

**APPENDIX 5.2 CORAL SURVEY RESULTS**

***Spot-check Dive Survey Methodology***

A5.1 Spot-check dive survey was conducted in and around the proposed work areas to locate any coral area. Locations of spot-check dive were illustrated in **Figure Nos. NEX2213/C/331/ENS/M51/004 and NEX2213/C/331/ENS/M51/011** including:

- Hung Hom (HUH, 7 transects)
- Causeway Bay Typhoon Shelter (CBTS, 5 transects)
- Shek O (SKO, 6 transects)

A5.2 For each dive route, information including maximum depths, GPS positions of dive locations, substrata, survey distances and visibility was recorded. Subtidal substrata along the dive routes were surveyed for the presence of coral communities. The corals to be examined covered hard corals (order Scleractinia), octocorals (sub-class Octocorallia) and black corals (order Antipatharia), and were identified to the lowest practical levels. Number of colonies, sizes and types of coral species, their coverages, abundances, health conditions, translocation feasibilities and the conservation statuses of coral species in Hong Kong waters were recorded.

A5.3 Areas with corals were located and suitable locations to carry out the REA surveys were determined.

***Spot-check Dive Survey Results***

A5.4 The weather during the spot-check dive survey and a description of each spot-check dive route are given in **Table 1** and **Table 2**, respectively.

**Table 1 Weather during the Spot-check Dive Survey**

Survey Site	Survey Date	Weather
Hung Hom (HUH)	1 February 2009	Wind direction: northeast Beaufort: 4 to 5 Sunny periods
	14 March 2009	Wind direction: east Beaufort: 3 to 4 Sunny periods
Causeway Bay Typhoon Shelter (CBTS)	19 August 2009	Wind direction: southwest Beaufort: 4 to 5 Sunny periods
Shek O (SKO)	22 August 2009	Wind direction: southwest Beaufort: 3 to 4 Sunny periods
	23 August 2009	Wind direction: southwest Beaufort: 4 to 5 Sunny periods

**Table 2 Description of each Spot-check Dive Transect**

Spot-check Dive Transect	Start Point GPS	Route Distance (m)	Maximum Depth (m)	Bottom Substrate	Visibility (m)
HUH-S1	E 114°10'39.6" N 22°17'47.9"	180	4	Concrete seawall/boulder	1
HUH-S2	E 114°10'46.8" N 22°17'53.8"	250	4	Artificial seawall/boulder	0.5
HUH-S3	E 114°10'57.3" N 22°17'58.0"	200	8	Artificial seawall/boulder	0.5

Spot-check Dive Transect	Start Point GPS	Route Distance (m)	Maximum Depth (m)	Bottom Substrate	Visibility (m)
HUH-S4	E 114°10'56.6" N 22°17'49.6"	190	8	Artificial seawall/boulder	1
HUH-S5	E 114°10'59.7" N 22°17'58.2"	250	10	Artificial seawall/boulder	1
HUH-S6	E 114°10'51.8" N 22°17'57.2"	300	10	Muddy	0.5
HUH-S7	E 114°10'51.4" N 22°17'51.1"	280	11	Muddy	0.5
CBTS-S1	E 114°11'19.9" N 22°17'12.3"	110	5	Artificial seawall/boulders	0.5 - 1
CBTS-S2	E 114°11'23.2" N 22°17'08.7"	150	3.5	Artificial seawall/boulders	0.5 - 1
CBTS-S3	E 114°11'19.2" N 22°17'05.4"	90	4	Artificial seawall/boulders	0.5 - 1
CBTS-S4	E 114°11'23.0" N 22°17'08.7"	440	6	Sandy/muddy	0.5
CBTS-S5	E 114°11'18.6" N 22°17'11.7"	330	8	Sandy/muddy	0.5
SKO-S1	E 114°14'10.3" N 22°13'16.0"	167	3.5	Bedrock/boulder	1
SKO-S2	E 114°14'14.4" N 22°13'14.2"	175	8.5	Bedrock/seawall	0.5 - 1
SKO-S3	E 114°14'16.9" N 22°13'12.4"	142	10	Muddy	0.5 - 1
SKO-S4	E 114°14'17.0" N 22°13'11.9"	158	9	Bedrock/seawall	1
SKO-S5	E 114°14'14.0" N 22°13'10.8"	183	3.5	Boulder/Rock	1
SKO-S6	E 114°14'17.8" N 22°13'06.4"	200	4.5	Boulder/Rock	1

A5.5 The general conditions and seabed as well as fauna recorded during spot-check dive survey were described in **Table 3**.

