
Air Quality Monitoring Results

1-hour TSP Monitoring Result 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 ($\mu\text{g}/\text{m}^3$)			Action Level (ug/m^3)	Limit Level (ug/m^3)
			1st Measurement	2nd Measurement	3rd Measurement		
5-Oct-21	Fine	8:32	57	59	50	291	500
11-Oct-21	Fine	8:42	38	42	33		
16-Oct-21	Cloudy	8:43	35	41	38		
22-Oct-21	Cloudy	8:31	57	63	50		
28-Oct-21	Fine	8:36	47	44	50		
		Min	33				
		Max	63				
		Average	47				

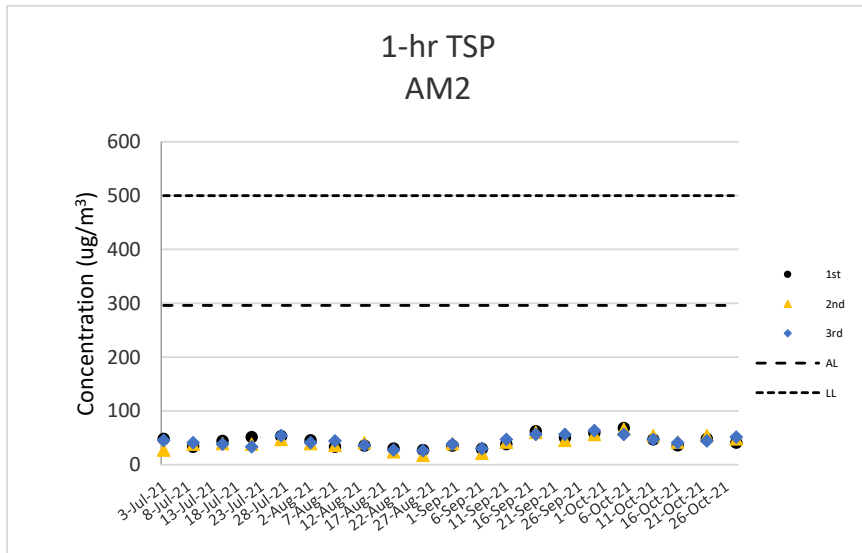
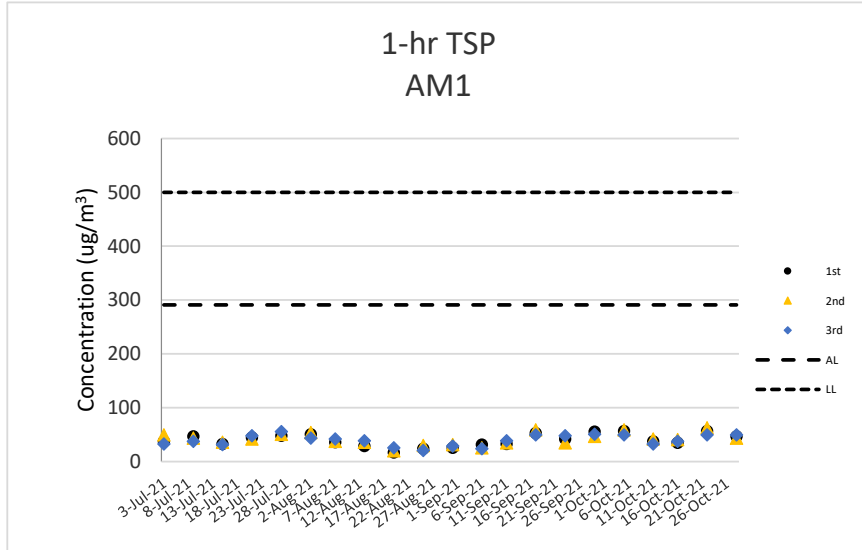
AM2 - Squatter house at the west of Yuen Long STW

Date	Weather Condition	Start Time	1-hour TSP ($\mu\text{g}/\text{m}^3$)			Action Level (ug/m^3)	Limit Level (ug/m^3)
			1st Measurement	2nd Measurement	3rd Measurement		
5-Oct-21	Fine	8:48	68	66	56	296	500
11-Oct-21	Fine	8:57	47	54	47		
16-Oct-21	Cloudy	8:58	36	42	41		
22-Oct-21	Cloudy	8:43	48	54	44		
28-Oct-21	Fine	8:51	41	48	51		
		Min	36				
		Max	68				
		Average	50				

Note:

Underline: Exceedance of Action Level

Underline and Bold: Exceedance of Limit Level



Noise Monitoring Results

**Noise Impact Monitoring Result 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)
5-Oct-21	10:11	54	55	51	0.1	Fine	75
11-Oct-21	10:29	53	54	50	0.4	Fine	75
22-Oct-21	10:06	60	65	51	0.3	Cloudy	75
28-Oct-21	10:28	60	64	51	0.2	Fine	75
	Max	60					
	Min	53					

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)
5-Oct-21	8:55	62	66	56	0.2	Fine	75
11-Oct-21	9:08	60	63	54	0.5	Fine	75
22-Oct-21	8:49	65	69	62	0.4	Cloudy	75
28-Oct-21	8:59	66	71	61	0.2	Fine	75
	Max	66					
	Min	60					

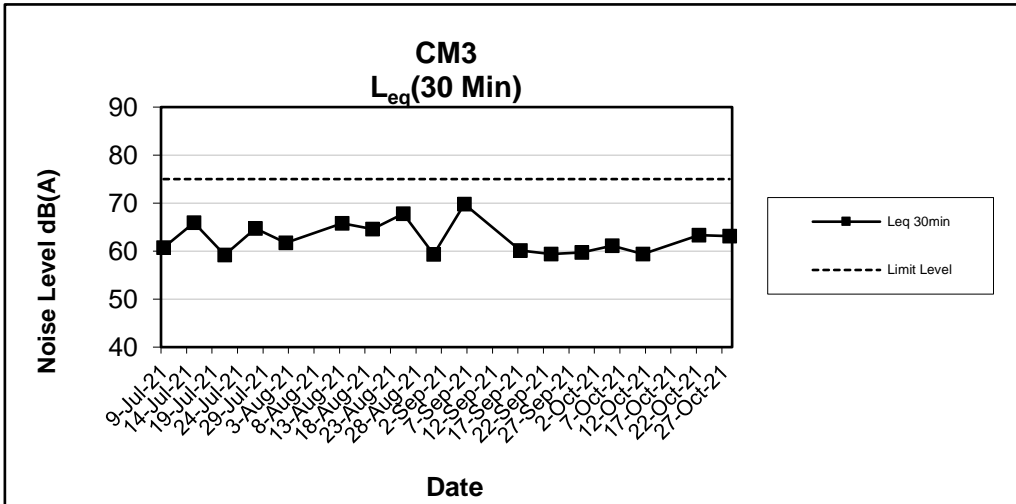
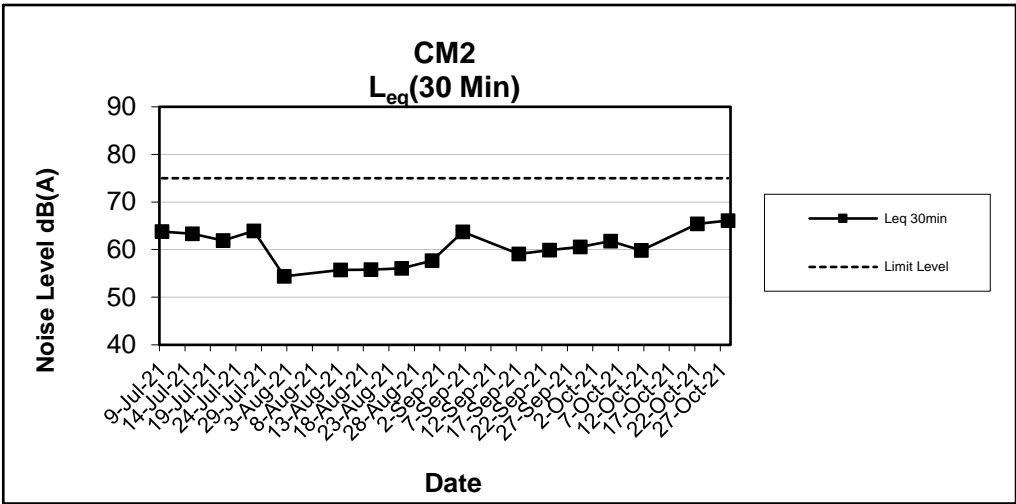
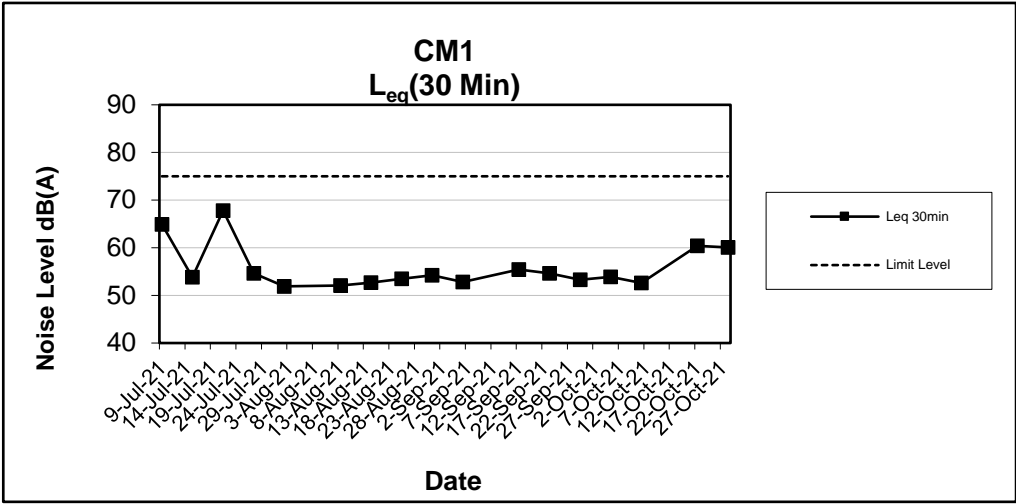
CM3 - Squatter house to the east of YLSTW

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)
5-Oct-21	11:29	61	65	56	0.4	Fine	75
11-Oct-21	13:01	59	63	55	0.4	Fine	75
22-Oct-21	11:27	63	68	56	0.4	Cloudy	75
28-Oct-21	13:05	63	68	57	0.3	Fine	75
	Max	63					
	Min	59					

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.



Water Quality Monitoring Results

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

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.
M1	2/10/2021	Mid-Flood	Fine	Moderate	18:16	1.6	M	0.8	1	0.024	266	7.23	7.26	5.06	5.07	31.49	31.50	30.4	30.5	2.18	2.20	13.4	13.4	10	10
M1	2/10/2021	Mid-Flood	Fine	Moderate	18:16	1.6	M	0.8	2			7.29		5.07		31.50		30.6		2.21		13.4			
M2	2/10/2021	Mid-Flood	Fine	Moderate	18:01	1.4	M	0.7	1	0.116	6	7.21	7.22	5.59	5.59	31.36	31.37	41.6	41.8	2.98	3.00	23.1	23.1	24	23
M2	2/10/2021	Mid-Flood	Fine	Moderate	18:01	1.4	M	0.7	2			7.22		5.58		31.37		41.9		3.02		23.0			
M3	2/10/2021	Mid-Flood	Cloudy	Calm	18:03	0.4	M	0.2	1	0.093	83	7.41	7.42	5.46	5.46	31.70	31.72	49.9	49.6	3.74	3.72	32.2	32.3	38	36
M3	2/10/2021	Mid-Flood	Cloudy	Calm	18:03	0.4	M	0.2	2			7.42		5.45		31.73		49.2		3.69		32.4			
M1	2/10/2021	Mid-Ebb	Fine	Moderate	10:35	0.8	M	0.4	1	0.063	176	7.06	7.05	5.78	5.78	31.89	31.89	36.7	36.8	2.64	2.66	33.0	33.0	15	16
M1	2/10/2021	Mid-Ebb	Fine	Moderate	10:35	0.8	M	0.4	2			7.04		5.77		31.88		36.9		2.67		33.0			
M2	2/10/2021	Mid-Ebb	Fine	Moderate	10:54	0.9	M	0.45	1	0.108	78	7.13	7.14	5.69	5.68	32.01	32.01	40.4	40.6	3.11	3.14	21.2	21.2	24	23
M2	2/10/2021	Mid-Ebb	Fine	Moderate	10:54	0.9	M	0.45	2			7.14		5.67		32.01		40.7		3.16		21.2			
M3	2/10/2021	Mid-Ebb	Cloudy	Calm	10:41	0.6	M	0.3	1	0.252	268	7.20	7.20	4.78	4.79	30.97	30.97	57.4	57.8	4.28	4.31	25.1	25.7	26	28
M3	2/10/2021	Mid-Ebb	Cloudy	Calm	10:41	0.6	M	0.3	2			7.19		4.79		30.97		58.1		4.33		26.3			

