Concentric – Hong Kong River Joint Venture

Contract No. CV/2020/09
Construction of
Lei Yue Mun Public Landing Facility

Coral Baseline Survey Report
(Version 4.0)

Endorsed By _____

(Mr. Keith Kei, ET's Coral Specialist)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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1 INTRODUCTION

Background

1.1 Lei Yue Mun (LYM) is one of the most popular tourist attractions in Hong Kong, for its pleasant seaside ambience and excellent seafood. LYM was included in the Tourism Commission (TC)'s Tourism District Enhancement Programme to enrich Hong Kong's appeal to visitors. In 2003, initial minor improvements were completed along the LYM waterfront, and further improvement of facilities along the LYM waterfront was planned.

1.2 The Project, Lei Yue Mun Waterfront Enhancement Project is a Designated Project under the Environmental Impact Assessment Ordinance (EIAO). An EIA Report under Agreement No. CE 54/2015 (EP) (Report No.: AEIAR-219/2018) for the Project was approved under EIAO on 26 October 2018 in accordance with the EIA Study Brief (No. ESB-287/2015) and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM). The corresponding Environmental Permit was issued (EP no.: EP-564/2018) by the Director of Environmental Protection (DEP) on 10 December 2018.

1.3 The works to be executed under Contract No. CV/2020/09 Construction of Lei Yue Mun Public Landing Facility (hereinafter called "the Contract") mainly comprise the construction of a public landing facility, a breakwater, and structural improvement works to an existing viewing platform and a lookout point. Dredging and excavation works for berthing of vessels at the new public landing facility will be involved, which might directly affect the hard coral colonies. Thus, a coral baseline survey that involves a detail coral mapping survey shall be conducted to ascertain the location, sizes, species and health status of the corals with reference to the extent of marine ecological survey indicated at Figure 9.1 of the EIA Report under the Contract.

1.4 The Work Area of this Project is illustrated in the site layout plan (**Figure 1)**.

1.5 Wellab Limited was commissioned by Concentric – Hong Kong River Joint Venture (hereinafter called "the Contractor") under Contract No. CV/2020/09 to conduct coral baseline survey for the Project. The coral survey area is shown in **Figure 2**.

Purpose of the Coral Baseline Survey Report

1.6 This Coral Baseline Survey Report is prepared by Wellab and the Coral Specialist of the Environmental Team, Mr. Keith Kei, to provide the results of coral baseline survey for the Contract, including coral mapping survey at the proposed dredging area at LYM and coral survey at the proposed coral recipient site at Fat Tong Chau (FTC), Junk Bay, and to fulfil Condition 2.14 of the Environmental Permit No. EP-564/2018.

1.7 The objectives of the coral baseline survey include the followings:

- To provide a mapping of the location, size, species and health status of corals (both

movable and non-movable);

- To identify affected corals; and
- To identify potential coral recipient site and prepare for the coral translocation plan.

Structure of the Coral Baseline Survey Report

1.8 The structure of the report is shown as follows:

Section 1	Introduction
Section 2	Methodology
Section 3	Results
Section 4	Coral Translocation Plan
Section 5	Summary of Coral Baseline Survey Findings
Section 6	References

2 METHODOLOGY

Coral Mapping Survey at the Proposed Dredging Area (LYM)

2.1 Coral Mapping Survey was conducted inside a coral mapping area inside the proposed dredging area on 5 and 6 March 2021. The coral mapping area is shown in **Figure 2**.

2.2 The coral mapping area (approx. 120 x 40 m) was determined in the field using landscape features and geographical coordinates using a handheld Global Positioning System (GPS) unit, and further divided into grids for mapping the location of coral colonies inside each grid (**Figure 3**).

2.3 As the water visibility was limited and water current was strong, an active search survey was conducted in a zig-zag dive route within each grid in the survey area to locate all the corals.

2.4 The mapping area was divided into 20 grids, labelled as columns 1 to 4 and rows A to E. This method was discussed with, and further agreed by, the coral specialist from the Environmental Team in the field, in view of the environmental conditions (water visibility and water current) during the survey. All field data were collected by marine ecologist(s) using SCUBA dive.

2.5 Locations of corals (except the locally common species *Oulastrea crispata*) and associated substrates found were recorded, size estimated, and health status (including percentage cover of bleaching, mortality and sedimentation) recorded. The feasibility of translocation of each coral colony was evaluated. Pictures of corals were also taken during the surveys.

2.6 Upon completion of the coral mapping survey, a coral recipient site was identified based on the results of the donor site.

2.7 Any associated organisms in the Project area and its vicinity were also recorded during the coral mapping survey.

Coral Survey at Potential Coral Recipient Site

Spot-check Dive Survey

2.8 A spot-check dive survey was conducted at a potential recipient site at Fat Tong Chau (FTC), Junk Bay (**Figure 4a and Figure 4b**) on 6 March 2021, to check the presence of coral species and substratum which are similar to the donor site.

2.9 At FTC, subtidal substrates were searched for the presence of coral communities, including hard coral (order Scleractinia), octocorals (sub-class Octocorallia) and black corals (order Antipatharia). The corals and associated substrates found during the survey were recorded, size estimated, and health status (including percentage cover of bleaching, mortality and sedimentation) recorded by a marine ecologist using SCUBA dive.

2.10 During the spot-check dive survey, the general environmental conditions of the potential recipient site were assessed (e.g. presence of healthy coral community with similar coral species as the

donor site, presence of suitable substrates to allow the translocated boulders to be permanently stabilized, and presence of sufficient space to receive the newly translocated coral colonies).

2.11 The spot-check dive survey findings revealed that FTC is suitable to act as a coral recipient site.

2.12 A more detailed semi-quantitative method, Rapid Ecological Assessment (REA) survey (DeVantier et al. 1998), was carried out to assess the benthic substrate and ecological attributes of the recipient site.

Rapid Ecological Assessment (REA) Survey

2.13 Following the spot-check dive survey, a more detailed REA survey was conducted at a potential coral recipient site at Fat Tong Chau (FTC), Junk Bay on 6 March 2021 (**Figure 4a and Figure 4b**).

2.14 The REA survey was conducted along a 100 m transect parallel to the coastline at each location, based on the preliminary results from the spot-check dive survey. The substrate type along the length of the transect was recorded at 1 m intervals. The benthic cover, taxon abundance, and ecological attributes along the transects were recorded in a swathe of 2 m wide, 1 m either side of the transect, by a marine ecologist using SCUBA dive.

2.15 Two major types of information were recorded:

(1) Cover of the major benthic groups
(2) Inventory of sessile benthic taxa
These were performed according to Tier I and Tier II levels of information.

2.16 Tier I: Categorization of ecological (benthic cover) and environmental variables.

To describe the benthic cover, six substrate and seven ecological attributes (**Table 2.1a**) were assigned. Each attribute was given a rank, from 0 to 6 (**Table 2.1b**) based on the overall cover along the survey area.

2.17 Tier II: Taxonomic inventories to define types of benthic communities.

An inventory of benthic taxa was compiled during each swim. Taxa were identified either in situ or with the aid of photos to confirm identification afterward.

Hard corals (Order Scleractinia) – to genus and species level where possible;

Soft corals (Subclass Octocorallia) – to genus level where possible;

Other benthos (such as sponges, zoanthids, bryozoans, macroalgae, etc) – to genus level where possible or phylum with growth form.

2.18 Each taxon in the inventory was given a rank (0 to 5) on the basis of its abundance in the community at the site (**Table 2.1c**). These broad categories rank the taxa in terms of the relative abundance of individuals, rather than the contribution to benthic cover, at each site.

2.19 Locations of corals and associated substrates were recorded, size estimated and health status (including percentage cover of bleaching, mortality and sedimentation) recorded. The coral colonies were identified to genus level or above wherever possible.

2.20 The feasibility of translocation of each coral colony was evaluated. Pictures of corals and representative taxa along the transects were taken during the surveys.

2.21 The location of the REA transects were recorded on site using handheld Global Positioning System (GPS) unit (e.g. Garmin GPSMap 66CS).

Table 2.1 Categories of a) benthic attributes, b) ordinal ranks of percentage cover of substrate, and (c) ordinal ranks of taxa abundance

a) Benthic attributes		**b) Percentage Cover**		**c) Taxon abundance**	
Substrate	**Ecological**	**Rank**	**Percentage Cover**	**Rank**	**Abundance**
Continuous Pavement (artificial)	Hard Coral	0	Not recorded	0	Absent
Bedrock	Dead Standing Coral	1	1-5%	1	Sparse
Large boulders (>50 cm)	Soft Coral	2	6-10%	2	Uncommon
Rubble (<50cm)	Black Coral	3	11-30%	3	Common
Sand with gravel	Marcoalgae	4	31-50%	4	Abundant
Silt and Mud	Turf Algae	5	51-75%	5	Dominant
	Encrusting Algae	6	76-100%		

2.22 A set of environmental site descriptions was recorded for the REA transect as follows:

The degree of exposure to prevailing wave energy was ranked from 1 – 4, where:

- 1 = sheltered (highly protected by topographic features from prevailing waves);
- 2 = semi-sheltered (moderately protected);
- 3 = semi-exposed (only partly protected); and
- 4 = exposed (experiences the full force of prevailing wave energy).

Sediment deposition on the reef substratum (particle sizes ranging from very fine to moderately coarse) rated on a four-point scale from 0 - 3, where:

- 0 = no sediment;
- 1 = minor (thin layer) sediment deposition;
- 2 = moderate sediment deposition (thick layer), but substrate can be cleaned by fanning off the sediment; and
- 3 = major sediment deposition (thick, deep layer), and substrate cannot be cleaned by fanning.

3 RESULTS

Coral Mapping Survey at the Proposed Dredging Area (LYM)

3.1 The coral mapping surveys at the proposed dredging area at LYM were conducted on 5th and 6th March 2021.

3.2 The area for coral mapping survey is shown in **Figure 2 and 3**, and the survey conditions are shown in **Table 3.1**.

3.3 Photos of representative taxa and corals along transects are shown in **Appendices Ia, Ib and Ic**. The species, number and conditions of coral colonies found in the mapping area are presented in **Table 3.2** and summarised in **Table 3.3**. The location of patches of coral colonies in the mapping area is shown in **Figure 5**.

Table 3.1 GPS Coordinates and Physical Attributes of Dive Survey Location at LYM

Site	Depth (m)	Visibility (m)	Substrate Type	Presence of Hard Corals?	Presence of Octocorals?	Degree of Exposure	Degree of Sediment Deposition
LYM	1.9 – 13.2	1 – 1.5	Bedrock, boulders, rubbles, sand with silt and gravels	Yes	Yes	2 - 3	2

3.4 The substrates of LYM were mainly composed of bedrock, big boulders, rubbles and sand with gravel and silt. Most surface of hard substrates was commonly covered by sediments. Encrusting algae and sessile animals (barnacles, rock oysters, sponges, hard corals and octocorals) were sparsely distributed on hard substrates and sandy bottom (**Appendices Ia and Ib**).

3.5 For the coral communities in the coral mapping area, a total of 421 coral colonies of 10 coral species, including 6 hard coral species and 4 octocoral species were found. Most of the species recorded in the baseline study of EIA report were also observed in the coral mapping area.

3.6 The most abundant coral species was octocoral *Echinomuricea* sp., of which a total of 357 colonies were observed in the mapping area.

3.7 Twenty-eight (28) hard coral colonies of 6 hard coral species (*Duncanopsammia peltate*, *Plesiastrea versipora*, *Bernardpora stutchburyi* and *Favites pentagona*, *Tubastraea* sp. A, and *Tubastraea* sp. B) were observed in the mapping area. The size of the hard corals ranged from 25 to 1225 cm^2. Most colonies were in good condition with no or low-level sedimentation, bleaching or partial mortality (**Tables 3.2 and 3.3**; **Appendix Ic**).

3.8 Among the 421 coral colonies mapped during the survey, most were attached to hard substrates, 377 colonies were attached to non-movable boulders or trash and 44 coral colonies were attached to movable rubbles (**Tables 3.2 and Tables 3.3**). Among these 44 translocatable colonies, 41

colonies were *Echinomuricea* sp., 2 colonies were *Echinogorgia* sp. and 1 colony was *Menella* sp..

3.9 No black coral or other taxon of conservation interest (e.g., seahorse) was recorded during the mapping survey.

3.10 Other than the coral colonies, associated organisms such as bryozoans, sponges, sea anemones, hydroids, sea cucumber and sea urchin were also recorded during the mapping survey and they are all common species in Hong Kong waters (**Appendix Ib**).

Table 3.2 Size, Percentage Area of Sedimentation (Sed), Bleaching (B) and Partial Mortality (PM) of Coral Colonies in Coral Mapping Area at LYM

