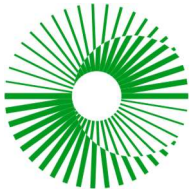




ERM

ANNEX J

SOFT SHORE ECOLOGY



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ANNEX J1

MONITRING SCHEDULE

Tung Chung New Town Extension (East)
Post-Construction Soft Shore Ecological Monitoring Schedule (March 2024)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Mar	2-Mar
3-Mar	4-Mar	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar
10-Mar	11-Mar	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar
		Soft Shore Monitoring at Tung Chung Bay				
17-Mar	18-Mar	19-Mar	20-Mar	21-Mar	22-Mar	23-Mar
24-Mar	25-Mar	26-Mar	27-Mar	28-Mar	29-Mar	30-Mar
		Soft Shore Monitoring at Tung Chung Bay	Soft Shore Monitoring at Tai Ho Bay			
31-Mar						



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ANNEX J2

MONITRING RESULTS

Table J2.1 Results for Horseshoe Crabs during Qualitative Walk-through Surveys in March 2024

Sighting #	Species	Prosomal Width (cm)	Total Length (cm)
Monitoring Date: 12 March 2024			
Monitoring Station: TCB3			
1	Unidentified ^(a)	0.6	0.6
2	<i>Tachypleus tridentatus</i>	0.9	1.1
3	<i>Tachypleus tridentatus</i>	0.9	1.1
4	<i>Tachypleus tridentatus</i>	0.9	1.2
5	Unidentified ^(a)	0.6	0.6
6	<i>Tachypleus tridentatus</i>	1.2	2.0
7	<i>Tachypleus tridentatus</i>	0.8	1.2
8	Unidentified ^(a)	0.6	0.6
9	<i>Tachypleus tridentatus</i>	1.1	1.8
10	<i>Tachypleus tridentatus</i>	1.1	1.8
11	<i>Tachypleus tridentatus</i>	0.9	1.2
	Mean (Range)	0.9 (0.6 – 1.2)	1.2 (0.6 – 2.0)
Monitoring Date: 26 March 2024			
Monitoring Station: TCB2			
1	<i>Tachypleus tridentatus</i>	1.1	1.8
2	<i>Tachypleus tridentatus</i>	6.0	11.0
3	<i>Tachypleus tridentatus</i>	0.9	1.1
4	<i>Tachypleus tridentatus</i>	3.1	3.1
5	<i>Tachypleus tridentatus</i>	3.0	3.7
6	<i>Tachypleus tridentatus</i>	0.9	1.1
7	<i>Tachypleus tridentatus</i>	2.5	4.6
8	<i>Tachypleus tridentatus</i>	0.9	1.1
9	Unidentified ^(a)	0.7	0.7
10	<i>Tachypleus tridentatus</i>	0.9	1.2
11	<i>Tachypleus tridentatus</i>	0.9	1.2
	Mean (Range)	1.9 (0.7 – 6.0)	2.8 (0.7 – 11.0)
Monitoring Date: 26 March 2024			
Monitoring Station: TCB1			
1	<i>Tachypleus tridentatus</i>	4.0	7.6
	Mean (Range)	4.0	7.6
Monitoring Date: 27 March 2024			
Monitoring Station: THW			
1	<i>Tachypleus tridentatus</i>	3.8	6.0
2	<i>Tachypleus tridentatus</i>	2.3	3.3
	Mean	3.1 (2.3 – 3.8)	4.7 (3.3 – 6.0)

Note:

- a) Four (4) horseshoe crab individuals, three (3) at TCB3 and one (1) at TCB2 and one were recorded with prosomal width of 0.6-0.7 cm and total length of 0.6-0.7 cm. These individuals were considered to be too small for species identification by the naked eye and were recorded as unidentified species.

