Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Fish Culture Zone													
Assessment Criteria (for Fish Spawning Ground in Eastern Buffer WCZ)			≥ 2	N/A	≥ 5	≥ 5	≤ 610	≤ 0.02	≤ 0.2	≤ 0.021	N/A	≤ 0.035	≤ 0.008
F1	Tung Lung Chau	2014 - Without HATS Stage 2A (1a)	5.00	3.78	5.15	5.23	10	0.00887	0.1342	0.005	3.55	0.011	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.05	3.75	5.28	5.28	8	0.00820	0.1289	0.004	3.56	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	5.01	3.80	5.15	5.23	11	0.00895	0.1356	0.005	3.55	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.09	3.68	5.27	5.31	8	0.00837	0.1302	0.004	3.51	0.009	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.09	3.68	5.27	5.31	8	0.00837	0.1301	0.004	3.51	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.10	3.69	5.28	5.32	8	0.00833	0.1294	0.004	3.51	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.08	3.70	5.26	5.30	8	0.00844	0.1314	0.004	3.51	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.08	3.68	5.26	5.30	8	0.00813	0.1303	0.004	3.51	0.009	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.12	3.66	5.31	5.35	8	0.00829	0.1333	0.004	3.50	0.008	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.11	3.68	5.30	5.33	10	0.00840	0.1355	0.004	3.51	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.68	-	-	8	0.00837	0.1302	0.004	3.51	0.009	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.68	-	-	8	0.00838	0.1302	0.004	3.51	0.009	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.68	-	-	8	0.00837	0.1302	0.004	3.51	0.009	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.81	-	-	11	0.00905	0.1365	0.005	3.57	0.012	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.78	-	-	10	0.00888	0.1343	0.005	3.56	0.011	-
Assessment Criteria (for Western Buffer WCZ)			≥ 2	N/A	N/A	≥ 4	≤ 610	≤ 0.04	≤ 0.4	≤ 0.021	N/A	≤ 0.035	≤ 0.008
F5	Ma Wan	2014 - Without HATS Stage 2A (1a)	5.27	8.50	5.37	5.42	23	0.02231	0.3875	0.011	6.43	0.013	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.26	8.31	5.33	5.41	20	0.01963	0.3699	0.010	6.35	0.012	0.0000
		2021 - Without HATS Stage 2A (2a)	5.25	8.46	5.35	5.40	19	0.02254	0.3959	0.011	6.44	0.014	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.31	8.35	5.41	5.46	12	0.02136	0.3951	0.011	6.31	0.014	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.31	8.35	5.41	5.46	12	0.02136	0.3951	0.011	6.31	0.014	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.33	8.34	5.44	5.48	12	0.02080	0.3843	0.011	6.29	0.013	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.28	8.36	5.37	5.43	12	0.02209	**0.4097**	0.012	6.33	0.015	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.30	8.35	5.40	5.45	12	0.01765	0.3956	0.011	6.30	0.014	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.45	8.25	5.57	5.58	12	0.02014	**0.4392**	0.008	6.20	0.010	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.42	8.26	5.54	5.56	13	0.02090	**0.4619**	0.008	6.22	0.010	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	8.35	-	-	12	0.02136	0.3951	0.011	6.31	0.014	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	8.35	-	-	12	0.02137	0.3952	0.011	6.31	0.014	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	8.35	-	-	12	0.02136	0.3951	0.011	6.31	0.014	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	8.50	-	-	23	0.02242	0.3882	0.011	6.45	0.013	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	8.50	-	-	23	0.02235	0.3876	0.011	6.44	0.013	-
Assessment Criteria (for Semi-enclosed Bay in Southern WCZ)			≥ 2	N/A	≥ 5	≥ 5	≤ 610	≤ 0.01	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
F3	Sok Kwu Wan	2014 - Without HATS Stage 2A (1a)	5.29	6.54	5.71	5.67	3	**0.01016**	**0.1701**	0.005	4.16	0.007	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.18	6.52	5.65	5.49	3	0.00987	**0.1725**	0.005	4.20	0.006	0.0000
		2021 - Without HATS Stage 2A (2a)	5.28	6.53	5.71	5.66	3	**0.01024**	**0.1719**	0.005	4.16	0.007	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.30	6.52	5.72	5.68	2	0.00988	**0.1712**	0.005	4.12	0.007	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.30	6.52	5.72	5.68	2	0.00988	**0.1711**	0.005	4.12	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.31	6.51	5.73	5.69	2	0.00973	**0.1682**	0.005	4.12	0.006	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.29	6.52	5.71	5.67	3	**0.01009**	**0.1752**	0.005	4.13	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.30	6.52	5.71	5.67	2	0.00901	**0.1722**	0.005	4.10	0.007	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.34	6.49	5.77	5.73	2	0.00958	**0.1810**	0.004	4.10	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.33	6.49	5.76	5.72	3	0.00980	**0.1869**	0.005	4.10	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.52	-	-	2	0.00988	**0.1712**	0.005	4.12	0.007	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.52	-	-	2	0.00988	**0.1712**	0.005	4.12	0.007	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.52	-	-	2	0.00988	**0.1712**	0.005	4.12	0.007	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.54	-	-	3	**0.01018**	**0.1702**	0.005	4.17	0.007	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.54	-	-	3	**0.01017**	**0.1701**	0.005	4.17	0.007	-
Assessment Criteria (for Southern WCZ)			≥ 2	N/A	≥ 5	≥ 5	≤ 610	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
F2	Po Toi	2014 - Without HATS Stage 2A (1a)	4.97	4.47	5.47	5.56	4	0.00716	**0.1105**	0.004	3.92	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.99	4.58	5.51	5.52	4	0.00706	**0.1101**	0.004	3.95	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.97	4.53	5.47	5.55	5	0.00717	**0.1107**	0.004	3.92	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.97	4.47	5.47	5.56	5	0.00714	**0.1106**	0.004	3.92	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.97	4.47	5.47	5.56	5	0.00714	**0.1106**	0.004	3.92	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.97	4.42	5.46	5.56	5	0.00713	**0.1104**	0.004	3.91	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.97	4.56	5.46	5.55	5	0.00715	**0.1108**	0.004	3.92	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.97	4.47	5.47	5.56	5	0.00708	**0.1106**	0.004	3.91	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.98	4.46	5.48	5.58	5	0.00712	**0.1113**	0.004	3.91	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.98	4.55	5.47	5.57	5	0.00714	**0.1117**	0.004	3.91	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.47	-	-	5	0.00714	**0.1106**	0.004	3.92	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.47	-	-	5	0.00714	**0.1106**	0.004	3.92	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.47	-	-	5	0.00714	**0.1106**	0.004	3.92	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.47	-	-	4	0.00716	**0.1105**	0.004	3.92	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.47	-	-	4	0.00716	**0.1105**	0.004	3.92	0.004	-
F4	Lo Tik Wan	2014 - Without HATS Stage 2A (1a)	5.30	5.47	5.71	5.61	3	0.01080	**0.1779**	0.005	4.10	0.007	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.19	5.53	5.53	5.47	1	0.01043	**0.1805**	0.005	4.15	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	5.30	5.48	5.71	5.61	3	0.01088	**0.1799**	0.005	4.09	0.007	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.31	5.45	5.72	5.62	1	0.01049	**0.1792**	0.005	4.05	0.007	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.31	5.45	5.72	5.62	1	0.01049	**0.1792**	0.005	4.05	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.32	5.45	5.73	5.63	1	0.01032	**0.1759**	0.005	4.05	0.007	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.30	5.46	5.71	5.61	1	0.01072	**0.1837**	0.006	4.06	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.31	5.45	5.71	5.62	1	0.00948	**0.1797**	0.005	4.04	0.007	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.35	5.43	5.78	5.68	1	0.01016	**0.1911**	0.004	4.02	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.35	5.43	5.77	5.67	1	0.01038	**0.1977**	0.005	4.03	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.45	-	-	1	0.01049	**0.1792**	0.005	4.05	0.007	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.45	-	-	1	0.01049	**0.1792**	0.005	4.05	0.007	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.45	-	-	1	0.01049	**0.1792**	0.005	4.05	0.007	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.47	-	-	3	0.01082	**0.1780**	0.005	4.10	0.007	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.47	-	-	3	0.01081	**0.1780**	0.005	4.10	0.007	-
F6	Cheung Sha Wan	2014 - Without HATS Stage 2A (1a)	6.21	1.72	6.50	6.48	11	0.01391	**0.2296**	0.005	5.91	0.007	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.85	2.26	6.29	6.26	12	0.01245	**0.2247**	0.005	5.78	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	6.20	1.72	6.47	6.46	11	0.01424	**0.2369**	0.006	5.88	0.007	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	6.21	1.69	6.49	6.49	11	0.01338	**0.2367**	0.006	5.80	0.007	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	6.21	1.69	6.49	6.49	11	0.01338	**0.2366**	0.006	5.80	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	6.22	1.69	6.51	6.51	11	0.01295	**0.2283**	0.005	5.78	0.007	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	6.20	1.67	6.47	6.47	11	0.01394	**0.2477**	0.006	5.82	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	6.20	1.69	6.47	6.46	11	0.01090	**0.2404**	0.006	5.73	0.008	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	6.29	1.67	6.59	6.61	11	0.01249	**0.2615**	0.004	5.73	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	6.27	1.65	6.58	6.60	12	0.01304	**0.2771**	0.004	5.75	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	1.69	-	-	11	0.01338	**0.2367**	0.006	5.80	0.007	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	1.69	-	-	11	0.01339	**0.2367**	0.006	5.80	0.007	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	1.69	-	-	11	0.01338	**0.2367**	0.006	5.80	0.007	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	1.72	-	-	11	0.01398	**0.2301**	0.005	5.91	0.008	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	1.72	-	-	11	0.01393	**0.2297**	0.005	5.91	0.007	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	TIN (mg/L)	UIA (mg/L)	SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for North Western WCZ)			≥ 2	≤ 100	N/A	≥ 4	N/A	≤ 0.05	≤ 0.5	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR1	Near Sha Chau	2014 - Without HATS Stage 2A (1a)	5.69	6.54	5.77	5.82	77	0.02794	**0.5219**	0.008	12.24	0.011	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.64	7.84	5.77	5.79	81	0.02446	0.4869	0.008	11.58	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.69	6.52	5.77	5.82	5	0.02773	**0.5277**	0.009	12.25	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.72	6.63	5.78	5.83	5	0.02709	**0.5263**	0.009	12.18	0.012	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.72	6.63	5.78	5.83	5	0.02709	**0.5262**	0.009	12.18	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.73	6.59	5.79	5.84	5	0.02681	**0.5214**	0.008	12.18	0.011	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.69	6.58	5.76	5.82	5	0.02747	**0.5342**	0.009	12.19	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.72	6.63	5.78	5.83	5	0.02516	**0.5266**	0.009	12.17	0.012	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.79	6.60	5.85	5.87	5	0.02645	**0.5433**	0.007	12.13	0.009	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.77	6.55	5.83	5.86	5	0.02692	**0.5560**	0.007	12.14	0.010	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.63	-	-	5	0.02709	**0.5263**	0.009	12.18	0.012	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.63	-	-	5	0.02709	**0.5263**	0.009	12.18	0.012	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.63	-	-	5	0.02709	**0.5263**	0.009	12.18	0.012	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.54	-	-	77	0.02799	**0.5222**	0.008	12.25	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.54	-	-	77	0.02796	**0.5219**	0.008	12.24	0.011	-
Assessment Criteria (for Eastern Buffer, Western Buffer & Victoria Harbour WCZs)			≥ 2	≤ 100	N/A	≥ 4	N/A	≤ 0.04	≤ 0.4	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR31	Tung Lung Chau	2014 - Without HATS Stage 2A (1a)	4.96	2.93	5.13	5.15	24	0.00893	0.1339	0.005	3.64	0.011	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.98	3.05	5.26	5.27	19	0.00829	0.1296	0.004	3.64	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	4.97	2.95	5.13	5.14	24	0.00901	0.1353	0.005	3.64	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.00	2.89	5.25	5.28	17	0.00841	0.1297	0.004	3.59	0.009	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.00	2.89	5.25	5.28	17	0.00841	0.1297	0.004	3.59	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.01	2.89	5.26	5.28	17	0.00837	0.1290	0.004	3.59	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.00	2.93	5.24	5.27	17	0.00847	0.1310	0.004	3.60	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.00	2.89	5.24	5.27	17	0.00817	0.1298	0.004	3.59	0.009	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.02	2.88	5.28	5.30	17	0.00833	0.1329	0.004	3.59	0.008	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.01	2.92	5.28	5.30	18	0.00844	0.1351	0.004	3.59	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	2.89	-	-	17	0.00841	0.1298	0.004	3.59	0.009	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	2.89	-	-	17	0.00841	0.1298	0.004	3.59	0.009	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	2.89	-	-	17	0.00841	0.1297	0.004	3.59	0.009	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	2.93	-	-	26	0.00910	0.1362	0.005	3.66	0.012	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	2.93	-	-	24	0.00894	0.1340	0.005	3.64	0.011	-
CR44	Cape Collinson	2014 - Without HATS Stage 2A (1a)	4.97	3.88	5.06	5.09	136	0.00966	0.1436	0.005	3.67	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.03	3.87	5.18	5.19	122	0.00892	0.1396	0.005	3.65	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	4.98	3.92	5.06	5.09	136	0.00976	0.1454	0.005	3.67	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.05	3.79	5.17	5.24	110	0.00895	0.1376	0.004	3.61	0.009	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.05	3.79	5.17	5.24	110	0.00895	0.1376	0.004	3.61	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.06	3.82	5.18	5.24	110	0.00890	0.1368	0.004	3.61	0.008	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.04	3.83	5.16	5.23	110	0.00902	0.1390	0.005	3.61	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.05	3.79	5.16	5.23	110	0.00869	0.1378	0.005	3.60	0.009	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.08	3.79	5.20	5.27	110	0.00886	0.1410	0.004	3.60	0.008	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.07	3.82	5.20	5.26	115	0.00899	0.1435	0.004	3.61	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.79	-	-	111	0.00895	0.1377	0.005	3.61	0.009	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.79	-	-	111	0.00895	0.1377	0.005	3.61	0.009	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.79	-	-	110	0.00895	0.1376	0.004	3.61	0.009	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.38	-	-	152	0.00984	0.1461	0.005	3.69	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.88	-	-	136	0.00967	0.1437	0.005	3.67	0.010	-
