中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LIMITED

香港軒尼詩道一三九號中國海外大厦二十九樓
29/F, China Overseas Building,139 Hennessy Road, Hong Kong
電話Tel: (852)2823 7888 傳真Fax: (852)2527 6782
網址: http://www.csci.com.hk

Your ref : (12) in EP2/H4/S3/15 Pt. 30
Our ref : CCW/GU18/L/EN10.05/ALL/005507
Date : 29 January 2015

Environmental Protection Department **By Hand**
Branch Office
28/F Southern Centre
130 Hennessy Road
Wanchai
Hong Kong

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

Contract No. HY/2009/15
Central – Wan Chai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)
Environmental Permit No.: FEP-06/364/2009/A – Landscape Plan (Revision 3)

With reference to your previous letter ref.: (12) in EP2/H4/S3/15 Pt. 30 dated 10 June 2014 regarding the captioned subject, we would like to submit the following documents for your reference and perusal.

1. Certification letter from Environmental Team – Lam Geotechnics Limited;
2. Verification letter from Independent Environmental Checker – ENVIRON Hong Kong Limited;
3. Responses to Comments;
4. Landscape Plan (rev. 3);
5. Tree Survey Record to DLO; &
6. Incidents Report prepared by AECOM;

In addition, an electronic copy containing the captioned documents is attached for your retention.

Should you have any query, please feel free to contact our Andy Mak at 3557 6347.

Yours faithfully,
For and on behalf of
China State Construction Engineering (Hong Kong) Limited

Gene Cheung
Contractor's Representative

AW/ AM / EC
Encl.

c.c. AECOM – Mr. Peter Poon

Lam Geotechnics Limited
Ground Investigation & Instrumentation Professionals

華益土力有限公司

Ref : G1120/CS/L909/FEP-06/364/2009/A
Date : 26 January 2015

China State Construction Engineering (Hong Kong) Ltd
29/F, China Overseas Building,
139 Hennessy Road
Hong Kong

Attn: Contractor's Representative, Mr. Gene Cheung

Dear Mr. Cheung,

Contract No. HY/2009/15
Central – WanChai Bypass Tunnel (Causeway Bay Shelter Section)

Landscape Plan (Rev. 3)

Referring to the captioned submission dated 20 January 2015 received through email on 20 January 2015, we have reviewed your submitted details and hereby certified this submission in accordance with Condition 2.10 of FEP-06/364/2009/A.

Should you have any enquiry, please feel free to contact the undersigned at 2839 5666.

Yours faithfully,

Raymond Dai
Environmental Team Leader

c.c.

HyD	- Mr. Eddie Wu	(By Fax: 2714 5289)
AECOM	- Mr. Peter Poon	(By Fax: 3912 3010)
AECOM	- Mr. Frankie Fan	(By Fax: 2587 1877)
ENVIRON	- Mr. David Yeung	(By Fax: 3548 6988)

11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong
Tel: (852) 2882-3939 Fax: (852) 2882-3331
Website: www.lamgeo.com Email: info@lamgeo.com

OHSAS 18001:2007 Certificate No.:0C007
ISO 14001:2004 Certificate No.:EC015
ISO 9001:2008 Certificate No.:CC049

ENVIRON

Ref.: AACWBIECEM00_0_6189L.15

26 January 2015

By Post and Fax (2566 2192)

China State Construction Engineering (Hong Kong) Ltd.
29/F, China Overseas Building
139 Hennessy Road
Hong Kong

Attention: Site Agent, Mr. Gene Cheung

Dear Sir,

Re: Contract No. HY/2009/15
Central – Wan Chai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)
Landscape Plan (Revision 3)

Reference is made to your submission of the Landscape Plan (Revision 3) to us dated 20 January 2015 through email on 20 January 2015 for our review and comment.

Please be informed that we have no further comments on the captioned submission. We write to verify the captioned submission in accordance with Condition 2.10 of FEP-06/364/2009/A.

Thank you for your kind attention.

Yours sincerely,

David Yeung
Independent Environmental Checker

c.c.	HyD	Mr. Eddy Wu	by fax: 2714 5289
	AECOM	Mr. Frankie Fan	by fax: 2587 1877
	AECOM	Mr. Peter Poon	by fax: 3912 3010
	LAM	Mr. Raymond Dai (ETL)	by fax: 2882 3331

Q:\Projects\AACWBIECEM00\Corr\AACWBIECEM00_0_6189L.15.doc

ENVIRON Hong Kong Limited 英環香港有限公司
Room 2403, 24/F., Jubilee Centre, 18 Fenwick Street, Wanchai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.environcorp.com

Ref	Comments	Responses
Comments from EPD		
1	Please be advised that ETWB TC(W) No.3/2006 has been superseded by DEVB TC(W) No. 10/2013. Please update all the references in the submission.	Section 9 & 10 have been updated.
2	Details of the compensatory tree planting for the 4 dead trees, T1905, T1906, T1907 and T1909, such as proposed species, sizes, quantity and future locations, according to the requirements as stipulated in DEVB TC (W) No. 10/2013 should be included in the Landscape Plan.	Section 8 & 10 has been revised. Please be informed that trees T1906 and T1907 will be compensated in accordance with the requirement as stipulated in DEVB TC(W) No. 10/2013 and the proposed species, sizes, quantity and future locations will be included in the Landscape Plan. For details, please refer to Table 1 of the revised Landscape Plan. An initial tree survey was carried out in November 2010 upon handover of the site, Tree T1909 and T1905 were found dead and damaged respectively. The condition of the trees was reported to LandsD and these trees were proposed to be felled in December 2010, please refer to the attached letter. Tree T1905 was subsequently fell down on 24 January 2011 and the incident was due to termite attack which resulted in less than 20% of sound wood remains. The incident report prepared by the Engineer' s Representative is also attached for easy reference. As the death of the trees was not caused by the works, we consider that compensation for the dead trees T1905 and T1909 was not required.
3	It is noted that all the tree record photos were taken on 10.10.2013 which are outdated. More reent tree record photos should be provided instead.	Appendix H & I has been updated.

CONTRACT HY/2009/15

CENTRAL – WAN CHAI BYPASS
TUNNEL (CAUSEWAY BAY TYPHOON SHELTER SECTION)

Landscape Plan

Submission Status: For Approval

Revision	Description	Date
0	1st Submission	19 October 2011
1	2nd Submission	13 August 2013
2	3rd Submission	9 May 2014
3	4th Submission	20 January 2015

Prepared by:	Esther Choi		20/1/2015
	Environmental Supervisor	Signature	Date
Checked by	Andy Mak		20/1/2015
	Environmental Officer	Signature	Date
Approved by:	Gene Cheung		20/1/2015
	Contractor's Representative	Signature	Date

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Appendix B	Location Plan of Visual Sensitive Receivers
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Appendix F	Tree Schedule for Transplanted Trees
Appendix G	Transplanted Trees in Holding Nursery - Report of Dead Trees T1906 and T1907
Appendix H	Report of Tree Preservation and Protection Plan with photos of retained trees
Appendix I	Transplanted Trees Inspection Record with photos of transplanted trees
Appendix J	Permanent Location of Dead Trees T1906 and T1907

1. Introduction

The purpose of this plan is to demonstrate design details, locations, implementation programme, maintenance and management schedules in accordance with contract requirement, Condition 2.14 of Environmental Permit No. EP-364/2009/A and Condition 2.10 of Further Environmental Permit No. FEP-06/364/2009/A.

2. Master Green Plan

The Master Greening Plan will not form part of the scope of this project. The final planting works will be carried out by another main contractor.

3. Identified Visual Sensitive Receivers

The following visual sensitive receivers (VSRs) are likely to be affected during the construction phase of this project:

- C/R4 (Elizabeth House);
- C/R5 (Riviera Mansion);
- C/R6 (Prospect Mansion);
- C/R7 (Miami Mansion);
- C/R8 (Marco Polo Mansion);
- C/R9 (Victoria Park Mansion);
- C/R18 (Belle House);
- C32 (Excelsior Hotel);
- C36 (Citicorp Centre); and
- C37 (Victoria Centre).

The above VSRs are mapped in Appendix B.

4. Landscape Mitigation Measures

The CEDD/HyD's Contractor shall be responsible for implementing a series of construction phase Landscape and visual mitigation measures. All mitigation measures stated in this plan are in compliance with relevant requirements in both CWB&IECL EIA Report (Register No. AEIAR-041/2001) and the WDII&CWB EIA Report (Register No. AEIAR-125/2008). While the operational phase mitigation measures as mentioned in EIA Reports should be carried out by other contractor(s) under separate contract(s).

The proposed landscape mitigation measures during construction phase for HY/2009/15, but not limited to, are listed as below:

Implementation Schedule for Landscape and Visual Impact Mitigation (Specific in CWB)

EIA Report Ref.	Environmental Protection Measures/ Mitigation Measures	Location /Timing	Implementation Agency	Relevant Legislation and Guidelines	Referring Section in this Plan
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	CEDD/HyD's Contractor	EIAO TM	Section 5
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction (Site Tree Survey Report, Tree Preservation and Protection Plan, and Method Statement for Tree Transplanting Works have been submitted to the Engineer's Representatives for approval).	Work site / During Construction Phase	CEDD/HyD's Contractor	EIAO TM	Section 7
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	CEDD/HyD's Contractor	EIAO TM	Section 8
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	CEDD/HyD's Contractor	EIAO TM	Section 10
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	CEDD/HyD's Contractor	EIAO TM	Section 11
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting (Please refer to Appendix C).	Work site / During Construction Phase	CEDD/HyD's Contractor	EIAO TM	Section 12
Table 7.4	Screen tree planting for Police Officers' Club (within Project boundary)	Adjacent to POC carpark	CEDD/HyD's Contractor	WBTC 18/94	Section 7

5. Topsoil

Stripped topsoil will be re-used in the construction of the soft landscape works where practical. For the topsoil which comprises reclamation fill material and is not desirable from a horticultural maintenance point of view, approved new soil-mix will be specified for new planting areas.

6. Tree Preservation and Protection Measures

There are a number of measures are adopted to protect trees and the details are described below.

i. Label all trees with tree numbers

The preserved trees have been clearly labeled with tree reference numbers.

ii. Temporary protection fencing

Temporary protective fencing of 1.2m height should be erected around tree protection zone to protect the preserved trees from construction damage.

iii. Regular monitoring of trees

Trees shall be inspected regularly to check the health of the tree. Any sign of deterioration shall be notified to the Engineer's Representatives and remedial action shall be adopted.

iv. Insect and disease control

Preserved tree shall be checked for insect attraction or fungal infestation. Dead or infected or infested branches should be pruned if necessary to prevent falling down.

Any infection and infestation shall be reported to Engineer's Representatives. Remedial eradication by use of sprayed insecticide or fungicide shall be carried out.

v. Watering

Fresh water shall be used for watering and all planted areas shall be watered. Watering shall be carried out in early morning and later afternoon so as to keep the soil moist around the roots and plants.

Watering operation shall be completed within 24 hours of an inspection which deems watering to be necessary.

vi. **Pruning of tree branches**

If any branches of preserved trees interferes with construction works or is in poor condition which may affect public safety and health of the tree and thus pruning is required, the Engineer's approval should be obtained prior to carrying out pruning works. The pruning works shall be carried out in compliance with G.S. Clause 3.86.

(i to vi - apply to retained trees at CBTS and Police Officer's Club;
i to ii - apply to retained trees at Siu Ho Wan)

7. Protection of Existing Trees

The existing trees recommended to be retained shall be protected by means of fencing to prevent vehicular, construction machines or pedestrian intrusion which may potentially damage tree canopies, trunks and root zones. Site tree survey report, and tree preservation and protection plan have been approved by Engineer's Representatives. Appendix D shows the location of trees namely T009, T010, T011, T012 and T013 are being retained and protected by HY/2009/15 in Siu Ho Wan, Lantau Island. While the trees being retained near Police Office's Club and at Portion 7 of the project area are also indicated. A tree schedule summarizes the details of retained trees is shown in Appendix E. A bi-monthly report of the Tree Preservation and Protection Plan with photos of retained trees is included in Appendix H. Referred to the follow-up discussion with Planning Department (PlanD), it has been clarified that the future progress photos of the retained trees would be forwarded to PlanD on bi-monthly basis by the contractor via regular submission for the tree reports.

8. Transplantation of Existing Trees

A total of 13 nos. trees were originally required to be transplanted at the commencement of the Contract. However, the trees T1909 and T1905 were found dead in November 2010 and in January 2011 respectively before any works had been carried out in the initial stage of the project. The remaining 11 trees were transplanted to the temporary holding nursery in Tai Po Lam Tsuen

on 11 May 2011. As agreed with the Engineer's Representative, CSHK is not responsible for the compensation for the dead trees T1905 and T1909.