**Table 3 Description of the Seabed and Fauna Recorded along each Spot-check Dive Route**

Site <sup>(1)</sup>	Transect	Maximum Depth (m)	Description
HUH	S1	4	The transect was located at artificial vertical seawall. The seabed was muddy with scattered bedrock and boulders. Visibility was fair (1 m) along the transect. Very low coverage (<1%) of two hard coral species were recorded on boulder surfaces: <i>Oulastrea crispata</i> (diameter: 2 – 15 cm) and <i>Balanophyllia</i> sp. (diameter: <0.5 cm). Other fauna, such as sponges, bryozoans, rock oyster ( <i>Saccostrea cucullata</i> ), common green mussel ( <i>Perna viridis</i> ) and tubeworms ( <i>Sabellastarte japonica</i> ), were found on the concrete seawalls and boulders.
HUH	S2	4	The transect was located at artificial vertical seawall. The seabed was muddy with scattered bedrock and boulders. Visibility was poor (0.5 m) along the transect. Very low coverage (<1%) of two hard coral species were recorded on boulder surfaces: <i>Oulastrea crispata</i> (diameter: 2 – 5 cm) and <i>Balanophyllia</i> sp. (diameter: <0.5 cm). Other fauna, such as sponges, bryozoans, rock oyster ( <i>Saccostrea cucullata</i> ), common green mussel ( <i>Perna viridis</i> ) and tubeworms ( <i>Sabellastarte japonica</i> ), were found on the concrete seawalls and boulders.
HUH	S3	8	The transect was located at artificial vertical seawall. The seabed was muddy with scattered bedrock and boulders. Visibility was poor (0.5 m) along the transect. Very low coverage (<1%) of two hard coral species were recorded. <i>Oulastrea crispata</i> (diameter: 2 –5 cm) were found at the base of the seawall and on boulder surface, whereas <i>Balanophyllia</i> sp. (diameter: <0.5 cm) were found on boulder surfaces. Other fauna, such as sponges, bryozoans, rock oyster ( <i>Saccostrea cucullata</i> ), common green mussel ( <i>Perna viridis</i> ) and tubeworms ( <i>Sabellastarte japonica</i> ), were found on the concrete seawalls and boulders. Common tube anemones ( <i>Cerianthus filiformis</i> ) were also recorded on the muddy bottom.
HUH	S4	8	The transect was located at artificial vertical seawall. The seabed was muddy with scattered bedrock and boulders. Visibility was fair (1 m) along the transect. Very low coverage (<1%) of two hard coral species were recorded. <i>Oulastrea crispata</i> (diameter: 2 –5 cm) were found at the base of the seawall and on boulder surface, whereas <i>Balanophyllia</i> sp. (diameter: <0.5 cm) were found on boulder surfaces. Other fauna, such as sponges, bryozoans, rock oyster ( <i>Saccostrea cucullata</i> ), common green mussel ( <i>Perna viridis</i> ) and tubeworms ( <i>Sabellastarte japonica</i> ), were found on the concrete seawalls and boulders. Common tube anemones ( <i>Cerianthus filiformis</i> ) were also recorded on the muddy bottom.
HUH	S5	10	The transect was located at artificial vertical seawall. The seabed was muddy with scattered bedrock and boulders. Visibility was fair (1 m) along the transect. Very low coverage (<1%) of two hard coral species were recorded. <i>Oulastrea crispata</i> (diameter: 2 – 4 cm) were found at the base of the seawall and on boulder surface, whereas <i>Balanophyllia</i> sp. (diameter: <0.5 cm) were found on boulder surfaces. Other fauna, such as sponges, bryozoans, rock oyster ( <i>Saccostrea cucullata</i> ), common green mussel ( <i>Perna viridis</i> ) and tubeworms ( <i>Sabellastarte japonica</i> ), were found on the concrete seawalls and boulders. Common tube anemones ( <i>Cerianthus filiformis</i> ) were also recorded on the muddy bottom.