CR52	Green Island	2014 - Without HATS Stage 2A (1a)	5.17	5.63	5.39	5.33	438	0.01525	0.2431	0.009	4.53	0.012	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.13	5.68	5.27	5.28	56	0.01360	0.2363	0.008	4.51	0.012	0.0000
		2021 - Without HATS Stage 2A (2a)	5.16	5.65	5.38	5.32	452	0.01549	0.2478	0.009	4.53	0.013	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.20	5.57	5.41	5.36	60	0.01406	0.2413	0.009	4.38	0.013	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.20	5.57	5.41	5.36	60	0.01406	0.2413	0.009	4.38	0.013	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.21	5.55	5.42	5.38	59	0.01370	0.2342	0.008	4.37	0.012	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.19	5.58	5.40	5.35	61	0.01454	0.2507	0.009	4.40	0.014	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.19	5.57	5.41	5.36	60	0.01161	0.2416	0.009	4.38	0.013	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.27	5.55	5.48	5.46	60	0.01326	0.2746	0.006	4.31	0.008	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.26	5.55	5.47	5.45	71	0.01373	0.2891	0.006	4.32	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.57	-	-	60	0.01407	0.2414	0.009	4.38	0.013	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.57	-	-	60	0.01407	0.2414	0.009	4.38	0.013	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.57	-	-	60	0.01407	0.2413	0.009	4.38	0.013	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.63	-	-	440	0.01532	0.2434	0.009	4.54	0.012	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.63	-	-	439	0.01527	0.2431	0.009	4.53	0.012	-
CR54	Sandy Bay	2014 - Without HATS Stage 2A (1a)	5.26	5.34	5.55	5.48	768	0.01284	0.2028	0.007	4.34	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.21	5.37	5.30	5.38	176	0.01163	0.1993	0.006	4.35	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.25	5.33	5.55	5.47	795	0.01300	0.2058	0.007	4.34	0.010	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.30	5.28	5.62	5.54	187	0.01169	0.1974	0.006	4.22	0.009	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.30	5.28	5.62	5.54	187	0.01169	0.1974	0.006	4.22	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.30	5.29	5.63	5.54	187	0.01147	0.1929	0.006	4.21	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.29	5.28	5.60	5.52	185	0.01199	0.2032	0.007	4.23	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.29	5.28	5.61	5.53	187	0.01026	0.1977	0.006	4.21	0.009	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.36	5.24	5.68	5.59	187	0.01122	0.2163	0.005	4.18	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.35	5.24	5.67	5.58	246	0.01155	0.2255	0.005	4.18	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.28	-	-	188	0.01169	0.1974	0.006	4.22	0.009	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.28	-	-	188	0.01169	0.1974	0.006	4.22	0.009	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.28	-	-	188	0.01169	0.1974	0.006	4.22	0.009	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.34	-	-	769	0.01287	0.2029	0.007	4.34	0.009	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.34	-	-	768	0.01286	0.2028	0.007	4.34	0.009	-
Assessment Criteria (for Fish Spawing Ground in Eastern Buffer WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR29	Joss House Bay	2014 - Without HATS Stage 2A (1a)	5.05	2.45	5.32	5.33	5	0.00816	**0.1214**	0.004	3.49	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.09	2.76	5.42	5.41	5	0.00758	**0.1165**	0.004	3.50	0.006	0.0000
		2021 - Without HATS Stage 2A (2a)	5.06	2.52	5.32	5.33	6	0.00823	**0.1225**	0.004	3.48	0.010	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.11	2.42	5.42	5.41	5	0.00780	**0.1186**	0.004	3.45	0.008	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.11	2.42	5.42	5.41	5	0.00780	**0.1186**	0.004	3.45	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.12	2.40	5.43	5.42	5	0.00777	**0.1180**	0.004	3.45	0.008	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.10	2.44	5.41	5.40	5	0.00786	**0.1196**	0.004	3.46	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.11	2.42	5.40	5.40	5	0.00761	**0.1188**	0.004	3.45	0.008	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.13	2.41	5.46	5.45	5	0.00774	**0.1212**	0.004	3.45	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.12	2.43	5.45	5.44	7	0.00783	**0.1229**	0.004	3.45	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	2.42	-	-	5	0.00781	**0.1187**	0.004	3.45	0.008	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	2.42	-	-	5	0.00781	**0.1187**	0.004	3.45	0.008	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	2.42	-	-	5	0.00780	**0.1186**	0.004	3.45	0.008	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	2.53	-	-	6	0.00832	**0.1236**	0.004	3.50	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	2.45	-	-	5	0.00817	**0.1215**	0.004	3.49	0.010	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for Fish Spawing Ground in Eastern Buffer WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR46	Tung Lung Chau	2014 - Without HATS Stage 2A (1a)	5.07	3.57	5.20	5.26	12	0.00880	**0.1322**	0.004	3.55	0.011	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.13	3.50	5.32	5.33	10	0.00811	**0.1267**	0.004	3.55	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	5.07	3.59	5.20	5.26	13	0.00888	**0.1336**	0.004	3.54	0.012	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.17	3.43	5.32	5.35	10	0.00830	**0.1282**	0.004	3.50	0.009	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.17	3.43	5.32	5.35	10	0.00830	**0.1282**	0.004	3.50	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.18	3.47	5.33	5.37	10	0.00826	**0.1275**	0.004	3.50	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.16	3.46	5.31	5.34	10	0.00837	**0.1295**	0.004	3.50	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.16	3.43	5.30	5.34	10	0.00806	**0.1284**	0.004	3.50	0.009	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.19	3.41	5.36	5.40	10	0.00823	**0.1314**	0.004	3.50	0.008	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.19	3.44	5.35	5.38	13	0.00833	**0.1336**	0.004	3.50	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.43	-	-	10	0.00831	**0.1283**	0.004	3.50	0.009	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.43	-	-	10	0.00831	**0.1283**	0.004	3.50	0.009	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.43	-	-	10	0.00830	**0.1282**	0.004	3.50	0.009	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.57	-	-	13	0.00898	**0.1346**	0.005	3.57	0.012	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.57	-	-	12	0.00881	**0.1322**	0.004	3.55	0.011	-
Assessment Criteria (for Southern WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR2	Kau Yi Chau	2014 - Without HATS Stage 2A (1a)	5.37	5.52	5.56	5.52	6	0.01789	**0.2994**	0.009	5.30	0.011	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.27	5.64	5.34	5.44	2	0.01608	**0.2914**	0.009	5.33	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.35	5.44	5.55	5.51	6	0.01814	**0.3059**	0.009	5.30	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.40	5.34	5.60	5.55	2	0.01719	**0.3066**	0.010	5.19	0.012	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.40	5.34	5.60	5.55	2	0.01718	**0.3066**	0.010	5.19	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.43	5.32	5.63	5.57	2	0.01667	**0.2966**	0.009	5.17	0.011	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.37	5.36	5.56	5.52	2	0.01785	**0.3199**	0.010	5.21	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.39	5.34	5.59	5.54	2	0.01399	**0.3072**	0.010	5.18	0.012	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.51	5.27	5.72	5.68	2	0.01613	**0.3454**	0.006	5.10	0.008	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.49	5.29	5.70	5.65	2	0.01679	**0.3654**	0.007	5.11	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.34	-	-	2	0.01719	**0.3066**	0.010	5.19	0.012	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.34	-	-	2	0.01719	**0.3066**	0.010	5.19	0.012	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.34	-	-	2	0.01719	**0.3066**	0.010	5.19	0.012	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.52	-	-	6	0.01797	**0.2999**	0.009	5.31	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.52	-	-	6	0.01792	**0.2995**	0.009	5.30	0.011	-
CR3	Kau Yi Chau	2014 - Without HATS Stage 2A (1a)	5.54	4.34	5.62	5.61	4	0.01858	**0.3124**	0.009	5.42	0.011	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.45	4.97	5.38	5.52	2	0.01667	**0.3041**	0.009	5.45	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.52	4.32	5.60	5.59	4	0.01885	**0.3195**	0.010	5.43	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.57	4.23	5.66	5.64	2	0.01787	**0.3205**	0.010	5.31	0.012	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.57	4.23	5.66	5.64	2	0.01786	**0.3205**	0.010	5.31	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.59	4.22	5.68	5.66	2	0.01732	**0.3099**	0.009	5.29	0.011	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.53	4.24	5.62	5.61	2	0.01857	**0.3346**	0.011	5.33	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.55	4.23	5.64	5.63	2	0.01448	**0.3212**	0.010	5.30	0.012	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.70	4.14	5.81	5.77	2	0.01675	**0.3611**	0.006	5.21	0.008	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.68	4.14	5.78	5.74	2	0.01745	**0.3824**	0.007	5.23	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.23	-	-	2	0.01787	**0.3205**	0.010	5.31	0.012	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.23	-	-	2	0.01787	**0.3206**	0.010	5.31	0.012	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.23	-	-	2	0.01787	**0.3205**	0.010	5.31	0.012	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.34	-	-	4	0.01866	**0.3129**	0.009	5.44	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.34	-	-	4	0.01861	**0.3125**	0.009	5.43	0.011	-
CR4	Kau Yi Chau	2014 - Without HATS Stage 2A (1a)	5.52	5.82	5.73	5.66	3	0.01767	**0.2958**	0.009	5.30	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.40	5.92	5.40	5.59	2	0.01595	**0.2892**	0.008	5.33	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.50	5.83	5.71	5.65	4	0.01792	**0.3023**	0.009	5.30	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.55	5.78	5.76	5.70	1	0.01700	**0.3034**	0.009	5.19	0.011	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.55	5.78	5.76	5.70	1	0.01700	**0.3034**	0.009	5.19	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.57	5.78	5.78	5.73	1	0.01649	**0.2933**	0.009	5.17	0.011	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.52	5.80	5.72	5.67	1	0.01768	**0.3169**	0.010	5.21	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.54	5.78	5.74	5.69	1	0.01384	**0.3042**	0.009	5.17	0.011	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.67	5.71	5.91	5.82	1	0.01595	**0.3412**	0.006	5.10	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.65	5.72	5.88	5.81	1	0.01662	**0.3613**	0.007	5.11	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.78	-	-	1	0.01700	**0.3034**	0.009	5.19	0.011	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.78	-	-	1	0.01701	**0.3035**	0.009	5.19	0.011	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.78	-	-	1	0.01700	**0.3034**	0.009	5.19	0.011	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.82	-	-	4	0.01775	**0.2962**	0.009	5.31	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.82	-	-	4	0.01770	**0.2958**	0.009	5.30	0.010	-
CR5	Siu Kau Yi Chau	2014 - Without HATS Stage 2A (1a)	5.63	5.96	5.79	5.70	2	0.01824	**0.3066**	0.009	5.56	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.53	5.91	5.50	5.62	2	0.01635	**0.2985**	0.008	5.57	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.60	5.81	5.76	5.68	2	0.01852	**0.3138**	0.009	5.56	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.65	5.77	5.81	5.73	1	0.01754	**0.3147**	0.009	5.45	0.011	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.65	5.77	5.81	5.73	1	0.01754	**0.3147**	0.009	5.45	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.68	5.75	5.83	5.75	1	0.01700	**0.3041**	0.009	5.43	0.010	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.61	5.77	5.77	5.70	1	0.01825	**0.3288**	0.010	5.47	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.64	5.77	5.79	5.71	1	0.01421	**0.3158**	0.009	5.42	0.011	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.77	5.70	5.92	5.86	1	0.01643	**0.3532**	0.006	5.35	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.75	5.69	5.91	5.84	1	0.01713	**0.3741**	0.006	5.37	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.77	-	-	1	0.01754	**0.3147**	0.009	5.45	0.011	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.77	-	-	1	0.01755	**0.3148**	0.009	5.45	0.011	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.77	-	-	1	0.01754	**0.3147**	0.009	5.45	0.011	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.96	-	-	2	0.01833	**0.3071**	0.009	5.57	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.96	-	-	2	0.01828	**0.3067**	0.009	5.56	0.010	-
