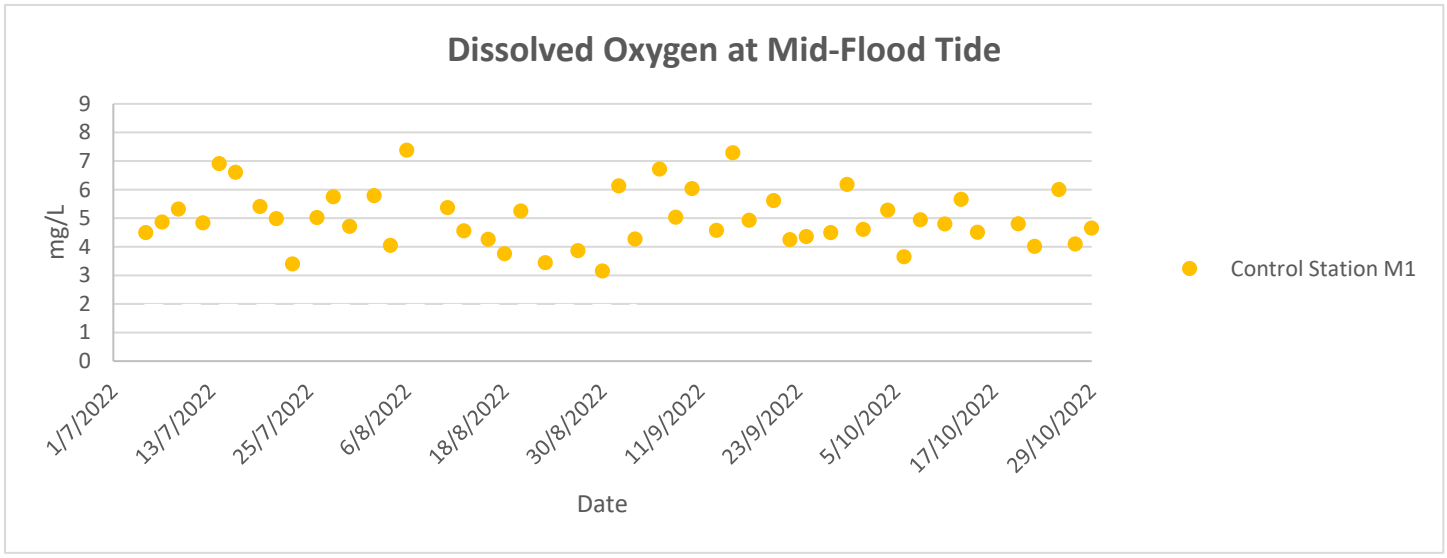
1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

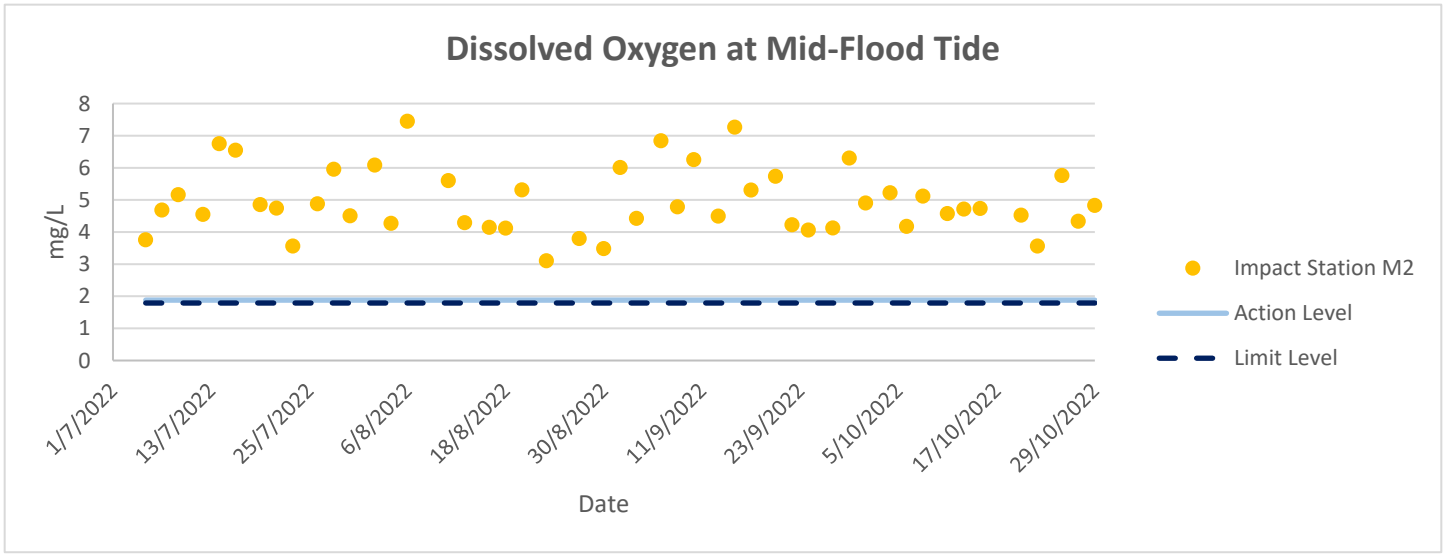
For Flood Tide

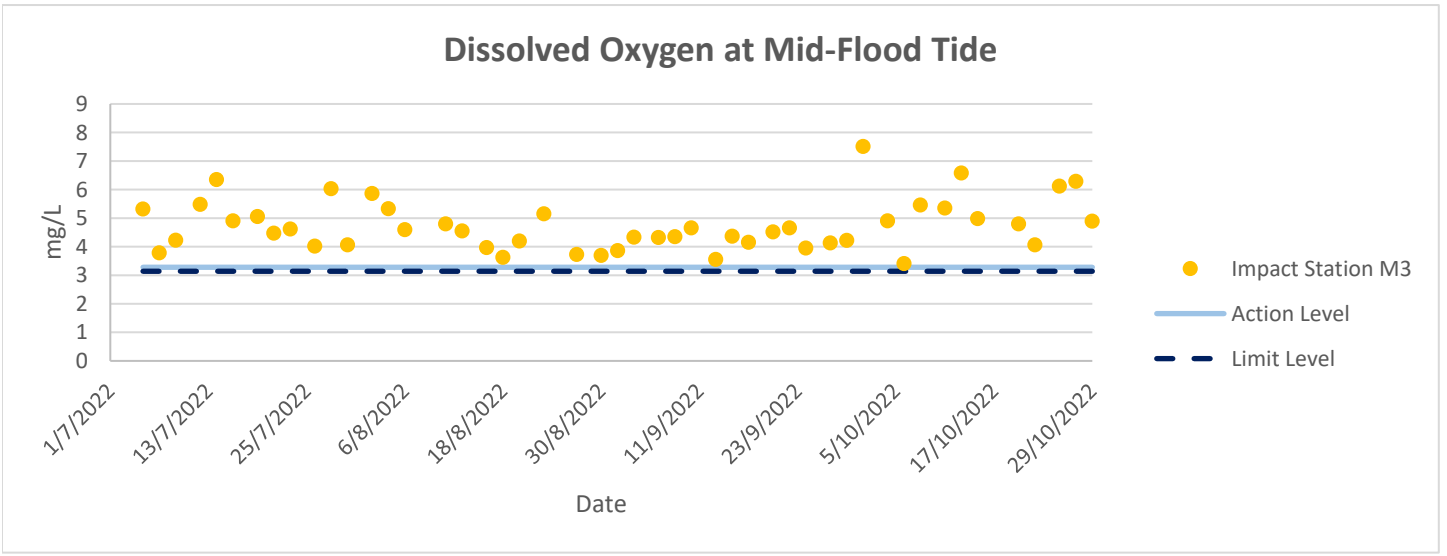
Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

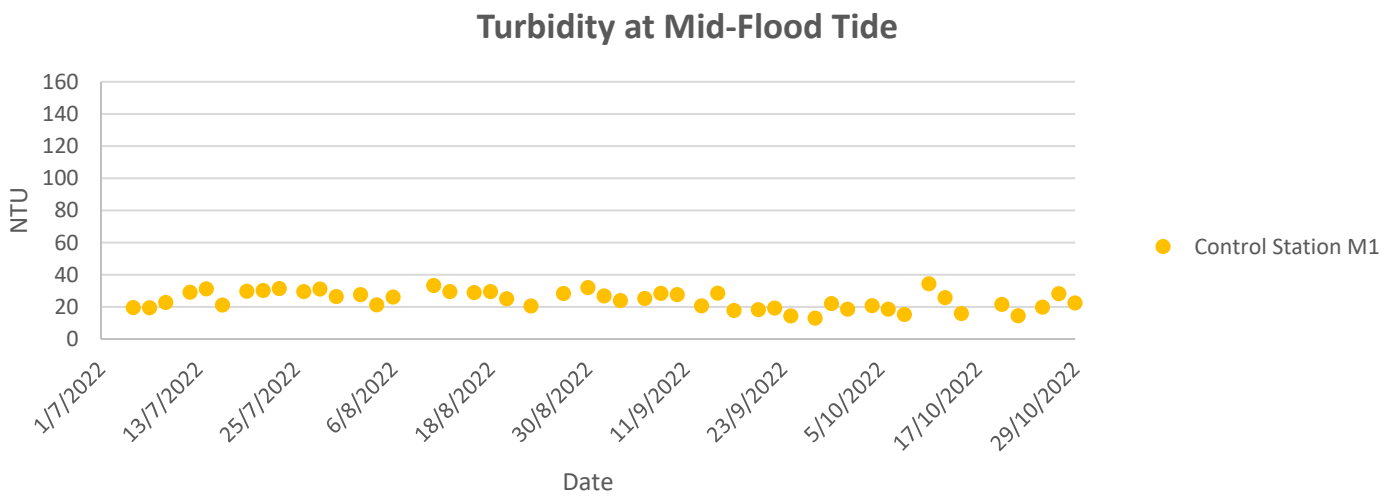
Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