Site <sup>(1)</sup>	Transect	Maximum Depth (m)	Description
HUH	S6	10	The seabed was composed of mud with scattered boulders. Visibility was poor (0.5 m) along the transect. Very low coverage (<1%) of two hard coral species were recorded on boulder surfaces: <i>Oulastrea crispata</i> (diameter: 2 – 4 cm) and <i>Balanophyllia</i> sp. (diameter: <0.5 cm). Only common tube anemones ( <i>Cerianthus filiformis</i> ) were found on the muddy bottom.
HUH	S7	11	The seabed was composed of mud with scattered boulders. Visibility was poor (0.5 m) along the transect. No coral was found along the transect. Only common tube anemones ( <i>Cerianthus filiformis</i> ) were found on the muddy bottom.
CBTS	S1	5	The transect was located at artificial vertical seawall. Visibility was poor (0.5 - 1 m) along the transect. No coral was found along the transect. Only common rock oyster ( <i>Saccostrea cucullata</i> ), green mussel <i>Perna viridis</i> and <i>Styela plicata</i> and sponge were found on the seawall.
CBTS	S2	3.5	The transect was located at artificial vertical seawall. Visibility was poor (0.5 - 1 m) along the transect. No coral was found along the transect. Only common rock oyster ( <i>Saccostrea cucullata</i> ), green mussel <i>Perna viridis</i> and <i>Styela plicata</i> and sponge were found on the seawall.
CBTS	S3	4	The transect was located at artificial vertical seawall. Visibility was poor (0.5 - 1 m) along the transect. No coral was found along the transect. Only common rock oyster ( <i>Saccostrea cucullata</i> ), green mussel <i>Perna viridis</i> and <i>Styela plicata</i> and sponge were found on the seawall.
CBTS	S4	6	The seabed was composed of sand and mud. Visibility was poor (0.5 m) along the transect. No coral was found along the transect. Only common tube anemones ( <i>Cerianthus filiformis</i> ) were found on the muddy bottom.
CBTS	S5	8	The seabed was composed of sand and mud. Visibility was poor (0.5 m) along the transect. No coral was found along the transect. Only common tube anemones ( <i>Cerianthus filiformis</i> ) were found on the muddy bottom.
SKO	S1	3.5	The seabed was composed of natural bedrocks. Visibility was fair (1 m) along the transect. Very low coverage (<1%) of three hard coral species and one soft coral species were recorded: <i>Porites lutea</i> (diameter: 5 cm), <i>Oulastrea crispata</i> (diameter: 5 - 10 cm), <i>Montipora peltiformis</i> (diameter: 10 cm) and <i>Dendronephthya</i> sp. (diameter: 7 cm). Other fauna, such as rock oyster ( <i>Saccostrea cucullata</i> ), tunicates ( <i>Styela plicata</i> ) and sea urchins ( <i>Anthocidaris crassispina</i> , <i>Diadema setosum</i> and <i>Salmacis sphaeroides</i> ), were also found.