CR6	Siu Kau Yi Chau	2014 - Without HATS Stage 2A (1a)	5.67	6.05	5.86	5.77	2	0.01790	**0.3003**	0.009	5.53	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.56	6.09	5.52	5.65	1	0.01607	**0.2928**	0.008	5.54	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.64	6.23	5.84	5.74	2	0.01818	**0.3073**	0.009	5.53	0.010	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.69	6.18	5.88	5.80	1	0.01722	**0.3083**	0.009	5.42	0.011	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.69	6.18	5.88	5.80	1	0.01722	**0.3082**	0.009	5.42	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.71	6.17	5.90	5.82	1	0.01668	**0.2978**	0.009	5.41	0.010	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.65	6.20	5.85	5.77	1	0.01791	**0.3221**	0.010	5.44	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.67	6.18	5.86	5.78	1	0.01396	**0.3095**	0.009	5.40	0.011	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.80	6.11	6.00	5.92	1	0.01613	**0.3457**	0.006	5.33	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.78	6.13	5.98	5.89	1	0.01682	**0.3662**	0.006	5.34	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.18	-	-	1	0.01722	**0.3083**	0.009	5.42	0.011	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.18	-	-	1	0.01722	**0.3083**	0.009	5.42	0.011	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.18	-	-	1	0.01722	**0.3083**	0.009	5.42	0.011	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.05	-	-	2	0.01799	**0.3007**	0.009	5.54	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.05	-	-	2	0.01793	**0.3003**	0.009	5.53	0.010	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for Southern WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR7	Siu Kau Yi Chau	2014 - Without HATS Stage 2A (1a)	5.57	4.83	5.68	5.64	3	0.01862	**0.3135**	0.009	5.55	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.48	5.11	5.46	5.57	2	0.01667	**0.3049**	0.008	5.56	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.55	4.84	5.66	5.62	3	0.01890	**0.3208**	0.009	5.55	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.59	4.77	5.71	5.66	1	0.01790	**0.3218**	0.010	5.44	0.011	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.59	4.77	5.71	5.66	1	0.01790	**0.3217**	0.010	5.44	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.62	4.76	5.74	5.69	1	0.01735	**0.3110**	0.009	5.42	0.011	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.56	4.77	5.67	5.63	1	0.01862	**0.3361**	0.010	5.46	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.58	4.78	5.69	5.65	1	0.01450	**0.3227**	0.010	5.42	0.011	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.72	4.71	5.85	5.79	1	0.01677	**0.3616**	0.006	5.34	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.70	4.70	5.83	5.76	2	0.01748	**0.3829**	0.007	5.36	0.008	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.77	-	-	1	0.01790	**0.3218**	0.010	5.44	0.011	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.77	-	-	1	0.01791	**0.3218**	0.010	5.44	0.011	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.77	-	-	1	0.01790	**0.3218**	0.010	5.44	0.011	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.83	-	-	3	0.01870	**0.3140**	0.009	5.57	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.83	-	-	3	0.01865	**0.3136**	0.009	5.56	0.010	-
CR8	Peng Chau	2014 - Without HATS Stage 2A (1a)	5.79	3.80	5.95	5.87	2	0.01795	**0.3013**	0.008	5.74	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.66	4.29	5.67	5.74	2	0.01603	**0.2936**	0.008	5.71	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.76	3.85	5.93	5.84	2	0.01823	**0.3088**	0.008	5.74	0.010	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.80	3.76	5.95	5.88	1	0.01722	**0.3095**	0.009	5.63	0.010	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.80	3.76	5.95	5.88	1	0.01722	**0.3094**	0.009	5.63	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.82	3.75	5.97	5.91	1	0.01667	**0.2987**	0.008	5.61	0.010	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.77	3.78	5.93	5.86	1	0.01793	**0.3237**	0.009	5.65	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.78	3.76	5.93	5.86	1	0.01387	**0.3112**	0.009	5.59	0.011	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.93	3.68	6.07	6.02	1	0.01608	**0.3470**	0.006	5.53	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.91	3.69	6.05	6.00	1	0.01679	**0.3679**	0.006	5.55	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.76	-	-	1	0.01722	**0.3095**	0.009	5.63	0.010	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.76	-	-	1	0.01722	**0.3095**	0.009	5.63	0.010	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.76	-	-	1	0.01722	**0.3095**	0.009	5.63	0.010	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.80	-	-	2	0.01803	**0.3018**	0.008	5.75	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.80	-	-	2	0.01798	**0.3014**	0.008	5.75	0.010	-
CR9	Peng Chau	2014 - Without HATS Stage 2A (1a)	5.80	3.88	5.97	5.88	2	0.01785	**0.2995**	0.008	5.73	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.66	4.38	5.67	5.75	1	0.01596	**0.2920**	0.008	5.71	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.78	3.92	5.95	5.86	2	0.01814	**0.3070**	0.008	5.73	0.010	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.81	3.87	5.97	5.90	1	0.01713	**0.3077**	0.009	5.62	0.010	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.81	3.87	5.97	5.90	1	0.01713	**0.3076**	0.009	5.62	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.84	3.87	5.99	5.93	1	0.01659	**0.2970**	0.008	5.60	0.010	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.78	3.89	5.94	5.87	1	0.01784	**0.3218**	0.009	5.64	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.79	3.87	5.95	5.88	1	0.01380	**0.3095**	0.009	5.58	0.010	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.94	3.80	6.08	6.03	1	0.01600	**0.3448**	0.006	5.52	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.92	3.82	6.07	6.01	1	0.01671	**0.3656**	0.006	5.54	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.87	-	-	1	0.01714	**0.3077**	0.009	5.62	0.010	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.87	-	-	1	0.01714	**0.3077**	0.009	5.62	0.010	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.87	-	-	1	0.01713	**0.3077**	0.009	5.62	0.010	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.88	-	-	2	0.01794	**0.3000**	0.008	5.75	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.88	-	-	2	0.01788	**0.2996**	0.008	5.74	0.010	-
CR10	Peng Chau	2014 - Without HATS Stage 2A (1a)	5.84	3.63	6.02	5.93	2	0.01767	**0.2962**	0.008	5.75	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.68	4.02	5.70	5.80	1	0.01580	**0.2890**	0.008	5.73	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.82	3.67	5.99	5.90	2	0.01795	**0.3036**	0.008	5.75	0.010	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.85	3.63	6.02	5.95	1	0.01696	**0.3043**	0.008	5.64	0.010	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.85	3.63	6.02	5.95	1	0.01695	**0.3043**	0.008	5.64	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.88	3.62	6.04	5.98	1	0.01641	**0.2937**	0.008	5.62	0.010	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.82	3.65	5.99	5.92	1	0.01766	**0.3184**	0.009	5.66	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.84	3.63	5.99	5.93	1	0.01365	**0.3062**	0.009	5.60	0.010	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.98	3.57	6.13	6.08	1	0.01583	**0.3411**	0.006	5.54	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.96	3.59	6.11	6.06	1	0.01654	**0.3617**	0.006	5.56	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.63	-	-	1	0.01696	**0.3043**	0.008	5.64	0.010	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.63	-	-	1	0.01696	**0.3044**	0.008	5.64	0.010	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.63	-	-	1	0.01696	**0.3043**	0.008	5.64	0.010	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.63	-	-	2	0.01775	**0.2967**	0.008	5.77	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.63	-	-	2	0.01770	**0.2963**	0.008	5.76	0.009	-
CR11	Peng Chau	2014 - Without HATS Stage 2A (1a)	5.89	4.98	6.11	6.01	1	0.01743	**0.2915**	0.008	5.75	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.71	5.06	5.71	5.86	1	0.01560	**0.2845**	0.007	5.72	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.86	5.01	6.09	5.98	1	0.01772	**0.2989**	0.008	5.74	0.010	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.90	4.99	6.12	6.03	1	0.01673	**0.2995**	0.008	5.63	0.010	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.90	4.99	6.12	6.03	1	0.01673	**0.2995**	0.008	5.63	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.93	4.99	6.14	6.05	1	0.01619	**0.2890**	0.008	5.61	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.87	4.98	6.09	6.00	1	0.01743	**0.3134**	0.009	5.65	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.88	4.99	6.10	6.01	1	0.01348	**0.3014**	0.008	5.59	0.010	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	6.04	4.94	6.24	6.15	1	0.01563	**0.3354**	0.006	5.54	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	6.02	4.92	6.22	6.13	1	0.01632	**0.3557**	0.006	5.55	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.99	-	-	1	0.01673	**0.2996**	0.008	5.63	0.010	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.99	-	-	1	0.01674	**0.2996**	0.008	5.63	0.010	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.99	-	-	1	0.01673	**0.2995**	0.008	5.63	0.010	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.98	-	-	1	0.01751	**0.2920**	0.008	5.76	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.98	-	-	1	0.01746	**0.2915**	0.008	5.75	0.009	-
CR12	Peng Chau	2014 - Without HATS Stage 2A (1a)	5.93	4.76	6.22	6.06	1	0.01723	**0.2878**	0.008	5.75	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.74	4.74	5.74	5.93	1	0.01541	**0.2808**	0.007	5.72	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.89	4.60	6.18	6.04	1	0.01753	**0.2952**	0.008	5.74	0.010	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.95	4.57	6.23	6.09	1	0.01655	**0.2959**	0.008	5.63	0.010	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.95	4.57	6.23	6.09	1	0.01655	**0.2958**	0.008	5.63	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.98	4.52	6.25	6.11	1	0.01602	**0.2854**	0.008	5.61	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.91	4.61	6.20	6.06	1	0.01724	**0.3096**	0.009	5.65	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.92	4.57	6.21	6.06	1	0.01334	**0.2978**	0.008	5.59	0.010	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	6.08	4.51	6.35	6.22	1	0.01545	**0.3312**	0.005	5.54	0.007	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	6.06	4.55	6.34	6.20	1	0.01614	**0.3513**	0.006	5.56	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.57	-	-	1	0.01655	**0.2959**	0.008	5.63	0.010	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.57	-	-	1	0.01655	**0.2959**	0.008	5.63	0.010	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.57	-	-	1	0.01655	**0.2959**	0.008	5.63	0.010	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.76	-	-	1	0.01732	**0.2883**	0.008	5.76	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.76	-	-	1	0.01726	**0.2879**	0.008	5.75	0.009	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for Southern WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR13	Sunshine Island	2014 - Without HATS Stage 2A (1a)	5.89	5.55	6.15	6.05	1	0.01654	**0.2754**	0.007	5.63	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.65	5.54	5.73	5.87	1	0.01490	**0.2700**	0.007	5.60	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.88	5.59	6.14	6.04	1	0.01678	**0.2815**	0.008	5.65	0.009	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.92	5.49	6.17	6.08	1	0.01586	**0.2821**	0.008	5.55	0.010	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.92	5.49	6.17	6.08	1	0.01585	**0.2820**	0.008	5.55	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.95	5.53	6.19	6.11	1	0.01535	**0.2722**	0.007	5.54	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.89	5.56	6.15	6.06	1	0.01651	**0.2951**	0.008	5.57	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.90	5.49	6.16	6.06	1	0.01284	**0.2841**	0.008	5.51	0.010	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	6.04	5.43	6.29	6.21	1	0.01482	**0.3149**	0.005	5.46	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	6.02	5.49	6.27	6.19	1	0.01547	**0.3339**	0.005	5.48	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.49	-	-	1	0.01586	**0.2821**	0.008	5.55	0.010	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.49	-	-	1	0.01586	**0.2821**	0.008	5.55	0.010	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.49	-	-	1	0.01586	**0.2821**	0.008	5.55	0.010	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.55	-	-	1	0.01662	**0.2758**	0.007	5.64	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.55	-	-	1	0.01657	**0.2754**	0.007	5.63	0.009	-
CR14	Sunshine Island	2014 - Without HATS Stage 2A (1a)	5.73	6.23	6.03	5.95	1	0.01642	**0.2730**	0.007	5.53	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.48	6.26	5.65	5.76	1	0.01486	**0.2681**	0.007	5.51	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.71	6.41	6.01	5.93	1	0.01667	**0.2793**	0.008	5.54	0.009	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.73	6.32	6.02	5.98	1	0.01578	**0.2799**	0.008	5.43	0.010	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.73	6.32	6.02	5.98	1	0.01577	**0.2799**	0.008	5.43	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.75	6.42	6.04	6.01	1	0.01528	**0.2703**	0.007	5.42	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.70	6.30	6.00	5.95	1	0.01642	**0.2927**	0.008	5.45	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.71	6.32	6.01	5.96	1	0.01283	**0.2816**	0.008	5.40	0.010	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.83	6.25	6.13	6.10	1	0.01477	**0.3121**	0.005	5.35	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.80	6.23	6.12	6.08	1	0.01541	**0.3307**	0.006	5.37	0.007	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.32	-	-	1	0.01578	**0.2799**	0.008	5.43	0.010	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.32	-	-	1	0.01578	**0.2799**	0.008	5.43	0.010	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.32	-	-	1	0.01578	**0.2799**	0.008	5.43	0.010	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.23	-	-	1	0.01650	**0.2735**	0.007	5.54	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.23	-	-	1	0.01645	**0.2731**	0.007	5.53	0.009	-
CR15	Sunshine Island	2014 - Without HATS Stage 2A (1a)	5.66	6.34	6.05	6.00	1	0.01624	**0.2697**	0.007	5.51	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.44	5.94	5.64	5.79	1	0.01470	**0.2648**	0.007	5.48	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.65	6.39	6.03	5.97	1	0.01649	**0.2760**	0.008	5.50	0.009	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.67	6.33	6.05	6.02	1	0.01561	**0.2767**	0.008	5.40	0.010	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.67	6.33	6.05	6.02	1	0.01561	**0.2766**	0.008	5.40	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.69	6.26	6.07	6.03	1	0.01513	**0.2672**	0.007	5.39	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.64	6.34	6.03	5.99	1	0.01624	**0.2892**	0.008	5.42	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.66	6.33	6.03	6.00	1	0.01273	**0.2784**	0.008	5.37	0.010	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.77	6.27	6.16	6.12	1	0.01463	**0.3080**	0.005	5.32	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.75	6.27	6.14	6.10	1	0.01525	**0.3262**	0.005	5.33	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.33	-	-	1	0.01561	**0.2767**	0.008	5.40	0.010	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.33	-	-	1	0.01562	**0.2767**	0.008	5.40	0.010	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.33	-	-	1	0.01561	**0.2767**	0.008	5.40	0.010	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.34	-	-	1	0.01631	**0.2701**	0.007	5.52	0.009	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.34	-	-	1	0.01627	**0.2697**	0.007	5.51	0.009	-