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

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.
M1	5/10/2021	Mid-Flood	Fine	Moderate	6:37	2.2	M	1.1	1	0.241	195	7.49	7.49	9.90	9.90	29.09	29.09	74.9	74.4	5.37	5.32	16.6	16.7	22	21
M1	5/10/2021	Mid-Flood	Fine	Moderate	6:37	2.2	M	1.1	2			7.49		9.90		29.08		73.8		5.26		16.7		20	
M2	5/10/2021	Mid-Flood	Fine	Moderate	6:53	1.2	M	0.6	1	0.269	282	7.45	7.44	8.10	8.10	29.74	29.74	61.8	61.7	4.46	4.45	14.3	14.7	19	20
M2	5/10/2021	Mid-Flood	Fine	Moderate	6:53	1.2	M	0.6	2			7.43		8.09		29.74		61.5		4.44		15.1		20	
M3	5/10/2021	Mid-Flood	Fine	Smooth	6:51	0.8	M	0.4	1	0.26	68	7.34	7.34	7.52	7.53	28.86	28.87	63.2	63.8	4.53	4.57	20.4	20.6	24	25
M3	5/10/2021	Mid-Flood	Fine	Smooth	6:51	0.8	M	0.4	2			7.33		7.53		28.87		64.4		4.60		20.8		26	
M1	5/10/2021	Mid-Ebb	Fine	Moderate	13:13	2	M	1	1	0.171	229	7.30	7.31	7.98	7.99	30.61	30.62	70.2	70.2	4.97	4.97	19.4	19.3	30	29
M1	5/10/2021	Mid-Ebb	Fine	Moderate	13:13	2	M	1	2			7.31		7.99		30.62		70.1		4.97		19.2		28	
M2	5/10/2021	Mid-Ebb	Fine	Moderate	12:58	1	M	0.5	1	0.187	257	7.32	7.32	6.91	6.91	30.31	30.31	54.5	54.4	3.97	3.96	18.2	18.4	20	20
M2	5/10/2021	Mid-Ebb	Fine	Moderate	12:58	1	M	0.5	2			7.31		6.90		30.30		54.3		3.95		18.6		19	
M3	5/10/2021	Mid-Ebb	Fine	Smooth	13:02	0.6	M	0.3	1	0.189	242	7.17	7.17	5.25	5.26	29.81	29.82	57.4	57.5	4.14	4.15	26.1	25.8	28	27
M3	5/10/2021	Mid-Ebb	Fine	Smooth	13:02	0.6	M	0.3	2			7.17		5.26		29.83		57.5		4.15		25.5		26	

Remark

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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

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.
M1	7/10/2021	Mid-Flood	Cloudy	Moderate	8:06	2.4	M	1.2	1	0.214	238	7.51	7.51	12.53	12.53	28.69	28.70	66.8	66.7	4.82	4.82	18.6	18.6	13	13
M1	7/10/2021	Mid-Flood	Cloudy	Moderate	8:06	2.4	M	1.2	2			7.50	7.50	12.53	12.53	28.71	28.70	66.6	66.7	4.81	4.82	18.6	18.6	13	13
M2	7/10/2021	Mid-Flood	Cloudy	Moderate	8:21	1.2	M	0.6	1	0.197	314	7.40	7.41	11.32	11.33	28.44	28.44	64.4	64.3	4.75	4.75	12.9	12.9	18	20
M2	7/10/2021	Mid-Flood	Cloudy	Moderate	8:21	1.2	M	0.6	2			7.41	7.41	11.33	11.33	28.43	28.44	64.2	64.3	4.74	4.75	12.9	12.9	21	20
M3	7/10/2021	Mid-Flood	Fine	Moderate	8:20	1.4	M	0.7	1	0.046	122	7.31	7.25	7.62	7.62	29.35	29.37	60.7	59.8	4.45	4.39	26.5	26.5	45	45
M3	7/10/2021	Mid-Flood	Fine	Moderate	8:20	1.4	M	0.7	2			7.19	7.25	7.62	7.62	29.38	29.37	58.9	59.8	4.32	4.39	26.5	26.5	44	45
M1	7/10/2021	Mid-Ebb	Cloudy	Moderate	14:40	2.2	M	1.1	1	0.28	175	7.18	7.20	10.33	10.34	29.53	29.54	72.2	72.4	5.32	5.34	15.0	15.1	21	20
M1	7/10/2021	Mid-Ebb	Cloudy	Moderate	14:40	2.2	M	1.1	2			7.21	7.20	10.34	10.34	29.54	29.54	72.6	72.4	5.35	5.34	15.3	15.1	19	20
M2	7/10/2021	Mid-Ebb	Cloudy	Moderate	14:22	1	M	0.5	1	0.251	291	7.25	7.26	9.83	9.83	29.49	29.50	68.0	67.9	4.96	4.95	16.5	16.5	23	23
M2	7/10/2021	Mid-Ebb	Cloudy	Moderate	14:22	1	M	0.5	2			7.26	7.26	9.83	9.83	29.51	29.50	67.7	67.9	4.93	4.95	16.5	16.5	22	23
M3	7/10/2021	Mid-Ebb	Fine	Moderate	14:26	0.9	M	0.45	1	0.108	79	7.19	7.17	7.66	7.66	28.71	28.71	57.6	57.9	4.37	4.39	24.6	24.6	35	36
M3	7/10/2021	Mid-Ebb	Fine	Moderate	14:26	0.9	M	0.45	2			7.14	7.17	7.65	7.66	28.71	28.71	58.2	57.9	4.41	4.39	24.6	24.6	37	36

Remark

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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

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.
M1	14/10/2021	Mid-Flood	Fine	Moderate	16:50	1.2	M	0.6	1	0.086	122	7.19	7.19	0.25	0.26	26.31	26.32	73.2	73.7	5.89	5.91	27.3	27.3	27	28
M1	14/10/2021	Mid-Flood	Fine	Moderate	16:50	1.2	M	0.6	2			7.18		0.27		26.32		74.1		5.92		27.3		27.3	
M2	14/10/2021	Mid-Flood	Fine	Moderate	16:32	1.4	M	0.7	1	0.071	43.8	7.09	7.09	0.31	0.32	26.18	26.19	60.9	60.7	4.92	4.90	34.8	34.8	28	28
M2	14/10/2021	Mid-Flood	Fine	Moderate	16:32	1.4	M	0.7	2			7.08		0.32		26.19		60.4		4.87		34.8		28	
M3	14/10/2021	Mid-Flood	Cloudy	Smooth	16:32	0.4	M	0.2	1	0.241	82	7.04	7.03	0.60	0.60	27.18	27.19	43.2	43.0	3.48	3.46	44.2	43.8	19	19
M3	14/10/2021	Mid-Flood	Cloudy	Smooth	16:32	0.4	M	0.2	2			7.02		0.59		27.19		42.7		3.44		43.5		19	
M1	14/10/2021	Mid-Ebb	Fine	Moderate	7:44	0.6	M	0.3	1	0.018	133	7.06	7.08	0.20	0.21	25.99	25.99	62.7	62.6	5.04	5.05	28.4	28.4	41	40
M1	14/10/2021	Mid-Ebb	Fine	Moderate	7:44	0.6	M	0.3	2			7.09		0.21		25.99		62.4		5.06		28.4		38	
M2	14/10/2021	Mid-Ebb	Fine	Moderate	8:00	0.8	M	0.4	1	0.053	77	6.98	6.99	0.28	0.29	26.06	26.06	56.4	56.6	4.57	4.58	31.7	31.7	31	29
M2	14/10/2021	Mid-Ebb	Fine	Moderate	8:00	0.8	M	0.4	2			6.99		0.29		26.06		56.8		4.59		31.7		26	
M3	14/10/2021	Mid-Ebb	Cloudy	Smooth	7:45	0.6	M	0.3	1	0.182	265	7.27	7.27	0.38	0.38	26.09	26.08	55.1	54.8	4.45	4.43	31.2	31.4	34	36
M3	14/10/2021	Mid-Ebb	Cloudy	Smooth	7:45	0.6	M	0.3	2			7.26		0.38		26.07		54.5		4.40		31.6		38	

Remark

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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

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.
M1	16/10/2021	Mid-Flood	Fine	Moderate	18:38	1.3	M	0.65	1	0.108	78	7.04	7.05	3.92	3.93	27.60	27.62	45.3	45.6	3.50	3.56	27.2	27.2	25	25
M1	16/10/2021	Mid-Flood	Fine	Moderate	18:38	1.3	M	0.65	2			7.05		3.94		27.64		45.9		3.61		27.2		25	
M2	16/10/2021	Mid-Flood	Fine	Moderate	18:19	1.1	M	0.55	1	0.045	83	6.85	6.87	2.72	2.76	27.23	27.23	39.1	39.4	3.03	3.07	21.8	21.8	43	41
M2	16/10/2021	Mid-Flood	Fine	Moderate	18:19	1.1	M	0.55	2			6.88		2.79		27.22		39.7		3.11		21.9		38	
M3	16/10/2021	Mid-Flood	Cloudy	Calm	18:05	0.4	M	0.2	1	0.261	70	7.29	7.29	2.84	2.85	28.13	28.13	58.5	58.4	4.21	4.20	26.0	26.1	31	30
M3	16/10/2021	Mid-Flood	Cloudy	Calm	18:05	0.4	M	0.2	2			7.28		2.85		28.12		58.3		4.19		26.2		29	
M1	16/10/2021	Mid-Ebb	Fine	Moderate	10:41	0.9	M	0.45	1	0.086	189	6.87	6.88	2.76	2.77	27.21	27.21	39.1	39.4	3.24	3.26	29.3	29.3	33	33
M1	16/10/2021	Mid-Ebb	Fine	Moderate	10:41	0.9	M	0.45	2			6.89		2.78		27.20		39.7		3.28		29.3		33	
M2	16/10/2021	Mid-Ebb	Fine	Moderate	10:59	0.8	M	0.4	1	0.061	73	7.04	7.05	3.58	3.59	27.60	27.62	45.4	45.7	3.51	3.55	27.0	27.0	29	30
M2	16/10/2021	Mid-Ebb	Fine	Moderate	10:59	0.8	M	0.4	2			7.05		3.59		27.64		45.9		3.59		27.0		29	
M3	16/10/2021	Mid-Ebb	Cloudy	Calm	10:38	0.6	M	0.3	1	0.222	243	6.80	6.81	1.76	1.76	27.01	27.02	44.2	44.1	3.49	3.48	21.5	21.4	28	29
M3	16/10/2021	Mid-Ebb	Cloudy	Calm	10:38	0.6	M	0.3	2			6.82		1.76		27.02		44.0		3.47		21.4		29	

Remark

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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

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.
M1	19/10/2021	Mid-Flood	Fine	Moderate	6:51	1.1	M	0.55	1	0.084	126	6.92	6.93	4.76	4.77	26.04	26.05	37.4	36.8	2.96	2.85	13.7	13.7	18	17
M1	19/10/2021	Mid-Flood	Fine	Moderate	6:51	1.1	M	0.55	2			6.94		4.77		26.05		36.2		2.73		13.7		16	
M2	19/10/2021	Mid-Flood	Fine	Moderate	7:11	1.2	M	0.6	1	0.055	76	6.95	6.97	2.64	2.65	25.83	25.83	39.4	39.5	3.11	3.13	11.2	11.2	9	10
M2	19/10/2021	Mid-Flood	Fine	Moderate	7:11	1.2	M	0.6	2			6.99		2.66		25.83		39.5		3.14		11.2		10	
M3	19/10/2021	Mid-Flood	Fine	Calm	6:55	0.8	M	0.4	1	0.141	81	7.27	7.27	3.19	3.20	25.10	25.11	42.8	43.0	3.41	3.42	12.4	12.4	14	14
M3	19/10/2021	Mid-Flood	Fine	Calm	6:55	0.8	M	0.4	2			7.27		3.20		25.11		43.1		3.43		12.3		13	
M1	19/10/2021	Mid-Ebb	Fine	Moderate	13:15	0.7	M	0.35	1	0.104	13	6.94	6.97	2.65	2.66	28.22	28.23	41.2	41.2	3.38	3.37	11.3	11.3	14	14
M1	19/10/2021	Mid-Ebb	Fine	Moderate	13:15	0.7	M	0.35	2			6.99		2.66		28.24		41.1		3.35		11.3		14	
M2	19/10/2021	Mid-Ebb	Fine	Moderate	12:56	0.9	M	0.45	1	0.046	313	7.08	7.09	3.22	3.23	27.14	27.15	38.7	38.5	3.06	3.04	13.7	13.7	10	10
M2	19/10/2021	Mid-Ebb	Fine	Moderate	12:56	0.9	M	0.45	2			7.09		3.24		27.16		38.2		3.01		13.7		10	
M3	19/10/2021	Mid-Ebb	Fine	Calm	12:56	0.4	M	0.2	1	0.184	254	6.99	6.98	2.07	2.08	26.35	26.35	45.2	45.2	3.57	3.57	16.0	16.0	16	16
M3	19/10/2021	Mid-Ebb	Fine	Calm	12:56	0.4	M	0.2	2			6.97		2.09		26.34		45.1		3.56		16.0		16	

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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

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.
M1	21/10/2021	Mid-Flood	Cloudy	Smooth	8:07	2.2	M	1.1	1	0.225	279	6.93	6.94	5.83	5.84	27.50	27.50	37.3	37.7	2.91	2.94	16.4	17.5	14	14
M1	21/10/2021	Mid-Flood	Cloudy	Smooth	8:07	2.2	M	1.1	2			6.94		5.84		27.50		38.1		2.97		18.7		13	
M2	21/10/2021	Mid-Flood	Cloudy	Smooth	8:27	1.2	M	0.6	1	0.242	204	7.06	7.05	6.15	6.15	27.22	27.23	35.9	36.1	2.82	2.84	21.1	21.6	10	10
M2	21/10/2021	Mid-Flood	Cloudy	Smooth	8:27	1.2	M	0.6	2			7.03		6.14		27.24		36.3		2.85		22.1		10	
M3	21/10/2021	Mid-Flood	Fine	Moderate	8:10	1.4	M	0.7	1	0.093	196	7.24	7.23	4.44	4.41	27.04	27.04	41.9	43.4	3.67	3.80	14.3	14.3	18	18
M3	21/10/2021	Mid-Flood	Fine	Moderate	8:10	1.4	M	0.7	2			7.22		4.37		27.04		44.8		3.92		14.3		18	
M1	21/10/2021	Mid-Ebb	Cloudy	Smooth	13:58	2	M	1	1	0.145	215	7.14	7.14	4.52	4.53	26.90	26.91	42.3	42.0	3.28	3.26	16.5	16.8	9	10
M1	21/10/2021	Mid-Ebb	Cloudy	Smooth	13:58	2	M	1	2			7.14		4.54		26.91		41.7		3.24		17.2		11	
M2	21/10/2021	Mid-Ebb	Cloudy	Smooth	14:13	1.2	M	0.6	1	0.178	242	7.18	7.18	5.21	5.22	26.77	26.76	40.1	39.9	3.13	3.11	14.9	15.2	19	18
M2	21/10/2021	Mid-Ebb	Cloudy	Smooth	14:13	1.2	M	0.6	2			7.17		5.22		26.75		39.6		3.09		15.5		17	
M3	21/10/2021	Mid-Ebb	Fine	Moderate	14:00	0.4	M	0.2	1	0.134	47	7.20	7.21	4.52	4.55	27.03	27.03	46.1	46.2	4.03	4.04	14.9	14.9	18	18
M3	21/10/2021	Mid-Ebb	Fine	Moderate	14:00	0.4	M	0.2	2			7.21		4.57		27.03		46.2		4.05		14.9		18	

