

# **Post-Installation Coral Survey Report**



**ECO-ENVIRO CONSULTANTS COMPANY**

**Dec 2023**

Our Ref: TCS01273/22/300/L0009

**Hong Kong Telecommunications (HKT) Limited**  
8/F, Lai Chi Kok Engineering Centre II  
4 Yuet Lun Street  
Lai Chi Kok  
Kowloon

**Attn: Mr. Cliff Ko**

**2 February 2024**

By email only

Dear Sir,

**Re: Cheung Chau Submarine Cable System  
Environmental Permit No. EP-612/2022  
Certification of Post-Installation Coral Survey Report**

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With reference to the Post-Installation Coral Survey Report for Cheung Chau Submarine System, we herewith certify the report has conformed to the requirement as set out under Conditions 3.2 and 3.3 of the captioned Environmental Permit.

Should you have any queries, please feel free to contact the undersigned at Tel: 2959-6059 or Fax: 2959-6079 or Email: [twtam@fordbusiness.com](mailto:twtam@fordbusiness.com).

Yours sincerely,  
For and on Behalf of  
**Action-United Environmental Services & Consulting (AUES)**



Tam Tak Wing  
Environmental Team Leader

Our ref: 7076911/L30579/AG/TK/rw

2 February 2024

Hong Kong Telecommunications (HKT) Limited  
8/F, Lai Chi Kok Engineering Centre II,  
4 Yuet Lun Street,  
Lai Chi Kok,  
Kowloon,  
Hong Kong

**By Email and Post**  
(cliff.mk.ko@pccw.com)

Attention: Mr Cliff KO

Dear Sir

**Independent Environmental Checker (“IEC”) for Environmental Monitoring Work for  
Cheung Chau Submarine Cable System  
Verification of Post-installation Coral Survey Report**

With reference to the enclosed Post-installation Coral Survey Report sent by ET to IEC via email on 11 December 2023, we have no adverse comment, and hereby approve the Schedule in accordance with Section 3.3 (b) of the Environmental Permit No. EP-612/2022.

Thank you for your attention. Should you have questions please do not hesitate to contact the undersigned at tel. 3995-8120 or by email to alex.gbaguidi@smec.com.

Yours faithfully,



**Alex GBAGUIDI**  
Independent Environmental Checker

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## Summary

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- The Post-installation Spot Dive Survey was carried out on 2<sup>nd</sup> November 2023 at the shore of Pak Tso Wan.
- A total of five hard coral colonies were recorded during the spot dive survey and no coral colonies were found along the cable alignment. All coral recorded during the survey are in good health condition and at least 15 m away from the cable alignment
- All corals recorded in the survey area are common species in Hong Kong water.
- All coral colonies recorded during the post-project coral survey showed the same health condition as the pre-installation coral survey. No bleaching, increased sediment and increased partial mortality were recorded during the survey after the cable laying work.
- As a conclusion, there is not directly impact on the recorded coral colonies during the cable installation work.

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## 1. Introduction

- 1.1 In support of the Government's policy initiative, the Office of the Communications Authority (“OFCA”) has implemented the “Subsidy Scheme to Extension Fibre-based Networks to Villages in Remote Areas” (“the Scheme”). The Scheme comprises six projects and Hong Kong Telecommunications (HKT) Limited (“HKT”) has been awarded “Project 6”, which includes the Cheung Chau Submarine Cable System (“the Project”). The Project will provide a submarine fibre-optic telecommunications cable system from Tai Long Wan (“TLW”) at the Chi Ma Wan Peninsula on southern Lantau Island to Pak Tso Wan (“PTW”) at western Cheung Chau.
- 1.2 The Project includes the offshore and shore-end sections of a cable, approximately 4.4km in length with a diameter of 60mm, buried below the seabed that lands at TLW on Lantau Island and at PTW on Cheung Chau. Installation is scheduled to be completed in the fourth quarter of 2022 and the system is planned to be in service by the fourth quarter of 2022.
- 1.3 Direct impact on coral communities caused by cable laying works during the construction and operation is not likely. However, coral colonies were recorded in the near shore area of PTW, as a precautionary measure a Pre-installation Coral Survey and a Post-project Coral Survey shall be carried out.
- 1.4 The Pre-installation Coral Survey in PTW was carried out on 28<sup>th</sup> September 2022 before commencement of the work of the Project. It has identified the locations of any corals in the near shore area of PTW that are in proximity to the proposed cable alignment and to confirm that none will be directly impacted by cable installation works (F4.3 of the approved Project Profile). The Pre-installation Coral Survey Report was submitted to EPD on 28<sup>th</sup> October 2022 pursuant to Condition 3.3 of the Environmental Permit No. EP-612/2022.
- 1.5 After the cable laying work, a post-installation survey was conducted on 2<sup>nd</sup> November 2023 to verify the health condition of the recorded nearby coral colonies. This is the post-installation coral survey report to present the findings of the Post-installation Coral Survey conducted in the near shore area of PTW. The Post-installation Coral Survey Report shall be submitted to EPD within one month after completion of post-installation coral survey pursuant to Condition 3.3 of the Environmental Permit No. EP-612/2022.

