

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

Tree Protection Plan

November 2015

Submitted by
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Tree Protection Plan

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Client: CLP Power Hong Kong Limited (CLP)		Project No: 0259952			
Summary: This document presents the Tree Protection Plan for the proposed 11kV Submarine Cables Replacement Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O.		Date: 5 November 2015			
		Approved by:  Terence Fong Partner			
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v0	Tree Protection Plan	VL	FZ	TF	23/10/15
Revision	Description	By	Checked	Approved	Date
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CONTENTS

1	INTRODUCTION	1
1.1	GENERAL DESCRIPTION OF THE PROJECT	1
1.2	SCOPE OF REPORT	2
1.3	RELEVANT LEGISLATION AND GUIDELINES	2
2	TREE SURVEY METHODOLOGIES	4
2.1	ASSESSMENT OF TREE FORM	4
2.2	ASSESSMENT OF HEALTH	4
2.3	ASSESSMENT OF AMENITY VALUE	5
2.4	RECOMMENDATION FOR TREE TREATMENT	6
3	RESULTS OF THE TREE SURVEYS	8
3.1	EXISTING CONDITION OF THE TREES	8
4	TREE PROTECTION PLAN	10
4.1	EXTENT OF PROJECT WORKS	10
4.2	MITIGATION MEASURES ON EXISTING TREES	10

<i>Annex A</i>	<i>Site Location Plan</i>	
<i>Annex B</i>	<i>Tree Location Plan</i>	
<i>Annex C</i>	<i>Tree Assessment Schedule</i>	
<i>Annex D</i>	<i>Photographic Record of Individual Trees</i>	
<i>Annex E</i>	<i>Method Statement for Tree Protection Works on Existing Trees To Be Retained</i>	
<i>Annex F</i>	<i>Method Statement for the Construction Works</i>	

GENERAL DESCRIPTION OF THE PROJECT

CLP Power Hong Kong Limited (CLP) is planning to enhance the security of power supply to Kat O Island (Crooked Island). At present, there is only one set of 11 kilovolts (kV) submarine cable circuit connecting between Liu Ko Ngam and Kat O. The existing 11kV submarine cable is, however, more than 30 years old and deteriorating. This will consequently limit the continuous supply of the electricity in the future to Kat O Island. CLP is therefore planning to replace the existing 11kV submarine cable connecting Liu Ko Ngam to Pak Sha Tau Tsui, Kat O, to ensure continuous electricity supply on the island (Figure 1.1 in Annex A).

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

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

Pursuant to Section 10 of the *Environmental Impact Assessment Ordinance* (EIAO), the Director of Environmental Protection has granted an environmental permit (EP No. EP-461/2013) to the Project Proponent (CLP Power Hong Kong Ltd) to construct and operate this designated project in accordance with the EP conditions. Under the Special Conditions 2.5 as stated in the EP, *a Tree Protection Plan detailing the location of existing trees within the Project boundary and measures for their proper protection shall be submitted for approval by the Director no later than one month before the commencement of site clearance works of the Project.*

ERM was commissioned by CLP Power (CLPP) in September 2014 to carry out a tree survey and prepare a Tree Protection Plan for the Project. The Tree Survey Area includes an area which extends 5 m from the excavation extent of the trench and pole area (Refer to Annex B Tree Location Plan for details).

This *Report* presents the detailed information concerning:

- Location of existing trees in relation to the proposed works;
- Method statement for tree protection works on existing trees to be retained;

The tree survey within the Tree Survey Area was carried out on 13 and 26 March 2015 and 25 September 2015. The location of each individual tree identified within the Tree Survey Area is shown on the Tree Location Plans (*Annex B*) and a detailed description of each tree is given in the Tree Assessment Schedule in *Annex C*. The photographic records of each existing individual trees are shown in *Annex D*. Method statement for tree protection works is provided in *Annex E*.

The purpose of this *Report* is to:

- Outline the approach and findings of the tree survey;
- Describe the extent of works required for the proposed works;
- Describe the type, extent and condition of the existing trees that will be affected by the proposed works;
- Outline the methods for tree protection measure on existing trees to be retained.

In preparation of this *Report*, reference has been made to the following technical circulars, practice notes and publications:

- *Forests and Countryside Ordinance (Cap. 96)*
- *Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586)*
- *Urban Council Publication – Champion Trees in Urban Hong Kong (1984)*
- *Standing Interdepartmental Landscape Technical Group (SILTECH) publication – Tree Planting and Maintenance in Hong Kong (1991)*
- *Agriculture, Fisheries and Conservation Department, Nature Conservation Practice Note No. 2 - Measurement of Diameter at Breast Height (DBH)*
- *Environment, Transport and Works Bureau Technical Circular (Works) No. 29/2004-Registration of Old and Valuable Trees (OVT), and Guidelines for their Preservation*

- *Agriculture, Fisheries and Conservation Department, Rare and Precious Plants of Hong Kong*
- *Development Bureau Technical Circular (Works) No. 07/2015 - Tree Preservation*

The tree survey was conducted with reference to guidelines from the *Development Bureau Technical Circular (Works) No. 10/2013 – Tree Preservation on Measurement of Diameter at Breast Height (DBH)*. A tree is defined having a DBH of 95 mm or greater at 1300 mm above the ground.

The attributes of trees were identified as follows.

- Botanical name;
- Location;
- Height;
- Crown spread;
- Trunk diameter and circumference (measured 1.3 m from the ground);
- Tree form;
- Health condition;
- Amenity value;
- Conflict or not with the Project;
- Proposed treatment; and,
- Brief description and remarks.

2.1

ASSESSMENT OF TREE FORM

The form of each tree was reviewed giving consideration to the canopy balance, branching structure and the expected form of the species. The assessment criteria used to evaluate the value of the tree form is summarised in *Table 2.1*.

Table 2.1 Assessment Criteria for Tree Form

Parameter	Category	Criteria
Tree form	Good	Trees with well-balanced form, upright, evenly branching, well-formed head and generally in accordance with the standard form for its species.
	Fair	Trees with general balanced form and compensated by loss of branches of leaning trunks.
	Poor	Trees with very unbalanced form, leaning, contorted, bending trunk, suffering from loss of major branches with general damage and growing close to adjacent trees.

2.2

ASSESSMENT OF HEALTH

The health of the trees was assessed as follows:

Foliage

- Colour and general appearance, and;
- Evidence of insect or fungal infection.

Branches

Evidence of:

- Dead or die-back or crossing branches;
- Heavy horizontal branches which may cause tree instability;
- Damaged, broken or cut branches;
- Insect and fungal infection on branches, and;
- Other uncharacteristic pattern of the branches.

Trunk

- Tightly forked or multi-ascending trunk that can be a weakness in trees;
- Cavities or internal/external rot;
- Sap seeping through the trunk;
- Fungi growing on the trunk; and
- Serious bark damage.

Based on the study team's assessment of these features, the health conditions are categorised according to the definitions presented in *Table 2.2*.

Table 2.2 *Assessment Criteria for Health*

Parameter	Category	Criteria
Health	Good	Tree with a low incidence of the less serious features (i.e. damage and infection) and a high chance of a fast recovery from such feature.
	Fair	Tree with a higher incidence of the less serious features (i.e. damage and infection) and a medium chance of recovery.
	Poor	A tree with more serious health features (i.e. damage and infection) and with low chance of recovery even with remedial measures or, the tree is dead.

2.3 ASSESSMENT OF AMENITY VALUE

The amenity value of all trees surveyed is stated as high, medium or low, taking into account each of the following criteria listed below. The HKSAR

Government's Guidelines 'Tree Planting and Maintenance in Hong Kong' ⁽¹⁾ was used as reference for the assessment.

- Size and maturity;
- Form;
- Health;
- Function (such as screening, shade, wind break, noise attenuation); and
- Creation of character or sense of place, by virtue as acting as a 'theme tree' or landmark e.g. Fung Shui and woodlands.

The categories of amenity value of a tree are presented in *Table 2.3*.

Table 2.3 *Assessment Criteria for Amenity Value*

Parameter	Category	Detail
Amenity value	High	Rare or protected species, fung shui significance or has high visual amenity with good health, condition and form.
	Medium	Rare or protected species, fung shui significance or high visual amenity with poor health condition and form. Common species with average health, medium condition and acceptable form.
	Low	Common species with poor health condition and poor form.

2.4 *RECOMMENDATION FOR TREE TREATMENT*

Based on the assessment of tree form, health, survival rate and amenity value one of the recommendations is made for each tree as follows:

Retain

Tree is in an unaffected area and is to be retained and protected during construction.

Transplant

Trees with overall good condition and high amenity value within the delineated work areas are recommended to be transplanted. Special consideration is necessary for relocation of the trees to a suitable location before the commencement of the construction work.

The criteria for the assessment of the suitability of transplantation are based on the following:

- The tree is a rare species or is protected by Hong Kong laws;
- Distinctiveness – trees with high amenity value and high local importance e.g. fung shui;

(1) Standing Interdepartmental Landscape Technical Group (SILTech) Publication (1991) *Tree Planting and Maintenance in Hong Kong*

- Condition of tree – tree with balanced form, good health and high amenity value;
- Maturity – younger trees have higher survival rate than the mature ones;
- Species characteristics – different tree species have different rates of survival after transplantation;
- Root ball feasibility – trees growing on loose rocky sub base/slope or adjacent to an important utility will not be considered; and
- Access – heavy machinery may be required to raise the tree. Steep slopes and rocky terrain may make the operation not feasible.

