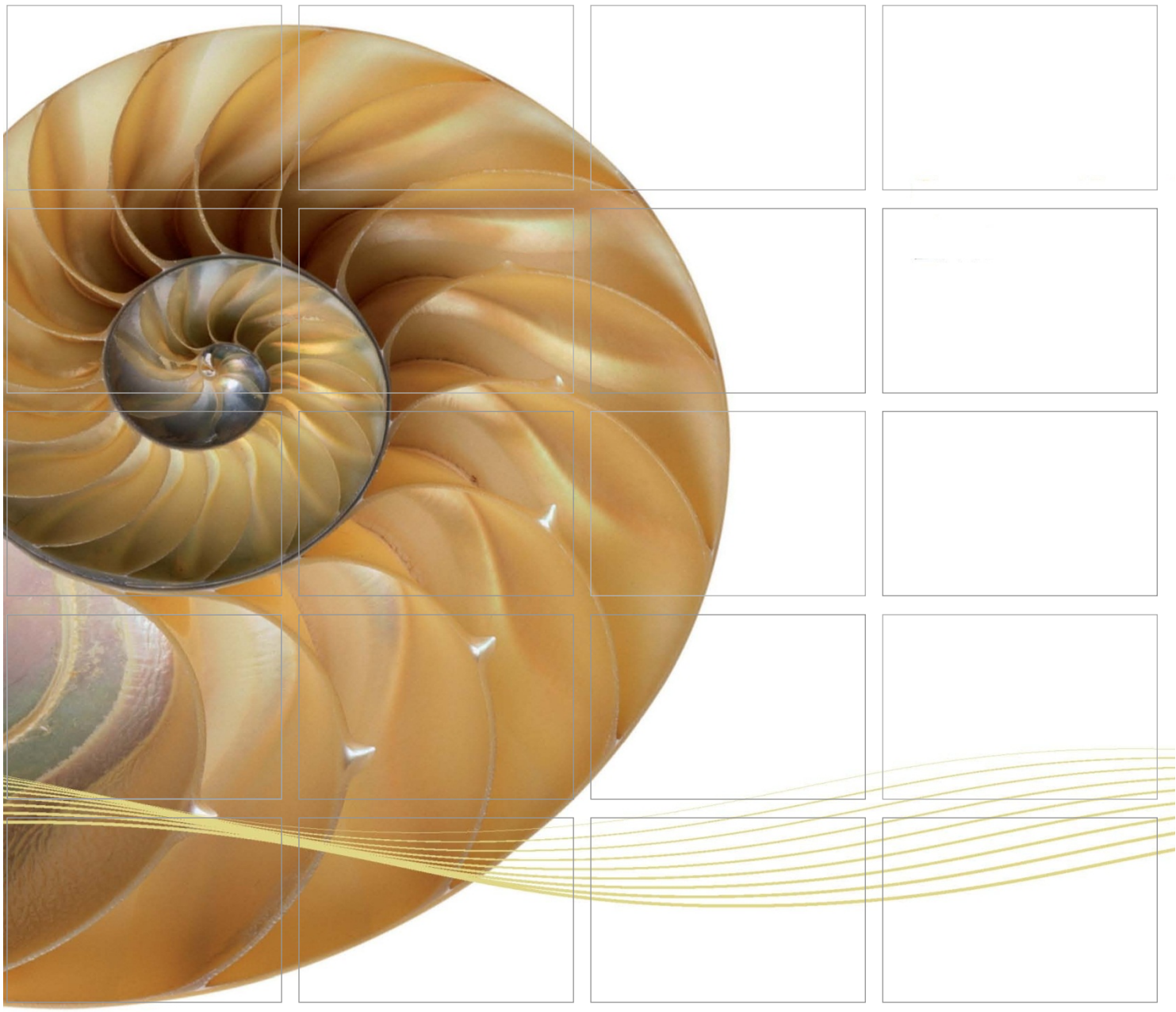
REPORT



Proposed 11kV Submarine Cables Replacement Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O

3rd Weekly Coral Impact Monitoring Survey Report

18 January 2016

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Client:	Project No:
CLP Power Hong Kong Limited (CLP)	0259952
Summary: This document presents the 3rd Weekly Coral Impact Monitoring Survey Report for the proposed 11kV Submarine Cables Replacement Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O.	Date: 18 January 2016 Approved by:  *Terence Fong* *Partner*

Revision	Description	By	Checked	Approved	Date
v0	3rd Weekly Coral Impact Monitoring Survey Report	CY	JT	TF	18/1/16

Distribution

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Proposed 11kV Submarine Cables Replacement Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O - Environmental Monitoring & Audit

Environmental Certification Sheet

EP-461/2013

Reference Document/Plan

Document/~~Plan~~ to be ~~Certified~~/ Verified:	Third Weekly Coral Impact Monitoring Survey Report
Date of Report:	18 January 2016
Date prepared by Environmental Team:	18 January 2016
Date received by IC:	18 January 2016

Reference Project Profile Annex E EM&A Requirement and EP Requirement

EM&A Requirement: Project Profile, Annex E EM&A Requirements, Section E2

Content: Coral Monitoring Plan

E.2.3 "The focus of the impact monitoring will be to determine if the corals are impacted during cable installation works and if such impact is a result of cable laying works. The results of the coral monitoring will be reviewed in association with the water quality monitoring results. Impact monitoring shall be undertaken during any process of the cable installation, including landing site preparation, cable laying and landing works, and backfilling. Similar information to be obtained during the Baseline Survey shall be obtained during each impact monitoring event, including information on: the health status of the corals, condition of their environment survey date, time, atmospheric, sea and tidal conditions during the survey and sediment cover in terms of percentage of coverage and approximate thickness. Each coral colony shall also be photographed."

E.2.5 "Letter reports shall be provided to AFCD, which shall include the monitoring results in addition to the operating practices of the dredging works and cable burial machine during sampling (including position, cable burial depth, etc.) and an interpretation of monitoring results in regard to cable laying works and coral conditions."

"Each Impact Monitoring Report will be provided within one week of the completion of the weekly monitoring surveys."

EP Condition: Condition No. 2.1

2.1 All measures described in the Project Profile (No. PP-489/2013) submitted by the applicant on 30 May 2013 shall be fully implemented.

IC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-461/2013.

Terence Fong, Date: 18 January 2016

Independent Checker

CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

CLP Power Hong Kong Limited (CLP) is replacing the existing 11 kV submarine cable connecting Liu Ko Ngam to Pak Sha Tau Tsui, Kat O in order to ensure continuous electricity supply on the island ("the Project" with location shown in *Figure 1.1*).

The Project involves the installation of an 11kV cable circuit consisting of two individual cables, with an intended burial depth up to 5 m for the submarine cable section and about 1 m for the land section. The two submarine cables (except the shore end sections which will be of only about 1 m separation and joining into a single cable trench at each landing site) will be 30 m away from each other and running parallel along the alignment. In areas (especially near the landing site) where the cable burial depth does not meet the requirements due to seabed geotechnical constraints, a protective cover such as a concrete slab will be adopted. The total length of the proposed cable alignment is approximately 880 m.

The cable installation process will only require minor works within the marine environment. Only small scale construction works are required onshore at each of the cable landing sites, i.e. Liu Ko Ngam and Pak Sha Tau Tsui, for connecting the submarine cable with existing overhead land cable systems.

Environmental assessment for the Project has been carried out as part of the Project Profile (Register No.: PP-489/2013) required under the *Environmental Impact Assessment Ordinance* (*EIAO*). An Environmental Permit (EP) has been issued by Environmental Protection Department (EPD) on 27 Aug 2013 for the Project (EP-461/2013)(1), which links directly to the Environmental Monitoring and Audit (EM&A) programme as well as the mitigation measures set out and agreed in the approved Project Profile (PP-489/2013) (2).

Construction of the Project commenced on 22 December 2015.

1.2 OBJECTIVES OF THE CORAL MONITORING PROGRAMME

Under the EM&A programme of the Project, a Coral Monitoring Programme is required to be implemented to verify the Project Profile (3) prediction that no unacceptable residual impacts to coral assemblages will occur provided that suitable mitigation measures, including the placement of a 5 m wide silt

(1) Environmental Permit No. EP-461/2013. Available at : http://www.epd.gov.hk/eia/register/permit/latest/ep4612013.htm

(2) ERM (2013) Replacement of the Existing 11KV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O – Project Profile submitted for Applications for Permission to Apply Directly for an Environmental Permit (PP-489/2013). Available at http://www.epd.gov.hk/eia/register/profile/latest/dir229/dir229.pdf

(3) ERM (2013) Replacement of the Existing 11KV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O – Project Profile submitted for Applications for Permission to Apply Directly for an Environmental Permit (PP-489/2013). Available at http://www.epd.gov.hk/eia/register/profile/latest/dir229/dir229.pdf

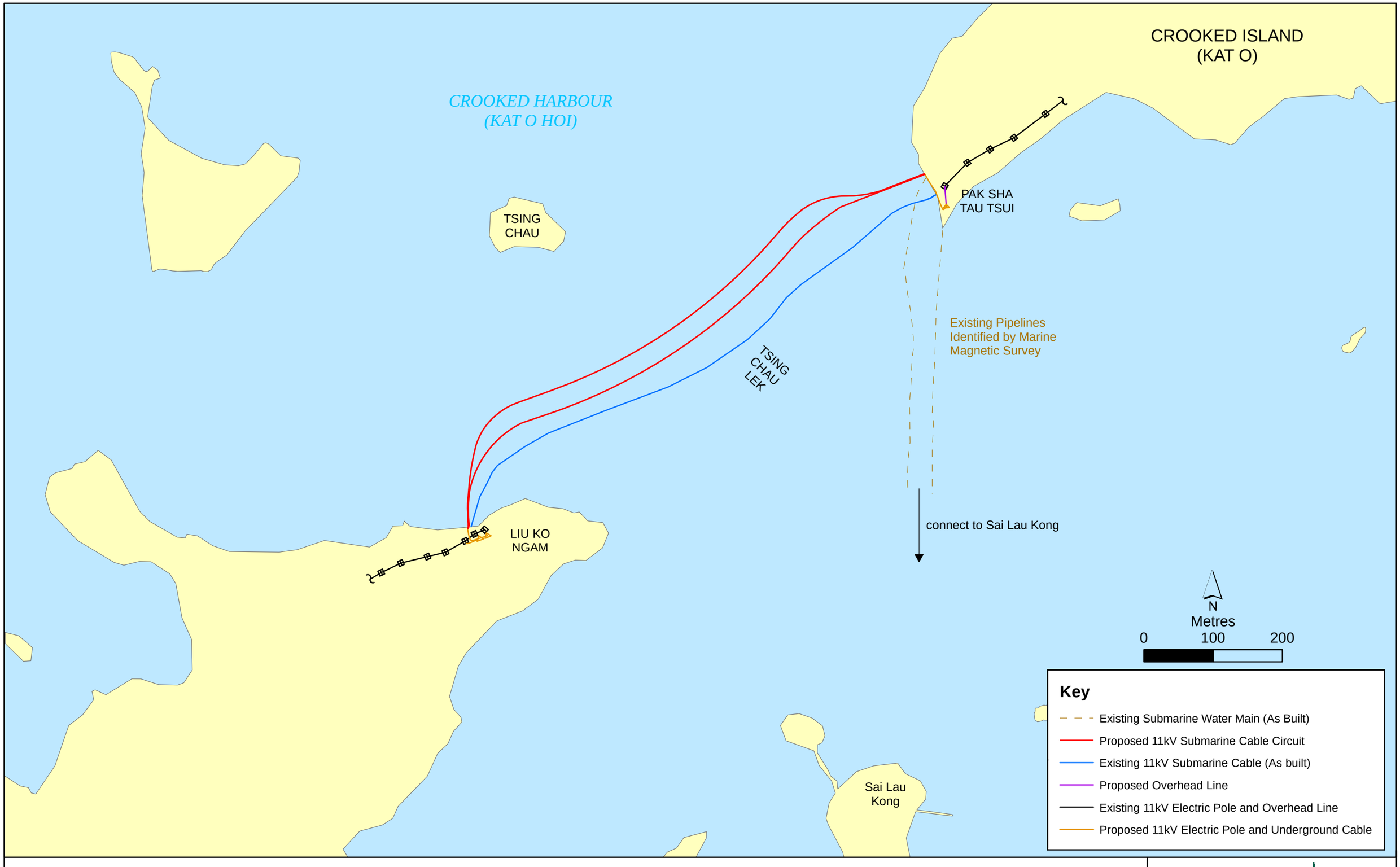

Figure 1.1

Alignment of the Proposed 11kV Submarine Cable Circuit from Liu Ko Ngam to Pak Sha Tau Tsui

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Date: 24/11/2014

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curtain for protecting the coral communities during dredging works, were implemented. In the event that significant adverse impacts are identified as a consequence of the works, monitoring would also allow for implementation of appropriate remedial actions to reduce such impacts. The Coral Monitoring Programme comprises Baseline, Impact and Post-Project monitoring before, during and after the Project construction, respectively.

1.3 PURPOSE OF THIS REPORT

The purpose of this 3rd *Weekly Coral Impact Monitoring Survey Report* is to report findings of the 3rd weekly coral impact monitoring surveys and investigate any observable impact of the cable installation works on coral colonies near the cable landing sites at Pak Sha Tau Tsui and Liu Ko Ngam. Baseline Coral Monitoring Surveys were conducted on 29 and 30 October 2015 which provided baseline data prior to the commencement of the cable installation works. The 3rd weekly coral impact monitoring surveys were conducted on 4 and 7 January 2016 when marine works were conducted at Pak Sha Tau Tsui. Coral conditions recorded during impact monitoring are compared with the baseline conditions in order to identify any observable impacts on corals during the cable installation works.