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
1	1A	1	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
2	1A	2	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
3	1A	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
4	1A	4	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
5	1A	5	*Tubastraea* sp. A	10 x 10	Good	0	0	0	Boulder (>50cm)	No
6	1A	6	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
7	1A	7	*Tubastraea* sp. A	5 x 5	Good	0	0	0	Boulder (>50cm)	No
8	1A	8	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
9	1A	9	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
10	1A	10	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
11	1A	11	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
12	1A	12	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
13	1A	13	*Tubastraea* sp. B	10 x 10	Good	0	0	0	Boulder (>50cm)	No
14	1A	14	*Tubastraea* sp. A	5 x 5	Good	0	0	0	Boulder (>50cm)	No
15	1A	15	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
16	1A	16	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
17	1A	17	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
18	1A	18	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
19	1A	19	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
20	1A	20	*Tubastraea* sp. A	5 x 5	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
21	1A	21	*Echinomuricea* sp.	35	Good	0	0	0	Boulder (>50cm)	No
22	1A	22	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
23	1A	23	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
24	1A	24	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
25	1A	25	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
26	1A	26	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
27	1A	27	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
28	1A	28	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
29	1A	29	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
30	1A	30	*Dendronephthya* sp.	15	Good	0	0	0	Boulder (>50cm)	No
31	1A	31	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
32	1A	32	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
33	1A	33	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
34	1A	34	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
35	1A	35	*Dendronephthya* sp.	20	Good	0	0	0	Boulder (>50cm)	No
36	1A	36	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
37	1A	37	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
38	1A	38	*Menella* sp.	20	Good	0	0	0	Boulder (>50cm)	No
39	1A	39	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
40	1A	40	*Menella* sp.	25	Good	0	0	0	Boulder (>50cm)	No
41	1A	41	*Dendronephthya* sp.	20	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
42	1A	42	*Dendronephthya* sp.	10	Good	0	0	0	Boulder (>50cm)	No
43	1A	43	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
44	1A	44	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
45	1A	45	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
46	1A	46	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
47	1A	47	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
48	1A	48	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
49	1A	49	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
50	1A	50	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
51	1A	51	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
52	1A	52	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
53	1A	53	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
54	1A	54	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
55	1A	55	*Echinogorgia* sp.	25	Good	0	0	0	Boulder (>50cm)	No
56	1A	56	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
57	1A	57	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
58	1A	58	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
59	1A	59	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
60	1A	60	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
61	1A	61	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
62	1A	62	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
63	1A	63	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
64	1A	64	*Echinogorgia* sp.	25	Good	0	0	0	Boulder (>50cm)	No
65	1A	65	*Menella* sp.	25	Good	0	0	0	Boulder (>50cm)	No
66	1A	66	*Menella* sp.	15	Good	0	0	0	Boulder (>50cm)	No
67	1A	67	*Echinogorgia* sp.	20	Good	0	0	0	Boulder (>50cm)	No
68	1A	68	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
69	1B	1	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
70	1B	2	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
71	1B	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
72	1B	4	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
73	1B	5	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
74	1B	6	*Tubastraea* sp. A	5 x 5	Good	0	0	0	Boulder (>50cm)	No
75	1B	7	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
76	1B	8	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
77	1B	9	*Tubastraea* sp. B	10 x 10	Good	0	0	0	Boulder (>50cm)	No
78	1B	10	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
79	1B	11	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
80	1B	12	*Menella* sp.	20	Good	0	0	0	Boulder (>50cm)	No
81	1B	13	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
82	1B	14	*Tubastraea* sp. B	5 x 5	Good	0	0	0	Boulder (>50cm)	No
83	1B	15	*Tubastraea* sp. B	5 x 5	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
84	1B	16	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
85	1B	17	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
86	1B	18	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
87	1B	19	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
88	1B	20	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
89	1B	21	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
90	1B	22	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
91	1B	23	*Tubastraea* sp. B	5	Good	0	0	0	Boulder (>50cm)	No
92	1B	24	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
93	1B	25	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
94	1B	26	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
95	1B	27	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
96	1B	28	*Dendronephthya* sp.	15	Good	0	0	0	Boulder (>50cm)	No
97	1B	29	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
98	1B	30	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
99	1B	31	*Menella* sp.	20	Good	0	0	0	Boulder (>50cm)	No
100	1B	32	*Menella* sp.	25	Good	0	0	0	Boulder (>50cm)	No
101	1B	33	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
102	1B	34	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
103	1B	35	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
104	1B	36	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
105	1B	37	*Menella* sp.	20	Good	0	0	0	Boulder (>50cm)	No
106	1B	38	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
107	1B	39	*Dendronephthya* sp.	15	Good	0	0	0	Boulder (>50cm)	No
108	1B	40	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
109	1B	41	*Menella* sp.	20	Good	0	0	0	Boulder (>50cm)	No
110	1B	42	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
111	1B	43	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
112	1B	44	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
113	1C	1	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
114	1C	2	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
115	1C	3	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
116	1C	4	*Duncanopsammia peltata*	45	Good	0	0	0	Boulder (>50cm)	No
117	1C	5	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
118	1C	6	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
119	1C	7	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
120	1C	8	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
121	1C	9	*Plesiastrea versipora*	35 x 35	Good	0	0	0	Boulder (>50cm)	No
122	1C	10	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
123	1C	11	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
124	1C	12	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
125	1C	13	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
126	1C	14	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
127	1C	15	*Echinogorgia sp.*	15	Good	0	0	0	Rubble (<50cm)	**Yes**
128	1C	16	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
129	1C	17	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
130	1C	18	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
131	1C	19	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
132	1C	20	*Echinomuricea* sp.	25	Good	0	0	0	Rubble (<50cm)	**Yes**
133	1C	21	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
134	1C	22	*Echinogorgia sp.*	25	Good	0	0	0	Boulder (>50cm)	No
135	1C	23	*Echinogorgia sp.*	20	Good	0	0	0	Boulder (>50cm)	No
136	1C	24	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
137	1C	25	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
138	1C	26	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
139	1C	27	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
140	1C	28	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
141	1C	29	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
142	1C	30	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
143	1C	31	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
144	1C	32	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
145	1C	33	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
146	1C	34	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
147	1C	35	*Echinomuricea* sp.	10	Good	0	0	0	Rubble (<50cm)	**Yes**
148	1C	36	*Echinogorgia sp.*	25	Good	0	0	0	Rubble (<50cm)	**Yes**
149	1C	37	*Echinogorgia sp.*	20	Good	0	0	0	Boulder (>50cm)	No
150	1C	38	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
151	1C	39	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
152	1C	40	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
153	1C	41	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
154	2A	1	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
155	2A	2	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
156	2A	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
157	2A	4	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
158	2A	5	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
159	2A	6	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
160	2A	7	*Echinomuricea* sp.	25	Good	0	0	0	Rubble (<50cm)	**Yes**
161	2A	8	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
162	2A	9	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
163	2A	10	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
164	2A	11	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
165	2A	12	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
166	2A	13	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
167	2A	14	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
168	2A	15	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
169	2A	16	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
170	2A	17	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
171	2A	18	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
172	2A	19	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
173	2A	20	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
174	2A	21	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
175	2A	22	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
176	2A	23	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
177	2A	24	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
178	2A	25	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
179	2A	26	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
180	2A	27	*Tubastraea* sp. B	5 x 5	Good	0	0	0	Boulder (>50cm)	No
181	2A	28	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
182	2A	29	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
183	2A	30	*Echinomuricea* sp.	25	Good	0	0	0	Rubble (<50cm)	**Yes**
184	2A	31	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
185	2A	32	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
186	2A	33	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
187	2A	34	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
188	2A	35	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
189	2A	36	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
190	2A	37	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
191	2A	38	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
192	2A	39	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
193	2A	40	*Tubastraea* sp. B	10 x 10	Good	0	0	0	Boulder (>50cm)	No
194	2A	41	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
195	2A	42	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
196	2A	43	*Tubastraea* sp. B	5 x 5	Good	0	0	0	Boulder (>50cm)	No
197	2A	44	*Tubastraea* sp. B	5 x 5	Good	0	0	0	Boulder (>50cm)	No
198	2A	45	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
199	2A	46	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
200	2A	47	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
201	2A	48	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
202	2A	49	*Dendronephthya* sp.	15	Good	0	0	0	Boulder (>50cm)	No
203	2A	50	*Dendronephthya* sp.	20	Good	0	0	0	Boulder (>50cm)	No
204	2A	51	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
205	2A	52	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
206	2A	53	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
207	2A	54	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
208	2A	55	*Echinomuricea* sp.	5	Good	0	0	0	Boulder (>50cm)	No
209	2A	56	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
210	2A	57	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
211	2A	58	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
212	2A	59	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
213	2A	60	*Tubastraea* sp. B	5 x 5	Good	0	0	0	Boulder (>50cm)	No
214	2A	61	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
215	2A	62	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
216	2A	63	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
217	2A	64	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
218	2A	65	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
219	2A	66	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
220	2A	67	*Dendronephthya* sp.	20	Good	0	0	0	Boulder (>50cm)	No
221	2A	68	*Dendronephthya* sp.	15	Good	0	0	0	Boulder (>50cm)	No
222	2A	69	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
223	2A	70	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
224	2A	71	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
225	2A	72	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
226	2A	73	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
227	2A	74	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
228	2A	75	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
229	2B	1	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
230	2B	2	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
231	2B	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
232	2B	4	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
233	2B	5	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
234	2B	6	*Menella* sp.	25	Good	0	0	0	Abandoned Tyre	No
235	2B	7	*Echinomuricea* sp.	25	Good	0	0	0	Abandoned Tyre	No
236	2B	8	*Echinomuricea* sp.	15	Good	0	0	0	Abandoned Tyre	No
237	2B	9	*Echinomuricea* sp.	20	Good	0	0	0	Abandoned Tyre	No
238	2B	10	*Echinomuricea* sp.	15	Good	0	0	0	Abandoned Tyre	No
239	2B	11	*Menella* sp.	15	Good	0	0	0	Abandoned Tyre	No
240	2B	12	*Echinomuricea* sp.	15	Good	0	0	0	Abandoned Tyre	No
241	2B	13	*Echinomuricea* sp.	20	Good	0	0	0	Abandoned Tyre	No
242	2B	14	*Echinomuricea* sp.	25	Good	0	0	0	Abandoned Tyre	No
243	2B	15	*Echinomuricea* sp.	20	Good	0	0	0	Abandoned Tyre	No
244	2B	16	*Echinomuricea* sp.	15	Good	0	0	0	Abandoned Tyre	No
245	2B	17	*Echinomuricea* sp.	15	Good	0	0	0	Abandoned Tyre	No
246	2B	18	*Echinomuricea* sp.	20	Good	0	0	0	Abandoned Tyre	No
247	2B	19	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
248	2B	20	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
249	2B	21	*Tubastraea* sp. B	10 x 10	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
250	2B	22	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
251	2B	23	*Tubastraea* sp. B	5 x 5	Good	0	0	0	Boulder (>50cm)	No
252	2B	24	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
253	2B	25	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
254	2B	26	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
255	2B	27	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
256	2B	28	*Echinomuricea* sp.	25	Good	0	0	0	Rubble (<50cm)	**Yes**
257	2B	29	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
258	2B	30	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
259	2B	31	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
260	2B	32	*Menella* sp.	15	Good	0	0	0	Boulder (>50cm)	No
261	2B	33	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
262	2B	34	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
263	2B	35	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
264	2B	36	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
265	2B	37	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
266	2B	38	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
267	2B	39	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
268	2B	40	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
269	2B	41	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
270	2B	42	*Menella* sp.	20	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
271	2B	43	*Menella* sp.	25	Good	0	0	0	Boulder (>50cm)	No
272	2B	44	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
273	2B	45	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
274	2B	46	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
275	2B	47	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
276	2B	48	*Echinomuricea* sp.	25	Good	0	0	0	Rubble (<50cm)	**Yes**
277	2B	49	*Echinomuricea* sp.	25	Good	0	0	0	Rubble (<50cm)	**Yes**
278	2B	50	*Tubastraea* sp. B	5 x 5	Good	0	0	0	Boulder (>50cm)	No
279	2B	51	*Tubastraea* sp. B	10 x 10	Good	0	0	0	Boulder (>50cm)	No
280	2B	52	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
281	2C	1	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
282	2C	2	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
283	2C	3	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
284	2C	4	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
285	2C	5	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
286	2C	6	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
287	2C	7	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
288	2C	8	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
289	2C	9	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
290	2C	10	*Menella* sp.	15	Good	0	0	0	Boulder (>50cm)	No
291	2C	11	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
292	2C	12	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
293	2C	13	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
294	2C	14	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
295	2C	15	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
296	2C	16	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
297	2C	17	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
298	2C	18	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
299	2C	19	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
300	2C	20	*Menella* sp.	10	Good	0	0	0	Boulder (>50cm)	No
301	2C	21	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
302	2C	22	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
303	2C	23	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
304	2C	24	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
305	2C	25	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
306	2C	26	*Tubastraea* sp. B	10	Good	0	0	0	Boulder (>50cm)	No
307	2C	27	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
308	2C	28	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
309	2D	1	*Bernardpora stutchburyi*	35 x 35	Good	0	0	0	Boulder (>50cm)	No
310	3A	1	*Echinomuricea* sp.	15	Good	0	0	0	Trash	No
311	3A	2	*Echinomuricea* sp.	20	Good	0	0	0	Trash	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
312	3A	3	*Echinomuricea* sp.	10	Good	0	0	0	Trash	No
313	3A	4	*Echinomuricea* sp..	10	Good	0	0	0	Trash	No
314	3A	5	*Echinomuricea* sp.	15	Good	0	0	0	Trash	No
315	3A	6	*Echinomuricea* sp.	15	Good	0	0	0	Trash	No
316	3A	7	*Echinomuricea* sp.	15	Good	0	0	0	Trash	No
317	3A	8	*Echinomuricea* sp.	20	Good	0	0	0	Trash	No
318	3A	9	*Echinomuricea* sp.	15	Good	0	0	0	Trash	No
319	3A	10	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
320	3A	11	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
321	3A	12	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
322	3A	13	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
323	3A	14	*Echinomuricea* sp.	40	Good	0	0	0	Rubble (<50cm)	**Yes**
324	3A	15	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
325	3A	16	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
326	3A	17	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
327	3A	18	*Echinomuricea* sp.	40	Good	0	0	0	Boulder (>50cm)	No
328	3A	19	*Echinomuricea* sp.	45	Good	0	0	0	Boulder (>50cm)	No
329	3A	20	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
330	3A	21	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
331	3A	22	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
332	3A	23	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
333	3A	24	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
334	3A	25	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
335	3B	1	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
336	3B	2	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
337	3B	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
338	3B	4	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
339	3B	5	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
340	3B	6	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
341	3B	7	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
342	3B	8	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
343	3B	9	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
344	3B	10	*Echinomuricea* sp.	30	Good	0	0	0	Rubble (<50cm)	**Yes**
345	3B	11	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
346	3B	12	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
347	3B	13	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
348	3B	14	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
349	3B	15	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
350	3B	16	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<50cm)	**Yes**
351	3B	17	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
352	3B	18	*Echinomuricea* sp.	25	Good	0	0	0	Rubble (<50cm)	**Yes**
353	3B	19	*Echinomuricea* sp.	35	Good	0	0	0	Rubble (<50cm)	**Yes**

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
354	3B	20	*Echinomuricea* sp.	30	Good	0	0	0	Rubble (<50cm)	**Yes**
355	3B	21	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
356	3B	22	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
357	3B	23	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
358	3B	24	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
359	3B	25	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
360	3B	26	*Echinomuricea* sp.	10	Good	0	0	0	Rubble (<50cm)	**Yes**
361	3B	27	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
362	3B	28	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
363	3B	29	*Menella* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
364	3B	30	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
365	3B	31	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
366	3B	32	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
367	3C	1	*Echinomuricea* sp.	35	Good	0	0	0	Boulder (>50cm)	No
368	3C	2	*Echinomuricea* sp.	30	Good	0	0	0	Rubble (<30cm)	**Yes**
369	3C	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
370	3C	4	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
371	3C	5	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<30cm)	**Yes**
372	3C	6	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
373	3C	7	*Tubastrea* sp. A	5 x 5	Good	0	0	0	Boulder (>50cm)	No
374	3C	8	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
375	3C	9	*Echinomuricea* sp.	15	Good	0	0	0	Rubble (<30cm)	**Yes**
376	3C	10	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
377	3C	11	*Echinomuricea* sp.	30	Good	0	0	0	Boulder (>50cm)	No
378	3C	12	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
379	3C	13	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
380	3C	14	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
381	3C	15	*Tubastrea* sp. A	10 x 10	Good	0	0	0	Boulder (>50cm)	No
382	3C	16	*Dendronephthya* sp.	10	Good	0	0	0	Boulder (>50cm)	No
383	3D	1	*Favites pentagona*	30 x 35	Good	0	0	0	Boulder (>50cm)	No
384	4A	1	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
385	4A	2	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
386	4A	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
387	4A	4	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
388	4A	5	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
389	4A	6	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
390	4A	7	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
391	4A	8	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
392	4A	9	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
393	4B	1	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
394	4B	2	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
395	4B	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
396	4B	4	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
397	4B	5	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
398	4C	1	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
399	4C	2	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
400	4C	3	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
401	4C	4	*Echinomuricea* sp.	20	Good	0	0	0	Boulder (>50cm)	No
402	4C	5	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
403	4C	6	*Tubastrea* sp. A	10 x 10	Good	0	0	0	Boulder (>50cm)	No
404	4C	7	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
405	4C	8	*Tubastrea* sp. A	10 x 10	Good	0	0	0	Boulder (>50cm)	No
406	4C	9	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
407	4C	10	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
408	4C	11	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
409	4C	12	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
410	4C	13	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
411	4C	14	*Echinomuricea* sp.	10	Good	0	0	0	Boulder (>50cm)	No
412	4C	15	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No
413	4C	16	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
414	4C	17	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
415	4C	18	*Echinomuricea* sp.	20	Good	0	0	0	Rubble (<50cm)	**Yes**
416	4C	19	*Echinomuricea* sp.	15	Good	0	0	0	Boulder (>50cm)	No

Code	Grid no.	Coral no.	Species	Size: Hard corals: L x W cm Octocorals: L cm	Habitat Conditions	%Sed	%B	%PM	Associated Substrate Type	Translocation Feasibility
417	4C	20	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No
418	4C	21	*Echinomuricea* sp.	25	Good	0	0	0	Rubble (<50cm)	**Yes**
419	4C	22	*Echinomuricea* sp.	35	Good	0	0	0	Boulder (>50cm)	No
420	4C	23	*Echinomuricea* sp.	40	Good	0	0	0	Boulder (>50cm)	No
421	4C	24	*Echinomuricea* sp.	25	Good	0	0	0	Boulder (>50cm)	No

Table 3.3 Summary of Coral Species Found in the Coral Mapping Area

			Grid no.	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E
	Taxon	**Family**	**Species**	**No. of Colonies (No. of Moveable Colonies)**									
1	Hard Coral	Dendrophylliidae	*Duncanopsammia peltata*	0 (0)	0 (0)	**1 (0)**	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2	Hard Coral	Plesiastreidae	*Plesiastrea versipora*	0 (0)	0 (0)	**1 (0)**	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
3	Hard Coral	Poritidae	*Bernardpora stutchburyi*	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**1 (0)**	0 (0)
4	Hard Coral	Merulinidae	*Favites pentagona*	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
5	Hard Coral	Dendrophylliidae	*Tubastraea* sp. A	**4 (0)**	**1 (0)**	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
6	Hard Coral	Dendrophylliidae	*Tubastraea* sp. B	**1 (0)**	**4 (0)**	0 (0)	0 (0)	0 (0)	**5 (0)**	**4 (0)**	**1 (0)**	0 (0)	0 (0)
7	Octocoral	Plexauridae	*Echinomuricea* sp.	**52 (0)**	**32 (0)**	**34 (2)**	0 (0)	0 (0)	**66 (9)**	**43 (11)**	**25 (3)**	0 (0)	0 (0)
8	Octocoral	Plexauridae	*Echinogorgia* sp. C	**3 (0)**	0 (0)	**5 (2)**	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
9	Octocoral	Plexauridae	*Menella* sp.	**4 (0)**	**5 (0)**	0 (0)	0 (0)	0 (0)	0 (0)	**5 (0)**	**2 (0)**	0 (0)	0 (0)
10	Octocoral	Nephtheidae	*Dendronephthya* sp.	**4 (0)**	**2 (0)**	0 (0)	0 (0)	0 (0)	**4 (0)**	0 (0)	0 (0)	0 (0)	0 (0)
		Hard Corals	Total no. of species;	**2**	**2**	**2**	0	0	**1**	**1**	**1**	**1**	0
			Total no. of colonies (and movable colonies)	**5 (0)**	**5 (0)**	**2 (0)**	0 (0)	0 (0)	**5 (0)**	**4 (0)**	**1 (0)**	**1 (0)**	0 (0)
		Octocorals	Total no. of species;	**4**	**3**	**2**	0	0	**2**	**2**	**2**	0	0
			Total no. of colonies (and movable colonies)	**63 (0)**	**39 (0)**	**39 (4)**	0 (0)	0 (0)	**70 (9)**	**48 (11)**	**27 (3)**	0 (0)	0 (0)
		Overall	Total no. of species;	**6**	**5**	**4**	0	0	**3**	**3**	**3**	**1**	0
			Total no. of colonies (and movable colonies)	**68 (0)**	**44 (0)**	**41 (4)**	0 (0)	0 (0)	**75 (9)**	**52 (11)**	**28 (3)**	**1 (0)**	0 (0)