During the holding period, two trees T1906 and T1907 were confirmed dead in November 2011 at the temporary hold nursery and removed/disposed in December 2012. On 16 January 2013, the temporary holding nursery was moved from Lam Tsuen to Lau Fau Shan to which the 11 trees, excluding T1906 and T1907, were transplanted. Appendix F presents the tree schedule for all transplanted trees. A Transplanted Trees Inspection Record with photos of transplanted trees is included in Appendix I. Referred to the follow-up discussion with PlanD, it has been clarified that the future progress photos of the transplanted trees would be forwarded to PlanD on bi-monthly basis by the contractor via regular submission for the tree reports. The transplanted trees temporarily stored at holding nursery will be transplanted to Central Interchange by Central-Wan Chai Bypass – Central Interchange (CWB(CI)). The final permanent locations of the transplanted trees will be determined by CWB(CI). The corresponding planting plans are included in the landscape plan under CWB(CI). Referring to the planting plans under CWB(CI), all the transplanted trees under CWB(T1), eleven in total (including tree numbers T1900, T1902, T1903, T1904, T1906, T1907, T1908, T1910, T1911, T1912 and T2015), shall be handled by CWB(CI). Further information and details shall be supplemented after the interface meeting for the permanent tree transplanting works.

9. Felling of Existing Trees

In case of EIA specifically identified trees required to be felled during the construction phase, proposal and compensation scheme will be submitted to relevant government department(s) for approval and implemented accordingly upon receipt of approval. As both T1906 and T1907 are not EIA identified trees, the compensation of the felled trees would be handled according to the Contract and DEVB TC(W)No.10/2013.

10. Trees Compensation

According to the Contract, compensatory trees for any dead tree shall be provided, and the provision of compensatory tress would be tentatively completed before end of contract. Compensatory planting shall be provided in

accordance with the requirements of DEVB TC(W)No.10/2013. This being of a ratio not less than 1:1 in terms of the total numbers of aggregated girth size of compensatory trees and shall not be less than that of dead trees. The size of compensatory trees should be at least of "heavy standard". (Please refer to Table 1 for details.) Compensatory trees will be planted in our holding nursery and will be transplanted to Central Interchange by Central-Wan Chai Bypass – Central Interchange (CWB(CI)). Please refer to Appendix J for the permanent location.

Table 1

Tree No.	Botanical Name	Chinese Name	Size	Quantity
T1906	Celtis sinensis	朴樹	75mm=< DBH=<150mm	1
T1907	Ficus variegate	青果榕	75mm=< DBH=<150mm	1

11. Control of Night-time Lighting

Sources of night-time lighting impacts during construction phase would include:

- Night-time terrestrial works;
- Construction site traffic;
- Lighting devices at site offices;

The following measures, but not limited to, would be implemented where practical to minimize impact:

a. Carefully planning of any night-time work would be adopted to minimize the use of unnatural lighting;
b. The need of using lighting devices would be carefully assessed based on work task to minimize usage;
c. Where lighting devices are needed to be operated, the devices would be aimed away from the visual sensitive receivers where necessary.
d. Site office lighting will be oriented away from VSRs.

The lighting impact will be monitored and assessed by designated person during night-time construction work. Upon any public concerns or complaints, the lights will be repositioned or shielded where necessary.

12. Erection of Decorative Screen Hoarding Compatible with the Surrounding Setting

Decorative screen hoarding not less than 2.4m high from ground level shall be supplied, erected and maintained in good condition, and to be removed upon completion of the works. The design of hoarding is compatible with the surround setting and has been approved by the Engineer. The design and location plan can be found in attached Appendix C.

13. Screening of Tree Planting at POC

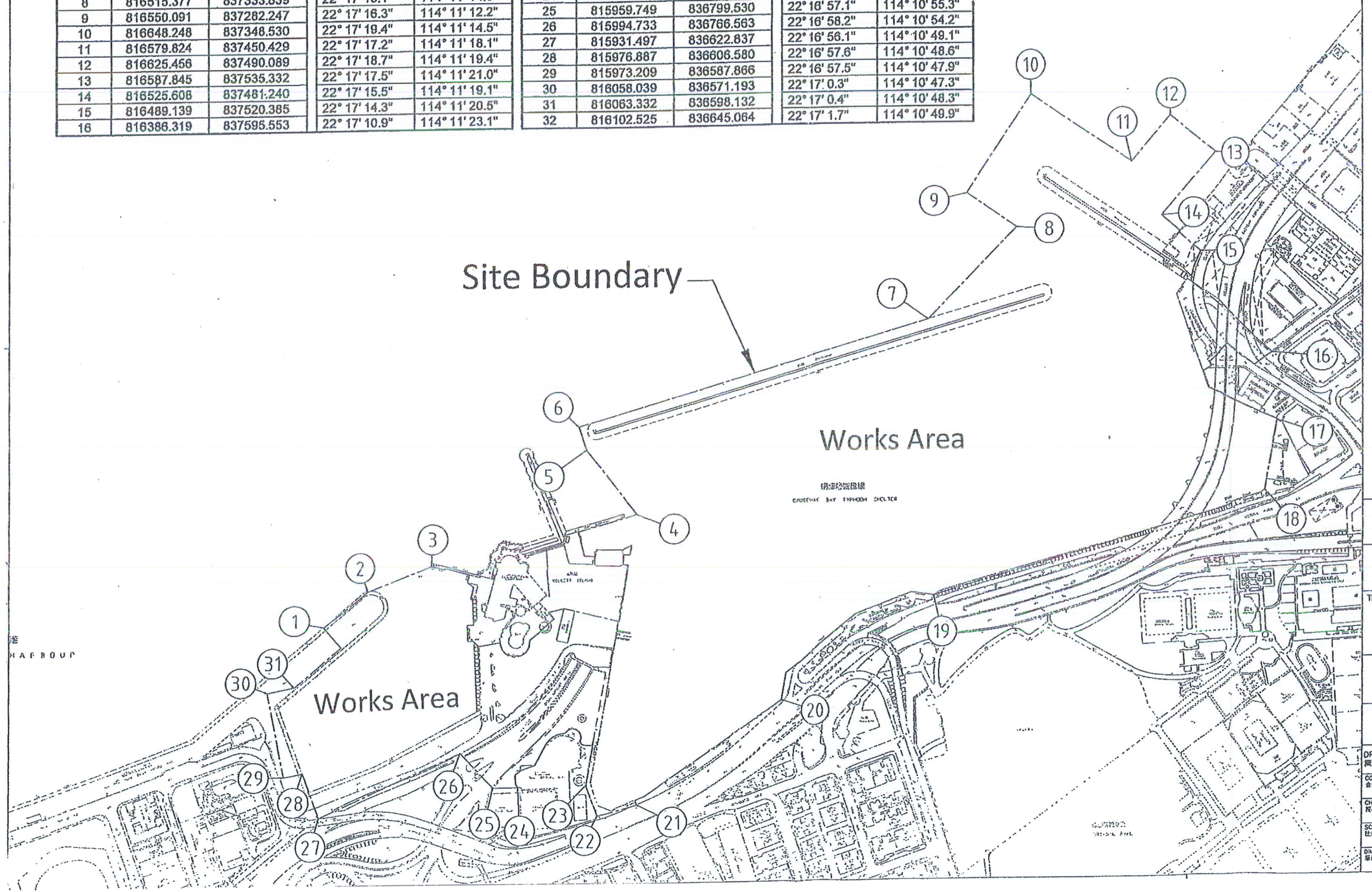
Tree planting adjacent to the Police Officer's Club (identified as DLA17) car park boundary (within site boundary) shall be screened to mitigate source of landscape impact from the construction of tunnel portal.

Appendix A

Site Layout Plan

Point	HK 1980 Grid Coordinate		WGS 84 (Deg°MM'SS.S")	
	Northing(m)	Easting(m)	Latitude(N)	Longitude(E)
1	816123.163	836627.778	22° 17' 2.4"	114° 10' 49.3"
2	816158.294	836672.793	22° 17' 3.5"	114° 10' 50.9"
3	816183.090	836737.200	22° 17' 4.3"	114° 10' 53.1"
4	816233.339	836944.955	22° 17' 6.0"	114° 11' 0.4"
5	816297.883	836893.247	22° 17' 8.1"	114° 10' 58.6"
6	816321.616	836885.404	22° 17' 8.8"	114° 10' 58.3"
7	816424.234	837243.006	22° 17' 12.2"	114° 11' 10.8"
8	816515.377	837333.839	22° 17' 15.1"	114° 11' 14.0"
9	816550.091	837282.247	22° 17' 16.3"	114° 11' 12.2"
10	816648.248	837348.530	22° 17' 19.4"	114° 11' 14.5"
11	816579.824	837450.429	22° 17' 17.2"	114° 11' 18.1"
12	816625.456	837490.089	22° 17' 18.7"	114° 11' 19.4"
13	816597.845	837535.332	22° 17' 17.5"	114° 11' 21.0"
14	816525.608	837481.240	22° 17' 15.5"	114° 11' 19.1"
15	816489.139	837520.385	22° 17' 14.3"	114° 11' 20.5"
16	816386.319	837595.553	22° 17' 10.9"	114° 11' 23.1"

Point	HK 1980 Grid Coordinate		WGS 84 (Deg°MM'SS.S")	
	Northing(m)	Easting(m)	Latitude(N)	Longitude(E)
17	816318.982	837600.533	22° 17' 8.7"	114° 11' 23.3"
18	816248.756	837588.973	22° 17' 6.5"	114° 11' 22.9"
19	816147.576	837248.874	22° 17' 3.2"	114° 11' 11.0"
20	816044.312	837091.645	22° 16' 59.8"	114° 11' 5.5"
21	815941.724	836945.745	22° 16' 56.5"	114° 11' 0.4"
22	815931.125	836905.152	22° 16' 56.1"	114° 10' 59.0"
23	815961.289	836893.217	22° 16' 57.1"	114° 10' 58.6"
24	815960.075	836824.609	22° 16' 57.1"	114° 10' 56.2"
25	815959.749	836799.530	22° 16' 57.1"	114° 10' 55.3"
26	815994.733	836766.563	22° 16' 58.2"	114° 10' 54.2"
27	815931.497	836622.837	22° 16' 56.1"	114° 10' 49.1"
28	815976.887	836606.580	22° 16' 57.6"	114° 10' 48.6"
29	815973.209	836587.866	22° 16' 57.5"	114° 10' 47.9"
30	816058.039	836571.193	22° 17' 0.3"	114° 10' 47.3"
31	816063.332	836598.132	22° 17' 0.4"	114° 10' 48.3"
32	816102.525	836645.064	22° 17' 1.7"	114° 10' 49.9"



CHINA STATE CONST. ENG. (H.K.) LTD.
中國建築工程(香港)有限公司
中環灣仔繞道銅鑼灣避風塘隧道
地盤
HY/2009/15

路政署 HIGHWAYS DEPARTMENT
主要工程管理處 Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK

TITLE

General Layout Plan

AECOM
AECOM Asia Co. Ltd.
(Formerly known as Maunsell Consultants Asia Ltd.)

中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGRG. (HONG KONG) LTD.

DRG.NO. 圖紙編號	CWB/MN/SK-001
CONTRACT NO. 合約編號 HY/2009/15	DATE OF ISSUE 發出日期 21-09-2010
CHECKED BY 核准 KYCHAN	DRAWN BY 繪圖 KCCHUNG
SCALE 比例 1: 4000	STATUS 階段
DIMENSIONS ARE IN 單位尺寸 METRES	PAPER SIZE 圖紙尺寸 A3

Appendix B

Location Plan of Visual Sensitive Receivers

KEY FOR VISUAL SENSITIVE RECEIVERS

C1	International Finance Centre
C2	Hong Kong Station Development Phase 2
C3	Exchange Square
C4	Jardine House
C5	Mandarin Hotel
C6	Hong Kong Club
C7	Ritz Carlton Hotel
C8	AIA Tower
C9	Hutchison House
C10	Bank of America Tower
C11	Far East Financial Centre
C12	Admiralty Centre
C13	United Centre
C14	CITIC Tower
C15	Fleet Arcade
C16	Asian House
C17	Chung Nam Building
C18	Fleet House, Harcourt House
C19	Telecom House, Hong Kong Arts Centre, Harbour View International House
C20	Shui On Centre
C21	Central Plaza
C22	Grand Hyatt Hotel
C23	Renaissance Harbour View Hotel
C24	Hong Kong Convention and Exhibition Centre
C25	Great Eagle Centre
C26	Harbour Centre
C27	China Resources Building
C28	Sun Hung Kai Centre
C29	AXA Centre
C30	Sino Plaza
C31	World Trade Centre
C32	Excelsior Hotel
C33	The Park Lane Hotel
C34	Windsor House
C35	19-31 Yee Wo Street
C36	Citicorp Centre
C37	Victoria Centre
C38	Ocean Terminal
C39	Star House
C40	Peninsula Hotel
C41	Sheraton Hotel
C42	InterContinental Hotel
C43	New World Centre and Hotel
C44	Wing On Plaza
C45	Shangri-La Hotel
C46	Tsim Sha Tsui Centre
C47	Empire Centre
C48	Grand Stanford Harbour View Hotel
C49	Nikko Hotel
C50	Four Season Hotel
C51	Harbour Plaza Metropolis
C52	AIA Tower
C53	Newton Hotel
C54	Electric Centre
C54A	Sea View Estate