## 2. Methodology

- 2.1 One subtidal spot dive survey will be carried out in the near shore area of PTW in proximity to the proposed cable alignment (*Figure 1*) prior to the installation of the proposed cable. For each coral colony found, the following data should be recorded:
  - GPS location
  - Species identification to genus or species level, as far as practicable
  - sizes (e.g. maximum diameter) and health of identified corals (e.g. degree of sedimentation, partial mortality, sign of bleaching)

- Photographic record
- Survey date and time
- Underwater visibility
- Atmospheric, sea and tidal conditions

### 3. Result

3.1 The Post-installation Coral Survey was carried out on 2<sup>nd</sup> November 2023 and the weather conditions were summarized in **Table 1**.

**Table 1 Weather Condition for the spot dive survey on 2<sup>nd</sup> November 2023**

Date	Condition	Average Underwater Visibility
2 <sup>nd</sup> November 2023	- Northeast force 6 - Sunny period - Tidal level 1.01m	Less than 10 cm

3.2 Spot dive survey were carried out from 09:00 to 12:30 on 2<sup>nd</sup> November 2023 in PTW (Figure 1). The average depth during the dive survey was about 3 m.

3.3 The survey area is mainly composed of sandy bottom with scattered boulders and rocks along the shore area of PTW. Some abandoned nets were found in the survey area as pre-installation dive survey. Because of the strong winter monsoon, the sea condition was so rough and the average visibility along the survey area was less than 10 cm during the dive survey.

3.4 Similar to pre-installation dive survey, no soft coral or gorgonian coral was recorded during the spot check survey. Five hard coral colonies with two species were recorded during the spot dive survey including one colony of *Oulastrea crispata* and four colonies of *Favites acuticollis*. Their GPS coordinates, size and health condition were recorded in **Table 2**. Photos of each coral colony were shown in **Photo Plate A**. All corals recorded in the survey area are common species in Hong Kong water.

**Table 2 GPS Coordinates, Size and Health Condition of Recorded Coral Colonies during Spot Dive Survey**

No.	Coral species	Size (cm)	% Bleaching	Partial Mortality	% Sediment	GPS Coordinates	
1	<i>Oulastrea crispata</i>	8	0	0	0	22°11'50.21N	114°01'17.43E
2	<i>Favites acuticollis</i>	15	0	0	0	22°11'50.00N	114°01'17.03E
3	<i>Favites acuticollis</i>	19	0	0	0	22°11'49.90N	114°01'16.88E
4	<i>Favites acuticollis</i>	16	0	0	0	22°11'49.78N	114°01'16.69E
5	<i>Favites acuticollis</i>	22	0	0	0	22°11'49.12N	114°01'16.02E

### 4. Discussion

4.1 The bottom substrates of the survey site were mainly composed of sandy bottom with scattered boulders and rocks. Similar to pre-installation dive survey, a total of 5 hard coral colonies were recorded during the spot dive survey. All coral recorded during the survey are in good health condition and at least 15 m away

from the cable alignment. No rare animals were recorded. They are all common species and found in very low abundance and diversity.

- 4.2 All coral colonies recorded during the post-project coral survey showed the same health condition as the pre-installation coral survey. No bleaching, increased sediment and increased partial mortality were recorded during the survey after the cable laying work. As a conclusion, there is not directly impact on the recorded coral colonies during the cable installation work.