Fell

Trees of low health, amenity value, form, etc. in conflict with the proposed construction work will be felled. The guidance and criteria for the proposed felling of trees are:

- No irreplaceable rare tree species involved;
- Felling of trees would not cause a serious environmental impact;
- The location of the tree is in conflict with the development;
- A genuine development or traffic need to fell exists, which cannot be reasonably overcome;
- The tree is not unusually large or a fine example of its type; or
- The tree is in poor condition.

All trees to be felled will provide compensatory planting as far as practical and to be agreed with the relevant authorities of the Hong Kong Government.

RESULTS OF THE TREE SURVEYS

The tree surveys within the survey area were carried out in March and September 2015. The location of each individual tree within the Tree Survey Extent is shown in the Tree Location Plan in *Annex B* and a detailed description of each tree is given in the Tree Assessment Schedule in *Annex C*. The photographic records of individual trees are shown in *Annex D*.

3.1

EXISTING CONDITION OF THE TREES

According to the *Development Bureau Technical Circular (Works) No. 10/2013 – Tree Preservation*, a 'Tree' is defined as a plant with a trunk diameter ≥ 95 mm at a height of 1.3 m above ground level.

Liu Ko Ngam

Based on the above information, a total of 26 trees were surveyed within the survey area. The 26 nos. of living surveyed tree species were dominated by common species such as *Cerbera manghas*, *Hibiscus tiliaceus*, *Rhus succedanea* and *Schefflera heptaphylla*. In addition the understorey plant species included common species such as the herb *Miscanthus sinensis*, shrubs *Baeckea frutescens*, *Clerodendrum inerme*, *Phyllanthus cochinchinensis* and climbers *Millettia nitida*, *Caesalpinia crista*, *Cassytha filiformis*.

The tree condition survey revealed that the existing trees ranged from fair to poor form, good to poor health condition and medium to low amenity value.

Pak Sha Tau Tsui

Based on the above information, a total of 7 trees were surveyed within the survey area. The 7 nos. of living surveyed tree species were dominated by common species such as *Hibiscus tiliaceus*, *Pandanus tectorius* and *Thespesia populnea*. In addition the understorey plant species included common species such as the herb *Cymbopogon hamatulus*, shrubs *Sageretia thea*, *Clerodendrum inerme*, *Vitex rotundifolia* and climbers *Cassytha filiformis*, *Dalbergia benthamii* and *Zanthoxylum nitidum*.

The tree condition survey revealed that the existing trees ranged from fair to poor form, fair to poor health condition and medium to low amenity value.

None of the surveyed trees are registered as an Old and Valuable Tree (OVT) or are potentially registrable as old and valuable trees (Potentially Registrable Trees) based on the criteria of the *ETWB TCW No. 29/2004 Registration of Old and Valuable Trees, and Guidelines for their Preservation*.

The inventory of tree species is summarised in *Table 3.1* and *Table 3.2*.

Table 3.1 The Inventory of Tree Species (Liu Ko Ngam)

Species	Origin	Status*	Total Number of Individuals
<i>Acronychia pedunculata</i> 山油柑	Native tree	Common	1
<i>Aporosa dioica</i> 銀柴	Native tree	Common	3
<i>Cerbera manghas</i> 海芒果	Native tree	Common	7
<i>Elaeocarpus sylvestris</i> 山杜英	Native tree	Common	1
<i>Heritiera littoralis</i> 銀葉樹	Native tree	Common	1
<i>Hibiscus tiliaceus</i> 黃槿	Native tree	Common	2
<i>Mallotus paniculatus</i> 白楸	Native tree	Common	1
<i>Microcos nervosa</i> 布渣葉	Native tree	Common	1
<i>Rhus succedanea</i> 野漆樹	Native tree	Common	4
<i>Schefflera heptaphylla</i> 鴨腳木	Native tree	Common	4
<i>Scolopia chinensis</i> 刺柃	Native tree	Common	1
Total			26

Table 3.2 The Inventory of Tree Species (Pak Sha Tau Tsui)

Species	Origin	Status*	Total Number of Individuals
<i>Hibiscus tiliaceus</i> 黃槿	Native tree	Common	2
<i>Pandanus tectorius</i> 露兜樹	Native tree	Common	3
<i>Thespesia populnea</i> 恒春黃槿	Native tree	Common	2
Total			7

Note: * Status derived from AFCD 'Flora of Hong Kong' Vol 1, 2, 3 Edited by Hong Kong Herbarium & South China Botanical Garden. 2007 AND AFCD Checklist of Hong Kong Plants 2001' by Hong Kong Herbarium & South China Institute of Botany, Chinese Academy of Sciences

4 TREE PROTECTION PLAN

4.1 EXTENT OF PROJECT WORKS

Small scale construction works are required onshore at each of the cable landing sites, i.e. Liu Ko Ngam and Pak Sha Tau Tsui, for connecting the submarine cable with the existing overhead land cable systems. Excavation works will be required for laying the cable at the onshore area prior to it reaching the land cable system. Two pairs of new electrical wooden poles (i.e. four electrical poles in total), with stay wires to mount them to the ground, will be installed at Liu Ko Ngam and one new electrical wooden H-pole, with stay wires, will be installed at Pak Sha Tau Tsui, to facilitate the re-connection to the existing land cable systems.

The current routing for the proposed cable at the onshore area has been carefully considered. To minimise the impact on existing trees, the land cable system and electrical poles, including stay wires, are planned to be laid or installed at locations which will not be in conflict with the TPZ of the existing trees surveyed within the Tree Survey Extent. The works areas, including the excavation area and manoeuvring space required for workers, equipment and plants, have also been carefully reviewed and have been kept to a minimal area (approx. 750 mm width for the excavation area and 1500 mm clearance on either side of the trench as working areas and manoeuvring space). Only ground vegetation or shrubs (confirmed without any plant species of conservation interest) will be cleared to facilitate the necessary access, manoeuvring and construction areas for the Works.

Please also refer to *Annex F* for details regarding the method statements on construction works.

4.2 MITIGATION MEASURES ON EXISTING TREES

With careful consideration and planning of the cable routing at the landing areas at Liu Ko Ngam and Pak Sha Tau Tsui, all existing trees which are within and adjacent to the tree survey extent will be protected from the Works. Only vegetation or shrubs will be cleared to facilitate for the necessary access, manoeuvring and construction areas for the Works. Nevertheless, mitigation measures to prevent and minimise the impact caused as well as with the aim to protect and maintain the existing trees to be retained at the two landing sites, including tree protection measures, tree maintenance works and tree inspections, will be provided during the Works period.

A summary of these key mitigation measures is listed below:

- All trees to be retained and protected by a protective fencing, or similar protection subject to the actual site conditions, during the Works period. Prior to the Works, all trees to be retained will be

secured and tied properly to the temporary support. The tree trunk guyed above ground will be wrapped with pads of hessian or rubber to prevent the tie from chafing the trunk or branches;

- Inspection of the tree protection works will be conducted before, during and after completion of the Works;
- Tree maintenance works will be carried out during the Works period including watering and maintenance of the tree protection measures;
- All excavation works will be carried out outside the TPZ using only hand tools such as hoe and spade, except T13 at Liu Ko Ngam and T12 at Pak Sha Tau Tsui. For both these trees, their TPZs extend close to High Water Mark (HWM) and the excavation works unavoidably route above the HWM therefore passing along the the edge of the TPZs of T13 and T12. In case tree roots are cut or exposed during the excavation works, they will be prevented from drying out during excavation by:
 - wrapping the tap roots, sinker roots, support roots, and roots with diameter exceeding 50 mm with wet hessian, straw or other porous, absorbent fabric once they are exposed;
 - hanging thick wet hessian or other porous, absorbent fabric from top of the cut surface over the exposed roots and soil immediately after root cutting;
 - misting the hessian or fabric at a frequency that keeps the roots and the soil at the cut surface moist all the time;
 - before backfilling, roots will be cut cleanly back to living tissues;
 - excavations will be backfilled with original site soil mix to a level not higher than the original soil level at the root collar.

For further details regarding the methodologies for tree protection works on the existing trees to be retained, please also refer to the method statement enclosed in *Annex E*.

