



### Environmental Permit No. EP-388/2010

## Development of a Bathing Beach at Lung Mei, Tai Po

## **Independent Environmental Checker Verification**

#### Reference Document/Plan

Document/Plan to be Certified/ Verified: 2<sup>nd</sup> Post-Translocation Ecological Monitoring Report (at the

vicinity of Ting Kok East)

Date of Report: May 2019

Date received by IEC: 25 June 2021

#### Reference EP Condition / Updated EM&A Manual Requirement

Environmental Permit Condition / Updated EM&A Manual Reference Section 7.2.1.5

The qualified Marine Ecologist shall submit a report with six copies within one month from the completion of each marine ecological monitoring.

#### **IEC Verification**

I hereby verify that the above referenced document/ $\frac{1}{plan}$  complies with the above referenced  $\frac{1}{plan}$  complies  $\frac{1}{pl$ 

Mr Terence Fong Date: 28 June 2021

Independent Environmental Checker

Our ref: P:\Projects\0206709 IEC for Lung Mei EM&A\07\_ET Submission\32\_Marine Fauna Monitoring Report



Our Ref: TCS00874/16/300/L0725

Welcome Construction Co., Ltd. Flat 01, 19/F, Westley Square, 48 Hoi Yuen Road, Kwun Tong, Kowloon.

Attn: Mr. William Lam

28 June 2021
By e-mail

Dear Sir,

Re: CEDD Contract No. CV/2012/05 - Bathing Beach at Lung Mei, Tai Po 2<sup>nd</sup> Post-Translocation Ecological Monitoring Report (at the Ting Kok East)

With reference to the revised 2<sup>nd</sup> Post-Translocation Ecological Monitoring Report ((at the Ting Kok East), we have no adverse comment on the report. We herewith certify the captioned submission in accordance with Section 7.2 of the Updated EM&A Manual.

Should you have any queries, please feel free to contact the undersigned at Tel: 2959-6059 or Fax: 2959-6079 or E-mail: twtam@fordbusiness.com.

Yours sincerely, For and on Behalf of

**Action-United Environmental Services & Consulting** 

T. W. Tam

Environmental Team Leader

TW/nh

**CEDD** 

**ERM** 

Mr. K F Chan

Mr. Terence Fong

via email

via email









## Environmental Impact Assessment for Development of a Bathing Beach at Lung Mei, Tai Po Environmental Permit No. EP-388/2010

**2<sup>nd</sup> Post-Translocation Ecological Monitoring Report (at the Ting Kok East)** (May 2019)



**ECO-ENVIRO CONSULTANTS COMPANY** 

#### 1 Introduction

- 1.1 In accordance to Section 7.2 of the updated EM & A manual, it is required to conductenvironmental monitoring after marine fauna relocation at a six-monthly interval at (i) vicinity site near bathing beach at Lung Mei and (ii) The Reception Site of Ting Kok East until expiry of the Contract Maintenance Period.
- 1.2 Aim of this report is to present post-translocation monitoring objectives, methods, locations and results.

#### 2 Objectives

- 2.1 The objectives of the marine ecological monitoring are to collect data for determining whether there is any impact on the marine ecological resources (i) in the vicinity of the Lung Mei intertidal area due to the development of the bathing beach at Lung Mei, and (ii) at the Reception Site of Ting Kok East due to relocation of the target marine fauna.
- 2.2 This 2<sup>nd</sup> Marine Fauna Monitoring Report covers the marine ecological surveys conducted at the Reception Site at Ting Kok East during the construction phase.

#### 3 Scope of Impact Marine Ecological Survey at Ting Kok East

- Intertidal quantitative transect survey at one location
- Intertidal fish survey at one location
- Semi-quantitative Crustacean Survey at one location