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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

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.
M1	23/10/2021	Mid-Flood	Fine	Moderate	9:37	1.2	M	0.6	1	0.046	119	6.91	6.92	3.44	3.40	21.41	21.41	37.6	37.0	2.87	2.81	18.0	17.9	27	30
M1	23/10/2021	Mid-Flood	Fine	Moderate	9:37	1.2	M	0.6	2			6.92		3.36		21.42		36.4		2.74		17.9		32	
M2	23/10/2021	Mid-Flood	Fine	Moderate	9:53	1.1	M	0.55	1	0.06	188	7.07	7.06	3.38	3.38	21.72	21.73	38.9	38.8	2.99	2.97	16.5	16.5	23	24
M2	23/10/2021	Mid-Flood	Fine	Moderate	9:53	1.1	M	0.55	2			7.04		3.37		21.73		38.6		2.94		16.6		24	
M3	23/10/2021	Mid-Flood	Cloudy	Calm	9:23	0.4	M	0.2	1	0.161	88	7.02	7.02	2.66	2.66	21.67	21.68	42.2	42.1	3.65	3.64	22.7	22.8	17	17
M3	23/10/2021	Mid-Flood	Cloudy	Calm	9:23	0.4	M	0.2	2			7.01		2.65		21.69		41.9		3.63		22.9		16	
M1	23/10/2021	Mid-Ebb	Fine	Moderate	15:10	1	M	0.5	1	0.058	321	7.04	7.05	4.57	4.54	21.93	22.14	40.7	40.8	3.12	3.13	19.3	19.3	27	26
M1	23/10/2021	Mid-Ebb	Fine	Moderate	15:10	1	M	0.5	2			7.05		4.51		22.34		40.9		3.14		19.3		24	
M2	23/10/2021	Mid-Ebb	Fine	Moderate	14:55	0.9	M	0.45	1	0.065	194	7.02	7.02	4.05	4.06	21.86	21.90	36.1	37.2	2.84	2.92	18.4	18.4	10	10
M2	23/10/2021	Mid-Ebb	Fine	Moderate	14:55	0.9	M	0.45	2			7.01		4.06		21.94		38.2		2.99		18.3		9	
M3	23/10/2021	Mid-Ebb	Cloudy	Calm	14:58	0.6	M	0.3	1	0.191	274	7.13	7.13	1.98	1.99	22.93	22.93	39.5	39.1	3.40	3.37	17.9	17.8	21	21
M3	23/10/2021	Mid-Ebb	Cloudy	Calm	14:58	0.6	M	0.3	2			7.13		1.99		22.92		38.6		3.33		17.8		21	

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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

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.
M1	26/10/2021	Mid-Flood	Fine	Smooth	12:02	2	M	1	1	0.261	318	7.04	7.04	3.94	3.93	24.24	24.25	37.1	36.8	3.06	3.03	15.5	15.8	20	21
M1	26/10/2021	Mid-Flood	Fine	Smooth	12:02	2	M	1	2			7.03		3.92		24.26		36.5		3.00		16.1		22	
M2	26/10/2021	Mid-Flood	Fine	Smooth	12:19	1	M	0.5	1	0.229	180	7.12	7.12	3.69	3.69	24.17	24.17	38.0	37.9	3.14	3.13	13.6	13.5	19	19
M2	26/10/2021	Mid-Flood	Fine	Smooth	12:19	1	M	0.5	2			7.11		3.69		24.16		37.8		3.12		13.4		18	
M3	26/10/2021	Mid-Flood	Fine	Moderate	11:50	1.4	M	0.7	1	0.068	144	7.20	7.21	2.71	2.73	24.23	24.23	40.6	40.7	3.67	3.69	13.1	13.2	22	23
M3	26/10/2021	Mid-Flood	Fine	Moderate	11:50	1.4	M	0.7	2			7.21		2.74		24.23		40.8		3.71		13.2		23	
M1	26/10/2021	Mid-Ebb	Fine	Smooth	17:08	2.2	M	1.1	1	0.223	260	7.21	7.22	3.02	3.02	25.33	25.34	52.8	52.7	4.34	4.34	26.4	26.3	31	31
M1	26/10/2021	Mid-Ebb	Fine	Smooth	17:08	2.2	M	1.1	2			7.22		3.01		25.35		52.6		4.33		26.3		30	
M2	26/10/2021	Mid-Ebb	Fine	Smooth	16:50	1.2	M	0.6	1	0.196	221	7.29	7.29	2.84	2.85	25.29	25.29	59.6	59.5	4.90	4.89	24.0	23.8	21	20
M2	26/10/2021	Mid-Ebb	Fine	Smooth	16:50	1.2	M	0.6	2			7.28		2.85		25.29		59.3		4.88		23.6		19	
M3	26/10/2021	Mid-Ebb	Fine	Moderate	16:55	0.9	M	0.45	1	0.116	72	7.16	7.15	2.83	2.84	25.19	25.21	46.8	46.5	3.92	3.89	14.7	14.7	22	22
M3	26/10/2021	Mid-Ebb	Fine	Moderate	16:55	0.9	M	0.45	2			7.14		2.84		25.23		46.1		3.86		14.8		22	

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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

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.
M1	28/10/2021	Mid-Flood	Fine	Moderate	18:27	1.3	M	0.65	1	0.076	348	7.04	7.05	6.54	6.55	26.94	26.93	35.4	35.5	2.78	2.79	17.7	17.8	27	26
M1	28/10/2021	Mid-Flood	Fine	Moderate	18:27	1.3	M	0.65	2			7.05	7.05	6.55	6.55	26.91	26.93	35.5	35.5	2.79	2.79	17.8	17.8	25	26
M2	28/10/2021	Mid-Flood	Fine	Moderate	18:08	1.1	M	0.55	1	0.065	319	6.28	7.03	6.28	6.28	26.28	26.29	41.1	41.3	3.24	3.24	14.5	14.5	21	21
M2	28/10/2021	Mid-Flood	Fine	Moderate	18:08	1.1	M	0.55	2			7.03	7.03	6.27	6.28	26.29	26.29	41.4	41.3	3.23	3.24	14.5	14.5	20	21
M3	28/10/2021	Mid-Flood	Fine	Calm	18:08	0.6	M	0.3	1	0.226	82	7.21	7.21	5.46	5.47	25.96	25.96	50.4	50.3	4.21	4.21	23.1	23.0	24	24
M3	28/10/2021	Mid-Flood	Fine	Calm	18:08	0.6	M	0.3	2			7.20	7.21	5.48	5.47	25.95	25.96	50.1	50.3	4.19	4.20	22.9	23.0	23	24
M1	28/10/2021	Mid-Ebb	Fine	Moderate	6:07	0.9	M	0.45	1	0.051	123	7.02	7.04	5.11	5.13	25.71	25.73	50.8	51.0	4.02	4.06	12.6	12.7	22	21
M1	28/10/2021	Mid-Ebb	Fine	Moderate	6:07	0.9	M	0.45	2			7.05	7.05	5.14	5.13	25.74	25.73	51.2	51.0	4.09	4.06	12.8	12.7	20	21
M2	28/10/2021	Mid-Ebb	Fine	Moderate	6:21	0.7	M	0.35	1	0.083	75	7.17	7.18	6.46	6.47	25.26	25.27	51.9	51.3	4.09	4.05	16.5	16.5	24	24
M2	28/10/2021	Mid-Ebb	Fine	Moderate	6:21	0.7	M	0.35	2			7.18	7.18	6.47	6.47	25.27	25.27	50.7	51.3	4.01	4.05	16.5	16.5	23	24
M3	28/10/2021	Mid-Ebb	Fine	Calm	5:59	0.6	M	0.3	1	0.203	265	7.05	7.06	4.39	4.38	25.01	25.02	43.6	44.0	3.82	3.86	17.2	16.7	26	27
M3	28/10/2021	Mid-Ebb	Fine	Calm	5:59	0.6	M	0.3	2			7.07	7.07	4.37	4.38	25.02	25.02	44.4	44.0	3.89	3.86	16.1	16.7	27	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

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.
M1	30/10/2021	Mid-Flood	Fine	Moderate	16:55	1.3	M	0.65	1	0.049	326	7.03	7.04	8.64	8.65	25.42	25.42	42.5	42.3	3.32	3.30	13.1	13.1	17	17
M1	30/10/2021	Mid-Flood	Fine	Moderate	16:55	1.3	M	0.65	2			7.04		8.66		25.43		42.1		3.28		13.1		17	
M2	30/10/2021	Mid-Flood	Fine	Moderate	16:40	1.1	M	0.55	1	0.073	116	7.04	7.04	8.65	8.66	25.58	25.59	34.1	33.3	2.62	2.61	11.8	11.8	17	18
M2	30/10/2021	Mid-Flood	Fine	Moderate	16:40	1.1	M	0.55	2			7.03		8.66		25.59		33.3		2.59		11.9		19	
M3	30/10/2021	Mid-Flood	Cloudy	Calm	16:32	0.4	M	0.2	1	0.149	90	7.39	7.38	5.78	5.77	26.07	26.08	49.2	49.7	3.87	3.90	20.7	20.9	27	29
M3	30/10/2021	Mid-Flood	Cloudy	Calm	16:32	0.4	M	0.2	2			7.37		5.76		26.09		50.1		3.92		21.2		30	
M1	30/10/2021	Mid-Ebb	Fine	Moderate	8:04	0.9	M	0.45	1	0.056	121	6.89	6.88	8.65	8.66	26.32	26.32	34.2	34.7	2.63	2.68	11.9	11.8	20	19
M1	30/10/2021	Mid-Ebb	Fine	Moderate	8:04	0.9	M	0.45	2			6.87		8.66		26.32		35.1		2.72		11.8		18	
M2	30/10/2021	Mid-Ebb	Fine	Moderate	8:23	0.7	M	0.35	1	0.042	29	6.95	6.96	8.64	8.62	25.71	25.71	38.3	38.2	2.98	2.92	11.8	12.0	18	19
M2	30/10/2021	Mid-Ebb	Fine	Moderate	8:23	0.7	M	0.35	2			6.97		8.60		25.71		38.1		2.86		12.2		20	
M3	30/10/2021	Mid-Ebb	Cloudy	Calm	8:12	0.4	M	0.2	1	0.102	275	7.06	7.07	4.66	4.66	25.27	25.27	46.4	46.7	3.66	3.68	25.1	25.1	34	34
M3	30/10/2021	Mid-Ebb	Cloudy	Calm	8:12	0.4	M	0.2	2			7.07		4.66		25.26		46.9		3.69		25.1		33	

Remark

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2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
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6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