Table J2.2 Results for Seagrass during Qualitative Walk-through Surveys in March 2024

Sighting #	Species	Area (m²)	Area Coverage (%)	Seagrass Area (m²)
Monitoring Date: 12 March 2024				
Monitoring Station: TCB3				
1	<i>Halophila ovalis</i>	7.5	50%	3.8
2	<i>Halophila ovalis</i>	1.0	30%	0.3
3	<i>Halophila ovalis</i>	120.0	80%	96.0
Monitoring Date: 26 March 2024				
Monitoring Station: TCB2				
1	<i>Halophila ovalis</i>	10.0	50%	5.0

Table J2.3 Results for Other Intertidal Soft Shore Communities during Qualitative Walk-through Surveys in March 2024

Monitoring Station	Shore Height *	No. of Species
TCB1	H	23
	M	29
	L	18
	Overall	38
TCB2	H	20
	M	21
	L	22
	Overall	32
TCB3	H	21
	M	29
	L	25
	Overall	36
THW	H	22
	M	19
	L	15
	Overall	34

* H: +2mCD; M: +1.5mCD; L: +1mCD

Table J2.4 Results for Other Intertidal Soft Shore Communities during Quantitative Transect Surveys in March 2024

Monitoring Station	Shore Height *	Top Three Dominant Species	Density (ind. / m ²)
TCB1	H	1 <i>Cerithidea diadjariensis</i>	160.0
		2 <i>Batillaria multiformis</i>	115.2
		3 <i>Batillaria zonalis</i>	52.0
	M	1 <i>Batillaria multiformis</i>	124.0
		2 <i>Cerithidea diadjariensis</i>	99.2
		3 <i>Batillaria zonalis</i>	61.6
	L	1 <i>Batillaria multiformis</i>	16.0
		2 <i>Sipunculus sp.</i>	7.2
		3 <i>Monodonta labio</i>	5.6
TCB2	H	1 <i>Oligochaete sp.</i>	16.8
		2 <i>Cerithidea diadjariensis</i>	2.4
		3 <i>Parasesarma pictum</i>	1.6
	M	1 <i>Cerithidea cingulata</i>	137.6
		2 <i>Cerithidea diadjariensis</i>	98.4
		3 <i>Batillaria zonalis</i>	20.8
	L	1 <i>Cerithidea cingulata</i>	69.6
		2 <i>Cerithidea diadjariensis</i>	19.2
		3 <i>Oligochaete sp.</i>	2.4
TCB3	H	1 <i>Batillaria zonalis</i>	408.8
		2 <i>Cerithidea diadjariensis</i>	227.2
		3 <i>Batillaria multiformis</i>	113.6
	M	1 <i>Cerithidea diadjariensis</i>	229.6
		2 <i>Batillaria zonalis</i>	145.6
		3 <i>Cerithidea cingulata</i>	58.4
	L	1 <i>Batillaria zonalis</i>	56.8
		2 <i>Cerithidea diadjariensis</i>	50.4
		3 <i>Batillaria multiformis</i>	19.2
THW	H	1 <i>Cerithidea cingulata</i>	64.0
		2 <i>Cerithidea diadjariensis</i>	60.8
		3 <i>Geloina erosa</i>	31.2
	M	1 <i>Cerithidea diadjariensis</i>	287.2
		2 <i>Cerithidea cingulata</i>	84.0
		3 <i>Batillaria zonalis</i>	76.0
	L	1 <i>Cerithidea cingulata</i>	551.2
		2 <i>Nassarius festivus</i>	450.4
		3 <i>Cerithidea diadjariensis</i>	221.6