#### 4 Methodology

- 4.1 Intertidal quantitative transect survey
- 4.1.1 The reception site at Ting Kok East for fauna relocation from the project site was identified and recommended during EIA stage. The project specification required that the captured target marine fauna from the project site should be released to the reception area with similar habitat and shore elevation where they are captured. The target fauna will be captured from the full tidal range at the project site. Therefore inter-tidal habitats at representative three tidal levels for full tidal range at Ting Kok East are selected to be sampled to collect data to characterize baseline condition.
- 4.1.2 The intertidal quantitative transect survey was undertaken during daytime low tide (<1mCD), Three 30-m horizontal transects parallel to the shoreline was haphazardly deployed at each of the three shore heights (0.5 mCD, 1.0 mCD and 1.5 mCD) areas where most of the intertidal fauna inhabit) within the intertidal and shallow subtidal zones. Five 0.25m x 0.25m quadrats was placed randomly along each transect to assess the abundance and diversity of marine fauna (total sample number = 3 shore heights x 3 transects x 5 quadrats = 45). For each quadrat, a photographic record was obtained, and the abundance of sessile fauna (e.g. barnacles and rock oysters, expressed as percentage planar cover of the quadrat) would be estimated. Surface sediment (approximate volume = 25 cm x 25cm x 5 cm =3,125 cm³) was

wet-sieved in situ (mesh size of 2 mm) to obtain all mobile organisms living on or in the surface sediment within each quadrat ('epifauna', including underside of the boulders/cobbles). Epifauna was identified to species level where possible and their abundance recorded to calculate epifaunal abundance per quadrat for comparison of abundance during subsequent ecological monitoring. Average percentage cover of each species was calculated by cumulated cover divided by number of quadrat.

- 4.1.3 All crustacean species observed and their relative abundance along each transect was also recorded during the transect surveys (semi-quantitative crustacean surveys) along 1 m belt area on each side of the transect line.
- 4.1.4 Sampling transects are shown in **Appendix I**. The selected marine ecological monitoring/survey site is the reception site for fauna relocation programme at the bathing beach construction site.
- 4.2 Semi-quantitative crustacean survey
- 4.2.1 All crustacean species observed and their relative abundance along each transect (0.5m each side) shall also be recorded during the transect surveys.
- 4.3 Intertidal fish survey
- 4.3.1 The intertidal fish survey was involve field observation, photographic record and drop-trapping during daytime low tide (tidal level <1.5 mCD) to examine the diversity and abundance of fish species. One-metre-square drop-traps was deployed by two persons, each holding the trap above the water surface when the water depth is about 0.2-0.5 m, and then dropped onto the sediment surface to capture intertidal fish. All intertidal fish captured using this method was recorded. At least 10 drop-trap samples was collected during each survey. All captured intertidal fish was identified to species level wherever possible and returned to their natural habitats after identification works as far as practicable. Intertidal fish survey area is given in **Appendix I**.
- 4.4 Shannon diversity index (H) and Pielou's evenness index (J)
- 4.4.1 The Shannon diversity index (H) is another index that is commonly used to characterize species diversity in a community. Shannon's index accounts for both abundance and evenness of the species present. The proportion of species i relative to the total number of species  $(p_i)$  is calculated, and then multiplied by the natural logarithm of this proportion  $(\ln p_i)$ . The resulting product is summed across species, and multiplied by -1:

$$H = -\sum_{i=1}^{N} p_i \ln p_i$$

The evenness of a community can be represented by Pielou's evenness index:

$$J = H'/Hmax = H'/lnS$$

Where H ' is the number derived from the Shannon diversity index and H' max is the maximum possible value of H ', equal to:

$$H_{\text{max}} = -\sum_{i=1}^{S} \frac{1}{S} \ln \frac{1}{S} = \ln S$$

J is constrained between 0 and 1. The less evenness in communities between the species (and the presence of a dominant species), the lower J is.

#### 5 Survey Results

#### Quantitative quadrats survey results

5.1 Quantitative quadrat surveys were conducted at Ting Kok East on 21 January 2019. A total of 45 quadrats were surveyed from three shore heights (0.5 mCD, 1.0 mCD and 1.5 mCD). The representative photos of survey transect and quadrats were presented in **Appendix IIa.** The survey results of quantitative quadrat survey were summarized in **Appendix III**. A total of 19 epifauna species was recorded, in which Molllusca made up the majority (79%) of the phylum composition (**Table.1**).