Annex A

Site Location Plan

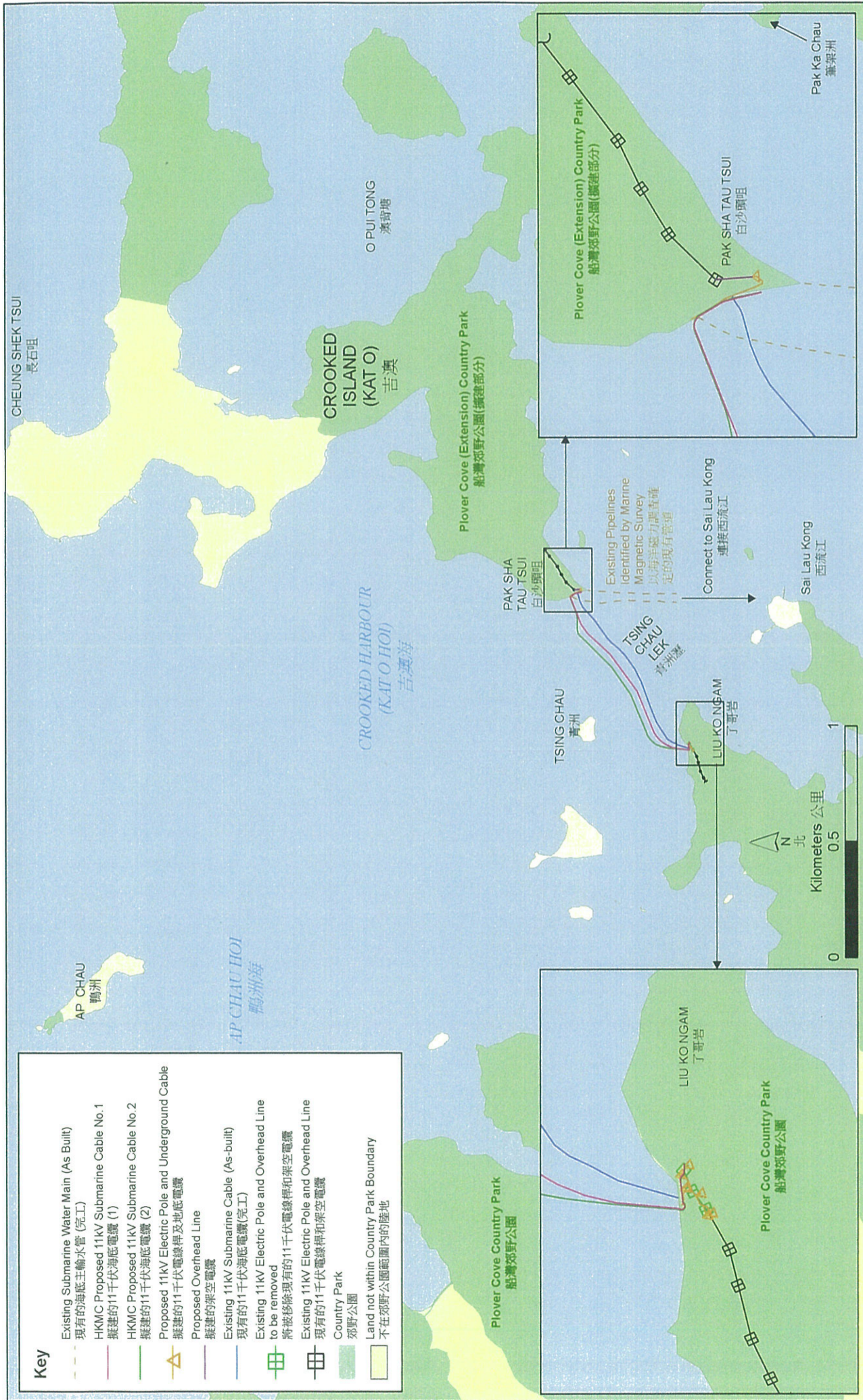
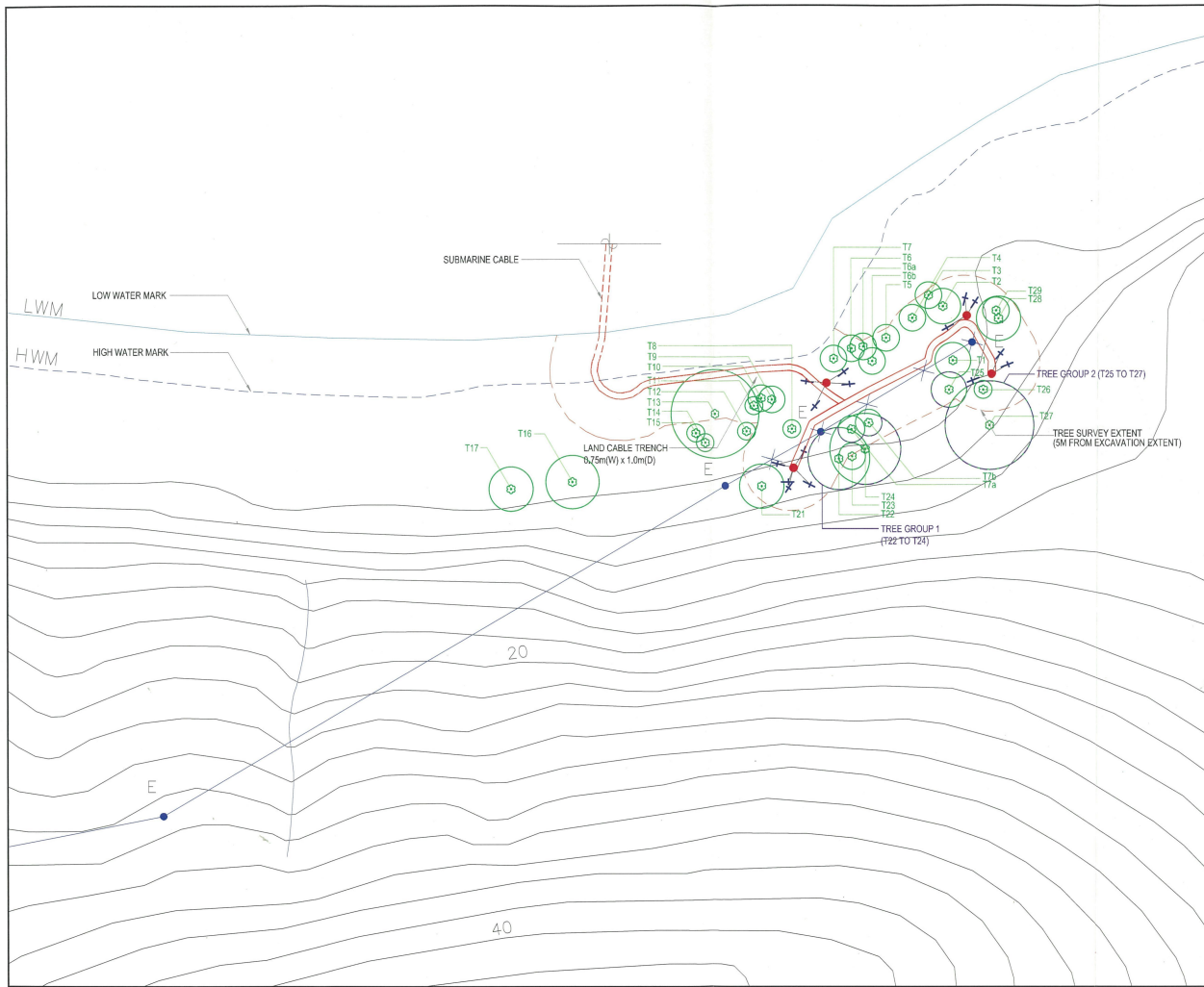


Figure 1.1
圖1.1
 Alignment of the Proposed 11kV Submarine Cable Circuit from Liu Ko Ngam to Pak Sha Tau Tsui
 了哥岩至白沙頭咀的擬建11kV海底電纜路線

Annex B

Tree Location Plan



LEGEND:

- SURVEYED TREE
- EXISTING OVERHEAD LINE & POLE
- OVERHEAD LINE & POLE TO BE DISMANTLED
- TREE GROUP
- NEW SINGLE WOODEN ELECTRICAL POLE
- STAY WIRE
- LAND CABLE TRENCH
- TREE SURVEY EXTENT (5M FROM EXCAVATION EXTENT)
- SUBMARINE CABLE

SUFFIX	DESCRIPTION	DRAWN	CHECKED	DATE

REVISION

CLIENT / ARCHITECT / MAIN CONTRACTOR

CLP 中電

PROJECT NAME

PROPOSED 11KV SUBMARINE CABLES REPLACEMENT CONNECTING LIU KO NGAM AND PAK SHA TAU TSUI AT KAT O

DRAWING TITLE

TREE SURVEY PLAN (Liu Ko Ngam)