Table 3.3 Summary of Coral Species Found in the Coral Mapping Area (continued)

			Grid no.	3A	3B	3C	3D	3E	4A	4B	4C	4D	4E
	Taxon	**Family**	**Species**	**No. of Colonies (No. of Moveable Colonies)**									
1	Hard Coral	Dendrophylliidae	*Duncanopsammia peltata*	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2	Hard Coral	Plesiastreidae	*Plesiastrea versipora*	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
3	Hard Coral	Poritidae	*Bernardpora stutchburyi*	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
4	Hard Coral	Merulinidae	*Favites pentagona*	0 (0)	0 (0)	0 (0)	**1 (0)**	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
5	Hard Coral	Dendrophylliidae	*Tubastraea* sp. A	0 (0)	0 (0)	**2 (0)**	0 (0)	0 (0)	0 (0)	0 (0)	**2 (0)**	0 (0)	0 (0)
6	Hard Coral	Dendrophylliidae	*Tubastraea* sp. B	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
7	Octocoral	Plexauridae	*Echinomuricea* sp.	**25 (4)**	**31 (6)**	**13 (3)**	0 (0)	0 (0)	**9 (0)**	**5 (0)**	**22 (3)**	0 (0)	0 (0)
8	Octocoral	Plexauridae	*Echinogorgia* sp. C	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
9	Octocoral	Plexauridae	*Menella* sp.	0 (0)	**1 (1)**	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
10	Octocoral	Nephtheidae	*Dendronephthya* sp.	0 (0)	0 (0)	**1 (0)**	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
		Hard Corals	Total no. of species;	0	0	**1**	**1**	0	0	0	**1**	0	0
			Total no. of colonies (and movable colonies)	0 (0)	0 (0)	**2 (0)**	**1 (0)**	0 (0)	0 (0)	0 (0)	**2 (0)**	0 (0)	0 (0)
		Octocorals	Total no. of species;	**1**	**2**	**2**	0	0	**1**	**1**	**1**	0	0
			Total no. of colonies (and movable colonies)	**25 (4)**	**32 (7)**	**14 (3)**	0 (0)	0 (0)	**9 (0)**	**5 (0)**	**22 (3)**	0 (0)	0 (0)
		Overall	Total no. of species;	**1**	**2**	**3**	**1**	0	**1**	**1**	**2**	0	0
			Total no. of colonies (and movable colonies)	**25 (4)**	**32 (7)**	**16 (3)**	**1 (0)**	0 (0)	**9 (0)**	**5 (0)**	**24 (3)**	0 (0)	0 (0)

Coral Survey at Potential Coral Recipient Site

Spot-check Dive Survey

3.11 The spot-check dive survey at Fat Tong Chau (FTC), Junk Bay was conducted on 6th March 2021. The location the spot-check dive survey is shown in **Figure 4b**, and survey conditions are shown in **Table 3.4**.

3.12 The substrates of FTC were mainly composed of natural bedrocks and boulders, with sparsely distributed rubbles and sand with gravel. The hard substrates were commonly covered by sediments, with crustose coralline algae, encrusting algae and sessile animals (barnacles, rock oysters, tube worms, bryozoans, octocorals and hard corals) sparsely distributed on the hard substrates.

3.13 Octocorals (mainly *Echinomuricea* sp.) were mainly observed at depth from 8 to 10m. Only few hard corals of *Tubastraea* spp. were observed.

3.14 Following the spot-check dive survey, FTC was found suitable for being a coral recipient site, a more detailed REA survey was conducted to collect more information on the coral communities at FTC.

Rapid Ecological Assessment (REA) Survey

3.15 The REA survey at Fat Tong Chau (FTC), Junk Bay was conducted on 6th March 2021.

3.16 The location the REA survey is shown in **Figure 4b**, and survey conditions are shown in **Table 3.4**. Ecological and substrate attributes, and taxonomic Inventories along the REA transects at the sites are presented in **Table 3.5**. Records of coral colonies are presented in **Table 3.6**. The occurrence and size range of each observed coral species at each survey location are summarized in **Table 3.7**. Photos of the survey locations, representative taxa and corals along the transect are shown in **Appendices IIa, IIb and IIc**.

Table 3.4 GPS Coordinates and Physical Attributes of Dive Survey Locations at FTC, Junk Bay

Type of dive survey	GPS Coordinates of Transects		Depth (m)	Visibility (m)	Substrate Type	Presence of Hard Corals?	Presence of Octocorals ?	Degree of Exposure	Degree of Sediment Deposition
Spot-check	Start	N 22° 16.530' E114° 15.857'	4.5 – 10.0	1.5 - 2	Rubbles, boulders, bedrocks, sand with gravels	Yes	Yes	2 - 3	2
	End	N 22° 16.416' E114° 15.933'							
REA	Start	N 22° 16.473' E114° 15.890'	8.1 – 9.6	1.5 - 2	Rubbles, boulders, bedrocks, sand with gravels	Yes	Yes	2 - 3	2
	End	N 22° 16.423' E114° 15.908'							

3.17 The substrates of FTC mainly composed of bedrocks, boulders, rubbles and sand with gravel. These hard substrates were commonly covered by a thin layer of sediments. Crustose coralline algae, encrusting algae and sessile animals (barnacles, rock oysters, tube worms, bryozoans, gorgonians and hard corals) were sparsely distributed on the hard substrates and sandy bottom (**Table 3.5**; **Appendices IIa and IIb**).

3.18 A total of one hundred and twenty-one (121) coral colonies including two (2) hard coral species (*Tubastraea* sp. A and *Tubastraea* sp. C) and three (3) octocoral species (*Echinomuricea* sp., *Echinogorgia* sp. A and *Echinogorgia* sp. B) were observed along the REA transect. The size of the hard corals ranged from 25 x 225 cm^2. The length of octocorals ranged from 10 to 50 cm.

3.19 All coral colonies were in good condition with no or low level sedimentation, bleaching or partial mortality (**Table 3.6**; **Appendix IIc**).

3.20 The coral colonies recorded along the REA transect were dominated by octocoral *Echinomuricea* sp. (106 colonies); only eight (8) colonies of octocorals *Echinogorgia* spp., and seven (7) colonies of hard corals *Tubastraea* spp., which are locally common, were recorded (**Table 3.7**).

3.21 No black coral or other taxon of conservation interest was recorded.

Table 3.5 Dive Surveys - Ecological and Substrate Attributes, and Taxonomic Inventories Along REA Transect at FTC, Junk Bay

Substrate Attributes (0 - 6)	**FTC**		**Ecological Attributes (0 – 6)**	**FTC**
Continuous Pavement	0		Hard Coral	0.5
Bedrock	3		Dead Standing Coral	0
Boulders (>50 cm)	4		Soft Coral	0
Rubble (<50cm)	3		Gorgonian	0.5
Sand with gravel	3		Black Coral	0
Mud & Silt	0		Marcoalgae	0.5
Artificial substrates (marine debris/ anchors)	0		Turf Algae/ Cynobacteria	0

Taxonomic inventories (0 – 5)	**FTC**
Other sessile taxa Sponges	0.5
Encrusting algae	0.5
Coralline algae	3
Barnacles	2
Sea anemones	0.5
Zoanthids	0
Rock oysters	0.5
Mussels	0
Bryozoans	0.5
Tunicates	0
Tube worms	0.5

	FTC
***No. of hard coral Species**	2
***No. of octocoral Species**	3
Total no. of coral species	5

	FTC
***No. of hard coral Colonies**	7
***No. of octocoral Colonies**	114
Total no. of coral colonies	121

Table 3.6 Size, Percentage Area of Sedimentation (Sed), Bleaching (B) and Partial Mortality (PM) of Coral Colonies along REA Transects at FTC, Junk Bay.

Coral no.	Family	Species	Position on transect (m)	Size: Hard Corals: L x W cm Octocorals: L cm	Health Condition	%Sed	%B	%PM	Associated Substrate Type
1	Plexauridae	*Echinomuricea* sp.	98.4	15	Good	0	0	0	Bedrock
2	Plexauridae	*Echinomuricea* sp.	98.4	20	Good	0	0	0	Bedrock
3	Plexauridae	*Echinomuricea* sp.	98.4	15	Good	0	0	0	Bedrock
4	Plexauridae	*Echinomuricea* sp.	98.4	25	Good	0	0	0	Bedrock
5	Plexauridae	*Echinomuricea* sp.	97.5	15	Good	0	0	0	Bedrock
6	Plexauridae	*Echinomuricea* sp.	97.1	20	Good	0	0	0	Bedrock
7	Plexauridae	*Echinomuricea* sp.	96.9	30	Good	0	0	0	Bedrock
8	Plexauridae	*Echinomuricea* sp.	96.8	30	Good	0	0	0	Bedrock
9	Plexauridae	*Echinomuricea* sp.	96.8	40	Good	0	0	5	Bedrock
10	Plexauridae	*Echinomuricea* sp.	96.8	25	Good	0	0	0	Bedrock
11	Plexauridae	*Echinomuricea* sp.	96.8	20	Good	0	0	0	Bedrock
12	Plexauridae	*Echinomuricea* sp.	96.4	45	Good	0	0	0	Boulder (>50cm)
13	Plexauridae	*Echinomuricea* sp.	96.4	45	Good	0	0	0	Boulder (>50cm)
14	Plexauridae	*Echinomuricea* sp.	96.4	30	Good	0	0	0	Boulder (>50cm)
15	Plexauridae	*Echinomuricea* sp.	93.8	15	Good	0	0	0	Boulder (>50cm)
16	Plexauridae	*Echinomuricea* sp.	93.8	15	Good	0	0	0	Boulder (>50cm)
17	Plexauridae	*Echinomuricea* sp.	93.8	20	Good	0	0	0	Boulder (>50cm)
18	Plexauridae	*Echinogorgia* sp. A	93.8	10	Good	0	0	0	Boulder (>50cm)

Coral no.	Family	Species	Position on transect (m)	Size: Hard Corals: L x W cm Octocorals: L cm	Health Condition	%Sed	%B	%PM	Associated Substrate Type
19	Plexauridae	*Echinomuricea* sp.	92.5	30	Good	0	0	0	Boulder (>50cm)
20	Plexauridae	*Echinomuricea* sp.	92.5	30	Good	0	0	0	Boulder (>50cm)
21	Plexauridae	*Echinomuricea* sp.	92.5	35	Good	0	0	0	Boulder (>50cm)
22	Plexauridae	*Echinomuricea* sp.	92.5	25	Good	0	0	0	Boulder (>50cm)
23	Plexauridae	*Echinogorgia* sp. B	92.5	25	Good	0	0	0	Boulder (>50cm)
24	Plexauridae	*Echinomuricea* sp.	92.0	30	Good	0	0	5	Boulder (>50cm)
25	Plexauridae	*Echinomuricea* sp.	91.2	35	Good	0	0	0	Boulder (>50cm)
26	Plexauridae	*Echinomuricea* sp.	90.7	25	Good	0	0	0	Bedrock
27	Plexauridae	*Echinomuricea* sp.	90.0	30	Good	0	0	0	Bedrock
28	Plexauridae	*Echinomuricea* sp.	87.7	35	Good	0	0	0	Boulder (>50cm)
29	Plexauridae	*Echinomuricea* sp.	82.0	15	Good	0	0	0	Boulder (>50cm)
30	Plexauridae	*Echinogorgia* sp. B	82.0	15	Good	0	0	0	Boulder (>50cm)
31	Dendrophylliidae	*Tubastraea* sp. C	76.0	10 x 10	Good	0	0	0	Boulder (>50cm)
32	Plexauridae	*Echinogorgia* sp. B	76.0	20	Good	0	0	0	Boulder (>50cm)
33	Dendrophylliidae	*Tubastraea* sp. A	70.9	15 x 15	Good	0	0	0	Boulder (>50cm)
34	Plexauridae	*Echinogorgia* sp. B	69.4	45	Good	0	0	0	Boulder (>50cm)
35	Plexauridae	*Echinogorgia* sp. A	68.0	15	Good	0	0	0	Boulder (>50cm)
36	Plexauridae	*Echinomuricea* sp.	67.3	25	Good	0	0	0	Boulder (>50cm)
37	Plexauridae	*Echinomuricea* sp.	66.7	20	Good	0	0	0	Boulder (>50cm)
38	Dendrophylliidae	*Tubastraea* sp. A	64.3	10 x 10	Good	0	0	0	Boulder (>50cm)

Coral no.	Family	Species	Position on transect (m)	Size: Hard Corals: L x W cm Octocorals: L cm	Health Condition	%Sed	%B	%PM	Associated Substrate Type
39	Plexauridae	*Echinomuricea* sp.	60.0	20	Good	0	0	0	Boulder (>50cm)
40	Plexauridae	*Echinomuricea* sp.	60.0	15	Good	0	0	5	Boulder (>50cm)
41	Plexauridae	*Echinogorgia* sp. B	60.0	20	Good	0	0	0	Boulder (>50cm)
42	Plexauridae	*Echinomuricea* sp.	53.9	30	Good	0	0	0	Boulder (>50cm)
43	Plexauridae	*Echinomuricea* sp.	46.5	40	Good	0	0	0	Rubble (<50cm)
44	Plexauridae	*Echinomuricea* sp.	46.5	30	Good	0	0	0	Rubble (<50cm)
45	Dendrophylliidae	*Tubastraea* sp. C	46.1	5 x 5	Good	0	0	0	Boulder (>50cm)
46	Plexauridae	*Echinomuricea* sp.	46.1	25	Good	0	0	0	Boulder (>50cm)
47	Plexauridae	*Echinomuricea* sp.	45.9	20	Good	0	0	0	Boulder (>50cm)
48	Plexauridae	*Echinomuricea* sp.	45.9	30	Good	0	0	0	Boulder (>50cm)
49	Plexauridae	*Echinomuricea* sp.	45.8	15	Good	0	0	0	Boulder (>50cm)
50	Plexauridae	*Echinomuricea* sp.	45.8	25	Good	0	0	0	Boulder (>50cm)
51	Plexauridae	*Echinomuricea* sp.	45.8	30	Good	0	0	0	Boulder (>50cm)
52	Plexauridae	*Echinomuricea* sp.	45.8	30	Good	0	0	0	Boulder (>50cm)
53	Plexauridae	*Echinomuricea* sp.	45.5	30	Good	0	0	0	Boulder (>50cm)
54	Plexauridae	*Echinomuricea* sp.	44.7	30	Good	0	0	0	Boulder (>50cm)
55	Plexauridae	*Echinomuricea* sp.	44.7	15	Good	0	0	0	Boulder (>50cm)
56	Plexauridae	*Echinomuricea* sp.	44.7	20	Good	0	0	0	Boulder (>50cm)
57	Plexauridae	*Echinomuricea* sp.	30.3	15	Good	0	0	0	Boulder (>50cm)
58	Plexauridae	*Echinomuricea* sp.	30.3	15	Good	0	0	0	Boulder (>50cm)