Site <sup>(1)</sup>	Transect	Maximum Depth (m)	Description
SKO	S2	8.5	The seabed was composed of natural bedrocks along part of the transect and artificial seawall along the other part. Visibility was fair (0.5 - 1 m) along the transect. Very low coverage (<1%) of nine hard coral species were recorded: <i>Porites lutea</i> (diameter: 5 - 10 cm), <i>Oulastrea crispata</i> (diameter: 5 - 10 cm), <i>Montipora peltiformis</i> (diameter: 5 - 15 cm), <i>Goniopora stutchburyi</i> (diameter: 10 - 15 cm), <i>Acropora solitaryensis</i> (diameter: 10 - 15 cm), <i>Tubastrea</i> sp. (diameter: 5 - 10 cm), <i>Pavona decussata</i> (diameter: 15 cm), <i>Cyphastrea serailia</i> (diameter: 10 - 15 cm) and <i>Psammocora superficialis</i> (diameter: 5 - 10 cm). Other fauna, such as rock oyster ( <i>Saccostrea cucullata</i> ), tunicates ( <i>Styela plicata</i> ), sea urchins ( <i>Anthocidaris crassispina</i> and <i>Diadema setosum</i> ) and common tube worm ( <i>Sabellastarte japonica</i> ), were also found.
SKO	S3	10	The seabed was composed of mud and sand. Visibility was poor (0.5 – 1 m) along the transect. No coral was found.
SKO	S4	9	The seabed was composed of natural bedrocks along part of the transect and artificial seawall along the other part. Visibility was fair (1 m) along the transect. Very low coverage (<1%) of seven hard coral species were recorded: <i>Porites lutea</i> (diameter: 5 - 10 cm), <i>Oulastrea crispata</i> (diameter: 5 - 10 cm), <i>Montipora peltiformis</i> (diameter: 5 - 15 cm), <i>Goniopora stutchburyi</i> (diameter: 10 - 15 cm), <i>Tubastrea</i> sp. (diameter: 5 - 10 cm), <i>Cyphastrea serailia</i> (diameter: 10 - 15 cm) and <i>Psammocora superficialis</i> (diameter: 5 - 10 cm). Other fauna, such as rock oyster ( <i>Saccostrea cucullata</i> ), tunicates ( <i>Styela plicata</i> ), sea urchins ( <i>Anthocidaris crassispina</i> and <i>Diadema setosum</i> ) and common tube worm ( <i>Sabellastarte japonica</i> ), were also found.
SKO	S5	3.5	The seabed was composed of artificial sloping boulders. Visibility was fair (1 m) along the transect. Very low coverage (<1%) of two hard coral species were recorded: <i>Porites lutea</i> (diameter: 5 - 10 cm) and <i>Oulastrea crispata</i> (diameter: 5 - 10 cm). Other fauna, such as rock oyster ( <i>Saccostrea cucullata</i> ), tunicates ( <i>Styela plicata</i> ) and sea urchins ( <i>Anthocidaris crassispina</i> and <i>Diadema setosum</i> ), were also found.
SKO	S6	4.5	The seabed was composed of artificial sloping boulders. Visibility was fair (1 m) along the transect. Very low coverage (<1%) of seven hard coral species were recorded: <i>Porites lutea</i> (diameter: 5 - 10 cm), <i>Oulastrea crispata</i> (diameter: 5 - 10 cm), <i>Montipora peltiformis</i> (diameter: 5 - 10 cm), <i>Goniopora stutchburyi</i> (diameter: 5 - 15 cm), <i>Cyphastrea serailia</i> (diameter: 10 - 15 cm), <i>Favia speciosa</i> (diameter: 25 cm) and <i>Favites pentagona</i> (diameter: 20 cm). Other fauna, such as rock oyster ( <i>Saccostrea cucullata</i> ), tunicates ( <i>Styela plicata</i> ) and sea urchins ( <i>Anthocidaris crassispina</i> and <i>Diadema setosum</i> ), were also found.

Note:

(1) Site: HUH = Hung Hom Area; CBTS = Causeway Bay Typhoon Shelter; SKO = Shek O.

**Rapid Ecological Assessment (REA) Methodology**

- A5.6 100 m horizontal transects were laid following the contour of the seabed at area where corals were recorded during the spot-check dives (**Figure Nos. NEX2213/C/331/ENS/M51/004 and NEX2213/C/331/ENS/M51/011**). Detailed REA was carried out for each transect with reference to DeVantier *et al.* (1998).
- A5.7 For each transect, the locations (GPS) of dive routes, distance surveyed, site condition (i.e. the degree of exposure to wave action), species list of corals and other marine organisms, number of colonies, sizes and types of corals., their coverage, abundance, condition, translocation feasibility and the conservation status of coral species in Hong Kong waters were recorded. The benthic cover, taxon abundance, and ecological attributes of the transect above were recorded in a swathe 2 m wide, 1 m either side of the transects, following the Rapid Ecological Assessment (REA) technique.
- A5.8 Rapid ecological assessment (DeVantier *et al.* 1998) is a two-tiered approach for underwater survey to assess the sub-littoral substrata and benthic organisms. This methodology has been modified to suit Hong Kong conditions and has become a standardised and widely adopted way to establish ecological baseline conditions. Two levels of information are to be recorded in a swathe ~2m wide, 1m on either side of each transect:
- Tier 1 will assess the relative cover of major benthic groups and substrata
  - Tier 2 will provide an inventory of sedentary/ sessile benthic taxa, which are also ranked in terms of their abundance in the community at the survey site.
- A5.9 Self-evidently, data was recorded by an expert who was experienced in field identification of sedentary/ sessile benthic taxa, particularly corals.