1.4 STRUCTURE OF THE REPORT

The remainder of the report is structured as follows:

Section 2: Coral Monitoring - Details the coral monitoring locations and frequency, monitoring methodology and impact coral monitoring results, and the compliance with the Action and Limit Levels in accordance with the approved *Coral Translocation and Monitoring Plan* (1).

Section 3: Conclusion - Concludes the representativeness of the impact coral monitoring results for the Project compared to baseline.

(1) ERM (2014) Replacement of the Existing 11KV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O. Coral Translocation and Monitoring Plan

2 CORAL MONITORING

2.1 INTRODUCTION

Construction of the Project commenced on 22 December 2015. The 3rd weekly coral impact monitoring surveys were conducted on 4 and 7 January 2016 at two impact stations at Liu Ko Ngam and Pak Sha Tau Tsui (outside and on either side of the working corridor) and at the control station situated to the north/ east of Tsing Chau (*Figure 2.1).*

Weather conditions were cloudy on 4 January and sunny on 7 January 2016 during the surveys with calm sea conditions. Underwater visibility at Pak Sha Tau Tsui, Liu Ko Ngam and Tsing Chau was around 2 to 3 m and 0.5 to 1 m during the surveys on 4 and 7 January 2016, respectively.

2.2 MONITORING METHODOLOGY

A total of 30 healthy coral colonies were tagged and surveyed at each of the impact and control stations on 29 and 30 October 2015 during the baseline monitoring surveys. These tagged colonies were re-visited and monitored during the impact monitoring to investigate any observable impact of the cable installation works on coral colonies near the cable landing sites. The coral monitoring results were evaluated against the Action and Limit Levels based on the conditions of the corals recorded during impact monitoring as well change in sediment cover on corals prior to and during cable installation works (please refer to *Table 2.1* for the Action and Limit Levels and *Table 2.2* for actions proposed to be undertaken in case of exceedance of the levels).

Photographic records of each coral colony tagged in the Baseline Survey were collected from an angle that best represents the entire colony, and photographs maintaining the same aspect and orientation were taken in Impact Monitoring Surveys (see *Annex A*). Adoption of the same monitoring method allows for direct comparison of baseline data with the impact monitoring data in order to determine any changes in conditions of corals after commencement of the cable installation works. Should impacts caused by the cable installation process to corals be identified, appropriate remedial action can be implemented to reduce such impacts (*Table 2.2*).

Table 2.1 Action and Limit Levels for Coral Monitoring

Level	Descriptions
Action Level	If during the Impact Monitoring a 15% increase in the percentage of sedimentation on the corals occurs at more than 20% of the tagged coral colonies at the Impact Monitoring Station, which is not recorded at the Control Monitoring Station, then the Action Level is exceeded.
Limit Level	If during the Impact Monitoring a 25% increase in the percentage of sedimentation on the corals occurs at more than 20% of the tagged coral colonies at the Impact Monitoring Station, which is not recorded at the Control Monitoring Station, then the Limit Level is exceeded.

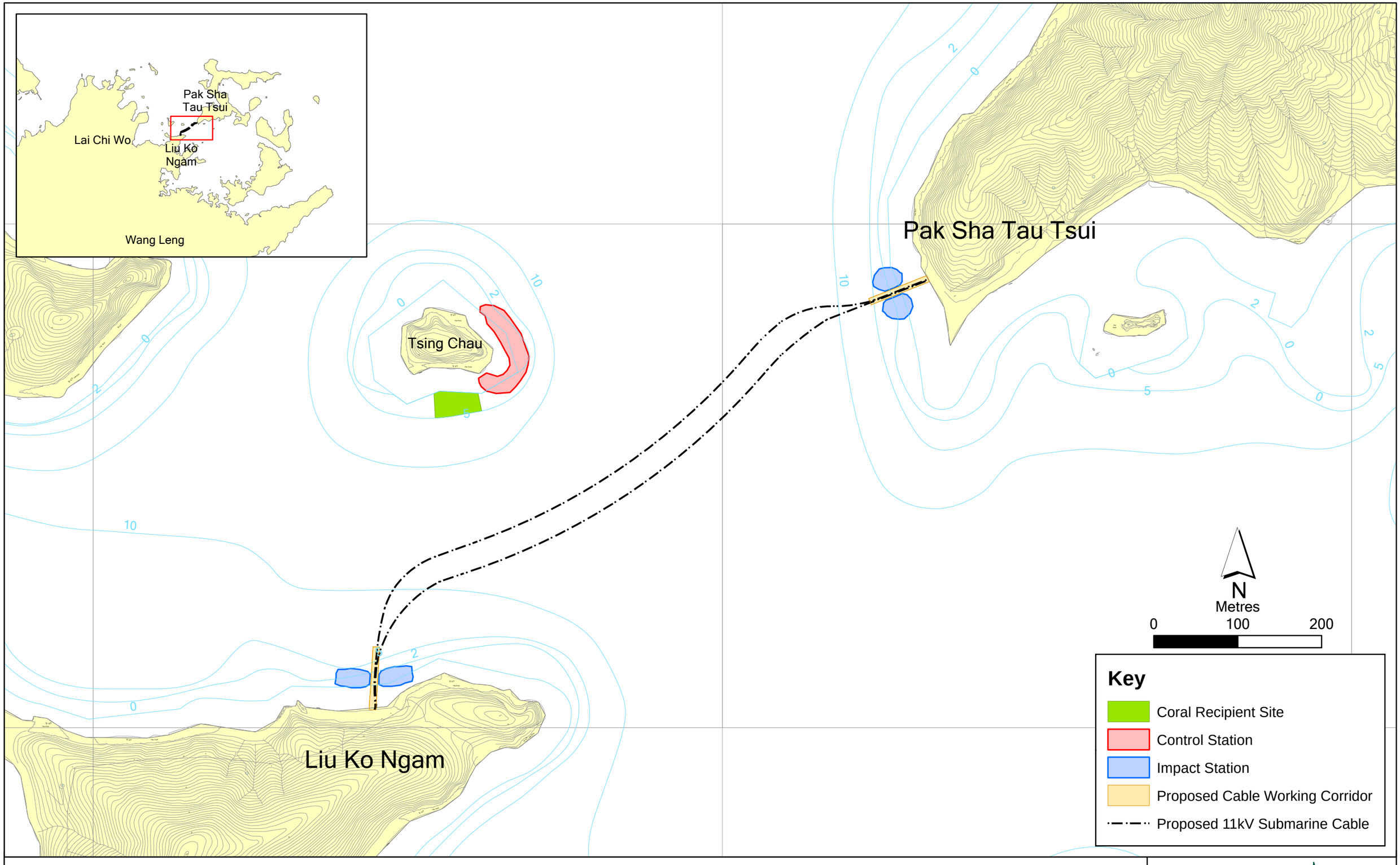

Figure 2.1

Recipient and Control Sites at Tsing Chau

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Date: 20-Nov-2015

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Table 2.2 Action for Action / Limit Level Exceedance for Coral Monitoring

Event	Contractor
Action Level Exceedance	**Step 1** - compare results with water quality monitoring results and repeat coral sampling event within two days, if Action Level is still exceeded notify AFCD.
	Step 2 - discuss with cable installation contractor the most appropriate method of reducing suspended solids during cable installation (e.g. reduce cable laying speed/volume of water used during installation, increase effectiveness of silt curtain).
	Step 3 - repeat survey after implementation of mitigation for confirmation of compliance.
	Step 4 - if non compliance continues - increase measures in Step 2 and repeat measurements in Step 3. If non compliance occurs a third time, suspend cable installation operations.
Limit Level Exceedance	Undertake **Steps 1-3** immediately, if further non compliance continues at the Limit Level, suspend cable installation operations until an effective solution is identified.

2.3 IMPACT MONITORING RESULTS

2.3.1 Comparison against Action and Limit Levels

The species, size range, partial mortality, bleaching and sediment cover (sediment thickness, type and colour) of the tagged coral colonies were recorded and summarized in *Tables 2.3* to *2.5* for the three monitoring stations. Photographic records of the tagged coral colonies are shown in *Annex A*. A total of 27, 28 and 29 tagged coral colonies were located at Pak Sha Tau Tsui, Liu Ko Ngam and Tsing Chau, respectively, during the 3rd weekly coral impact monitoring surveys (same as 2nd weekly coral impact monitoring but additionally LKN7 at Liu Ko Ngam could not be located). Inability to locate certain tagged corals during the dive surveys is possibly due to the loss of the tags or poor visibility experienced during the survey. According to the approved *Coral Translocation and Monitoring Plan*, a minimum of 20 coral colonies are required to be tagged for monitoring at each station. As a precautionary approach, a total of 30 coral colonies were tagged at each station to ensure that an adequate number of tagged colonies (i.e. not less than 20 colonies) can be re-visited to reveal any observable impacts to corals, in particular when difficulty of relocating the tagged corals is encountered at these stations with typical low underwater visibility (i.e. visibility of 0.5 to 1 m recorded during the translocation works) or due to the loss of the tags.

Findings of the 3rd weekly coral impact monitoring surveys revealed none of the tagged coral colonies recorded an increase in sediment cover of more than 15% on 4 and 7 January 2016 which indicated the Action Levels or Limit Levels for coral monitoring were not exceeded (*Table 2.1*). There did not appear to be any signs of impacts or deterioration in the general health and condition of the tagged coral colonies as a result of cable installation works of the Project.

Table 2.3 Species, Size, Partial Mortality, Bleaching and Sediment Cover of Tagged Coral Colonies at Pak Sha Tau Tsui (Impact Site)

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
Baseline Monitoring on 29 October 2015									
PSTT2	*Favites flexuosa*	<10	<1	<1	<1	N/A	<1	N/A	N/A
PSTT3	*Favites flexuosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT4	*Dipsastraea rotumana*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT5	*Favites chinensis*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT6	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT7	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT8	*Goniastrea aspera*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT9	*Cyphastrea serailia*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT10	*Leptastrea pruinosa*	>50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT11	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT12	*Goniastrea aspera*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT13	*Leptastrea pruinosa*	<10	<1	<1	<1	N/A	<1	N/A	N/A
PSTT14	*Dipsastraea rotumana*	<10	<1	<1	<1	N/A	<1	N/A	N/A
PSTT15	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT16	*Leptastrea purpurea*	>50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT18	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT20	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT21	*Porites* sp.	10-50	5	<1	<1	N/A	<1	N/A	N/A
PSTT22	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT23	*Porites* sp.	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT24	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT25	*Leptastrea purpurea*	>50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT26	*Favites chinensis*	>50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT27	*Porites* sp.	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT28	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT29	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
PSTT30	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
Impact Monitoring on 4 January 2016									
PSTT2	*Favites flexuosa*	<10	<1	<1	<1	0	<1	N/A	N/A
PSTT3	*Favites flexuosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT4	*Dipsastraea rotumana*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT5	*Favites chinensis*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT6	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT7	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT8	*Goniastrea aspera*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT9	*Cyphastrea serailia*	10-50	<1	<1	<1	0	<1	N/A	N/A

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
PSTT10	*Leptastrea pruinosa*	>50	<1	<1	<1	0	<1	N/A	N/A
PSTT11	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT12	*Goniastrea aspera*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT13	*Leptastrea pruinosa*	<10	<1	<1	<1	0	<1	N/A	N/A
PSTT14	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A
PSTT15	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT16	*Leptastrea purpurea*	>50	<1	<1	<1	0	<1	N/A	N/A
PSTT18	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT20	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT21	*Porites* sp.	10-50	5	<1	<1	0	<1	N/A	N/A
PSTT22	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT23	*Porites* sp.	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT24	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT25	*Leptastrea purpurea*	>50	<1	<1	<1	0	<1	N/A	N/A
PSTT26	*Favites chinensis*	>50	<1	<1	<1	0	<1	N/A	N/A
PSTT27	*Porites* sp.	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT28	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT29	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT30	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
Impact Monitoring on 7 January 2016									
PSTT2	*Favites flexuosa*	<10	<1	<1	<1	0	<1	N/A	N/A
PSTT3	*Favites flexuosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT4	*Dipsastraea rotumana*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT5	*Favites chinensis*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT6	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT7	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT8	*Goniastrea aspera*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT9	*Cyphastrea serailia*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT10	*Leptastrea pruinosa*	>50	<1	<1	<1	0	<1	N/A	N/A
PSTT11	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT12	*Goniastrea aspera*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT13	*Leptastrea pruinosa*	<10	<1	<1	<1	0	<1	N/A	N/A
PSTT14	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A
PSTT15	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT16	*Leptastrea purpurea*	>50	<1	<1	<1	0	<1	N/A	N/A
PSTT18	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT20	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT21	*Porites* sp.	10-50	5	<1	<1	0	<1	N/A	N/A
PSTT22	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
PSTT23	*Porites* sp.	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT24	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT25	*Leptastrea purpurea*	>50	<1	<1	<1	0	<1	N/A	N/A
PSTT26	*Favites chinensis*	>50	<1	<1	<1	0	<1	N/A	N/A
PSTT27	*Porites* sp.	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT28	*Leptastrea pruinosa*	10-50	<1	<1	5	5	1	Mud	Light Brown
PSTT29	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
PSTT30	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A

Note: PSTT1, PSTT17 and PSTT19 could not be located during both monitoring days and the results are not presented in the table.