Coral no.	Family	Species	Position on transect (m)	Size: Hard Corals: L x W cm Octocorals: L cm	Health Condition	%Sed	%B	%PM	Associated Substrate Type
59	Plexauridae	*Echinomuricea* sp.	30.3	25	Good	0	0	0	Boulder (>50cm)
60	Dendrophylliidae	*Tubastraea* sp. C	29.8	15 x 15	Good	0	0	0	Boulder (>50cm)
61	Plexauridae	*Echinomuricea* sp.	29.5	35	Good	0	0	0	Boulder (>50cm)
62	Plexauridae	*Echinomuricea* sp.	27.5	40	Good	0	0	5	Boulder (>50cm)
63	Dendrophylliidae	*Tubastraea* sp. C	26.9	15 x 15	Good	0	0	0	Boulder (>50cm)
64	Plexauridae	*Echinomuricea* sp.	25.0	50	Good	0	0	0	Rubble (<50cm)
65	Plexauridae	*Echinomuricea* sp.	25.0	25	Good	0	0	0	Rubble (<50cm)
66	Plexauridae	*Echinomuricea* sp.	25.0	20	Good	0	0	0	Rubble (<50cm)
67	Plexauridae	*Echinomuricea* sp.	24.8	15	Good	0	0	0	Rubble (<50cm)
68	Plexauridae	*Echinomuricea* sp.	24.8	15	Good	0	0	0	Rubble (<50cm)
69	Plexauridae	*Echinomuricea* sp.	24.1	45	Good	0	0	0	Boulder (>50cm)
70	Plexauridae	*Echinomuricea* sp.	23.7	40	Good	0	0	0	Rubble (<50cm)
71	Plexauridae	*Echinomuricea* sp.	23.7	40	Good	0	0	0	Rubble (<50cm)
72	Plexauridae	*Echinomuricea* sp.	23.3	15	Good	0	0	0	Rubble (<50cm)
73	Plexauridae	*Echinomuricea* sp.	23.1	25	Good	0	0	0	Rubble (<50cm)
74	Plexauridae	*Echinomuricea* sp.	22.7	20	Good	0	0	0	Boulder (>50cm)
75	Plexauridae	*Echinomuricea* sp.	22.7	20	Good	0	0	0	Boulder (>50cm)
76	Plexauridae	*Echinomuricea* sp.	22.7	15	Good	0	0	0	Rubble (<50cm)
77	Plexauridae	*Echinomuricea* sp.	22.3	15	Good	0	0	0	Rubble (<50cm)
78	Plexauridae	*Echinomuricea* sp.	22.3	15	Good	0	0	0	Rubble (<50cm)

Coral no.	Family	Species	Position on transect (m)	Size: Hard Corals: L x W cm Octocorals: L cm	Health Condition	%Sed	%B	%PM	Associated Substrate Type
79	Plexauridae	*Echinomuricea* sp.	22.3	15	Good	0	0	0	Rubble (<50cm)
80	Plexauridae	*Echinomuricea* sp.	21.6	35	Good	0	0	0	Rubble (<50cm)
81	Plexauridae	*Echinomuricea* sp.	21.3	40	Good	0	0	0	Rubble (<50cm)
82	Plexauridae	*Echinomuricea* sp.	21.3	35	Good	0	0	0	Rubble (<50cm)
83	Plexauridae	*Echinomuricea* sp.	21.3	40	Good	0	0	0	Rubble (<50cm)
84	Plexauridae	*Echinomuricea* sp.	20.8	45	Good	0	0	0	Boulder (>50cm)
85	Plexauridae	*Echinomuricea* sp.	20.5	20	Good	0	0	0	Boulder (>50cm)
86	Plexauridae	*Echinomuricea* sp.	20.2	20	Good	0	0	0	Rubble (<50cm)
87	Dendrophylliidae	*Tubastraea* sp. C	20.2	10 x 10	Good	0	0	0	Rubble (<50cm)
88	Plexauridae	*Echinomuricea* sp.	19.6	15	Good	0	0	0	Boulder (>50cm)
89	Plexauridae	*Echinomuricea* sp.	19.2	15	Good	0	0	0	Boulder (>50cm)
90	Plexauridae	*Echinomuricea* sp.	18.6	15	Good	0	0	0	Boulder (>50cm)
91	Plexauridae	*Echinomuricea* sp.	18.3	15	Good	0	0	0	Boulder (>50cm)
92	Plexauridae	*Echinomuricea* sp.	16.8	10	Good	0	0	0	Rubble (<50cm)
93	Plexauridae	*Echinomuricea* sp.	16.8	15	Good	0	0	0	Rubble (<50cm)
94	Plexauridae	*Echinogorgia* sp. B	15.4	15	Good	0	0	0	Boulder (>50cm)
95	Plexauridae	*Echinomuricea* sp.	14.2	25	Good	0	0	0	Boulder (>50cm)
96	Plexauridae	*Echinomuricea* sp.	14.2	30	Good	0	0	0	Boulder (>50cm)
97	Plexauridae	*Echinomuricea* sp.	13.3	20	Good	0	0	0	Boulder (>50cm)
98	Plexauridae	*Echinomuricea* sp.	13.3	25	Good	0	0	0	Boulder (>50cm)

Coral no.	Family	Species	Position on transect (m)	Size: Hard Corals: L x W cm Octocorals: L cm	Health Condition	%Sed	%B	%PM	Associated Substrate Type
99	Plexauridae	*Echinomuricea* sp.	12.7	15	Good	0	0	0	Rubble (<50cm)
100	Plexauridae	*Echinomuricea* sp.	12.7	15	Good	0	0	0	Rubble (<50cm)
101	Plexauridae	*Echinomuricea* sp.	11.7	20	Good	0	0	0	Boulder (>50cm)
102	Plexauridae	*Echinomuricea* sp.	11.7	20	Good	0	0	0	Boulder (>50cm)
103	Plexauridae	*Echinomuricea* sp.	11.7	40	Good	0	0	0	Boulder (>50cm)
104	Plexauridae	*Echinomuricea* sp.	11.7	40	Good	0	0	0	Boulder (>50cm)
105	Plexauridae	*Echinomuricea* sp.	11.7	20	Good	0	0	0	Boulder (>50cm)
106	Plexauridae	*Echinomuricea* sp.	11.0	25	Good	0	0	0	Boulder (>50cm)
107	Plexauridae	*Echinomuricea* sp.	11.0	35	Good	0	0	0	Boulder (>50cm)
108	Plexauridae	*Echinomuricea* sp.	10.6	15	Good	0	0	0	Boulder (>50cm)
109	Plexauridae	*Echinomuricea* sp.	10.6	20	Good	0	0	0	Boulder (>50cm)
110	Plexauridae	*Echinomuricea* sp.	7.4	35	Good	0	0	0	Boulder (>50cm)
111	Plexauridae	*Echinomuricea* sp.	7.4	40	Good	0	0	0	Boulder (>50cm)
112	Plexauridae	*Echinomuricea* sp.	7.0	25	Good	0	0	0	Boulder (>50cm)
113	Plexauridae	*Echinomuricea* sp.	7.0	20	Good	0	0	0	Rubble (<50cm)
114	Plexauridae	*Echinomuricea* sp.	7.0	20	Good	0	0	0	Rubble (<50cm)
115	Plexauridae	*Echinomuricea* sp.	2.6	35	Good	0	0	0	Boulder (>50cm)
116	Plexauridae	*Echinomuricea* sp.	2.6	30	Good	0	0	0	Boulder (>50cm)
117	Plexauridae	*Echinomuricea* sp.	2.6	20	Good	0	0	0	Rubble (<50cm)
118	Plexauridae	*Echinomuricea* sp.	1.0	25	Good	0	0	0	Boulder (>50cm)

Coral no.	Family	Species	Position on transect (m)	Size: Hard Corals: L x W cm Octocorals: L cm	Health Condition	%Sed	%B	%PM	Associated Substrate Type
119	Plexauridae	*Echinomuricea* sp.	0.5	20	Good	0	0	5	Boulder (>50cm)
120	Plexauridae	*Echinomuricea* sp.	0.0	20	Good	0	0	0	Boulder (>50cm)
121	Plexauridae	*Echinomuricea* sp.	0.0	25	Good	0	0	0	Boulder (>50cm)

Table 3.7 Occurrence and Size Range of Coral Species at FTC, Junk Bay

Location	Coral Taxon	Family	Coral species	No. of Colonies	Qualitative Estimate of Coral Coverage (%) in (100x4 m) 400 m^2 Survey Area	Size Range in Area (cm^2) for Hard Corals; Area (cm^2) and height (cm) for Octocoral
FTC	Hard coral	Dendrophylliidae	*Tubastraea* sp. A	2	<1%	100 – 225 cm^2
FTC	Hard coral	Dendrophylliidae	*Tubastraea* sp. C	5	<1%	25 – 225 cm^2
FTC	Octocoral	Plexauridae	*Echinomuricea* sp.	106	<5%	10 – 50 cm
FTC	Octocoral	Plexauridae	*Echinogorgia* sp. A	2	<1%	10 – 15 cm
FTC	Octocoral	Plexauridae	*Echinogorgia* sp. B	6	<1%	15 – 45 cm

4 CORAL TRANSLOCATION PLAN

4.1 This section presents a brief method statement for coral translocation. A detailed translocation methodology is presented in a separated Coral Translocation Plan.

Coral Translocation Procedure

Tagging of Reference Coral Colonies at the Recipient Site

4.2 At the recipient site, a minimum of 10 coral colonies will be identified to species level, tagged and used as reference colonies for monitoring after the coral translocation. Target species of reference coral colonies will include species which can be found at the corresponding donor location. Colonies will be tagged giving priority to the large, undamaged colonies since damage to these colonies would be more evident compared to smaller colonies or corals with existing damage.

4.3 For hard corals, the selected colonies will be tagged with a labelled stone or concrete block placed next to each tagged colony (**Photo 4.1**) or using plastic tags (~3.5 cm diameter) glued onto boulders adjacent to the coral colonies.

4.4 For octocorals, the selected colonies will be tagged with laminated labels or plastic tags using cable ties (**Photo 4.2**).

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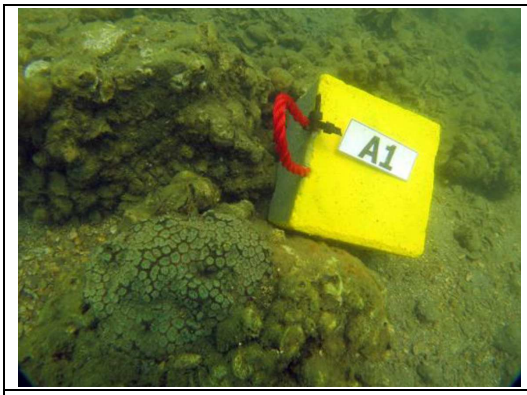
<td> 
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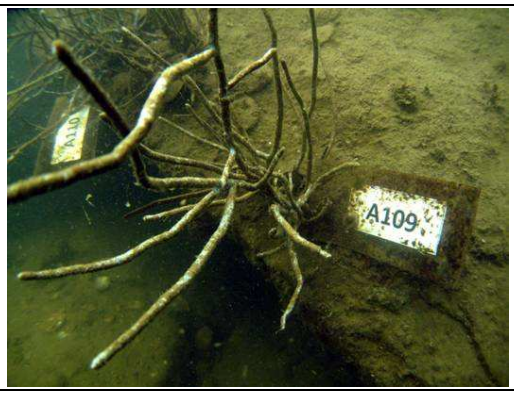
<td> 
</td>
</tr>
<tr>
<td>Photo 4.1 Concrete block in bright color can be used for coral tagging.</td>
<td>Photo 4.2 Laminated labels can be used for tagging corals with fragments or branching structures, and tied onto the basal section of octocoral and black corals.</td>
</tr>
</table>

4.5 For each tagged coral, detailed information will be recorded including its location, species name, size, and health status information including sedimentation level (percentage cover and thickness of sediments), percentage cover of partial mortality and bleaching.

Translocation and Tagging of Coral Colonies from the Donor Site

4.6 All tagged movable boulders with the translocated coral colonies at donor location will be moved entirely as a whole object into a tray or bucket, and lifted from sea bottom to water surface using lifting bag by SCUBA divers. All the coral colonies attached on the boulders will be kept submerged at all time with a brief exposure unavoidable when transferred onto the vessel.

4.7 Corals will be transported to the recipient site immediately on the same day after the removal. Once arrived at the recipient site, translocated colonies will be placed one by one onto the seabed. Colonies will be positioned to similar depths with orientations as their previous location at the donor sites as far as possible. The translocated coral colonies will be tagged as described above (**Photo 4.1 and Photo 4.2**).

4.8 The status of each translocated coral colony including size, location, health conditions (sedimentation, bleaching and partial mortality) will be recorded after the completion of translocation work. Photographs of each translocated coral will be taken as baseline for future monitoring.

Post-Translocation Monitoring

4.9 In order to evaluate the effectiveness of the translocation, regular post-translocation monitoring will be conducted to assess the status of the translocated colonies, using the original coral colonies in the recipient location as reference.

4.10 Monitoring will be conducted quarterly for one year at the 3rd, 6th, 9th and 12th month after the coral translocation work. Any change in health status in both translocated and reference coral colonies should be monitored and compared, to evaluate the effectiveness of the coral translocation work. An additional monitoring will be conducted after the construction work.

5 SUMMARY OF CORAL BASELINE SURVEY FINDINGS

Coral Mapping Survey at the Proposed Dredging Area (LYM)

5.1 A total of 10 coral species and 421 coral colonies were found in the coral mapping area. All these corals are considered as common species in Hong Kong (Chan, et al. 2005, Ang et al. 2010). These species have been commonly recorded in previous surveys in Hong Kong and are not considered to be rare in Hong Kong waters (**Table 5.1**).

5.2 Among all the 421 coral colonies, it is estimated that a total of 44 coral colonies including 41 colonies of octocoral *Echinomuricea* sp., 2 colonies of octocoral *Echinogorgia* sp. and 1 colony of *Menella* sp. could be translocated to the coral recipient site.

5.3 Associated organisms such as bryozoans, sponges, sea anemones, hydroids, sea cucumber and sea urchin were also recorded during the mapping survey and they are all common species in Hong Kong waters.

5.4 A coral recipient site should be identified, and detailed translocation programme should be prepared for coral colonies within the work area. The detailed translocation methodology and programme is presented in a separated Coral Translocation Plan.

Recommendation of Coral Recipient Site

5.5 Fat Tong Chau (FTC) located at Junk Bay is recommended as a suitable recipient site for octocorals from the donar site Lei Yue Mun (LYM) because:

- FTC is located at Junk Bay, close to the donar site (distance <2 km) which is favourable for translocation work, but far enough (>500 m) to avoid direct impact from any construction work at the donar site LYM;
- FTC has similar substrate type (i.e. hard substrates with boulders and rubbles), water depth (>8 m) and wave exposure (i.e. semi-exposed) as the area inhabited by octocorals at the donar site LYM;
- The sea bottom of FTC has sufficient space available for the newly translocated coral; and
- The occurrence of coral species at both coral recipient and donar sites are summarised in **Table 5.2**. Same species of the dominant octocoral *Echinomuricea* sp., which are in good and healthy condition, can be found at both recipient and donar sites, indicating FTC is a habitat suitable for the octocorals to be translocated from the donar site LYM.

Table 5.1 Current Status of Recorded Coral Species in Hong Kong Waters

No.	Family	Species	Status in Hong Kong	Global Status According to IUCN (2021) (date assessed)	Remarks
Hard Corals					
1	Dendrophylliidae	*Tubastraea* sp. A	Common	Not available	
2	Dendrophylliidae	*Tubastraea* sp. B	Common	Not available	
3	Dendrophylliidae	*Duncanopsammia peltata*	Common (Chan et al. 2005)	Vulnerable (01 Jan 2008)	Former name: *Turbinaria peltata,* revised by Baird and Thomson (2018).
4	Merulinidae	*Favites pentagona*	Dominant (Chan et al. 2005)	Least concern (03 Jan 2008)	
5	Plesiastreidae	*Plesiastrea versipora*	Abundant (Chan et al. 2005)	Least concern (03 Jan 2008)	
6	Poritidae	*Bernardpora stutchburyi*	Common (Chan et al. 2005)	Least concern (01 Jan 2008)	Former name: *Goniopora stutchburyi,* revised by Kitano et al. (2014).
Octocorals					
7	Plexauridae	*Echinomuricea* sp.	Common (Ang et al. 2010)	Not available	
8	Plexauridae	*Echinogorgia* spp.	Common (Ang et al. 2010)	Not available	
9	Plexauridae	*Menella* sp.	Common (Ang et al. 2010)	Not available	
10	Nephtheidae	*Dendronephthya* sp.	Common (Ang et al. 2010)	Not available	

Note: All species names were reported according to the updates by Hoeksema and Cairns (2021).

Table 5.2 Occurrence of Coral Species at Coral Recipient and Donar Sites.