CR17	Hei Ling Chau	2014 - Without HATS Stage 2A (1a)	5.37	5.60	6.00	5.97	1	0.01551	**0.2569**	0.007	5.36	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.18	5.58	5.56	5.70	1	0.01406	**0.2513**	0.007	5.34	0.008	0.0000
		2021 - Without HATS Stage 2A (2a)	5.25	5.77	5.97	5.92	1	0.01580	**0.2635**	0.007	5.35	0.009	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.26	5.91	5.98	5.99	1	0.01499	**0.2640**	0.007	5.26	0.009	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.26	5.91	5.98	5.99	1	0.01499	**0.2640**	0.007	5.26	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.28	5.87	6.00	6.01	1	0.01455	**0.2554**	0.007	5.24	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.24	5.94	5.96	5.94	1	0.01557	**0.2755**	0.008	5.27	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.26	5.91	5.97	5.96	1	0.01237	**0.2656**	0.007	5.22	0.009	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.35	5.86	6.08	6.06	1	0.01410	**0.2920**	0.005	5.18	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.34	5.89	6.06	6.05	1	0.01467	**0.3086**	0.005	5.20	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.91	-	-	1	0.01499	**0.2641**	0.007	5.26	0.009	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.91	-	-	1	0.01500	**0.2641**	0.007	5.26	0.009	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.91	-	-	1	0.01499	**0.2640**	0.007	5.26	0.009	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.60	-	-	1	0.01558	**0.2573**	0.007	5.37	0.009	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.60	-	-	1	0.01554	**0.2570**	0.007	5.36	0.009	-
CR18	Hei Ling Chau	2014 - Without HATS Stage 2A (1a)	5.37	5.60	6.00	5.97	1	0.01551	**0.2569**	0.007	5.36	0.009	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.18	5.58	5.56	5.70	1	0.01406	**0.2513**	0.007	5.34	0.008	0.0000
		2021 - Without HATS Stage 2A (2a)	5.25	5.77	5.97	5.92	1	0.01580	**0.2635**	0.007	5.35	0.009	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.26	5.91	5.98	5.99	1	0.01499	**0.2640**	0.007	5.26	0.009	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.26	5.91	5.98	5.99	1	0.01499	**0.2640**	0.007	5.26	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.28	5.87	6.00	6.01	1	0.01455	**0.2554**	0.007	5.24	0.009	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.24	5.94	5.96	5.94	1	0.01557	**0.2755**	0.008	5.27	0.010	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.26	5.91	5.97	5.96	1	0.01237	**0.2656**	0.007	5.22	0.009	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.35	5.86	6.08	6.06	1	0.01410	**0.2920**	0.005	5.18	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.34	5.89	6.06	6.05	1	0.01467	**0.3086**	0.005	5.20	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.91	-	-	1	0.01499	**0.2641**	0.007	5.26	0.009	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.91	-	-	1	0.01500	**0.2641**	0.007	5.26	0.009	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.91	-	-	1	0.01499	**0.2640**	0.007	5.26	0.009	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.60	-	-	1	0.01558	**0.2573**	0.007	5.37	0.009	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.60	-	-	1	0.01554	**0.2570**	0.007	5.36	0.009	-
CR19	Hei Ling Chau	2014 - Without HATS Stage 2A (1a)	6.24	6.23	6.48	6.49	2	0.01444	**0.2366**	0.005	6.10	0.007	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.79	6.15	6.18	6.17	3	0.01302	**0.2340**	0.005	5.95	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	6.23	6.19	6.46	6.48	2	0.01471	**0.2430**	0.005	6.10	0.007	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	6.24	6.20	6.47	6.50	2	0.01378	**0.2427**	0.006	6.02	0.007	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	6.24	6.20	6.47	6.51	2	0.01378	**0.2426**	0.006	6.02	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	6.25	6.14	6.49	6.52	2	0.01332	**0.2337**	0.005	6.00	0.007	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	6.22	6.22	6.45	6.49	2	0.01438	**0.2546**	0.006	6.04	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	6.22	6.20	6.45	6.48	2	0.01109	**0.2468**	0.006	5.94	0.007	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	6.34	6.16	6.59	6.62	2	0.01281	**0.2688**	0.004	5.94	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	6.33	6.17	6.58	6.61	2	0.01340	**0.2855**	0.004	5.97	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.20	-	-	2	0.01378	**0.2427**	0.006	6.02	0.007	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.20	-	-	2	0.01378	**0.2427**	0.006	6.02	0.007	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.20	-	-	2	0.01378	**0.2427**	0.006	6.02	0.007	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.23	-	-	2	0.01452	**0.2371**	0.005	6.11	0.007	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.23	-	-	2	0.01447	**0.2367**	0.005	6.11	0.007	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for Southern WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR20	Chi Ma Wan Peninsula	2014 - Without HATS Stage 2A (1a)	6.16	3.80	6.48	6.44	7	0.01410	**0.2326**	0.006	5.79	0.007	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.83	3.86	6.20	6.23	8	0.01260	**0.2269**	0.005	5.67	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	6.13	3.84	6.46	6.42	7	0.01442	**0.2398**	0.006	5.76	0.008	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	6.16	3.75	6.47	6.45	7	0.01358	**0.2397**	0.006	5.68	0.008	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	6.16	3.75	6.47	6.45	7	0.01358	**0.2396**	0.006	5.68	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	6.18	3.77	6.49	6.46	7	0.01315	**0.2313**	0.006	5.67	0.007	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	6.13	3.77	6.45	6.44	7	0.01414	**0.2507**	0.006	5.70	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	6.14	3.75	6.45	6.43	7	0.01110	**0.2430**	0.006	5.62	0.008	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	6.25	3.71	6.57	6.53	7	0.01269	**0.2646**	0.004	5.61	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	6.24	3.74	6.56	6.52	8	0.01324	**0.2803**	0.004	5.63	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.75	-	-	7	0.01358	**0.2397**	0.006	5.68	0.008	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.75	-	-	7	0.01358	**0.2397**	0.006	5.68	0.008	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.75	-	-	7	0.01358	**0.2397**	0.006	5.68	0.008	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.80	-	-	7	0.01417	**0.2331**	0.006	5.79	0.008	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.80	-	-	7	0.01412	**0.2327**	0.006	5.79	0.007	-
CR21	Chi Ma Wan Peninsula	2014 - Without HATS Stage 2A (1a)	6.21	1.72	6.50	6.48	11	0.01391	**0.2296**	0.005	5.91	0.007	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.85	2.26	6.29	6.26	12	0.01245	**0.2247**	0.005	5.78	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	6.20	1.72	6.47	6.46	11	0.01424	**0.2369**	0.006	5.88	0.007	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	6.21	1.69	6.49	6.49	11	0.01338	**0.2367**	0.006	5.80	0.007	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	6.21	1.69	6.49	6.49	11	0.01338	**0.2366**	0.006	5.80	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	6.22	1.69	6.51	6.51	11	0.01295	**0.2283**	0.005	5.78	0.007	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	6.20	1.67	6.47	6.47	11	0.01394	**0.2477**	0.006	5.82	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	6.20	1.69	6.47	6.46	11	0.01090	**0.2404**	0.006	5.73	0.008	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	6.29	1.67	6.59	6.61	11	0.01249	**0.2615**	0.004	5.73	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	6.27	1.65	6.58	6.60	12	0.01304	**0.2771**	0.004	5.75	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	1.69	-	-	11	0.01338	**0.2367**	0.006	5.80	0.007	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	1.69	-	-	11	0.01339	**0.2367**	0.006	5.80	0.007	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	1.69	-	-	11	0.01338	**0.2367**	0.006	5.80	0.007	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	1.72	-	-	11	0.01398	**0.2301**	0.005	5.91	0.008	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	1.72	-	-	11	0.01393	**0.2297**	0.005	5.91	0.007	-
CR22	Cheung Chau	2014 - Without HATS Stage 2A (1a)	5.16	7.02	5.84	5.84	15	0.01410	**0.2328**	0.006	5.12	0.008	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.05	6.90	5.54	5.60	15	0.01283	**0.2265**	0.006	5.09	0.008	0.0000
		2021 - Without HATS Stage 2A (2a)	5.14	7.10	5.82	5.83	15	0.01430	**0.2374**	0.006	5.12	0.008	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.15	7.04	5.83	5.85	15	0.01364	**0.2378**	0.006	5.05	0.008	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.15	7.04	5.83	5.85	15	0.01364	**0.2377**	0.006	5.05	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.16	7.03	5.85	5.86	15	0.01329	**0.2308**	0.006	5.04	0.008	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.14	7.03	5.82	5.83	15	0.01411	**0.2471**	0.007	5.06	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.15	7.04	5.82	5.84	15	0.01154	**0.2393**	0.007	5.02	0.008	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.22	7.00	5.91	5.93	15	0.01292	**0.2599**	0.005	4.99	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.20	6.98	5.90	5.92	17	0.01339	**0.2733**	0.005	5.00	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	7.04	-	-	15	0.01364	**0.2378**	0.006	5.05	0.008	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	7.04	-	-	15	0.01364	**0.2378**	0.006	5.05	0.008	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	7.04	-	-	15	0.01364	**0.2378**	0.006	5.05	0.008	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	7.02	-	-	15	0.01416	**0.2331**	0.006	5.13	0.008	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	7.02	-	-	15	0.01412	**0.2329**	0.006	5.12	0.008	-
CR23	Cheung Chau	2014 - Without HATS Stage 2A (1a)	5.24	6.85	5.88	5.87	224	0.01407	**0.2311**	0.006	4.97	0.008	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.06	6.78	5.76	5.67	208	0.01278	**0.2244**	0.006	4.94	0.007	0.0000
		2021 - Without HATS Stage 2A (2a)	5.23	6.87	5.87	5.86	233	0.01427	**0.2356**	0.006	4.97	0.008	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.23	6.83	5.88	5.88	233	0.01363	**0.2360**	0.006	4.90	0.008	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.23	6.83	5.88	5.88	233	0.01363	**0.2360**	0.006	4.90	0.008	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.24	6.82	5.89	5.89	232	0.01328	**0.2291**	0.006	4.89	0.008	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.22	6.84	5.86	5.86	233	0.01409	**0.2453**	0.007	4.91	0.009	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.23	6.83	5.86	5.87	232	0.01158	**0.2378**	0.006	4.87	0.008	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.31	6.79	5.96	5.98	232	0.01292	**0.2574**	0.005	4.85	0.006	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.30	6.80	5.95	5.97	253	0.01340	**0.2708**	0.005	4.86	0.006	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.83	-	-	233	0.01363	**0.2360**	0.006	4.90	0.008	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.83	-	-	233	0.01363	**0.2360**	0.006	4.90	0.008	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.83	-	-	233	0.01363	**0.2360**	0.006	4.90	0.008	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.85	-	-	225	0.01412	**0.2314**	0.006	4.98	0.008	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.85	-	-	224	0.01409	**0.2311**	0.006	4.98	0.008	-
CR24	Siu A Chau	2014 - Without HATS Stage 2A (1a)	5.16	7.60	5.53	5.55	1	0.01211	**0.2022**	0.004	5.38	0.005	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.10	7.57	5.56	5.52	1	0.01172	**0.2014**	0.004	5.39	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	5.16	7.58	5.53	5.55	1	0.01219	**0.2039**	0.004	5.38	0.005	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.16	7.56	5.53	5.55	1	0.01195	**0.2039**	0.004	5.36	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.16	7.56	5.53	5.55	1	0.01195	**0.2039**	0.004	5.36	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.16	7.56	5.53	5.55	1	0.01182	**0.2014**	0.004	5.35	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.15	7.56	5.53	5.55	1	0.01211	**0.2072**	0.005	5.36	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.16	7.56	5.53	5.55	1	0.01125	**0.2049**	0.004	5.34	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.17	7.55	5.54	5.56	1	0.01170	**0.2105**	0.004	5.34	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.16	7.55	5.54	5.55	1	0.01186	**0.2150**	0.004	5.34	0.005	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	7.56	-	-	1	0.01195	**0.2039**	0.004	5.36	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	7.56	-	-	1	0.01195	**0.2039**	0.004	5.36	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	7.56	-	-	1	0.01195	**0.2039**	0.004	5.36	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	7.60	-	-	1	0.01213	**0.2024**	0.004	5.38	0.005	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	7.60	-	-	1	0.01212	**0.2022**	0.004	5.38	0.005	-
CR34	Cape D' Aguilar	2014 - Without HATS Stage 2A (1a)	4.93	3.99	5.14	5.14	2	0.00708	**0.1062**	0.004	3.60	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.93	4.06	5.18	5.16	2	0.00695	**0.1056**	0.004	3.63	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.93	4.02	5.15	5.14	2	0.00709	**0.1064**	0.004	3.59	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.93	3.96	5.15	5.15	2	0.00701	**0.1057**	0.004	3.58	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.93	3.96	5.15	5.15	2	0.00701	**0.1057**	0.004	3.58	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.93	3.98	5.16	5.15	2	0.00700	**0.1056**	0.004	3.58	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.93	3.98	5.15	5.14	2	0.00703	**0.1061**	0.004	3.59	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.93	3.96	5.15	5.15	2	0.00696	**0.1058**	0.004	3.58	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.94	3.95	5.17	5.17	2	0.00699	**0.1064**	0.004	3.58	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.94	3.98	5.17	5.16	2	0.00702	**0.1069**	0.004	3.59	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.96	-	-	2	0.00701	**0.1057**	0.004	3.58	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.96	-	-	2	0.00701	**0.1057**	0.004	3.58	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.96	-	-	2	0.00701	**0.1057**	0.004	3.58	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.99	-	-	2	0.00710	**0.1065**	0.004	3.60	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.99	-	-	2	0.00708	**0.1062**	0.004	3.60	0.004	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for Southern WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR35	Sung Kong	2014 - Without HATS Stage 2A (1a)	4.84	3.96	5.02	5.09	1	0.00669	0.0997	0.004	3.69	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.86	4.01	5.05	5.10	1	0.00659	0.0990	0.003	3.71	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.85	3.97	5.02	5.09	1	0.00669	0.0998	0.004	3.69	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.84	3.98	5.02	5.09	1	0.00666	0.0995	0.004	3.69	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.84	3.98	5.02	5.09	1	0.00666	0.0995	0.004	3.69	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.84	3.98	5.02	5.09	1	0.00666	0.0995	0.004	3.69	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.84	3.97	5.03	5.09	1	0.00667	0.0997	0.004	3.69	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.84	3.98	5.02	5.09	1	0.00663	0.0995	0.004	3.69	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.85	3.98	5.03	5.10	1	0.00665	0.0998	0.004	3.68	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.85	3.96	5.03	5.10	1	0.00666	**0.1002**	0.004	3.69	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.98	-	-	1	0.00666	0.0995	0.004	3.69	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.98	-	-	1	0.00666	0.0995	0.004	3.69	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.98	-	-	1	0.00666	0.0995	0.004	3.69	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.96	-	-	1	0.00670	0.0998	0.004	3.69	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.96	-	-	1	0.00669	0.0997	0.004	3.69	0.004	-