C/R1	Causeway Centre
C/R2	160-169 Gloucester Road
C/R3	210-226 Gloucester Road
C/R4	Elizabeth House
C/R5	Riviera Mansion
C/R6	Prospect Mansion
C/R7	Miami Mansion
C/R8	Marco Polo Mansion
C/R9	Victoria Park Mansion
C/R10	Chesterfield Mansion
C/R11	Greenfield Mansion
C/R12	Properties fronting Causeway Road
C/R13	Park Towers
C/R14	Viking Garden
C/R15	50-52 Hing Fat Street
C/R16	Mayson Garden Building
C/R17	Gorden House
C/R18	Belle House
C/R19	Top Glory Tower
C/R20	Hoi Kung Court
C/R21	Hoi To Court
C/R22	Hoi Deen Court
C/R23	Pacific Place Complex

GIC1	General Post Office
GIC2	City Hall
GIC3	PLA Headquarters at Tamar
GIC4	Hong Kong Police Force Headquarters, May House
GIC5	Revenue Tower
GIC6	Wan Chai Tower
GIC7	Police Officers' Club
GIC8	Queen's College
GIC9	Hing Fat Street Post Office
GIC10	Victoria Park School for the Deaf
GIC11	YMCA
GIC12	Electric Road Municipal Services Building
O1	Fenwick Pier Street Public Open Space
O2	HKCEC Open Space
O3	HKCEC Extension Open Space and Promenade
O4	Renaissance Harbour View Plaza
O5	Central Plaza Open Space
O6	Wanchai Sports Ground
O7	Tunnel Approach Rest Garden
O8	Victoria Park
O9	Tsim Sha Tsui Waterfront Promenade
OU1	Royal Hong Kong Yacht Club

R1	Residential Properties fronting Tung Lo Wan Road
R4	Harbour Heights
R5	Residential Properties fronting King Wah Road
R6	City Garden
R7	Provident Centre
S1	Harbour Traffic
T1	Wanchai North Road Network - vehicular - predestrian
T2	Gloucester Road Corridor - vehicular - predestrian
T3	Island Eastern Corridor

LEGEND

- PLANNING AND ENGINEERING REVIEW TUDY AREA BOUNDARY
- LIMIT OF PRIMARY ZONE OF VISUAL INFLUENCE
- C1 — BOUNDARY OF KEY VSRs
- C01 — PHOTO TAKING POINT WITH PHOTO NO.
- COMMERCIAL
- COMMERCIAL / RESIDENTIAL
- RESIDENTIAL
- RECREATIONAL
- GOVERNMENT / INSTITUTION / COMMUNITY
- TRANSPORT
- DP1 — CENTRAL-WANCHAI BYPASS (CWB) INCLUDING ITS ROAD TUNNEL AND SLIP ROADS
- DP2 — ROAD P2 AND OTHER ROADS WHICH ARE CLASSIFIED AS PRIMARY/DISTRICT DISTRIBUTOR ROADS
- DP3 — RECLAMATION WORKS INCLUDING ASSOCIATED DREDGING WORKS
- DP4 — TEMPORARY TYPHOON SHELTER

VICTORIA HARBOUR

0 62.5 250 625 METERS

1 : 12500

MAUNSELL | AECOM

Maunsell Consultants Asia Ltd

WAN CHAI DEVELOPMENT PHASE II - PLANNING AND ENGINEERING REVIEW

KEY VSRs AND PRIMARY ZONE OF VISUAL INFLUENCE DURING CONSTRUCTION

FIGURE 10.4

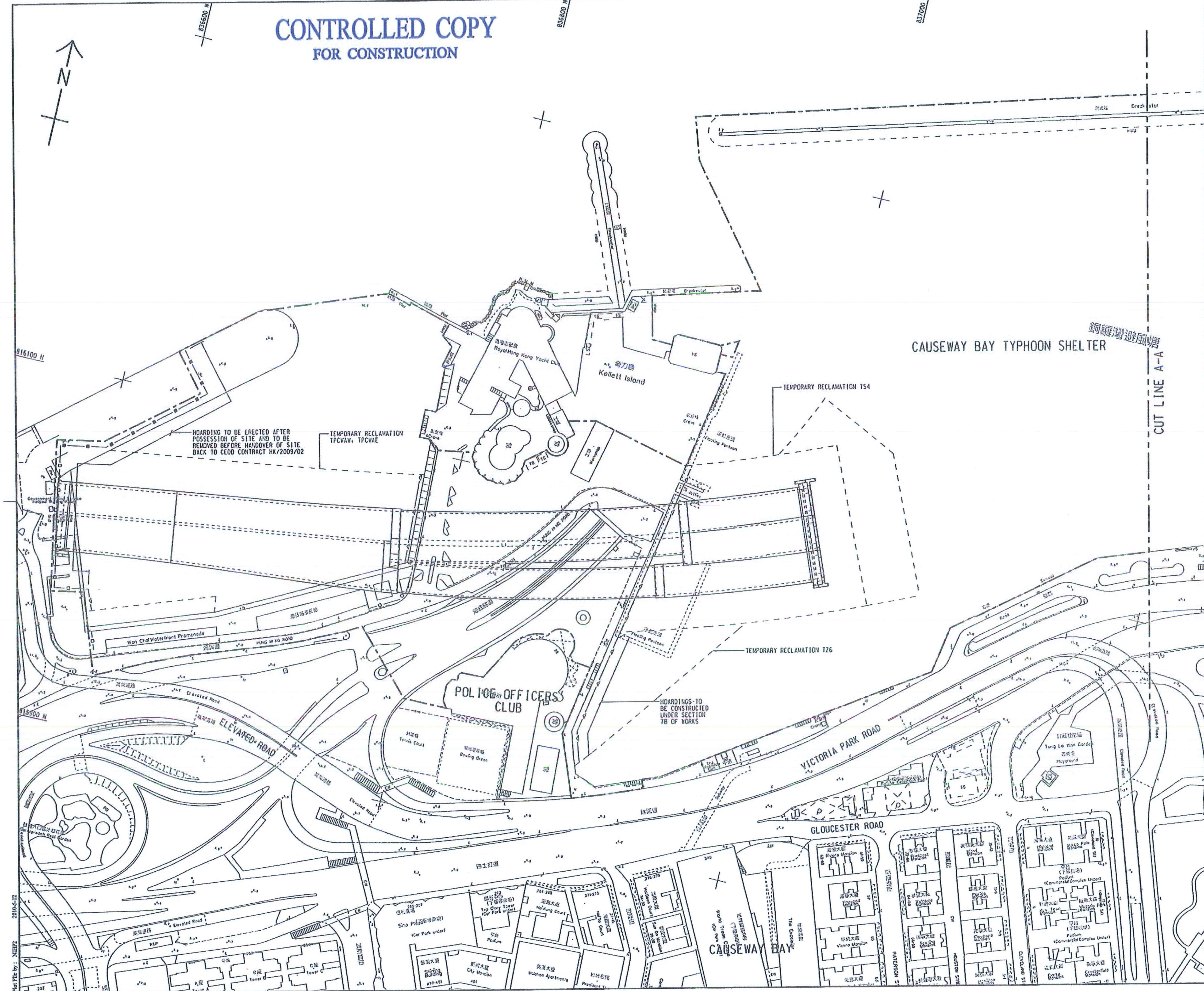
5/9/2007 11:28:02

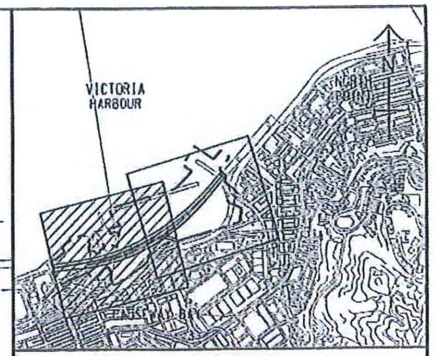
FILE : d:\wanchai\DGN\FIGURE 10-4.dgn

Appendix C

Design and Location Plan of Decorative Screen Hoarding

CONTROLLED COPY
FOR CONSTRUCTION





KEY PLAN

SCALE A1 1 : 20000
A3 1 : 40000

NOTES:

1. ALL HOARDING ALIGNMENT/SETTING OUT SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL SUBMIT PROPOSED HOARDING PLANS PHASE BY PHASE SHOWING THE HOARDING INCLUDING STREET FURNITURE, DETAILS OF ANY PROPOSED TEMPORARY VEHICULAR ACCESS, EXISTING TRAFFIC SIGNS OR TRAFFIC PROVISIONS AND EXISTING TREES, AS WELL AS OTHER RELEVANT INFORMATION FOR THE ENGINEER'S AGREEMENT.
2. DETAILS OF THE HOARDING SHALL REFER TO HyD STANDARD DRAWING H6110-H6111.
3. THE REQUIREMENTS OF THE AESTHETIC DESIGN OF THE HOARDING SHALL REFER TO PARTICULAR SPECIFICATION.
4. THE HOARDING ARRANGEMENT AT CONTRACT INTERFACE SHALL BE AGREED WITH OTHER CONTRACTORS.
5. ANY MODIFICATION OF STANDARD DRAWING TO SUIT EXISTING CONDITIONS SHALL BE SUBMITTED TO THE ENGINEER FOR CONSENT.

LEGEND:

- SITE BOUNDARY
- HOARDING TO BE ERECTED ON EXISTING LAND
- HOARDING WITH AESTHETIC DESIGN TO BE ERECTED ON EXISTING LAND
- HOARDING TO BE ERECTED ON TEMPORARY RECLAIMED LAND
- HOARDING WITH AESTHETIC DESIGN TO BE ERECTED ON TEMPORARY RECLAIMED LAND
- BOUNDARY FOR TEMPORARY RECLAMATION

12 OCT 2010

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 審核		DATE 日期
B	WORKING DRAWING	RPCM	BCC	OCT 10
A	TENDER DRAWING	JTCL	BCC	MAY 10

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK

PWP ITEM NO. 工務計劃項目編號 579 TH

CENTRAL WAN CHAI BYPASS - TUNNEL
(CAUSEWAY BAY TYPHOON SHELTER SECTION)

HOARDING PLAN

SHEET 1 OF 2

AECOM

DRG.NO. 圖紙編號 60095653/T1/1271B

DESIGNED BY 設計: VLMK
CONTRACT NO. 合約編號: HY/2009/15
P. Dir. APPROVED 批准人: CW
DRAWN BY 繪圖: WYP
SCALE 比例: A1 1 : 1000, A3 1 : 2000
DIMENSIONS ARE IN 尺寸單位: METRES
STATUS 狀況: WORKING DRAWING

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2010-5-12
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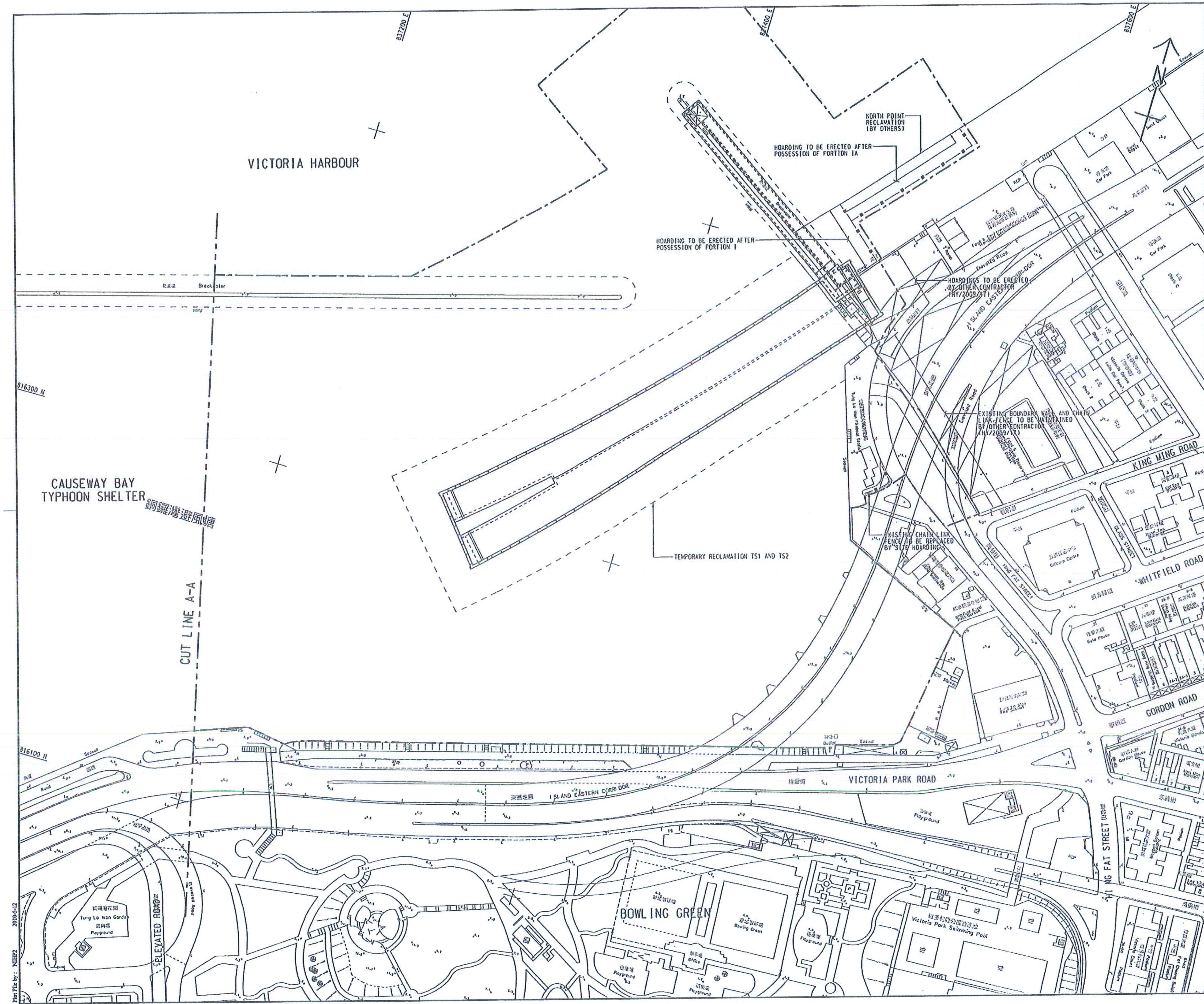