Table.1 Total Number of Recorded Epifauna Species in Each Phylum

Dhylum/Cubabylum	Number of Species						
Phylum/Subphylum	Baseline (Jun-17)	2 <sup>nd</sup> Monitoring (Jan-19)					
Mollusca	17	15					
Chordata	2	1					
Annelida	2	1					
Arthropoda	5	2					
Sipuncula	1	0					
Polyplacophora	1	0					
Total No. of Species	28	19					

5.2 Similar to the baseline, the highest abundance of epifauna was recorded at 1 mCD, in which total of 506 individuals of epifauna were recorded, followed by 1.5 mCD (273 individuals) and 0.5 mCD (148 individuals) (**Table 2**). The most abundant species at 0.5 mCD, 1 mCD and 1.5 mCD were sea snails *Cerithidea cingulata*, sandy shore snail *Batillaria zonalis*, and the crowned turban shell *Lunella coronata* respectively. The most abundant species were all under taxonomic group of Mollusca.

Table 2 No. of Mobile Animal Recorded during Baseline (Jul018) and 2nd Monitoring (Jan-19)

(0 25)									
Tidal Level	No. of mobile animal								

	Baseline (Jun-17)	2 <sup>nd</sup> Monitoring (Jan-19)
0.5mCD	131	148
1.0mCD	492	506
1.5mCD	213	273

5.3 The mean number of species per quadrat for mobile fauna and sessile fauna at three tidal levels were summarized in the **Table 3.** Similar to baseline survey result, the highest number of species of mobile fauna and sessile organisms were both recorded at the 1.0 mCD, which are 6.53±2.07 and 1.60±0.74 respectively. The overall mean of species number of mobile fauna and sessile organisms at Ting Kok East were 4.47±1.83 and 1.11±0.88 respectively.

Table 3. The Mean Number of Epifaunal Species per Quadrat

		Tidal level									
	0.5 n	nCD	1.0 n	nCD	1.5 n	ıCD	Overall				
	Baseline (Jun-17)	2 <sup>nd</sup> Monitoring Jan-19									
Mobile Fauna (no. of species)	2.80±1.66	5.13±2.10	4.53±1.25	6.53±2.07	3.13±1.25	5.53±2.41	3.49±1.56	5.73±2.23			
Sessile Organisms (no. of species)	1.40±0.74	1.26±0.80	1.53±0.80	1.60±0.74	1.13±0.64	0.87±0.52	1.36±0.68	1.24±0.74			

- 5.4 Species richness, diversity and evenness indices are inter-related. A diversity index integrates two components: the total number of species (d) and the distribution of individuals among species, into a single number (H). H' is usually high (e.g. >3 or 4) in environmentally undisturbed benthic communities, and low (e.g. <1) in highly disturbed communities.
- 5.5 Based on the calculation (excluding sessile organism), the species diversity at 0.5 mCD (H=2.38) was higher than 1.0 mCD (H=2.06) and 1.5 mCD (H=2.32). The overall species diversity (H) of epifauna was 2.24. The species evenness (J) was similar among three tidal levels ranging from 0.80 to 0.94, and the overall species evenness was 0.85. The calculated results were summarized in **Table 4.** Both baseline and January monitoring surveys showed medium (between 1-3) species diversity and evenness (**Table 4**).

**Table 4. Species Diversity and Evenness** 

			Tidal Level					
		0.5 mCD	1.0 mCD	1.5 mCD	Overall			
Н	Baseline (Jun-17)	2.01	2.38	1.77	2.00			

		2 <sup>nd</sup> Monitoring (Jan-19)	2.38	2.06	2.32	2.24
Ī		Baseline (Jun-17)	0.74	0.90	0.71	0.64
	J	<b>2<sup>nd</sup> Monitoring</b> (Jan-19)	0.94	0.80	0.93	0.85

#### Semi-quantitative crustacean survey results

5.6 Semi-quantitative crustacean surveys were undertaken to record all crustaceans along 1 m belt area on each side of the transect line, shown as **Table 5.** Similar to baseline, the highest number of species recorded was at 0.5 mCD (Baseline:17, Jan-19:7), followed by 1.0 mCD (Baseline:13, Jan-19:6) and 1.5 mCD (Baseline:5, Jan-19:4). The relative abundance of all crustaceans are shown in Table 6. The recorded species belong to common species (with no conservation interest).