Table 2.4 Species, Size, Partial Mortality, Bleaching and Sediment Cover of Tagged Coral Colonies (Impact Site)

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
Baseline Monitoring on 30 October 2015									
LKN1	*Dipsastraea rotumana*	<10	<1	<1	<1	N/A	<1	N/A	N/A
LKN2	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN3	*Cyphastrea japonica*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN4	*Favites pentagona*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN5	*Dipsastraea rotumana*	<10	<1	<1	<1	N/A	<1	N/A	N/A
LKN6	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN8	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN9	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN11	*Echinophyllia aspera*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN12	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN13	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN14	*Dipsastraea rotumana*	<10	<1	<1	<1	N/A	<1	N/A	N/A
LKN15	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN16	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN17	*Leptastrea pruinosa*	'10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN18	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN19	*Platygyra acuta*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN20	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN21	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN22	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN23	*Leptastrea purpurea*	>50	<1	<1	<1	N/A	<1	N/A	N/A
LKN24	*Porites* sp.	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN25	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN26	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN27	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN28	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN29	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
LKN30	*Dipsastraea rotumana*	<10	<1	<1	<1	N/A	<1	N/A	N/A
Impact Monitoring on 4 January 2016									
LKN1	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A
LKN2	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN3	*Cyphastrea japonica*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN4	*Favites pentagona*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN5	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
LKN6	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN8	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN9	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN11	*Echinophyllia aspera*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN12	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN13	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN14	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A
LKN15	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN16	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN17	*Leptastrea pruinosa*	'10-50	<1	<1	<1	0	<1	N/A	N/A
LKN18	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN19	*Platygyra acuta*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN20	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN21	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN22	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN23	*Leptastrea purpurea*	>50	<1	<1	<1	0	<1	N/A	N/A
LKN24	*Porites* sp.	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN25	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN26	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN27	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN28	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN29	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN30	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A
Impact Monitoring on 7 January 2016									
LKN1	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A
LKN2	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN3	*Cyphastrea japonica*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN4	*Favites pentagona*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN5	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A
LKN6	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN8	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN9	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN11	*Echinophyllia aspera*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN12	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN13	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN14	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A
LKN15	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN16	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
LKN17	*Leptastrea pruinosa*	'10-50	<1	<1	<1	0	<1	N/A	N/A
LKN18	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN19	*Platygyra acuta*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN20	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN21	*Leptastrea purpurea*	10-50	<1	<1	5	5	1	Mud	light Brown
LKN22	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN23	*Leptastrea purpurea*	>50	<1	<1	<1	0	<1	N/A	N/A
LKN24	*Porites* sp.	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN25	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN26	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN27	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN28	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN29	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
LKN30	*Dipsastraea rotumana*	<10	<1	<1	<1	0	<1	N/A	N/A

Note: LKN7 and LKN10 could not be located during both monitoring days and the results are not presented in the table.

Table 2.5 Species, Size, Partial Mortality, Bleaching and Sediment Cover of Tagged Coral Colonies at Tsing Chau (Control Site)

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
Baseline Monitoring on 30 October 2015									
TC1	*Dipsastraea rotumana*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC2	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC3	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC5	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC6	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC7	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC8	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC9	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC10	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC11	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC12	*Dipsastraea rotumana*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC13	*Favities pentagona*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC14	*Lithophyllon undulatum*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC15	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC16	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC17	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC18	*Porities* sp.	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC19	*Dipsastraea rotumana*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC20	*Lithophyllon undulatum*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC21	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC22	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC23	*Leptastrea purpurea*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC24	*Cyphastrea japonica*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC25	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC26	*Leptastrea pruinosa*	>50	<1	<1	<1	N/A	<1	N/A	N/A
TC27	*Leptastrea pruinosa*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC28	*Favities pentagona*	10-50	<1	<1	<1	N/A	<1	N/A	N/A
TC29	*Leptastrea pruinosa*	>50	<1	<1	<1	N/A	<1	N/A	N/A
TC30	*Leptastrea pruinosa*	>50	<1	<1	<1	N/A	<1	N/A	N/A
Impact Monitoring on 4 January 2016									
TC1	*Dipsastraea rotumana*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC2	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC3	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC5	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC6	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
TC7	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC8	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC9	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC10	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC11	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC12	*Dipsastraea rotumana*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC13	*Favities pentagona*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC14	*Lithophyllon undulatum*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC15	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC16	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC17	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC18	*Porities* sp.	10-50	<1	<1	<1	0	<1	N/A	N/A
TC19	*Dipsastraea rotumana*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC20	*Lithophyllon undulatum*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC21	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC22	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC23	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC24	*Cyphastrea japonica*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC25	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC26	*Leptastrea pruinosa*	>50	<1	<1	<1	0	<1	N/A	N/A
TC27	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC28	*Favities pentagona*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC29	*Leptastrea pruinosa*	>50	<1	<1	<1	0	<1	N/A	N/A
TC30	*Leptastrea pruinosa*	>50	<1	<1	<1	0	<1	N/A	N/A
Impact Monitoring on 7 January 2016									
TC1	*Dipsastraea rotumana*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC2	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC3	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC5	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC6	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC7	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC8	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC9	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC10	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC11	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC12	*Dipsastraea rotumana*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC13	*Favities pentagona*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC14	*Lithophyllon undulatum*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC15	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A

Tag no.	Species	Size range (<10, 10-50; >50cm)	Partial Mortality (%)	Bleaching (%)	Sediment cover (%)	Percentage increase in sediment cover (%)	Sediment Thickness (<1mm; 1mm; >1mm)	Sediment Type (Mud/ Sand)	Sediment Color
TC16	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC17	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC18	*Porities* sp.	10-50	<1	<1	<1	0	<1	N/A	N/A
TC19	*Dipsastraea rotumana*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC20	*Lithophyllon undulatum*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC21	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC22	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC23	*Leptastrea purpurea*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC24	*Cyphastrea japonica*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC25	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC26	*Leptastrea pruinosa*	>50	<1	<1	<1	0	<1	N/A	N/A
TC27	*Leptastrea pruinosa*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC28	*Favities pentagona*	10-50	<1	<1	<1	0	<1	N/A	N/A
TC29	*Leptastrea pruinosa*	>50	<1	<1	<1	0	<1	N/A	N/A
TC30	*Leptastrea pruinosa*	>50	<1	<1	<1	0	<1	N/A	N/A

Notes: TC4 could not be located during both monitoring days and the results are not presented in the table.

2.3.2 Rapid Ecological Assessment (REA) Survey

Baseline REA surveys were conduct on 29 and 30 October 2015 at the two impact and one control stations on the subtidal marine conditions according to the methodology presented in the *Coral Translocation and Baseline Monitoring Survey Report*. REA surveys were conducted during the impact monitoring surveys on 4 and 7 January 2016 to determine any observable impacts to coral assemblages due to the cable installation works. Data collected during the REA surveys are presented in *Annex B*.

Results obtained during the REA surveys in the baseline surveys in October 2015 and the 3rd weekly coral impact monitoring surveys on 4 and 7 January 2016 were noted to be similar with no observable changes. At Pak Sha Tau Tsui, the seabed was predominately composed of hard substrates of small boulders (<50 cm) and rubble while Liu Ko Ngam was predominately composed of small boulders (<50cm). Cover of hard corals ranged from 6 to 10% at both impact stations. Ten (10) and fourteen (14) species of hard corals were recorded at Pak Sha Tau Tsui and Liu Ko Ngam, respectively. At the control station at Tsing Chau, the seabed was predominately composed of hard substrates of small boulders (<50 cm), rubble and rock (<26 cm). Cover of hard corals was similar to the impact stations which range from 6 to 10 %. A total of eight (8) hard coral species were recorded at Tsing Chau during the survey.

Overall, the REA results showed that the general health and condition of the coral assemblages are similar between the baseline and the 3rd weekly monitoring.

3 CONCLUSION

The 3rd Weekly Coral Impact Monitoring Surveys were carried out on 4 and 7 January 2016 at two impact stations and one control station in accordance with the EM&A Requirements in the *Project Profile* and the *Coral Translocation and Monitoring Plan*. During the impact monitoring, the tagged coral colonies were re-visited and monitored at each station. The conditions of the tagged coral colonies during the Coral Impact Monitoring Surveys are compared with the baseline conditions which were recorded prior to the commencement of the cable installation works.

No exceedances of the Action and Limit Levels were identified during the 3rd weekly coral impact monitoring surveys on 4 and 7 January 2016. There thus did not appear to be any signs of impacts or deterioration in the general health and condition of the tagged coral colonies as a result of the cable installation works at the landing sites. Results of REA surveys also indicated no observable impact to the coral assemblages.

Coral impact monitoring surveys will be conducted twice weekly during any process of the cable installation, including landing site preparation, cable laying and landing works, and backfilling. Findings of further coral impact monitoring surveys will be presented in subsequent *Weekly Coral Impact Monitoring Survey Reports* in order to determine any observable impacts to the tagged corals as well as the coral assemblages as a result of the cable installation process. In the event that significant adverse impacts are identified as a consequence of the works, monitoring would also allow for implementation of appropriate remedial actions to reduce such impacts.

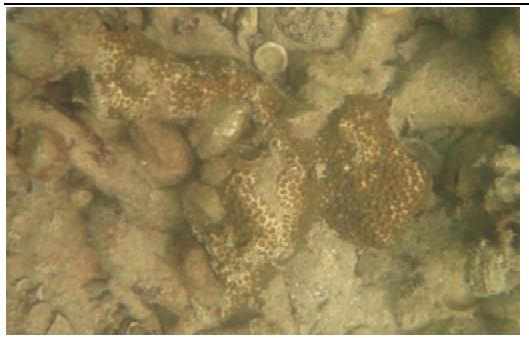
The current monitoring schedule is presented in *Annex C*.

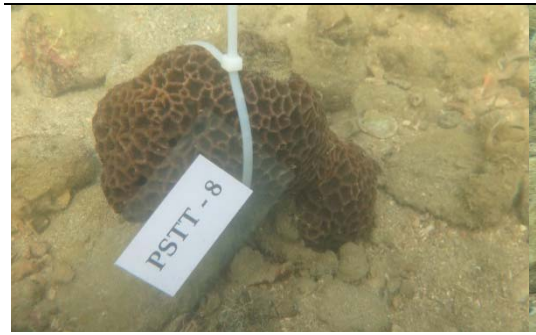
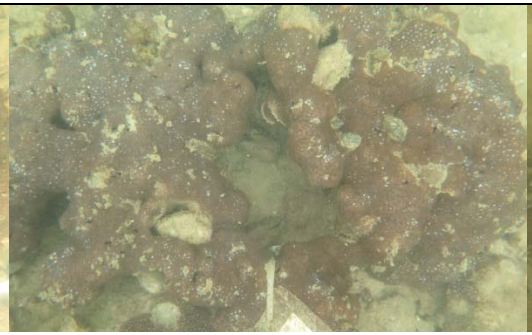
Annex A

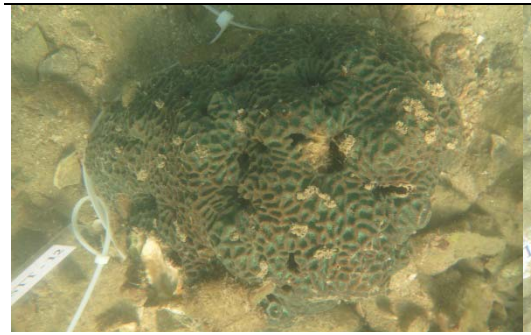
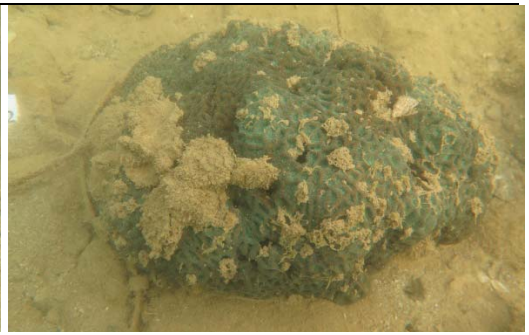
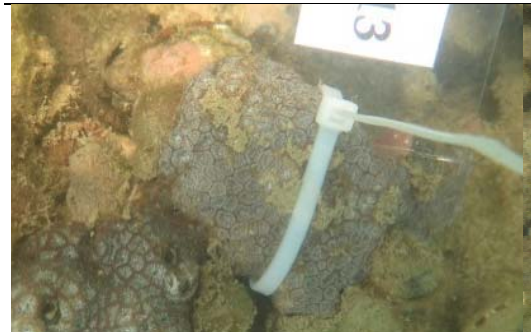
Photographic Record of Tagged Coral Colonies

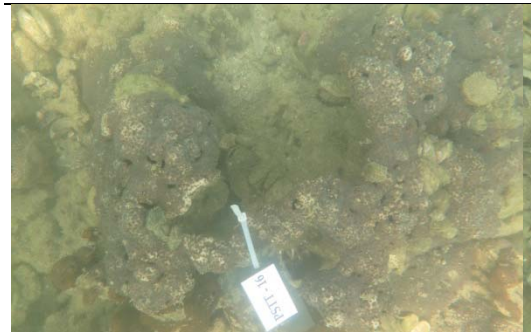
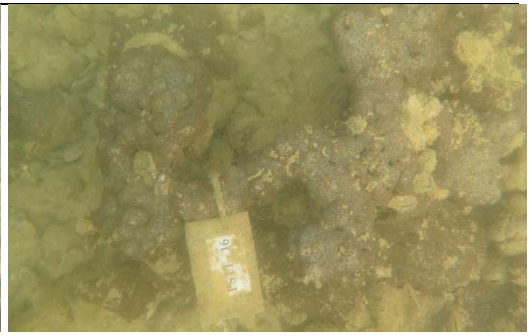
Annex A1 – Corals Tagged at Pak Sha Tau Tsui