				Recipient Site	Donor Site
	Taxon	**Family**	**Species**	**FTC**	**LYM**
Hard Corals					
1	Hard Coral	Dendrophylliidae	*Tubastraea* sp. A	√	√
2	Hard Coral	Dendrophylliidae	*Tubastraea* sp. B		√
3	Hard Coral	Dendrophylliidae	*Tubastraea* sp. C	√	
4	Hard Coral	Dendrophylliidae	*Duncanopsammia peltata*		√
5	Hard Coral	Merulinidae	*Favites pentagona*		√
6	Hard coral	Plesiastreidae	*Plesiastrea versipora*		√
7	Hard coral	Poritidae	*Bernardpora stutchburyi*		√
Octocorals					
8	Octocoral	Plexauridae	*Echinomuricea* sp.	√	√
9	Octocoral	Plexauridae	*Echinogorgia* sp. A	√	
10	Octocoral	Plexauridae	*Echinogorgia* sp. B	√	
11	Octocoral	Plexauridae	*Echinogorgia* sp.		√
12	Octocoral	Plexauridae	*Menella* sp.		√
13	Octocoral	Nephtheidae	*Dendronephthya* sp.		√
			Total No. of Hard Coral Species	2	6
			Total No. of Octocoral Species	3	4

6 REFERENCES

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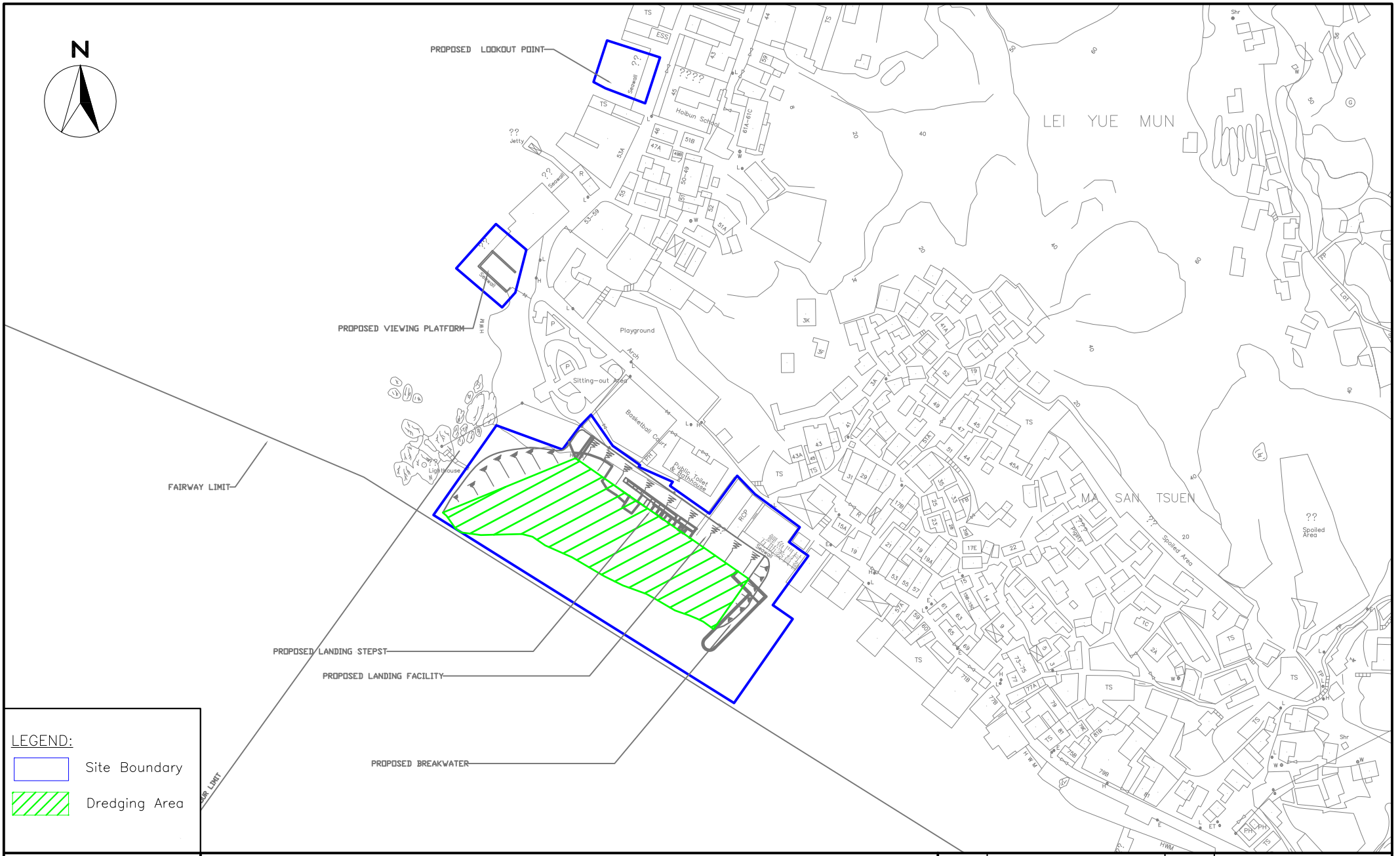
FIGURES



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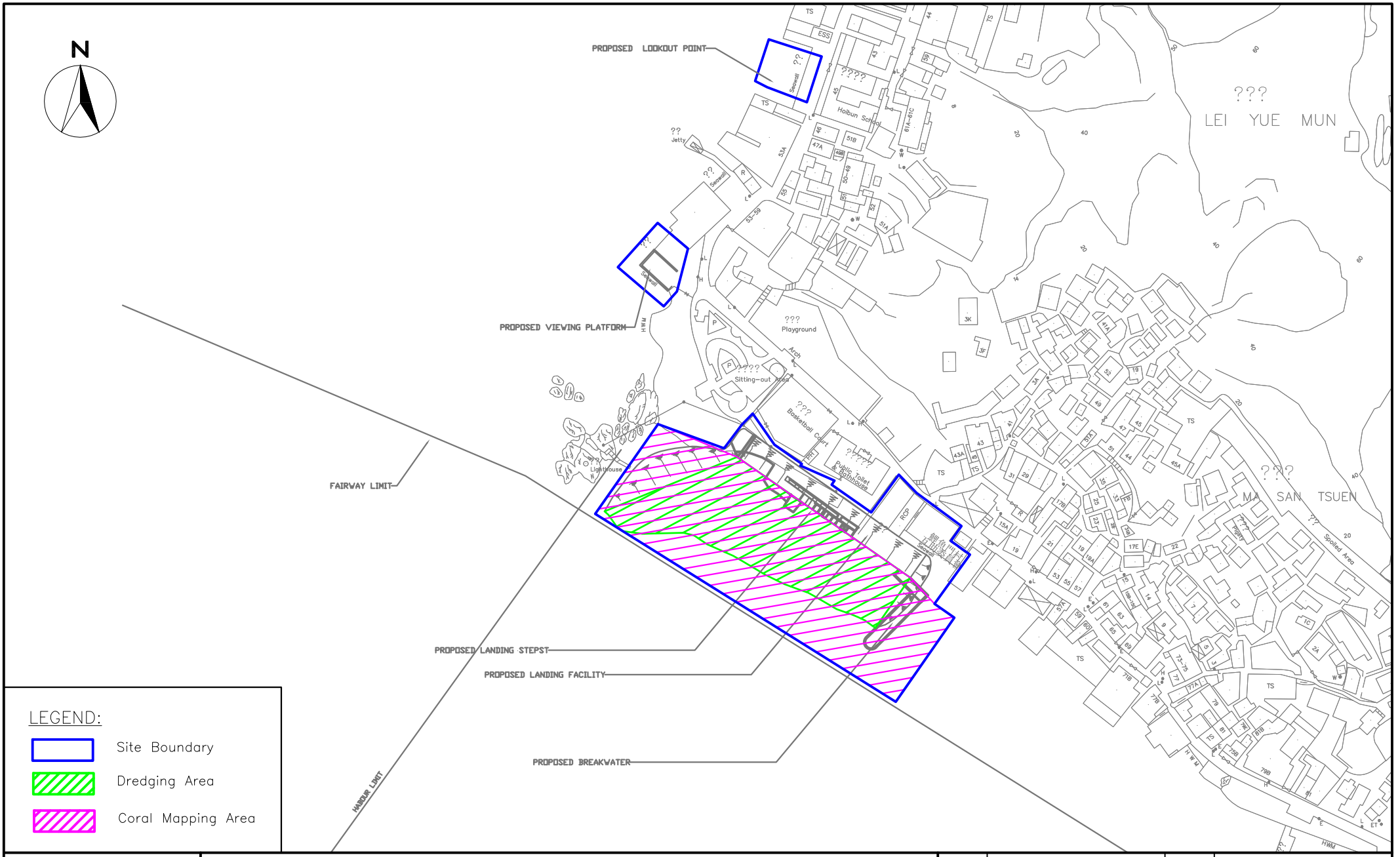
Contract No. CV/2020/09
Construction of Lei Yue Mun Public Landing Facility

Site Layout Plan

SCALE	1: 4500 @A4	DATE	Jan 2021
CHECK	JT	DRAWN	NL
Project No.	WEC20026	FIGURE NO. 1	REV —



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Contract No. CV/2020/09
Construction of Lei Yue Mun Public Landing Facility

Location Plan of Coral Baseline Survey

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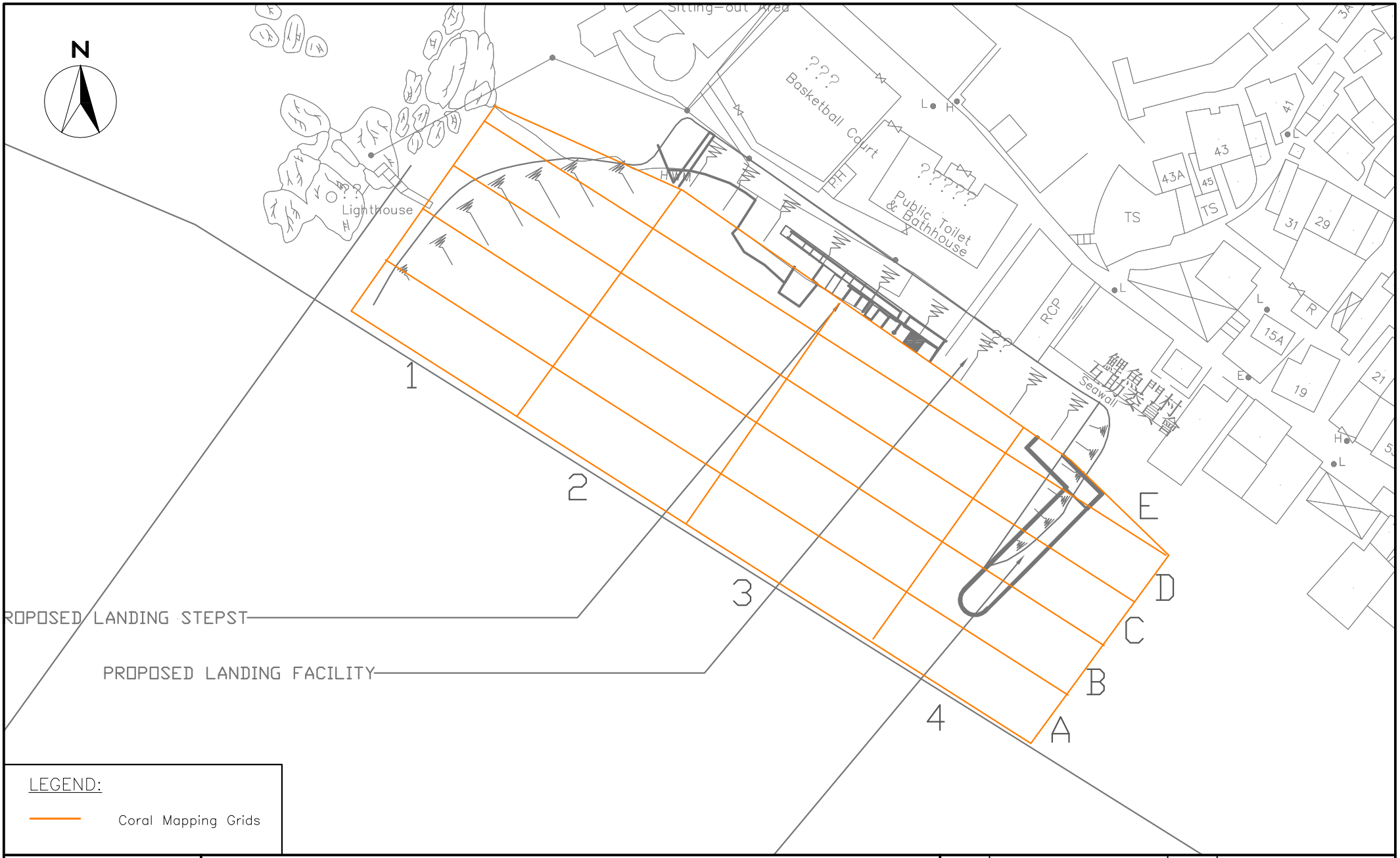
Project No.	WEC20026	FIGURE NO. 2	REV —



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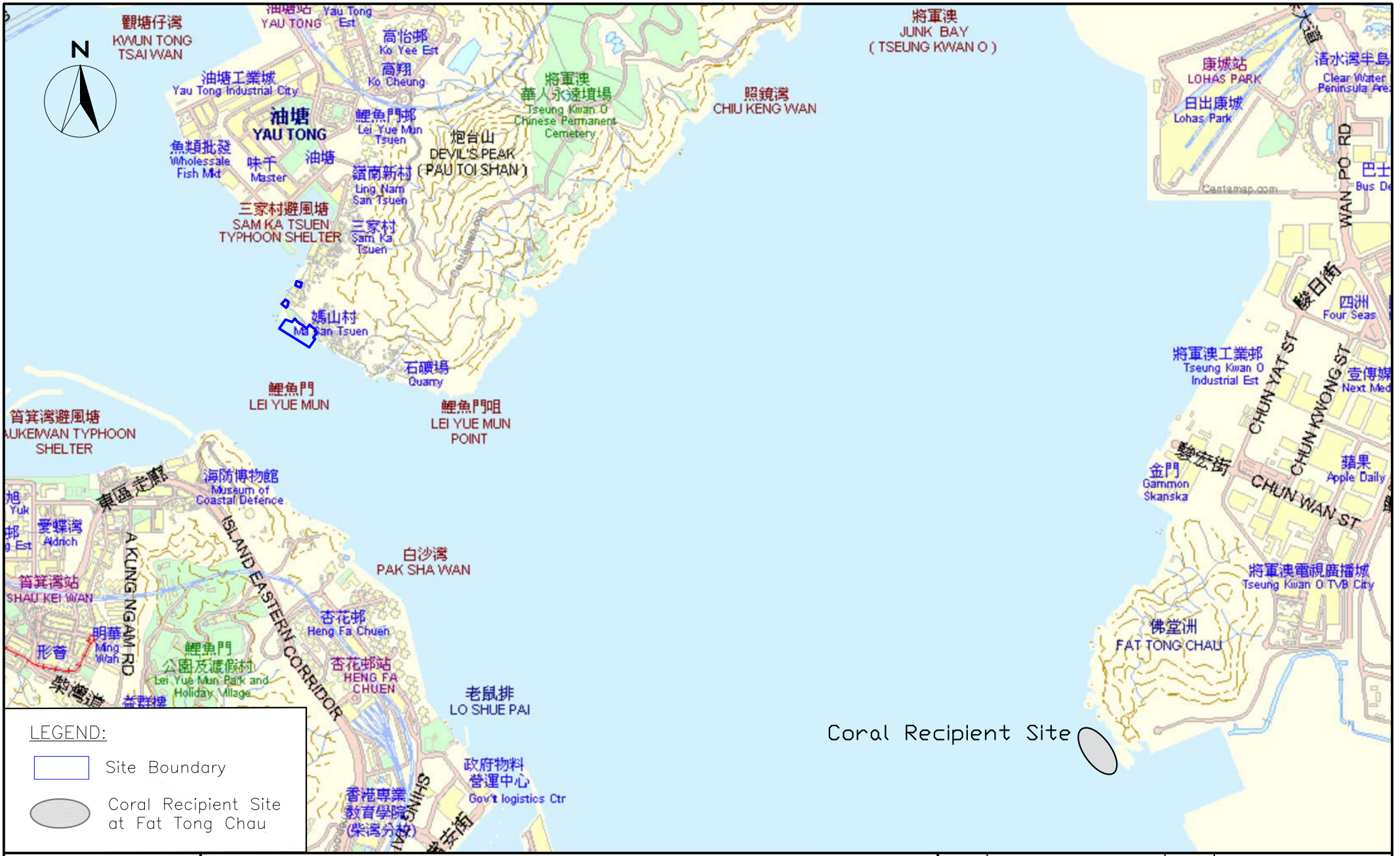
Contract No. CV/2020/09
Construction of Lei Yue Mun Public Landing Facility