VICTORIA HARBOUR
NORTH POINT RECLAMATION (BY OTHERS)
HOARDING TO BE ERECTED AFTER POSSESSION OF PORTION IA
HOARDING TO BE ERECTED AFTER POSSESSION OF PORTION I
HOARDINGS TO BE ERECTED BY OTHER CONTRACTOR (HY/2009/11)
EXISTING BOUNDARY WALL AND CHAIN LINK FENCE TO BE MAINTAINED BY OTHER CONTRACTOR (HY/2009/11)
EXISTING CHAIN LINK FENCE TO BE REPLACED BY SITE HOARDING
TEMPORARY RECLAMATION TS1 AND TS2
CAUSEWAY BAY TYPHOON SHELTER 銅鑼灣避風塘
CUT LINE A-A
816300 N
816100 N
837200 E
837400 E
837600 E
KING MING ROAD
WHITFIELD ROAD
GORDON ROAD
VICTORIA PARK ROAD
ISLAND EASTERN CORRIDOR
HING FAT STREET
ELEVATED ROAD
BOWLING GREEN

Plot File by: NHP2 2010-5-12
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KEY PLAN

SCALE A1 1 : 20000
A3 1 : 40000

NOTE:

1. FOR NOTES AND LEGEND, REFER TO DRAWING NO. 60095653/T1/1271.

CONTROLLED COPY
FOR CONSTRUCTION
12 OCT 2010

REV. 修訂	DESCRIPTION 內容摘要			DATE 日期
B	WORKING DRAWING		BCC	OCT 10
A	TENDER DRAWING	JTCL	BCC	MAY 10

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK

PWP ITEM NO. 工務計劃項目編號 579 TH

CENTRAL WAN CHAI BYPASS - TUNNEL (CAUSEWAY BAY TYPHOON SHELTER SECTION)

HOARDING PLAN

SHEET 2 OF 2

AECOM

DRG.NO. 圖紙編號 60095653/T1/1272B

DESIGNED BY 設計	VLMK	CONTRACT NO. 合約編號 HY/2009/15	P. DIR. APPROVED 批准人 CW
DRAWN BY 繪圖	WYP	STATUS 狀況	WORKING DRAWING
SCALE 比例	A1 1 : 1000 A3 1 : 2000		
DIMENSIONS ARE IN 尺寸單位	METRES		

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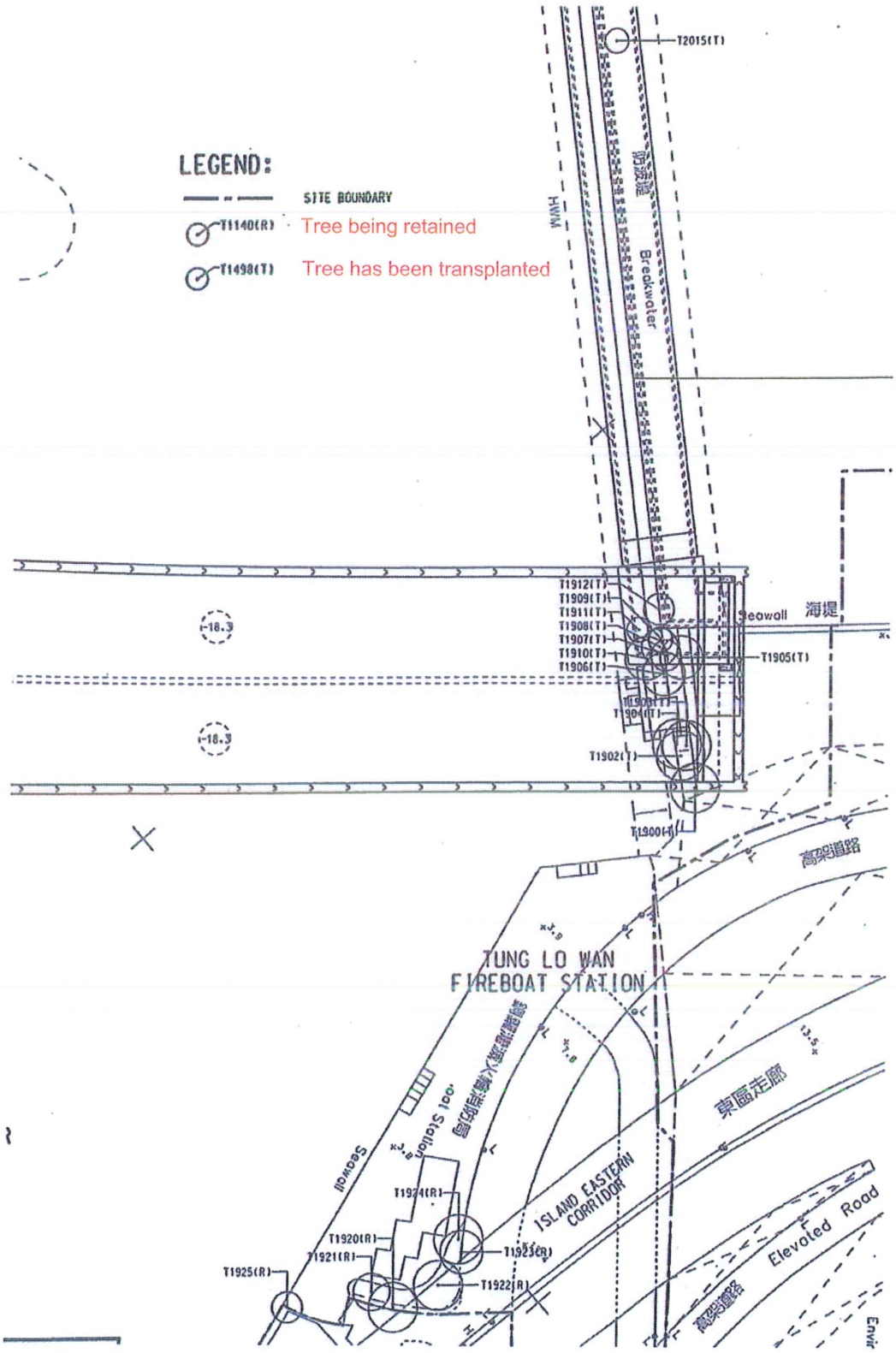
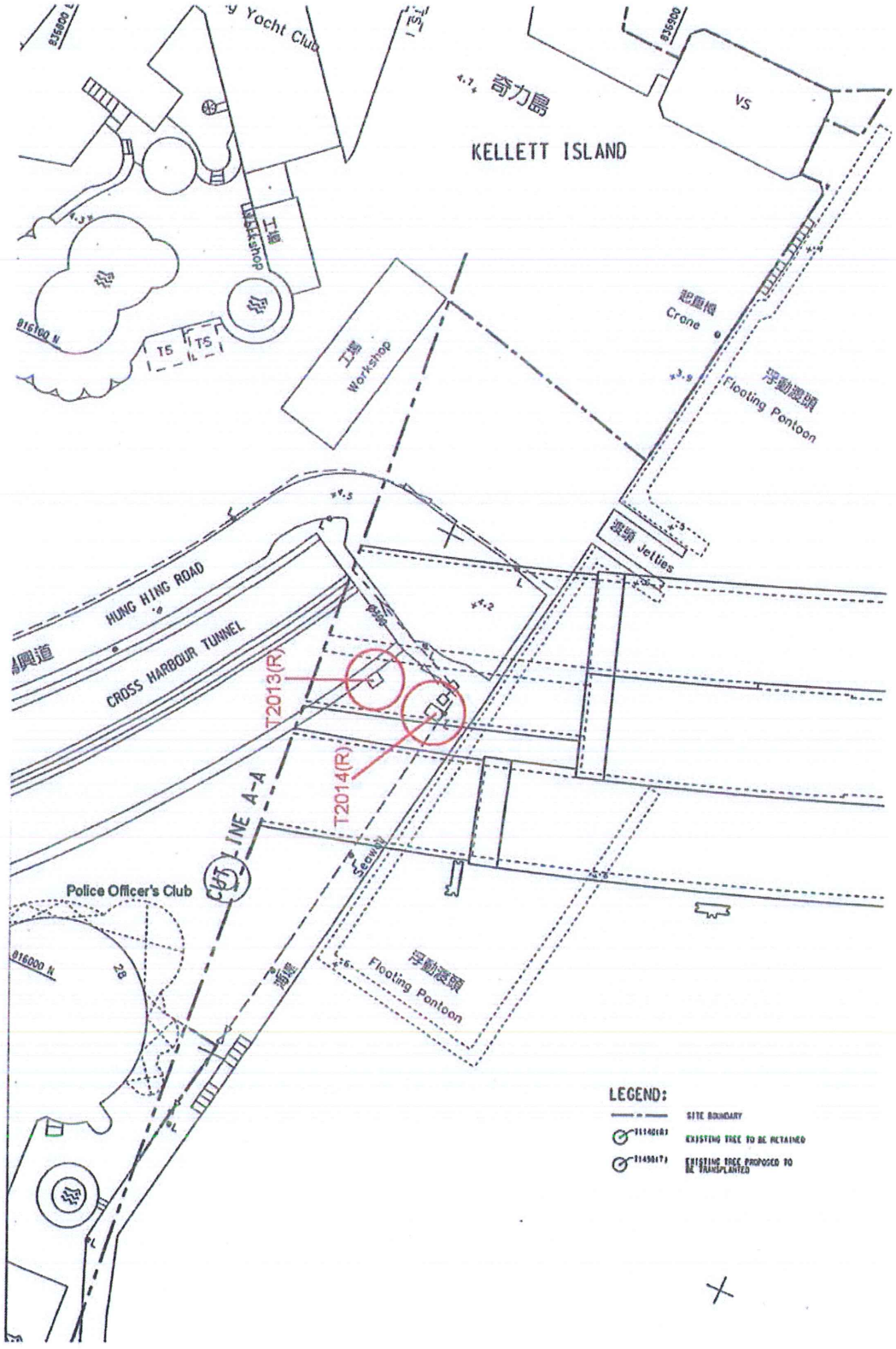
2m
2m
2m
路政署
HIGHWAYS DEPARTMENT
路政署
Highways Department
CENTRAL - WAN CHAI BYPASS AND ISLAND EASTERN CORRIDOR LINK
路政署
HIGHWAYS DEPARTMENT
路政署
Highways Department
CENTRAL - WAN CHAI BYPASS AND ISLAND EASTERN CORRIDOR LINK
路政署
HIGHWAYS DEPARTMENT
15m
15m
36m