Table 5. Total Number of Crustacean Species Recorded at Different Tidal Levels from Semi-quantitative Survey

	0.5 r	nCD	1.0 n	nCD	1.5 mCD			
	Baseline	2 <sup>nd</sup> Monitoring	Baseline	2 <sup>nd</sup> Monitoring	Baseline 2 <sup>nd</sup> Monitor			
	(Jun-17)	(Jan-19)	(Jun-17)	(Jan-19)	(Jun-17)	(Jan-19)		
No. of	17	7	13	6	5	4		
Crustacean								
Species								

Table 6 Total Number of Crustacean Species and their Abundance Recorded from Semi-quantitative Survey

										Abund	ance								
Conservation		0.5m above mCD (Relative low tidal level)							1.0m ab	ove mCD (M	ledium tio	lal level)		1.5m above mCD (Relative high tidal level)					
Crustacean Species	Status	1		2		3		1		2		3		1		2		3	
		Jun-17	Jan-19	Jun-17	Jan-19	Jun-17	Jan-19	Jun-17	Jan-19	Jun-17	Jan-19	Jun-17	Jan-19	Jun-17	Jan-19	Jun-17	Jan-19	Jun-17	Jan-19
Ligia exotica	-											+		+	+		+	+	+
Alpheus																			
brevicristatus	-	++	+		+	++	+	+				+	+			+			
Alpheus lobidens	-	++	+					+		++	+	+							
Clibanarius																			
longitarsus	-	+		+	+	+	+	+		+	+		+						
Metopograpsus		+		+		+		++	+	+		+		+	+		+	+	+
frontalis	-	<b>T</b>		+		<b>T</b>		++	<b>T</b>	+		<b>T</b>		т	<b>T</b>		<b>T</b>	+	<b>T</b>
Palaeman serrifer	-	+	+	+	+	+		+	+	+		+							
Pyrhila pisum	-			+															
Etisus laevimanus	-			+		+						+							
Gaetice depressus	-			+						+	+		+	+	+	+	+		+
Leptodius exaratus	-			++	+	+	+	+		+									
Lysmata wurdemanni	-	+		+															
Petrolisthes boscii	-	+																	
Philyra pisum	-			+	+	+				+						+			
Portunus pelagicus	-			+															
Thalamita danae	-			+		+	+												
Stimpson  Perisesarma bidens	-			+								+							

Thalamita crenata	-		++	+		+			+					+	
Amphipada sp.	-				+				+						
Scopimera globosa	-										+	+	+		+

NOTE: "+"Occur "++" Common "+++" Abundant

<sup>\*</sup> Species listed as "Lowest Concern" in IUCN Red List was not shown in the Conservation Status Column

#### Inter-tidal fish survey results

5.7 The inter-tidal fish survey was conducted at the area indicated in **Appendix I**. From the survey, a total of 7 species were recorded during the baseline survey and only 1 species (*Therapon jarbua*) were recorded during January 18 survey. The recorded species were low in abundance of 0.1 individual per square meter. Other than the recorded fish, Brown frillfin goby, Shimofuri goby, and *Sillago japonicus* are common recorded inside the survey area. The list of the recorded species and their abundance were shown in **Table 7**. The recorded fish species belong to common species (with no conservation interest). The survey results were shown in **Appendix III**.

Table 7. Average Abundance of Inter-tidal Fish Recorded from 10 drop-traps

Common Name		Abundance	e per m <sup>2</sup>
	Species	D !! (I 17)	2 <sup>nd</sup> Monitoring
		Baseline ( <b>Jun-17</b> )	(Jan-19)
Dusky frillgoby	Bathygobius fuscus	0.3	0
Target shrimp goby	Cryptocentrus strigilliceps	0.1	0
Fan-bellied leatherjacket	Monacanthus chinensis	0.1	0
Pointed goatfish	Parupeneus biaculeatus	0.1	0
Crescent-banded grunter	Therapon jarbua	0.4	0.1
Tridentiger bifasciatus	Tridentiger bifasciatus	0.2	0
Chameleon goby	Tridentiger trigonocephalus	0.1	0

Note: All the recorded fishes are common and listed as Least Concern in IUCN Red List except *Parupeneus biaculeatus* and *Tridentiger trigonocephalus* which were not assessed.