* H: +2mCD; M: +1.5mCD; L: +1mCD

Group	Species	TCB1			TCB2			TCB3			THW		
		H (Qual)	M (Qual)	L (Qual)	H (Qual)	M (Qual)	L (Qual)	H (Qual)	M (Qual)	L (Qual)	H (Qual)	M (Qual)	L (Qual)
Algae	<i>Ulva sp.</i>				+		+	+	+	+			
Anemone	<i>Haliphanella lineata</i>					+							
Barnacle	<i>Balanus amphitrite</i>	+		+		+	+	+	+	+		++	
Barnacle	<i>Fistulobalanus albicostatus</i>	+						+				+	
Bivalve	<i>Anomalocardia squamosa</i>	+	+	+						+			
Bivalve	<i>Arcuatula senhousia</i>			+									
Bivalve	<i>Barbatia virescens</i>					+							
Bivalve	<i>Cyclina sinensis</i>	+	+					+				+	+
Bivalve	<i>Donax sp.</i>										+	+	
Bivalve	<i>Geloina erosa</i>	+	+		+	+	+	+	+		++	+++	+
Bivalve	<i>Saccostrea cucullata</i>	+	+	+++	+	++	+	+	++	+++		++	+
Bivalve	<i>Septifer virgatus</i>		+	+					+	+		+	
Bivalve	<i>Ruditapes philippinarum</i>	+											
Crab	<i>Hemigrapsus penicillatus</i>						+		+	+			
Crab	<i>Macrophthalmus sp.</i>				+						+		
Crab	<i>Metaplex longipes</i>						+						
Crab	<i>Metapograpus frontalis</i>	++	++	+	+	++	+	+	+	+	+	+	
Crab	<i>Metapograpus quadridemtatus</i>	++	+++	++	++	++	++	+	+	+	+	+	
Crab	<i>Parasesarma pictum</i>				++		+				+		+
Crab	<i>Perisesarma bidens</i>							+			++		
Crab	<i>Scylla paramamosain</i>						+						
Crab	<i>Uca arcuata</i>		+						+	+	+++		
Crab	<i>Uca borealis</i>		+	+		++	+++		+				
Crab	<i>Uca lactea</i>	++							+++	+	+		+
Crab	<i>Uca splendida</i>										+		
Fish	<i>Periophthalmus modestus</i>	++	+		+						++	++	
Gastropod	<i>Batillaria multiformis</i>	+++	++	+	+	+	+	+++	++	++		+	+
Gastropod	<i>Batillaria zonalis</i>	++	++	++	++	++	+	+++	+++	+++		++	+++
Gastropod	<i>Cellana grata</i>		+						+	+			
Gastropod	<i>Cellana toreuma</i>		+	+		+	+		+	+			
Gastropod	<i>Cerithidea cingulata</i>	++	++		++	+++	+++	++	+++	++	++	+++	+++
Gastropod	<i>Cerithidea diadjarimensis</i>	+++	+++		+++	+++	++	+++	+++	+++	++	+++	+++
Gastropod	<i>Cerithidea rhizophorarum</i>	+			+	+					+++	+	
Gastropod	<i>Clithon spp.</i>	+	+		+	+		++	+				+
Gastropod	<i>Echinolittorina radiata</i>		+						+	+			
Gastropod	<i>Echinolittorina vidua</i>		+										
Gastropod	<i>Ellobium polita</i>												+
Gastropod	<i>Hamineoa sp.</i>		+		++	++							
Gastropod	<i>Littoraria arduiniana</i>	+						+			+		
Gastropod	<i>Littoraria articulata</i>		++	+		+			+	+			
Gastropod	<i>Littoraria melanostoma</i>	+						+			+	+	
Gastropod	<i>Lunella coronata</i>	+	++	+		+	+		+	++			
Gastropod	<i>Monodonta labio</i>	+	+++	++	++	+	+	+	++	+			
Gastropod	<i>Nassarius festivus</i>						+	++	+	+		++	+++
Gastropod	<i>Nerita albicilla</i>		+	+		+	+	+	+	++			
Gastropod	<i>Nerita polita</i>	+	+		+	+		+	+	+		+	+
Gastropod	<i>Patelloida pygmaea</i>		+							+			
Gastropod	<i>Planaxis sulcatus</i>				+								
Gastropod	<i>Terebralia palustris</i>										+		
Gastropod	<i>Terebralia sulcata</i>										+++	++	
Gastropod	<i>Thais clavigera</i>	++											+
Hermit Crab	<i>Clibanarius sp.</i>		++	+	+	+	+	+	+	+	++		
Hermit Crab	<i>Diogenes sp.</i>		+	+					+			+	
Horseshoe Crab	<i>Tachypleus tridentatus</i>	+				+	+	+	++	+		+	
Horseshoe Crab	<i>Unidentified sp.</i>					+		+	+				
Seagrass	<i>Halophila ovalis</i>					+		+	+				
Seaslug	<i>Onchidium sp.</i>										+		
Worm	<i>Oligochaete sp.</i>				+++	+			+		+		+
Worm	<i>Sipunculus sp.</i>		++	+					+				

Remark: '+' denotes the species was relatively uncommon at the area;
 '++' denotes the species was relatively common at the area;
 '++++' denotes the species was relatively abundant at the area.