DRAWING INFORMATION

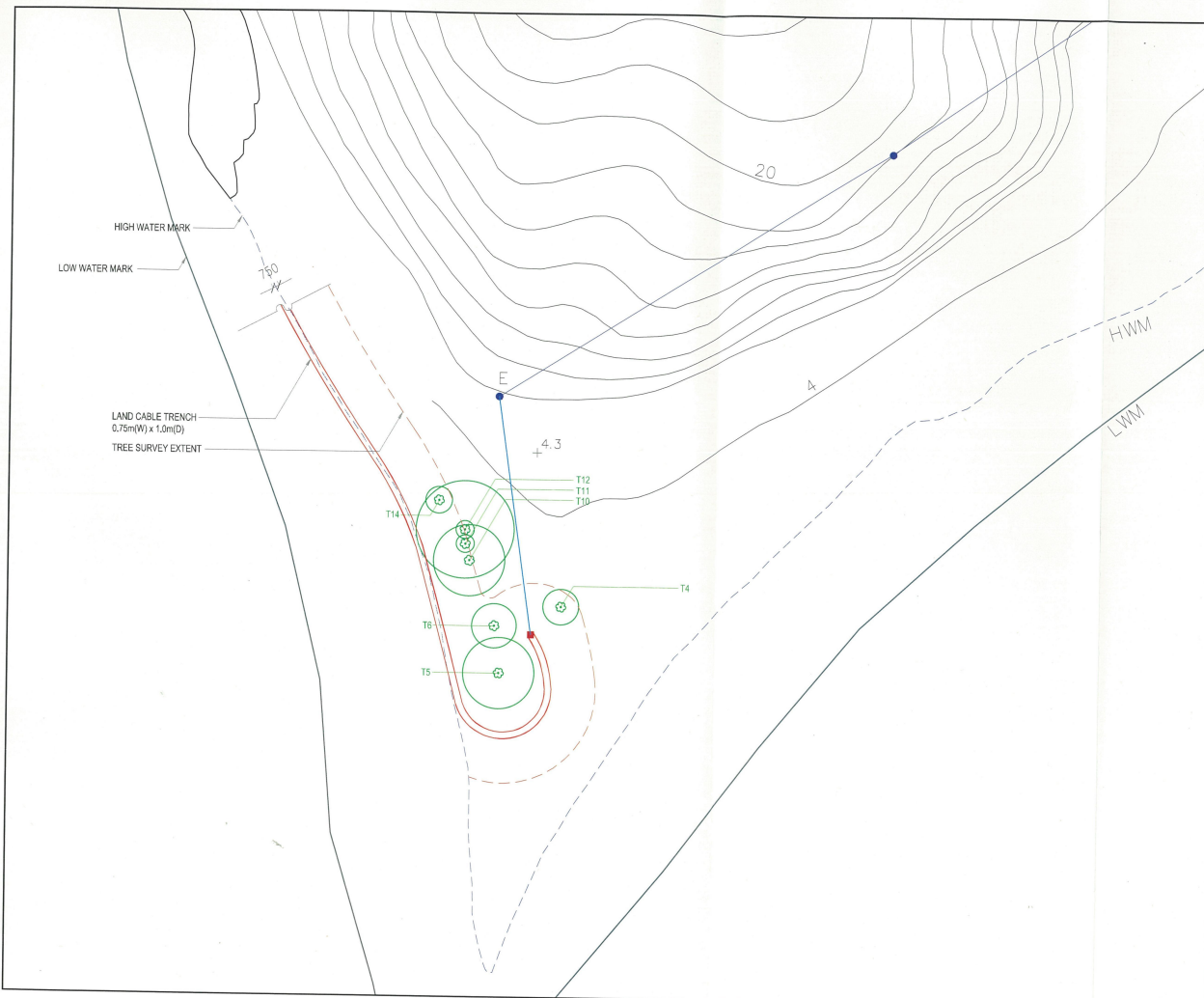
PROJECT NUMBER	0259952
DRAWING NUMBER	TS01.1
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FILE NAME	0259952-TS01.DWG
DATE	OCT 2015
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REVIEWED BY	

SCALE

1 : 400 (A3)

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- LEGEND:**
- SURVEYED TREE
 - EXISTING OVERHEAD LINE & POLE
 - NEW OVERHEAD LINE
 - NEW ELECTRICAL WOODEN H-POLE
 - LAND CABLE TRENCH
 - TREE SURVEY EXTENT (5M FROM EXCAVATION EXTENT)
 - SUBMARINE CABLE

SUFFIX	DESCRIPTION	DRAWN	CHECKED	DATE
REVISION				

CLIENT / ARCHITECT / MAIN CONTRACTOR:



PROJECT NAME

PROPOSED 11KV SUBMARINE CABLES REPLACEMENT CONNECTING LIU KO NGAM AND PAK SHA TAU TSUI AT KAT O

DRAWING TITLE

TREE SURVEY PLAN
(Pak Sha Tau Tsui)

DRAWING INFORMATION

PROJECT NUMBER	0259952		
DRAWING NUMBER	TS01.2	REVISION	-
FILE NAME	0259952-TS01.DWG	DATE	OCT 2015
DESIGN/DRAWN BY		REVIEWED BY	

SCALE
 1 : 400 (A3)

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Annex C

Tree Assessment Schedule

Tree Assessment Schedule at

Address: Liu Ko Ngam and Pak Sha Tau Tsui at Kat O

Project Title: Replacement of the Existing 11kV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O

Prepared by Lee Hin Yung, ISA Certified Arborist in October 2015

Field Survey was conducted on 13th and 26th March 2015 and 25th September 2015

To be read in conjunction with drawing nos. 0259952_TS01.1

Liu Ko Ngam											
Tree ID No.	Species		Tree Size			Form (Good/ Fair/ Poor)	Health (Good/ Fair/ Poor)	Amenity value (High / Med / Low)	Justification	Tree Treatment (Retain / Transplant / Fell)	Remarks (Structural defects or symptoms of declining health which may pose danger to the public if the tree falls, as well as special features)
	Scientific Name	Chinese Name	Height (m)	Spread (m)	Diameter at Breast Height (mm)						
T1	<i>Aporosa dioica</i>	銀柴	5.0	3.5	205	F	F	F	1, 2	Retain	Slight leaning, unbalanced canopy with climbers attached.
T2	<i>Cerbera manghas</i>	海芒果	6.0	4.0	257	F	F	F	1, 2	Retain	Slight leaning, heavily covered by shrubs and climbers with an emerging canopy, spreading but slightly unbalanced canopy.
T3	<i>Scolopia chinensis</i>	制株	3.0	3.0	126	F	F	F	1, 2	Retain	Y-shape codominant trunk, spreading but slight unbalanced canopy.
T4	<i>Heritiera littoralis</i>	銀葉樹	8.0	8.0	125	F	F	F	1, 2	Retain	Codominant trunk.
T5	<i>Cerbera manghas</i>	海芒果	4.0	4.0	130	P	F	F	1, 2	Retain	Heavily leaning and unbalanced canopy.
T6	<i>Cerbera manghas</i>	海芒果	6.0	4.0	150	P	F	F	1, 2	Retain	Leaning, curving branch with self rectification and unbalanced canopy intersects with T6a.
T6a	<i>Hibiscus tiliaceus</i>	黃槿	7.0	7.0	194	P	F	F	1, 2	Retain	Heavily leaning, codominant V-shape branches with self rectification and unbalanced canopy intersects with T6a.
T6b	<i>Rhus succedanea</i>	野漆樹	6.0	4.0	147	F	F	F	1, 2	Retain	Low foliage density, heavily covered by shrub and climbers and broken branches.

Tree Assessment Schedule at

Address: Liu Ko Ngam and Pak Sha Tau Tsui at Kat O
 Project Title: Replacement of the Existing 11kV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O
 Prepared by Lee Hin Yung, ISA Certified Arborist in October 2015
 Field Survey was conducted on 13th and 26th March 2015 and 26th September 2015
 To be read in conjunction with drawing nos. 0258952_TS01.1

Liu Ko Ngam												
Tree ID No.	Species		Tree Size			Form (Good/ Fair/ Poor)	Health (Good/ Fair/ Poor)	Amenity value (High / Med / Low)	Justification	Tree Treatment (Retain / Transplant / Fell)	Remarks (Structural defects or symptoms of declining health which may pose danger to the public if the tree falls, as well as special features)	
	Scientific Name	Chinese Name	Height (m)	Spread (m)	Diameter at Breast Height (mm)							
T7	<i>Cerbera manghas</i>	海芒果	6.0	5.0	160	F	F	F	1, 2	Retain	Y-shape trunk with balanced canopy.	
T7a	<i>Schefflera heptaphylla</i>	鴨腳木	8.0	5.0	230	F	F	F	1, 2	Retain	Trunk with multiple dominant main branches, heavily covered with shrubs and climbers with an emerging canopy and canopy intersects with T7b.	
T7b	<i>Elaeocarpus sylvestris</i>	山杜英	8.0	6.0	193	F	F	F	1, 2	Retain	Trunk with multiple dominant main branches, heavily covered with shrubs and climbers and canopy intersects with T7a.	
T8	<i>Rhus succedanea</i>	野漆樹	5.0	2.0	95	P	F	F	1, 2	Retain	S-shape trunk with self rectification, low foliage density and slightly unbalanced canopy.	
T9	<i>Cerbera manghas</i>	海芒果	4.0	1.0	165	F	F	F	1, 2	Retain	Y-shape trunk with one of the branch wilted and broken and canopy intersects with T10.	
T10	<i>Cerbera manghas</i>	海芒果	7.0	4.0	319	F	G	F	1, 2	Retain	Codominant V-shape trunk, leaning in one of the trunk with self rectification, normal foliage density and fruiting.	
T11	<i>Rhus succedanea</i>	野漆樹	6.0	1.5	157	F	F	F	1, 2	Retain	Codominant Y-shape branches, unbalanced canopy and low foliage density.	
T12	<i>Cerbera manghas</i>	海芒果	4.0	2.0	195	P	P	L	1, 2	Retain	Main trunk broken, sprouts, low foliage density and canopy covered by climbers.	
T13	<i>Hibiscus tiliaceus</i>	黃槿	4.0	8.0	307	P	P	L	1, 2	Retain	Unbalanced canopy, heavily leaning, multi-trunk found toppled and growing horizontally with 90 degree self rectification.	
T21	<i>Acronychia pedunculata</i>	山油柑	7.0	5.0	180	F	P	L	1, 2	Retain	Y-shape trunk and branches, heavily covered by climbers with an emerging canopy.	
T22 (Tree Group 1)	<i>Schefflera heptaphylla</i>	鴨腳木	12.0	7.0	250	F	F	F	1, 2	Retain	Not accessible due to dense understory vegetation, slightly unbalanced canopy, broken branch, normal foliage density and colour.	