Tier 1 : Categorisation of benthic cover

- A5.10 For each transect, ecological and substratum attributes were categorised and ranked. The required attributes were detailed in **Table 4 and**
- A5.11 **Table 5:**

**Table 4 Tier 1 Benthic Attribute Categories**

Ecological Attributes	Substratum Attributes
Hard Corals	<b>Hard substrata</b>
Octocorals (soft corals and gorgonians)	Bedrock / continuous pavement
Black corals	Boulder blocks (diam. >50cm)
Dead Standing Corals	Boulder blocks (diam. <50cm)
	Rubble
	Other
	<b>Soft substrata</b>
	Sand
	Mud/Silt

**Table 5 Tier 1 Ordinal Ranks of Percentage Cover of Benthic Attributes**

Rank <sup>(1)</sup>	Percentage Cover
0	None recorded
0.5	1-5%
1	6-10%
2	11-30%
3	31-50%
4	51-75%
5	76-100%

Note:

(1) For substratum attributes, it is preferable to record actual estimates of cover. The percentage of hard substrata vs soft substrata can be provided (e.g. 80% and 20% respectively). The percentage cover of the types of hard or soft substrata could also then be presented (e.g. bedrock pavement 60%, rubble 20%, sand 15%, mud/silt 5%). Similarly, recording

and presenting actual estimates of, for instance, hard and soft coral cover may be more informative (e.g. <1%) and is also an approach adopted by similar recent survey reports.

Tier 2 :Taxonomic inventories to define types of benthic communities

A5.12 An inventory of benthic taxa along each transect was compiled during the survey. The taxa were defined *in situ* to at least the following levels as **Table 6**:

**Table 6 Taxonomic Inventory Identification**

Type of Benthos	Level of Taxa
Hard corals	Species level, wherever possible
Octocorals	Genus level
Black Corals	Genus level

A5.13 For each transect, each taxon in the inventory was ranked in terms of abundance in the community (**Table 7**).

**Table 7 Ordinal Ranks of Taxon Abundance**

Taxon Abundance Rank	Abundance
0	Absent
1	Rare
2	Uncommon
3	Common
4	Abundant
5	Dominant

A5.14 The taxon categories were ranked in terms of relative abundance of individuals, rather than the contribution to benthic cover along each transect. The ranks are visual assessments of abundance, rather than quantitative counts of each taxon.

**REA Survey Results**

A5.15 The weather during the REA survey and a description of each REA transect are given in **Table 8** and **Table 9**, respectively.

**Table 8 Weather during the REA Survey**

Survey Site	Survey Date	Weather
Hung Hom (HUH)	8 May 2009	Wind direction: east Beaufort: 3 to 4 Sunny
	9 May 2009	Wind direction: east Beaufort: 4 Sunny
	10 May 2009	Wind direction: southeast Beaufort: 4, occasionally 5 offshore Sunny
Shek O (SKO)	3 October 2009	Wind direction: east Beaufort: 4 to 5 Sunny periods
	4 October 2009	Wind direction: northeast Beaufort: 5, occasionally 6 Sunny periods