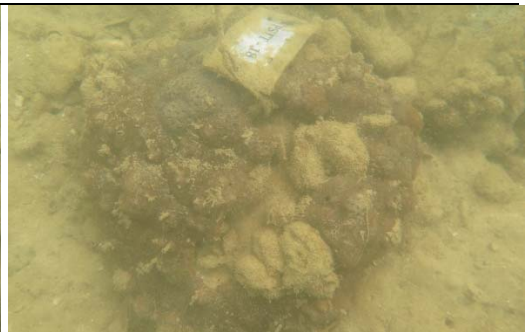
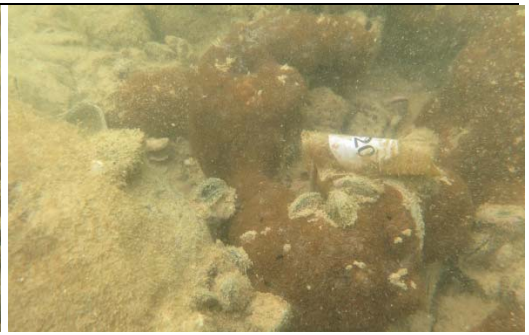
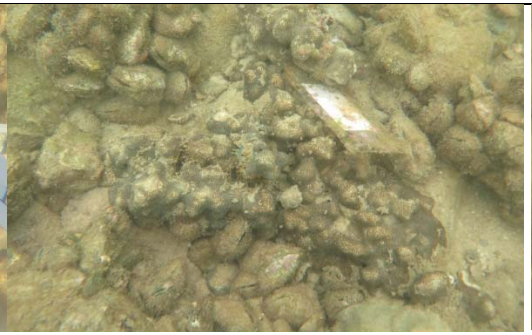
Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-2 (*Favites flexuosa*)		
		
Tag No.: PSTT-3 (*Favites flexuosa*)		
		
Tag No.: PSTT-4 (*Dipsastraea rotumana*)		

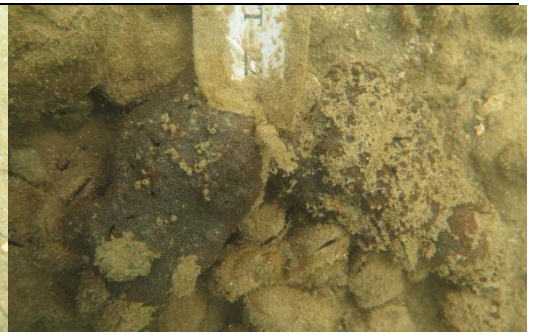
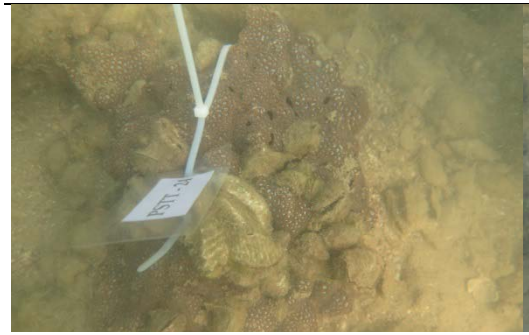
Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-5 (*Favites chinensis*)		
		
Tag No.: PSTT-6 (*Leptastrea purpurea*)		
		
Tag No.: PSTT-7 (*Leptastrea pruinosa*)		

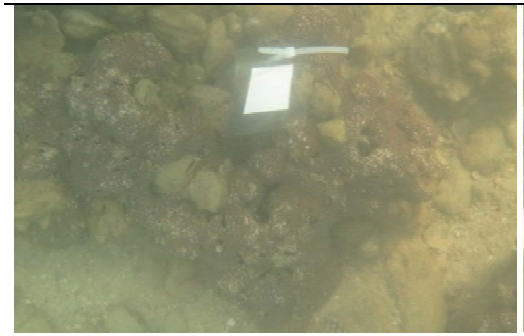
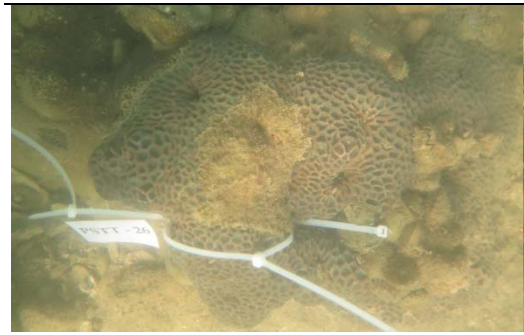
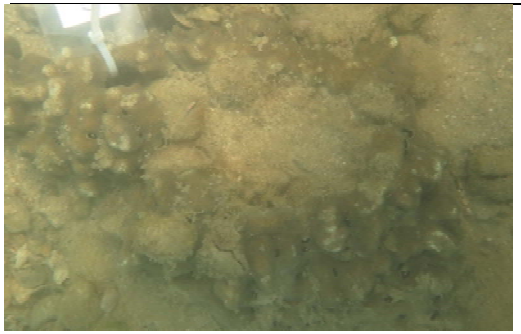
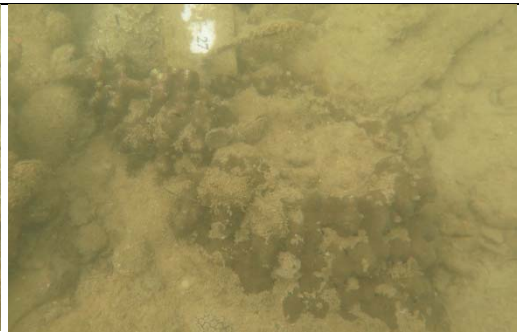
Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-8 (*Goniastrea aspera*)		
		
Tag No.: PSTT-9 (*Cyphastrea serailia*)		
		
Tag No.: PSTT-10 (*Leptastrea pruinosa*)		

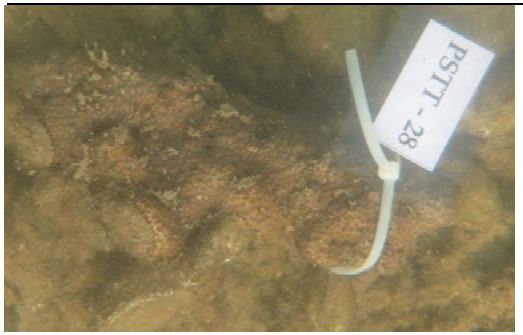
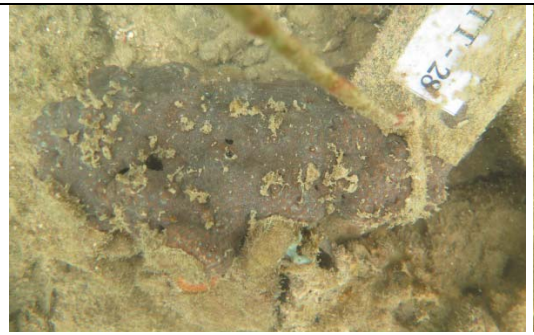
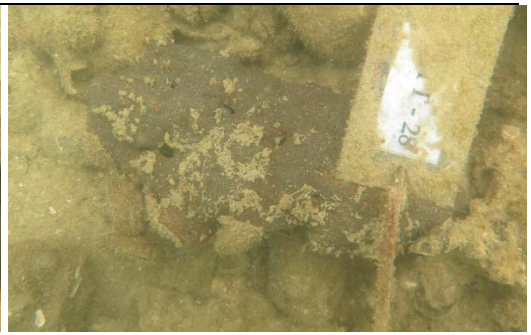
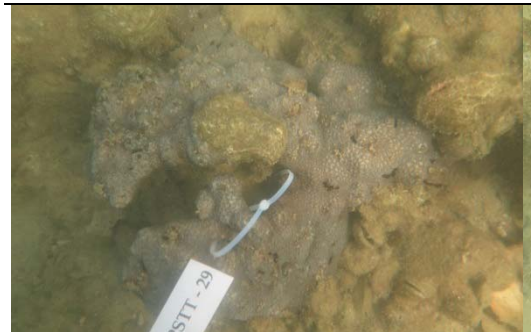
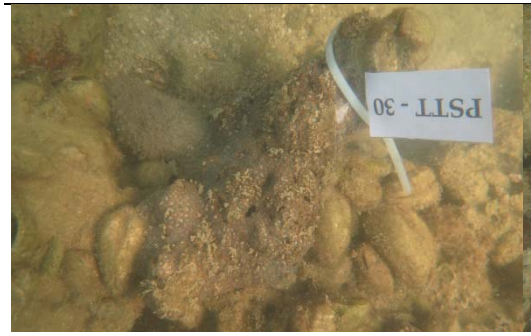
Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-11 (*Leptastrea purpurea*)		
		
Tag No.: PSTT-12 (*Goniastrea aspera*)		
		
Tag No.: PSTT-13 (*Leptastrea pruinosa*)		

Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-14 (*Dipsastraea rotumana*)		
		
Tag No.: PSTT-15 (*Leptastrea purpurea*)		
		
Tag No.: PSTT-16 (*Leptastrea purpurea*)		

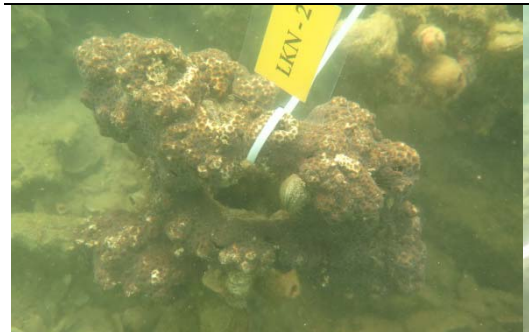
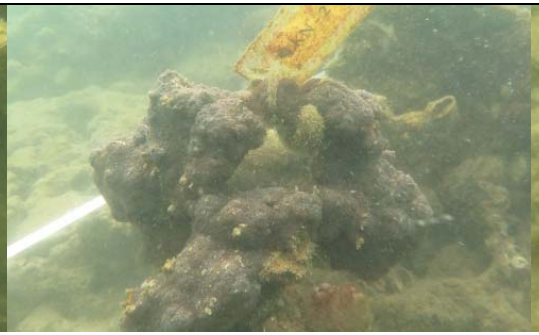
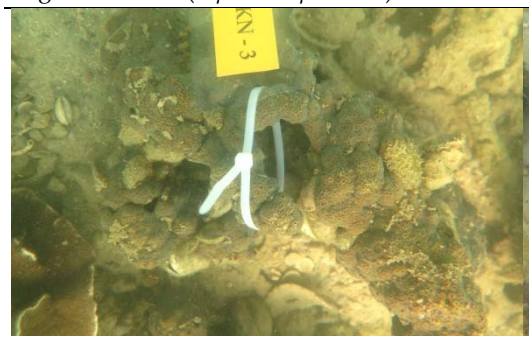
Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-18 (*Leptastrea pruinosa*)		
		
Tag No.: PSTT-20 (*Leptastrea pruinosa*)		
		
Tag No.: PSTT-21 (*Porites* sp.)		

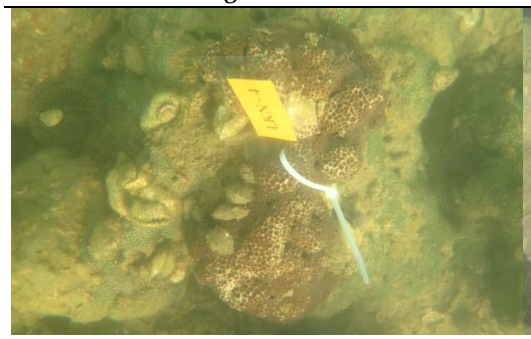
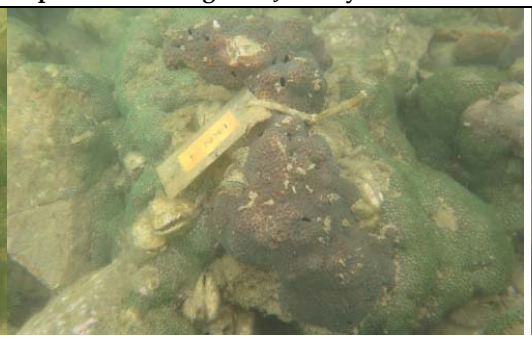
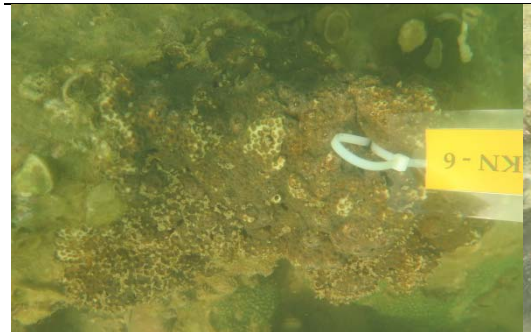
Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-22 (*Leptastrea pruinosa*)		
		
Tag No.: PSTT-23 (*Porites* sp.)		
		