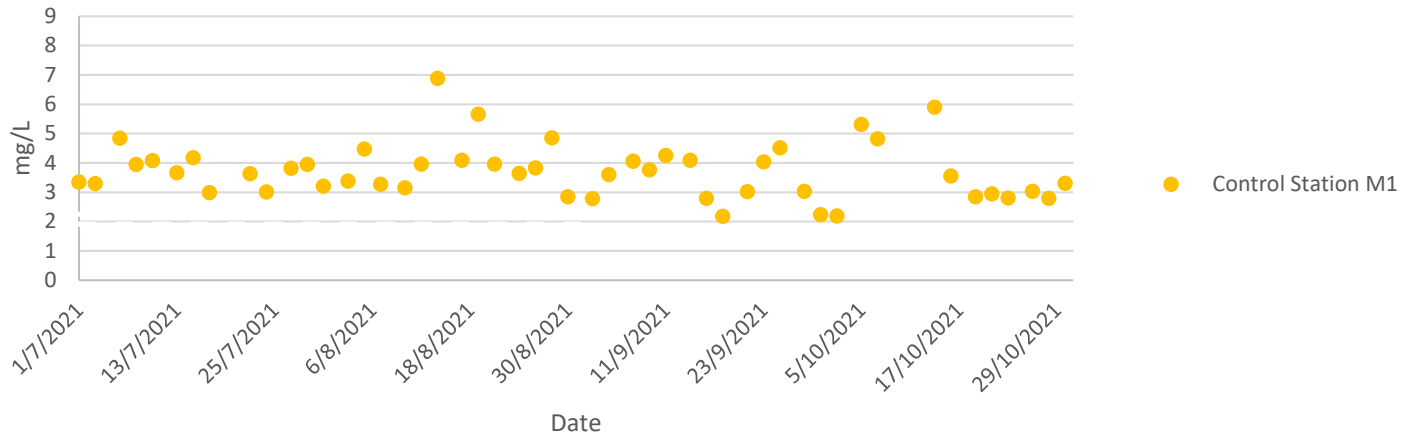
For Flood Tide

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

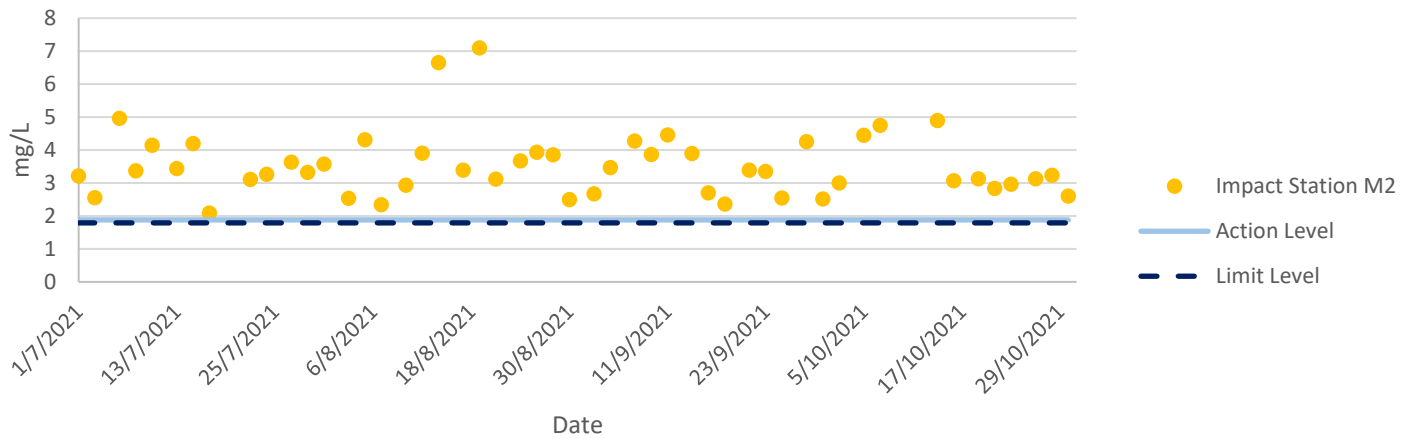
For Ebb Tide

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

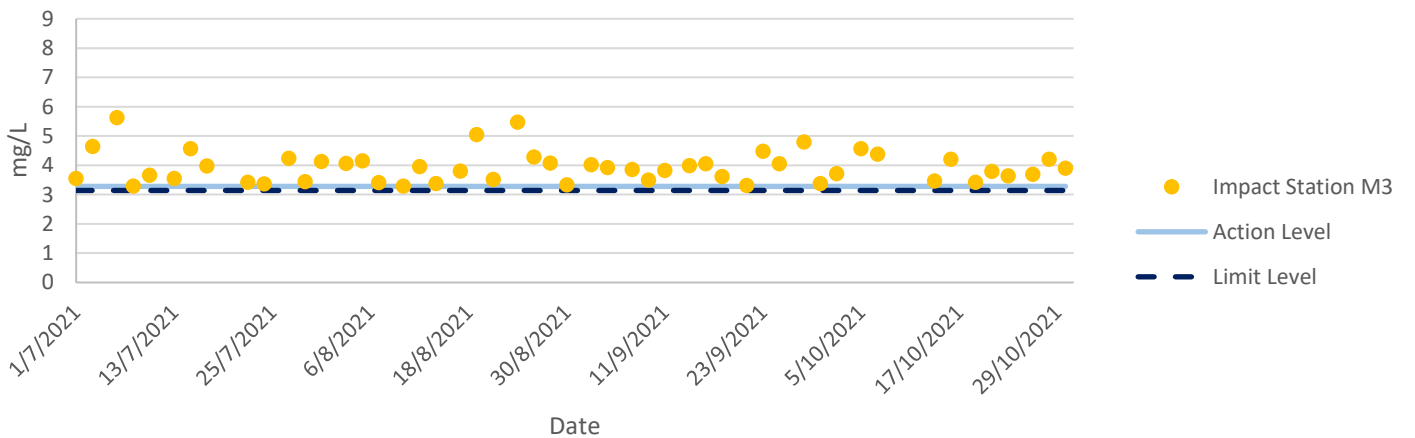
Dissolved Oxygen at Mid-Flood Tide



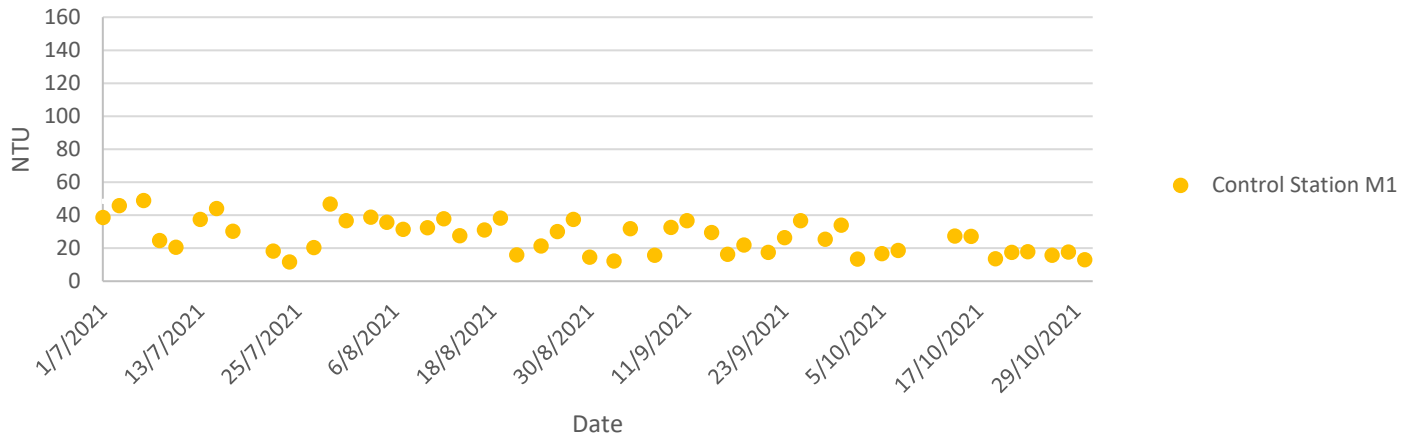
Dissolved Oxygen at Mid-Flood Tide



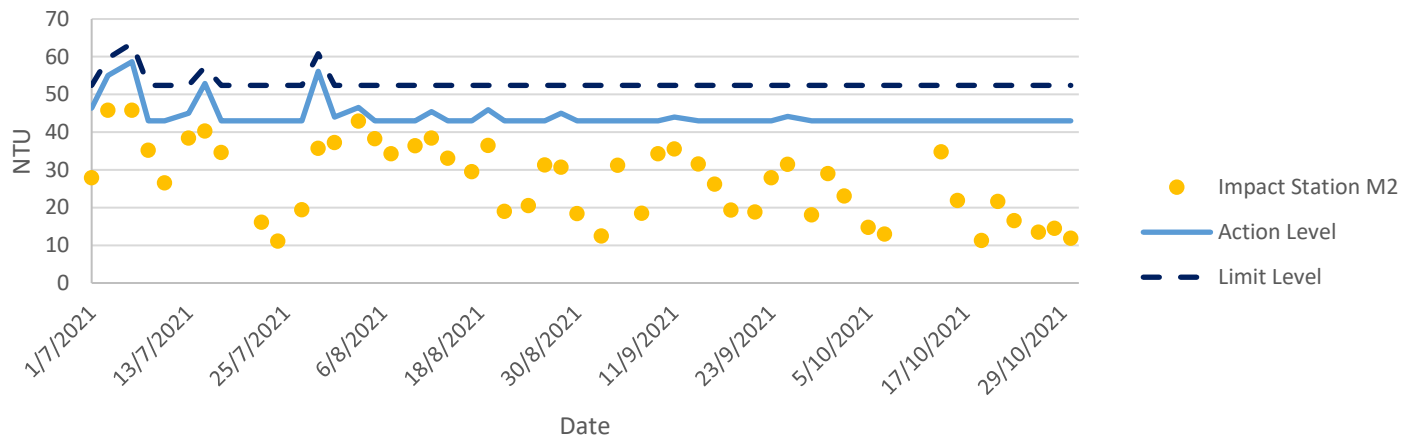
Dissolved Oxygen at Mid-Flood Tide



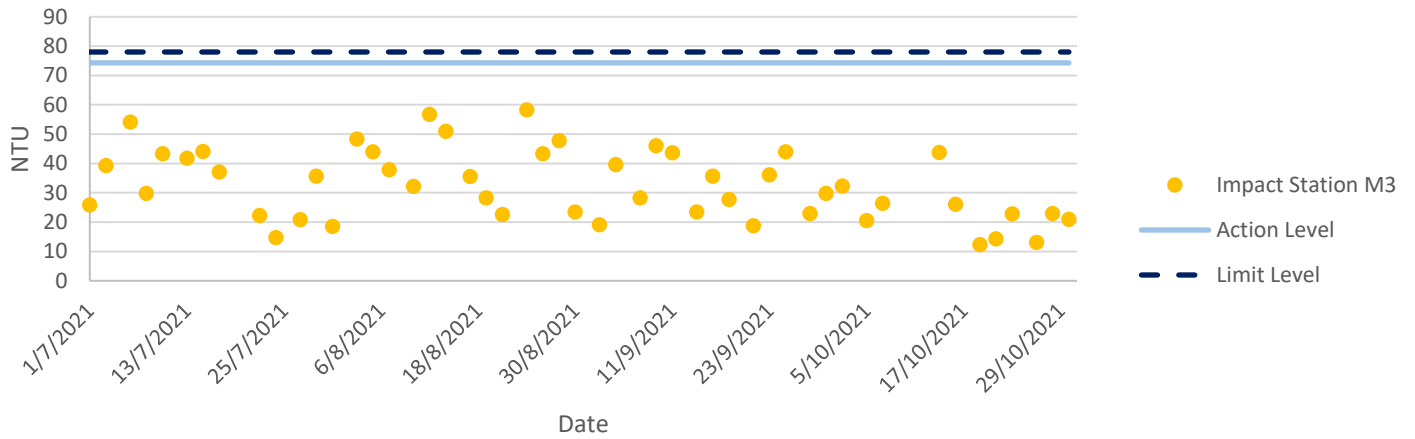
Turbidity at Mid-Flood Tide



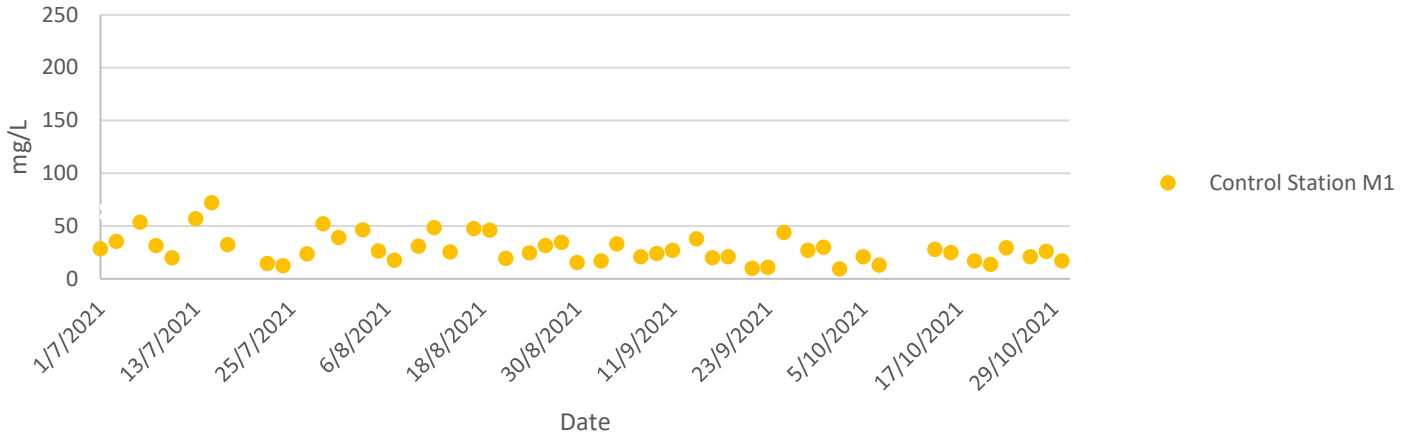
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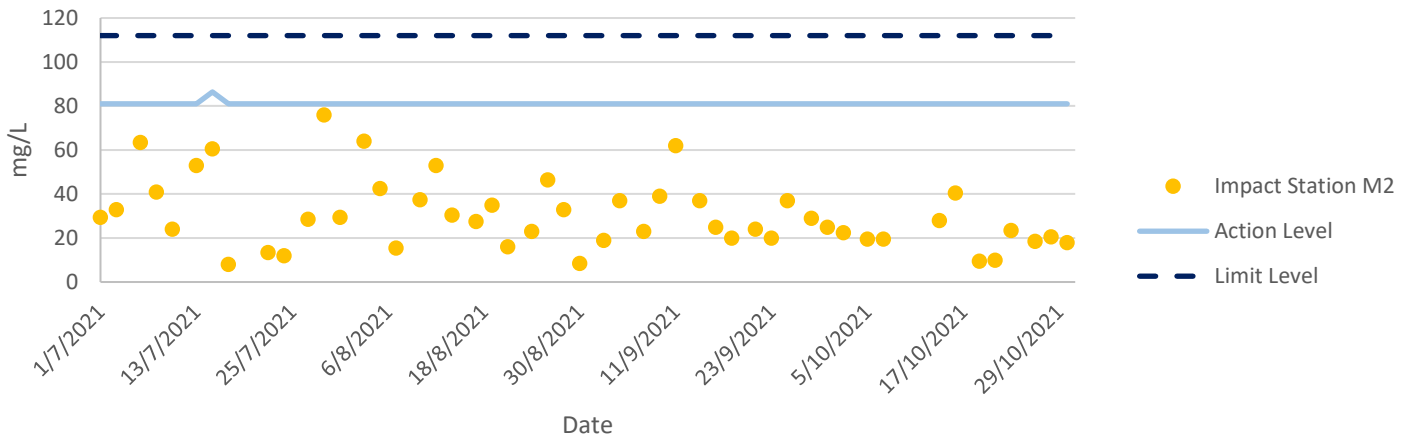
Turbidity at Mid-Flood Tide