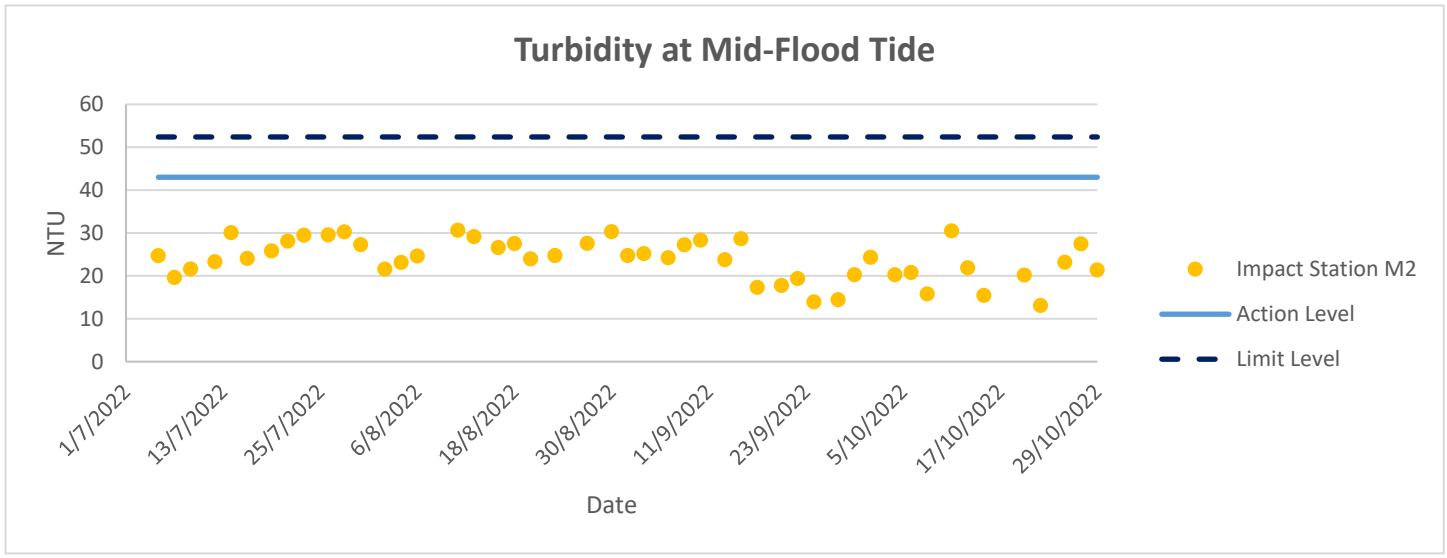


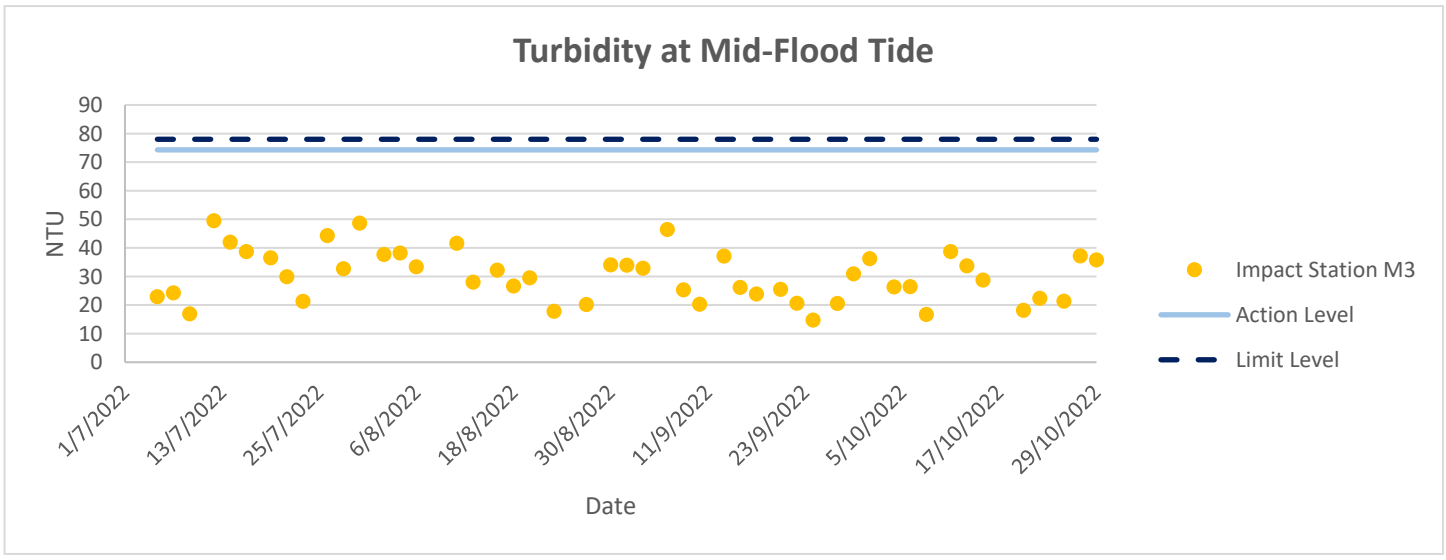




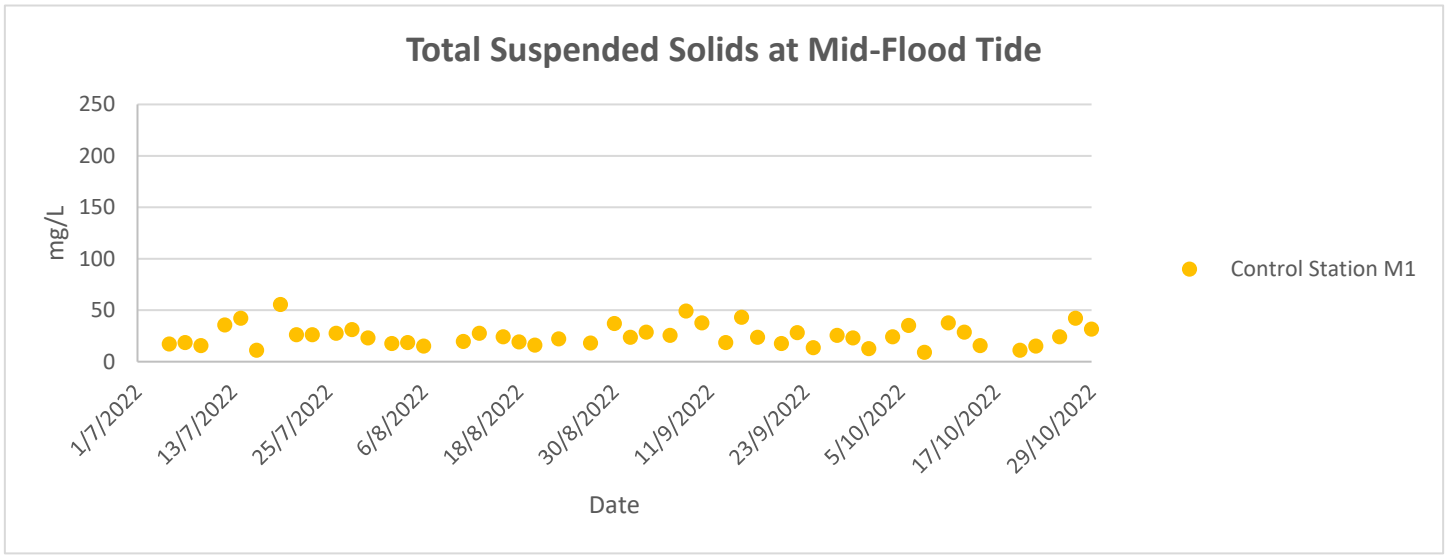
Water Quality Monitoring Results

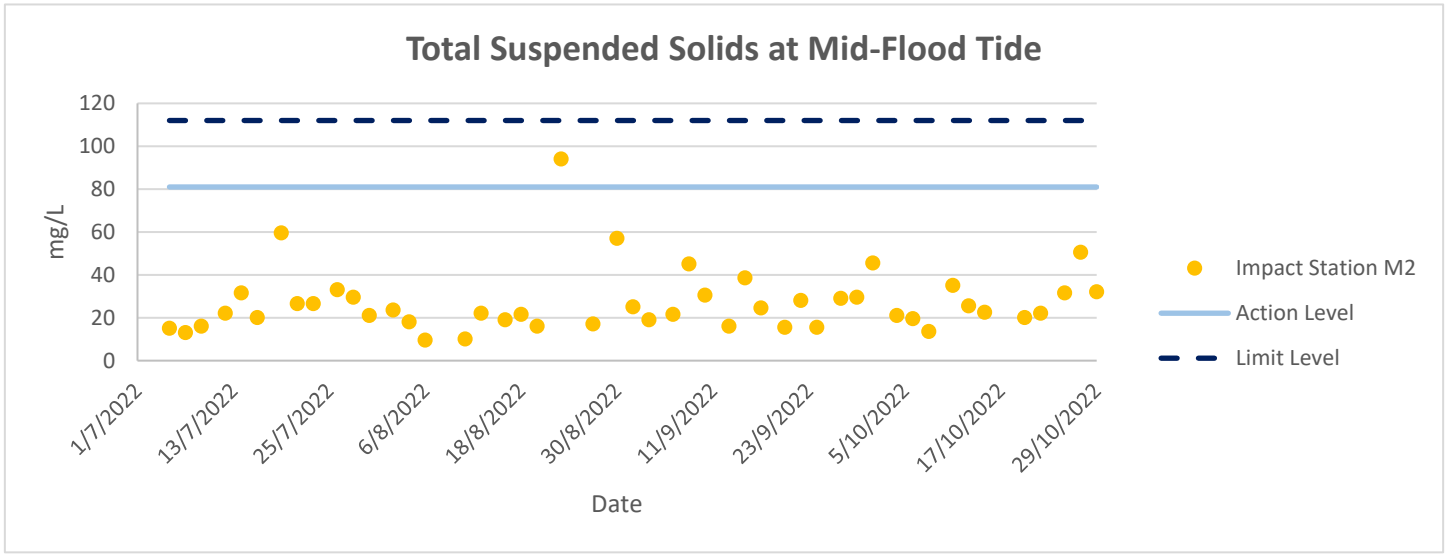


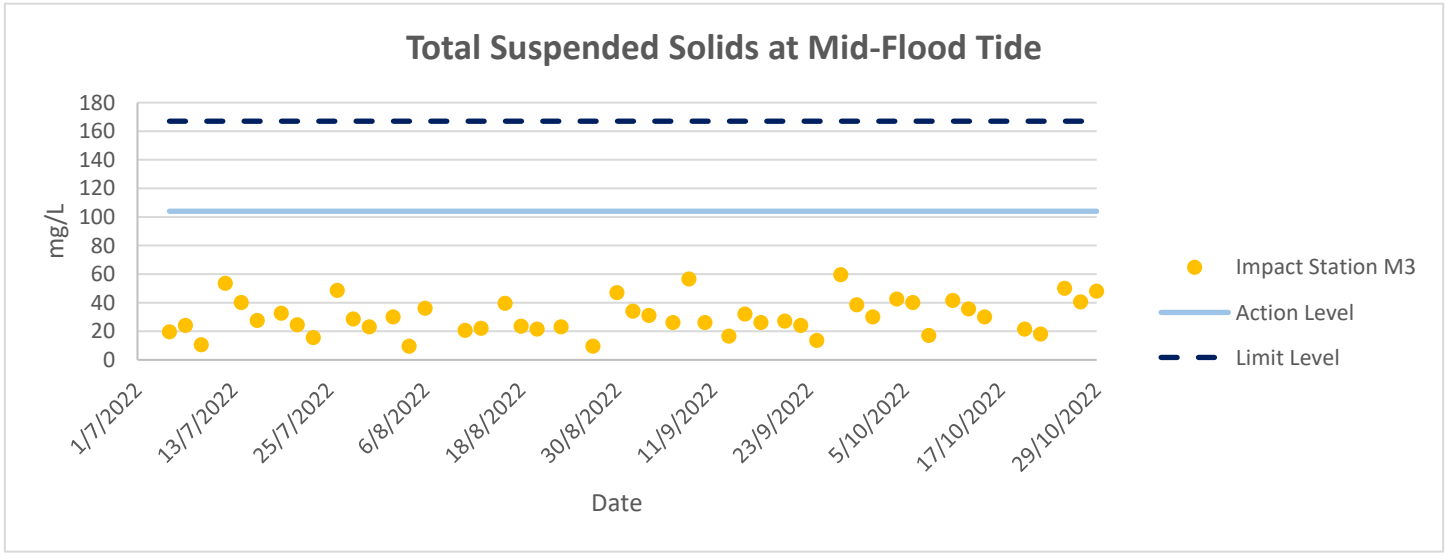




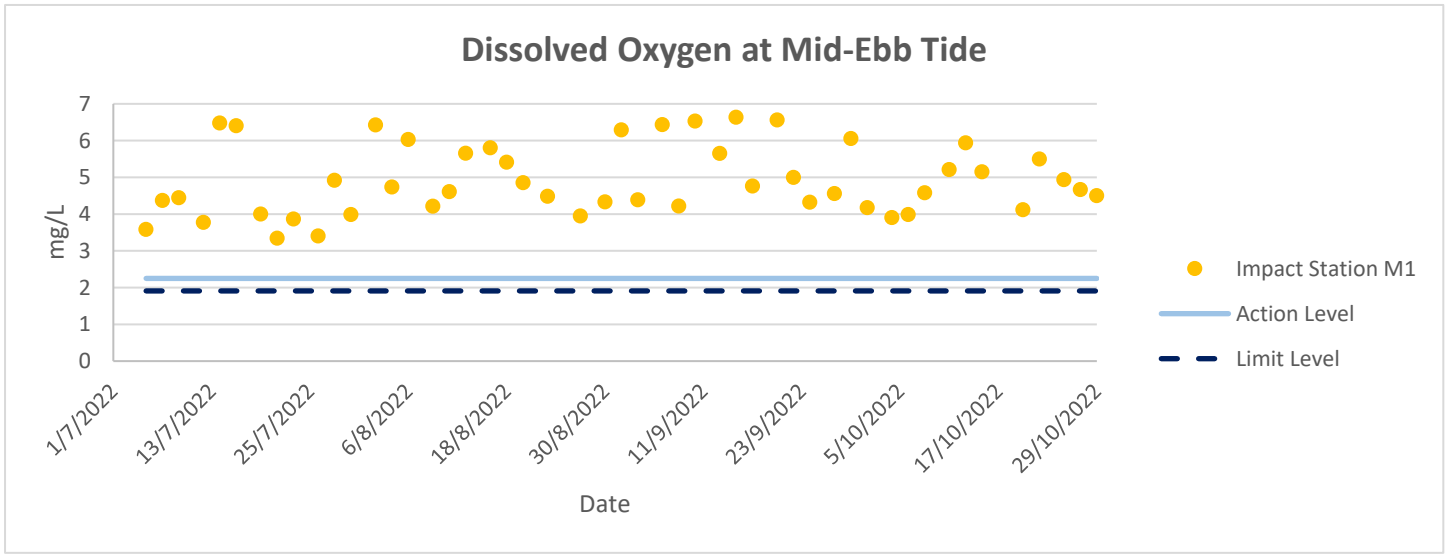
Water Quality Monitoring Results

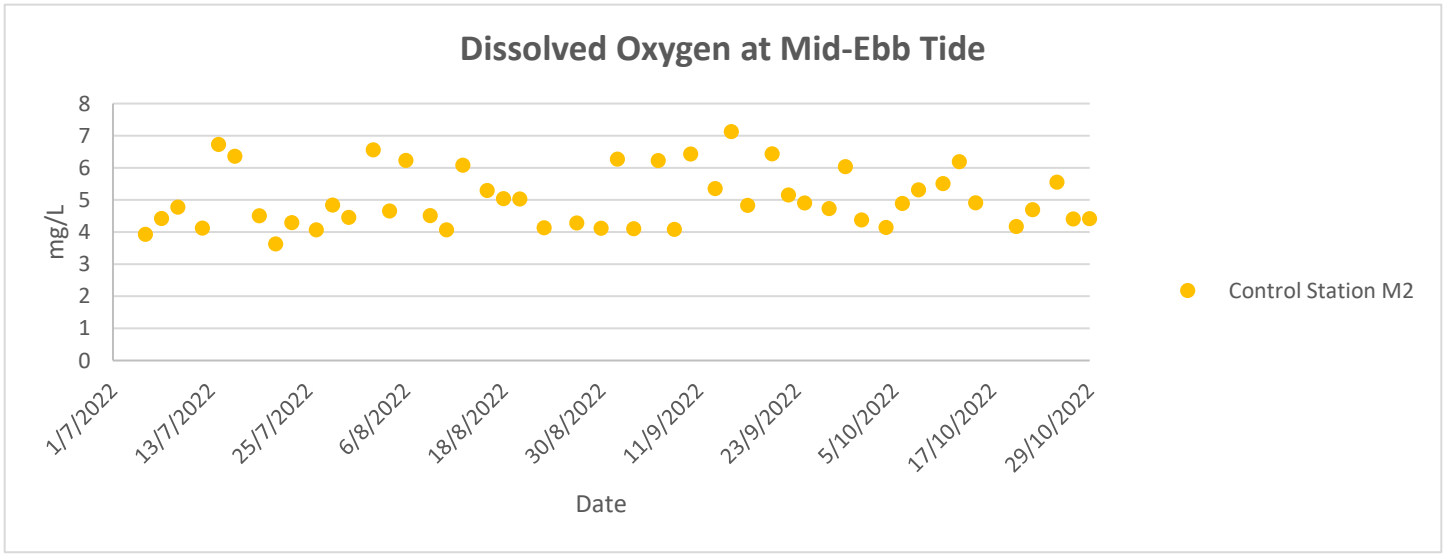


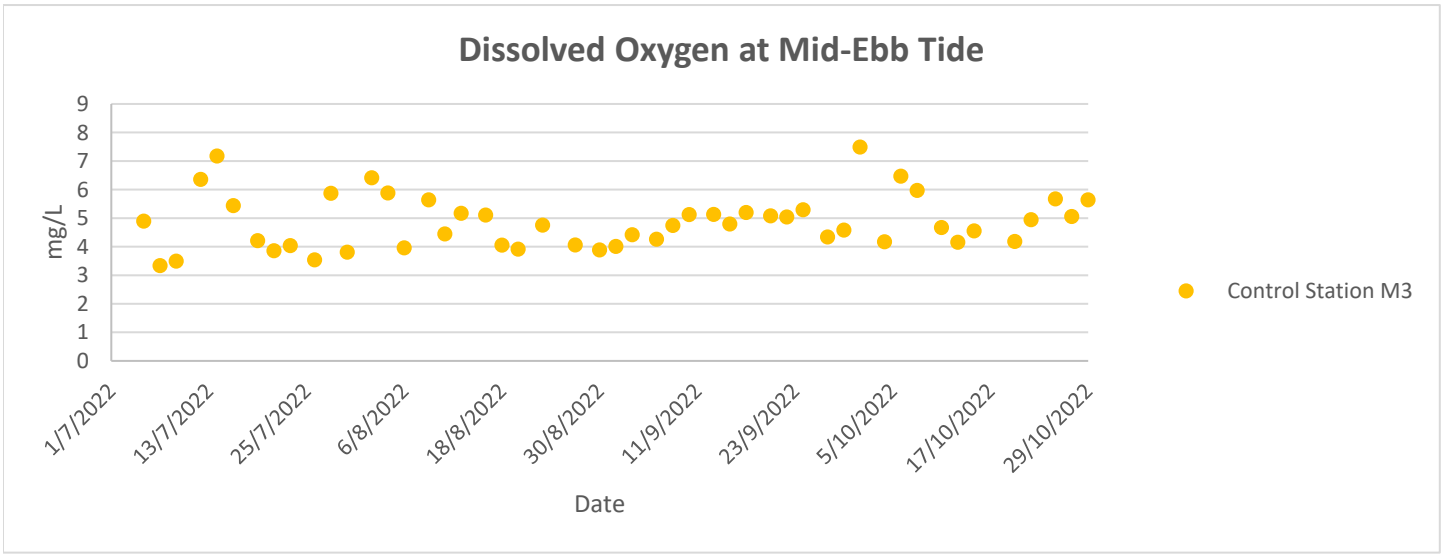




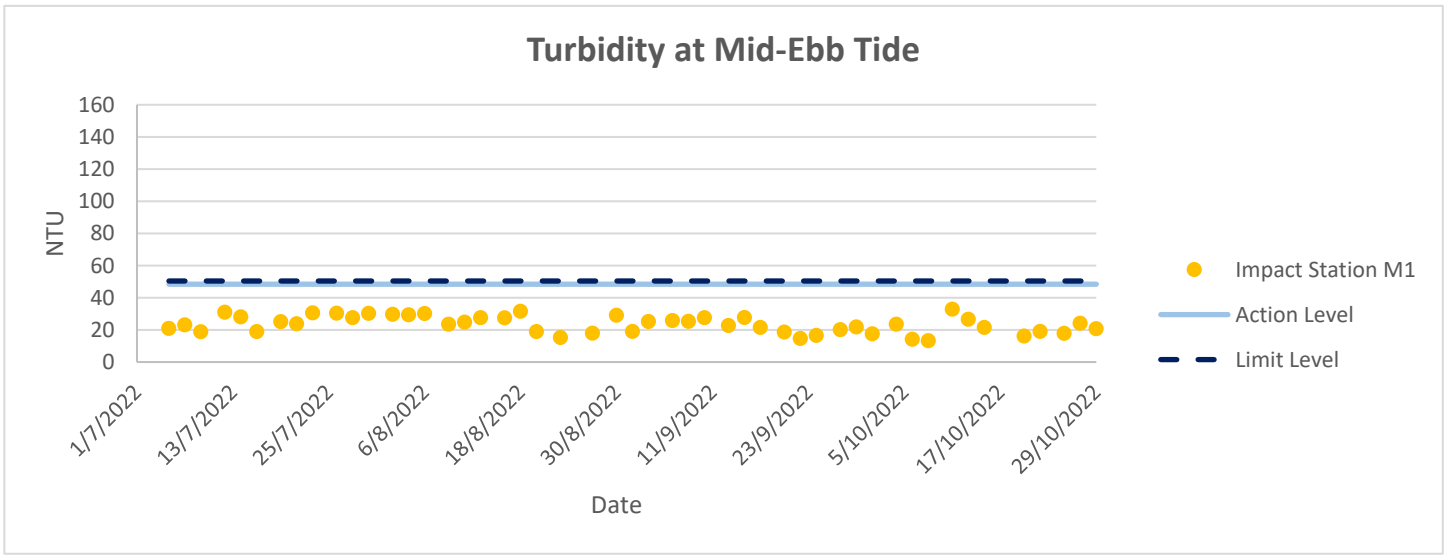
Water Quality Monitoring Results

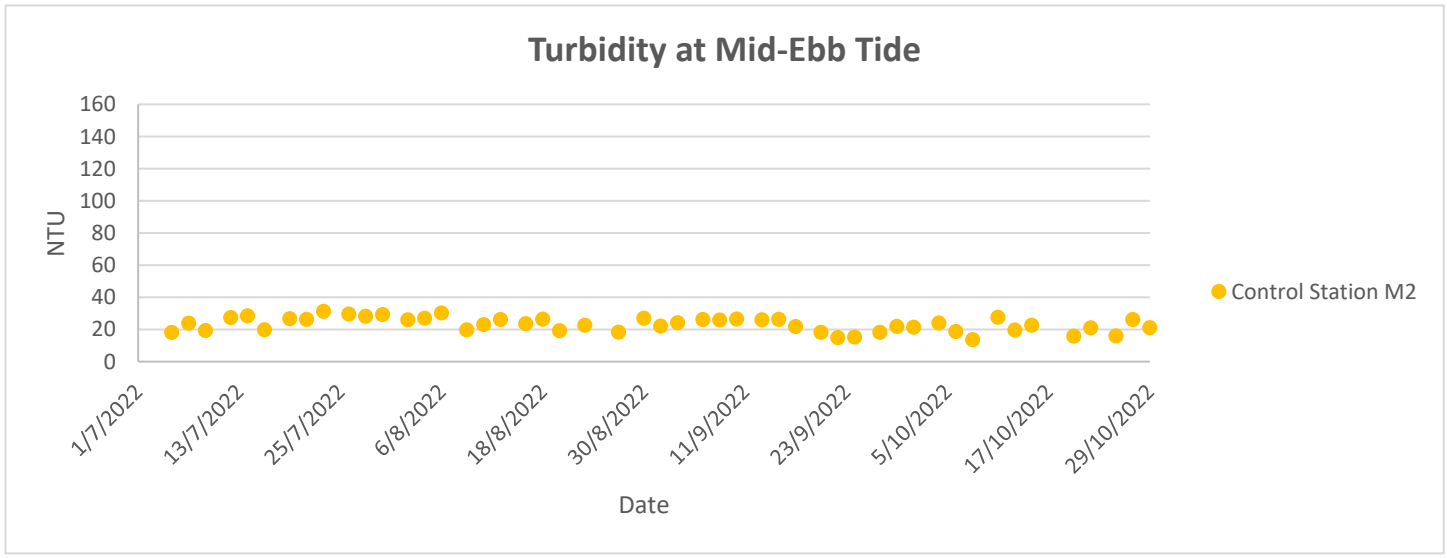


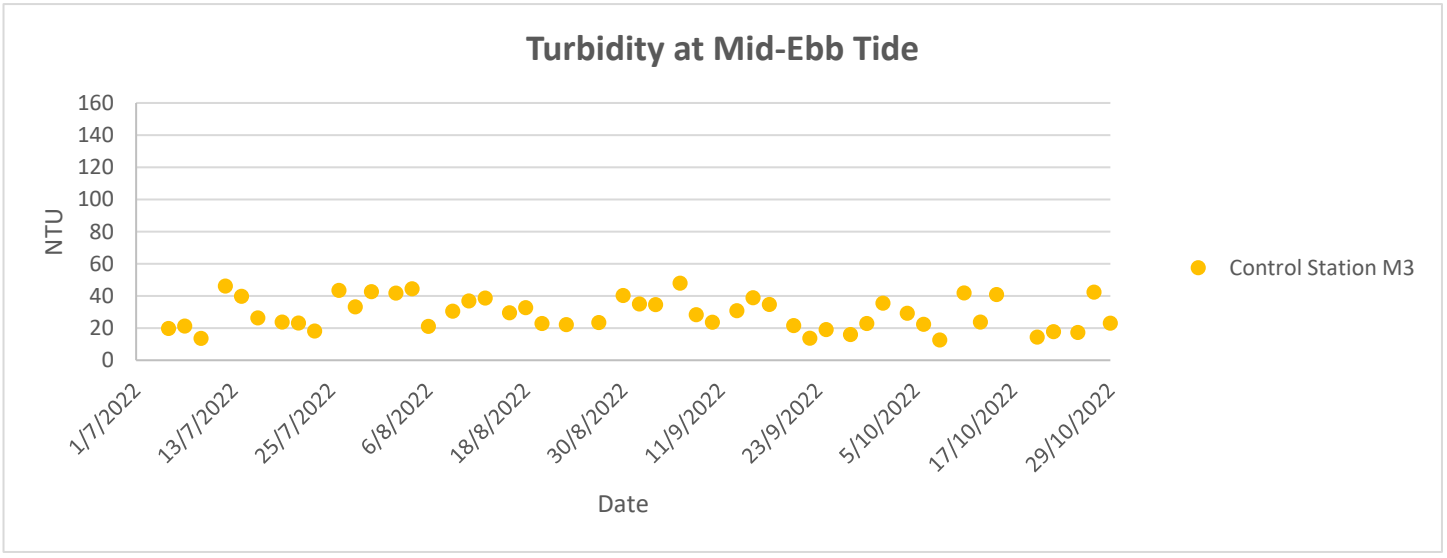




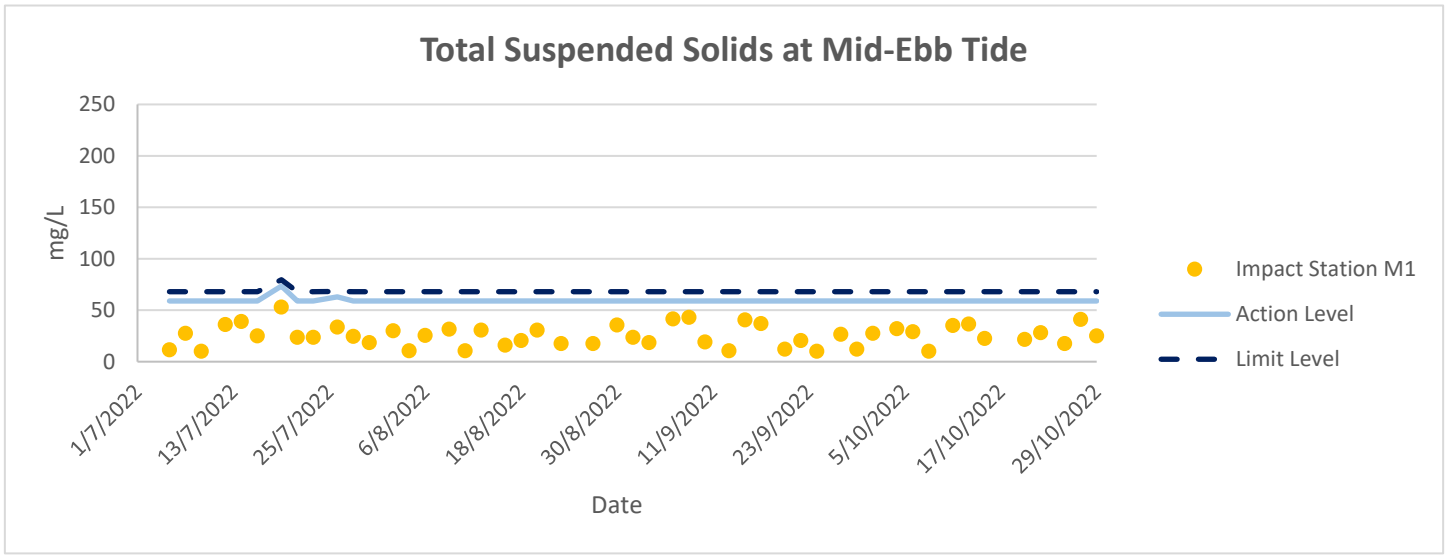
Water Quality Monitoring Results

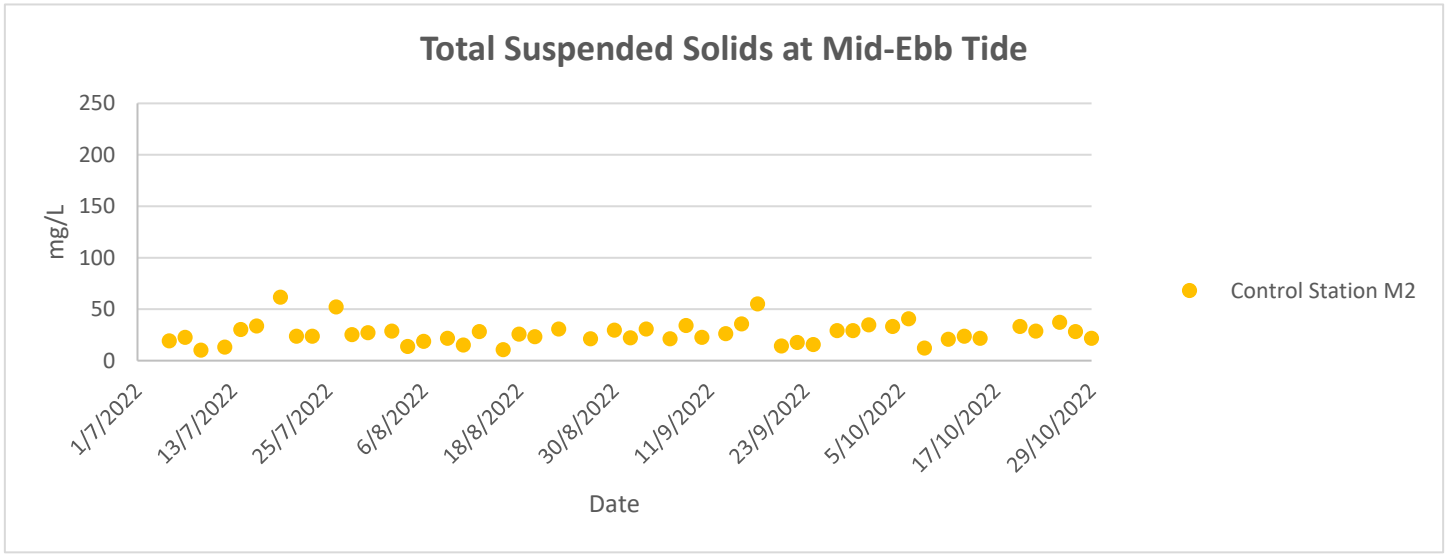


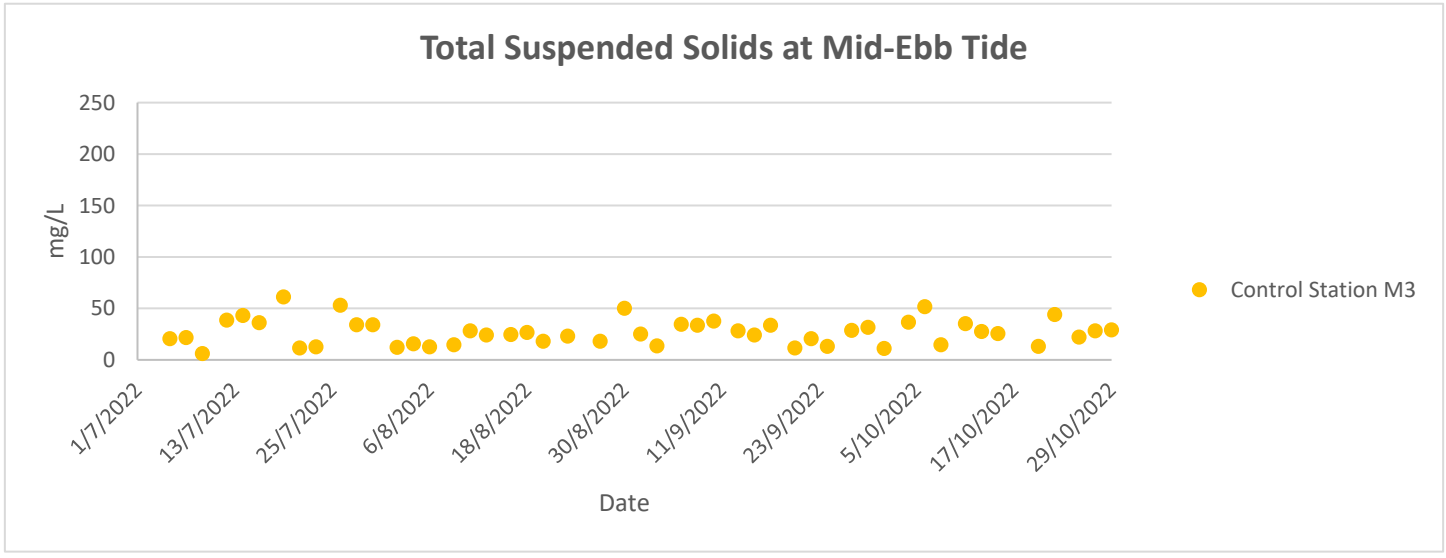




Water Quality Monitoring Results







Water Quality Monitoring Results

Ecology Monitoring Results

Ecology Monitoring Results for
Contract No. SPW 07/2020
Environmental Team for Construction of Yuen long Effluent Polishing Plant Stage 1

Appendix F.1 Ecological Bird Monitoring Result (12 October 2022)

Date (dd/mm/yyyy)	Daytime/Night time	Season	Area	Transect/Point Count	Point Count (Location)/Transect Impact	Habitat	Common Name	Scientific Name	Abundance	Distribution in Hong Kong[2]	Principal Status[3]	Level of Concern[4]	Protection Status in China[5]	China Red Data Book [6]	Red List of China's Vertebrates [10]	IUCN Red List [7] (v.2020-3)	Species of Conservation Importance	Wetland Dependent