Group	Species	TCB1																	
		H1	H2	H3	H4	H5	Density (ind. / m ² or % cover)	M1	M2	M3	M4	M5	Density (ind. / m ² or % cover)	L1	L2	L3	L4	L5	Density (ind. / m ² or % cover)
Algae	<i>Ulva sp.</i>						0%						0%						0%
Anemone	<i>Haliplanella lineata</i>						0						0						0
Barnacle	<i>Balanus amphitrite</i>						0%						0%					<5%	<5%
Bivalve	<i>Anomalocardia squamosa</i>		1				0.8					1	0.8		1				0.8
Bivalve	<i>Arcuatula senhousia</i>						0						0			<5%			0
Bivalve	<i>Barbatia virescens</i>						0						0						0
Bivalve	<i>Cyclina sinensis</i>	1					0.8			1	1	1	2.4						0
Bivalve	<i>Donax sp.</i>						0						0						0
Bivalve	<i>Geloina erosa</i>	1					0.8				1		0.8						0
Bivalve	<i>Saccostrea cucullata</i>			<5%	5%	5%	2%	<5%	<5%		<5%	<5%	<5%	10%	5%	25%	10%	15%	13%
Bivalve	<i>Septifer virgatus</i>						0%			<5%			<5%			5%			1%
Bivalve	<i>Ruditapes philippinarum</i>				1		0.8						0						0
Crab	<i>Hemigrapsus penicillatus</i>						0						0						0
Crab	<i>Macrophthalmus sp.</i>						0						0						0
Crab	<i>Metaplex longipes</i>						0						0						0
Crab	<i>Metapograpus frontalis</i>						0						0						0
Crab	<i>Metapograpus quadridematus</i>						0						0				2		1.6
Crab	<i>Parasesarma pictum</i>						0						0						0
Crab	<i>Perisesarma bidens</i>						0						0						0
Crab	<i>Scylla paramamosain</i>						0						0						0
Crab	<i>Uca borealis</i>						0						0	1					0.8
Crab	<i>Uca lactea</i>						0						0						0
Gastropod	<i>Batillaria multiformis</i>	92	2	26	16	8	115.2	2	46	28	14	65	124.0		2		2	16	16.0
Gastropod	<i>Batillaria zonalis</i>	19	22	12	3	9	52.0	29	15	18	8	7	61.6	2	3				4.0
Gastropod	<i>Cellana grata</i>						0.0						0						0
Gastropod	<i>Cellana toreuma</i>						0						0						0
Gastropod	<i>Cerithidea cingulata</i>	6	7	21		12	36.8	8	20	1	15	2	36.8						0
Gastropod	<i>Cerithidea diadjarimensis</i>	30	46	98		26	160.0	17	24	9	60	14	99.2						0
Gastropod	<i>Cerithidea rhizophorarum</i>			2			1.6						0.0						0
Gastropod	<i>Clithon spp.</i>						0						0						0
Gastropod	<i>Echinolittorina radiata</i>						0						0						0
Gastropod	<i>Littoraria articulata</i>						0			3			2.4					2	1.6
Gastropod	<i>Lunella coronata</i>				2		1.6			2	2		3.2					1	0.8
Gastropod	<i>Monadonta labio</i>						0			22		6	22.4			1		6	5.6
Gastropod	<i>Nassarius festivus</i>						0						0						0
Gastropod	<i>Nerita albicilla</i>						0						0				1		0.8
Gastropod	<i>Nerita polita</i>						0						0						0
Gastropod	<i>Patelloida pygmaea</i>						0						0						0
Gastropod	<i>Terebralia palustris</i>						0						0						0
Gastropod	<i>Terebralia sulcata</i>						0						0						0
Gastropod	<i>Thais clavigera</i>						0					2	1.6						0
Hermit Crab	<i>Clibanarius sp.</i>						0					1	0.8				1	1	1.6
Hermit Crab	<i>Diogenes sp.</i>						0					1	0.8				1		0.8
Horseshoe Crab	<i>Unidentified sp.</i>						0						0						0
Seaslug	<i>Onchidium sp.</i>						0						0						0
Worm	<i>Oligochaete sp.</i>						0						0						0
Worm	<i>Sipunculus sp.</i>						0			5		2	5.6			9			7.2