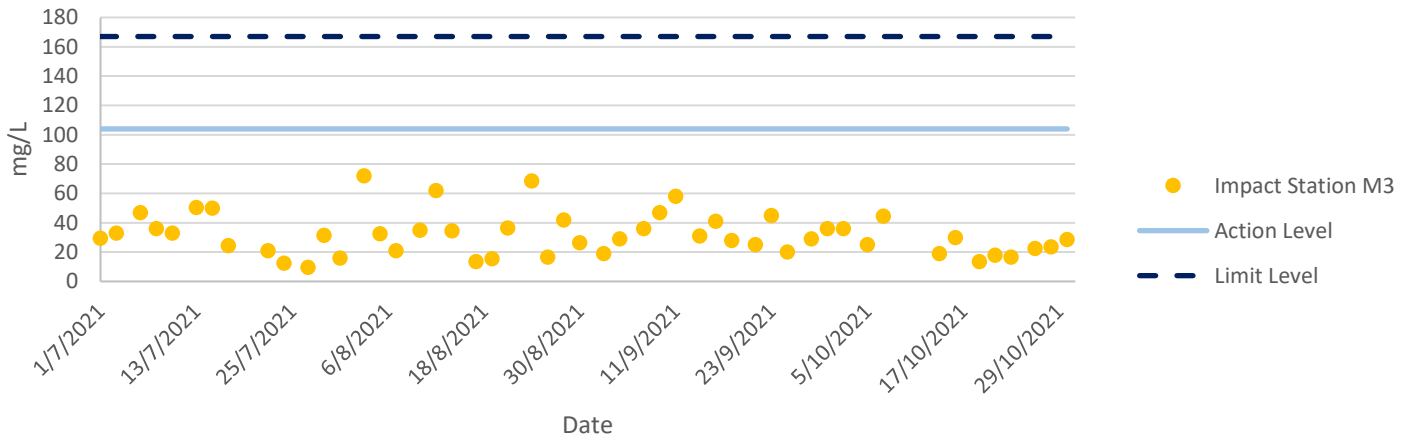
Total Suspended Solids at Mid-Flood Tide



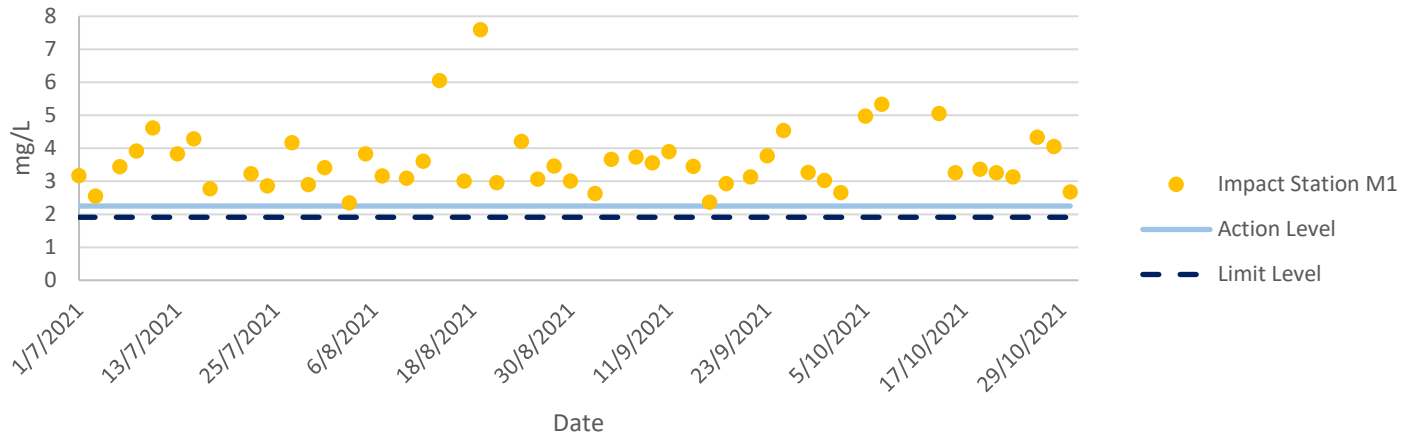
Total Suspended Solids at Mid-Flood Tide



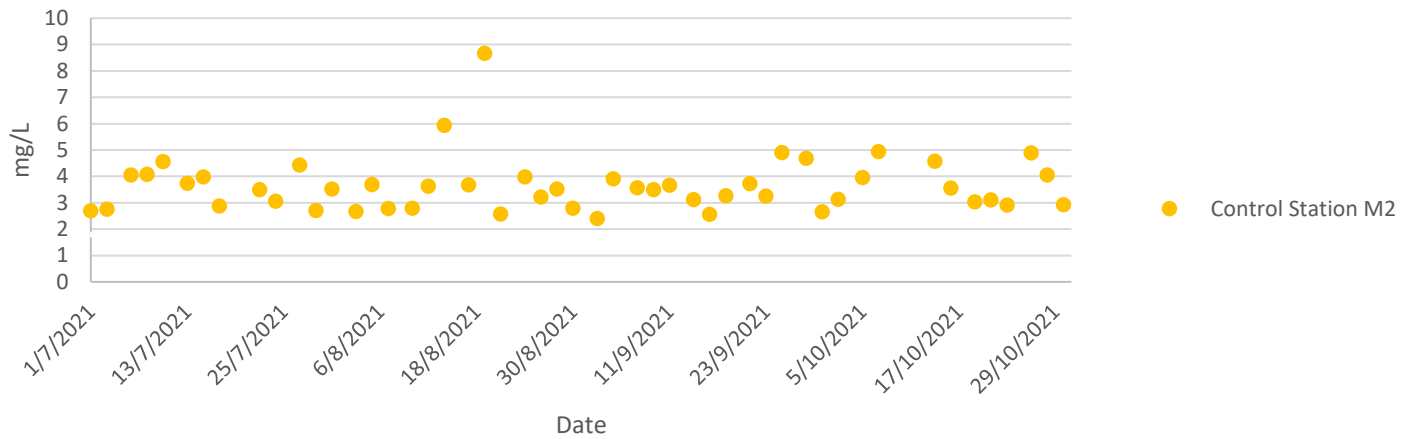
Total Suspended Solids at Mid-Flood Tide



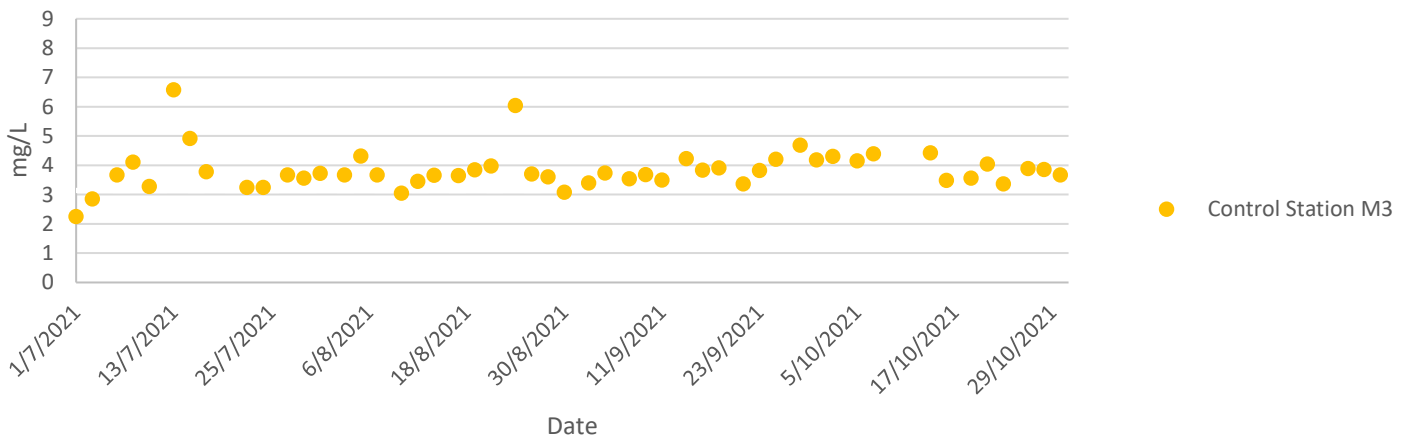
Dissolved Oxygen at Mid-Ebb Tide



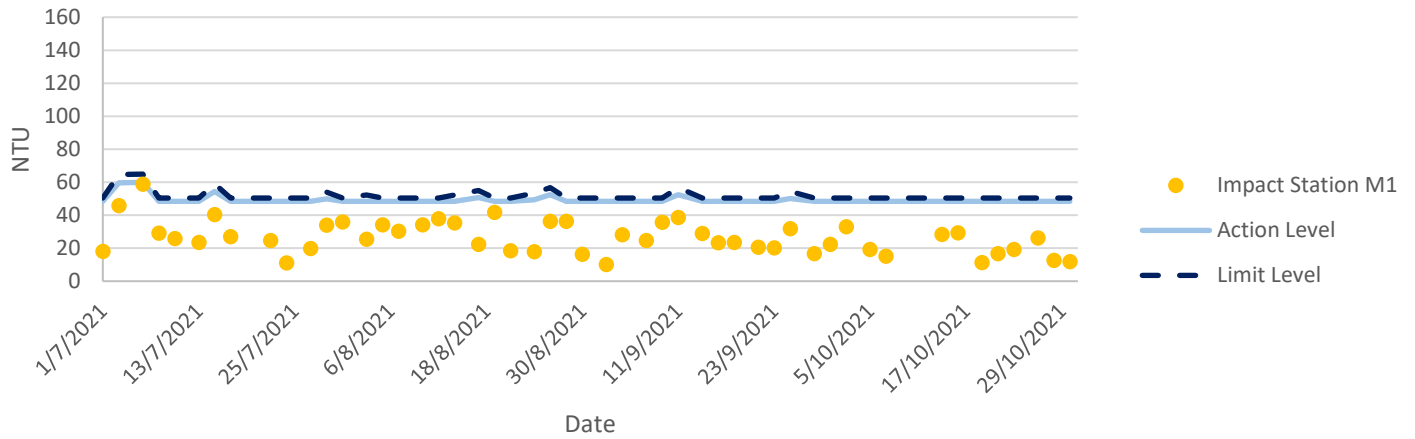
Dissolved Oxygen at Mid-Ebb Tide



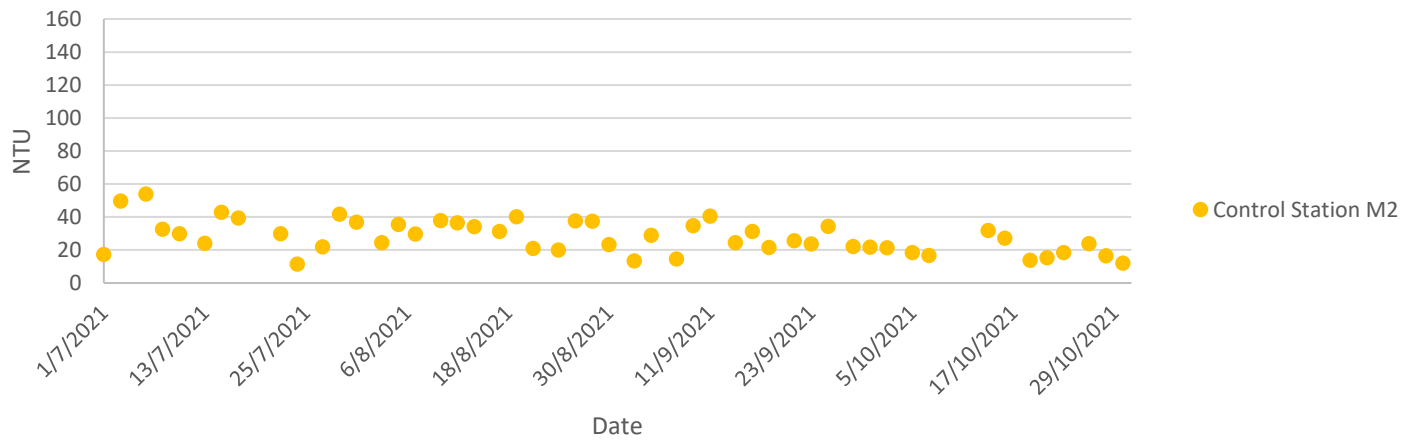
Dissolved Oxygen at Mid-Ebb Tide



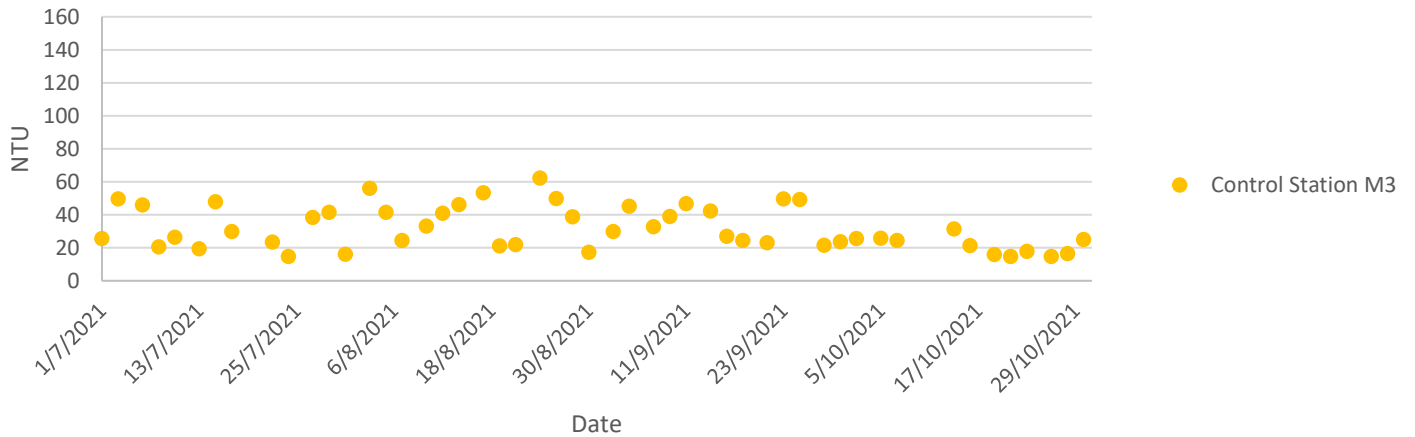
Turbidity at Mid-Ebb Tide



Turbidity at Mid-Ebb Tide



Turbidity at Mid-Ebb Tide



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 Supplemental Discussion

F.1.1 Active Ardeid Night Roost

For the final night roost, Chinese Pond Heron individuals (ind.) utilized the inside portions of the understory to canopy layers of the roosting substrate *Sonneratia apetala* and *S. caseolaris* at ANR1 (14 ind.) and ANR2 (6 ind.). For the months May to September 2021, the night roost (ANR2) located at the northeast of the Project was not used by ardeids and its current utilization by Chinese Pond Heron may be due to changes in roosting locations temporally. In Hong Kong, fluctuation of roosting population and change in locations of roosting site without major nearby environmental change has been observed in roosts and locations (HKJC, 2005; Lee et al., 2004; MTRC, 2010).