Appendix D

Location Plan of Trees

1. Location Plans showing the Preserved Trees

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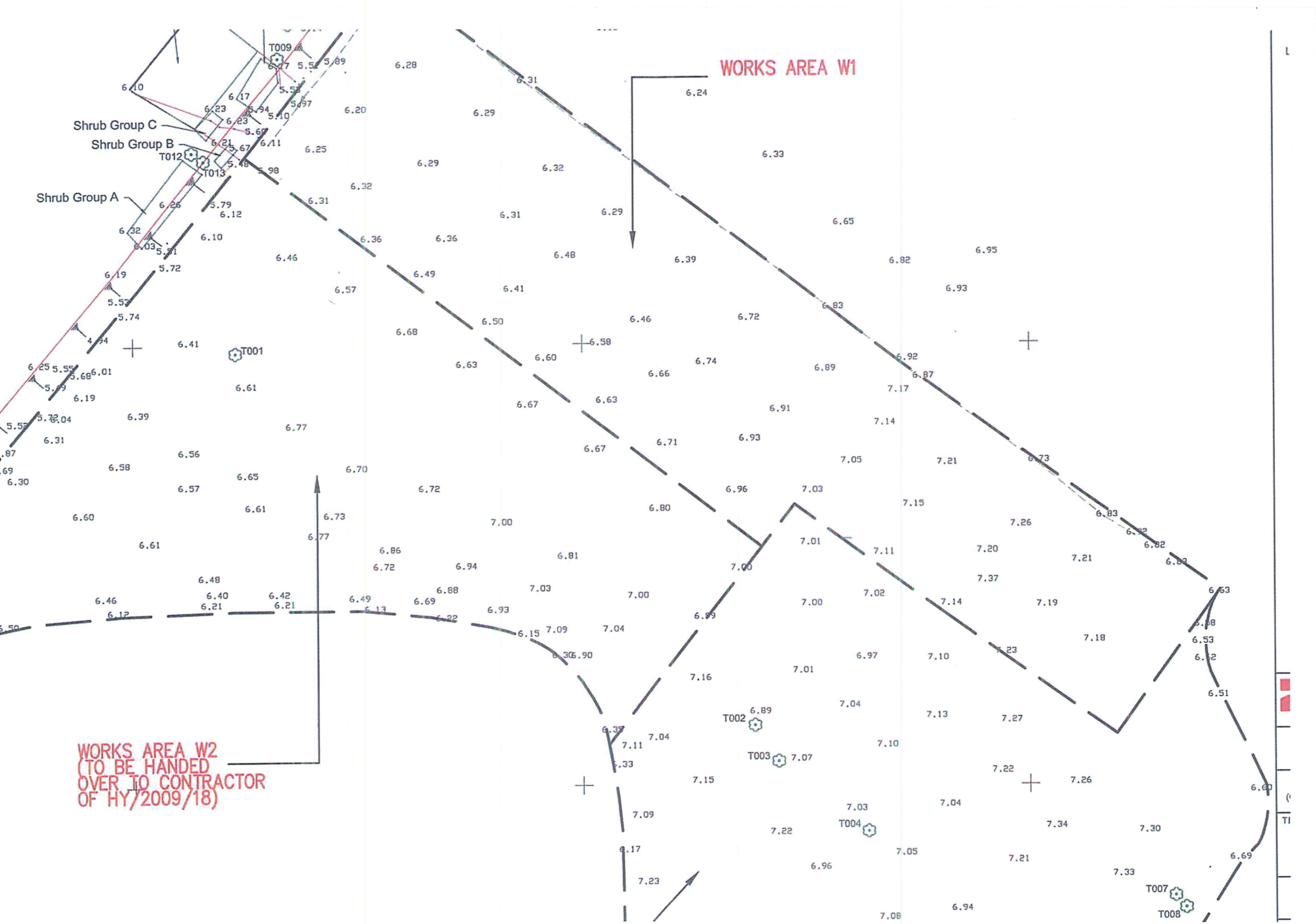
奇力島
KELLETT ISLAND
VS
Workshop
工場
Crane
起重機
Floating Pontoon
浮動躉頭
Jetties
躉頭
HUNG HING ROAD
興道
CROSS HARBOUR TUNNEL
T2013(R)
T2014(R)
LINE A-A
Police Officer's Club
Seawall
LEGEND:
SITE BOUNDARY
EXISTING TREE TO BE RETAINED
EXISTING TREE PROPOSED TO BE TRANSPLANTED


WORKS AREA W1
WORKS AREA W2
(TO BE HANDED
OVER TO CONTRACTOR
OF HY/2009/18)
Shrub Group A
Shrub Group B
Shrub Group C
T001
T002
T003
T004
T007
T008
T009
T012
T013

Appendix E

Tree Schedule for Retained Trees

Tree Schedule for Retained Trees

Tree No.	Botanical Name	Chinese Name	Location	Size			Ground Level (mPD)	Form (G/F/P)	Health (G/F/P)	Tree Condition	Mitgation Measures
				Height (m)	Crown Spread (m)	Girth (mm)					
T1920	Ficus virens	大葉榕,黃葛樹	At Portion 7	10	7	760	4.8	G	F	No significant defect observed 未有察覺明顯缺陷	Nil
T1921	Morus alba	桑	At Portion 7	8	7	330	4.4	G	F	Sign of decay - Minor 呈現腐爛 - 輕微	Tree condition under close observation 密切監察樹木狀況
T1922	Ficus virens	大葉榕,黃葛樹	At Portion 7	9	6	360	4.74	P	F	No significant defect observed 未有察覺明顯缺陷	Nil
T1923	Ficus microcarpa	榕樹,細葉榕	At Portion 7	9	7	420	4.84	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T1924	Morus alba	桑	At Portion 7	8	7	360	4.77	P	F	.	Nil
T1925	Ficus virens	大葉榕,黃葛樹	At Portion 7	6	5	270	3.7	F	P	No significant defect observed 未有察覺明顯缺陷	Nil
T2013	Aleurites moluccana	石栗	Police Officer's Club	7	5	414	5.38	G	G	No significant defect observed 未有察覺明顯缺陷	Cabling / other support (to be done by POC) 安裝纜索或支撐物(由警察員工會所負責) Reminded POC of the tree condition 已通知警察員工會所有關樹木情況
T2014	Aleurites moluccana	石栗	Police Officer's Club	8	4.5	481	5.48	G	G	No significant defect observed 未有察覺明顯缺陷	Cabling / other support (to be done by POC) 安裝纜索或支撐物(由警察員工會所負責) Reminded POC of the tree condition 已通知警察員工會所有關樹木情況
T009	Liquidamber Formosana	楓香	Works Area W1 at Siu Ho Wan	4	3	100	6.17	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T010	Acacia Confusa	臺灣相思	Works Area W1 at Siu Ho Wan	5	5	115	6.14	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T011	Liquidamber Formosana	楓香	Works Area W1 at Siu Ho Wan	4	3	95	6.12	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T012	Acacia Confusa	臺灣相思	Works Area W1 at Siu Ho Wan	9	7	302	6.21	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T013	Acacia Confusa	臺灣相思	Works Area W1 at Siu Ho Wan	8	5	153	6.21	F	F	No significant defect observed 未有察覺明顯缺陷	Nil

Appendix F

Tree Schedule for Transplanted Trees

Tree Schedule for Transplanted Trees

Tree No.	Botanical Name	Chinese Name	Size (m)			Health Condition (Good / Fair / Poor / Dead)	Date of Transplant to Nursery	Date of Re-Transplant to Nursery	Holding Nursery	Area of Land Occupied	Remarks
			Height (m)	Crown Spread (m)	DBH (mm)						
T1900	Ficus virens	大葉榕,黃葛樹	8	3.5	300	Fair	21/2/2011	16/1/2013	***Lau Fau Shan	21 m²	
T1902	Ficus benjamina	垂葉榕	7.5	4.0	370	Fair	22/2/2011	16/1/2013	***Lau Fau Shan	24 m²	
T1903	Ficus benjamina	垂葉榕	9	3.5	360	Fair	22/2/2011	16/1/2013	***Lau Fau Shan	21 m²	
T1904	Ficus benjamina	垂葉榕	8	3.5	385	Fair	21/2/2011	16/1/2013	***Lau Fau Shan	21 m²	
T1906	Celtis sinensis	朴樹	8.5	4.0	380	Dead	21/2/2011	Nil	Tai Po Lam Tsuen	24 m²	Report of dead trees for tree nos. T1906 has been submitted under CSF ref. no. CCW/CSF/LDS/002073 dated 17 Jan 2012. With approval from AECOM, the dead tree has been removed on 1 Sep 2012.
T1907	Ficus variegata	青果榕	8	3.5	190	Dead	18/2/2011	Nil	Tai Po Lam Tsuen	21 m²	Report of dead trees for tree nos. T1907 has been submitted under CSF ref. no. CCW/CSF/LDS/002073 dated 17 Jan 2012.With approval from AECOM, the dead tree has been removed on 14 Sep 2012.
T1908	Albizia lebbeck	大葉合歡	4.5	3.5	280	Fair	18/2/2011	16/1/2013	***Lau Fau Shan	21 m²	
T1910	Ficus virens	大葉榕,黃葛樹	9	4.0	600	Fair	23/2/2011	16/1/2013	***Lau Fau Shan	24 m²	
T1911	Albizia lebbeck	大葉合歡	2.5	2.5	130	Poor	18/2/2011	16/1/2013	***Lau Fau Shan	10 m²	
T1912	Ficus benjamina	垂葉榕	4	2.5	170	Fair	18/2/2011	16/1/2013	***Lau Fau Shan	10 m²	
T2015	Ficus microcarpa	榕樹,細葉榕	3.5	5.0	212	Fair	23/2/2011	16/1/2013	***Lau Fau Shan	30 m²	

Remarks: *** indicates that the tree has been relocated from Tai Po Lam Tsuen Tree Nursery to Lau Fau Shan Tree Nursery on the re-transplant date.

Total area of land occupied by the trees : 227 m²

Appendix G

Transplanted Trees in Holding Nursery - Report of Dead Trees T1906 and T1907

HY/2009/15: Central – Wan Chai Bypass-Tunnel
(Causeway Bay Typhoon Shelter Section)

Contractor's Submission Form

To: The Engineer's Representative – Attn: Mr Peter Poon

**Title of Submission: Transplanted Trees in Holding Nursery –
Report of Dead Trees T1906 and T1907**

Submission Ref. No.: CCW/CSF/LDS/002073

Description of Contents: (for materials submissions, use Material Submission Form)

☑ **Please refer to attachment** ☐ **See Below**

Specification/Drawing Reference (if applicable):

We refer to your correspondence ref CWB/(HY/2009/15)/C30/940/15B004797 dated 3 January 2012 concerning the dead trees T1906 and T1907 in the holding nursery.

Pursuant to PS Clause 3.101(3), we submit herewith a report for the aforesaid dead trees for your perusal.

Purpose of Submission:

☐ **For Approval** ☑ **For Information** ☐ **For Record Purposes**

From: Contractor's Representative

Name:	Signature:	Date Response required by:
David Lau		N/A

Date: 17/01/2012

Prepared by: DL/RC/GC
cc: MasterFile/QA/

	Report of Damages to the Plant in Holding Nursery			
Central-Wan Chai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)		Contract HY/2009/15	MS	Revision : A
Tree Mark:	T1906 and T1907			

1. Report of Damages

Pursuant to PS Clause 3.101(3)(b), we report that the trees T1906 and T1907, transplanted from Portion IV of the Site to the temporary holding nursery in Yuen Long, were both identified dead during our routine inspection for the month in November 2011. The photographical records are appended in Annex A.

2. Reason of Damages

After thorough investigation, the reasons that the trees die are as follow:

1. The trees grew near the seaside of the rocky embankment of the East Breakwater before they were transplanted. During the transplanting works in early 2011, concrete and rock breaking around their root balls could not be avoided. During the process, we also found that the root balls were not intact attached with soil and hence no pruning works were done for the transplanting. After transplanted to the holding nursery, they intended to grow unhealthily and became week gradually and died as a consequence.

2. Referring to the Tree Survey Report submitted under cover of Contractor's Submission ref CCW/CSF/LDS/000037B dated 23 December 2010, our landscape specialist had already highlighted the following:

   (a) For tree No. T1906, the root system distorted due to confined growing space between rock. Preparation of root ball was unfeasible for survival of transplanting.
   (b) For tree No. T1907, the root system distorted due to rock and limited root system coverage for stability.

3. Remedial Measure

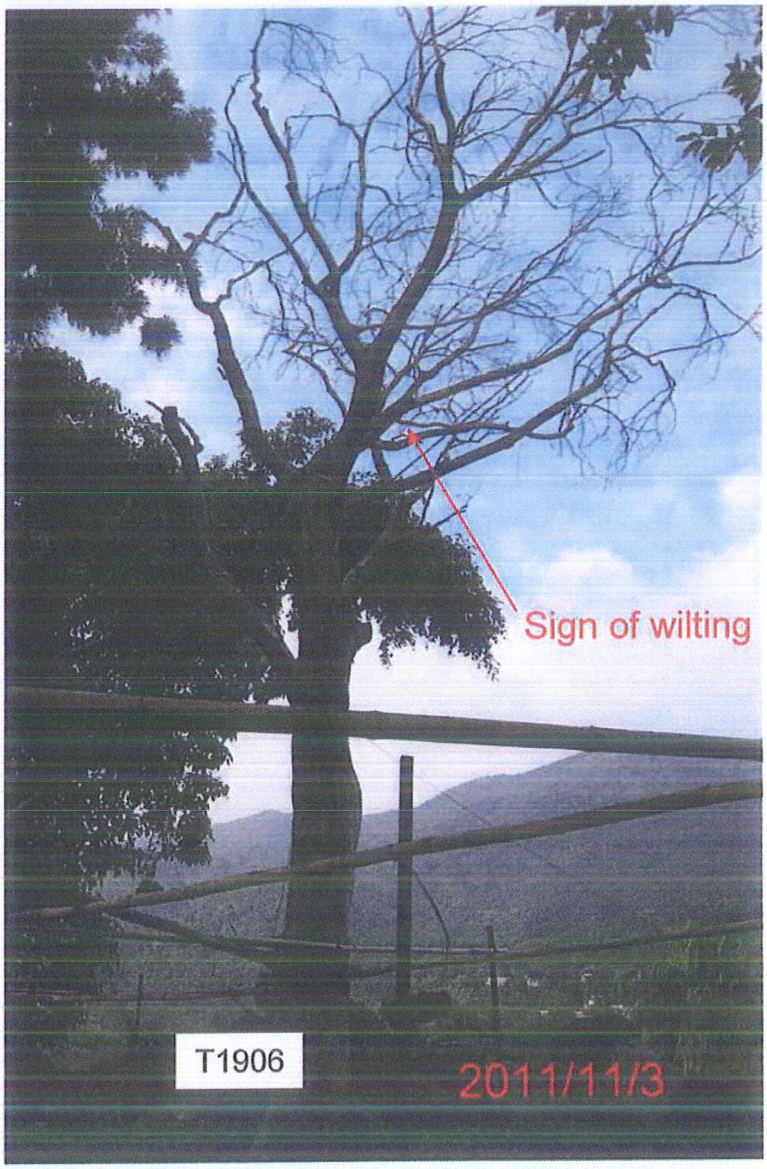
There were pre-existed conditions that the trees T1906 and T1907 were not suitable for being transplanted that we had pointed out before the execution of such works. Nevertheless, we have made our best endeavors to maintain the trees in healthy conditions during the whole process of the transplanting and in the holding nursery as required under the Contract. Therefore, under such circumstances, it is considered that we are not responsible for remedial works or replacement for the dead trees.