**Table 9 Description of each REA Transect**

REA Transect	Starting Point GPS	End Point GPS	Maximum Depth (m)	Bottom Substrate	Visibility (m)
HUH-T1	E 114°10'42.0" N 22°17'49.8"	E 114°10'48.1" N 22°17'52.3"	5	Artificial seawall /boulders	1
HUH-T2	E 114°10'46.9" N 22°17'53.9"	E 114°10'49.6" N 22°17'56.1"	5	Artificial seawall /boulders	1
HUH-T3	E 114°10'53.7" N 22°17'58.3"	E 114°10'57.2" N 22°17'58.4"	4	Artificial seawall /boulders	1
HUH-T4	E 114°10'53.6" N 22°17'58.0"	E 114°10'57.2" N 22°17'58.2"	5	Boulders/rocks	0.5
HUH-T5	E 114°10'57.2" N 22°17'54.7"	E 114°10'56.5" N 22°17'52.1"	7	Artificial seawall /boulders	0.5
HUH-T6	E 114°10'58.4" N 22°17'51.5"	E 114°10'52.1" N 22°17'50.3"	7	Artificial seawall /boulders	0.5
HUH-T7	E 114°10'57.9" N 22°17'51.0"	E 114°10'59.0" N 22°17'53.8"	8	Artificial seawall /boulders	0.5
HUH-T8	E 114°10'58.9" N 22°17'58.0"	E 114°11'01.8" N 22°17'58.1"	8	Artificial seawall /boulders	0.5
HUH-T9	E 114°11'02.5" N 22°17'56.5"	E 114°11'05.3" N 22°17'56.3"	7.5	Artificial seawall /boulders	1
HUH-T10	E 114°11'06.0" N 22°17'56.5"	E 114°11'10.6" N 22°17'58.4"	8	Artificial seawall /boulders	1
SKO-T1	E 114°14'11.5" N 22°13'15.5"	E 114°14'14.3" N 22°13'14.3"	3.5	Bedrock	1
SKO-T2	E 114°14'15.6" N 22°13'13.7"	E 114°14'17.2" N 22°13'12.4"	6	Boulder/rock/ artificial seawall	0.5
SKO-T3	E 114°14'17.1" N 22°13'11.9"	E 114°14'15.3" N 22°13'11.3"	6	Artificial seawall/boulder	0.5
SKO-T4	E 114°14'14.0" N 22°13'10.3"	E 114°14'15.2" N 22°13'08.8"	3.5	Boulders/rocks	1
SKO-T5	E 114°14'18.4" N 22°13'06.6"	E 114°14'20.6" N 22°13'07.3"	3.5	Boulders/rocks	1

A5.16 Along each transect the seabed composition was identified and conditions were noted as shown in **Table 10**.



**Table 10 Substratum Attributes along the REA Survey Transects**

	HUH -T1	HUH -T2	HUH -T3	HUH -T4	HUH -T5	HUH -T6	HUH -T7	HUH -T8	HUH -T9	HUH -T10	SKO -T1	SKO -T2	SKO -T3	SKO -T4	SKO -T5
<b>Substratum Attributes<sup>(1)</sup></b>															
<b>Hard substrata</b>															
Bedrock / continuous pavement	3	3	4	0	3	3	3	3	3	3	3	4	3	0	0
Boulder blocks (diam. >50cm)	2	2	1	2	2	2	2	2	2	2	2	2	3	3	4
Boulder blocks (diam. <50cm)	1	1	1	2	1	1	1	1	1	1	1	1	2	3	2
Rubble	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Soft substrata</b>															
Sand	1	1	0	2	1	1	1	1	0	0	1	0	0	1	1
Mud/Silt	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
<b>Ecological Attributes<sup>(1)</sup></b>															
Hard Corals	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Octocorals (soft corals and gorgonians)	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0
Black corals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dead Standing Corals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note:

(1) Rank of percentage cover: 0 = None recorded; 0.5 = 1 – 5%; 1 = 6 – 10%; 2 = 11 – 30%; 4 = 51 – 75%; 5 = 76 – 100%.

A5.17 Information, including numbers of colonies, sizes, types, coverages, health conditions and translocation feasibilities, of the corals found during REA surveys were summarized in **Table 11**.