F.1.2 Ecological Monitoring of Birds

F.1.2.1 Abundance

F.1.2.1.1 All Avifauna Species

Point Count

Among the different species recorded, the Spotted Dove *Spilopelia chinensis* was noted with the highest abundance (34 ind.), followed by the Black-winged Stilt *Himantopus himantopus* (18 ind.) and Azure-winged Magpie *Cyanopica cyanus* (15 ind.). On the other hand, species with the least abundance (1 ind.) include the Black Kite *Milvus migrans*, Common Kingfisher *Alcedo atthis*, Red-whiskered Bulbul *Pycnonotus jocosus*, Yellow Bittern *Ixobrychus sinensis* and Yellow-bellied Prinia *Prinia flaviventris*.

Transect Walk

Among the different species recorded, the Great Cormorant *Phalacrocorax carbo* was noted with the highest abundance (102 ind.), distantly followed by Black-winged Stilt *Himantopus himantopus* (24 ind.) and Eurasian Tree Sparrow *Passer montanus* (19 ind.). The noted high abundance of Great Cormorant was due to their flocks in flight to the direction of the nearby Deep Bay area. On the other hand, the Black Kite *Milvus migrans*, Oriental Magpie Robin *Copsychus saularis*, Red-whiskered Bulbul *Pycnonotus jocosus* and Yellow Bittern *Ixobrychus sinensis* had the lowest abundance (1 ind. each).

F.1.2.1.2 Avifauna Species of Conservation Importance

Point Count

Among the different species recorded, the Black-winged Stilt *Himantopus himantopus* was recorded with the highest abundance (18 ind.), followed by both the Common Greenshank *Tringa nebularia* and Great Cormorant with 11 ind. each. On the other hand, species such as the Common Redshank *Tringa totanus* (2 ind.), Little Grebe *Tachybaptus ruficollis* (2 ind.), and Black Kite (1 ind.) were noted with low abundances.

Transect Walk

Among the different species recorded, the Great Cormorant was noted with the highest abundance (102 ind.) and distantly followed by the Black-winged Stilt (24 ind.). On the other hand, the Black Kite had the lowest recorded abundance (1 ind.).

Appendix F.2 Ecological Bird Monitoring Results (15 October 2021)

Date (dd/mm/yyyy)	Daytime/Night time	Season	Area	Transect/Point Count	Point Count (Location)/ Transect Impact	Common Name	Scientific Name	Abundance	Habitat	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
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	2	Pond-FLW	Common	R	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Great Egret	<i>Ardea alba</i>	5	Pond-FLW	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Grey Heron	<i>Ardea cinerea</i>	2	Pond-FLW	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Chinese Pond Heron	<i>Ardeola bacchus</i>	5	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Eastern Cattle Egret	<i>Bubulcus coromandus</i>	4	Pond-FLW	Common	R,PM	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Whiskered Tern	<i>Chlidonias hybrida</i>	9	Pond-FLW	Uncommon	PM	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Azure-winged Magpie	<i>Cyanopica cyanus</i>	11	Plantation-FLW	Introduced	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Black Drongo	<i>Dicrurus macrocercus</i>	7	Pond-FLW	Common	SV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Little Egret	<i>Egretta garzetta</i>	4	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Black-collared Starling	<i>Gracupica nigricollis</i>	6	Pond-FLW	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Black-winged Stilt	<i>Himantopus himantopus</i>	4	Pond-FLW	Common	PM	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Yellow Bittern	<i>Ixobrychus sinensis</i>	1	Pond-FLW	Uncommon	PM,SV	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Scaly-breasted Munia	<i>Lonchura punctulata</i>	5	Pond-FLW	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Black Kite	<i>Milvus migrans</i>	1	Pond-FLW	Common	R,WV	(RC)	Class II	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	White Wagtail	<i>Motacilla alba</i>	2	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Eurasian Tree Sparrow	<i>Passer montanus</i>	19	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Great Cormorant	<i>Phalacrocorax carbo</i>	7	In Flight	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Great Cormorant	<i>Phalacrocorax carbo</i>	95	In Flight	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Plain Prinia	<i>Prinia inornata</i>	6	Pond-FLW	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Spotted Dove	<i>Spilopelia chinensis</i>	11	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Oriental Turtle Dove	<i>Streptopelia orientalis</i>	2	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Transect	FLW	Little Grebe	<i>Tachybaptus ruficollis</i>	3	Pond-FLW	Common	R	LC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW1	Azure-winged Magpie	<i>Cyanopica cyanus</i>	7	Pond-FLW	Introduced	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW1	Black-winged Stilt	<i>Himantopus himantopus</i>	6	Pond-FLW	Common	PM	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW1	Dusky Warbler	<i>Phylloscopus fuscatus</i>	2	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW1	Little Grebe	<i>Tachybaptus ruficollis</i>	1	Pond-FLW	Common	R	LC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW2	Crested Myna	<i>Acridotheres cristatellus</i>	6	Pond-FLW	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW2	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	1	Pond-FLW	Common	R	-	-	-	LC	LC	N	Y

15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW2	White Wagtail	<i>Motacilla alba</i>	5	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW2	Yellow-bellied Prinia	<i>Prinia flaviventris</i>	1	Pond-FLW	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW2	Spotted Dove	<i>Spilopelia chinensis</i>	7	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW3	Eurasian Tree Sparrow	<i>Passer montanus</i>	2	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW3	Dusky Warbler	<i>Phylloscopus fuscatus</i>	1	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW3	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	1	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW3	Spotted Dove	<i>Spilopelia chinensis</i>	7	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW4	Crested Myna	<i>Acridotheres cristatellus</i>	3	Pond-FLW	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW4	Grey Heron	<i>Ardea cinerea</i>	1	Pond-FLW	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW4	Whiskered Tern	<i>Chlidonias hybrida</i>	1	Pond-FLW	Uncommon	PM	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW4	Little Egret	<i>Egretta garzetta</i>	1	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW4	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	1	Pond-FLW	Common	R	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW4	Black Kite	<i>Milvus migrans</i>	1	Pond-FLW	Common	R,WV	(RC)	Class II	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW5	Azure-winged Magpie	<i>Cyanopica cyanus</i>	5	Pond-FLW	Introduced	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW5	Black Drongo	<i>Dicrurus macrocercus</i>	4	Pond-FLW	Common	SV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW5	Masked Laughingthrush	<i>Garrulax perspicillatus</i>	5	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW5	White Wagtail	<i>Motacilla alba</i>	2	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW5	Great Cormorant	<i>Phalacrocorax carbo</i>	5	Pond-FLW	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW5	Spotted Dove	<i>Spilopelia chinensis</i>	5	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW5	Little Grebe	<i>Tachybaptus ruficollis</i>	1	Pond-FLW	Common	R	LC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW6	Eastern Cattle Egret	<i>Bubulcus coromandus</i>	2	Pond-FLW	Common	R.PM	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW6	Whiskered Tern	<i>Chlidonias hybrida</i>	2	Pond-FLW	Uncommon	PM	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW6	Azure-winged Magpie	<i>Cyanopica cyanus</i>	3	Plantation-FLW	Introduced	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW6	Black Drongo	<i>Dicrurus macrocercus</i>	2	Pond-FLW	Common	SV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW6	Masked Laughingthrush	<i>Garrulax perspicillatus</i>	3	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW6	Brown Shrike	<i>Lanius cristatus</i>	1	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW7	Great Egret	<i>Ardea alba</i>	3	Pond-FLW	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW7	Whiskered Tern	<i>Chlidonias hybrida</i>	3	Pond-FLW	Uncommon	PM	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW7	Large-billed Crow	<i>Corvus macrorhynchos</i>	3	Pond-FLW	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	FLW	Point Count	FLW7	Black Drongo	<i>Dicrurus macrocercus</i>	2	Pond-FLW	Common	SV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Transect	NSW	Grey Heron	<i>Ardea cinerea</i>	1	Modified Watercourse	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Transect	NSW	Chinese Pond Heron	<i>Ardeola bacchus</i>	4	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y

15/10/2021	Daytime	Wet Season	NSW	Transect	NSW	Little Egret	<i>Egretta garzetta</i>	2	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Transect	NSW	Masked Laughingthrush	<i>Garrulax perspicillatus</i>	4	Plantation-NSW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Transect	NSW	Black-winged Stilt	<i>Himantopus himantopus</i>	5	Modified Watercourse	Common	PM	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	NSW1	Common Kingfisher	<i>Alcedo atthis</i>	1	Pond-NSW	Common	PM,WV	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	NSW1	Chinese Pond Heron	<i>Ardeola bacchus</i>	5	Pond-NSW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	NSW1	Pied Kingfisher	<i>Ceryle rudis</i>	1	Pond-NSW	Uncommon	R	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	NSW1	White Wagtail	<i>Motacilla alba</i>	2	Pond-NSW	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	NSW1	Eurasian Tree Sparrow	<i>Passer montanus</i>	9	Pond-NSW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	NSW1	Spotted Dove	<i>Spilopelia chinensis</i>	4	Pond-NSW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Crested Myna	<i>Acridotheres cristatellus</i>	5	Mangrove	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Little Egret	<i>Egretta garzetta</i>	4	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Black-winged Stilt	<i>Himantopus himantopus</i>	5	Modified Watercourse	Common	PM	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Yellow Bittern	<i>Ixobrychus sinensis</i>	1	Modified Watercourse	Uncommon	PM,SV	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Scaly-breasted Munia	<i>Lonchura punctulata</i>	5	Plantation-NSW	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Pied Avocet	<i>Recurvirostra avosetta</i>	3	Modified Watercourse	Abundant	WV	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Spotted Dove	<i>Spilopelia chinensis</i>	11	Plantation-NSW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Common Greenshank	<i>Tringa nebularia</i>	5	Modified Watercourse	Abundant	PM,WV	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Common Redshank	<i>Tringa totanus</i>	2	Modified Watercourse	Common	PM	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Brown Shrike	<i>Lanius cristatus</i>	1	Mangrove	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Great Cormorant	<i>Phalacrocorax carbo</i>	1	In Flight	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Japanese White-eye	<i>Zosterops japonicus</i>	2	Plantation-NSW	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Great Egret	<i>Ardea alba</i>	3	Modified Watercourse	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Grey Heron	<i>Ardea cinerea</i>	2	Modified Watercourse	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Chinese Pond Heron	<i>Ardeola bacchus</i>	3	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Pied Kingfisher	<i>Ceryle rudis</i>	1	Modified Watercourse	Uncommon	R	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Little Egret	<i>Egretta garzetta</i>	3	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Black-winged Stilt	<i>Himantopus himantopus</i>	7	Modified Watercourse	Common	PM	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	White Wagtail	<i>Motacilla alba</i>	2	Modified Watercourse	Common	PM,WV	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Great Cormorant	<i>Phalacrocorax carbo</i>	5	In Flight	Common	WV	PRC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Common Greenshank	<i>Tringa nebularia</i>	6	Modified Watercourse	Abundant	PM,WV	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Crested Myna	<i>Acridotheres cristatellus</i>	6	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Great Egret	<i>Ardea alba</i>	1	Modified Watercourse	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y