12/10/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Common Myna	*Acridotheres tristis*	2	Uncommon	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Little Egret	*Egretta garzetta*	10	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Great Cormorant	*Phalacrocorax carbo*	2	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Barn Swallow	*Hirundo rustica*	1	Abundant	PM,SV	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	White Wagtail	*Motacilla alba*	2	Common	PM,WV	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Transect	FLW	In flight	Pomarine Jaeger	*Stercorarius pomarinus*	11	Scarce	PM	-	-	-	LC	LC	N	Y
12/10/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Eurasian Collared Dove	*Streptopelia decaocto*	2	Found in Mai Po, Tsim Bei Tsui, Fung Lok Wai	-	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Common Kingfisher	*Alcedo atthis*	1	Common	PM,WV	-	-	-	LC	LC	N	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Great Cormorant	*Phalacrocorax carbo*	2	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW2	Pond-FLW	Plain Prinia	*Prinia inornata*	3	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Grey Heron	*Ardea cinerea*	1	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Great Cormorant	*Phalacrocorax carbo*	2	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Little Grebe	*Tachybaptus ruficollis*	1	Common	Common	LC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Black-collared Starling	*Gracupica nigricollis*	2	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Plain Prinia	*Prinia inornata*	3	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Eurasian Collared Dove	*Streptopelia decaocto*	2	Found in Mai Po, Tsim Bei Tsui, Fung Lok Wai	-	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW4	Pond-FLW	Great Cormorant	*Phalacrocorax carbo*	1	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW4	Pond-FLW	Chinese Bulbul	*Pycnonotus sinensis*	1	Abundant	