Group	Species	TCB2																	
		H1	H2	H3	H4	H5	Density (ind. / m ² or % cover)	M1	M2	M3	M4	M5	Density (ind. / m ² or % cover)	L1	L2	L3	L4	L5	Density (ind. / m ² or % cover)
Algae	<i>Ulva sp.</i>		<5%	<5%			<5%						0%					<5%	<5%
Anemone	<i>Haliplanella lineata</i>						0					1	0.2						0
Barnacle	<i>Balanus amphitrite</i>						0%					<5%	<5%					<5%	<5%
Bivalve	<i>Anomalocardia squamosa</i>						0						0						0
Bivalve	<i>Arcuatula senhousia</i>						0						0						0
Bivalve	<i>Barbatia virescens</i>						0					1	0.8						0
Bivalve	<i>Cyclina sinensis</i>						0						0						0
Bivalve	<i>Donax sp.</i>						0						0						0
Bivalve	<i>Geloina erosa</i>				1		0.8	1	2				2.4	1					0.8
Bivalve	<i>Saccostrea cucullata</i>						0%	5%	5%			10%	4%	<5%					<5%
Bivalve	<i>Septifer virgatus</i>						0%						0%						0%
Bivalve	<i>Ruditapes philippinarum</i>						0						0						0
Crab	<i>Hemigrapsus penicillatus</i>						0						0			1			0.8
Crab	<i>Macrophthalmus sp.</i>		1				0.8						0						0
Crab	<i>Metaplex longipes</i>						0						0	1					0.8
Crab	<i>Metapograpsus frontalis</i>						0					2	1.6						0
Crab	<i>Metapograpsus quadridematus</i>						0					4	3.2						0%
Crab	<i>Parasesarma pictum</i>				2		1.6						0	1					0.8
Crab	<i>Perisesarma bidens</i>						0						0						0
Crab	<i>Scylla paramamosain</i>						0						0					1	0.8
Crab	<i>Uca borealis</i>						0						0	1		1			1.6
Crab	<i>Uca lactea</i>						0						0						0
Gastropod	<i>Batillaria multififormis</i>						0		2	2			3.2						0
Gastropod	<i>Batillaria zonalis</i>						0	6	3	7	6	4	20.8		2				1.6
Gastropod	<i>Cellana grata</i>						0						0						0
Gastropod	<i>Cellana toreuma</i>						0					1	0.8						0
Gastropod	<i>Cerithidea cingulata</i>						0	12	16	78	41	25	137.6	36	37	10	4		69.6
Gastropod	<i>Cerithidea diadjarimensis</i>			3			2.4	31	10	38	28	16	98.4	11	4	4	3	2	19.2
Gastropod	<i>Cerithidea rhizophorarum</i>						0					2	1.6						0
Gastropod	<i>Clithon spp.</i>						0						0						0
Gastropod	<i>Echinolittorina radiata</i>						0						0						0
Gastropod	<i>Littoraria articulata</i>						0						0						0
Gastropod	<i>Lunella coronata</i>						0	2				1	2.4					1	0.8
Gastropod	<i>Monadonta labio</i>						0						0						0
Gastropod	<i>Nassarius festivus</i>						0						0				2		1.6
Gastropod	<i>Nerita albicilla</i>						0					1	0.8						0
Gastropod	<i>Nerita polita</i>						0					2	1.6						0
Gastropod	<i>Patelloida pygmaea</i>						0						0						0
Gastropod	<i>Terebralia palustris</i>						0						0						0
Gastropod	<i>Terebralia sulcata</i>						0						0						0
Gastropod	<i>Thais clavigera</i>						0						0						0
Hermit Crab	<i>Clibanarius sp.</i>						0					3	2.4						0
Hermit Crab	<i>Diogenes sp.</i>						0						0						0
Horseshoe Crab	<i>Unidentified sp.</i>						0						0						0
Seaslug	<i>Onchidium sp.</i>						0						0						0
Worm	<i>Oligochaete sp.</i>	10	1		8	2	16.8						0				2	1	2.4
Worm	<i>Sipunculus sp.</i>						0						0						0