15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Chinese Pond Heron	<i>Ardeola bacchus</i>	4	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Little Ringed Plover	<i>Charadrius dubius</i>	3	Modified Watercourse	Common	WV,PM	-	-	-	LC	LC	N	Y
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Oriental Magpie Robin	<i>Copsychus saularis</i>	1	Modified Watercourse	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Black-collared Starling	<i>Gracupica nigricollis</i>	4	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Black-winged Stilt	<i>Himantopus himantopus</i>	15	Modified Watercourse	Common	PM	RC	-	-	LC	LC	Y	Y
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Plain Prinia	<i>Prinia inornata</i>	1	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	1	Modified Watercourse	Abundant	R	-	-	-	LC	LC	N	N
15/10/2021	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Common Greenshank	<i>Tringa nebularia</i>	4	Modified Watercourse	Abundant	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.3.1 Ecological Bird Monitoring Diversity (All avifauna species in Point Count Method) in All Habitats (15 October 2021)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) ²
<i>Acridotheres cristatellus</i>	14	0.068293	-2.68395	-0.18329	0.491953
<i>Alcedo atthis</i>	1	0.004878	-5.32301	-0.02597	0.138217
<i>Ardea alba</i>	6	0.029268	-3.53125	-0.10335	0.364968
<i>Ardea cinerea</i>	3	0.014634	-4.2244	-0.06182	0.261154
<i>Ardeola bacchus</i>	8	0.039024	-3.24357	-0.12658	0.410565
<i>Bubulcus coromandus</i>	2	0.009756	-4.62986	-0.04517	0.209128
<i>Ceryle rudis</i>	2	0.009756	-4.62986	-0.04517	0.209128
<i>Chlidonias hybrida</i>	6	0.029268	-3.53125	-0.10335	0.364968
<i>Corvus macrorhynchos</i>	3	0.014634	-4.2244	-0.06182	0.261154
<i>Cyanopica cyanus</i>	15	0.073171	-2.61496	-0.19134	0.500343
<i>Dicrurus macrocercus</i>	8	0.039024	-3.24357	-0.12658	0.410565
<i>Egretta garzetta</i>	8	0.039024	-3.24357	-0.12658	0.410565
<i>Garrulax perspicillatus</i>	8	0.039024	-3.24357	-0.12658	0.410565
<i>Halcyon smyrnensis</i>	2	0.009756	-4.62986	-0.04517	0.209128
<i>Himantopus himantopus</i>	18	0.087805	-2.43264	-0.2136	0.519605
<i>Ixobrychus sinensis</i>	1	0.004878	-5.32301	-0.02597	0.138217
<i>Lanius cristatus</i>	2	0.009756	-4.62986	-0.04517	0.209128
<i>Lonchura punctulata</i>	5	0.02439	-3.71357	-0.09057	0.336357
<i>Milvus migrans</i>	1	0.004878	-5.32301	-0.02597	0.138217
<i>Motacilla alba</i>	11	0.053659	-2.92511	-0.15696	0.459118
<i>Passer montanus</i>	11	0.053659	-2.92511	-0.15696	0.459118
<i>Phalacrocorax carbo</i>	11	0.053659	-2.92511	-0.15696	0.459118
<i>Phylloscopus fuscatus</i>	3	0.014634	-4.2244	-0.06182	0.261154
<i>Prinia flaviventris</i>	1	0.004878	-5.32301	-0.02597	0.138217
<i>Pycnonotus jocosus</i>	1	0.004878	-5.32301	-0.02597	0.138217
<i>Spilopelia chinensis</i>	34	0.165854	-1.79665	-0.29798	0.535367
<i>Tachybaptus ruficollis</i>	2	0.009756	-4.62986	-0.04517	0.209128
<i>Tringa nebularia</i>	11	0.053659	-2.92511	-0.15696	0.459118
<i>Tringa totanus</i>	2	0.009756	-4.62986	-0.04517	0.209128
<i>Recurvirostra avosetta</i>	3	0.014634	-4.2244	-0.06182	0.261154
<i>Zosterops japonicus</i>	2	0.009756	-4.62986	-0.04517	0.209128
Total	205	1	-120.901	-3.01093	9.791892
Richness	31				
SS	9.791892				
SQ	9.065719				
H	3.01093				
S ² _H	0.003899				

Appendix F.3.2 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Point Count Method) in All Habitats (15 October 2021)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) ²
<i>Ardea alba</i>	6	0.082192	-2.4987	-0.20537	0.513165
<i>Ardea cinerea</i>	3	0.041096	-3.19185	-0.13117	0.41868
<i>Ardeola bacchus</i>	8	0.109589	-2.21102	-0.2423	0.535737

<i>Egretta garzetta</i>	8	0.109589	-2.21102	-0.2423	0.535737
<i>Himantopus himantopus</i>	18	0.246575	-1.40009	-0.34523	0.483348
<i>Milvus migrans</i>	1	0.013699	-4.29046	-0.05877	0.252165
<i>Phalacrocorax carbo</i>	11	0.150685	-1.89256	-0.28518	0.539723
<i>Tachybaptus ruficollis</i>	2	0.027397	-3.59731	-0.09856	0.354539
<i>Tringa nebularia</i>	11	0.150685	-1.89256	-0.28518	0.539723
<i>Tringa totanus</i>	2	0.027397	-3.59731	-0.09856	0.354539
<i>Recurvirostra avosetta</i>	3	0.041096	-3.19185	-0.13117	0.41868
Total	73	1	-29.9747	-2.1238	4.946036
Richness	11				
SS	4.946036				
SQ	4.510519				
H	2.1238				
S ² _H	0.006904				

Appendix F.3.3 Ecological Bird Monitoring Diversity (All avifauna species in Transect Walk Method) in All Habitats (15 October 2021)

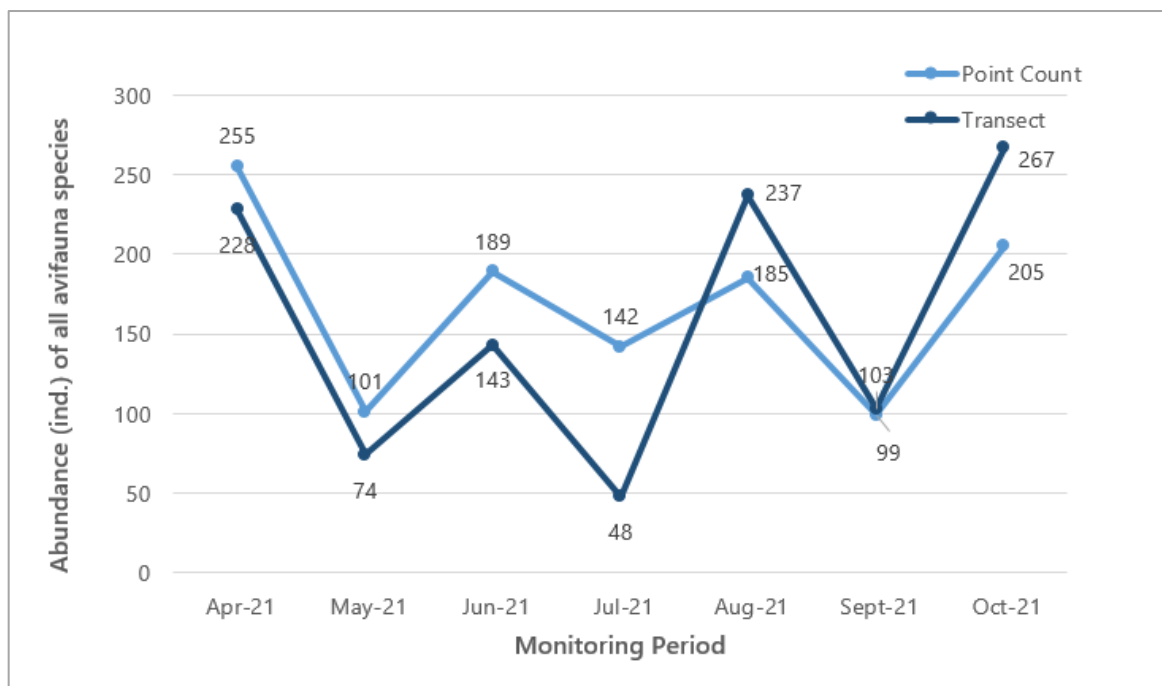
Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) ²
<i>Acridotheres cristatellus</i>	6	0.022472	-3.79549	-0.08529	0.323724
<i>Amaurornis phoenicurus</i>	2	0.007491	-4.8941	-0.03666	0.179417
<i>Ardea alba</i>	6	0.022472	-3.79549	-0.08529	0.323724
<i>Ardea cinerea</i>	3	0.011236	-4.48864	-0.05043	0.22638
<i>Ardeola bacchus</i>	13	0.048689	-3.0223	-0.14715	0.444741
<i>Bubulcus coromandus</i>	4	0.014981	-4.20095	-0.06294	0.26439
<i>Charadrius dubius</i>	3	0.011236	-4.48864	-0.05043	0.22638
<i>Chlidonias hybrida</i>	9	0.033708	-3.39002	-0.11427	0.38738
<i>Copsychus saularis</i>	1	0.003745	-5.58725	-0.02093	0.116919
<i>Cyanopica cyanus</i>	11	0.041199	-3.18935	-0.1314	0.41907
<i>Dicrurus macrocercus</i>	7	0.026217	-3.64134	-0.09547	0.347623
<i>Egretta garzetta</i>	6	0.022472	-3.79549	-0.08529	0.323724
<i>Garrulax perspicillatus</i>	4	0.014981	-4.20095	-0.06294	0.26439
<i>Gracupica nigricollis</i>	10	0.037453	-3.28466	-0.12302	0.404083
<i>Himantopus himantopus</i>	24	0.089888	-2.40919	-0.21656	0.521728
<i>Ixobrychus sinensis</i>	1	0.003745	-5.58725	-0.02093	0.116919
<i>Lonchura punctulata</i>	5	0.018727	-3.97781	-0.07449	0.29631
<i>Milvus migrans</i>	1	0.003745	-5.58725	-0.02093	0.116919
<i>Motacilla alba</i>	2	0.007491	-4.8941	-0.03666	0.179417
<i>Passer montanus</i>	19	0.071161	-2.64281	-0.18807	0.49702
<i>Phalacrocorax carbo</i>	102	0.382022	-0.96228	-0.36761	0.353743
<i>Prinia inornata</i>	7	0.026217	-3.64134	-0.09547	0.347623
<i>Pycnonotus jocosus</i>	1	0.003745	-5.58725	-0.02093	0.116919
<i>Spilopelia chinensis</i>	11	0.041199	-3.18935	-0.1314	0.41907
<i>Streptopelia orientalis</i>	2	0.007491	-4.8941	-0.03666	0.179417
<i>Tachybaptus ruficollis</i>	3	0.011236	-4.48864	-0.05043	0.22638
<i>Tringa nebularia</i>	4	0.014981	-4.20095	-0.06294	0.26439
Total	267	1	-107.837	-2.47456	7.887804
Richness	27				
SS	7.887804				

SQ	6.123458				
H	2.47456				
S ² _H	0.00679				

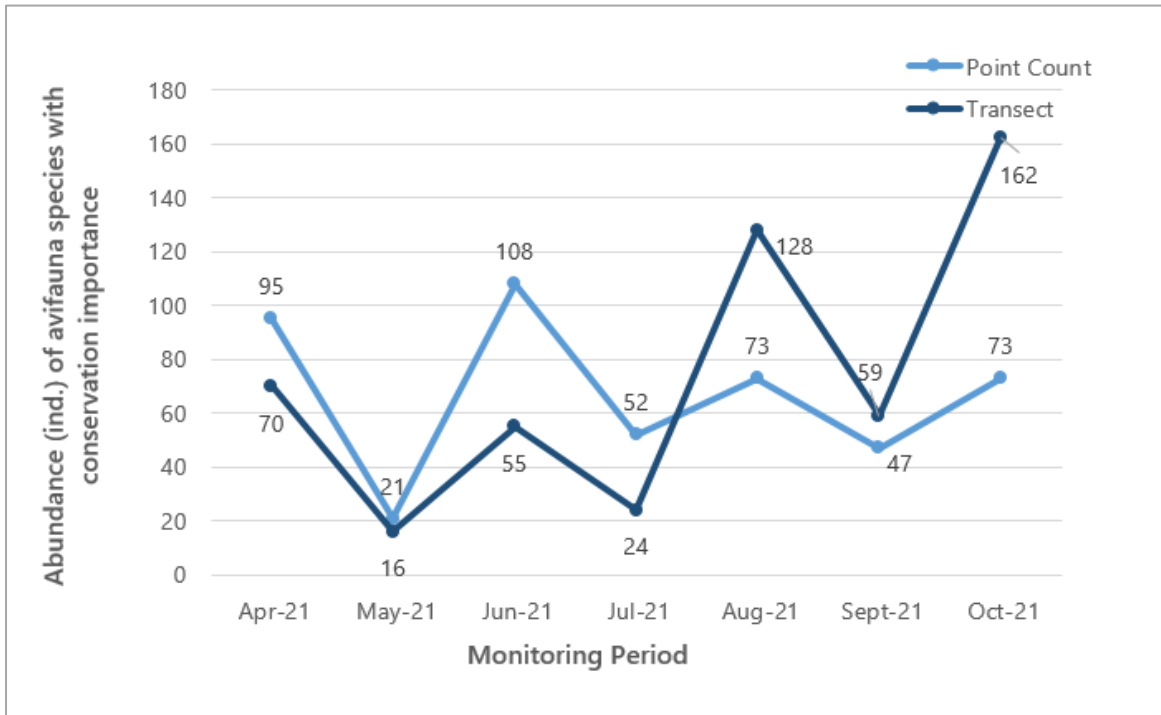
Appendix F.3.4 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Transect Walk Method) in All Habitats (15 October 2021)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) ²
<i>Ardea alba</i>	6	0.037037	-3.29584	-0.12207	0.402316
<i>Ardea cinerea</i>	3	0.018519	-3.98898	-0.07387	0.294667
<i>Ardeola bacchus</i>	13	0.080247	-2.52265	-0.20243	0.510671
<i>Egretta garzetta</i>	6	0.037037	-3.29584	-0.12207	0.402316
<i>Himantopus himantopus</i>	24	0.148148	-1.90954	-0.2829	0.5402
<i>Milvus migrans</i>	1	0.006173	-5.0876	-0.0314	0.159776
<i>Phalacrocorax carbo</i>	102	0.62963	-0.46262	-0.29128	0.134754
<i>Tachybaptus ruficollis</i>	3	0.018519	-3.98898	-0.07387	0.294667
<i>Tringa nebularia</i>	4	0.024691	-3.7013	-0.09139	0.338263
Total	162	1	-28.2534	-1.29128	3.077629
Richness	9				
SS	3.077629				
SQ	1.667411				
H	1.29128				
S ² _H	0.008857				