CR36	Sung Kong	2014 - Without HATS Stage 2A (1a)	4.88	4.05	5.15	5.14	1	0.00676	**0.1013**	0.004	3.71	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.89	4.10	5.18	5.16	1	0.00666	**0.1006**	0.003	3.72	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.89	4.05	5.15	5.14	1	0.00676	**0.1014**	0.004	3.71	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.88	4.04	5.15	5.14	1	0.00672	**0.1010**	0.004	3.70	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.88	4.04	5.15	5.14	1	0.00672	**0.1010**	0.004	3.70	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.87	4.02	5.15	5.14	1	0.00672	**0.1010**	0.004	3.70	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.88	4.04	5.15	5.14	1	0.00674	**0.1013**	0.004	3.70	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.88	4.04	5.15	5.14	1	0.00669	**0.1011**	0.004	3.70	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.89	4.04	5.16	5.15	1	0.00671	**0.1015**	0.004	3.70	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.89	4.03	5.16	5.15	1	0.00673	**0.1019**	0.004	3.70	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.04	-	-	1	0.00672	**0.1010**	0.004	3.70	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.04	-	-	1	0.00672	**0.1010**	0.004	3.70	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.04	-	-	1	0.00672	**0.1010**	0.004	3.70	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.05	-	-	1	0.00677	**0.1014**	0.004	3.71	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.05	-	-	1	0.00676	**0.1013**	0.004	3.71	0.004	-
CR37	Sung Kong	2014 - Without HATS Stage 2A (1a)	4.88	4.14	5.04	5.09	1	0.00672	**0.1005**	0.004	3.74	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.89	4.18	5.07	5.10	1	0.00663	0.1000	0.004	3.76	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.88	4.14	5.04	5.09	1	0.00672	**0.1006**	0.004	3.74	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.88	4.13	5.04	5.09	1	0.00669	**0.1003**	0.004	3.74	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.88	4.13	5.04	5.09	1	0.00669	**0.1003**	0.004	3.74	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.87	4.13	5.04	5.08	1	0.00669	**0.1003**	0.004	3.74	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.88	4.13	5.04	5.09	1	0.00670	**0.1005**	0.004	3.74	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.88	4.13	5.03	5.09	1	0.00666	**0.1004**	0.004	3.74	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.88	4.13	5.04	5.10	1	0.00668	**0.1007**	0.004	3.74	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.88	4.13	5.05	5.09	1	0.00670	**0.1010**	0.004	3.74	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.13	-	-	1	0.00669	**0.1003**	0.004	3.74	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.13	-	-	1	0.00669	**0.1003**	0.004	3.74	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.13	-	-	1	0.00669	**0.1003**	0.004	3.74	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.14	-	-	1	0.00672	**0.1006**	0.004	3.75	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.14	-	-	1	0.00672	**0.1005**	0.004	3.74	0.004	-
CR38	Beaufort Island	2014 - Without HATS Stage 2A (1a)	4.92	4.21	5.04	5.09	1	0.00687	**0.1031**	0.004	3.68	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.91	4.24	5.07	5.10	1	0.00678	**0.1027**	0.003	3.71	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.92	4.21	5.04	5.09	1	0.00688	**0.1033**	0.004	3.68	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.92	4.19	5.04	5.10	1	0.00684	**0.1029**	0.004	3.67	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.92	4.19	5.04	5.10	1	0.00684	**0.1029**	0.004	3.67	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.91	4.17	5.04	5.09	1	0.00684	**0.1029**	0.004	3.67	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.92	4.20	5.04	5.09	1	0.00685	**0.1032**	0.004	3.67	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.92	4.19	5.04	5.09	1	0.00680	**0.1030**	0.004	3.67	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.92	4.19	5.05	5.10	1	0.00683	**0.1034**	0.004	3.67	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.92	4.20	5.05	5.10	1	0.00685	**0.1037**	0.004	3.67	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.19	-	-	1	0.00684	**0.1029**	0.004	3.67	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.19	-	-	1	0.00684	**0.1029**	0.004	3.67	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.19	-	-	1	0.00684	**0.1029**	0.004	3.67	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.21	-	-	1	0.00688	**0.1032**	0.004	3.68	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.21	-	-	1	0.00688	**0.1031**	0.004	3.68	0.004	-
CR39	Beaufort Island	2014 - Without HATS Stage 2A (1a)	4.92	4.04	5.10	5.11	2	0.00696	**0.1044**	0.004	3.65	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.92	4.11	5.13	5.12	1	0.00686	**0.1040**	0.004	3.69	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.92	4.06	5.10	5.11	2	0.00697	**0.1046**	0.004	3.65	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.92	4.03	5.10	5.12	1	0.00692	**0.1042**	0.004	3.65	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.92	4.03	5.10	5.12	1	0.00692	**0.1042**	0.004	3.65	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.92	4.05	5.10	5.11	1	0.00691	**0.1041**	0.004	3.65	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.92	4.02	5.10	5.11	1	0.00693	**0.1045**	0.004	3.65	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.92	4.03	5.10	5.11	1	0.00688	**0.1042**	0.004	3.64	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.92	4.03	5.11	5.12	1	0.00691	**0.1047**	0.004	3.64	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.92	4.02	5.11	5.12	2	0.00693	**0.1051**	0.004	3.65	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.03	-	-	1	0.00692	**0.1042**	0.004	3.65	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.03	-	-	1	0.00692	**0.1042**	0.004	3.65	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.03	-	-	1	0.00692	**0.1042**	0.004	3.65	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.04	-	-	2	0.00697	**0.1046**	0.004	3.66	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.04	-	-	2	0.00696	**0.1044**	0.004	3.65	0.004	-
CR40	Beaufort Island	2014 - Without HATS Stage 2A (1a)	4.93	4.20	5.12	5.13	1	0.00701	**0.1054**	0.004	3.65	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.93	4.28	5.16	5.13	1	0.00691	**0.1050**	0.004	3.69	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.93	4.24	5.12	5.13	1	0.00702	**0.1056**	0.004	3.65	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.94	4.17	5.12	5.13	1	0.00697	**0.1051**	0.004	3.65	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.94	4.17	5.12	5.13	1	0.00697	**0.1051**	0.004	3.65	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.93	4.21	5.13	5.13	1	0.00696	**0.1051**	0.004	3.65	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.93	4.22	5.12	5.13	1	0.00698	**0.1055**	0.004	3.65	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.93	4.17	5.12	5.13	1	0.00692	**0.1052**	0.004	3.64	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.94	4.16	5.14	5.13	1	0.00695	**0.1057**	0.004	3.64	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.94	4.21	5.14	5.13	1	0.00698	**0.1061**	0.004	3.65	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.17	-	-	1	0.00697	**0.1051**	0.004	3.65	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.17	-	-	1	0.00697	**0.1051**	0.004	3.65	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.17	-	-	1	0.00697	**0.1051**	0.004	3.65	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.20	-	-	2	0.00702	**0.1055**	0.004	3.66	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.20	-	-	1	0.00701	**0.1054**	0.004	3.65	0.004	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for Southern WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR41	Luk Chau	2014 - Without HATS Stage 2A (1a)	5.08	5.48	5.31	5.35	8	0.01020	**0.1644**	0.005	4.13	0.007	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.07	5.63	5.34	5.28	1	0.00978	**0.1649**	0.005	4.19	0.006	0.0000
		2021 - Without HATS Stage 2A (2a)	5.07	5.63	5.31	5.34	8	0.01027	**0.1660**	0.005	4.13	0.007	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.08	5.58	5.32	5.36	1	0.00990	**0.1649**	0.005	4.09	0.007	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.08	5.58	5.32	5.36	1	0.00989	**0.1649**	0.005	4.09	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.09	5.55	5.32	5.37	1	0.00976	**0.1622**	0.005	4.09	0.006	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.08	5.60	5.31	5.35	1	0.01008	**0.1685**	0.005	4.10	0.007	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.08	5.58	5.31	5.36	1	0.00905	**0.1652**	0.005	4.09	0.007	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.10	5.56	5.35	5.39	1	0.00962	**0.1750**	0.004	4.07	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.10	5.58	5.35	5.38	1	0.00980	**0.1804**	0.004	4.07	0.005	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.58	-	-	1	0.00990	**0.1649**	0.005	4.09	0.007	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.58	-	-	1	0.00990	**0.1649**	0.005	4.09	0.007	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.58	-	-	1	0.00990	**0.1649**	0.005	4.09	0.007	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.48	-	-	8	0.01022	**0.1645**	0.005	4.14	0.007	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.48	-	-	8	0.01020	**0.1644**	0.005	4.13	0.007	-
CR42	Pak Kok	2014 - Without HATS Stage 2A (1a)	5.30	6.46	5.64	5.54	17	0.01257	**0.2078**	0.006	4.48	0.008	0.0001
		2014 - Early Phase of HATS Stage 2A (1b)	5.20	6.44	5.35	5.40	3	0.01190	**0.2087**	0.006	4.55	0.008	0.0001
		2021 - Without HATS Stage 2A (2a)	5.30	6.49	5.63	5.53	18	0.01269	**0.2107**	0.006	4.47	0.008	0.0001
		2021 - Late Phase of HATS Stage 2A (2b)	5.32	6.37	5.65	5.56	3	0.01214	**0.2103**	0.006	4.41	0.008	0.0001
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.32	6.37	5.65	5.56	3	0.01214	**0.2103**	0.006	4.41	0.008	0.0001
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.33	6.40	5.66	5.57	3	0.01189	**0.2053**	0.006	4.40	0.008	0.0001
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.30	6.41	5.64	5.54	3	0.01248	**0.2171**	0.007	4.42	0.009	0.0001
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.32	6.36	5.64	5.55	3	0.01059	**0.2107**	0.007	4.40	0.008	0.0001
		2021 - Early Phase of HATS Stage 2B (3a)	5.38	6.31	5.72	5.65	3	0.01163	**0.2295**	0.005	4.37	0.006	0.0001
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.37	6.35	5.71	5.64	3	0.01197	**0.2396**	0.005	4.37	0.006	0.0001
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.37	-	-	3	0.01214	**0.2103**	0.006	4.41	0.008	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.37	-	-	3	0.01214	**0.2103**	0.006	4.41	0.008	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.37	-	-	3	0.01214	**0.2103**	0.006	4.41	0.008	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.46	-	-	17	0.01260	**0.2079**	0.006	4.48	0.008	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.46	-	-	17	0.01258	**0.2078**	0.006	4.48	0.008	-
CR43	Shek Kok Tsui	2014 - Without HATS Stage 2A (1a)	5.45	6.56	5.78	5.69	13	0.01308	**0.2199**	0.007	4.67	0.008	0.0003
		2014 - Early Phase of HATS Stage 2A (1b)	5.31	6.51	5.39	5.51	8	0.01240	**0.2212**	0.006	4.74	0.008	0.0003
		2021 - Without HATS Stage 2A (2a)	5.44	6.53	5.78	5.68	13	0.01323	**0.2235**	0.007	4.67	0.009	0.0003
		2021 - Late Phase of HATS Stage 2A (2b)	5.46	6.52	5.81	5.71	8	0.01272	**0.2240**	0.007	4.61	0.009	0.0003
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.46	6.52	5.81	5.71	8	0.01272	**0.2240**	0.007	4.61	0.009	0.0003
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.47	6.44	5.83	5.72	8	0.01243	**0.2184**	0.007	4.60	0.008	0.0003
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.44	6.46	5.79	5.69	8	0.01310	**0.2316**	0.007	4.62	0.009	0.0003
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.45	6.52	5.79	5.70	8	0.01100	**0.2245**	0.007	4.60	0.009	0.0003
		2021 - Early Phase of HATS Stage 2B (3a)	5.53	6.46	5.91	5.80	8	0.01215	**0.2446**	0.005	4.56	0.006	0.0003
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.52	6.40	5.89	5.78	8	0.01253	**0.2560**	0.005	4.56	0.006	0.0003
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.52	-	-	8	0.01272	**0.2240**	0.007	4.61	0.009	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.52	-	-	8	0.01272	**0.2240**	0.007	4.61	0.009	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.52	-	-	8	0.01272	**0.2240**	0.007	4.61	0.009	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.56	-	-	13	0.01312	**0.2201**	0.007	4.67	0.008	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.56	-	-	13	0.01310	**0.2200**	0.007	4.67	0.008	-