#### 6 Discussion and Summary

- 6.1 A total of 19 epifauna species were recorded from the quantitative quadrat survey. The highest abundance was recorded at 1mCD, where 506 individuals of epifauna were recorded. The overall species diversity (H) and species evenness (J) were 2.24 and 0.85 respectively. Both baseline and January 2019 monitoring surveys showed medium (between 1-3) species diversity and evenness (**Table 4**).
- 6.2 For the semi-quantitative crustacean survey, a total of 11 crustacean species were recorded from 9 transects at 3 different shore heights. The recorded species comprised mostly common

- species.
- 6.3 For the inter-tidal fish survey, only 1 common species were recorded.
- 6.4 In conclusion, since the species diversity and evenness showed no significant differences or similar trends between baseline and the 2<sup>nd</sup> monitoring survey except only 1 fish were recorded during the intertidal survey.
- 6.5 No deterioration in the general condition of the habitat was observed. No deterioration of the animal community was observed in the ecological monitoring results when compared with the baseline ecological monitoring results.

## Appendix I Figure



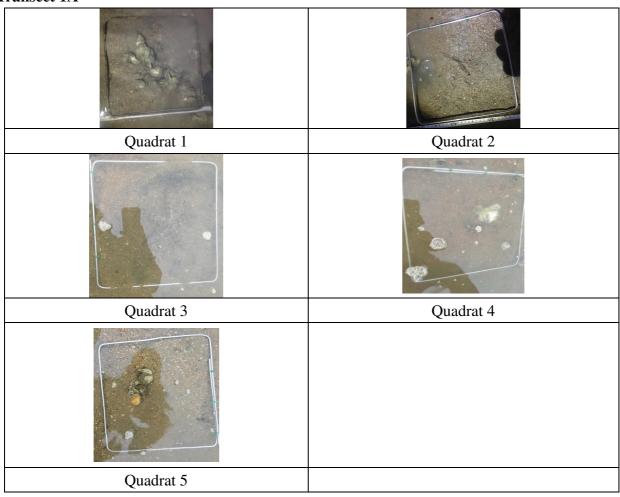
Figure 1. Survey locations at Ting Kok East.