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW4	Pond-FLW	Eurasian Collared Dove	*Streptopelia decaocto*	6	Found in Mai Po, Tsim Bei Tsui, Fung Lok Wai	-	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Crested Myna	*Acridotheres cristatellus*	1	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Great Cormorant	*Phalacrocorax carbo*	2	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Eurasian Collared Dove	*Streptopelia decaocto*	1	Found in Mai Po, Tsim Bei Tsui, Fung Lok Wai	-	-	-	-	LC	LC	N	N

12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Great Egret	*Ardea alba*	7	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Grey Heron	*Ardea cinerea*	3	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Chinese Pond Heron	*Ardeola bacchus*	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Little Egret	*Egretta garzetta*	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Great Cormorant	*Phalacrocorax carbo*	4	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Plain Prinia	*Prinia inornata*	3	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	Crested Myna	*Acridotheres cristatellus*	8	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	Little Egret	*Egretta garzetta*	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	Great Cormorant	*Phalacrocorax carbo*	1	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	Barn Swallow	*Hirundo rustica*	1	Abundant	PM,SV	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	White Wagtail	*Motacilla alba*	1	Common	PM,WV	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	Eurasian Collared Dove	*Streptopelia decaocto*	1	Found in Mai Po, Tsim Bei Tsui, Fung Lok Wai	-	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Transect	