**Table 11 Information of Corals Found during REA Surveys**

Transects	Number of Colonies	Size Range (cm)	Type of Coral	Coral Coverage	Health Condition	Translocation Feasibility <sup>(1)</sup>
HUH-T1	50 <sup>(2)</sup>	2 - 15	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	60%
HUH-T2	32 <sup>(2)</sup>	2 - 5	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	45%
HUH-T3	83 <sup>(2)</sup>	1 - 5	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	63%
HUH-T4	27 <sup>(2)</sup>	1 - 3	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	100%
HUH-T5	5 <sup>(2)</sup>	2 - 5	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	0%
HUH-T6	11 <sup>(2)</sup>	1 - 5	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	0%
HUH-T7	20 <sup>(2)</sup>	2 - 5	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	1 - 5%	Fair	55%
HUH-T8	16 <sup>(2)</sup>	2 - 5	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	40%
HUH-T9	23 <sup>(2)</sup>	2 - 5	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	50%
HUH-T10	31 <sup>(2)</sup>	2 - 5	2 hard coral species: <i>Oulastrea crispata</i> , <i>Balanophyllia</i> sp.	<1%	Fair	30%
SKO-T1	11	5 - 10	3 hard coral species: <i>Montipora peltiformis</i> , <i>Oulastrea crispata</i> , <i>Porites lutea</i> ; 1 soft coral species: <i>Dendronephthya</i> sp.	<1%	Good	18%

Transects	Number of Colonies	Size Range (cm)	Type of Coral	Coral Coverage	Health Condition	Translocation Feasibility <sup>(1)</sup>
SKO-T2	48	5 – 15	9 hard coral species: <i>Montipora peltiformis</i> , <i>Goniopora stutchburyi</i> , <i>Cyphastrea serailia</i> , <i>Oulastrea crispata</i> , <i>Porites lutea</i> , <i>Psammocora superficialis</i> , <i>Acropora solitaryensis</i> , <i>Tubastrea</i> sp., <i>Pavona decussata</i>	<1%	Good	6%
SKO-T3	32	5 - 15	7 hard coral species: <i>Montipora peltiformis</i> , <i>Goniopora stutchburyi</i> , <i>Cyphastrea serailia</i> , <i>Oulastrea crispata</i> , <i>Porites lutea</i> , <i>Tubastrea</i> sp., <i>Psammocora superficialis</i>	<1%	Good	9%
SKO-T4	12	2 - 15	2 hard coral species: <i>Oulastrea crispata</i> and <i>Porites lutea</i>	<1%	Good	33%
SKO-T5	15	5 - 25	7 hard coral species: <i>Favia speciosa</i> , <i>Favites pentagona</i> , <i>Montipora peltiformis</i> , <i>Goniopora stutchburyi</i> , <i>Cyphastrea serailia</i> , <i>Oulastrea crispata</i> , <i>Porites lutea</i>	<1%	Good	20%

Note:

- (1) Corals attached on movable boulders/rocks less than 50 cm in diameter are considered translocatable.  
 (2) Number of *Balanophyllia* sp. colonies found was not counted. Patches of a few polyps were scattered over a rock. Abundance is only expressed in terms of coverage.

A5.18 Detailed information of colonies found along the REA transects within the proposed works areas are listed in **Table 12**.

**Table 12 Coral Colonies along REA transects within the Proposed Works Areas**

Coral Species	Transect	Size (cm)	Health Condition	Distance Along the Transect Line (m)	Translocation Feasibility
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	5.2	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	5.2	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	6.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	6.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	6.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	1.5	Fair	6.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	6.3	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	12.4	Yes
<i>Oulastrea crispata</i>	HUH-T3	5	Fair	12.8	No
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	15	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	15	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	15.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	1.5	Fair	15.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	15.2	Yes

<b>Coral Species</b>	<b>Transect</b>	<b>Size (cm)</b>	<b>Health Condition</b>	<b>Distance Along the Transect Line (m)</b>	<b>Translocation Feasibility</b>
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	15.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	15.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	15.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	15.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	15.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	15.4	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	15.4	No
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	15.4	No
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	19.5	No
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	19.9	Yes
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	30.7	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	30.7	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	30.8	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	47.1	No
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	47.1	No
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	47.1	No
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	47.2	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	47.2	No
<i>Oulastrea crispata</i>	HUH-T3	5	Fair	49.5	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	50.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	50.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	50.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	50.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	55.6	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	55.6	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	55.7	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	60.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	60.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	60.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	60.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	60.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	61.5	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	66	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	66.1	No
<i>Oulastrea crispata</i>	HUH-T3	5	Fair	70.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	70.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	70.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	70.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	70.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	70.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	70.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	70.4	No
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	70.4	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	70.4	No
<i>Oulastrea crispata</i>	HUH-T3	5	Fair	75.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	75.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	75.1	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	75.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	75.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	75.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	75.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	75.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	75.3	No
<i>Oulastrea crispata</i>	HUH-T3	2.5	Fair	75.3	Yes
<i>Oulastrea crispata</i>	HUH-T3	3.5	Fair	75.4	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	75.4	No