## **Appendix IIa Photos – Survey Transects and Quadrats**

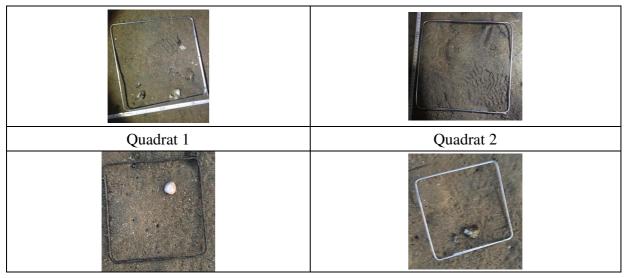
Survey Location: Ting Kok East

**Transect 1 (A-C):** 0.5 m above mCD (relative low tidal level)

#### **Transect 1A**

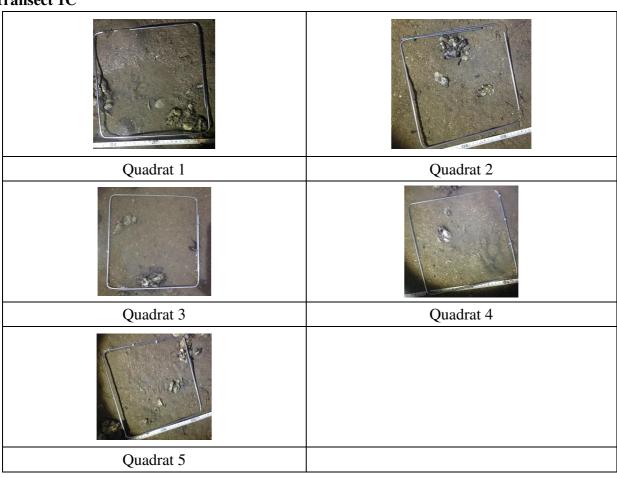


#### **Transect 1B**



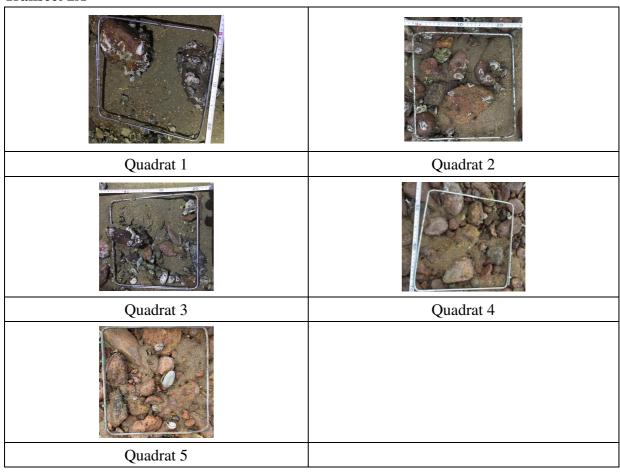
Quadrat 3	Quadrat 4
Quadrat 5	

## **Transect 1C**

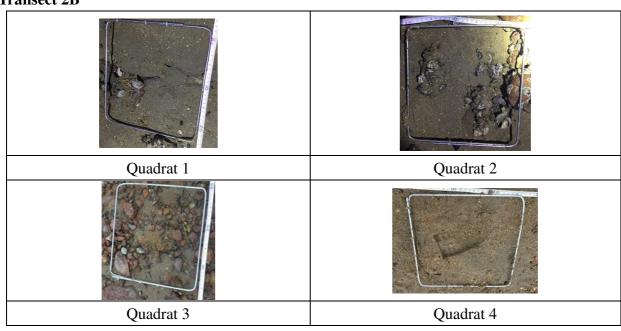


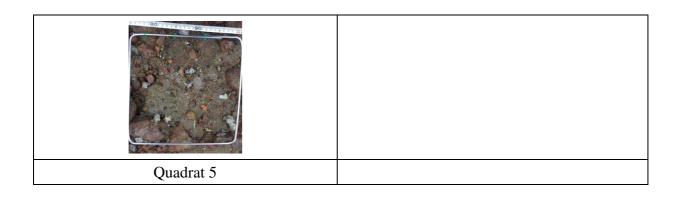
Transect 2 (A-C): 1 m above mCD (medium tidal level)

## **Transect 2A**

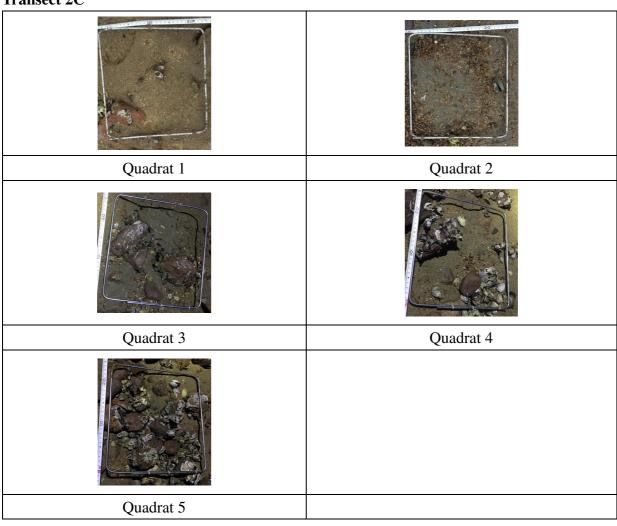


## **Transect 2B**





## **Transect 2C**

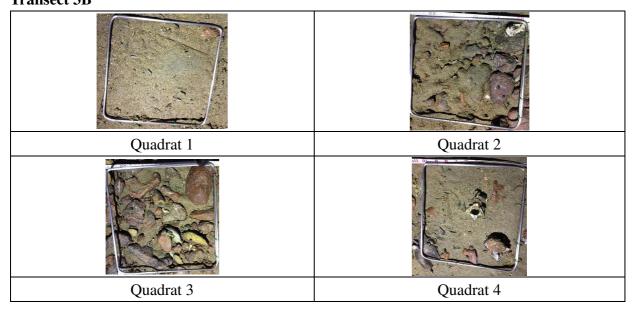


**Transect 3 (A-C):** 1.5 m above mCD (relative high tidal level)

## Transect 3A

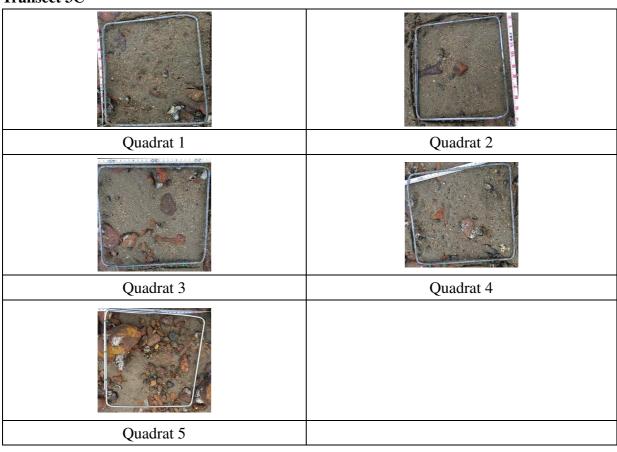
Quadrat 1	Quadrat 2
Quadrat 3	Quadrat 4
SOULD OF S	
Quadrat 5	