Tree Assessment Schedule at

Address: Liu Ko Ngam and Pak Sha Tau Tsui at Kat O
 Project Title: Replacement of the Existing 11kV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O
 Prepared by Lee Hin Yung, ISA Certified Arborist in October 2015
 Field Survey was conducted on 13th and 26th March 2015 and 29th September 2015
 To be read in conjunction with drawing nos. 0259952_TS01.1

Liu Ko Ngam											
Tree ID No.	Species		Tree Size			Form (Good/ Fair/ Poor)	Health (Good/ Fair/ Poor)	Amenity value (High / Med / Low)	Justification	Tree Treatment (Retain / Transplant / Fell)	Remarks (Structural defects or symptoms of declining health which may pose danger to the public if the tree falls, as well as special features)
	Scientific Name	Chinese Name	Height (m)	Spread (m)	Diameter at Breast Height (mm)						
T23 (Tree Group 1)	<i>Aporosa dioica</i>	銀柴	6.0	3.0	100	F	F	F	1, 2	Retain	Not accessible due to dense understory vegetation, slightly unbalanced canopy, normal foliage density and colour.
T24 (Tree Group 1)	<i>Schefflera heptaphylla</i>	鴨腳木	14.0	8.0	400	F	F	F	1, 2	Retain	Not accessible due to dense understory vegetation, balance emerging canopy, normal foliage density and colour.
T25 (Tree Group 2)	<i>Mallotus paniculatus</i>	白楸	7.0	4.0	100	F	F	F	1, 2	Retain	Not accessible due to dense understory vegetation, slightly unbalanced canopy, normal foliage density and colour.
T26 (Tree Group 2)	<i>Aporosa dioica</i>	銀柴	5.0	2	80	F	F	F	1, 2	Retain	Not accessible due to dense understory vegetation, slightly unbalanced canopy, some broken branches and covered with climbers.
T27 (Tree Group 2)	<i>Schefflera heptaphylla</i>	鴨腳木	12.0	10.0	400	F	F	F	1, 2	Retain	Not accessible due to dense understory vegetation, slightly unbalanced canopy, normal foliage density and colour.
T28	<i>Microcos nervosa</i>	布渣葉	5.0	5.0	100	P	P	L	1, 2	Retain	Not accessible due to dense understory vegetation, slightly unbalanced canopy, small amount of yellow and bitten leaves and covered by climbers.
T29	<i>Rhus succedanea</i>	野漆樹	3.5	3.0	130	F	F	F	1, 2	Retain	Not accessible due to dense understory vegetation, slightly unbalanced canopy and low foliage density.

Summary of Proposed Treatment to Existing Trees	
to be retained (nos.)	26
to be transplanted (nos.)	0
to be felled (nos.)	0
Total number of existing trees surveyed	26

1- Not in conflict with proposed works

2- Tree Protection Zone (TPZ) will be established (using protected protective fencing, or similar protection subject to the actual site conditions) and works will be carried out outside the TPZ

Tree Assessment Schedule at

Address: Liu Ko Ngam and Pak Sha Tau Tsui at Kat O
 Project Title: Replacement of the Existing 11kV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O
 Prepared by Lee Hin Yung, ISA Certified Arborist in October 2015
 Field Survey was conducted on 13th and 26th March 2015 and 25th September 2015
 To be read in conjunction with drawing nos. 0259952_TS01.2

Pak Sha Tau Tsui											
Tree ID No.	Species		Tree Size			Form	Health	Amenity value	Justification	Tree Treatment	Remarks (Structural defects or symptoms of declining health which may pose danger to the public if the tree falls, as well as special features)
	Scientific Name	Chinese Name	Height (m)	Spread (m)	Diameter at Breast Height (mm)	(Good/ Fair/ Poor)	(Good/ Fair/ Poor)	(High / Med / Low)		(Retain / Transplant / Fell)	
T4	<i>Hibiscus tiliaceus</i>	黃槿	5.0	9.0	498	P	F	L	1, 2	Retain	Growing in a toppling form, multiple branches and sprouts.
T5	<i>Thespesia populnea</i>	恒春黃槿	6.0	8.0	345	F	F	L	1, 2	Retain	Multiple dominant trunks and branches, spreading and balanced canopy, broken twigs, fruiting and minor yellow foliage.
T6	<i>Thespesia populnea</i>	恒春黃槿	6.0	5.0	229	F	F	L	1, 2	Retain	Multi-branches, cracks on trunk, leaning with self rectification, unbalanced canopy, broken twigs, fruiting and minor yellow foliage.
T10	<i>Hibiscus tiliaceus</i>	黃槿	4.0	8.0	340	F	F	M	1, 2	Retain	Balanced canopy, normal foliage density and colour.
T11	<i>Pandanus tectorius</i>	露兜樹	4.0	2.0	100	P	F	L	1, 2	Retain	Heavily leaning with broken branches.
T12	<i>Pandanus tectorius</i>	露兜樹	4.0	2.0	130	P	P	L	1, 2	Retain	Heavily leaning, broken branches and diebacks.
T14	<i>Pandanus tectorius</i>	露兜樹	4.0	3.0	175	P	F	L	1, 2	Retain	Leaning with broken branches.

Summary of Proposed Treatment to Existing Trees	
to be retained (nos.)	7
to be transplanted (nos.)	0
to be felled (nos.)	0
Total number of existing trees surveyed	7

1- Not in conflict with proposed works

2-Tree Protection Zone (TPZ) will be established (using protected protective fencing, or similar protection subject to the actual site conditions) and works will be carried out outside the TPZ

Annex D

Photographic Record of
Individual Trees

Lui Ko Ngam



Tree No. T1: *Aporosa dioica* 銀柴
 Retain Transplant Fell Dead



Tree No. T2: *Cerbera manghas* 海芒果
 Retain Transplant Fell Dead



Tree No. T3: *Scolopia chinensis* 刺柃
 Retain Transplant Fell Dead



Tree No. T4: *Heritiera littoralis* 銀葉樹
 Retain Transplant Fell Dead



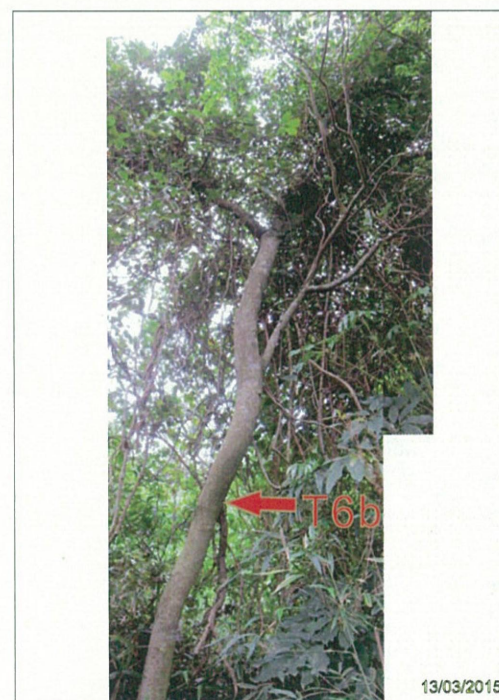
Tree No. T5: *Cerbera manghas* 海芒果
 Retain Transplant Fell Dead



Tree No. T6: *Cerbera manghas* 海芒果
 Retain Transplant Fell Dead



Tree No. T6a: *Hibiscus tiliaceus* 黃槿
 Retain Transplant Fell Dead



Tree No. T6b: *Rhus succedanea* 野漆樹
 Retain Transplant Fell Dead



Tree No. T7: *Cerbera manghas* 海芒果
 Retain Transplant Fell Dead



Tree No. T7a: *Schefflera heptaphylla* 鴨腳木
 Retain Transplant Fell Dead



Tree No. T7b: *Elaeocarpus sylvestris* 山杜英
 Retain Transplant Fell Dead



Tree No. T8: *Rhus succedanea* 野漆樹
 Retain Transplant Fell Dead



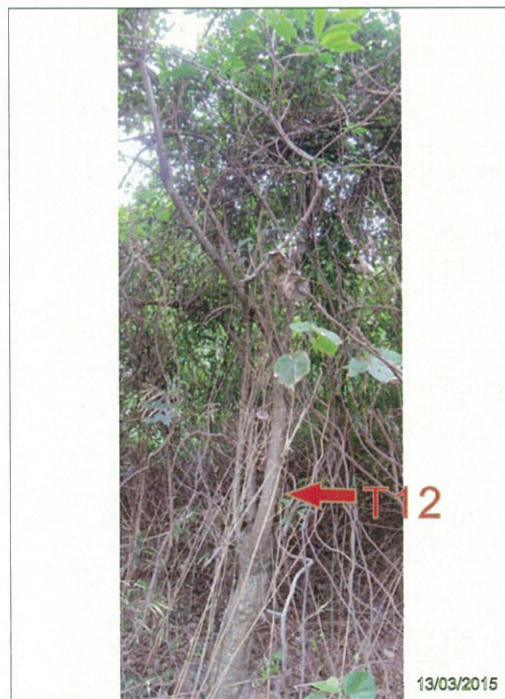
Tree No. T9: *Cerbera manghas* 海芒果
 Retain Transplant Fell Dead