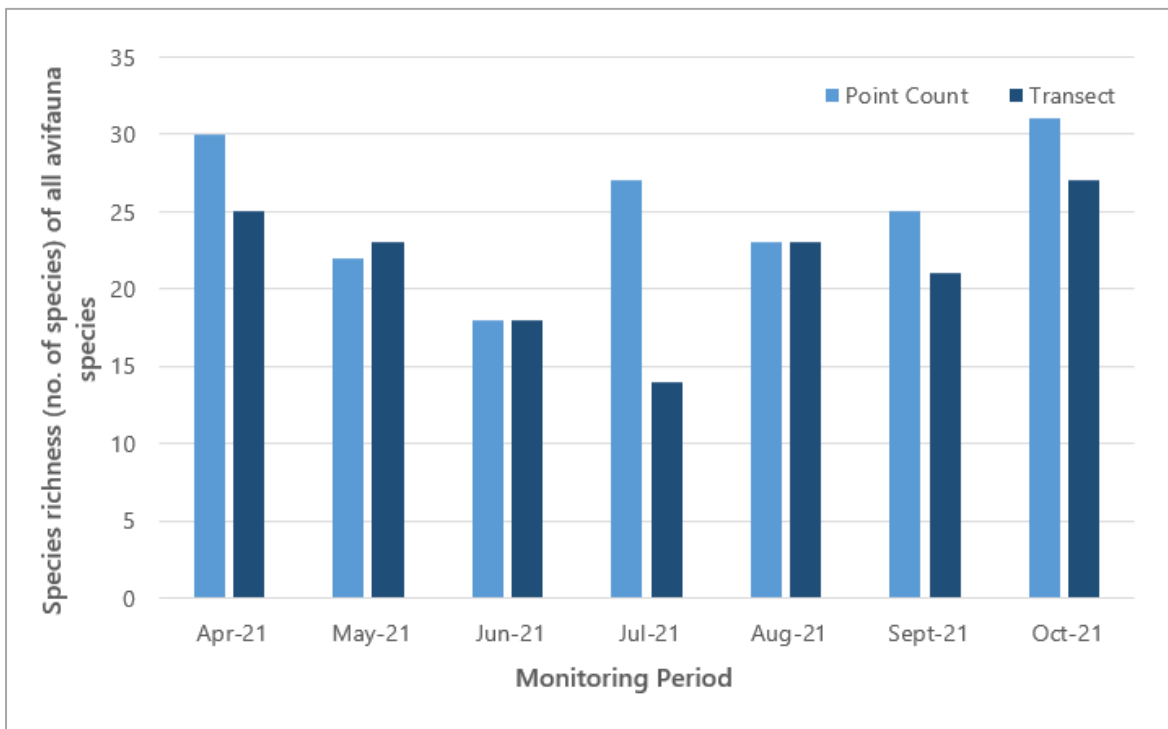
Appendix F.4.1 Abundance of all avifauna species throughout the monitoring period



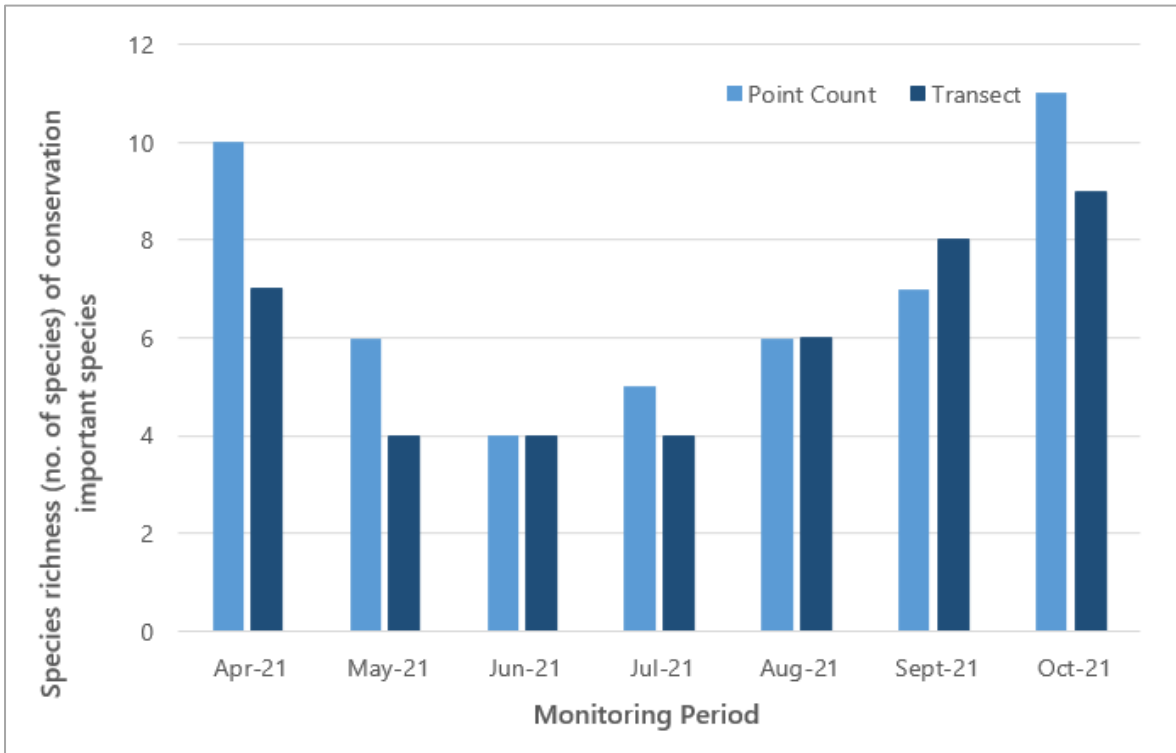
Appendix F.4.2 Abundance of avifauna species with conservation importance throughout the monitoring period



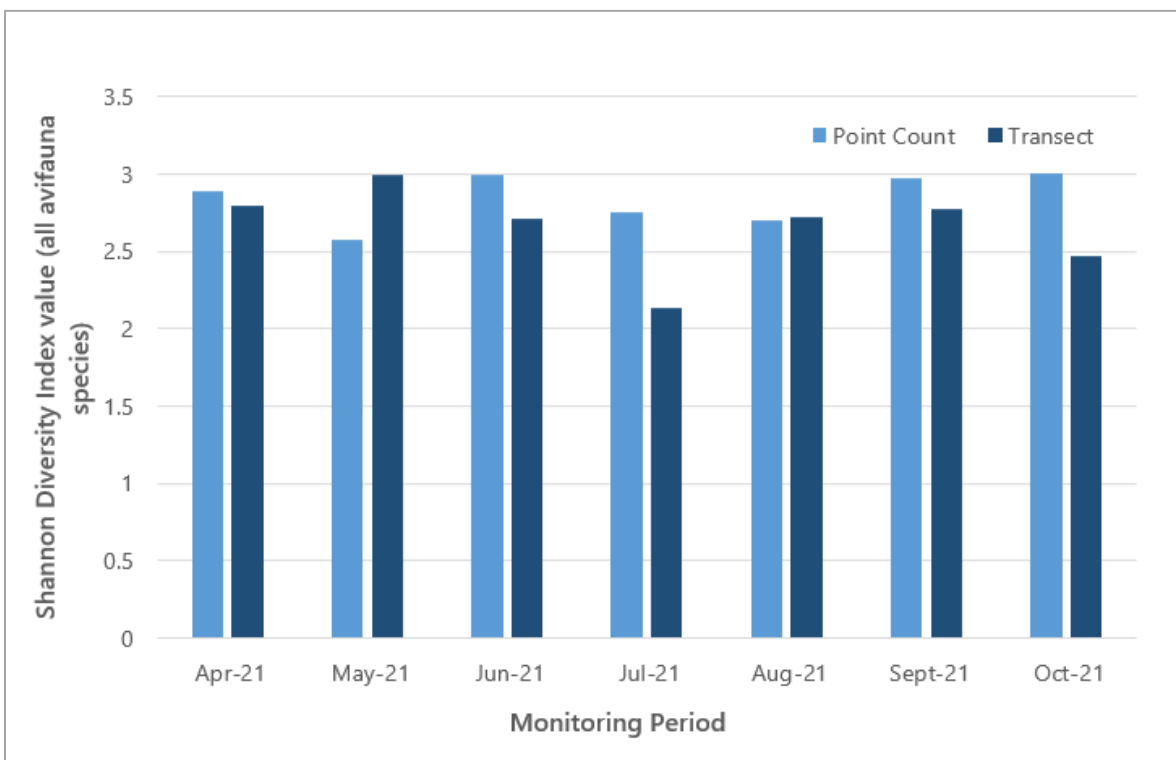
Appendix F.5.1 Species richness of all avifauna species throughout the monitoring period



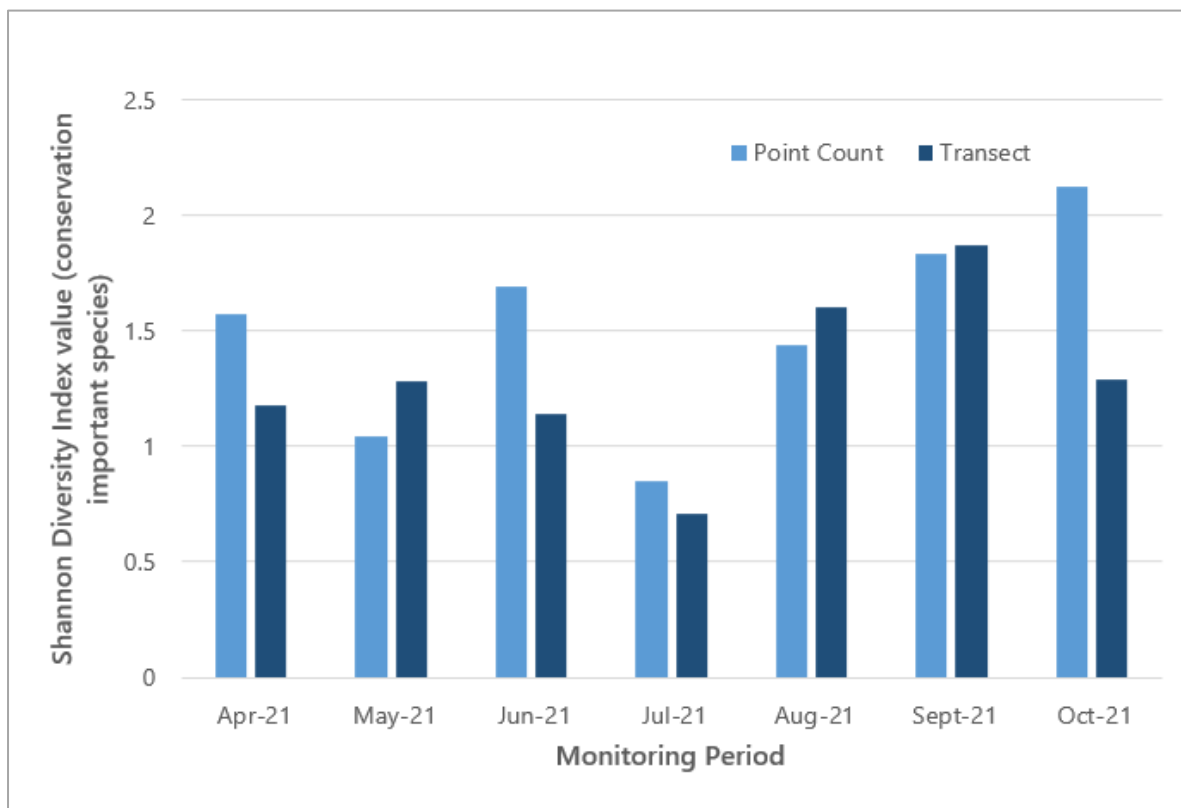
Appendix F.5.2 Species richness of avifauna species with conservation importance throughout the monitoring period



Appendix F.6.1 Shannon Diversity Index values of all avifauna species throughout the monitoring period



Appendix F.6.2 Shannon Diversity Index values of avifauna species with conservation importance throughout the monitoring period



Appendix F.7 Two-tailed Unpaired T-test

Formula:

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

Appendix F.7.1 Abundance of avifauna species with conservation importance – Point Count Method

Months	October 2016	October 2021
N	36	22
df	35	21
M	2.97	3.32
SS	220.97	78.77
S ²	6.31	3.75
t-value	-0.55	
p-value	0.58	
Notes: N: Number of samples/observation df: Degrees of freedom M: Mean SS: Sum of Squares		

Months	October 2016	October 2021
S ² : Measure on a random sample that is used to estimate the variance of the population		

Appendix F.8 Hutcheson t-test testing method and output

Formula:

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

Appendix F.8.1 Species diversity of avifauna species with conservation importance – Point Count Method

Months	October 2016	October 2021
Total	107	73
N	13	11
H	2.17	2.12
S ² _H	0.0056	0.0069
t	0.39	
df	165.50	
Crit	1.97	
p	0.70	
CI	0.15	0.17
Notes: Total: Total abundance N: Number of species H: Shannon Diversity Index S ² _H : variance t: t-value df: degrees of freedom Crit: critical value p: p-value CI: confidence interval		