## Transect 3B



Quadrat 5	

## **Transect 3C**



# Appendix IIb – Representative Photographs of Ting Kok East Survey





**Quadrat Survey** 





**Drop Net Survey** 



Therapon jarbua



Sieving the Sediment Sample for Infauna





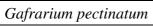
Various mollusks in the sieve





Gafrarium sp.







Cerithidea cingulata

## **Appendix III Survey Results**

## **Ting Kok Quantitative Quadrat Survey Result (0.5mCD)**

Transect							1					2					3				
	Qua	adrat		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5			
	Phylum	Scientific Name	Conversation status	Relative Abundance																	
		Batillaria zonalis	-	3	4	2	2	-	-	2	1	-	-	-	2	-	-	-			
		Batillaria multiformis	-	1	1	2	-	-	1	-	-	-	1	1	-	-	-	-			
		Cerithidea cingulata	-	8	4	1	3	-	5	2	3	-	2	1	2	-	-	1			
		Isognomon isognomum	-	-	1	-	2	2	4	4	-	-	-	-	1	-	3	-			
	Mollusca	Lunella coronata	-	1	1	-	-	2	1	1	-	-	1	1	2	-	1	-			
		Gafrarium pectinatum	-	2	3	-	1	1	-	-	-	2	-	-	-	-	-	-			
		Asaphis dichotoma	-	-	2	3	2	3	-	2	2	-	-	-	-	1	-	-			
Mobile Fauna		Cronia margariticola	-	-	-	-	2	1	-	-	2	-	-	1	-	1	-	2			
		Barbatia virescens	-	-	2	1	-	-	-	-	-	-	1	-	-	-	-	-			
		Brachidontes variabilis	-	3	-	-	1	1	-	-	-	2	1	-	-	-	1	-			
		Scapharca cornea	-	-	2	3	-	-	-	1	-	-	-	1	-	-	1	-			
	Arthropoda	Alpheus lobidens	-	2	-	-	1	-	1	-	-	-	2	-	-	1	-	-			
	Ai tin opoda	Paguroidea sp.	-	-	2	-	2	1	-	-	-	2	2	-	-	1	1	-			
	Chordata	Bathygobius fuscus	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-			
	Sipuncula	Sipunculus nudus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Mollusca	Saccostrea cucullata	-	30%	16%	35%	25%	10%	-	5%	-	15%	10%	5%	15%	5%	10%	5%			
Sessile Organisms	Arthropoda	Amphibalanus amphitrite	-	-	-	-	-	-	-	-	-	1%	-	-	-	-	-	-			
Sessife Of gamsilis	Annelida	Serpulorbis imbricatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Chordata	Styela plicata	-	-	-	5%	-	2%	-	-	-	3%	-	-	-	5%	-	5%			