Coral Mapping Survey Grids

SCALE	1: 2000 @A4	DATE	Mar 2021
CHECK	IT	DRAWN	JT
Project No.	WEC20026	FIGURE NO. 3	REV —



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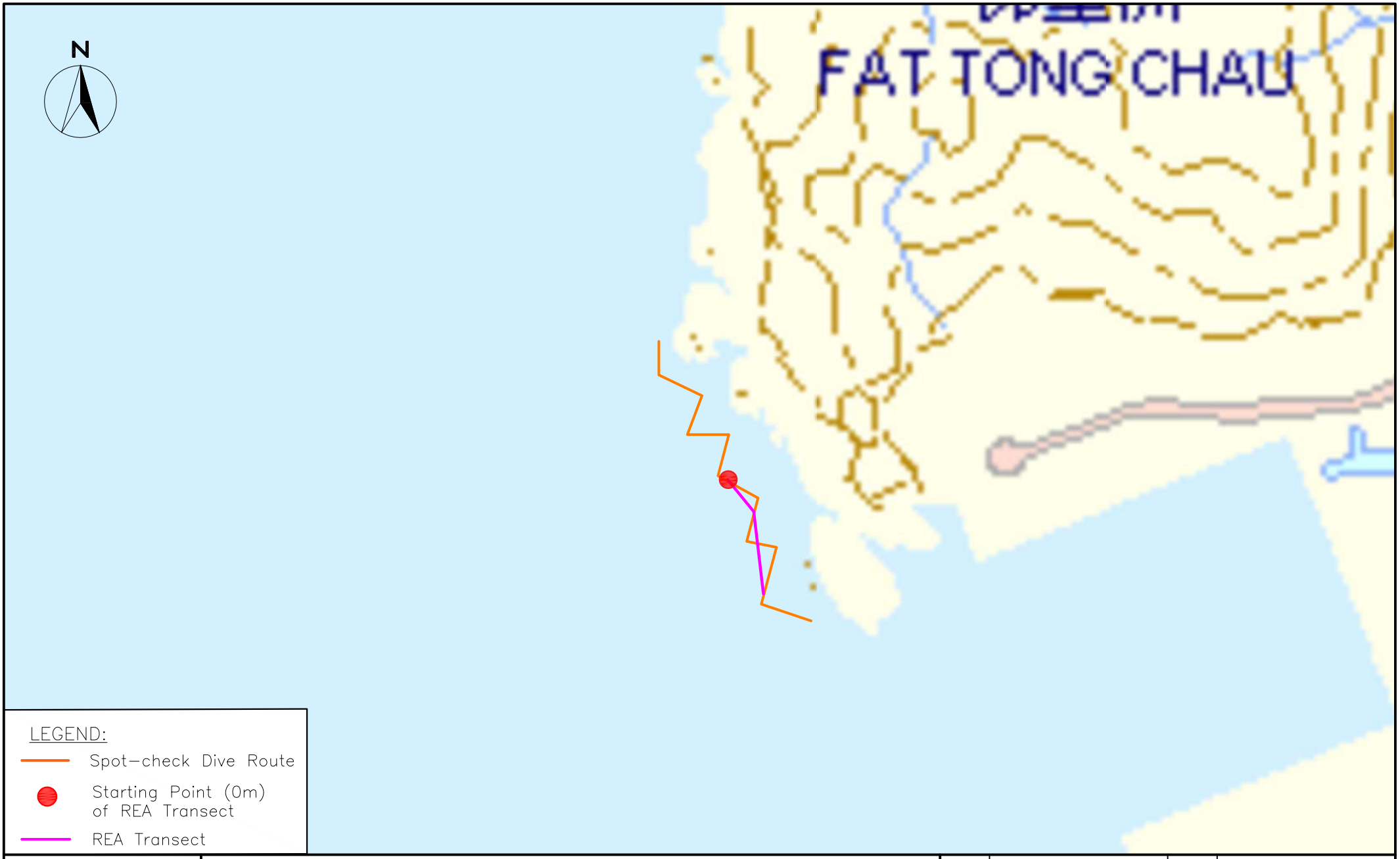
Contract No. CV/2020/09
Construction of Lei Yue Mun Public Landing Facility

Location of Coral Recipient Site at Fat Tong Chau, Junk Bay

SCALE	1: 45000 @A4	DATE	Mar 2021
CHECK	IT	DRAWN	JT
Project No.	WEC20026	FIGURE NO. 4a	REV —



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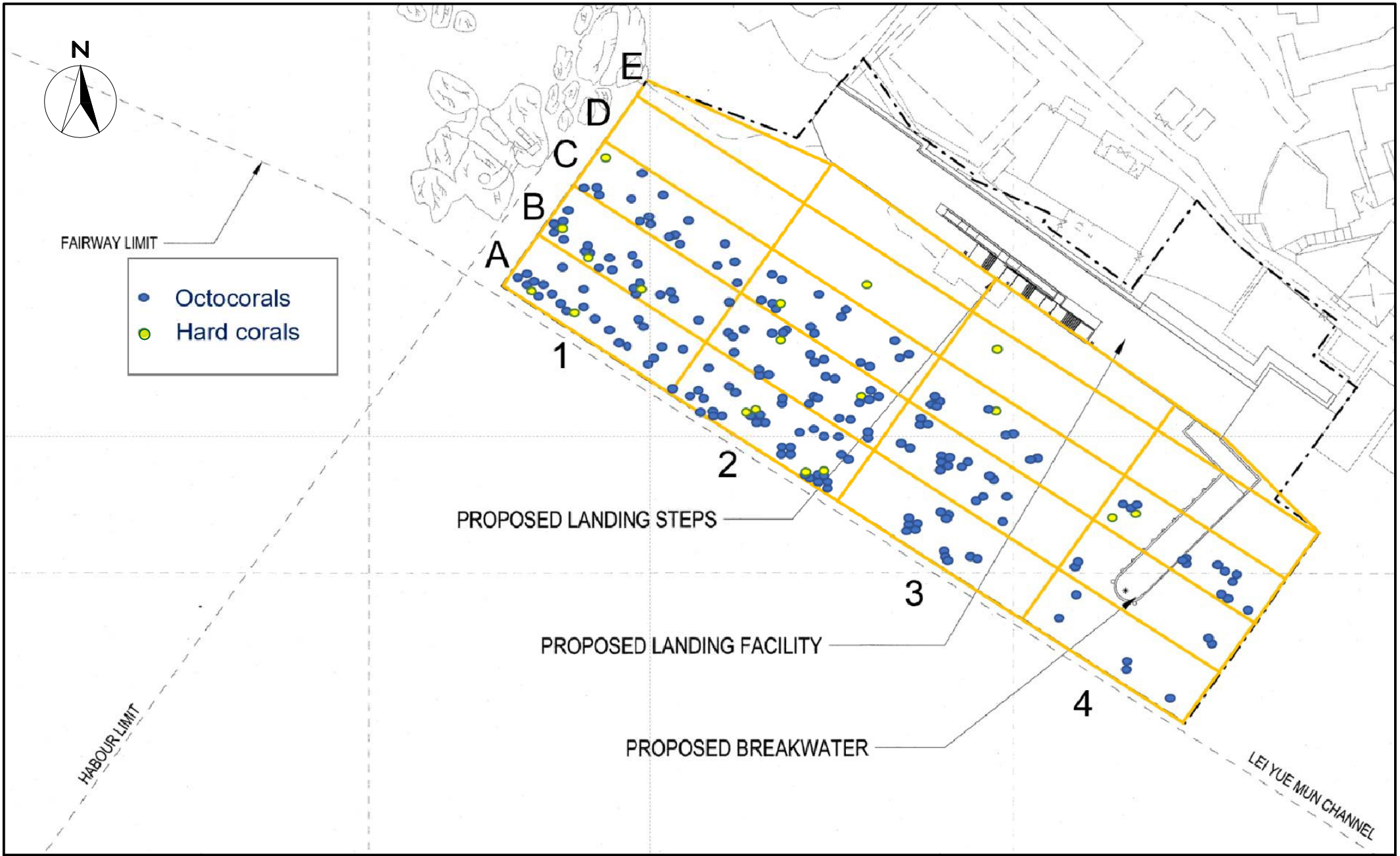
Contract No. CV/2020/09
Construction of Lei Yue Mun Public Landing Facility

Location Plan of Coral Survey at Fat Tong Chau, Junk Bay

SCALE	1:10000 @A4	DATE	Mar 2021
CHECK	IT	DRAWN	JT
Project No.	WEC20026	FIGURE NO.	4b
		REV	–



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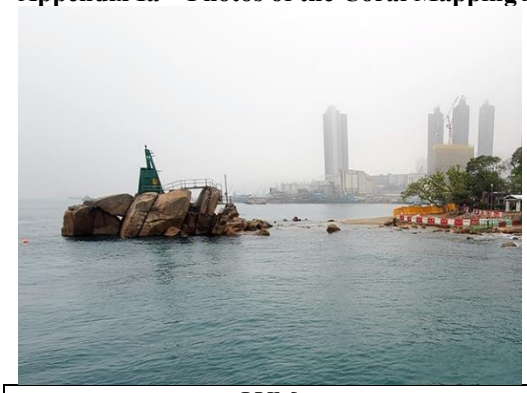
Contract No. CV/2020/09
Construction of Lei Yue Mun Public Landing Facility

Locations of Coral Colonies in the Coral Mapping Area

SCALE	1: 2000 @A4	DATE	Mar 2021
CHECK	IT	DRAWN	JT
Project No.	WEC20026	FIGURE NO.	5
		REV	–

APPENDIX Ia
PHOTOS OF CORAL MAPPING AREA AT LYM

Appendix Ia Photos of the Coral Mapping Area at LYM.

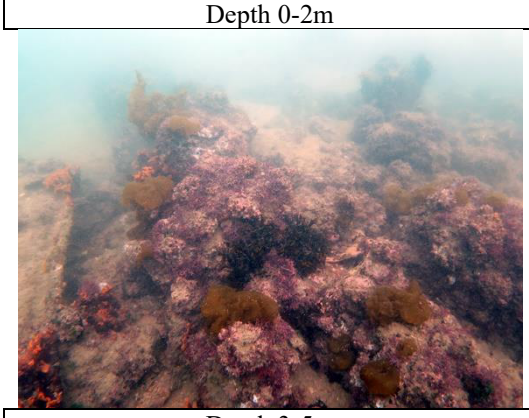


LYM

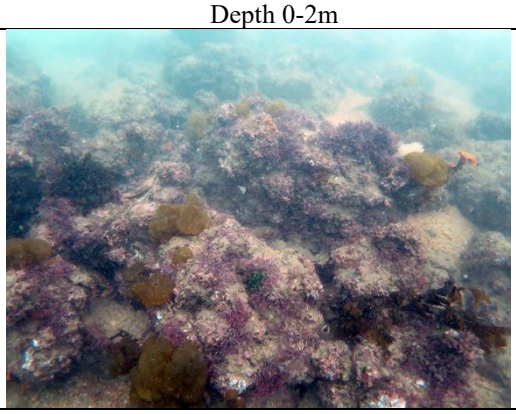
LYM

Depth 0-2m

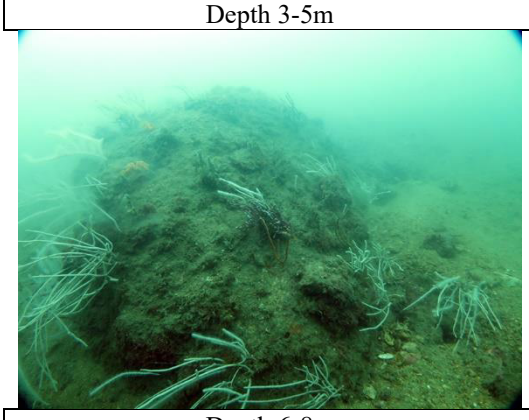
Depth 0-2m



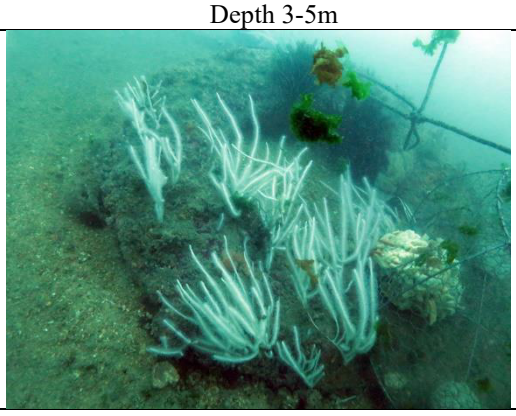
Depth 3-5m



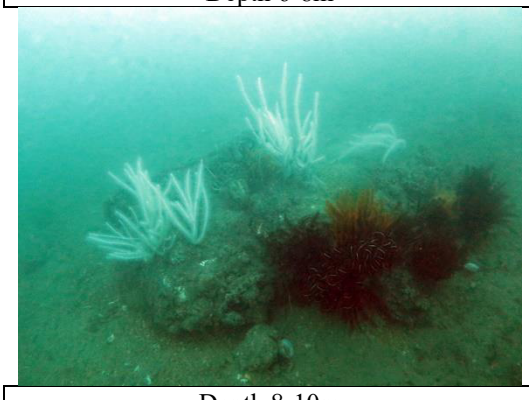
Depth 3-5m



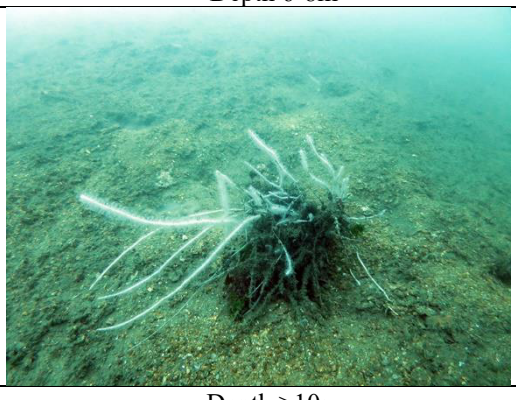
Depth 6-8m



Depth 6-8m



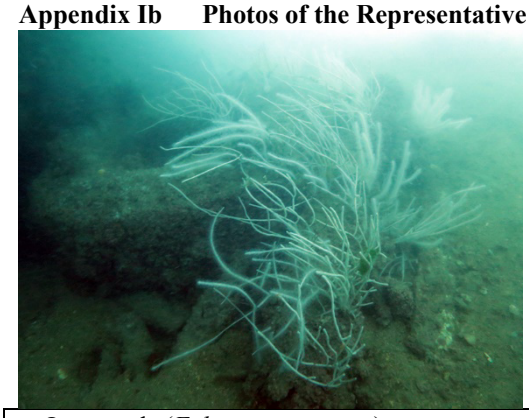
Depth 8-10m



Depth >10m

APPENDIX Ib
PHOTOS OF REPRESENTATIVE TAXA AT LYM

Appendix Ib Photos of the Representative Taxa at LYM.

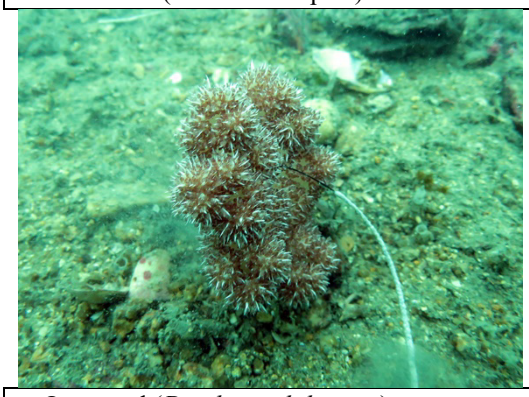


Octocorals (*Echinomuricea* sp.)

Octocorals (*Echinomuricea* sp.)

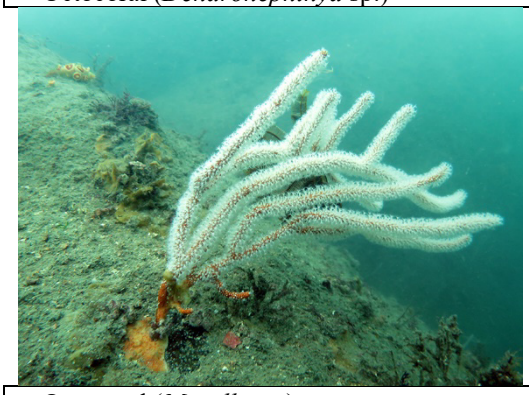
Hard coral (*Tubastraea* sp. A)

Hard coral (*Tubastraea* sp. A)

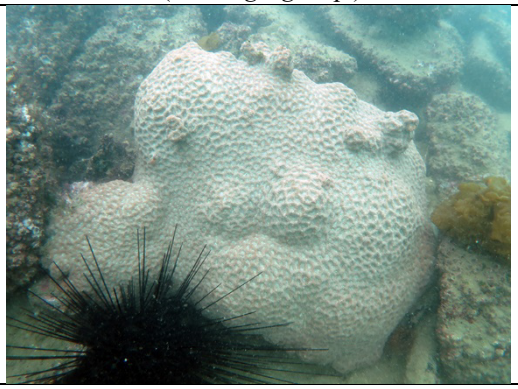


Octocoral (*Dendronephthya* sp.)