CR47	Waglan Island	2014 - Without HATS Stage 2A (1a)	4.81	4.03	5.04	5.11	1	0.00651	0.0967	0.004	3.85	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.85	4.08	5.07	5.11	1	0.00643	0.0961	0.004	3.85	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.82	4.02	5.05	5.11	1	0.00651	0.0968	0.004	3.85	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.81	4.02	5.04	5.11	1	0.00649	0.0966	0.004	3.84	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.81	4.02	5.04	5.11	1	0.00649	0.0966	0.004	3.84	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.80	4.02	5.04	5.10	1	0.00649	0.0966	0.004	3.84	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.81	4.02	5.05	5.11	1	0.00650	0.0968	0.004	3.85	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.81	4.02	5.04	5.11	1	0.00647	0.0966	0.004	3.84	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.81	4.01	5.05	5.11	1	0.00648	0.0969	0.004	3.84	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.82	4.02	5.05	5.11	1	0.00649	0.0972	0.004	3.84	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.02	-	-	1	0.00649	0.0966	0.004	3.84	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.02	-	-	1	0.00649	0.0966	0.004	3.84	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.02	-	-	1	0.00649	0.0966	0.004	3.84	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.03	-	-	1	0.00652	0.0968	0.004	3.85	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.03	-	-	1	0.00651	0.0967	0.004	3.85	0.004	-
CR48	Beaufort Island	2014 - Without HATS Stage 2A (1a)	4.92	4.13	5.04	5.09	1	0.00691	**0.1037**	0.004	3.69	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.92	4.25	5.07	5.09	1	0.00681	**0.1034**	0.003	3.72	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.92	4.12	5.04	5.09	1	0.00691	**0.1039**	0.004	3.69	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.92	4.16	5.04	5.09	1	0.00687	**0.1036**	0.004	3.68	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.92	4.16	5.04	5.09	1	0.00687	**0.1036**	0.004	3.68	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.92	4.13	5.04	5.09	1	0.00687	**0.1035**	0.004	3.68	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.92	4.21	5.04	5.09	1	0.00689	**0.1038**	0.004	3.68	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.92	4.16	5.04	5.09	1	0.00684	**0.1036**	0.004	3.68	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.93	4.16	5.05	5.10	1	0.00686	**0.1040**	0.004	3.68	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.93	4.20	5.05	5.09	1	0.00688	**0.1044**	0.004	3.68	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.16	-	-	1	0.00687	**0.1036**	0.004	3.68	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.16	-	-	1	0.00687	**0.1036**	0.004	3.68	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.16	-	-	1	0.00687	**0.1036**	0.004	3.68	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.13	-	-	1	0.00691	**0.1038**	0.004	3.69	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.13	-	-	1	0.00691	**0.1037**	0.004	3.69	0.004	-
CR49	Round Island	2014 - Without HATS Stage 2A (1a)	5.05	4.83	5.48	5.44	8	0.00795	**0.1232**	0.004	3.85	0.005	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.07	4.97	5.50	5.40	3	0.00786	**0.1250**	0.004	3.89	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	5.05	4.86	5.48	5.43	9	0.00797	**0.1237**	0.004	3.84	0.005	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.06	4.83	5.49	5.45	2	0.00784	**0.1230**	0.004	3.83	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.06	4.83	5.49	5.45	2	0.00784	**0.1230**	0.004	3.83	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.06	4.84	5.49	5.45	2	0.00781	**0.1224**	0.004	3.83	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.05	4.84	5.48	5.44	2	0.00789	**0.1239**	0.004	3.83	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.05	4.83	5.48	5.44	2	0.00765	**0.1231**	0.004	3.83	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.07	4.82	5.52	5.48	2	0.00778	**0.1254**	0.004	3.83	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.07	4.83	5.51	5.47	3	0.00783	**0.1268**	0.004	3.83	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.83	-	-	2	0.00784	**0.1230**	0.004	3.83	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.83	-	-	2	0.00784	**0.1230**	0.004	3.83	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.83	-	-	2	0.00784	**0.1230**	0.004	3.83	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.83	-	-	9	0.00796	**0.1232**	0.004	3.85	0.005	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.83	-	-	8	0.00796	**0.1232**	0.004	3.85	0.005	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for Southern WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR50	Wong Chuk Kok	2014 - Without HATS Stage 2A (1a)	4.97	5.01	5.19	5.21	6	0.00869	**0.1365**	0.004	3.99	0.005	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.01	5.21	5.23	5.22	1	0.00848	**0.1374**	0.004	4.03	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	4.97	5.04	5.19	5.20	6	0.00872	**0.1373**	0.004	3.98	0.005	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.97	5.01	5.19	5.21	1	0.00853	**0.1366**	0.004	3.96	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.97	5.01	5.19	5.21	1	0.00853	**0.1365**	0.004	3.96	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.97	5.01	5.20	5.22	1	0.00846	**0.1353**	0.004	3.96	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.97	5.01	5.19	5.20	1	0.00862	**0.1383**	0.004	3.97	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.97	5.01	5.19	5.21	1	0.00813	**0.1367**	0.004	3.96	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.98	5.00	5.22	5.26	1	0.00840	**0.1412**	0.004	3.95	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.98	5.00	5.22	5.25	1	0.00849	**0.1438**	0.004	3.95	0.005	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.01	-	-	1	0.00853	**0.1366**	0.004	3.96	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.01	-	-	1	0.00853	**0.1366**	0.004	3.96	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.01	-	-	1	0.00853	**0.1366**	0.004	3.96	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.01	-	-	6	0.00870	**0.1365**	0.004	3.99	0.005	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.01	-	-	6	0.00869	**0.1365**	0.004	3.99	0.005	-
CR51	Wong Chuk Kok	2014 - Without HATS Stage 2A (1a)	4.93	5.88	5.43	5.43	2	0.00838	**0.1319**	0.004	3.97	0.005	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.96	5.91	5.41	5.33	1	0.00815	**0.1313**	0.004	4.00	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	4.93	5.89	5.43	5.42	2	0.00841	**0.1324**	0.004	3.97	0.005	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.93	5.91	5.44	5.43	1	0.00828	**0.1320**	0.004	3.96	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.93	5.91	5.44	5.43	1	0.00828	**0.1320**	0.004	3.96	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.93	5.92	5.44	5.44	1	0.00824	**0.1311**	0.004	3.96	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.93	5.91	5.43	5.42	1	0.00834	**0.1332**	0.004	3.96	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.93	5.91	5.43	5.43	1	0.00801	**0.1321**	0.004	3.96	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.94	5.90	5.46	5.45	1	0.00819	**0.1351**	0.004	3.95	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.94	5.90	5.46	5.45	1	0.00826	**0.1368**	0.004	3.95	0.005	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.91	-	-	1	0.00828	**0.1320**	0.004	3.96	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.91	-	-	1	0.00828	**0.1320**	0.004	3.96	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.91	-	-	1	0.00828	**0.1320**	0.004	3.96	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.88	-	-	2	0.00839	**0.1319**	0.004	3.98	0.005	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.88	-	-	2	0.00839	**0.1319**	0.004	3.98	0.005	-
CR55	Ap Lei Chau	2014 - Without HATS Stage 2A (1a)	5.06	5.39	5.37	5.35	2,732	0.01023	**0.1550**	0.005	4.06	0.006	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.08	5.43	5.36	5.30	45	0.00910	**0.1492**	0.004	4.05	0.006	0.0000
		2021 - Without HATS Stage 2A (2a)	5.06	5.39	5.37	5.35	2,786	0.01030	**0.1563**	0.005	4.06	0.006	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.08	5.36	5.39	5.37	46	0.00908	**0.1467**	0.004	3.96	0.006	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.08	5.36	5.39	5.37	46	0.00908	**0.1467**	0.004	3.96	0.006	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.08	5.35	5.40	5.37	46	0.00899	**0.1450**	0.004	3.96	0.006	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.08	5.37	5.38	5.36	46	0.00920	**0.1491**	0.005	3.96	0.006	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.08	5.36	5.38	5.36	46	0.00852	**0.1469**	0.004	3.96	0.006	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.10	5.35	5.43	5.44	46	0.00890	**0.1535**	0.004	3.94	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.10	5.36	5.42	5.40	50	0.00903	**0.1572**	0.004	3.95	0.005	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.36	-	-	46	0.00908	**0.1467**	0.004	3.96	0.006	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.36	-	-	46	0.00908	**0.1467**	0.004	3.96	0.006	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.36	-	-	47	0.00908	**0.1467**	0.004	3.96	0.006	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.39	-	-	2,732	0.01024	**0.1551**	0.005	4.07	0.006	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.39	-	-	2,732	0.01023	**0.1550**	0.005	4.06	0.006	-
Assessment Criteria (for Semi-enclosed Bay in Southern WCZ)			≥ 2	≤ 100	≥ 5	≥ 4	N/A	≤ 0.01	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR53	Sham Wan	2014 - Without HATS Stage 2A (1a)	4.92	6.15	5.72	5.69	1	0.00845	**0.1337**	0.004	3.95	0.005	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.88	6.09	5.28	5.44	1	0.00823	**0.1331**	0.004	3.99	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	4.92	6.13	5.72	5.68	1	0.00847	**0.1342**	0.004	3.94	0.005	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.93	6.10	5.73	5.69	1	0.00837	**0.1340**	0.004	3.94	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.93	6.10	5.73	5.69	1	0.00837	**0.1340**	0.004	3.94	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.93	6.13	5.73	5.70	1	0.00833	**0.1332**	0.004	3.93	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.92	6.14	5.72	5.68	1	0.00843	**0.1350**	0.004	3.94	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.93	6.10	5.72	5.68	1	0.00814	**0.1342**	0.004	3.93	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.94	6.08	5.75	5.71	1	0.00830	**0.1365**	0.004	3.93	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.94	6.12	5.75	5.71	1	0.00836	**0.1381**	0.004	3.93	0.005	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.10	-	-	1	0.00837	**0.1340**	0.004	3.94	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.10	-	-	1	0.00837	**0.1340**	0.004	3.94	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.10	-	-	1	0.00837	**0.1340**	0.004	3.94	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.15	-	-	1	0.00845	**0.1337**	0.004	3.95	0.005	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.15	-	-	1	0.00845	**0.1337**	0.004	3.95	0.005	-
Assessment Criteria (for Junk Bay WCZs)			≥ 2	≤ 100	N/A	≥ 4	N/A	≤ 0.03	≤ 0.3	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR25	Junk Bay - SE	2014 - Without HATS Stage 2A (1a)	5.00	4.38	5.09	5.07	81	0.01200	0.1789	0.006	3.81	0.016	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.13	4.33	5.25	5.22	41	0.01049	0.1677	0.005	3.74	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	4.99	4.41	5.08	5.07	83	0.01221	0.1824	0.006	3.81	0.017	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.18	4.23	5.24	5.28	35	0.01076	0.1685	0.006	3.70	0.014	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.18	4.23	5.24	5.28	35	0.01076	0.1685	0.006	3.70	0.014	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.19	4.25	5.26	5.29	35	0.01068	0.1671	0.006	3.70	0.013	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.16	4.26	5.24	5.27	35	0.01086	0.1705	0.006	3.70	0.014	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.17	4.23	5.23	5.28	35	0.01035	0.1687	0.006	3.70	0.014	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.22	4.21	5.30	5.32	35	0.01062	0.1738	0.005	3.69	0.012	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.21	4.24	5.28	5.31	37	0.01083	0.1777	0.005	3.70	0.013	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.23	-	-	35	0.01076	0.1686	0.006	3.70	0.014	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.23	-	-	35	0.01077	0.1686	0.006	3.70	0.014	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.23	-	-	35	0.01076	0.1686	0.006	3.70	0.014	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.23	-	-	92	0.01223	0.1820	0.006	3.83	0.016	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.38	-	-	81	0.01201	0.1790	0.006	3.81	0.016	-
CR26	Junk Bay	2014 - Without HATS Stage 2A (1a)	4.94	4.27	5.12	5.11	34	0.01147	0.1710	0.006	3.73	0.014	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.05	4.25	5.27	5.24	19	0.01009	0.1606	0.005	3.68	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	4.94	4.29	5.11	5.11	35	0.01166	0.1740	0.006	3.73	0.015	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.10	4.09	5.27	5.30	15	0.01033	0.1613	0.005	3.64	0.012	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.10	4.09	5.27	5.30	15	0.01033	0.1613	0.005	3.64	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.11	4.11	5.28	5.31	15	0.01026	0.1600	0.005	3.64	0.012	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.10	4.13	5.26	5.29	15	0.01043	0.1632	0.005	3.64	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.10	4.09	5.26	5.29	15	0.00996	0.1615	0.005	3.63	0.012	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.14	4.07	5.32	5.34	15	0.01021	0.1661	0.005	3.63	0.011	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.13	4.10	5.31	5.32	15	0.01040	0.1698	0.005	3.64	0.011	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.09	-	-	15	0.01034	0.1614	0.005	3.64	0.012	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.09	-	-	15	0.01034	0.1614	0.005	3.64	0.012	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.09	-	-	15	0.01033	0.1613	0.005	3.64	0.012	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.41	-	-	38	0.01169	0.1739	0.006	3.76	0.014	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.27	-	-	34	0.01149	0.1711	0.006	3.73	0.014	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Corals													
Assessment Criteria (for Junk Bay WCZs)			≥ 2	≤ 100	N/A	≥ 4	N/A	≤ 0.03	≤ 0.3	≤ 0.021	N/A	≤ 0.035	≤ 0.008
CR27	Junk Bay	2014 - Without HATS Stage 2A (1a)	4.56	5.78	4.99	5.03	1,189	0.02114	0.2744	0.011	4.63	0.018	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.66	4.57	5.14	5.12	1,260	0.01870	0.2521	0.010	4.50	0.015	0.0000