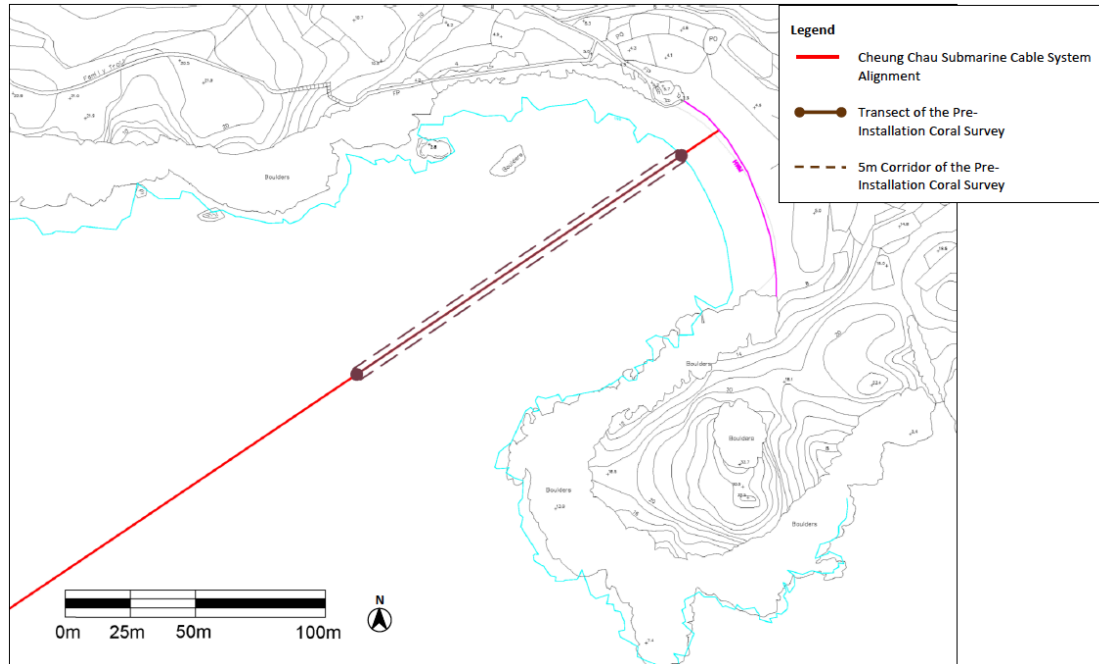
## 5. References

- Brian Morton and John Morton. 1983. *The Sea Shore Ecology of Hong Kong*. Hong Kong University Press.
- Binnie Consultants Limited. 1995. Marine Ecology of Hong Kong: Report on Underwater Dive Surveys. Volume I. Civil Engineering Department Geotechnical Engineering Office
- Chan A.L.K., Choi, C.L.S., McCorry D., Chan K.K., Lee, M.W., and Put, A. Jr. 2005. *Field Guide to Hard Corals of Hong Kong*. AFCD.


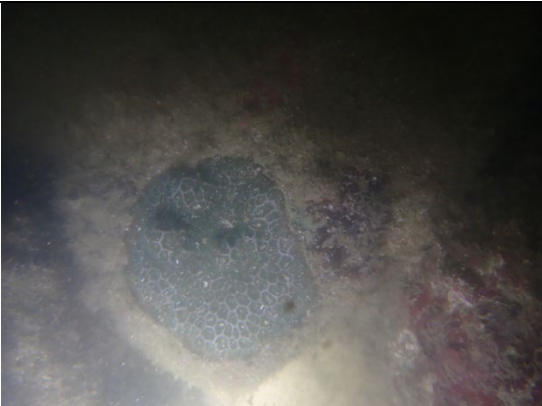


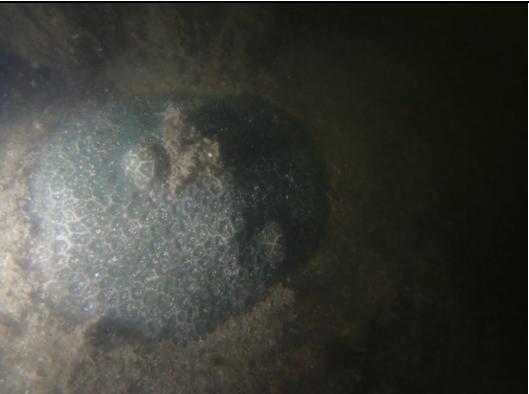
**END**



**Figure 1 Spot Dive Survey Location PTW**



**PHOTO PLATE A**

	
Coral #1 <i>Favites acuticollis</i>	Coral #2 <i>Favites acuticollis</i>
	
Coral #3 <i>Favites acuticollis</i>	Coral #4 <i>Favites acuticollis</i>
	
Coral #5 <i>Favites acuticollis</i>	