Annex A

Record Photos of Dead Trees T1906 and T1907

Report of Damages to the Plant in Holding Nursery

Central-Wan Chai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)	Contract HY/2009/15	MS	Revision : A
Tree Mark:	T1906 and T1907		



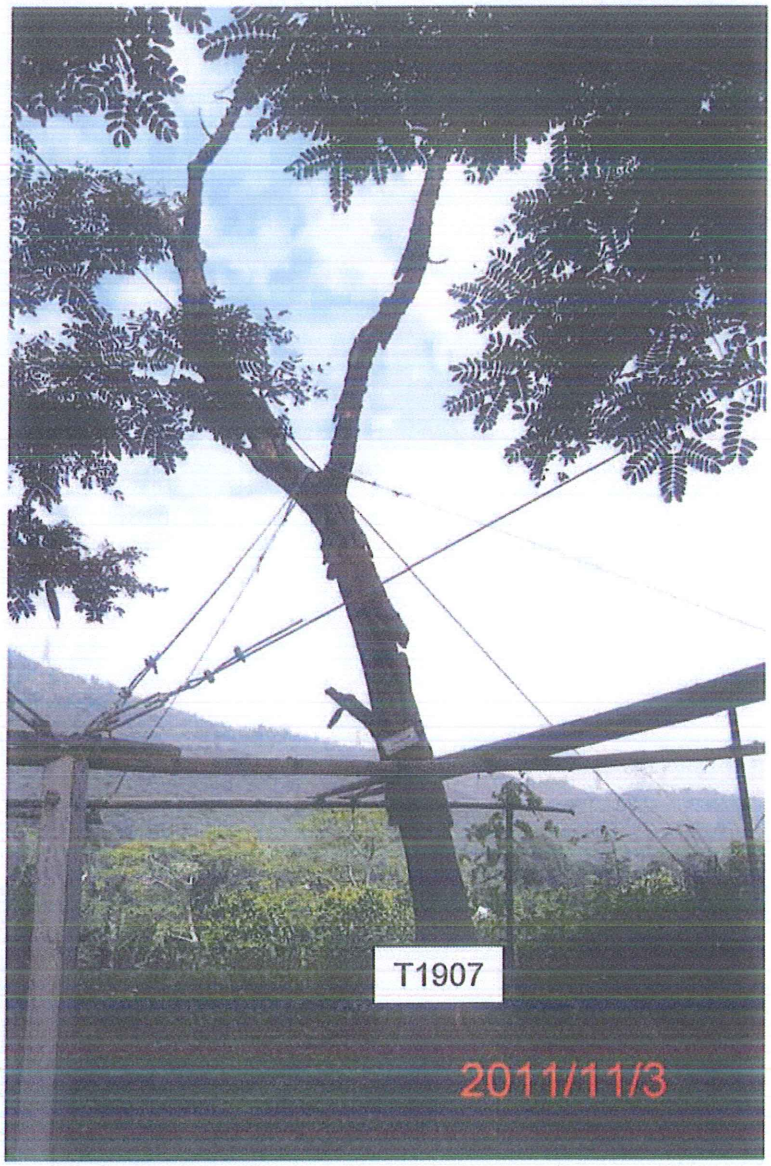
Report of Damages to the Plant in Holding Nursery

Central-Wan Chai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)	Contract HY/2009/15	MS	Revision : A
Tree Mark:	T1906 and T1907		

Sign of wilting

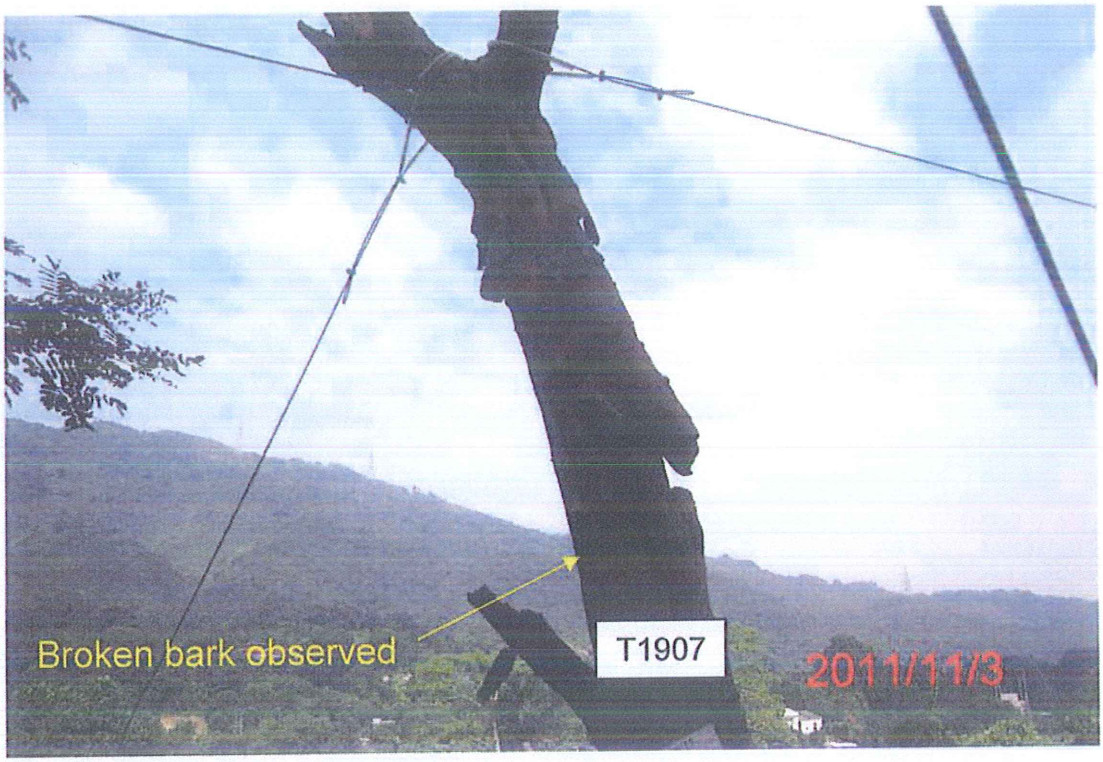
Report of Damages to the Plant in Holding Nursery

Central-Wan Chai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)	Contract HY/2009/15	MS	Revision : A
Tree Mark:	T1906 and T1907		



Report of Damages to the Plant in Holding Nursery

Central-Wan Chai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)	Contract HY/2009/15	MS	Revision : A
Tree Mark:	T1906 and T1907		



Appendix H

Report of Tree Preservation and Protection Plan with photos of retained trees

中國建築工程(香港)有限公司 CHINA STATE CONSTRUCTION ENGRG. (HONG KONG) LTD.	Contract No. HY/2009/15 Central - Wan Chai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)

CONTRACTOR'S SUBMISSION FORM

To : The Engineer's Representative
Attn : Mr. Peter Poon

CSF Ref. No.:	**CCW / 2002 / CSF / LDS / ALL / 006359** Old CSF ref. no. (if applicable) : AECOM ref. no. (if applicable) :
Title of Submission:	Bi-Monthly Report No. 23 of the Tree Preservation and Protection Plan

Description of Contents:

☒ **Please refer to attachment** ☒ **See Below**

Specification/Drawing Reference (if applicable):

We are pleased to submit herewith the bi-monthly report no.23 of the tree preservation and protection plan for your perusal.

Encl.

Purpose of Submission:
☐ **For Approval** ☐ **For Information** ☒ **For Record Purposes**

From: Contractor's Representative

Name : Gene Cheung

Signature:

Date : 10/11/2014

Date Response required by:

N/A

Prepared by: GC/gl
cc: MasterFile/QA

Tree Preservation and Protection Plan

Bi-Monthly Report No. 23

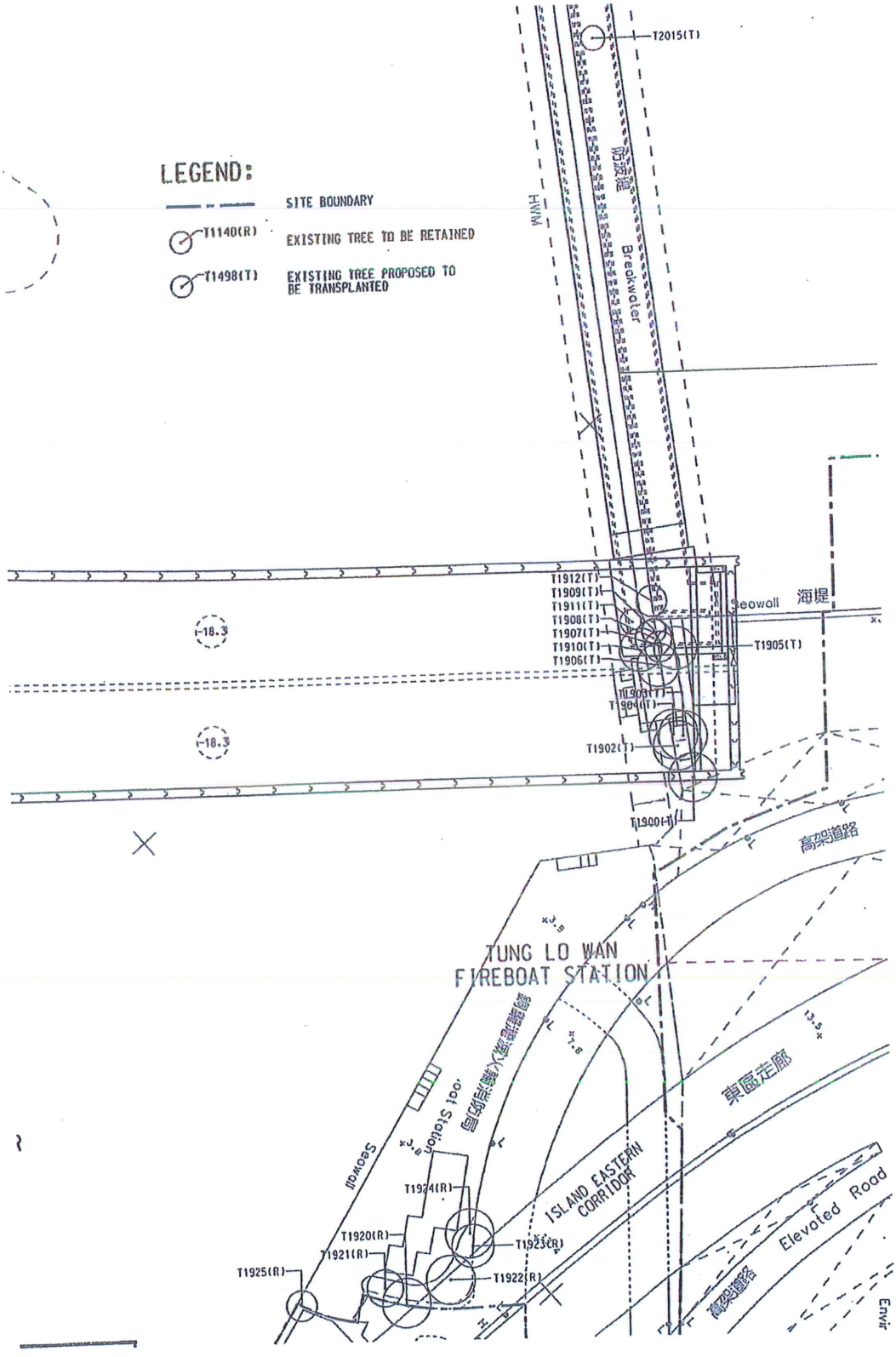
(For the Month from September 2014 to October 2014)