		2021 - Without HATS Stage 2A (2a)	4.53	5.81	4.97	5.00	1,300	0.02216	0.2862	0.012	4.67	0.019	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.74	5.51	5.22	5.18	1,271	0.02062	0.2707	0.011	4.58	0.017	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.74	5.51	5.22	5.18	1,271	0.02062	0.2707	0.011	4.58	0.017	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.74	5.49	5.22	5.18	1,279	0.02056	0.2693	0.011	4.58	0.017	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.72	5.51	5.20	5.16	1,276	0.02074	0.2728	0.011	4.59	0.017	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.73	5.51	5.20	5.17	1,271	0.02019	0.2709	0.011	4.58	0.017	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.79	5.49	5.27	5.22	1,271	0.02048	0.2758	0.011	4.57	0.017	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.75	5.52	5.23	5.19	1,365	0.02136	0.2867	0.011	4.62	0.018	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.51	-	-	1,273	0.02063	0.2708	0.011	4.58	0.017	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.51	-	-	1,276	0.02064	0.2709	0.011	4.58	0.017	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.51	-	-	1,271	0.02062	0.2707	0.011	4.58	0.017	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.78	-	-	1,211	0.02138	0.2778	0.011	4.65	0.018	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.78	-	-	1,189	0.02115	0.2746	0.011	4.63	0.018	-
CR28	Junk Bay - Junk Island	2014 - Without HATS Stage 2A (1a)	4.98	4.19	5.06	5.07	32	0.01091	0.1629	0.006	3.72	0.014	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.06	4.15	5.21	5.21	17	0.00968	0.1539	0.005	3.67	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	4.98	4.21	5.06	5.07	33	0.01107	0.1656	0.006	3.72	0.014	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.10	4.03	5.19	5.26	13	0.00987	0.1542	0.005	3.63	0.012	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.10	4.03	5.19	5.26	13	0.00987	0.1542	0.005	3.63	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.10	4.04	5.21	5.27	13	0.00981	0.1530	0.005	3.63	0.012	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.09	4.06	5.19	5.25	13	0.00996	0.1559	0.005	3.64	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.09	4.03	5.18	5.25	13	0.00953	0.1544	0.005	3.63	0.012	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.12	4.01	5.24	5.28	13	0.00976	0.1587	0.005	3.62	0.011	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.11	4.04	5.23	5.28	13	0.00993	0.1619	0.005	3.63	0.011	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.03	-	-	13	0.00988	0.1543	0.005	3.63	0.012	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.03	-	-	13	0.00988	0.1543	0.005	3.63	0.012	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.03	-	-	13	0.00988	0.1542	0.005	3.63	0.012	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.97	-	-	37	0.01110	0.1655	0.006	3.74	0.014	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.24	-	-	32	0.01093	0.1630	0.006	3.72	0.014	-
Marine Parks													
Assessment Criteria (for North Western WCZ)			≥ 2	N/A	N/A	≥ 4	N/A	≤ 0.05	≤ 0.5	≤ 0.021	N/A	≤ 0.035	≤ 0.008
MP1	Sha Chau and Lunk Kwu Chau - Marine Park	2014 - Without HATS Stage 2A (1a)	5.54	12.63	5.66	5.66	892	0.03056	**0.5802**	0.010	13.38	0.012	0.0002
		2014 - Early Phase of HATS Stage 2A (1b)	5.42	11.58	5.53	5.59	849	0.02612	**0.5320**	0.009	12.36	0.011	0.0002
		2021 - Without HATS Stage 2A (2a)	5.54	12.77	5.66	5.66	22	0.03015	**0.5879**	0.010	13.35	0.013	0.0002
		2021 - Late Phase of HATS Stage 2A (2b)	5.58	12.80	5.68	5.68	22	0.02935	**0.5862**	0.010	13.25	0.013	0.0002
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.58	12.80	5.68	5.69	22	0.02934	**0.5861**	0.010	13.25	0.013	0.0002
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.59	12.74	5.69	5.70	22	0.02898	**0.5800**	0.010	13.25	0.012	0.0002
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.54	12.66	5.66	5.66	22	0.02982	**0.5962**	0.011	13.28	0.013	0.0002
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.57	12.79	5.68	5.68	22	0.02690	**0.5866**	0.010	13.24	0.013	0.0002
		2021 - Early Phase of HATS Stage 2B (3a)	5.66	12.73	5.76	5.76	22	0.02853	**0.6086**	0.008	13.19	0.010	0.0002
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.64	12.61	5.74	5.74	23	0.02913	**0.6250**	0.009	13.21	0.011	0.0002
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	12.80	-	-	22	0.02935	**0.5862**	0.010	13.25	0.013	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	12.80	-	-	22	0.02935	**0.5862**	0.010	13.25	0.013	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	12.80	-	-	22	0.02935	**0.5862**	0.010	13.25	0.013	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	12.63	-	-	892	0.03063	**0.5806**	0.010	13.39	0.012	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	12.63	-	-	892	0.03059	**0.5802**	0.010	13.39	0.012	-
MP2	Sha Chau and Lunk Kwu Chau - Marine Park	2014 - Without HATS Stage 2A (1a)	5.63	11.55	5.71	5.74	137	0.02857	**0.5345**	0.009	11.81	0.012	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.56	11.06	5.68	5.71	142	0.02479	0.4967	0.008	11.15	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.62	11.50	5.71	5.73	8	0.02833	**0.5411**	0.009	11.80	0.012	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.65	11.47	5.72	5.76	8	0.02759	**0.5395**	0.009	11.72	0.012	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.65	11.47	5.72	5.76	8	0.02759	**0.5394**	0.009	11.72	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.66	11.48	5.74	5.77	8	0.02726	**0.5338**	0.009	11.71	0.012	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.63	11.48	5.70	5.74	8	0.02804	**0.5487**	0.010	11.74	0.013	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.65	11.47	5.72	5.76	8	0.02536	**0.5399**	0.009	11.71	0.012	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.73	11.42	5.80	5.84	8	0.02685	**0.5598**	0.008	11.66	0.010	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.71	11.43	5.78	5.82	8	0.02739	**0.5746**	0.008	11.68	0.010	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	11.47	-	-	8	0.02759	**0.5395**	0.009	11.72	0.012	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	11.47	-	-	8	0.02760	**0.5395**	0.009	11.72	0.012	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	11.47	-	-	8	0.02759	**0.5395**	0.009	11.72	0.012	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	11.55	-	-	137	0.02863	**0.5349**	0.009	11.82	0.012	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	11.55	-	-	137	0.02860	**0.5345**	0.009	11.81	0.012	-
MP3	Sha Chau and Lunk Kwu Chau - Marine Park	2014 - Without HATS Stage 2A (1a)	5.72	5.26	5.80	5.84	40	0.02686	0.4987	0.008	12.00	0.010	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.67	6.68	5.83	5.83	45	0.02378	0.4681	0.007	11.41	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.72	5.42	5.79	5.84	4	0.02671	**0.5042**	0.008	12.02	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.74	5.48	5.81	5.85	4	0.02615	**0.5030**	0.008	11.96	0.011	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.74	5.48	5.81	5.85	4	0.02615	**0.5029**	0.008	11.96	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.75	5.34	5.82	5.86	4	0.02590	0.4987	0.008	11.95	0.011	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.72	5.37	5.79	5.84	4	0.02648	**0.5099**	0.008	11.97	0.011	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.74	5.48	5.81	5.85	4	0.02446	**0.5033**	0.008	11.95	0.011	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.81	5.45	5.87	5.89	4	0.02559	**0.5178**	0.007	11.91	0.009	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.79	5.34	5.85	5.88	4	0.02600	**0.5289**	0.007	11.93	0.009	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	5.48	-	-	4	0.02615	**0.5030**	0.008	11.96	0.011	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	5.48	-	-	4	0.02615	**0.5030**	0.008	11.96	0.011	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	5.48	-	-	4	0.02615	**0.5030**	0.008	11.96	0.011	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	5.26	-	-	40	0.02690	0.4990	0.008	12.00	0.010	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	5.26	-	-	40	0.02687	0.4987	0.008	12.00	0.010	-
MP4	Sha Chau and Lunk Kwu Chau - Marine Park	2014 - Without HATS Stage 2A (1a)	5.73	11.63	5.78	5.82	151	0.03085	**0.5940**	0.009	14.92	0.011	0.0001
		2014 - Early Phase of HATS Stage 2A (1b)	5.62	11.05	5.70	5.74	141	0.02653	**0.5463**	0.008	13.77	0.010	0.0001
		2021 - Without HATS Stage 2A (2a)	5.73	11.69	5.78	5.82	7	0.03058	**0.5998**	0.009	14.90	0.011	0.0001
		2021 - Late Phase of HATS Stage 2A (2b)	5.75	11.62	5.80	5.84	7	0.02992	**0.5983**	0.009	14.83	0.011	0.0001
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.75	11.62	5.80	5.84	7	0.02992	**0.5982**	0.009	14.83	0.011	0.0001
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.76	11.64	5.81	5.84	7	0.02963	**0.5934**	0.009	14.82	0.011	0.0001
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.73	11.62	5.78	5.82	7	0.03031	**0.6063**	0.009	14.84	0.012	0.0001
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.75	11.62	5.80	5.84	7	0.02795	**0.5986**	0.009	14.82	0.011	0.0001
		2021 - Early Phase of HATS Stage 2B (3a)	5.82	11.58	5.86	5.89	7	0.02926	**0.6151**	0.008	14.77	0.009	0.0001
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.80	11.59	5.84	5.88	7	0.02975	**0.6281**	0.008	14.79	0.010	0.0001
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	11.62	-	-	7	0.02992	**0.5983**	0.009	14.83	0.011	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	11.62	-	-	7	0.02992	**0.5983**	0.009	14.83	0.011	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	11.62	-	-	7	0.02992	**0.5983**	0.009	14.83	0.011	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	11.63	-	-	151	0.03091	**0.5943**	0.009	14.93	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	11.63	-	-	151	0.03088	**0.5940**	0.009	14.92	0.011	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Artificial Reefs													
Assessment Criteria (for North Western WCZ)			≥ 2	N/A	N/A	≥ 4	N/A	≤ 0.05	≤ 0.5	≤ 0.021	N/A	≤ 0.035	≤ 0.008
AR1	Airport	2014 - Without HATS Stage 2A (1a)	5.60	11.82	5.72	5.70	36	0.02651	0.4844	0.010	9.80	0.012	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.46	11.11	5.64	5.65	40	0.02298	0.4523	0.009	9.34	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.57	11.81	5.70	5.67	11	0.02649	0.4933	0.010	9.78	0.013	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.61	11.75	5.73	5.70	11	0.02556	0.4916	0.010	9.68	0.013	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.61	11.75	5.73	5.70	11	0.02556	0.4915	0.010	9.68	0.013	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.62	11.78	5.74	5.72	11	0.02514	0.4840	0.010	9.67	0.012	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.58	11.76	5.70	5.68	11	0.02611	**0.5029**	0.011	9.70	0.014	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.61	11.75	5.72	5.70	11	0.02276	0.4923	0.010	9.66	0.013	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.70	11.70	5.82	5.80	11	0.02463	**0.5186**	0.008	9.60	0.010	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.67	11.71	5.81	5.78	12	0.02527	**0.5367**	0.008	9.62	0.010	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	11.75	-	-	11	0.02556	0.4917	0.010	9.68	0.013	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	11.75	-	-	11	0.02556	0.4917	0.010	9.68	0.013	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	11.75	-	-	11	0.02556	0.4916	0.010	9.68	0.013	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	11.82	-	-	36	0.02659	0.4849	0.010	9.81	0.012	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	11.82	-	-	36	0.02654	0.4844	0.010	9.80	0.012	-
AR2	Sha Chau and Lunk Kwu Chau	2014 - Without HATS Stage 2A (1a)	5.69	6.54	5.77	5.82	77	0.02794	**0.5219**	0.008	12.24	0.011	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.64	7.84	5.77	5.79	81	0.02446	0.4869	0.008	11.58	0.009	0.0000
		2021 - Without HATS Stage 2A (2a)	5.69	6.52	5.77	5.82	5	0.02773	**0.5277**	0.009	12.25	0.011	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.72	6.63	5.78	5.83	5	0.02709	**0.5263**	0.009	12.18	0.012	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.72	6.63	5.78	5.83	5	0.02709	**0.5262**	0.009	12.18	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.73	6.59	5.79	5.84	5	0.02681	**0.5214**	0.008	12.18	0.011	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.69	6.58	5.76	5.82	5	0.02747	**0.5342**	0.009	12.19	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.72	6.63	5.78	5.83	5	0.02516	**0.5266**	0.009	12.17	0.012	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.79	6.60	5.85	5.87	5	0.02645	**0.5433**	0.007	12.13	0.009	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.77	6.55	5.83	5.86	5	0.02692	**0.5560**	0.007	12.14	0.010	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.63	-	-	5	0.02709	**0.5263**	0.009	12.18	0.012	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.63	-	-	5	0.02709	**0.5263**	0.009	12.18	0.012	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.63	-	-	5	0.02709	**0.5263**	0.009	12.18	0.012	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.54	-	-	77	0.02799	**0.5222**	0.008	12.25	0.011	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.54	-	-	77	0.02796	**0.5219**	0.008	12.24	0.011	-
Seagrass Beds													
Assessment Criteria (for Semi-enclosed Bay in North Western WCZ)			≥ 2	N/A	N/A	≥ 4	N/A	≤ 0.01	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
SG1	San Tau	2014 - Without HATS Stage 2A (1a)	5.71	6.12	5.79	5.93	412	**0.02650**	**0.4222**	0.007	10.82	0.014	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.63	6.09	5.93	5.97	390	**0.02314**	**0.3975**	0.006	10.36	0.011	0.0000
		2021 - Without HATS Stage 2A (2a)	5.58	6.26	5.64	5.80	521	**0.02773**	**0.4398**	0.008	11.06	0.015	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.59	6.18	5.65	5.81	520	**0.02694**	**0.4373**	0.008	11.02	0.015	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.59	6.18	5.65	5.81	520	**0.02694**	**0.4373**	0.008	11.02	0.015	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.60	6.21	5.66	5.82	520	**0.02664**	**0.4321**	0.007	11.00	0.015	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.58	6.25	5.64	5.80	522	**0.02736**	**0.4454**	0.008	11.03	0.015	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.59	6.18	5.65	5.81	520	**0.02493**	**0.4399**	0.008	10.97	0.015	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.64	6.16	5.69	5.85	520	**0.02619**	**0.4514**	0.007	10.98	0.014	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.62	6.23	5.67	5.84	535	**0.02689**	**0.4660**	0.007	11.00	0.014	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.18	-	-	520	**0.02694**	**0.4373**	0.008	11.02	0.015	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.18	-	-	520	**0.02694**	**0.4374**	0.008	11.02	0.015	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.18	-	-	520	**0.02694**	**0.4373**	0.008	11.02	0.015	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.12	-	-	412	**0.02658**	**0.4227**	0.007	10.83	0.014	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.12	-	-	412	**0.02653**	**0.4222**	0.007	10.82	0.014	-