NSW	Modified Watercourse	Little Egret	*Egretta garzetta*	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Transect	NSW	In flight	Great Cormorant	*Phalacrocorax carbo*	3	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Transect	NSW	Plantation-NSW	Red-whiskered Bulbul	*Pycnonotus jocosus*	2	Abundant	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Transect	NSW	Plantation-NSW	Chinese Bulbul	*Pycnonotus sinensis*	3	Abundant	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Pied Kingfisher	*Ceryle rudis*	1	Uncommon	R	-	-	-	LC	LC	N	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Black Drongo	*Dicrurus macrocercus*	1	Common	SV	-	-		LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Great Egret	*Ardea alba*	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Chinese Pond Heron	*Ardeola bacchus*	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Black Kite	*Milvus migrans*	2	Common	R,WV	(RC)	Class II	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Great Cormorant	*Phalacrocorax carbo*	23	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Black-collared Starling	*Gracupica nigricollis*	3	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	White Wagtail	*Motacilla alba*	1	Common	PM,WV	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Spotted Dove	*Spilopelia chinensis*	2	Abundant	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	White-breasted Waterhen	*Amaurornis phoenicurus*	1	Common	R	-	-	-	LC	LC	N	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Eurasian Teal	*Anas crecca*	2	Common	WV	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Great Egret	*Ardea alba*	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y