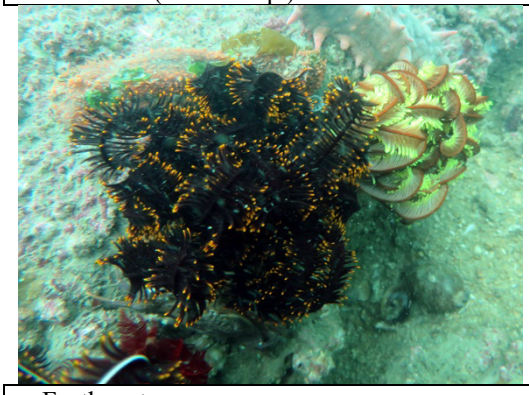
Octocoral (*Echinogorgia* sp.)



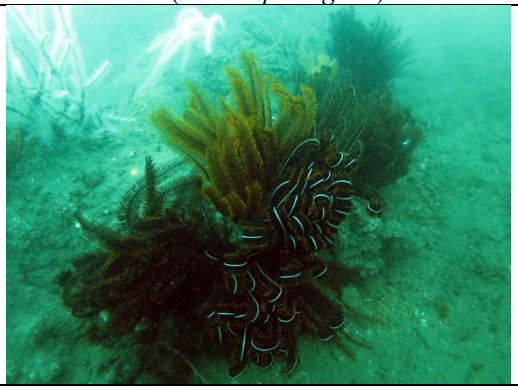
Octocoral (*Menella* sp.)



Hard coral (*Favites pentagona*)



Feather stars

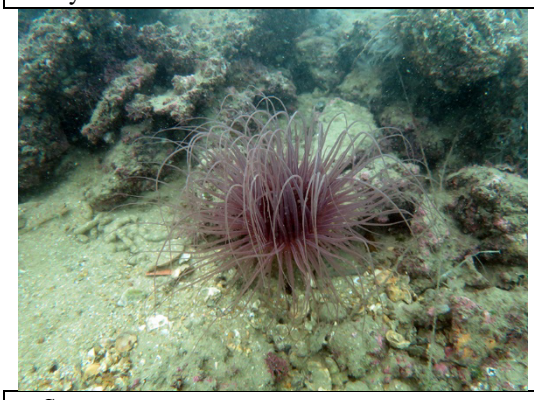


Feather stars

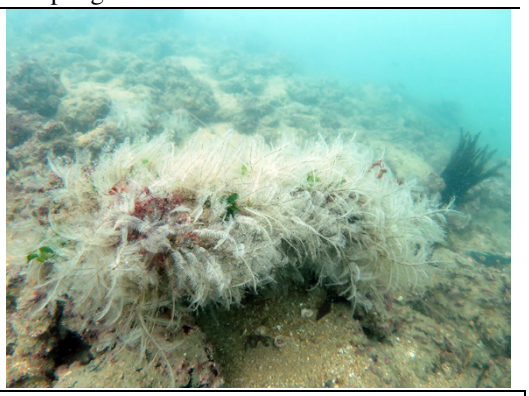
Appendix Ib Continued.

Bryozoans

Sponges



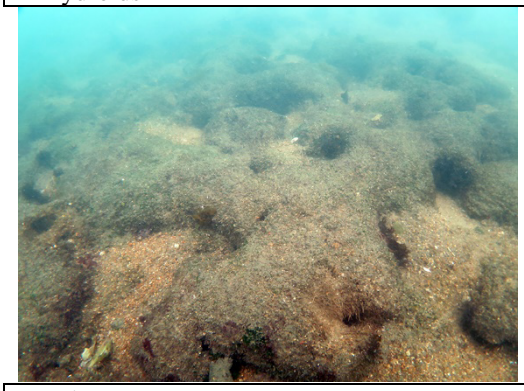
Sea anemones



Hydroids

Hydroids

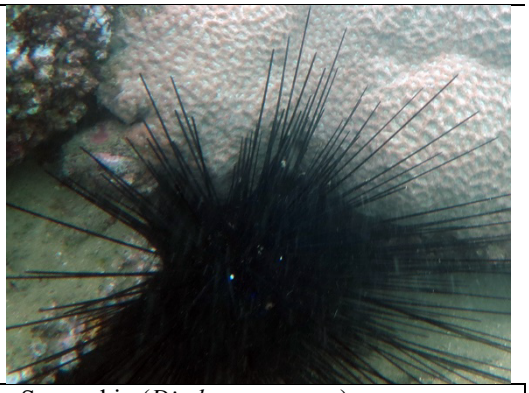
Sea cucumber



Tube worms

Tube worms

Sea urchin (*Heliocidaris crassispina*)



Sea urchin (*Diadema setosum*)

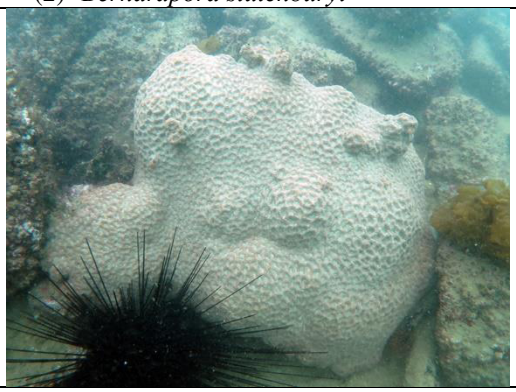
APPENDIX Ic
PHOTOS OF CORAL COLONIES FOUND AT LYM

Appendix Ic Photos of Corals found at LYM.

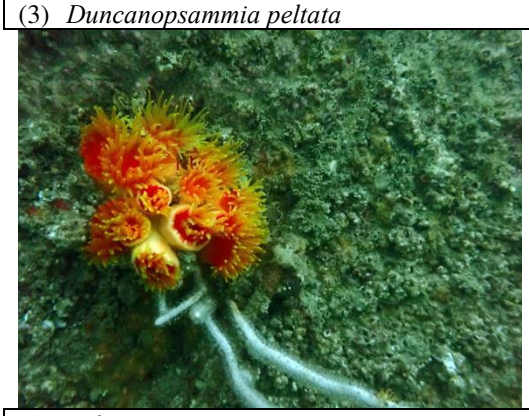
(1) *Plesiastrea versipora*

(2) *Bernardpora stutchburyi*

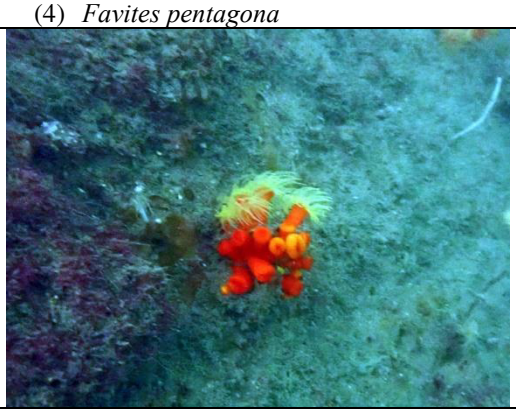
(3) *Duncanopsammia peltata*



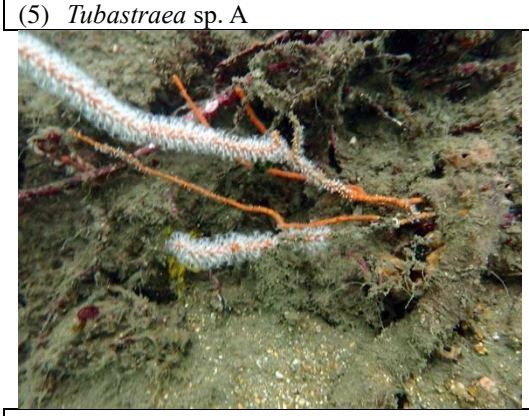
(4) *Favites pentagona*



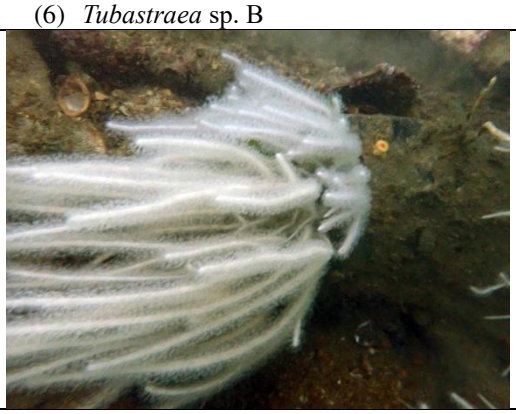
(5) *Tubastraea* sp. A



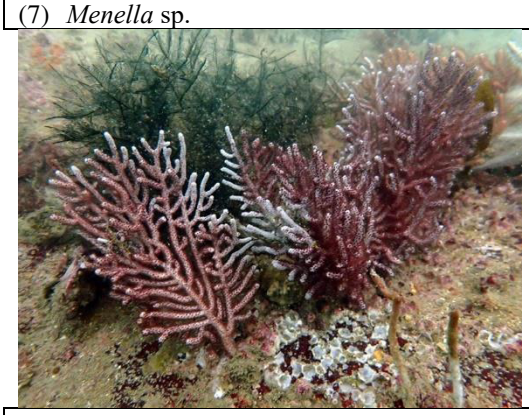
(6) *Tubastraea* sp. B



(7) *Menella* sp.



(8) *Echinomuricea* sp.

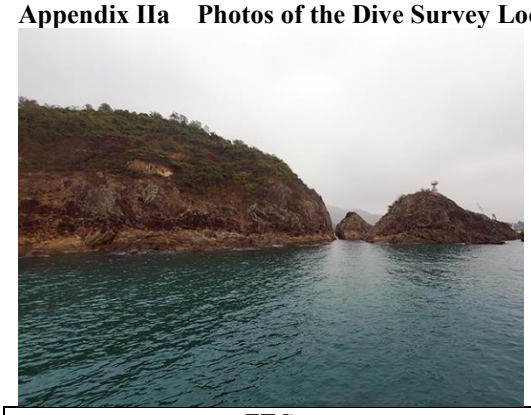


(9) *Echinogorgia* sp.

(10) *Dendronephthya* sp.

APPENDIX IIa
PHOTOS OF SPOT DIVE AND REA SURVEY LOCATIONS AT FTC, JUNK BAY

Appendix IIa Photos of the Dive Survey Locations at FTC, Junk Bay.

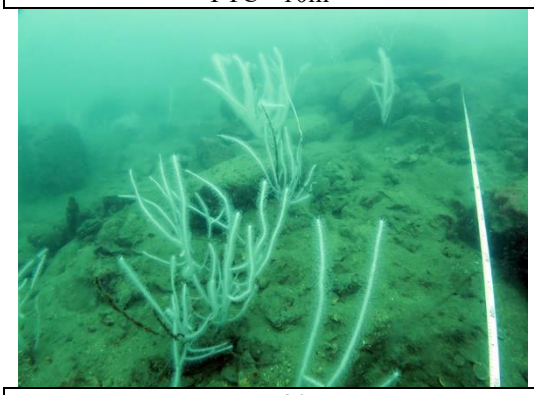


FTC

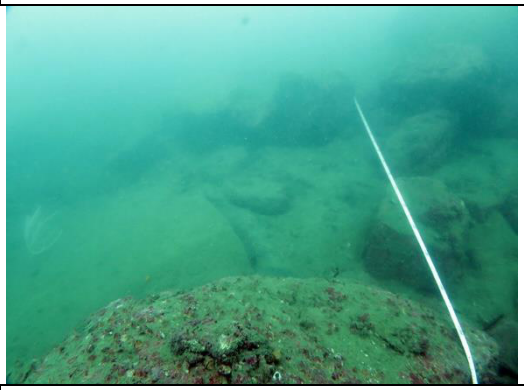
FTC - 0m

FTC - 10m

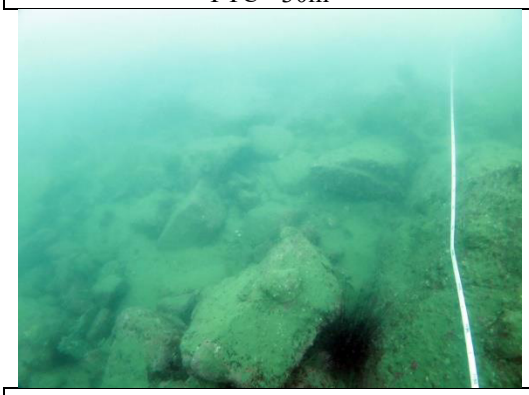
FTC - 20m



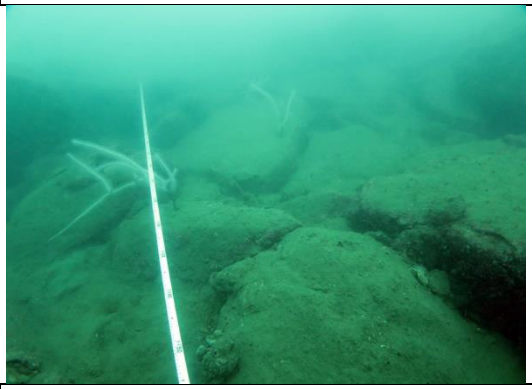
FTC - 30m



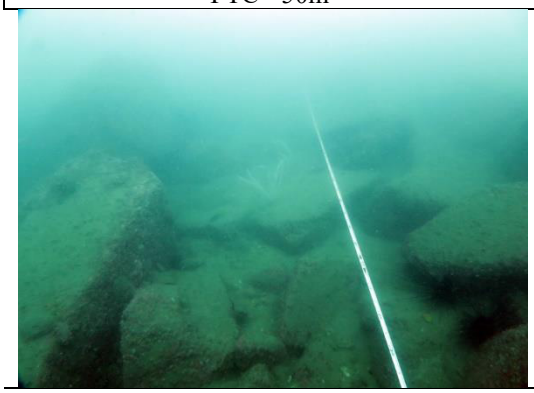
FTC - 40m



FTC - 50m



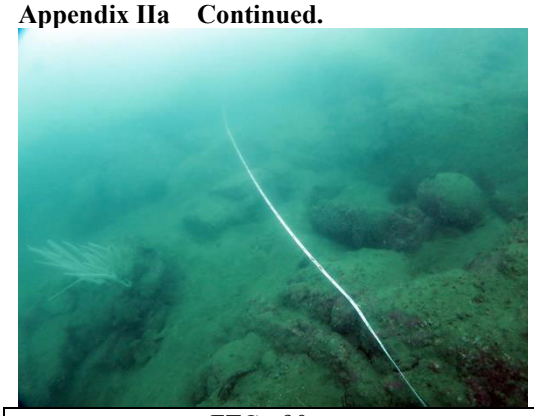
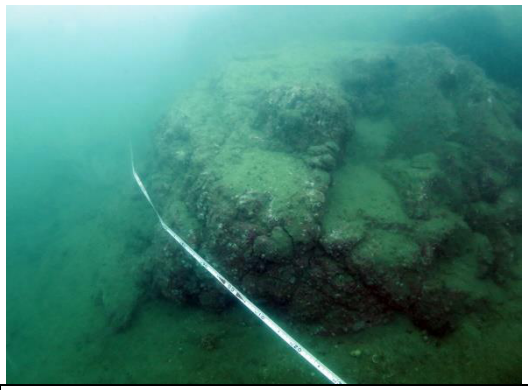
FTC - 60m



FTC - 70m

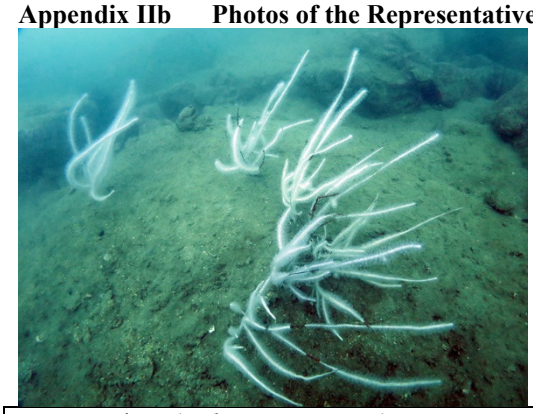
FTC - 80m

Appendix IIa Continued.