Group	Species	TCB3																	
		H1	H2	H3	H4	H5	Density (ind. / m ² or % cover)	M1	M2	M3	M4	M5	Density (ind. / m ² or % cover)	L1	L2	L3	L4	L5	Density (ind. / m ² or % cover)
Algae	<i>Ulva sp.</i>	<5%	5%	10%	<5%	5%	4%	<5%	<5%	5%			1%		<5%				<5%
Anemone	<i>Haliplanella lineata</i>						0						0						0
Barnacle	<i>Balanus amphitrite</i>						0%						0%		<5%		<5%		<5%
Bivalve	<i>Anomalocardia squamosa</i>						0						0		1			1	1.6
Bivalve	<i>Arcuatula senhousia</i>						0						0						0
Bivalve	<i>Barbatia virescens</i>						0						0						0
Bivalve	<i>Cyclina sinensis</i>		1	1		1	2.4						0						0
Bivalve	<i>Donax sp.</i>						0						0						0
Bivalve	<i>Geloina erosa</i>			1			0.8	1				1	1.6						0
Bivalve	<i>Saccostrea cucullata</i>						0%	10%	5%	<5%			3%	25%	15%	<5%	30%	10%	16%
Bivalve	<i>Septifer virgatus</i>						0%		<5%				<5%	<5%	<5%	<5%			<5%
Bivalve	<i>Ruditapes philippinarum</i>						0						0						0
Crab	<i>Hemigrapsus penicillatus</i>						0	1					0.8						0
Crab	<i>Macrophthalmus sp.</i>						0						0						0
Crab	<i>Metaplex longipes</i>						0						0						0
Crab	<i>Metapograpsus frontalis</i>						0						0						0
Crab	<i>Metapograpsus quadridematus</i>						0						0						0
Crab	<i>Parasesarma pictum</i>						0						0						0
Crab	<i>Perisesarma bidens</i>						0						0						0
Crab	<i>Scylla paramamosain</i>						0						0						0
Crab	<i>Uca borealis</i>						0						0						0
Crab	<i>Uca lactea</i>						0						0						0
Gastropod	<i>Batillaria multififormis</i>	32	49	24	16	21	113.6	12	8	2	13	12	37.6		8		10	6	19.2
Gastropod	<i>Batillaria zonalis</i>	24	34	39	364	50	408.8	32	18	29	30	73	145.6	16	28	10	13	4	56.8
Gastropod	<i>Cellana grata</i>						0						0	1					0.8
Gastropod	<i>Cellana toreuma</i>						0						0				1		0.8
Gastropod	<i>Cerithidea cingulata</i>	2	3	6	7	16	27.2	13	7	17	34	2	58.4		2	6			6.4
Gastropod	<i>Cerithidea diadjarimensis</i>	79	25	77	60	43	227.2	28	85	90	76	8	229.6	2	27	34			50.4
Gastropod	<i>Cerithidea rhizophorarum</i>						0						0						0.0
Gastropod	<i>Clithon spp.</i>	4		7			8.8				2		1.6						0
Gastropod	<i>Echinolittorina radiata</i>						0					3	2.4						0
Gastropod	<i>Littoraria articulata</i>						0					2	1.6	3					2.4
Gastropod	<i>Lunella coronata</i>						0						0	2	1		6		7.2
Gastropod	<i>Monadonta labio</i>						0				3	7	8	3	2			2	5.6
Gastropod	<i>Nassarius festivus</i>		6		23	8	29.6						0						0
Gastropod	<i>Nerita albicilla</i>						0	1					0.8	3	2		1		4.8
Gastropod	<i>Nerita polita</i>						0	1		2			2.4	1			2		2.4
Gastropod	<i>Patelloida pygmaea</i>						0						0	2			2		3.2
Gastropod	<i>Terebralia palustris</i>						0						0						0
Gastropod	<i>Terebralia sulcata</i>						0						0						0
Gastropod	<i>Thais clavigera</i>						0						0						0
Hermit Crab	<i>Clibanarius sp.</i>	2		1			2.4	1					0.8						0
Hermit Crab	<i>Diogenes sp.</i>						0	1					0.8						0
Horseshoe Crab	<i>Unidentified sp.</i>		1				0.8						0						0
Seaslug	<i>Onchidium sp.</i>						0						0						0
Worm	<i>Oligochaete sp.</i>						0					1	0.8						0
Worm	<i>Sipunculus sp.</i>						0	3				2	4						0