Tree No. T10: *Cerbera manghas* 海芒果
 Retain Transplant Fell Dead



Tree No. T11: *Rhus succedanea* 野漆樹
 Retain Transplant Fell Dead



Tree No. T12: *Cerbera manghas* 海芒果
 Retain Transplant Fell Dead



13/03/2015

Tree No. T13: *Hibiscus tiliaceus* 黃薔
 Retain Transplant Fell Dead



13/03/2015

Tree No. T21: *Acronychia pedunculata* 山油柑
 Retain Transplant Fell Dead



13/03/2015

Tree No. T22: *Schefflera heptaphylla* 鴨腳木 (Tree Group 1)
 Retain Transplant Fell Dead



13/03/2015

Tree No. T23: *Aporosa dioica* 銀樂 (Tree Group 1)
 Retain Transplant Fell Dead

Drawing TITLE:
Photographic Records of Existing Individual Trees

Project No: 0258852
 Photo Sheet No: 006
 Revision No: -

0258852a-006_v1.cdr

Tree Protection Plan

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

Landscape Architecture & Urban Design
 15/F, Bankapark House
 25 HASTINGS ROAD
 QUERRY BAY, HONG KONG

October 2015





Tree No. T24: *Schefflera heptaphylla* 鴨腳木 (Tree Group 1)
 Retain Transplant Fell Dead



Tree No. T25: *Mallotus paniculatus* 白楸 (Tree Group 2)
 Retain Transplant Fell Dead



Tree No. T26: *Aporosa dioica* 銀柴 (Tree Group 2)
 Retain Transplant Fell Dead



Tree No. T27: *Schefflera heptaphylla* 鴨腳木 (Tree Group 2)
 Retain Transplant Fell Dead

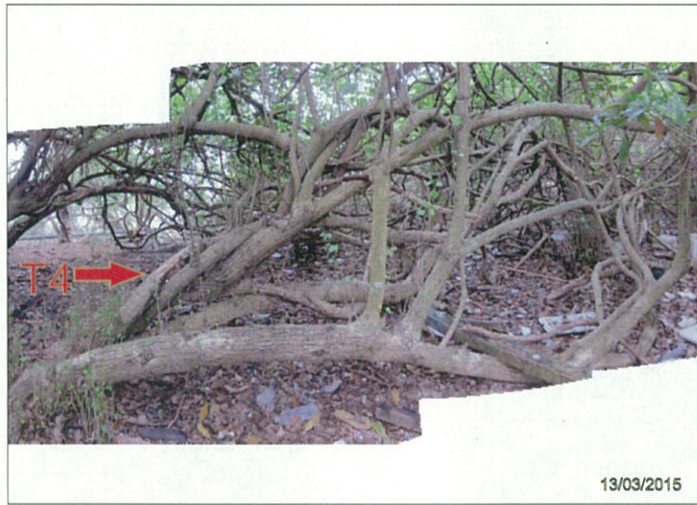


Tree No. T28: *Microcos nervosa* 布渣菜
 Retain Transplant Fell Dead



Tree No. T29: *Rhus succedanea* 野漆樹
 Retain Transplant Fell Dead

Pak Sha Tau Tsui



Tree No. T4: *Hibiscus tiliaceus* 黃槿
 Retain Transplant Fell Dead



Tree No. T5: *Thespesia populnea* 恒春黃槿
 Retain Transplant Fell Dead



Tree No. T6: *Thespesia populnea* 恒春黃槿
 Retain Transplant Fell Dead

Drawing TITLE:
Photographic Records of Existing Individual Trees
 Project No 0268852 Photo Sheet No 008 Revision No -

Tree Protection Plan
 Proposed 11kV Submarine Cables Replacement Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O
 Landscape Architecture & Urban Design
 15/F, Bauhinia House
 25 Westlands Road
 Quarry Bay, Hong Kong
 October 2015





Tree No. T10: *Hibiscus tiliaceus* 黃槿
 Retain Transplant Fell Dead



Tree No. T11: *Pandanus tectorius* 露兜樹
 Retain Transplant Fell Dead



Tree No. T12: *Pandanus tectorius* 露兜樹
 Retain Transplant Fell Dead



Tree No. T14: *Pandanus tectorius* 露兜樹
 Retain Transplant Fell Dead

Annex E

Method Statement for Tree
Protection Works on
Existing Trees To Be
Retained

METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O

1 Foreword

1.1 In order to protect the existing trees to be retained, the Project Proponent will ensure for the whole duration of the Works, the following:

- a) No unnecessary intrusion into the existing woodland is made;
- b) Access to sites will be by sea to the landing sites and no access routes will be allowed to pass through existing woodland;
- c) The extents of site clearance are located at area within 5 m offset from the Works and are limited to areas which are with growth of shrubs/undercover vegetation only. No existing trees will be removed.
- d) No nails or other fixing shall be driven into trees;
- e) No fencing or signs shall be attached to trees;
- f) No materials or machinery shall be stored under or against trees;
- g) No workshop, canteens, or similar shall be installed beneath trees, nor shall equipment maintenance etc. be carried out under trees; and
- h) No trees shall be used as anchors for ropes or chains used in guying, pulling and the like.
- i) Protection by fencing or similar protection subject to the actual site conditions; and
- j) Secure tree from tipping over with cable throughout the Works period.

2 Scope of Work

The Project Proponent will carry out tree protection work on trees to be retained within the sites as specified in this Tree Protection Plan.

Contractor will carry out general maintenance works including watering and maintenance of the tree protection works to the retained trees on site during the Works period.

The Works period is the period during which construction works will be carried out at the on-shore areas at Liu Ko Ngam and Pak Sha Tau Tsui.

3 Commencement

The Project Proponent will commence the Works after the Tree Protection Plan is agreed and approved by relevant government department.

METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O

4 Inspections

Inspections will be carried out at various stages as set out below:

- 1) Commencement of tree protection works
- 2) Weekly inspection on the tree protection works throughout the Works.
- 3) Completion of the Works.

5 Protection of Existing Vegetation

The Project Proponent will exercise all care during the course of Works to protect the existing vegetation within/ adjacent to the Works area from being damaged.

6 Securing and Staking retained Trees

Prior to the Works, the trees to be retained should be secured and tied properly to the temporary support. Wrap the area of trunk guyed above ground with pads of hessian or rubber to prevent the tie from chafing the trunk or branches.

For smaller trees with DBH below 300 mm, secure the retained tree with stakes and ties.

For larger trees with DBH above 300 mm, Contractor will submit the method of securing and staking to the Engineer for approval prior to commencement of Works.

7 Protection during Construction Work

All trees to be retained and protected as shown in the Tree Survey Plan will be protected during the Works period by temporary fencing, or similar protection subject to the actual site conditions. The tree trunk will be wrapped and protected to prevent mechanical damage during the Works. Temporary protective fence will be erected with detail as shown in Drawing No. TP1 (total 3 sheets) or similar protection provided subject to the actual site conditions.

Protective fencing, or similar protection subject to the actual site conditions, will be erected before the works commence. Protective fence should be erected beyond the crown spread or the designed protection zone (within dripline) of all retained trees (typical fencing is shown in Drawing No. TP1. This restricted area is known as the Tree Protection Zone (TPZ). Access into the TPZ will be restricted only to workers directly involved in tree work. No construction machinery, tools, equipment or materials will breach the TPZ. No heat or fume will drift into the TPZ.

This protection to the trees will only be removed after completion of the Works when instructed by the Project Proponent.

METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O

8 Protection of the Works from Weather

- 9 The Project Proponent will protect the Works from damage by inclement weather, including providing sufficient staff, adequate plant and any other requirements necessary to ensure such protection during typhoon and heavy rainstorms. **Work during Inclement Water**

The Project Proponent will avoid execution of Works during periods of inclement weather. His contractor will take all necessary precautions to protect the Works and remedy the damage of typhoon, monsoon, heavy rainfall, draught, desiccating winds and strong sun, including watering and securing of the plants.

10 Water for the Works

Every attempt will be made to have fresh water readily available for the irrigation provision throughout the Works period.

11 Protection of Existing Vegetation and Woodland

The Project Proponent will take every reasonable precaution possible to preserve all existing vegetation and woodland not affected by the Works. No tree within or adjacent to the Works extent will be cut down without the prior approval of the relevant government department.

12 Pruning of Existing Trees Under Protection

All trees listed for retention within the sites will be protected. Should any tree surgery/ pruning work be required, this should be approved by relevant government department and should be carried out by qualified specialist arborist.

Protected tree damage by unavoidable natural cause with imminent safety hazards will be reported to relevant government department. Remedial tree surgery pruning will be carried out when necessary with approval from relevant government department. All remedial tree surgery work will be carried out in accordance with good horticultural practice and in accordance with British Standard 3998: 1989 - Recommendations for tree work, or Australian Standard for Pruning Amenity Trees (AS4373-2007) and will be directed and supervised by a qualified specialist arborist. Photographs will be taken before/ during/ after the pruning works.