	
FTC - 90m	FTC - 100m

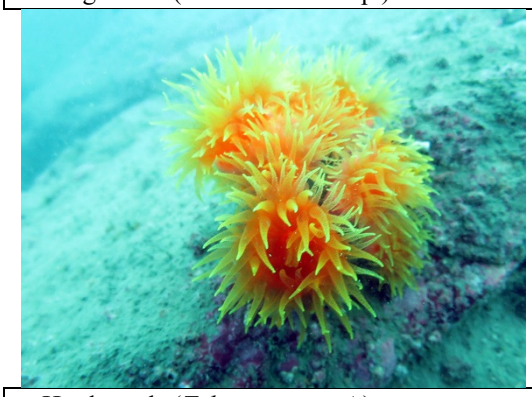
APPENDIX IIb
PHOTOS OF REPRESENTATIVE TAXA AT FTC, JUNK BAY

Appendix IIb Photos of the Representative Taxa at FTC, Junk Bay.

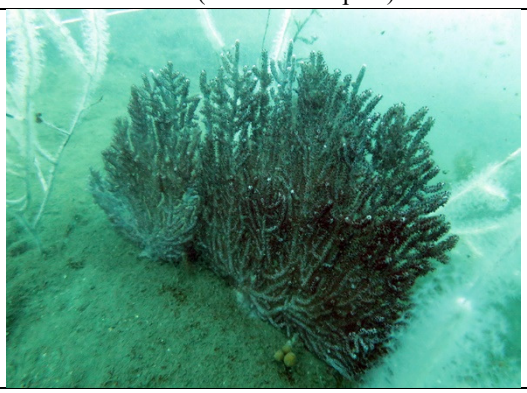


Gorgonians (*Echinomuricea* sp.)

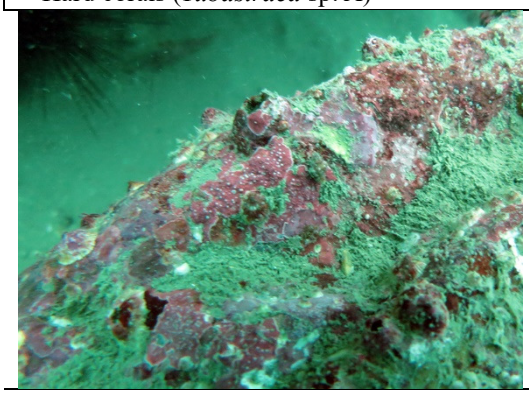
Hard corals (*Tubastraea* sp. C)



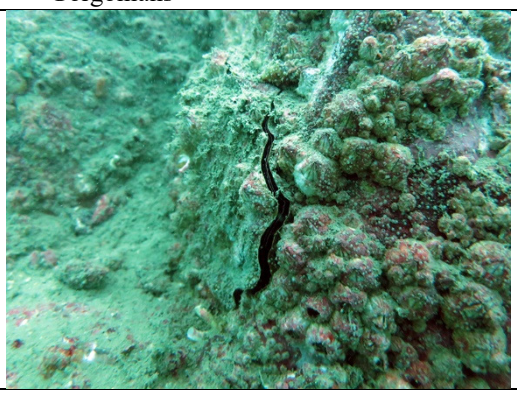
Hard corals (*Tubastraea* sp. A)



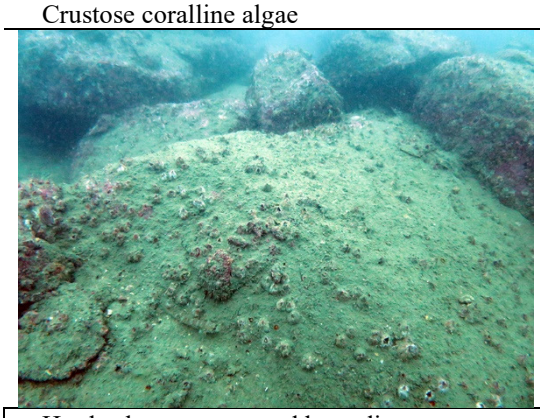
Gorgonians



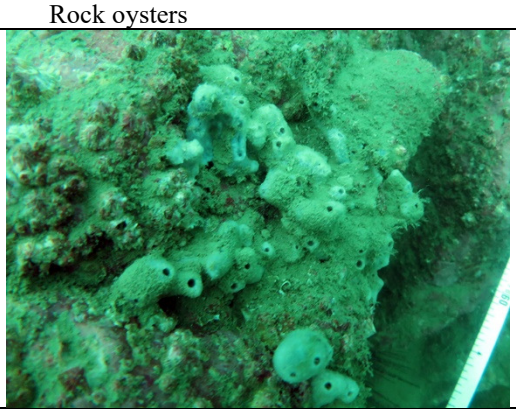
Crustose coralline algae



Rock oysters

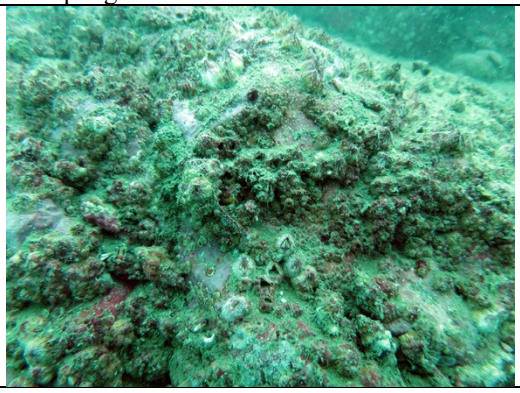


Hard substrates covered by sediments



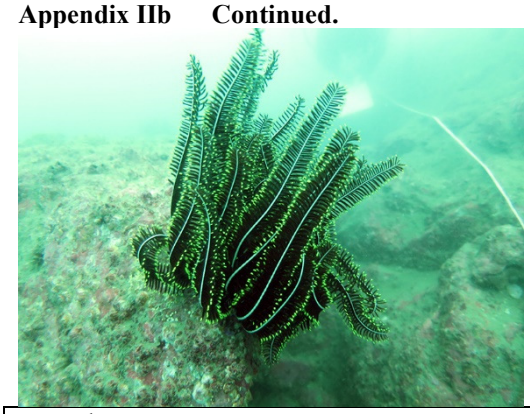
Sponges

Sea anemones

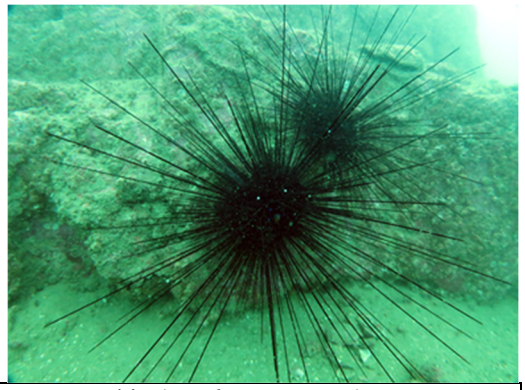


Barnacles

Appendix IIb Continued.



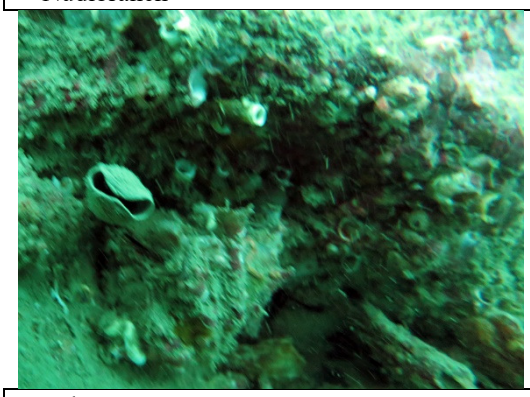
Feather stars



Sea urchin (*Diadema setosum*)

Nudibranch

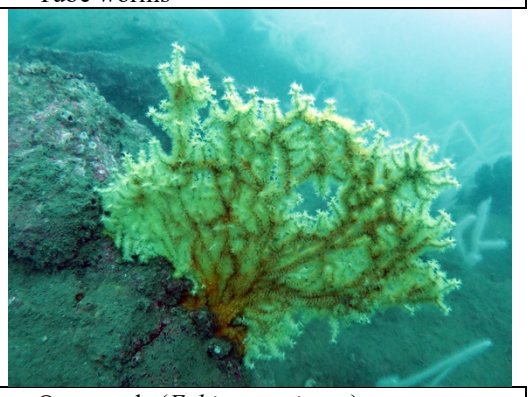
Bryozoans



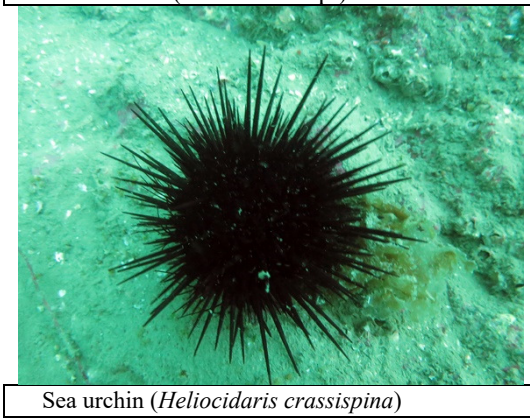
Tube worms

Tube worms

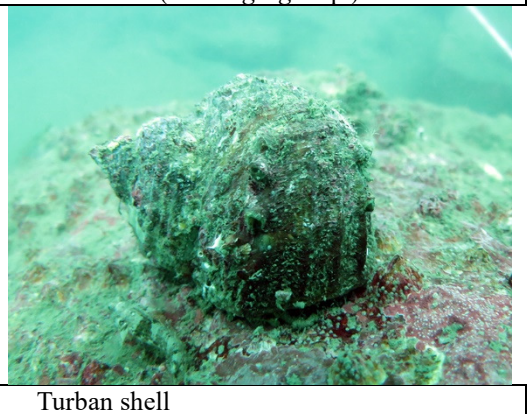
Hard corals (*Tubastraea* sp.)



Octocorals (*Echinogorgia* sp.)



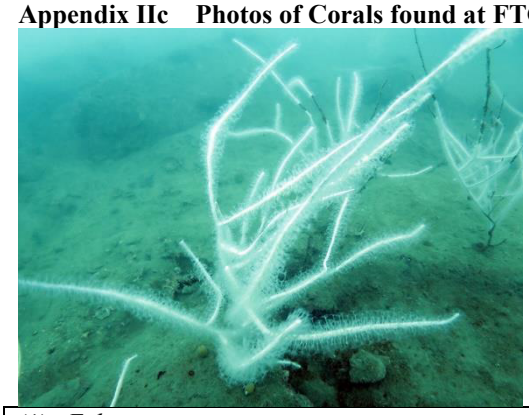
Sea urchin (*Heliocidaris crassispina*)



Turban shell

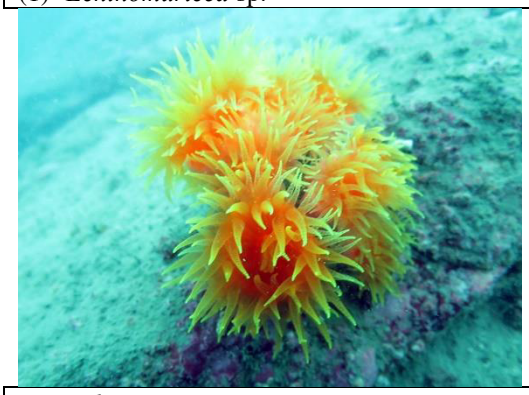
APPENDIX IIc
PHOTOS OF CORAL COLONIES FOUND AT FTC, JUNK BAY

Appendix IIc Photos of Corals found at FTC, Junk Bay.

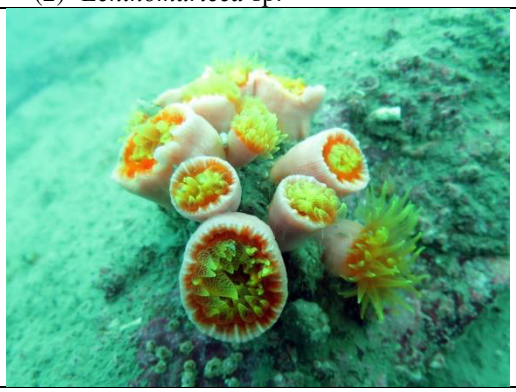


(1) *Echinomuricea* sp.

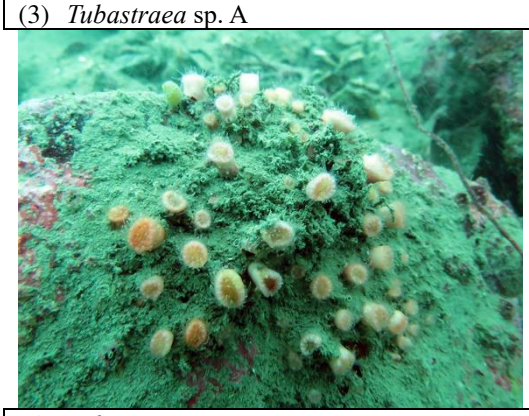
(2) *Echinomuricea* sp.



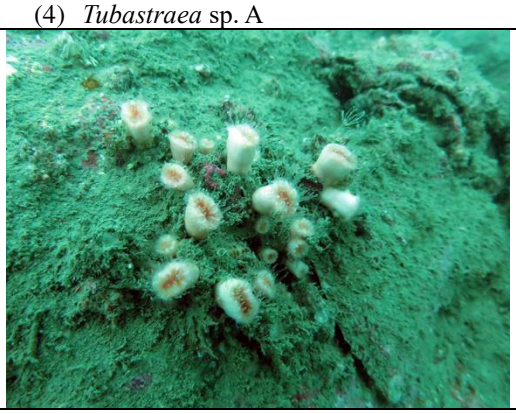
(3) *Tubastraea* sp. A



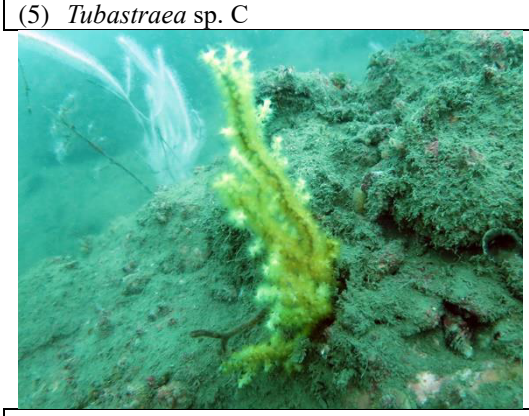
(4) *Tubastraea* sp. A



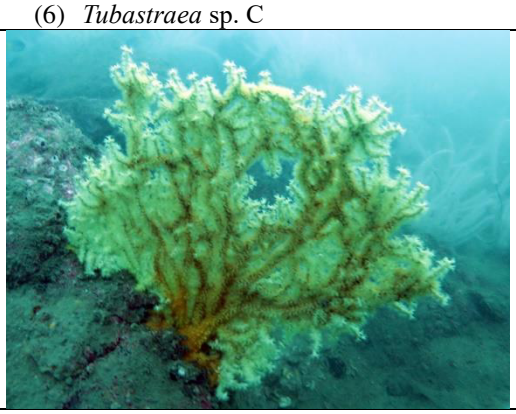
(5) *Tubastraea* sp. C



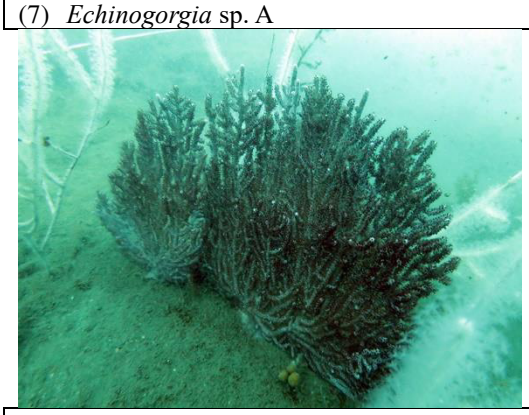
(6) *Tubastraea* sp. C



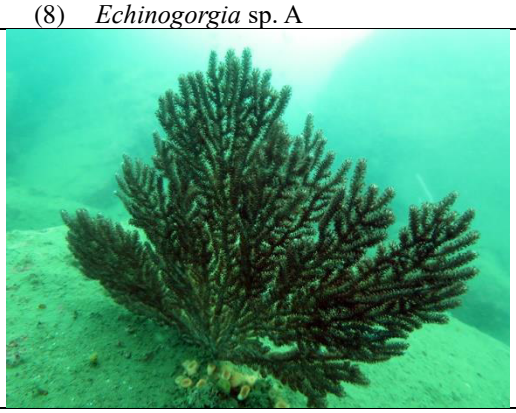
(7) *Echinogorgia* sp. A



(8) *Echinogorgia* sp. A



(9) *Echinogorgia* sp. B



(10) *Echinogorgia* sp. B