## **Ting Kok Quantitative Quadrat Survey Result (1.0mCD)**

_		Transect				1					2					3		
		Quadrat		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	Phylum	Scientific Name	Conversation status							Relat	ive Abu	ndance						
		Batillaria zonalis	-	15	12	11	19	10	22	8	12	5	7	11	6	3	-	8
		Batillaria multiformis	-	-	2	12	8	11	-	7	2	24	7	18	-	23	11	10
		Cerithidea cingulata	-	3	4	5	3	-	3	2	-	-	3	4	2	5	3	-
		Cerithidea djadjariensis	-	9	11	6	-	2	4	-	-	-	1	1	-	3	4	1
	Mollusca	Clithon oualaniensis	-	8	11	4	-	7	-	-	-	-	-	-	2	-	-	-
		Lunella coronata	-	5	3	1	-	2	5	-	-	1	-	-	1	1	-	-
Mobile Fauna		Gafrarium pectinatum	-	-	-	1	-	2	-	-	-	2	-	1	-	-	-	-
		Asaphis dichotoma	-	-	3	1	4	1	-	-	1	-	-	2	3	-	-	-
		Tegillarca granosa	-	2	1	1	-	2	-	2	-	-	1	1	-	1	2	-
		Scapharca cornea	-	1	1	1	2	2	1	4	-	-	2	1	-	2	1	-
		Cellana grata		-	-	2	1	-	2	-	2	2	-	1	-	ı	1	-
		Brachidontes variabilis	-	-	1	1	2	3	5	6	2	-	-	ı	-	ı	3	-
	Annelida	Dendronereides sp.	-	-	2	3	2	1	-	-	-	2	1	1	1	-	-	1
	Mollusca	Saccostrea cucullata	-	5%	3%	4%	10%	15%	3%	15%	20%	16%	19%	20%	7%	10%	5%	15%
	Arthropoda	Amphibalanus amphitrite	-	-	-	2%	2%%	-	5%%	-	2%	-	-	1	-	-	5%	-
Sessile Organisms	Polyplacophora	Acanthopleura japonica	-	-	-	1%	2%	-	-	-	-	3%	-	-	-	-	1	-
	Annelida	Serpulorbis imbricatus	-	-	-	-	-	-	-	-	-	-	-	3%	-	-	-	-
	Chordata	Styela plicata	-	-	-	1	1	-		-	-	-	-	1	-	ı	1	-

## **Ting Kok Quantitative Quadrat Survey Result (1.5mCD)**

Transect				1						2					3					
	Phylum Scientific Name  Batillaria zonalis Batillaria multiformis Cerithidea cingulata Lunella coronata Gafrarium pectinatum Monodonta labio Cellana grata Asaphis dichotoma Brachidontes variabilis Thalamita crenata Annelida Dendronereides sp. Mollusca Saccostrea cucullata			1	2	3	4	5	1	2	3	4	5	1	2	3	4	5		
	Phylum	Scientific Name	Conversation status		Relative Abundance															
		Batillaria zonalis	-	1	2	3	-	3	-	2	6	-	-	1	1	-	-	-		
		Batillaria multiformis	-	9	14	4	2	5	-	-	2	2	5	-	2	1	-	-		
		Cerithidea cingulata	-	-	3	4	9	-	-	-	3	2	-	2	-	-	-	-		
	Mollusca		Lunella coronata	-	2	1	2	-	9	3	-	-	-	3	7	-	9	-	12	
		Gafrarium pectinatum	-	2	3	1	5	-	8	-	11	-	-	2	3	-	-	-		
Makila Farra		Monodonta labio	-	-	2	3	-	-	3	-	3	5	-	-	3	-	-	-		
Mobile Fauna		Cellana grata	-	-	-	2	-	2	3	1	-	-	1	2	-	4	-	-		
		Asaphis dichotoma	-	2	1	1	-	2	-	-	-	-	-	-	1	-	1	-		
		Brachidontes variabilis	-	-	1	2	2	-	5	-	7	-	1	1	-	2	1	-		
	A4h	Metopograpsus frontalis	-	-	6	3	-	-	-	6	-	-	2	3	3	-	1	-		
	Arthropoda	Thalamita crenata	-	-	2	1	-	1	-	-	3	-	-	-	2	-	1	-		
	Annelida	Dendronereides sp.	-	-	-	-	4	-	2	-	-	-	1	-	-	1	-	-		
	Mollusca	Saccostrea cucullata	-	5%	5%	10	-	-	10%	15%	6%	2	-	-	-	5%	5%	3%		
Sessile Organisms	Arthropoda	Amphibalanus amphitrite	-	-	-	1	1%	-	-	-	-	-	-	-	-	-	-	-		
	Annelida	Serpulorbis imbricatus	-	-	1%	1	-	-	-	-	-	-	2%	-	-	-	-	-		

**Ting Kok Inter-tidal fish survey results** 

		Net Drop Replicates										
	1	2	3	4	5	6	7	8	9	10		
Species					Ab	undan	ce					
Bathygobius fuscus												
Cryptocentrus strigilliceps												
Monacanthus chinensis												
Parupeneus biaculeatus												
Therapon jarbua					1							
Tridentiger bifasciatus												
Tridentiger trigonocephalus												

All the recorded fishes are common and listed as Least Concern in IUCN Red List except *Parupeneus biaculeatus* and *Tridentiger trigonocephalus* which were Not Evaluated (NE).

## The End