Tag No.: PSTT-24 (*Leptastrea purpurea*)		

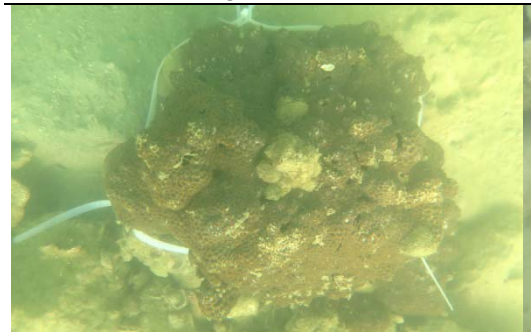
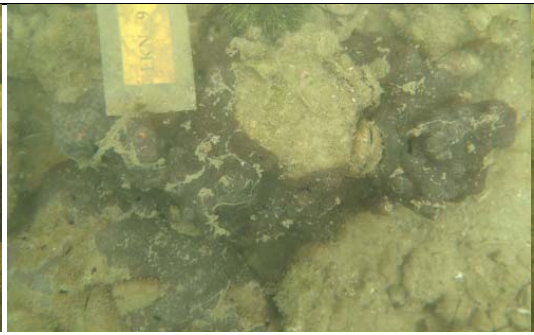
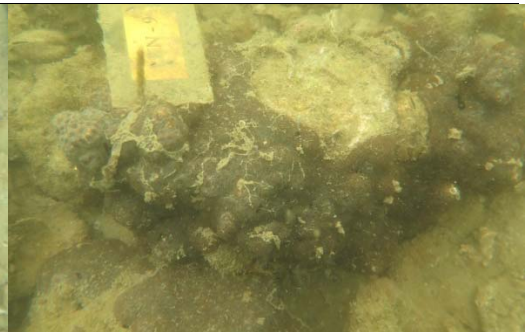
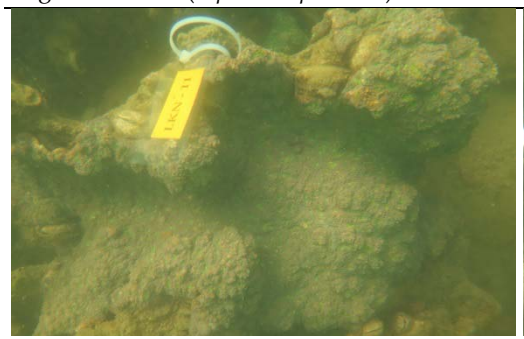
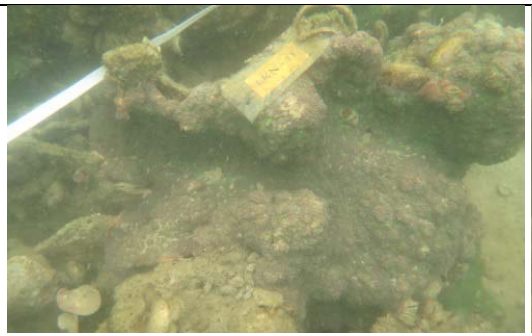
Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-25 (*Leptastrea purpurea*)		
		
Tag No.: PSTT-26 (*Favites chinensis*)		
		
Tag No.: PSTT-27 (*Porites* sp.)		

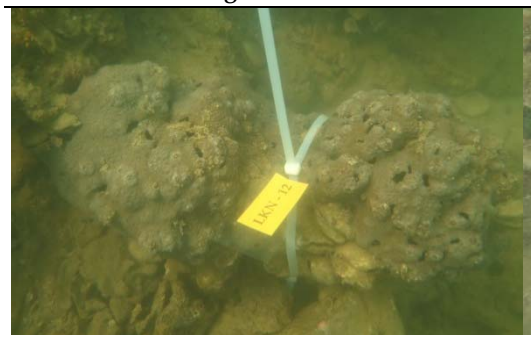
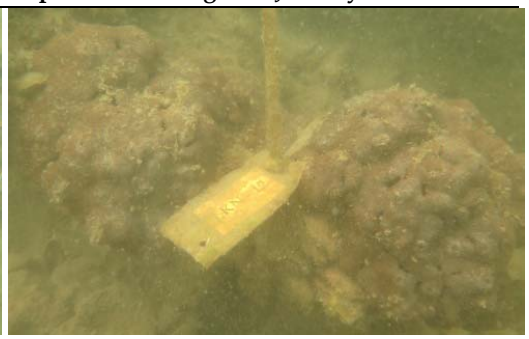
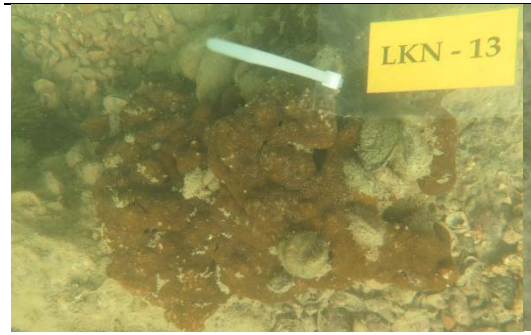
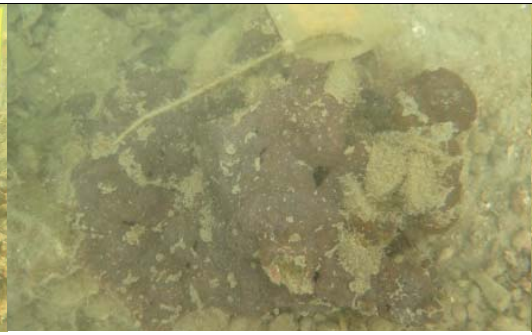
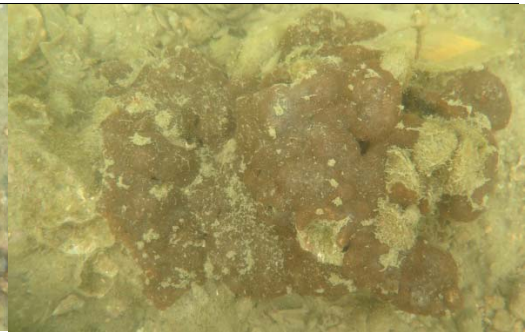
Baseline Monitoring on 29 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: PSTT-28 (*Leptastrea pruinosa*)		
		
Tag No.: PSTT-29 (*Leptastrea purpurea*)		
		
Tag No.: PSTT-30 (*Leptastrea purpurea*)		

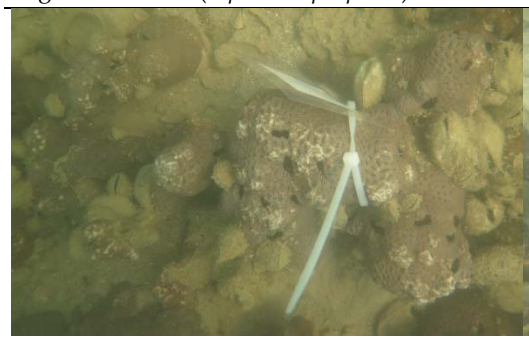
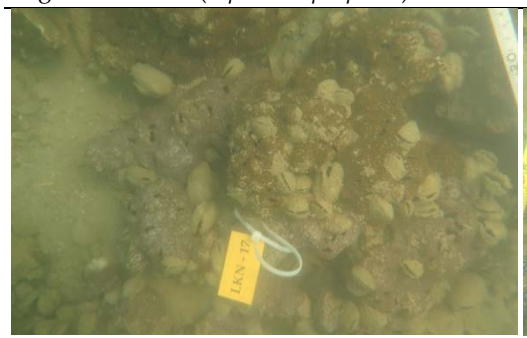
Annex A2 – Corals Tagged at Liu Ko Ngam

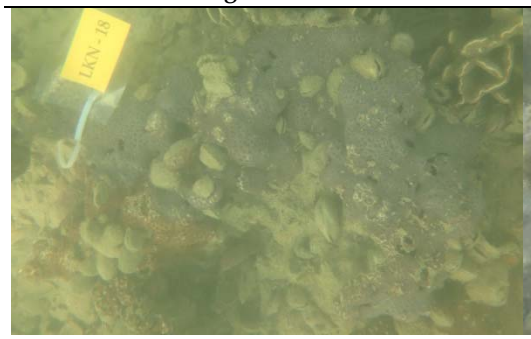
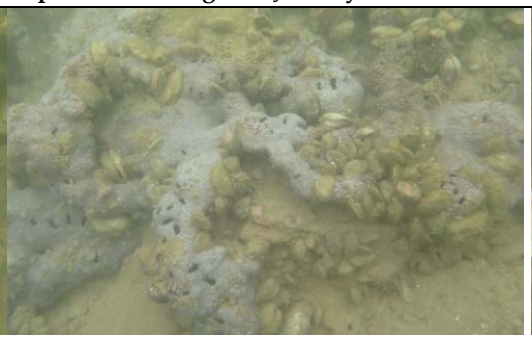
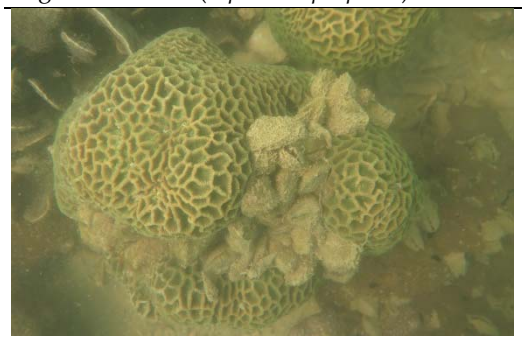
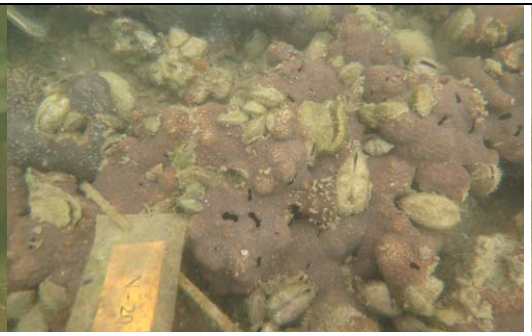
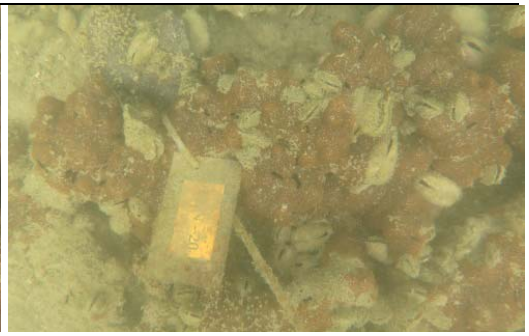
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-1 (*Dipsastraea rotumana*)		
		
Tag No.: LKN-2 (*Leptastrea pruinosa*)		
		
Tag No.: LKN-3 (*Cyphastrea japonica*)		

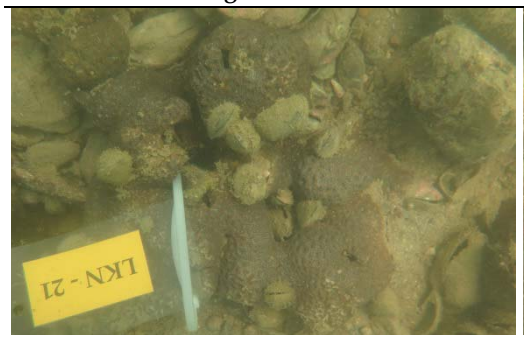
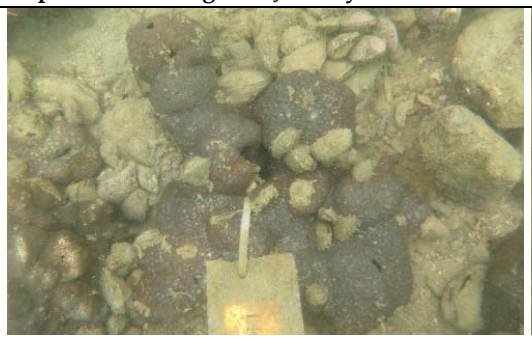
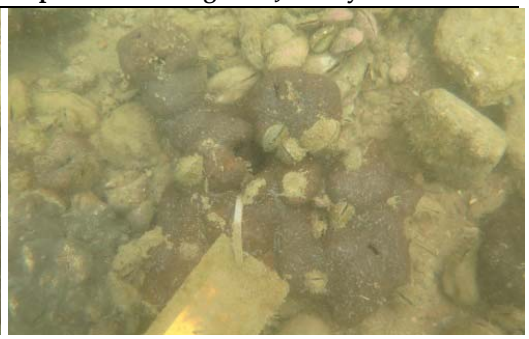
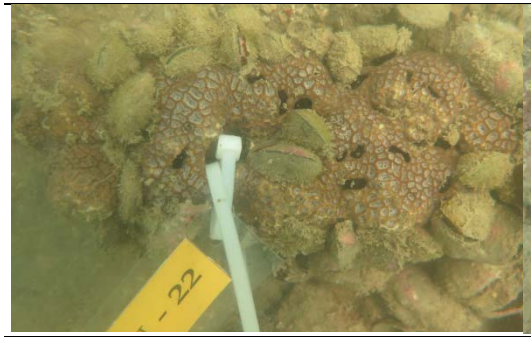
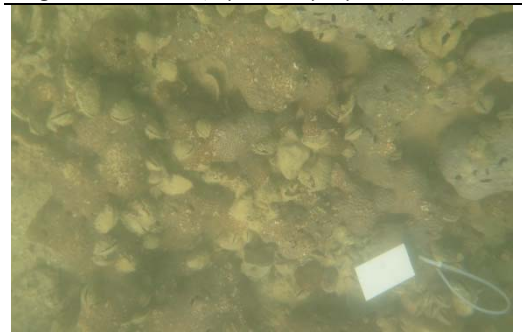
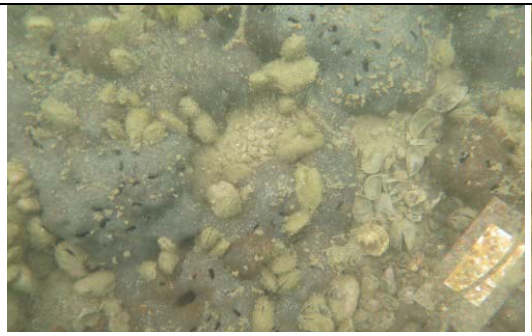
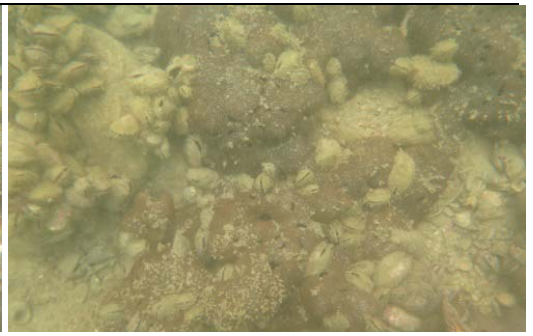
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-4 (*Favites pentagona)*		
		