Safety precaution will be taken to protect those engaged in tree pruning operations as well as people and property in the vicinity. Pruning will be done using sharp, clean implements to give a single flat, sloping face. Ragged edges of bark or wood are to be trimmed with a sharp knife. Large branches will be removed in stages beginning with removal of the main weight of the branch with the final cut as close to the main stem as possible without damaging the bark and leaving the branch collar intact. In the case of branch removal, the final cut should be aligned with the branch collar and the mid-point of the crotch. All cuts will be made to avoid splintering or tearing of bark which would catch water and encourage rot. Branches less than 15 mm diameter may be cut with sharp secateurs. Any material pruned from trees will be collected and removed to

METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O

an approved tip to be provided by the Contractor. Any cuts or wounds over 25 mm diameter will be painted with an approved fungicidal sealant.

Cracks and cavities with rotten wood will be cut back to healthy tissue. If necessary, a cavity that may accumulate water could be drained by drilling a small hole of 5 mm diameter into its bottom at an angle of about 45 degrees taking as far as possible the shortest path and pointing downwards. If necessary, cracks would be secured by rod bracing.

13 General Excavation Near Existing Trees

No excavation will be done within the Tree Protection Zone (TPZ) which will be within the dripline of each existing tree or ten times the size of its DBH, whichever is more practical, with the possible exception of two trees whose TPZs extend close to High Water Mark (HWM) and where the excavation works unavoidably route above the HWM therefore passing along the edge of these TPZs. A protection fence, or similar protection subject to the actual site conditions, will be erected enclosing the TPZ.

Where excavation is required near existing trees for construction of the Works, the following precautions will be taken to protect the roots:

- a) Roots exposed during excavation shall be wrapped with wet straw or hessian during construction of the Works. Cutting of the roots shall be kept to a minimum.
- b) Before backfilling, roots shall be cut cleanly back to living tissue.
- c) Excavation shall be backfilled with original site topsoil to a level not higher than the original soil level at the root collar.

14 Excavation for Services Near Existing Trees

Trench excavation for any underground services will be kept outside the TPZ. Particular care will be taken to protect large roots exposed in trench excavations. Following installation of the services, severed roots will be cut back cleanly to living tissue. Trenches will be backfilled with the original soil excavated afterwards.

The Project Proponent will take the following precautions when carrying out excavation that involves cutting of the roots of the preserved trees:

- a) excavation shall be carried out using only hand tools such as hoe and spade, but not mechanical diggers or bulldozers in any circumstances;
- b) whenever roots are encountered and before root cutting is carried out, soil shall be carefully forked away from the roots using hand tools up to the edge along which root cutting is required;

METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O

- c) root cutting shall be carried out carefully using sterilised hand-held pruning tools, and roots greater than 25 mm in diameter shall be pruned carefully so as not to result in shattered and frayed roots;
- d) any roots damaged during excavation shall be cut back cleanly with sharp tools to undamaged tissue;
- e) all cut and exposed roots shall be prevented from drying out during excavation by adopting the following measures until backfilling:
- f) wrap the tap roots, sinker roots, support roots, and roots with diameter exceeding 50 mm, which shall not be cut, with wet hessian, straw or other porous, absorbent fabric once they are exposed;
- g) hang thick wet hessian or other porous, absorbent fabric from top of the cut surface over the exposed roots and soil immediately after root cutting; and
- h) mist the hessian or fabric at a frequency that keeps the roots and the soil at the cut surface moist all the time.
- i) the hessian, straw or other porous, absorbent fabric shall be removed immediately before backfilling; and
- j) excavations shall be backfilled with original site soil mix to a level not higher than the original soil level at the root collar.

15 Formation Work Near Existing Trees

Where formation work is required near existing trees, the following precautions will be taken to protect the trees:

- a) The fill material and topsoil shall not be graded to a level higher than the original soil level around the existing trees to be retained, so preventing asphyxiation damage to the roots of the tree.
- b) All bladed and heavy machinery shall not be used within the cordoned zone of the trunks of all existing trees to be retained so preventing damage to the roots and crown of the tree.

16 Plants Damaged by Natural Cause

The Project Proponent will not be responsible for replacing dead or damaged trees resulting from natural cause/ inclement weather during the construction/ protection period provided that the incident should be reported to the police or relevant government authorities with proper record.

17 Maintenance of protected trees

All maintenance works on the protected trees or retained trees will be carried out throughout the Works period. The maintenance works will include measures to retain

METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O

the original condition of the tree prior to the commencement of the Works, including the followings:

- a) Watering
- b) Immediately after any surgery that might be carried out, the base of all trees shall be well watered, using enough water to thoroughly soak the rootball to Field Capacity. Plants should be well watered in evenings and early morning only. Water in Dry Season

Watering shall be carried out daily during the dry season, generally September to April.

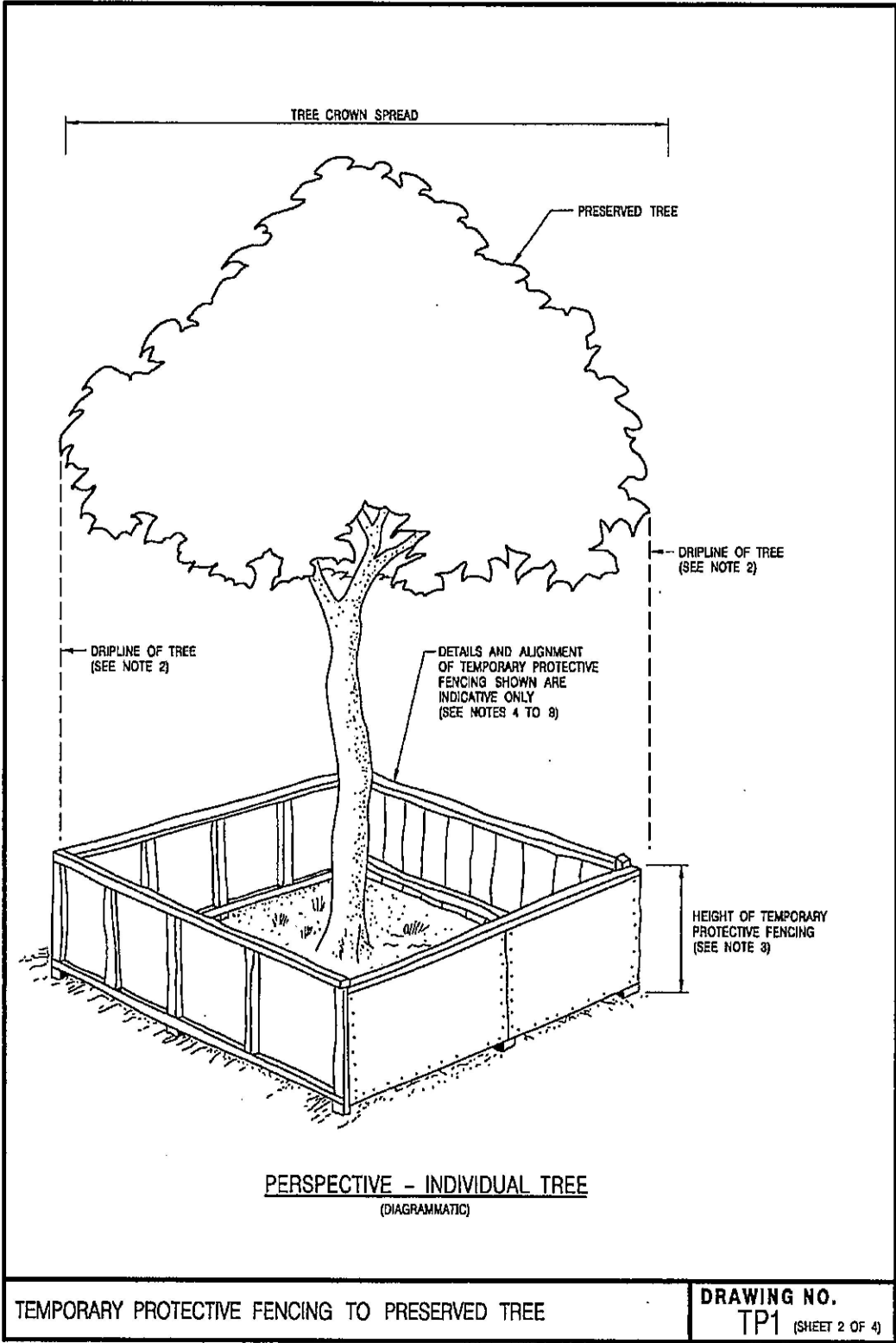
- c) Watering in Wet Season

Watering shall be carried out as required during the wet season.

- d) Firming up

Firming up of plants and tree stakes shall be undertaken from time to time during the period and particularly after heavy rain and/or wind.