SG2	San Tau	2014 - Without HATS Stage 2A (1a)	3.27	10.58	5.50	5.71	2,298	**0.02996**	**0.4493**	0.009	10.37	0.018	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	2.70	9.91	5.66	5.81	2,221	**0.02606**	**0.4192**	0.008	9.87	0.013	0.0000
		2021 - Without HATS Stage 2A (2a)	3.16	10.62	5.37	5.55	2,841	**0.03200**	**0.4755**	0.010	10.60	0.020	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	3.08	10.82	5.38	5.56	2,843	**0.03119**	**0.4730**	0.010	10.56	0.020	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	3.08	10.82	5.38	5.56	2,843	**0.03118**	**0.4729**	0.010	10.56	0.020	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	3.15	10.68	5.39	5.57	2,844	**0.03087**	**0.4676**	0.010	10.55	0.020	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	3.10	10.83	5.38	5.56	2,841	**0.03159**	**0.4810**	0.010	10.57	0.020	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	3.09	10.82	5.38	5.56	2,842	**0.02911**	**0.4755**	0.010	10.51	0.020	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	3.11	10.78	5.42	5.58	2,843	**0.03040**	**0.4866**	0.009	10.52	0.019	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	3.10	10.79	5.40	5.57	2,916	**0.03123**	**0.5024**	0.009	10.55	0.019	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	10.82	-	-	2,843	**0.03119**	**0.4730**	0.010	10.56	0.020	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	10.82	-	-	2,843	**0.03119**	**0.4730**	0.010	10.56	0.020	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	10.82	-	-	2,843	**0.03119**	**0.4730**	0.010	10.56	0.020	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	10.58	-	-	2,298	**0.03004**	**0.4499**	0.009	10.37	0.018	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	10.58	-	-	2,298	**0.02999**	**0.4494**	0.009	10.37	0.018	-
SG3	San Tau	2014 - Without HATS Stage 2A (1a)	3.27	10.58	5.50	5.71	2,298	**0.02996**	**0.4493**	0.009	10.37	0.018	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	2.70	9.91	5.66	5.81	2,221	**0.02606**	**0.4192**	0.008	9.87	0.013	0.0000
		2021 - Without HATS Stage 2A (2a)	3.16	10.62	5.37	5.55	2,841	**0.03200**	**0.4755**	0.010	10.60	0.020	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	3.08	10.82	5.38	5.56	2,843	**0.03119**	**0.4730**	0.010	10.56	0.020	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	3.08	10.82	5.38	5.56	2,843	**0.03118**	**0.4729**	0.010	10.56	0.020	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	3.15	10.68	5.39	5.57	2,844	**0.03087**	**0.4676**	0.010	10.55	0.020	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	3.10	10.83	5.38	5.56	2,841	**0.03159**	**0.4810**	0.010	10.57	0.020	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	3.09	10.82	5.38	5.56	2,842	**0.02911**	**0.4755**	0.010	10.51	0.020	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	3.11	10.78	5.42	5.58	2,843	**0.03040**	**0.4866**	0.009	10.52	0.019	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	3.10	10.79	5.40	5.57	2,916	**0.03123**	**0.5024**	0.009	10.55	0.019	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	10.82	-	-	2,843	**0.03119**	**0.4730**	0.010	10.56	0.020	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	10.82	-	-	2,843	**0.03119**	**0.4730**	0.010	10.56	0.020	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	10.82	-	-	2,843	**0.03119**	**0.4730**	0.010	10.56	0.020	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	10.58	-	-	2,298	**0.03004**	**0.4499**	0.009	10.37	0.018	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	10.58	-	-	2,298	**0.02999**	**0.4494**	0.009	10.37	0.018	-
Assessment Criteria (for North Western WCZ)			≥ 2	N/A	N/A	≥ 4	N/A	≤ 0.05	≤ 0.5	≤ 0.021	N/A	≤ 0.035	≤ 0.008
SG4	Tai Ho Wan	2014 - Without HATS Stage 2A (1a)	5.75	0.00	6.06	5.93	11	0.02517	0.4555	0.009	9.01	0.012	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.69	2.88	5.98	5.91	14	0.02168	0.4250	0.008	8.57	0.010	0.0000
		2021 - Without HATS Stage 2A (2a)	5.76	0.44	6.10	6.01	6	0.02508	0.4621	0.009	9.50	0.012	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.80	0.45	6.12	6.03	6	0.02409	0.4601	0.009	9.40	0.012	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.80	0.45	6.12	6.03	6	0.02409	0.4600	0.009	9.40	0.012	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.81	0.45	6.14	6.05	6	0.02366	0.4521	0.009	9.39	0.012	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.77	0.47	6.10	6.01	6	0.02467	0.4717	0.009	9.42	0.013	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.79	0.45	6.12	6.03	6	0.02122	0.4613	0.009	9.37	0.012	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.89	0.45	6.20	6.11	6	0.02311	0.4870	0.007	9.32	0.009	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.86	0.47	6.18	6.10	6	0.02378	**0.5056**	0.007	9.34	0.010	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	0.45	-	-	6	0.02409	0.4601	0.009	9.40	0.012	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	0.45	-	-	6	0.02409	0.4601	0.009	9.40	0.012	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	0.45	-	-	6	0.02409	0.4601	0.009	9.40	0.012	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	0.00	-	-	11	0.02526	0.4561	0.009	9.03	0.012	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	0.00	-	-	11	0.02520	0.4556	0.009	9.02	0.012	-

Appendix 6.5 Model Results for Marine Ecological Receivers

Note: Shaded and bolded - value exceeded the assessment criteria
N/A - Not Available

ID	Indicator Point	Scenario	Bottom 10%ile DO (mg/L)	Maximum Sedimentation rate ($g/m^2/d$)	Depth Averaged Min. monthly DO (mg/L)	10%ile DO (mg/L)	GM *E.coli* (no./100mL)	Mean PO_4 (mg/L)	Mean TIN (mg/L)	Mean UIA (mg/L)	Mean SS (mg/L)	Max. 4-d mean UIA (mg/L)	Max. TRC (mg/L)
Finless Porpoises													
Assessment Criteria (for Southern WCZ)			≥ 2	N/A	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
FP2	East Lamma Channel	2014 - Without HATS Stage 2A (1a)	4.99	4.91	5.48	5.44	6	0.00796	**0.1236**	0.004	3.87	0.005	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.04	5.03	5.51	5.40	2	0.00788	**0.1255**	0.004	3.91	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	4.99	4.92	5.48	5.43	6	0.00798	**0.1241**	0.004	3.87	0.005	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.00	4.89	5.49	5.45	2	0.00786	**0.1235**	0.004	3.85	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.00	4.89	5.49	5.45	2	0.00786	**0.1235**	0.004	3.85	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.00	4.92	5.49	5.45	2	0.00783	**0.1229**	0.004	3.85	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.99	4.92	5.48	5.44	2	0.00791	**0.1245**	0.004	3.86	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.99	4.89	5.48	5.44	2	0.00766	**0.1236**	0.004	3.85	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.03	4.88	5.52	5.48	2	0.00779	**0.1260**	0.004	3.85	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.02	4.91	5.51	5.47	2	0.00785	**0.1275**	0.004	3.85	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	4.89	-	-	2	0.00786	**0.1235**	0.004	3.85	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	4.89	-	-	2	0.00786	**0.1235**	0.004	3.85	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	4.89	-	-	2	0.00786	**0.1235**	0.004	3.85	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	4.91	-	-	6	0.00797	**0.1236**	0.004	3.87	0.005	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	4.91	-	-	6	0.00797	**0.1236**	0.004	3.87	0.005	-
Green Turtle Nesting Ground													
Assessment Criteria (for Semi-enclosed Bay in Southern WCZ)			≥ 2	N/A	≥ 5	≥ 4	N/A	≤ 0.01	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
TNG1	Sham Wan	2014 - Without HATS Stage 2A (1a)	6.10	0.00	6.30	6.28	1	0.00778	**0.1252**	0.004	4.19	0.005	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.74	2.40	5.48	6.05	1	0.00748	**0.1239**	0.004	4.23	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	6.10	0.00	6.30	6.28	1	0.00779	**0.1257**	0.004	4.19	0.005	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	6.10	0.00	6.30	6.29	1	0.00771	**0.1256**	0.004	4.18	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	6.10	0.00	6.30	6.29	1	0.00771	**0.1256**	0.004	4.18	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	6.11	0.00	6.30	6.30	1	0.00765	**0.1245**	0.004	4.18	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	6.09	0.00	6.30	6.28	1	0.00777	**0.1267**	0.004	4.19	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	6.09	0.00	6.30	6.27	1	0.00748	**0.1260**	0.004	4.18	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	6.12	0.00	6.31	6.31	1	0.00763	**0.1282**	0.003	4.18	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	6.11	0.00	6.31	6.30	1	0.00769	**0.1297**	0.004	4.18	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	0.00	-	-	1	0.00771	**0.1256**	0.004	4.18	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	0.00	-	-	1	0.00771	**0.1256**	0.004	4.18	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	0.00	-	-	1	0.00771	**0.1256**	0.004	4.18	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	0.00	-	-	1	0.00778	**0.1252**	0.004	4.20	0.005	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	0.00	-	-	1	0.00778	**0.1252**	0.004	4.20	0.005	-
Site of Special Scientific Interests													
Assessment Criteria (for Southern WCZ)			≥ 2	N/A	≥ 5	≥ 4	N/A	≤ 0.02	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
S1	Shek O Headland	2014 - Without HATS Stage 2A (1a)	5.06	3.76	5.26	5.27	188	0.00742	**0.1108**	0.004	3.59	0.006	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	5.08	3.79	5.31	5.31	185	0.00718	**0.1092**	0.004	3.61	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	5.07	3.73	5.27	5.27	191	0.00745	**0.1113**	0.004	3.58	0.006	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	5.09	3.69	5.30	5.30	189	0.00728	**0.1097**	0.004	3.57	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	5.09	3.69	5.30	5.30	189	0.00728	**0.1097**	0.004	3.57	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	5.09	3.68	5.31	5.31	187	0.00726	**0.1094**	0.004	3.57	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	5.08	3.71	5.30	5.29	187	0.00730	**0.1102**	0.004	3.57	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	5.09	3.69	5.29	5.30	189	0.00718	**0.1098**	0.004	3.57	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	5.11	3.68	5.32	5.32	189	0.00725	**0.1109**	0.004	3.57	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	5.10	3.70	5.33	5.31	196	0.00729	**0.1117**	0.004	3.57	0.005	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.69	-	-	189	0.00728	**0.1097**	0.004	3.57	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.69	-	-	189	0.00728	**0.1097**	0.004	3.57	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.69	-	-	189	0.00728	**0.1097**	0.004	3.57	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.76	-	-	191	0.00750	**0.1119**	0.004	3.60	0.007	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.76	-	-	188	0.00743	**0.1108**	0.004	3.59	0.006	-
S2	Cape D' Aguilar - Kau Pei Chau	2014 - Without HATS Stage 2A (1a)	4.93	3.99	5.14	5.14	2	0.00708	**0.1062**	0.004	3.60	0.004	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.93	4.06	5.18	5.16	2	0.00695	**0.1056**	0.004	3.63	0.004	0.0000
		2021 - Without HATS Stage 2A (2a)	4.93	4.02	5.15	5.14	2	0.00709	**0.1064**	0.004	3.59	0.004	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.93	3.96	5.15	5.15	2	0.00701	**0.1057**	0.004	3.58	0.004	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.93	3.96	5.15	5.15	2	0.00701	**0.1057**	0.004	3.58	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.93	3.98	5.16	5.15	2	0.00700	**0.1056**	0.004	3.58	0.004	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.93	3.98	5.15	5.14	2	0.00703	**0.1061**	0.004	3.59	0.004	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.93	3.96	5.15	5.15	2	0.00696	**0.1058**	0.004	3.58	0.004	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.94	3.95	5.17	5.17	2	0.00699	**0.1064**	0.004	3.58	0.004	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.94	3.98	5.17	5.16	2	0.00702	**0.1069**	0.004	3.59	0.004	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	3.96	-	-	2	0.00701	**0.1057**	0.004	3.58	0.004	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	3.96	-	-	2	0.00701	**0.1057**	0.004	3.58	0.004	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	3.96	-	-	2	0.00701	**0.1057**	0.004	3.58	0.004	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	3.99	-	-	2	0.00710	**0.1065**	0.004	3.60	0.004	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	3.99	-	-	2	0.00708	**0.1062**	0.004	3.60	0.004	-
Assessment Criteria (for Semi-enclosed Bay in Southern WCZ)			≥ 2	N/A	≥ 5	≥ 4	N/A	≤ 0.01	≤ 0.1	≤ 0.021	N/A	≤ 0.035	≤ 0.008
S3	Sham Wan	2014 - Without HATS Stage 2A (1a)	4.92	6.15	5.72	5.69	1	0.00845	**0.1337**	0.004	3.95	0.005	0.0000
		2014 - Early Phase of HATS Stage 2A (1b)	4.88	6.09	5.28	5.44	1	0.00823	**0.1331**	0.004	3.99	0.005	0.0000
		2021 - Without HATS Stage 2A (2a)	4.92	6.13	5.72	5.68	1	0.00847	**0.1342**	0.004	3.94	0.005	0.0000
		2021 - Late Phase of HATS Stage 2A (2b)	4.93	6.10	5.73	5.69	1	0.00837	**0.1340**	0.004	3.94	0.005	0.0000
		2021- Sensitivity Test - Stage 2A - Change of Storm Loading (2c)	4.93	6.10	5.73	5.69	1	0.00837	**0.1340**	0.004	3.94	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - Change of Sewage Flow Interception (2d)	4.93	6.13	5.73	5.70	1	0.00833	**0.1332**	0.004	3.93	0.005	0.0000
		Ultimate - Sensitivity Test - Stage 2A - Use of HATS Design Flow Rate (2e)	4.92	6.14	5.72	5.68	1	0.00843	**0.1350**	0.004	3.94	0.005	0.0000
		2021 - Sensitivity Test - Stage 2A - enhanced P-removal (2f)	4.93	6.10	5.72	5.68	1	0.00814	**0.1342**	0.004	3.93	0.005	0.0000
		2021 - Early Phase of HATS Stage 2B (3a)	4.94	6.08	5.75	5.71	1	0.00830	**0.1365**	0.004	3.93	0.005	0.0000
		Ultimate - Late Phase of HATS Stage 2B (3b)	4.94	6.12	5.75	5.71	1	0.00836	**0.1381**	0.004	3.93	0.005	0.0000
		2021 - Emergency Scenario due to heavy rainfall (overflow) (A)	-	6.10	-	-	1	0.00837	**0.1340**	0.004	3.94	0.005	-
		2021 - Emergency Scenario due to power failure at SCISTW (B)	-	6.10	-	-	1	0.00837	**0.1340**	0.004	3.94	0.005	-
		2021 - Emergency Scenario due to failure at Stage 2 PTWs (C)	-	6.10	-	-	1	0.00837	**0.1340**	0.004	3.94	0.005	-
		2014 - Emergency Scenario due to modification works at pumping station (D)	-	6.15	-	-	1	0.00845	**0.1337**	0.004	3.95	0.005	-
		2014 - Emergency Scenario due to modification works at NWK PS (E)	-	6.15	-	-	1	0.00845	**0.1337**	0.004	3.95	0.005	-