12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Grey Heron	*Ardea cinerea*	1	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Chinese Pond Heron	*Ardeola bacchus*	5	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Little Egret	*Egretta garzetta*	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Intermediate Egret	*Egretta intermedia*	1	Common	PM	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Long-tailed Shrike	*Lanius schach*	1	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Black-winged Stilt	*Himantopus himantopus*	3	Common	PM	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Marsh Sandpiper	*Tringa stagnatilis*	1	Common	PM,WV	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Plain Prinia	*Prinia inornata*	1	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Red-whiskered Bulbul	*Pycnonotus jocosus*	4	Abundant	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Modified Watercourse	White-breasted Waterhen	*Amaurornis phoenicurus*	1	Common	R	-	-	-	LC	LC	N	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Mangrove	Chinese Pond Heron	*Ardeola bacchus*	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Modified Watercourse	Great Cormorant	*Phalacrocorax carbo*	2	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Plantation-NSW	Plain Prinia	*Prinia inornata*	2	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Plantation-NSW	Red-whiskered Bulbul	*Pycnonotus jocosus*	2	Abundant	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Plantation-NSW	Chinese Bulbul	*Pycnonotus sinensis*	2	Abundant	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Plantation-NSW	Common Blackbird	*Turdus merula*	1	Common	PM,WV	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Great Egret	*Ardea alba*	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Grey Heron	*Ardea cinerea*	1	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Chinese Pond Heron	*Ardeola bacchus*	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Little Egret	*Egretta garzetta*	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Intermediate Egret	*Egretta intermedia*	1	Common	PM	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Black-winged Stilt	*Himantopus himantopus*	3	Common	PM	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Great Cormorant	*Phalacrocorax carbo*	3	Common	WV	PRC	-	-	LC	LC	Y	Y

12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Common Greenshank	*Tringa nebularia*	3	Abundant	PM,WV	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Plantation-NSW	Plain Prinia	*Prinia inornata*	2	Common	R	-	-	-	LC	LC	N	N
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Marsh Sandpiper	*Tringa stagnatilis*	1	Common	PM,WV	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Common Redshank	*Tringa totanus*	1	Common	PM	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Modified Watercourse	Great Egret	*Ardea alba*	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Modified Watercourse	Grey Heron	*Ardea cinerea*	1	Common	WV	PRC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Modified Watercourse	Black-winged Stilt	*Himantopus himantopus*	1	Common	PM	RC	-	-	LC	LC	Y	Y
12/10/2022	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Modified Watercourse	Marsh Sandpiper	*Tringa stagnatilis*	1	Common	PM,WV	RC	-	-	LC	LC	Y	Y

Notes:

(1) All wild birds are protected under Wild Animals Protection Ordinance (Cap. 170).
(2) AFCD (2021). Hong Kong Biodiversity Database.
(3) Carey et al. (2001): R=resident; WV=winter visitor; SV=summer visitor; PM=passage migrant; Sp=spring; A=autumn;
(4) Fellowes et al. (2002): GC=Global Concern; LC=Local Concern; RC=Regional Concern; PRC=Potential Regional Concern; PGC: Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.
(5) List of Wild Animals under State Protection (promulgated by State Forestry Administration and Ministry of Agriculture on 14 January, 1989).
(6) Zheng, G. M. and Wang, Q. S. (1998). China Red Data Book
(7) IUCN 2021. The IUCN Red List of Threatened Species. Version 2020-3.
(9) Wetland-dependent species (including wetland-dependent species and waterbirds).
(10) Jiang et al. (2016). Red List of China's Vertebrates

Appendix F.2.1 Ecological Bird Monitoring Diversity (All avifauna species in Point Count Method) in All Habitats (12 October 2022)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P)^2
Acridotheres cristatellus	9	0.058442	-2.83973	-0.16596	0.471276
Alcedo atthis	1	0.006494	-5.03695	-0.03271	0.164746
Amaurornis phoenicurus	2	0.012987	-4.34381	-0.05641	0.245047
Anas crecca	2	0.012987	-4.34381	-0.05641	0.245047
Ardea alba	10	0.064935	-2.73437	-0.17756	0.485504
Ardea cinerea	6	0.038961	-3.24519	-0.12644	0.41031
Ardeola bacchus	13	0.084416	-2.472	-0.20868	0.515847
Ceryle rudis	1	0.006494	-5.03695	-0.03271	0.164746
Dicrurus macrocercus	1	0.006494	-5.03695	-0.03271	0.164746
Egretta garzetta	7	0.045455	-3.09104	-0.1405	0.434297
Egretta intermedia	2	0.012987	-4.34381	-0.05641	0.245047
Gracupica nigricollis	5	0.032468	-3.42751	-0.11128	0.381424
Himantopus himantopus	6	0.038961	-3.24519	-0.12644	0.41031
Hirundo rustica	1	0.006494	-5.03695	-0.03271	0.164746
Lanius schach	1	0.006494	-5.03695	-0.03271	0.164746
Milvus migrans	2	0.012987	-4.34381	-0.05641	0.245047
Motacilla alba	2	0.012987	-4.34381	-0.05641	0.245047
Phalacrocorax carbo	40	0.25974	-1.34807	-0.35015	0.472026
Prinia inornata	14	0.090909	-2.3979	-0.21799	0.522718
Pycnonotus jocosus	6	0.038961	-3.24519	-0.12644	0.41031
Pycnonotus sinensis	3	0.019481	-3.93834	-0.07672	0.302153
Spilopelia chinensis	2	0.012987	-4.34381	-0.05641	0.245047
Streptopelia decaocto	10	0.064935	-2.73437	-0.17756	0.485504
Tachybaptus ruficollis	1	0.006494	-5.03695	-0.03271	0.164746
Tringa nebularia	3	0.019481	-3.93834	-0.07672	0.302153
Tringa stagnatilis	2	0.012987	-4.34381	-0.05641	0.245047
Tringa totanus	1	0.006494	-5.03695	-0.03271	0.164746
Turdus merula	1	0.006494	-5.03695	-0.03271	0.164746
Total	**154**	**1**	**-109.36**	**-2.73897**	**8.637132**
Richness	**28**				
SS	**8.64**				
SQ	**7.5**				
H	**2.74**				
S^2_H	**0.01**				

Appendix F.2.2 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Point Count Method) in All Habitats (12 October 2022)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P)^2
Anas crecca	2	0.021053	-3.86073	-0.08128	0.313794
Ardea alba	10	0.105263	-2.25129	-0.23698	0.533507
Ardea cinerea	6	0.063158	-2.76212	-0.17445	0.48185
Ardeola bacchus	13	0.136842	-1.98893	-0.27217	0.541324
Egretta garzetta	7	0.073684	-2.60797	-0.19217	0.501162
Egretta intermedia	2	0.021053	-3.86073	-0.08128	0.313794

Himantopus himantopus	6	0.063158	-2.76212	-0.17445	0.48185
Milvus migrans	2	0.021053	-3.86073	-0.08128	0.313794
Phalacrocorax carbo	40	0.421053	-0.865	-0.36421	0.31504
Tachybaptus ruficollis	1	0.010526	-4.55388	-0.04794	0.218293
Tringa nebularia	3	0.031579	-3.45526	-0.10911	0.377016
Tringa stagnatilis	2	0.021053	-3.86073	-0.08128	0.313794
Tringa totanus	1	0.010526	-4.55388	-0.04794	0.218293
Total	**95**	**1**	**-41.2434**	**-1.94452**	**4.923513**
Richness	**13**				
SS	**4.92**				
SQ	**3.78**				
H	**1.94**				
S^2_H	**0.01**				

Appendix F.2.3 Ecological Bird Monitoring Diversity (All avifauna species in Transect Walk Method) in All Habitats (12 October 2022)