Tag No.: LKN-5 (*Dipsastraea rotumana*)		
		
Tag No.: LKN-6 (*Leptastrea pruinosa*)		

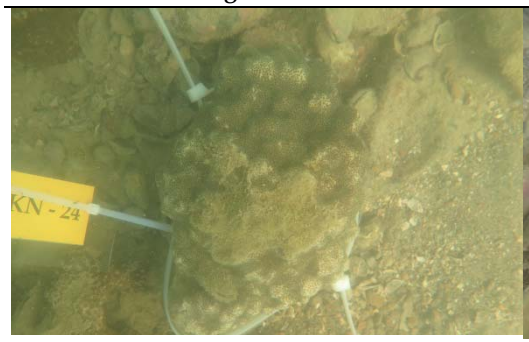
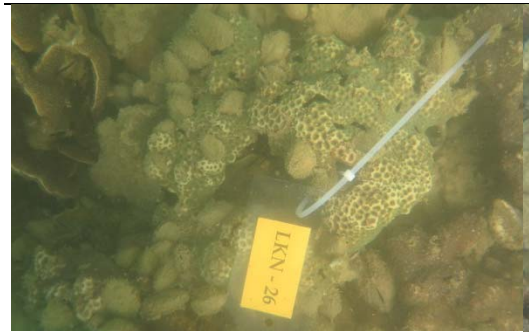
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-8 (*Leptastrea pruinosa*)		
		
Tag No.: LKN-9 (*Leptastrea pruinosa*)		
		
Tag No.: LKN-11 (*Echinophyllia aspera*)		

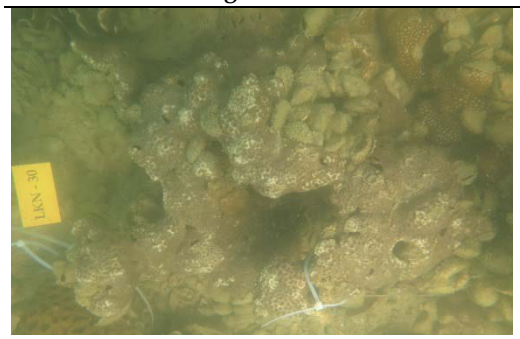
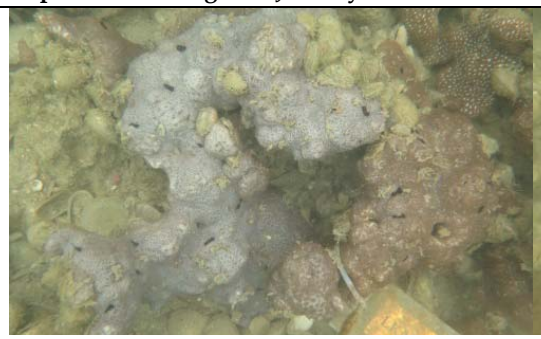
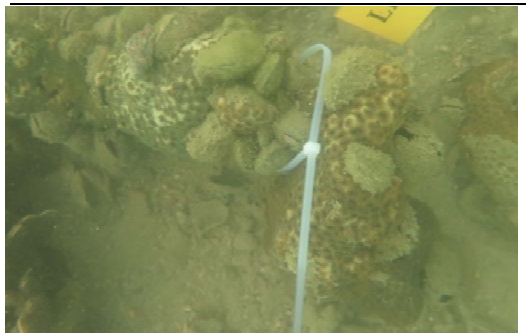
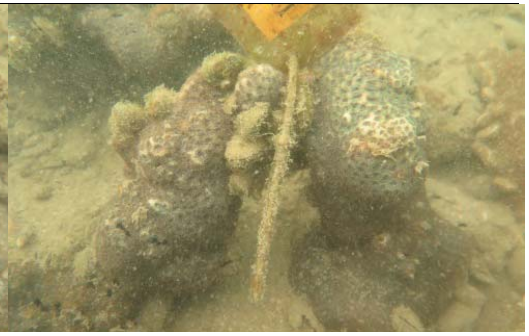
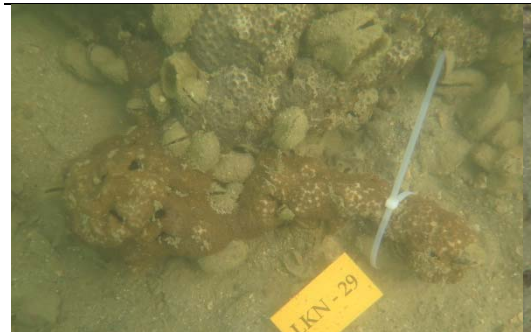
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-12 (*Leptastrea purpurea*)		
		
Tag No.: LKN-13 (*Leptastrea pruinosa*)		
		
Tag No.: LKN-14 (*Dipsastraea rotumana*)		

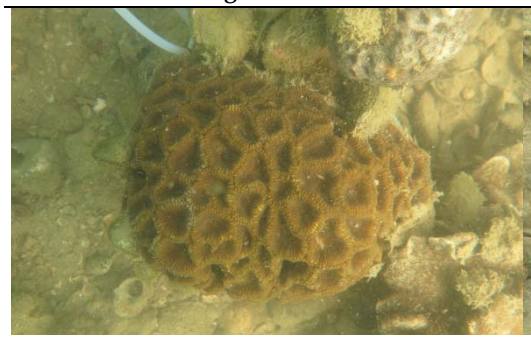
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-15 (*Leptastrea purpurea*)		
		
Tag No.: LKN-16 (*Leptastrea purpurea*)		
		
Tag No.: LKN-17 (*Leptastrea pruinosa*)		

Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-18 (*Leptastrea purpurea*)		
		
Tag No.: LKN-19 (*Platygyra acuta*)		
		
Tag No.: LKN-20 (*Leptastrea pruinosa*)		

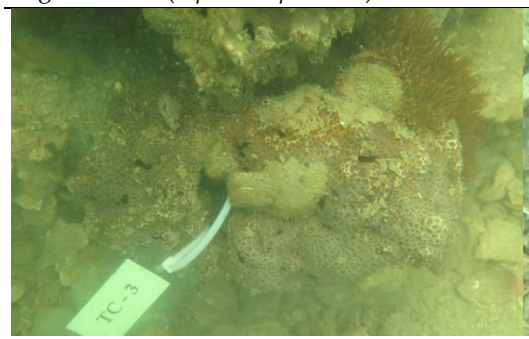
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-21 (*Leptastrea purpurea*)		
		
Tag No.: LKN-22 (*Leptastrea purpurea*)		
		
Tag No.: LKN-23 (*Leptastrea purpurea*)		

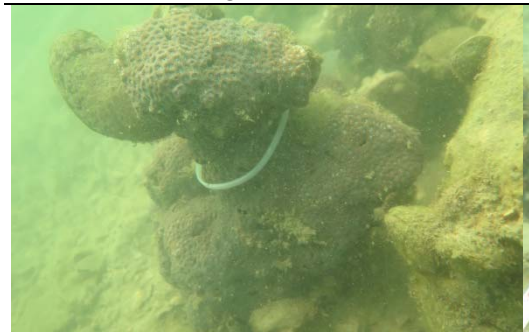
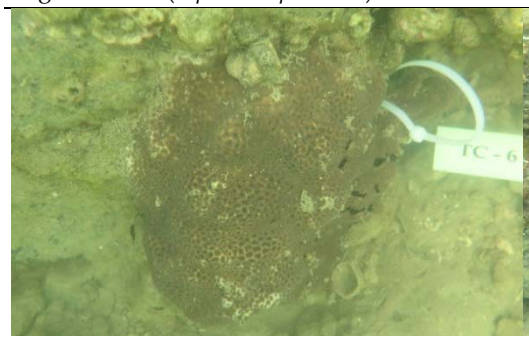
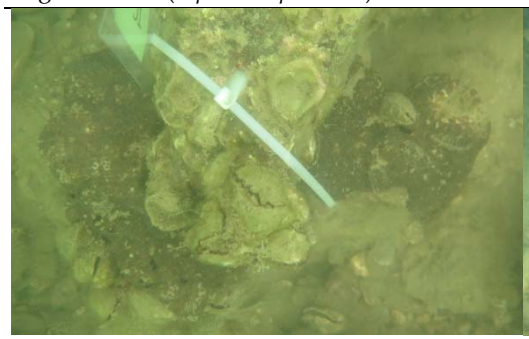
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-24 (*Porites* sp.)		
		
Tag No.: LKN-25 (*Leptastrea pruinosa*)		
		
Tag No.: LKN-26 (*Leptastrea pruinosa*)		

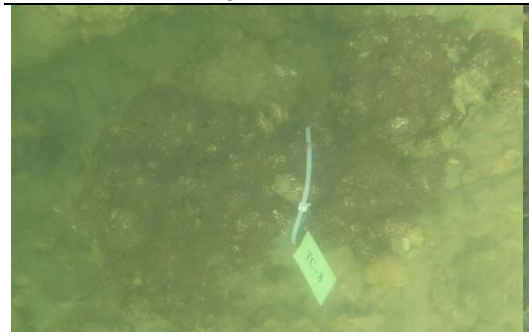
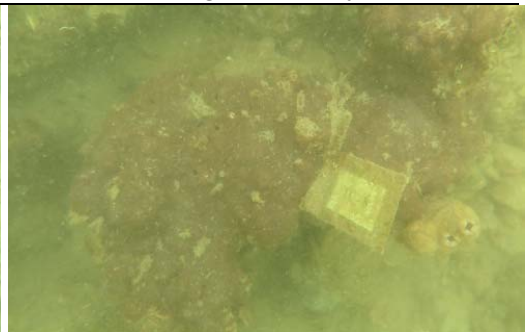
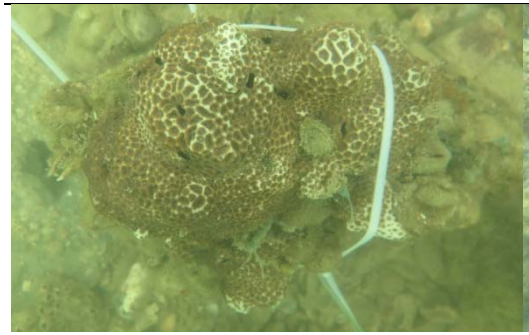
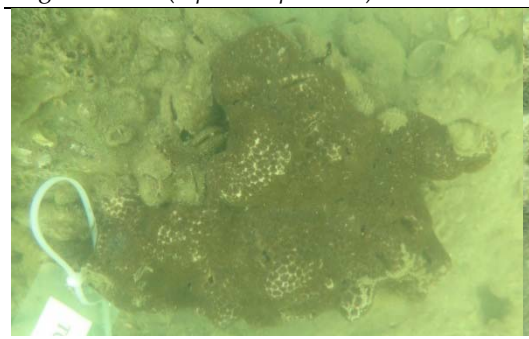
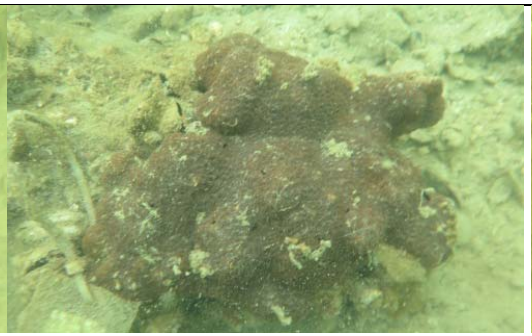
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-27 (*Leptastrea pruinosa*)		
		
Tag No.: LKN-28 (*Leptastrea pruinosa*)		
		
Tag No.: LKN-29 (*Leptastrea pruinosa*)		