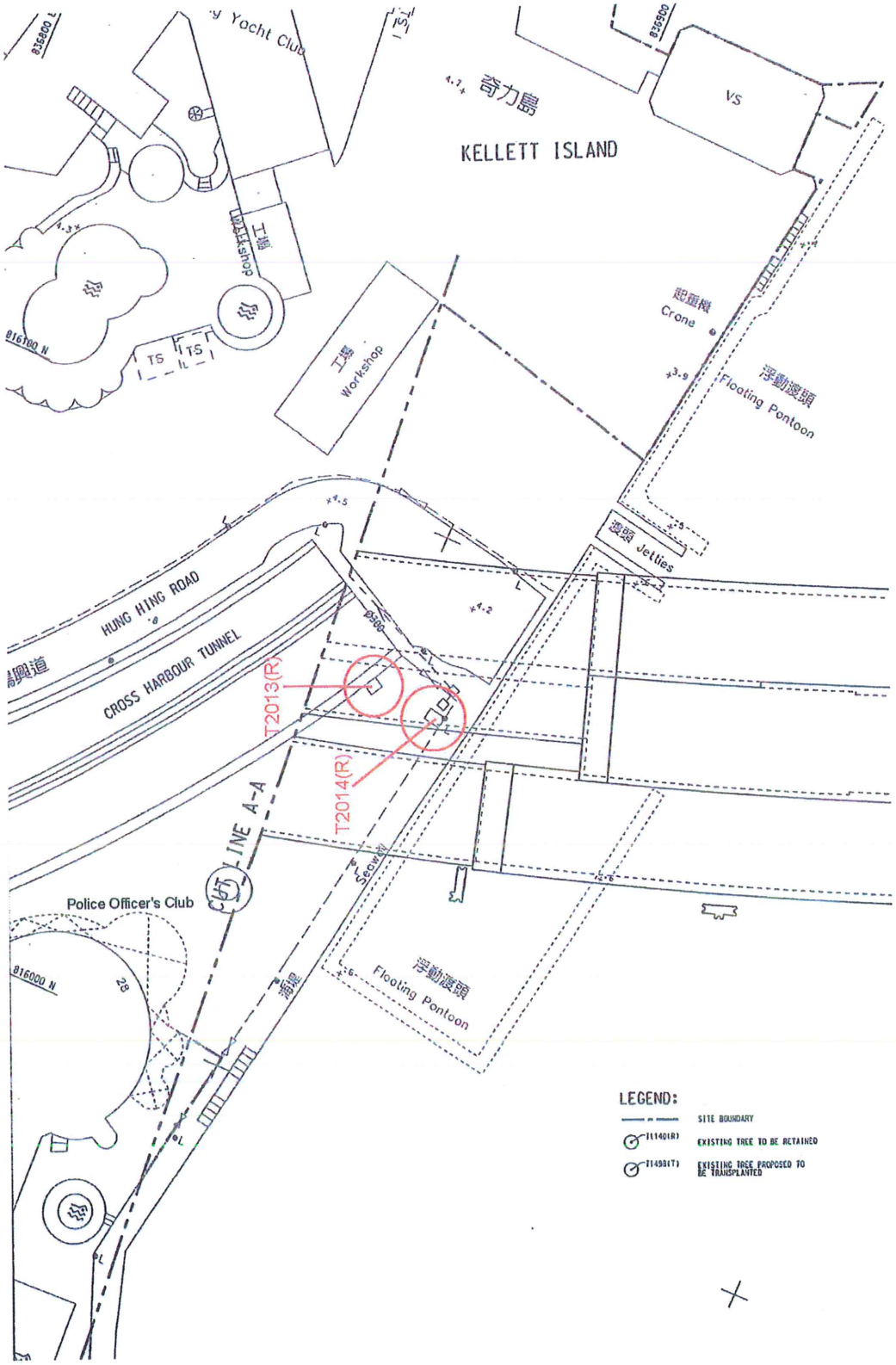
Endorsed by:

David Bloxham
Senior Landscape Architect
China State Construction
Engineering(Hong Kong)Ltd.

Contents –

1. Location Plans showing the Preserved Trees

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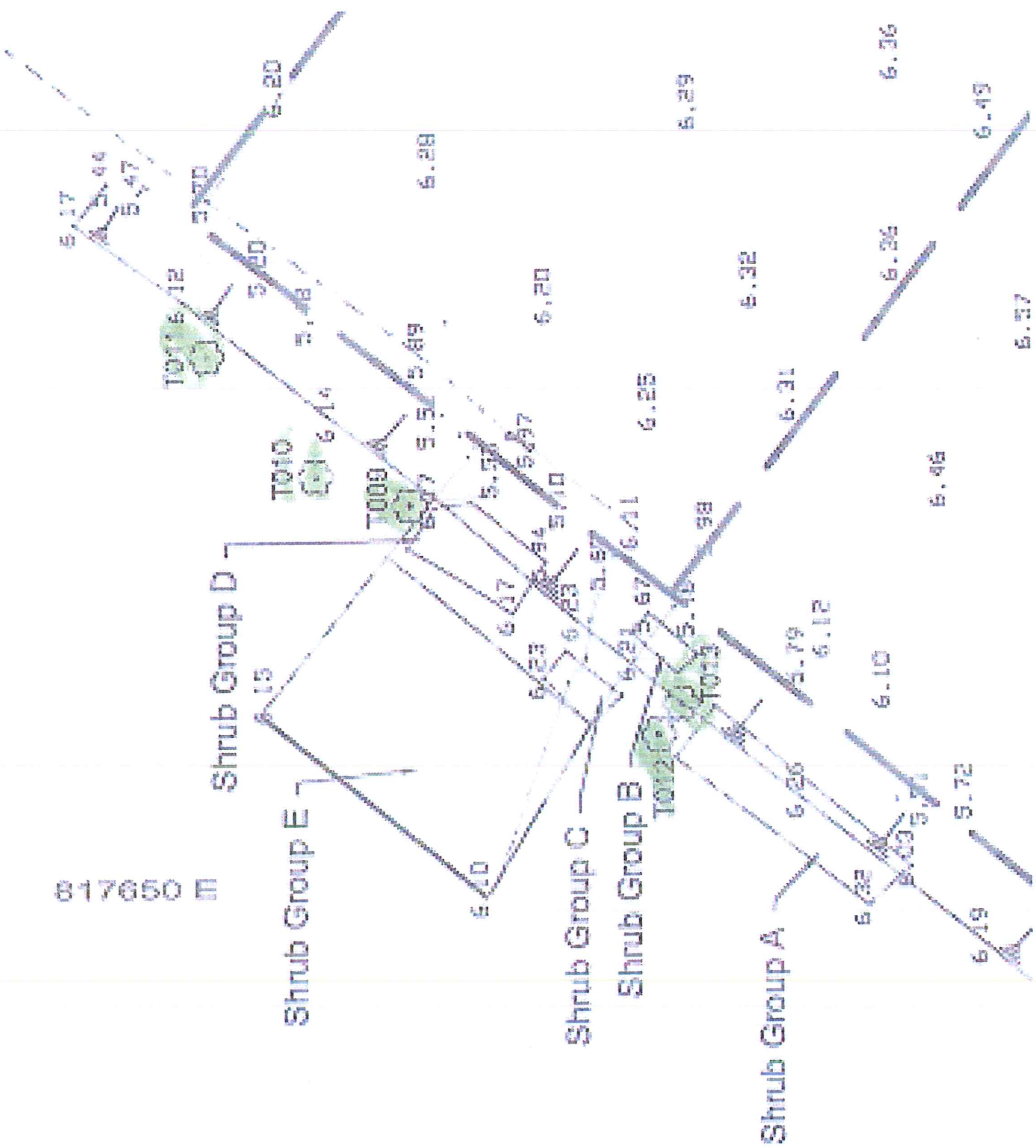
奇力島
KELLETT ISLAND
VS
工場
Workshop
起重機
Crane
浮動躉頭
Floating Pontoon
躉頭 Jetties
HUNG HING ROAD
CROSS HARBOUR TUNNEL
T2013(R)
T2014(R)
LINE A-A
Police Officer's Club
Sewer
LEGEND:
SITE BOUNDARY
EXISTING TREE TO BE RETAINED
EXISTING TREE PROPOSED TO BE TRANSPLANTED


Shrub Group D
Shrub Group E
Shrub Group C
Shrub Group B
Shrub Group A
817650 E
T009
T010

2. Tree Schedule

Tree No.	Botanical Name	Chinese Name	Location	Size			Ground Level (mPD)	Form (G/F/P)	Health (G/F/P)	Tree Condition	Mitgation Measures
				Height (m)	Crown Spread (m)	Girth (mm)					
T1920	Ficus virens	大葉榕,黃葛樹	At Portion 7	10	7	760	4.8	G	F	No significant defect observed 未有察覺明顯缺陷	Nil
T1921	Morus alba	桑	At Portion 7	8	7	330	4.4	G	F	Sign of decay - Minor 呈現腐爛 - 輕微	Tree condition under close observation 密切監察樹木狀況
T1922	Ficus virens	大葉榕,黃葛樹	At Portion 7	9	6	360	4.74	P	F	No significant defect observed 未有察覺明顯缺陷	Nil
T1923	Ficus microcarpa	榕樹,細葉榕	At Portion 7	9	7	420	4.84	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T1924	Morus alba	桑	At Portion 7	8	7	360	4.77	P	F	.	Nil
T1925	Ficus virens	大葉榕,黃葛樹	At Portion 7	6	5	270	3.7	F	P	No significant defect observed 未有察覺明顯缺陷	Nil
T2013	Aleurites moluccana	石栗	Police Officer's Club	7	5	414	5.38	G	G	p	Cabling / other support (to be done by POC) 安裝纜索或支撐物(由警察員工會所負責) Reminded POC of the tree condition 已通知警察員工會所有關樹木情況
T2014	Aleurites moluccana	石栗	Police Officer's Club	8	4.5	481	5.48	G	G	No significant defect observed 未有察覺明顯缺陷	Cabling / other support (to be done by POC) 安裝纜索或支撐物(由警察員工會所負責) Reminded POC of the tree condition 已通知警察員工會所有關樹木情況
T009	Liquidamber Formosana	楓香	Works Area W1 at Siu Ho Wan	4	3	100	6.17	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T010	Acacia Confusa	臺灣相思	Works Area W1 at Siu Ho Wan	5	5	115	6.14	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T011	Liquidamber Formosana	楓香	Works Area W1 at Siu Ho Wan	4	3	95	6.12	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T012	Acacia Confusa	臺灣相思	Works Area W1 at Siu Ho Wan	9	7	302	6.21	F	F	No significant defect observed 未有察覺明顯缺陷	Nil
T013	Acacia Confusa	臺灣相思	Works Area W1 at Siu Ho Wan	8	5	153	6.21	F	F	No significant defect observed 未有察覺明顯缺陷	Nil

3. Photographic Records of the Preserved Trees

T1920 - Ficus virens　大葉榕，黃葛樹

T1921 - Morus alba 桑

T1921 : Sign of decay – Minor (Tree condition under close observation)

T1922 - Ficus virens　大葉榕，黃葛樹

T1923 - Ficus microcarpa　榕樹，細葉榕

T1924 - Morus alba 桑

T1925 - Ficus virens　大葉榕，黃葛樹

T1923 - Ficus microcarpa　榕樹,細葉榕
T1924 - Morus alba　桑

T1923　　T1924

T2013 - Aleurites moluccana　石栗

T2014 - Aleurites moluccana 石栗

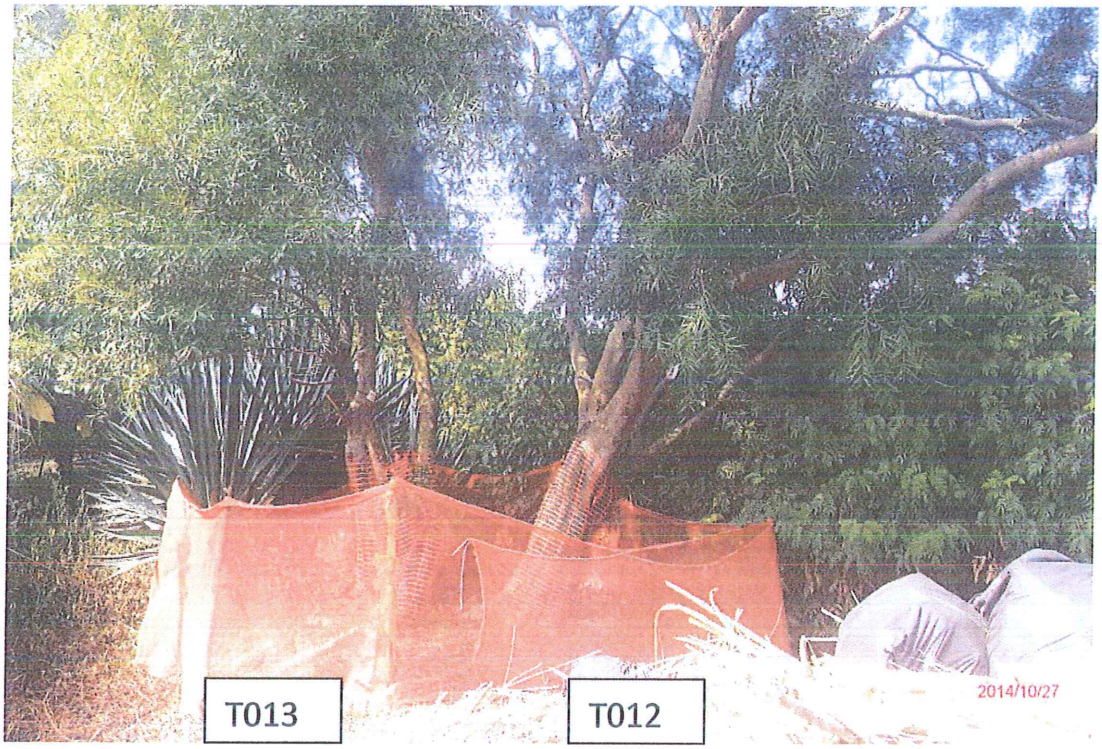
T009 Liquidamber Formosana 楓香

T010 Acacia Confusa 臺灣相思

T011 Liquidamber Formosana 楓香

T011

T012 Acacia Confusa 臺灣相思
T013 Acacia Confusa 臺灣相思



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Appendix I

Transplanted Trees Inspection Record with photos of transplanted trees

中國建築工程(香港)有限公司 CHINA STATE CONSTRUCTION ENGRG. (HONG KONG) LTD.	Contract No. HY/2009/15 Central - Wan Chai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)

CONTRACTOR'S SUBMISSION FORM

To : The Engineer's Representative
Attn : Mr. Peter Poon

CSF Ref. No.:	**CCW / 2002 / CSF / LDS / TS1 / 006360** Old CSF ref. no. (if applicable) : AECOM ref. no. (if applicable) :
Title of Submission:	Transplanted Trees Inspection Record for the Month of October 2014

Description of Contents:

☒ **Please refer to attachment** ☒ **See Below**

Specification/Drawing Reference (if applicable):

Pursuant to P.S. Clause 3.101(4), we submit herewith the transplanted trees inspection record for the month of October 2014 for your perusal.