Group	Species	THW															Density (ind. / m ² or % cover)					
		H1	H2	H3	H4	H5	Density (ind. / m ² or % cover)	M1	M2	M3	M4	M5	Density (ind. / m ² or % cover)	L1	L2	L3		L4	L5	Density (ind. / m ² or % cover)		
Algae	<i>Ulva sp.</i>						0%								0%							0%
Anemone	<i>Haliplanella lineata</i>						0								0							0
Barnacle	<i>Balanus amphitrite</i>						0%								0%							0%
Bivalve	<i>Anomalocardia squamosa</i>						0								0							0
Bivalve	<i>Arcuatula senhousia</i>						0								0							0
Bivalve	<i>Barbatia virescens</i>						0								0							0
Bivalve	<i>Cyclina sinensis</i>						0					1			0.8						1	0.8
Bivalve	<i>Donax sp.</i>		1				0.8	1		2					2.4							0
Bivalve	<i>Geloina erosa</i>	7	8	10	5	9	31.2	2	3	3	2	1		8.8							1	0.8
Bivalve	<i>Saccostrea cucullata</i>						0%	20%		<5%			10%	6%		<5%	10%				5%	3%
Bivalve	<i>Septifer virgatus</i>					<5%	<5%							0%								0%
Bivalve	<i>Ruditapes philippinarum</i>						0							0								0
Crab	<i>Hemigrapsus penicillatus</i>						0							0								0
Crab	<i>Macrophthalmus sp.</i>				1		0.8							0								0
Crab	<i>Metaplex longipes</i>						0							0								0
Crab	<i>Metapograpus frontalis</i>						0					1		0.8								0
Crab	<i>Metapograpus quadridematus</i>						0					1		0.8								0
Crab	<i>Parasesarma pictum</i>						0							0								0
Crab	<i>Perisesarma bidens</i>	1	1				1.6							0								0
Crab	<i>Scylla paramamosain</i>						0							0								0
Crab	<i>Uca borealis</i>						0							0								0
Crab	<i>Uca lactea</i>						0							0				1				0.8
Gastropod	<i>Batillaria multififormis</i>						0		2			9	8.8		4	5						7.2
Gastropod	<i>Batillaria zonalis</i>						0	24	16	21	34	76.0	45	22	20	30	58					140.0
Gastropod	<i>Cellana grata</i>						0							0								0
Gastropod	<i>Cellana toreuma</i>						0							0								0
Gastropod	<i>Cerithidea cingulata</i>	78			2		64		11	6	80	8	84	76	4	109	318	182				551.2
Gastropod	<i>Cerithidea diajariensis</i>	12	31	20		13	60.8	66	62	64	85	82	287.2	58	25	70	50	74				221.6
Gastropod	<i>Cerithidea rhizophorarum</i>		15	9	3		21.6	3					2.4									0
Gastropod	<i>Clithon spp.</i>						0							0	2							1.6
Gastropod	<i>Echinolittorina radiata</i>						0							0								0
Gastropod	<i>Littoraria articulata</i>						0							0								0
Gastropod	<i>Lunella coronata</i>						0							0								0
Gastropod	<i>Monadonta labio</i>						0							0								0
Gastropod	<i>Nassarius festivus</i>						0	2			31		26.4	103	294	52	36	78				450.4
Gastropod	<i>Nerita albicilla</i>						0						0									0
Gastropod	<i>Nerita polita</i>						0					2	1.6									0
Gastropod	<i>Patelloida pygmaea</i>						0						0									0
Gastropod	<i>Terebralia palustris</i>			2			1.6						0									0
Gastropod	<i>Terebralia sulcata</i>	2	4	1	6	7	16.0						0									0
Gastropod	<i>Thais clavigera</i>						0						0	1								0.8
Hermit Crab	<i>Clibanarius sp.</i>						0						0									0
Hermit Crab	<i>Diogenes sp.</i>						0	1					0.8									0
Horseshoe Crab	<i>Unidentified sp.</i>						0						0									0
Seaslug	<i>Onchidium sp.</i>					1	0.8						0									0
Worm	<i>Oligochaete sp.</i>			1			0.8						0				1					0.8
Worm	<i>Sipunculus sp.</i>						0						0									0



ERM

ANNEX J3

EVENT AND ACTION PLAN

Annex J3 Event and Action Plan for Soft Shore Ecological Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Density or the distribution pattern of horseshoe crab, seagrass and intertidal soft shore communities recorded in the impact or post-construction monitoring are significantly lower than or different from those recorded in the baseline monitoring.	<ol style="list-style-type: none"> 1. Review historical data to ensure differences are as a result of natural variation or previously observed seasonal differences; 2. Identify source(s) of impact; 3. Inform the IEC, ER and Contractor; 4. Check monitoring data; 5. Discuss additional monitoring and any other measures, with the IEC, ER and Contractor. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET; 2. Make agreement on the measures to be implemented. 	<ol style="list-style-type: none"> 1. Inform the ER and in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the ER; 3. Implement the agreed measures; 4. Resubmit proposals of remedial actions if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.