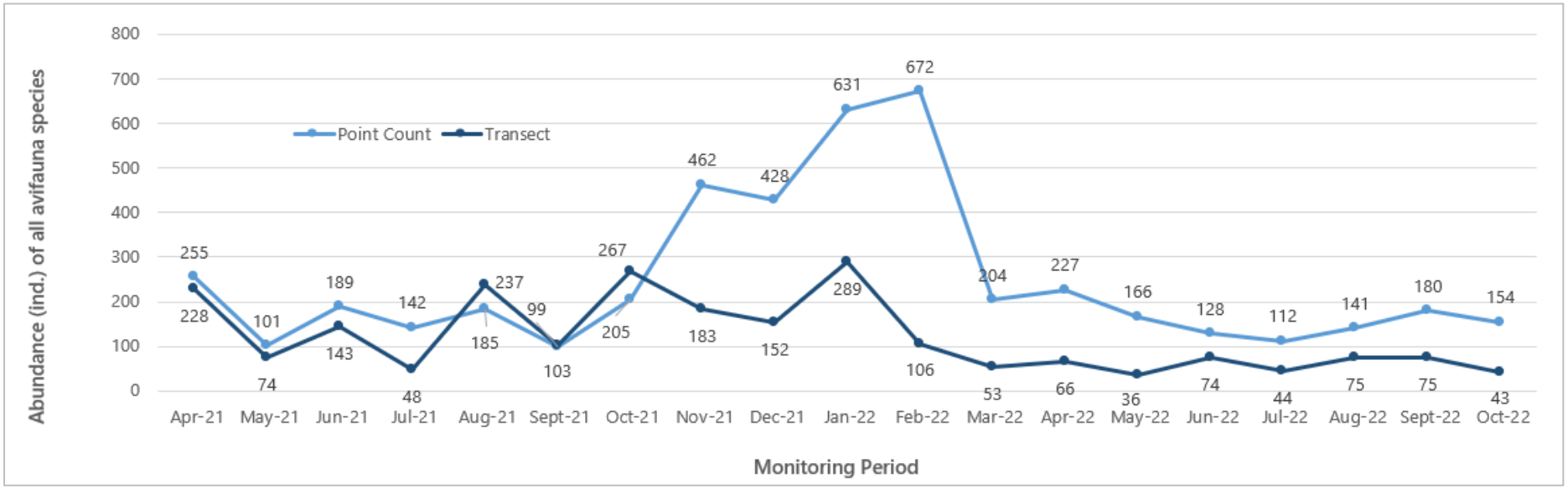
Scientific Name	Count	P	Ln(P)	P*Ln(P)	$P*Ln(P)^2$
Acridotheres tristis	2	0.046512	-3.06805	-0.1427	0.437812
Ardea alba	1	0.023256	-3.7612	-0.08747	0.328991
Ardea cinerea	1	0.023256	-3.7612	-0.08747	0.328991
Egretta garzetta	11	0.255814	-1.3633	-0.34875	0.475456
Himantopus himantopus	1	0.023256	-3.7612	-0.08747	0.328991
Hirundo rustica	1	0.023256	-3.7612	-0.08747	0.328991
Motacilla alba	2	0.046512	-3.06805	-0.1427	0.437812
Phalacrocorax carbo	5	0.116279	-2.15176	-0.2502	0.538381
Pycnonotus jocosus	2	0.046512	-3.06805	-0.1427	0.437812
Pycnonotus sinensis	3	0.069767	-2.66259	-0.18576	0.494607
Stercorarius pomarinus	11	0.255814	-1.3633	-0.34875	0.475456
Streptopelia decaocto	2	0.046512	-3.06805	-0.1427	0.437812
Tringa stagnatilis	1	0.023256	-3.7612	-0.08747	0.328991
Total	**43**	**1**	**-38.6192**	**-2.14162**	**5.380103**
Richness	**13**				
SS	**5.380103**				
SQ	**4.586541**				
H	**2.14**				
S^2_H	**0.0217**				

Appendix F.2.4 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Transect Walk Method) in All Habitats (12 October 2022)

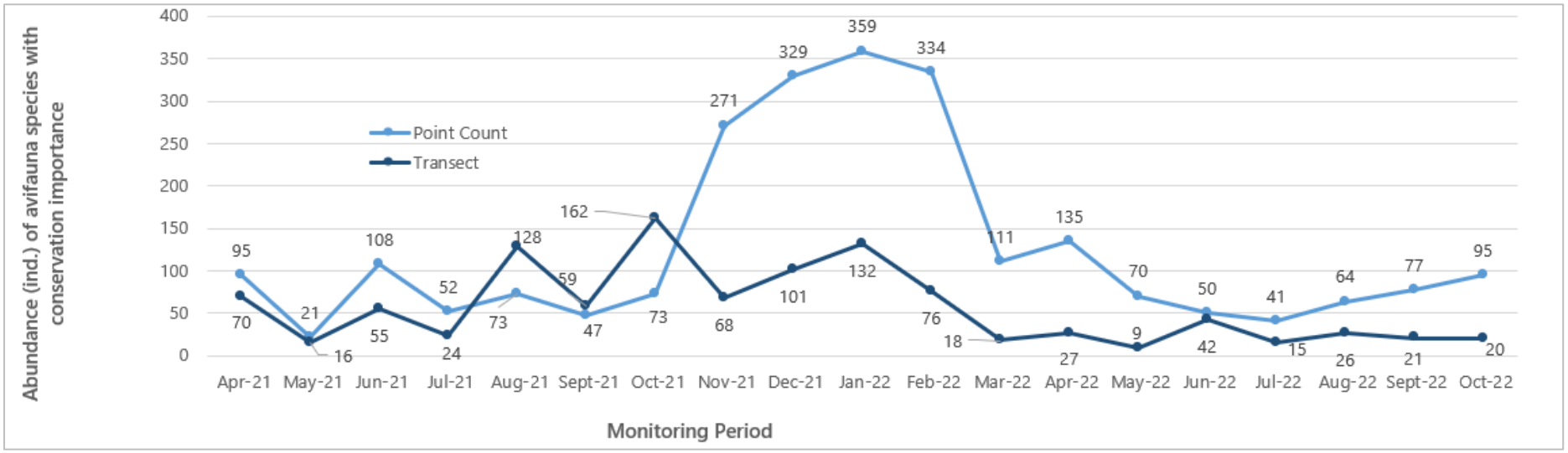
Scientific Name	Count	P	Ln(P)	P*Ln(P)	$P*Ln(P)^2$
Ardea alba	1	0.05	-2.99573	-0.14979	0.448721
Ardea cinerea	1	0.05	-2.99573	-0.14979	0.448721
Egretta garzetta	11	0.55	-0.59784	-0.32881	0.196575
Himantopus himantopus	1	0.05	-2.99573	-0.14979	0.448721
Phalacrocorax carbo	5	0.25	-1.38629	-0.34657	0.480453
Tringa stagnatilis	1	0.05	-2.99573	-0.14979	0.448721

Total	**20**	**1**	**-13.9671**	**-1.27453**	**2.47191**
Richness	**6**				
SS	**2.47191**				
SQ	**1.624428**				
H	**1.27**				
S^2_H	**0.048624**				

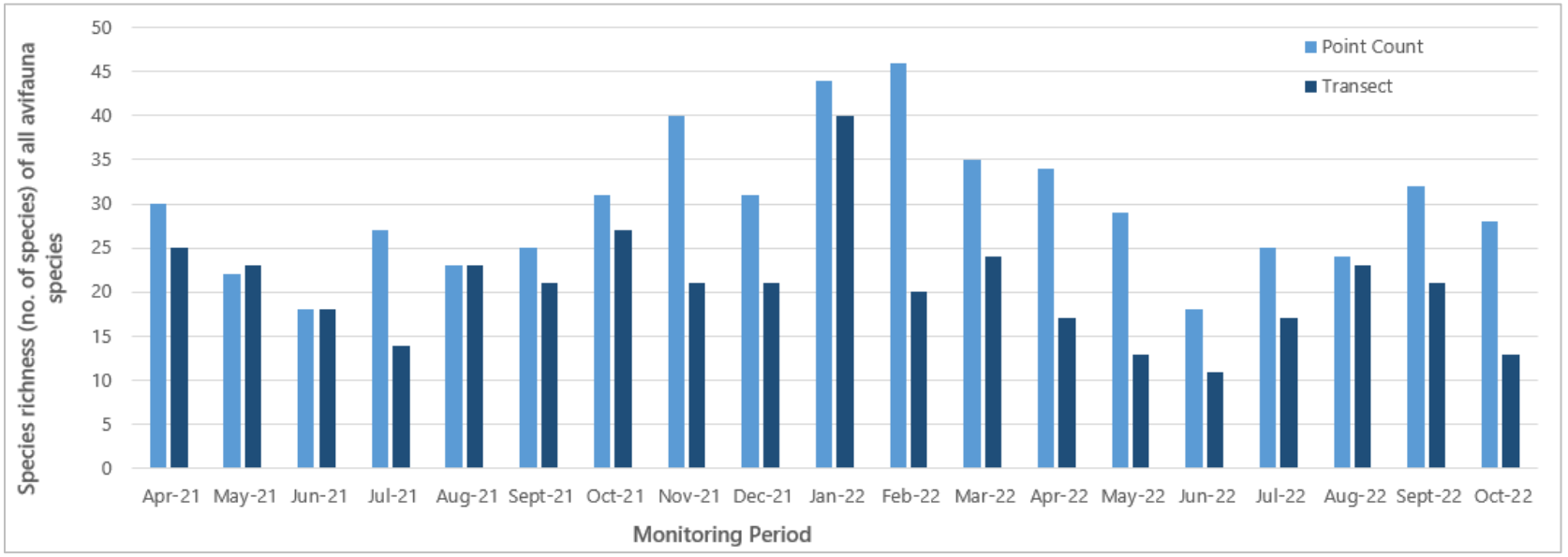
Appendix F.3.1 Abundance of all avifauna species throughout the monitoring period



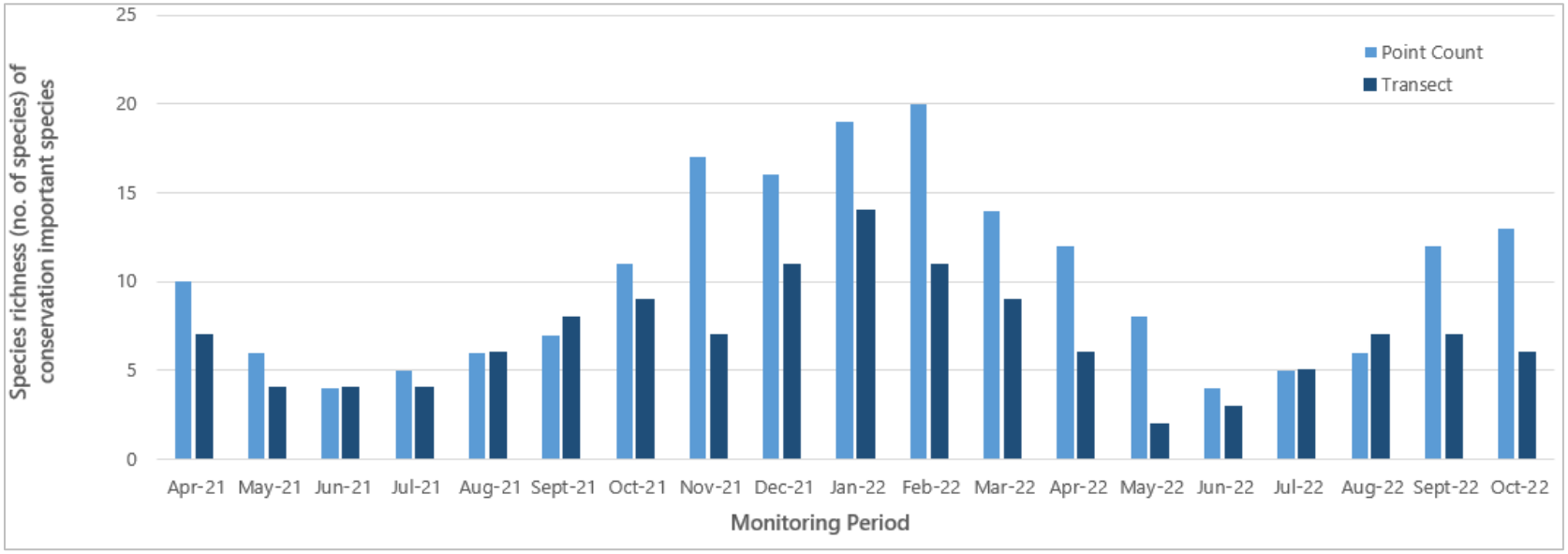
Appendix F.3.2 Abundance of avifauna species with conservation importance throughout the monitoring period