<b>Coral Species</b>	<b>Transect</b>	<b>Size (cm)</b>	<b>Health Condition</b>	<b>Distance Along the Transect Line (m)</b>	<b>Translocation Feasibility</b>
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	75.4	No
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	75.4	No
<i>Oulastrea crispata</i>	HUH-T3	1.5	Fair	75.4	No
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	76.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	76.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	76.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	76.2	Yes
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	79.1	No
<i>Oulastrea crispata</i>	HUH-T3	5	Fair	79.1	No
<i>Oulastrea crispata</i>	HUH-T3	3	Fair	79.1	No
<i>Oulastrea crispata</i>	HUH-T3	2	Fair	84.5	Yes
<i>Oulastrea crispata</i>	HUH-T3	1	Fair	84.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	1.5	Fair	14.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	2.5	Fair	14.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	16.7	Yes
<i>Oulastrea crispata</i>	HUH-T4	1	Fair	28.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	28.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	1	Fair	28.3	Yes
<i>Oulastrea crispata</i>	HUH-T4	1	Fair	44.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	1.5	Fair	44.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	44.6	Yes
<i>Oulastrea crispata</i>	HUH-T4	1	Fair	55.1	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	55.1	Yes
<i>Oulastrea crispata</i>	HUH-T4	3	Fair	55.2	Yes
<i>Oulastrea crispata</i>	HUH-T4	1	Fair	55.2	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	62.3	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	62.3	Yes
<i>Oulastrea crispata</i>	HUH-T4	2.5	Fair	64.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	64.5	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	69	Yes
<i>Oulastrea crispata</i>	HUH-T4	1	Fair	69	Yes
<i>Oulastrea crispata</i>	HUH-T4	1.5	Fair	69.1	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	69.1	Yes
<i>Oulastrea crispata</i>	HUH-T4	3	Fair	77.1	Yes
<i>Oulastrea crispata</i>	HUH-T4	1	Fair	77.2	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	77.2	Yes
<i>Oulastrea crispata</i>	HUH-T4	1.5	Fair	88.1	Yes
<i>Oulastrea crispata</i>	HUH-T4	2	Fair	88.3	Yes
<i>Oulastrea crispata</i>	HUH-T4	1	Fair	88.7	Yes
<i>Oulastrea crispata</i>	HUH-T5	2	Fair	25.1	No
<i>Oulastrea crispata</i>	HUH-T5	3	Fair	25.8	No
<i>Oulastrea crispata</i>	HUH-T5	2	Fair	44.6	No
<i>Oulastrea crispata</i>	HUH-T5	5	Fair	69.3	No
<i>Oulastrea crispata</i>	HUH-T5	2	Fair	81.5	No
<i>Oulastrea crispata</i>	HUH-T6	2	Fair	12.5	No
<i>Oulastrea crispata</i>	HUH-T6	1.5	Fair	12.8	No
<i>Oulastrea crispata</i>	HUH-T6	1	Fair	35.2	No
<i>Oulastrea crispata</i>	HUH-T6	2	Fair	39.1	No
<i>Oulastrea crispata</i>	HUH-T6	2	Fair	45.3	No
<i>Oulastrea crispata</i>	HUH-T6	5	Fair	58.7	No
<i>Oulastrea crispata</i>	HUH-T6	3	Fair	59.1	No
<i>Oulastrea crispata</i>	HUH-T6	2	Fair	59.8	No
<i>Oulastrea crispata</i>	HUH-T6	1	Fair	77.5	No
<i>Oulastrea crispata</i>	HUH-T6	2.5	Fair	89.1	No
<i>Oulastrea crispata</i>	HUH-T6	1	Fair	92.4	No

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