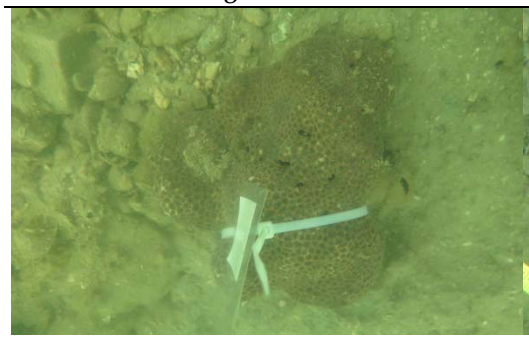
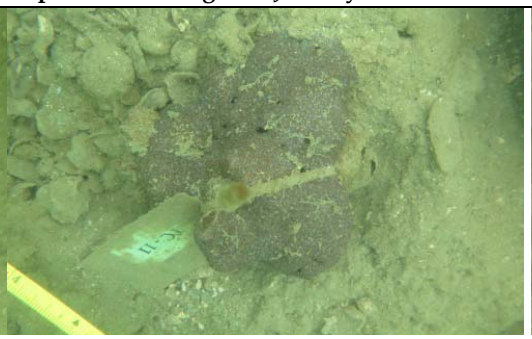
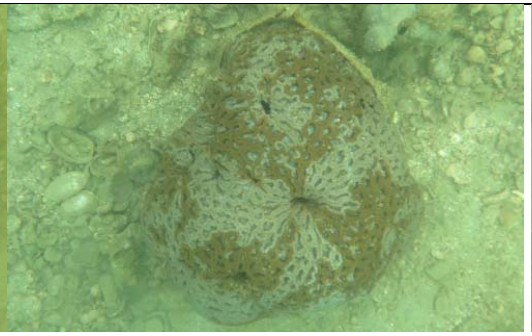
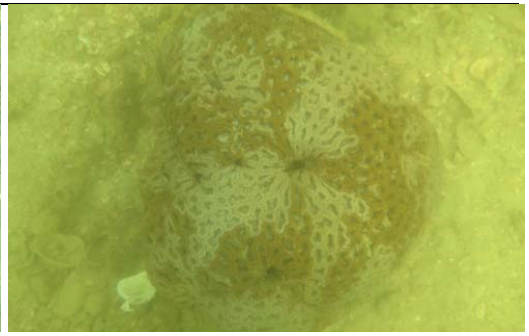
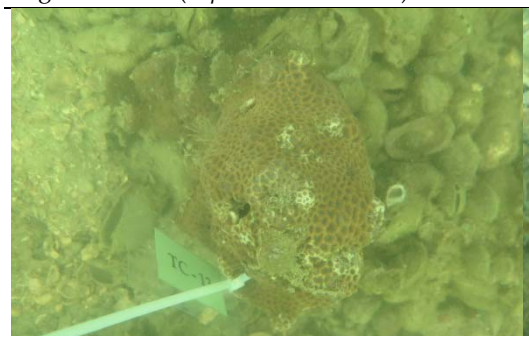
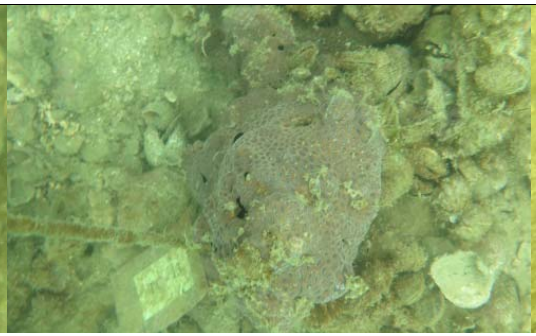
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: LKN-30 (*Dipsastraea rotumana*)		

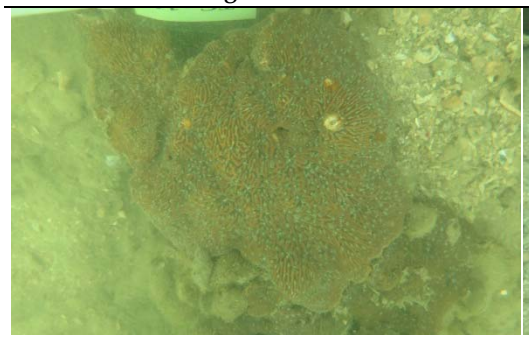
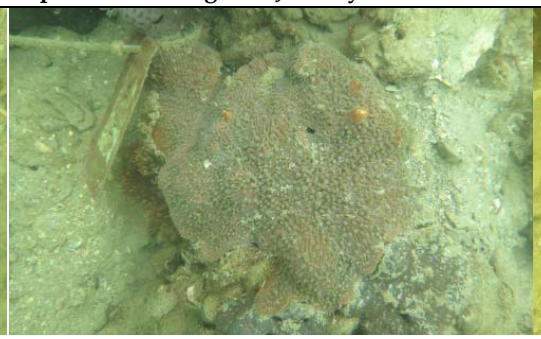
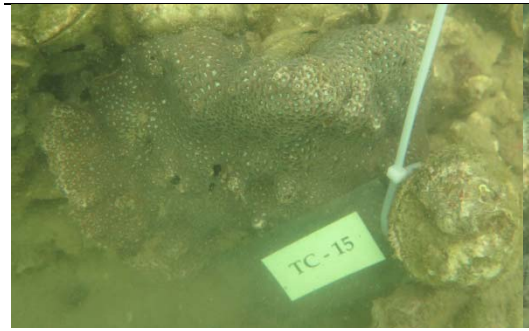
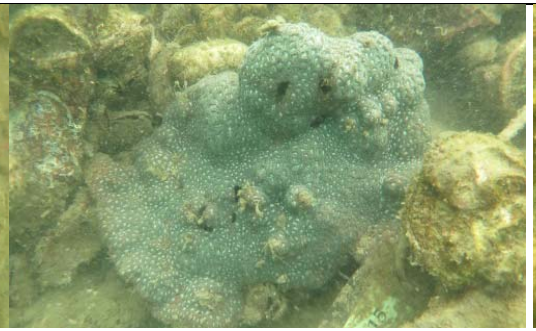
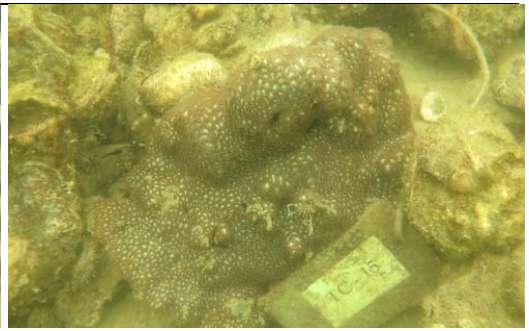
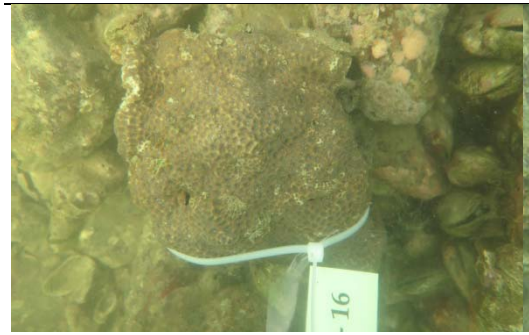
Annex A3 – Corals Tagged at Tsing Chau

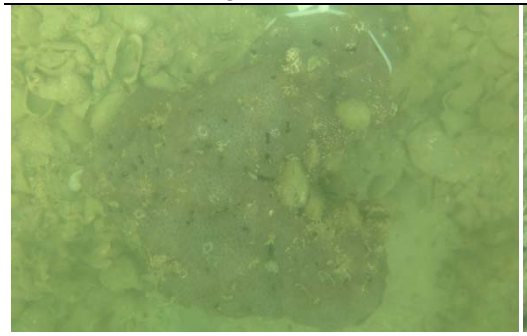
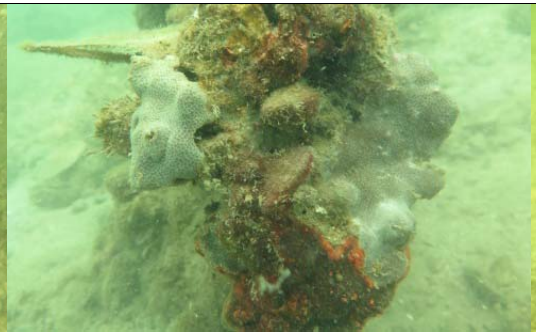
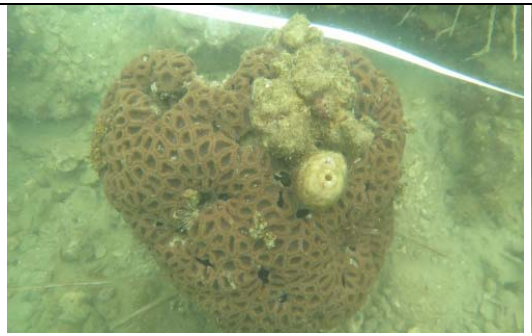
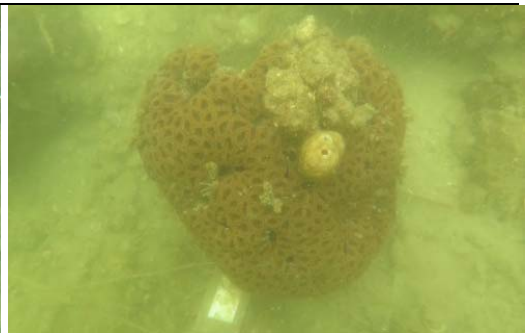
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-1 (*Dipsastraea rotumana*)		
		
Tag No.: TC-2 (*Leptastrea pruinosa*)		
		
Tag No.: TC-3 (*Leptastrea purpurea*)		

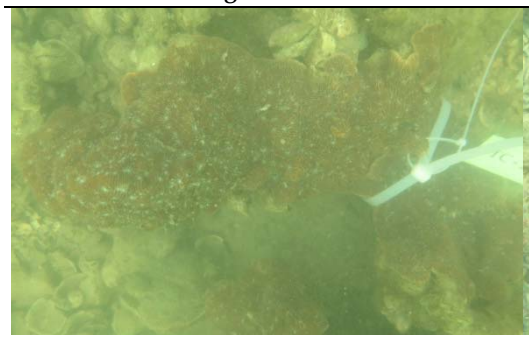
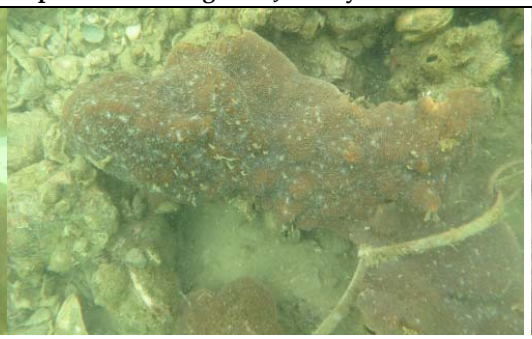
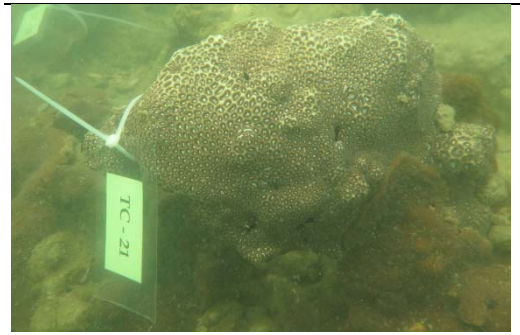
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-5 (*Leptastrea pruinosa*)		
		
Tag No.: TC-6 (*Leptastrea pruinosa*)		
		
Tag No.: TC-7 (*Leptastrea pruinosa*)		

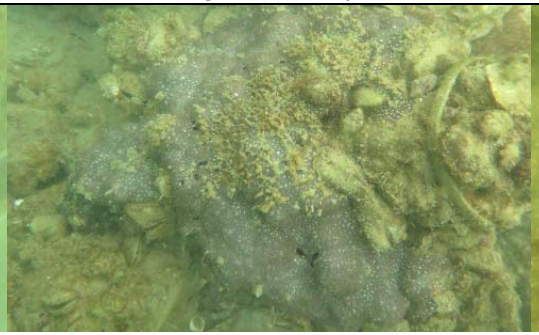
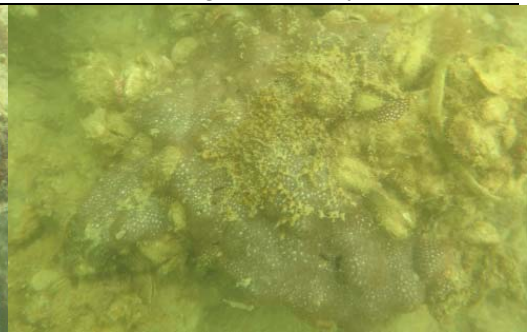
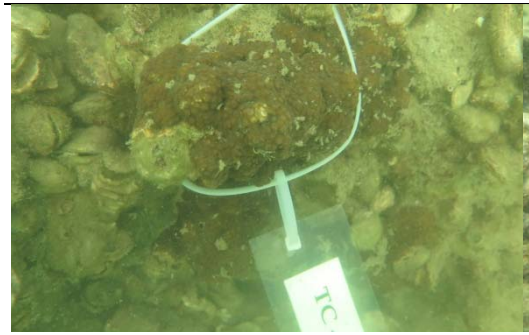
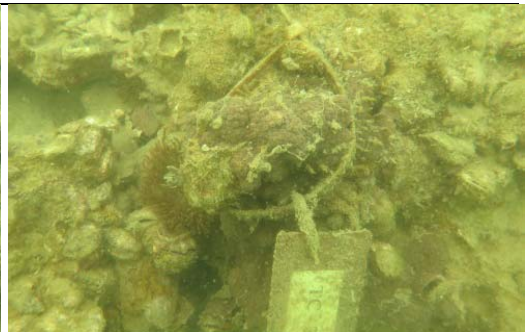
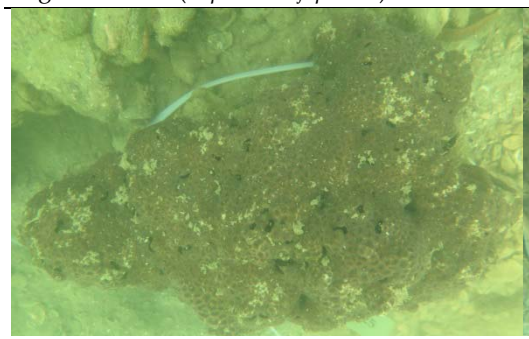
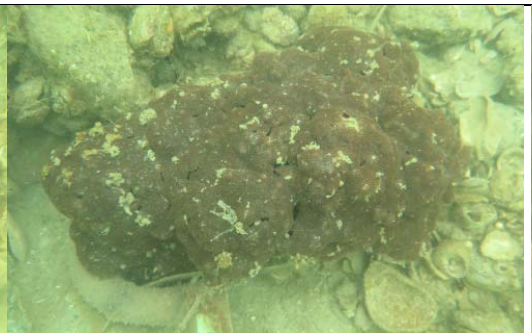
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-8 (*Leptastrea pruinosa*)		
		
Tag No.: TC-9 (*Leptastrea pruinosa*)		
		