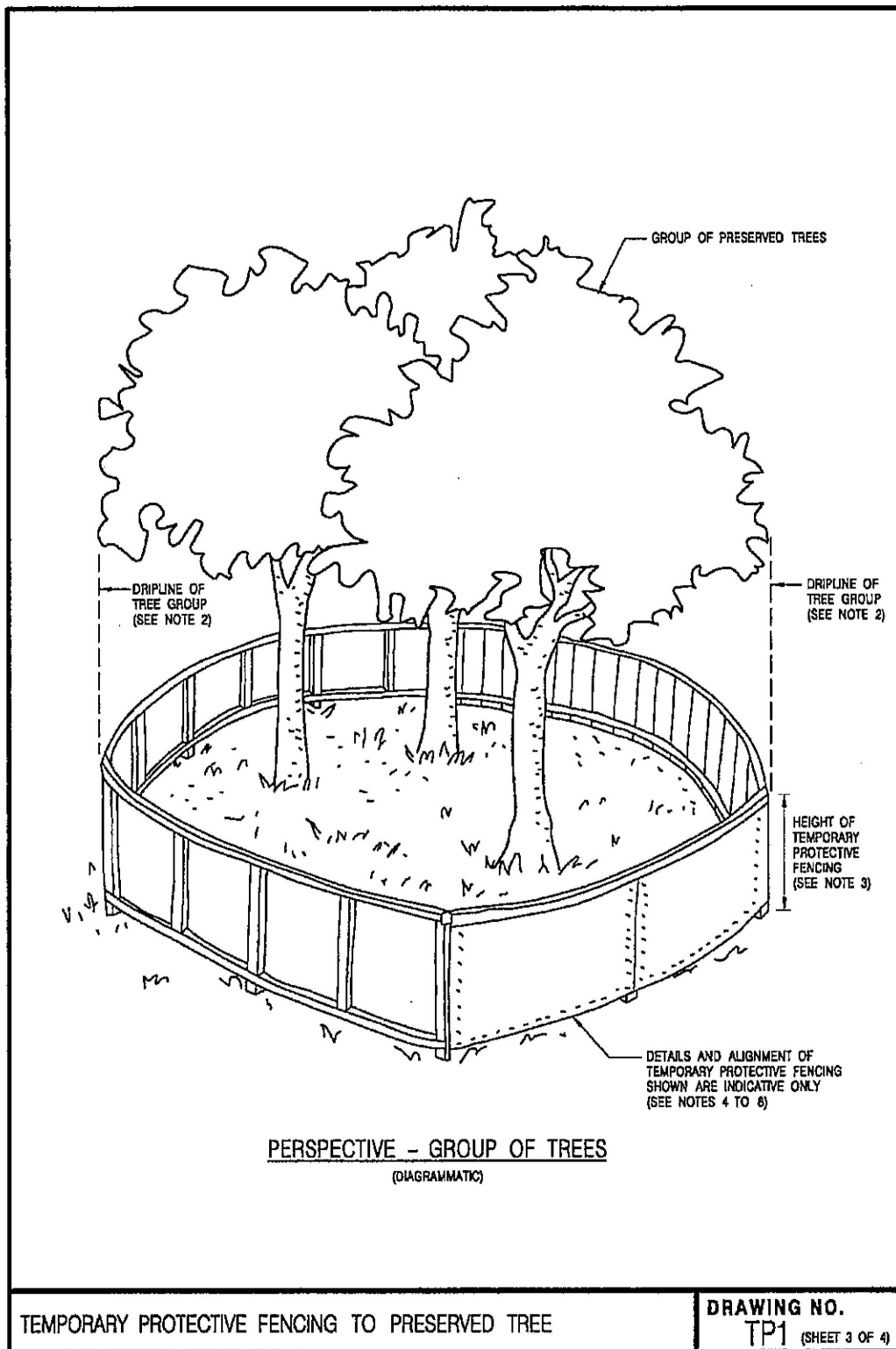
METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O



TEMPORARY PROTECTIVE FENCING TO PRESERVED TREE

DRAWING NO.
TP1 (SHEET 2 OF 4)

METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O



METHOD STATEMENT FOR TREE PROTECTION WORKS ON EXISTING TREES TO BE RETAINED - LIU KO NGAM & PAK SHA TAU TSUI, KAT O

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. DRIPLINE OF *TREE /TREE GROUP EXTENDS TO THE OUTERMOST BRANCHES OF THE *TREE / TREE GROUP, DEFINING THE PERIMETER OF THE *TREE PROTECTION ZONE /AGGREGATE TREE PROTECTION ZONE.
3. HEIGHT OF TEMPORARY PROTECTIVE FENCING SHALL BE 1500 MINIMUM, BUT THE REQUIRED HEIGHT SHALL BE DETERMINED BY THE *ARCHITECT / ENGINEER / SUPERVISING OFFICER WHEN APPROVING THE CONSTRUCTION DETAILS OF THE FENCING AS REFERRED TO IN NOTE B.
4. TEMPORARY PROTECTIVE FENCING SHALL BE STRONG AND APPROPRIATE FOR RESISTING THE IMPACTS OF CONSTRUCTION ACTIVITIES ON THE SITE. IT SHALL BE MADE OF ROBUST MATERIALS AND SHALL COMPRISE A VERTICAL AND HORIZONTAL SCAFFOLDING FRAMEWORK, WELL BRACED AND SUPPORTING **CHAIN LINK FENCING / STEEL SHEET FENCING, OR OTHER FENCING AS APPROVED BY THE *ARCHITECT / ENGINEER / SUPERVISING OFFICER. ONLY IN EXCEPTIONAL CIRCUMSTANCES SHALL PLASTIC WEBBING BE CONSIDERED.
5. THE ALIGNMENT OF TEMPORARY PROTECTIVE FENCING CAN BE IN CIRCULAR, SQUARE, RECTANGULAR OR ANY OTHER SHAPE SO LONG AS THE FENCING INCLUDING ITS FOUNDATIONS DOES NOT ENCROACH INTO THE TREE PROTECTION ZONE.
6. A LOCKABLE GATE SHALL BE PROVIDED TO THE TEMPORARY PROTECTIVE FENCING TO ALLOW ENTRY FOR CARRYING OUT THE NECESSARY ARBORICULTURAL WORKS OR MAINTENANCE WORKS TO THE TREE OR ANY OTHER APPROVED WORKS WITHIN THE TREE PROTECTION ZONE.
7. WARNING NOTICE GUARDING AGAINST UNAUTHORISED OPERATIONS WITHIN FENCED AREA SHALL BE ERECTED ON THE TEMPORARY PROTECTIVE FENCING.
8. THE CONTRACTOR SHALL SUBMIT THE CONSTRUCTION DETAILS OF THE TEMPORARY PROTECTIVE FENCING TO THE *ARCHITECT / ENGINEER / SUPERVISING OFFICER FOR APPROVAL PRIOR TO ERECTION OF THE FENCING.

* DELETE WHICHEVER IS INAPPROPRIATE.

** DELETE WHICHEVER IS INAPPROPRIATE. STEEL SHEET FENCING SHALL BE USED IN CIRCUMSTANCES WHERE THE CONCENTRATION OF CONSTRUCTION ACTIVITY IS PARTICULARLY INTENSE OR THE PRESERVED TREE IS EITHER PARTICULARLY VALUABLE OR PARTICULARLY VULNERABLE.

TEMPORARY PROTECTIVE FENCING TO PRESERVED TREE

DRAWING NO.
TP1 (SHEET 4 OF 4)

Annex F

Method Statement for the Construction Works

Method Statement for the Construction Works

Connection to Existing Cable System - After landing, the proposed replacement 11kV submarine cable circuit will connect to the existing Overhead Line (OHL) system with minimal underground cable and one to two pairs of new wooden electricity poles at each of Pak Sha Tau Tsui and Liu Ko Ngam landing sites respectively. The landing site at Liu Ko Ngam is located within the Plover Cove Country Park while the landing site at Pak Sha Tau Tsui is located within the Plover Cove (Extension) Country Park. The length of the new underground cables at each landing site (Liu Ko Ngam and Pak Sha Tau Tsui) is approximately 50 m. Once the proposed cables pass beyond the High Water Mark (HWM) at the both landing points, they will be laid in a 0.75 m (W) x 1.0 m (D) cable trench and connected to new wooden electricity poles.

The soil to be excavated for the construction of each wooden pole foundation would be about 1.8 m (W) x 1.4 m (L) x 1.6 m (D). The equipment to be involved during the construction are mainly hand tools, one or two backhoes and concrete mixer. They will then be connected to the existing electricity pole via underground cable. The cable trenches will be excavated by open excavation method using backhoe and hand tools.

The excavated materials associated with the new underground cables and wooden electricity pole installation at Liu Ko Ngam and Pak Sha Tau Tsui are estimated to be approximately 45 m³ and 40 m³ respectively.

The OHL wooden poles will be transported to the site by helicopter and installed manually and mainly using hand tools. At the detailed design stage of the Project, after close examination of the location of trees and vegetation at both landing sites, the arrangement and location of the new wooden electricity poles at Liu Ko Ngam has been adjusted to better avoid trees in the area and minimize disturbance. Vegetation removal may be required but no tree felling will be involved in this Project. Two of the existing OHL poles at Liu Ko Ngam will be removed (only the wooden pole above ground) after the installation of the new wooden electricity poles. The abandoned OHL wooden poles will also be transported off site by helicopter.

Construction works within Country Park boundary will be confined to 8 am to 6 pm during weekdays (Monday to Friday only).

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