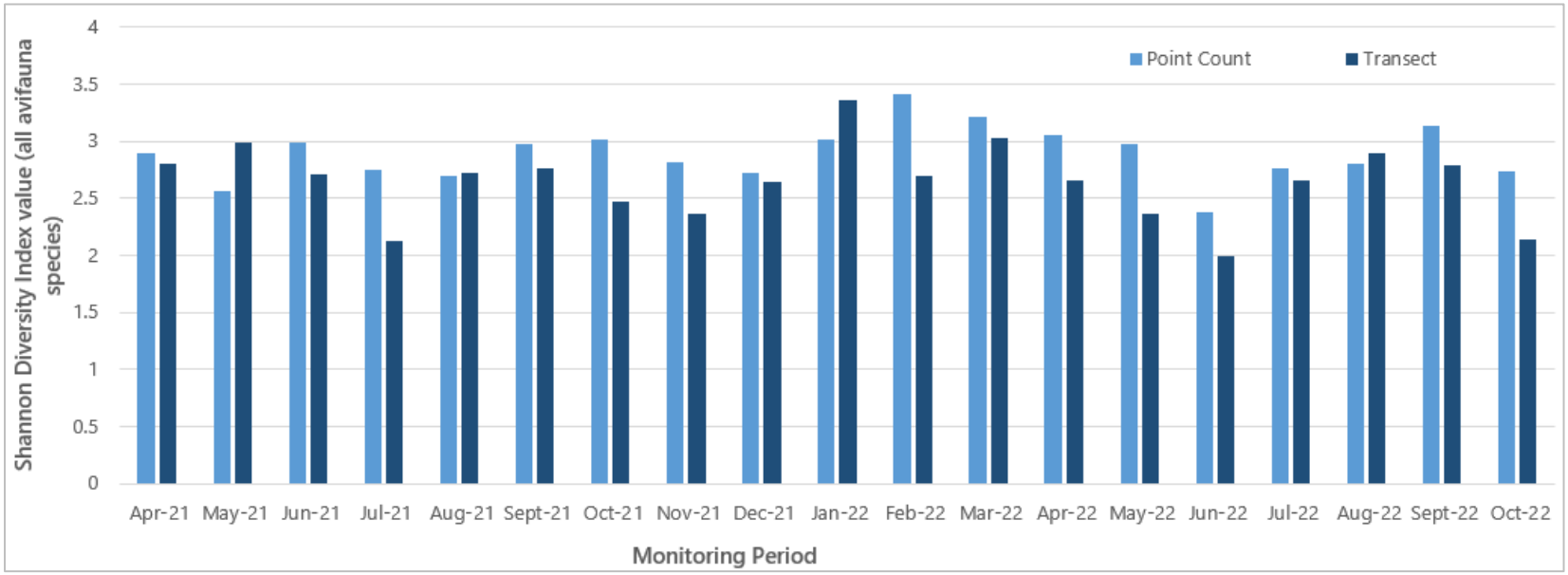
Appendix F.4.1 Species richness of all avifauna species throughout the monitoring period



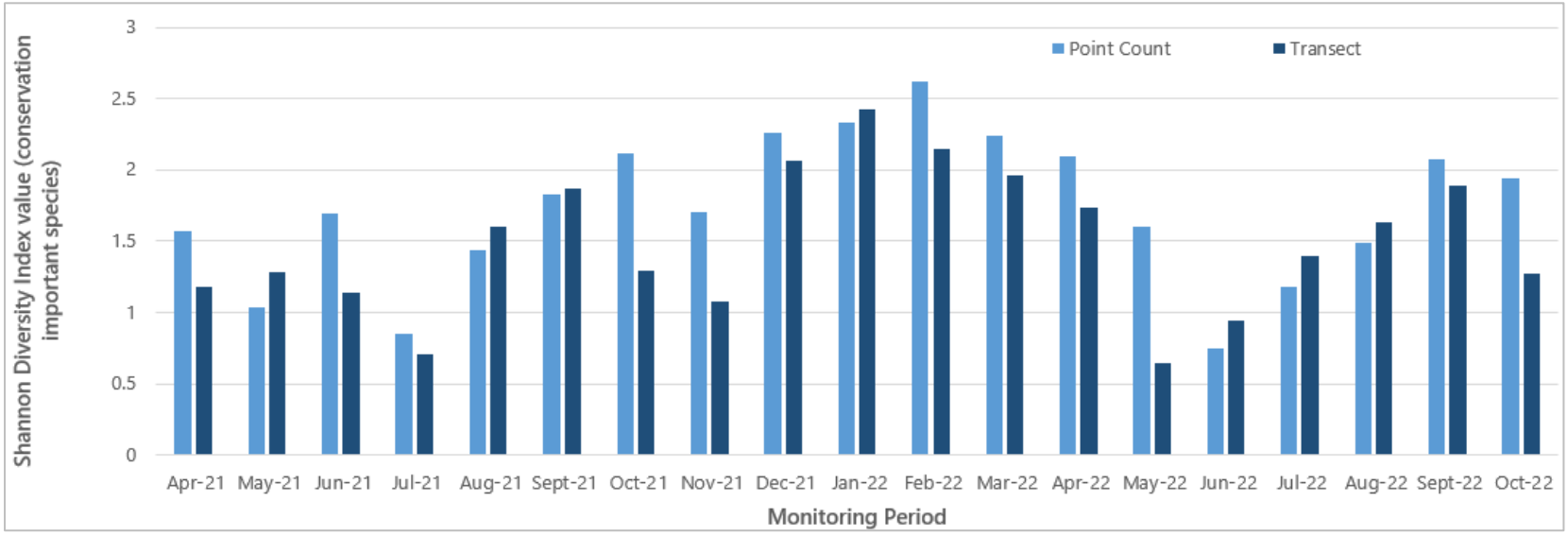
Appendix F.4.2 Species richness of avifauna species with conservation importance throughout the monitoring period



Appendix F.5.1 Shannon Diversity Index values of all avifauna species throughout the monitoring period



Appendix F.5.2 Shannon Diversity Index values of avifauna species with conservation importance throughout the monitoring period



Appendix F.6 Two-tailed Unpaired T-test

Formula:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\left(\frac{(N_1 - 1)s_1^2 + (N_2 - 1)s_2^2}{N_1 + N_2 - 2}\right)\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}}$$

Appendix F.6.1 Abundance of all avifauna species – Point Count Method

Months	October 2016	October 2022
N	70	66
df	69	65
M	2.24	2.33
SS	280.87	572.67
S^2	4.07	8.81
t-value	-0.21	
p-value	0.83	

Notes:
N: Number of samples/observations
df: Degrees of freedom
M: Mean
SS: Sum of Squares
S^2: Measure on a random sample that is used to estimate the variance of the population

Appendix F.6.2 Abundance of all avifauna species – Transect Walk Method

Months	October 2016	October 2022
N	14	15
df	13	14
M	3.64	2.87
SS	557.21	141.73
S^2	42.86	10.12
t-value	0.41	
p-value	0.68	

Notes:
N: Number of samples/observations
df: Degrees of freedom
M: Mean
SS: Sum of Squares
S^2: Measure on a random sample that is used to estimate the variance of the population

Appendix F.6.3 Abundance of avifauna species with conservation importance – Point Count Method

Months	October 2016	October 2022
N	36	37
df	35	36
M	2.97	2.57
SS	220.97	493.08
S^2	6.31	13.7
t-value	0.55	
p-value	0.59	

Notes:
N: Number of samples/observations
df: Degrees of freedom
M: Mean
SS: Sum of Squares
S^2: Measure on a random sample that is used to estimate the variance of the population

Appendix F.6.4 Abundance of avifauna species with conservation importance – Transect Walk Method

Months	October 2016	October 2022
N	3	8
df	2	7
M	11.67	2.5
SS	308.67	68
S^2	154.33	9.71
t-value	2.09	
p-value	0.66	

Notes:
N: Number of samples/observations
df: Degrees of freedom
M: Mean
SS: Sum of Squares
S^2: Measure on a random sample that is used to estimate the variance of the population

Appendix F.7. Hutcheson t-test testing method and output

Formula:

$$t = \frac{H_a - H_b}{\sqrt{s^2_{H_a} + s^2_{H_b}}}$$

Appendix F.7.1 Species diversity of all avifauna species – Point Count Method

Months	October 2016	October 2022
Total	157	154
Richness	32	28
H	2.93	2.74
S^2_H	0.006	0.008
t	1.60	
df	306.91	
Crit	1.97	
p	0.11	
CI	0.16	0.18

Appendix F.7.2 Species diversity of avifauna species with conservation importance – Point Count Method

Months	October 2016	October 2022
Total	107	95
Richness	13	13
H	2.17	1.94
S^2_H	0.006	0.013
t	1.64	
df	168.53	
Crit	1.97	
p	0.10	
CI	0.15	0.23