Tag No.: TC-10 (*Leptastrea pruinosa*)		

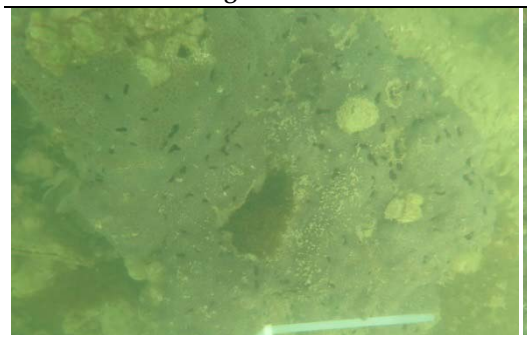
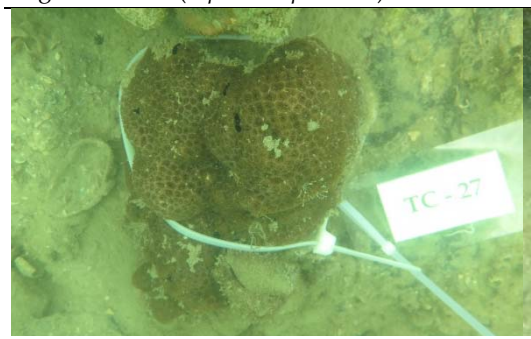
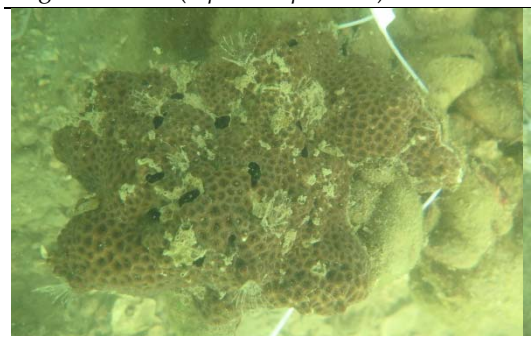
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-11 (*Leptastrea pruinosa*)		
		
Tag No.: TC-12 (*Dipsastraea rotumana*)		
		
Tag No.: TC-13 (*Favities pentagona*)		

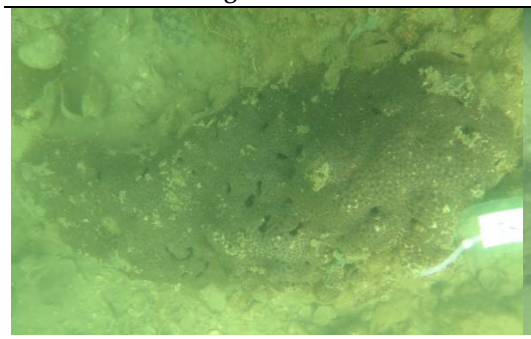
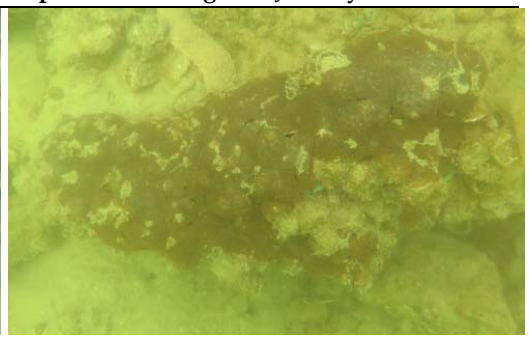
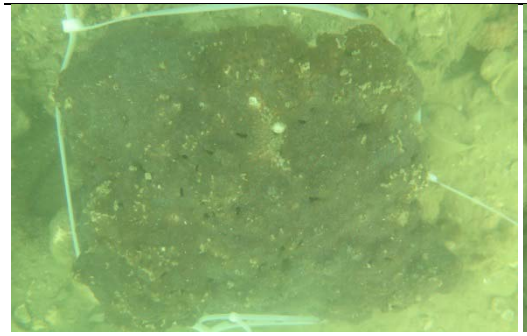
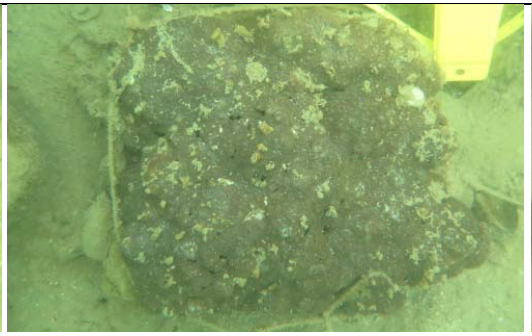
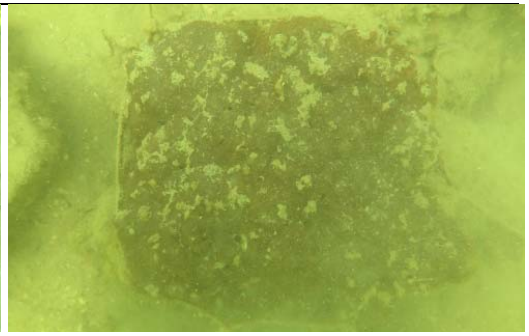
Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-14 (*Lithophyllon undulatum*)		
		
Tag No.: TC-15 (*Leptastrea pruinosa*)		
		
Tag No.: TC-16 (*Leptastrea pruinosa*)		

Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-17 (*Leptastrea pruinosa*)		
		
Tag No.: TC-18 (*Porities* sp.)		
		
Tag No.: TC-19 (*Dipsastraea rotumana*)		

Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-20 (*Lithophyllon undulatum*)		
		
Tag No.: TC-21 (*Leptastrea pruinosa*)		
		
Tag No.: TC-22 (*Leptastrea pruinosa*)		

Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-23 (*Leptastrea purpurea*)		
		
Tag No.: TC-24 (*Crphastrea japonica*)		
		
Tag No.: TC-25 (*Leptastrea pruinosa*)		

Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-26 (*Leptastrea pruinosa*)		
		
Tag No.: TC-27 (*Leptastrea pruinosa*)		
		
Tag No.: TC-28 (*Favities pentagona*)		

Baseline Monitoring on 30 October 2015	Impact Monitoring on 4 January 2016	Impact Monitoring on 7 January 2016
		
Tag No.: TC-29 (*Leptastrea pruinosa*)		
		
Tag No.: TC-30 (*Leptastrea pruinosa*)		

Annex B

Results of REA Surveys

Table B1 Rank of Ecological Seabed Attributes along the REA Survey Transects

Date	Site	Hard Coral	Dead Coral	Soft Coral	Black Coral	Macroalgae	Turf Algae
Baseline on 29-30/10/15	PSTT	2	2	0	0	0	0
	LKN	2	3	0	0	0	0
	TC	2	2	0	0	0	0
Impact monitoring on 4/1/16	PSTT	2	2	0	0	0	0
	LKN	2	3	0	0	0	0
	TC	2	2	0	0	0	0
Impact monitoring on 7/1/16	PSTT	2	2	0	0	0	0
	LKN	2	3	0	0	0	0
	TC	2	2	0	0	0	0

Note: PSTT = Pak Sha Tau Tsui, LKN = Liu Ko Ngam & TC = Tsing Chau.

Table B2 Rank of Physical Seabed Attributes along the REA Survey Transects

		Hard Substrata						Soft Substrata		
Date	Site	Bedrock/ continuous pavement	Boulder Blocks (> 50 cm)	Boulder Blocks (< 50 cm)	Rubble	Rock (< 26 cm)	Other	Sand	Mud/Silt	Mud
Baseline on 29 -30/10/15	PSTT	0	1	4	3	2	0	1	1	0
	LKN	0	1	5	3	3	0	1	1	0
	TC	0	0	4	4	3	0	2	2	0
Impact monitoring on 4/1/16	PSTT	0	1	4	3	2	0	1	1	0
	LKN	0	1	5	3	3	0	1	1	0
	TC	0	0	4	4	3	0	2	2	0
Impact monitoring on 7/1/16	PSTT	0	1	4	3	2	0	1	1	0
	LKN	0	1	5	3	3	0	1	1	0
	TC	0	0	4	4	3	0	2	2	0

Note: PSTT = Pak Sha Tau Tsui, LKN = Liu Ko Ngam & TC = Tsing Chau.

Table B3 Relative Abundance of Hard Coral Species Recorded during the REA Survey

Date	Species	Pak Sha Tau Tsui	Liu Ko Ngam	Tsing Chau
Baseline on 29 - 30/10/15	*Cyphastrea japonica*	0	2	1
	Cyphastrea serailia	1	2	0
	Echinophyllia aspera	0	1	3
	Dipsastraea rotumana	3	3	0
	Favites acuticollis	0	2	0
	Favites chinensis	2	0	0
	Favites flexuosa	2	2	0
	Favites pentagona	0	2	1
	Goniastrea aspera	2	0	0
	Leprastrea priunosa	4	4	4
	Leptastrea purpurea	3	3	4
	Lithophyllon undulatum	0	0	2
	Oulastrea cripsata	1	0	0
	Pavona decussata	3	4	4
	Platygyra acuta	0	1	0
	Porites sp.	3	2	2
	Total Species	10	12	8
Impact monitoring on 4/1/16	*Cyphastrea japonica*	0	2	1
	Cyphastrea serailia	1	2	0
	Echinophyllia aspera	0	1	3
	Dipsastraea rotumana	3	3	0
	Favites acuticollis	0	2	0
	Favites chinensis	2	0	0
	Favites flexuosa	2	2	0
	Favites pentagona	0	2	1
	Goniastrea aspera	2	0	0
	Leprastrea priunosa	4	4	4
	Leptastrea purpurea	3	3	4
	Lithophyllon undulatum	0	0	2
	Oulastrea cripsata	1	0	0
	Pavona decussata	3	4	4
	Platygyra acuta	0	1	0
	Porites sp.	3	2	2
	Total Species	10	12	8
Impact monitoring on 7/1/16	*Cyphastrea japonica*	0	2	1
	Cyphastrea serailia	1	2	0
	Echinophyllia aspera	0	1	3
	Dipsastraea rotumana	3	3	0
	Favites acuticollis	0	2	0
	Favites chinensis	2	0	0
	Favites flexuosa	2	2	0
	Favites pentagona	0	2	1
	Goniastrea aspera	2	0	0
	Leprastrea priunosa	4	4	4
	Leptastrea purpurea	3	3	4
	Lithophyllon undulatum	0	0	2
	Oulastrea cripsata	1	0	0
	Pavona decussata	3	4	4
	Platygyra acuta	0	1	0
	Porites sp.	3	2	2
	Total Species	10	12	8

Table B4 Relative Abundance of Species (excluding Hard Coral) Recorded during the REA Survey

Date	Genus	Pak Sha Tau Tsui	Liu Ko Ngam	Tsing Chau
Baseline on 29-30/10/15	Sponge	2	3	1
	Sea anemones	0	1	1
	Zoanthids	2	0	0
	Tunicates	1	2	0
	Molluscs	4	4	3
.	Total Species	4	4	3
Impact monitoring on 4/1/16	Sponge	2	3	1
	Sea anemones	0	1	1
	Zoanthids	2	0	0
	Tunicates	1	2	0
	Molluscs	4	4	3
	Total Species	4	4	3
Impact monitoring on 7/1/16	Sponge	2	3	1
	Sea anemones	0	1	1
	Zoanthids	2	0	0
	Tunicates	1	2	0
	Molluscs	4	4	3
	Total Species	4	4	4

Annex C

Tentative Survey Schedule

Annex C - Tentative Survey Schedule

Coral Impact Monitoring Schedule
Dec 2015 - Feb 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Dec	2-Dec	3-Dec	4-Dec	5-Dec
6-Dec	7-Dec	8-Dec	9-Dec	10-Dec	11-Dec	12-Dec
13-Dec	14-Dec	15-Dec	16-Dec	17-Dec	18-Dec	19-Dec
20-Dec	21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	26-Dec
		Commencement of Dredging Preparation Works	**Impact Monitoring at PSTT, LKN and TC**		No Works	No Works
27-Dec	28-Dec	29-Dec	30-Dec	31-Dec	1-Jan	2-Jan
No Works	**Impact Monitoring at PSTT, LKN and TC**			**Impact Monitoring at PSTT, LKN and TC**	No Works	
3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	8-Jan	9-Jan
No Works	**Impact Monitoring at PSTT, LKN and TC**			**Impact Monitoring at PSTT, LKN and TC**		
10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan
	Impact Monitoring at PSTT, LKN and TC			**Impact Monitoring at PSTT, LKN and TC**		
17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan
	Impact Monitoring at PSTT, LKN and TC			**Impact Monitoring at PSTT, LKN and TC**		
24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan
	Impact Monitoring at PSTT, LKN and TC			**Impact Monitoring at PSTT, LKN and TC**		
31-Jan	1-Feb	2-Feb	3-Feb	4-Feb	5-Feb	6-Feb
	Impact Monitoring at PSTT, LKN and TC			**Impact Monitoring at PSTT, LKN and TC**		
7-Feb	8-Feb	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb
					Impact Monitoring at PSTT, LKN and TC	
14-Feb	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb
	Impact Monitoring at PSTT, LKN and TC			**Impact Monitoring at PSTT, LKN and TC**		
21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb
	Impact Monitoring at PSTT, LKN and TC			**Impact Monitoring at PSTT, LKN and TC**		

Note: (1) The schedule of coral monitoring is subject to change depending on the weather condition and the work programme of the cable installation works.
(2) It is assumed that the marine works would be completed in 60 days, thus, impact coral monitoring is arranged for 8 weeks initially (excluding public holidays).
(3) PSTT = Pak Sha Tau Tsui; LKN = Liu Ko Ngam; TC = Tsing Chau

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