Encl.

Purpose of Submission:

☐ **For Approval** ☐ **For Information** ☒ **For Record Purposes**

From: Contractor's Representative

Name : Gene Cheung

Signature:

Date : 10/11/2014

Date Response required by:

N/A

Prepared by: GC/GL
cc: MasterFile/QA

Transplanted Trees Inspection Record

For the Month of October 2014

Endorsed by:

David Bloxham
Senior Landscape Architect
China State Construction
Engineering(Hong Kong)Ltd

1. Tree Survey Schedule of Transplanted Trees at Holding Nursery

(for Octobber 2014)

Tree No.	Botanical Name	Chinese Name	Size (m)			Health Condition (Good / Fair / Poor / Dead)	Date of Transplant to Nursery	Date of Re-Transplant to Nursery	Holding Nursery	Area of Land Occupied	Remarks
			Height (m)	Crown Spread (m)	DBH (mm)						
T1900	Ficus virens	大葉榕,黃葛樹	8	3.5	300	Fair	21/2/2011	16/1/2013	***Lau Fau Shan	21 m²	
T1902	Ficus benjamina	垂葉榕	7.5	4.0	370	Fair	22/2/2011	16/1/2013	***Lau Fau Shan	24 m²	
T1903	Ficus benjamina	垂葉榕	9	3.5	360	Fair	22/2/2011	16/1/2013	***Lau Fau Shan	21 m²	
T1904	Ficus benjamina	垂葉榕	8	3.5	385	Fair	21/2/2011	16/1/2013	***Lau Fau Shan	21 m²	
T1906	Celtis sinensis	朴樹	8.5	4.0	380	Dead	21/2/2011	Nil	Tai Po Lam Tsuen	24 m²	Report of dead trees for tree nos. T1906 has been submitted under CSF ref. no. CCW/CSF/LDS/002073 dated 17 Jan 2012. Dead tree has been removed on 1 Sep 2012.
T1907	Ficus variegata	青果榕	8	3.5	190	Dead	18/2/2011	Nil	Tai Po Lam Tsuen	21 m²	Report of dead trees for tree nos. T1907 has been submitted under CSF ref. no. CCW/CSF/LDS/002073 dated 17 Jan 2012. Dead tree has been removed on 14 Sep 2012.
T1908	Albizia lebbeck	大葉合歡	4.5	3.5	280	Fair	18/2/2011	16/1/2013	***Lau Fau Shan	21 m²	
T1910	Ficus virens	大葉榕,黃葛樹	9	4.0	600	Fair	23/2/2011	16/1/2013	***Lau Fau Shan	24 m²	
T1911	Albizia lebbeck	大葉合歡	2.5	2.5	130	Fair	18/2/2011	16/1/2013	***Lau Fau Shan	10 m²	
T1912	Ficus benjamina	垂葉榕	4	2.5	170	Fair	18/2/2011	16/1/2013	***Lau Fau Shan	10 m²	
T2015	Ficus microcarpa	榕樹,細葉榕	3.5	5.0	212	Fair	23/2/2011	16/1/2013	***Lau Fau Shan	30 m²	

Remarks: *** indicates that the tree has been relocated from Tai Po Lam Tsuen Tree Nursery to Lau Fau Shan Tree Nursery on the re-transplant date.

Total area of land occupied by the trees : 227 m²

Granton

HONG KONG LANDSCAPING CO., LTD.

CONTRACT NO. HY/2009/15

CENTRAL - WANCHAI BYPASS - TUNNEL

(CAUSEWAY BAY TYPHOON SHELTER SECTION)

LANDSCAPING WORKS

ESTABLISHMENT WORKS DAILY RECORD FOR THE MONTH OF (5 Sept 月份) 2014

Year 201		Frequency	Dates	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Works																																		
Watering *	澆水	2/W			✓			✓			✓				✓				✓			✓				✓			✓				✓	
Fertilizing *	施肥	3/Y																✓														✓	
Pruning	修剪	As required																																
Weeding *	除雜草	1/M																														✓	
Litter clearing	清垃圾	As required																																
Pest & Disease control	病蟲害治理	As required																																
Firming up	扶樹	As required																																
Forking *	翻土	3/Y																																
Root activator	生根粉	1/Y																																
地盤主管簽署																																		

Reviewed By Project Manager

項目經理

日期 30/9/2014

Remarks:

* Record photos should be provided for the works.

Content

2. Photographic Records

General View of the Holding Nursery

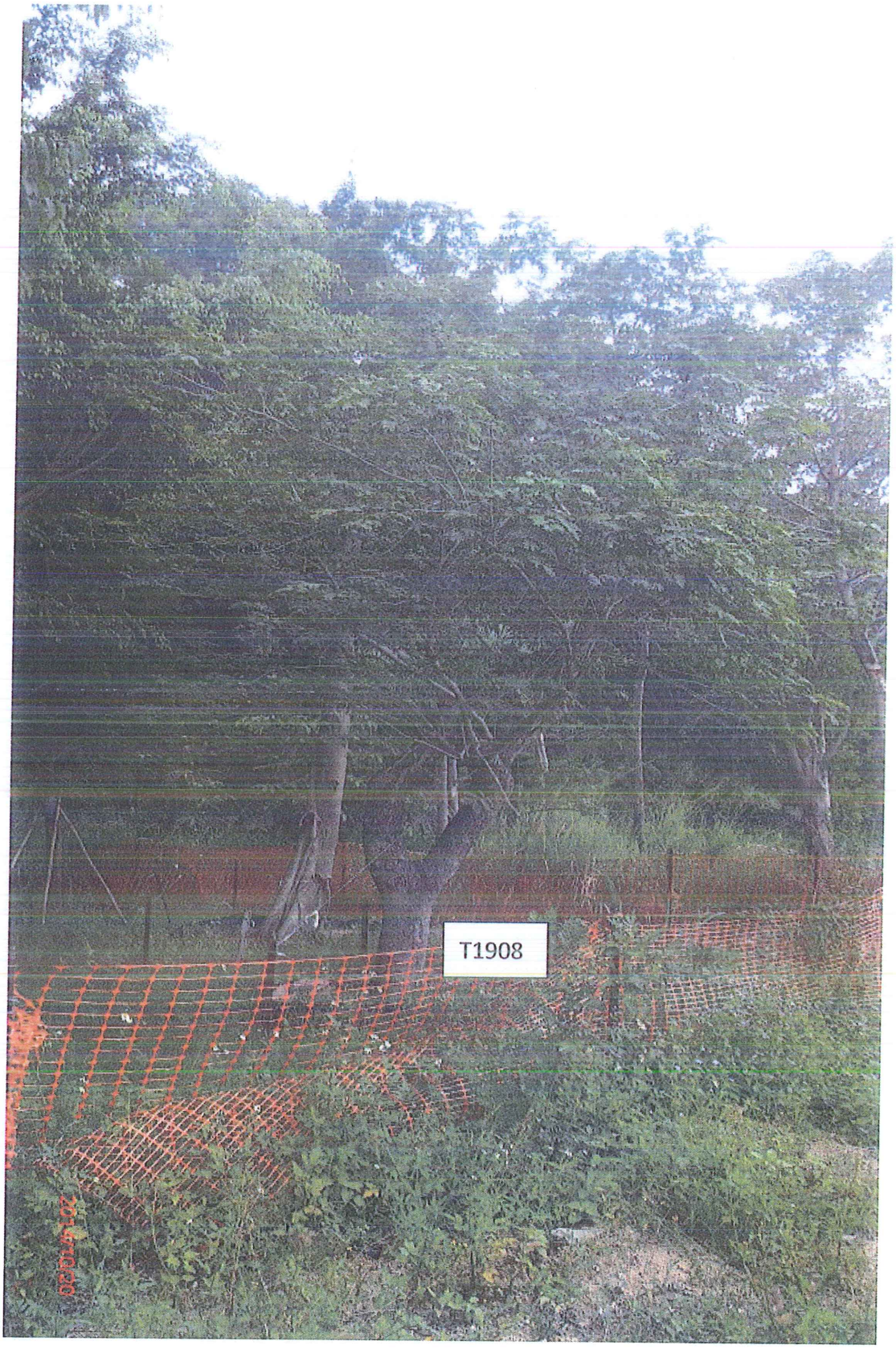

T1900


T1902


2014/10/23
T1903


T1904
2014/09/20

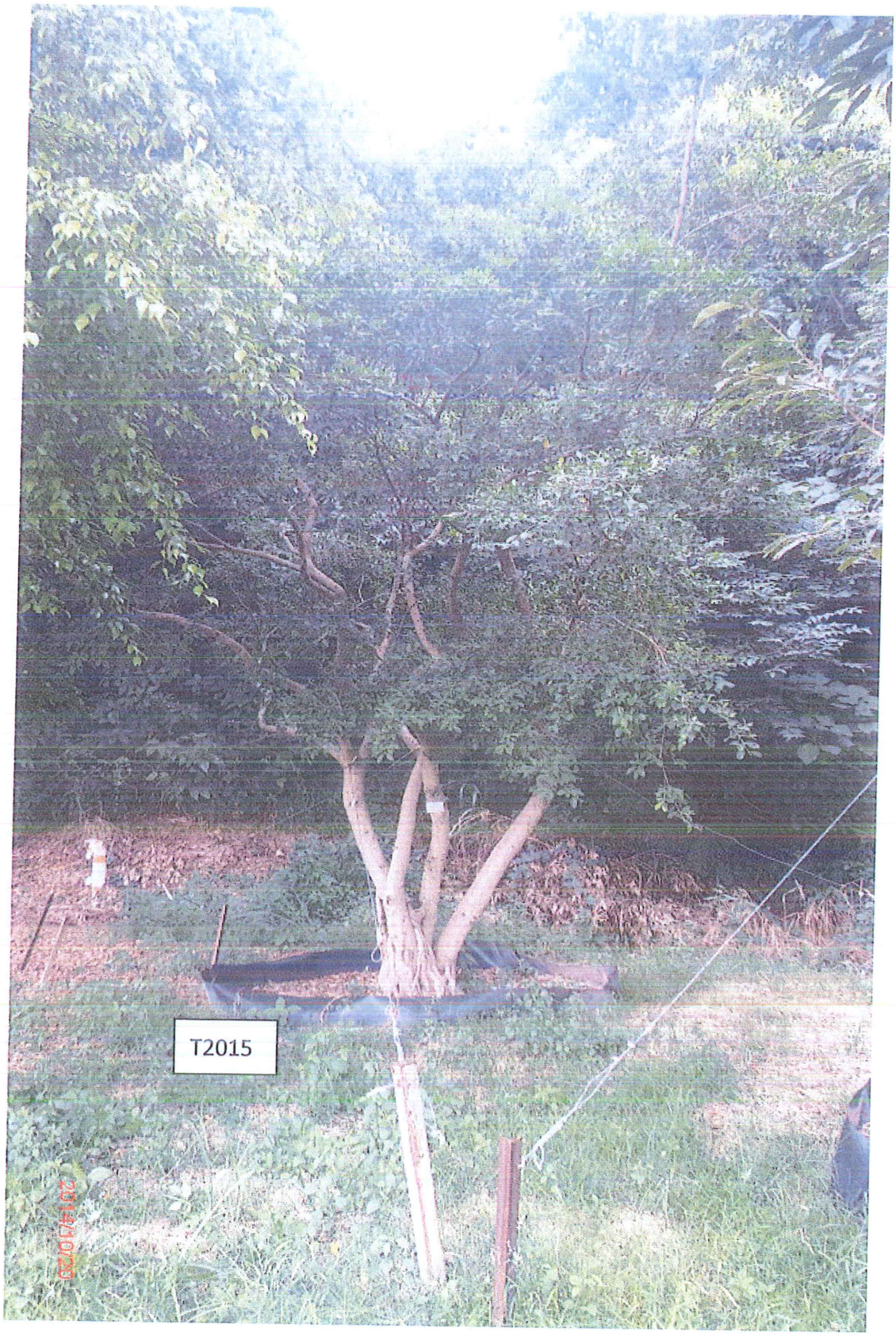

T1904
20140020


T1908
20150420


T1910
2014/10/20

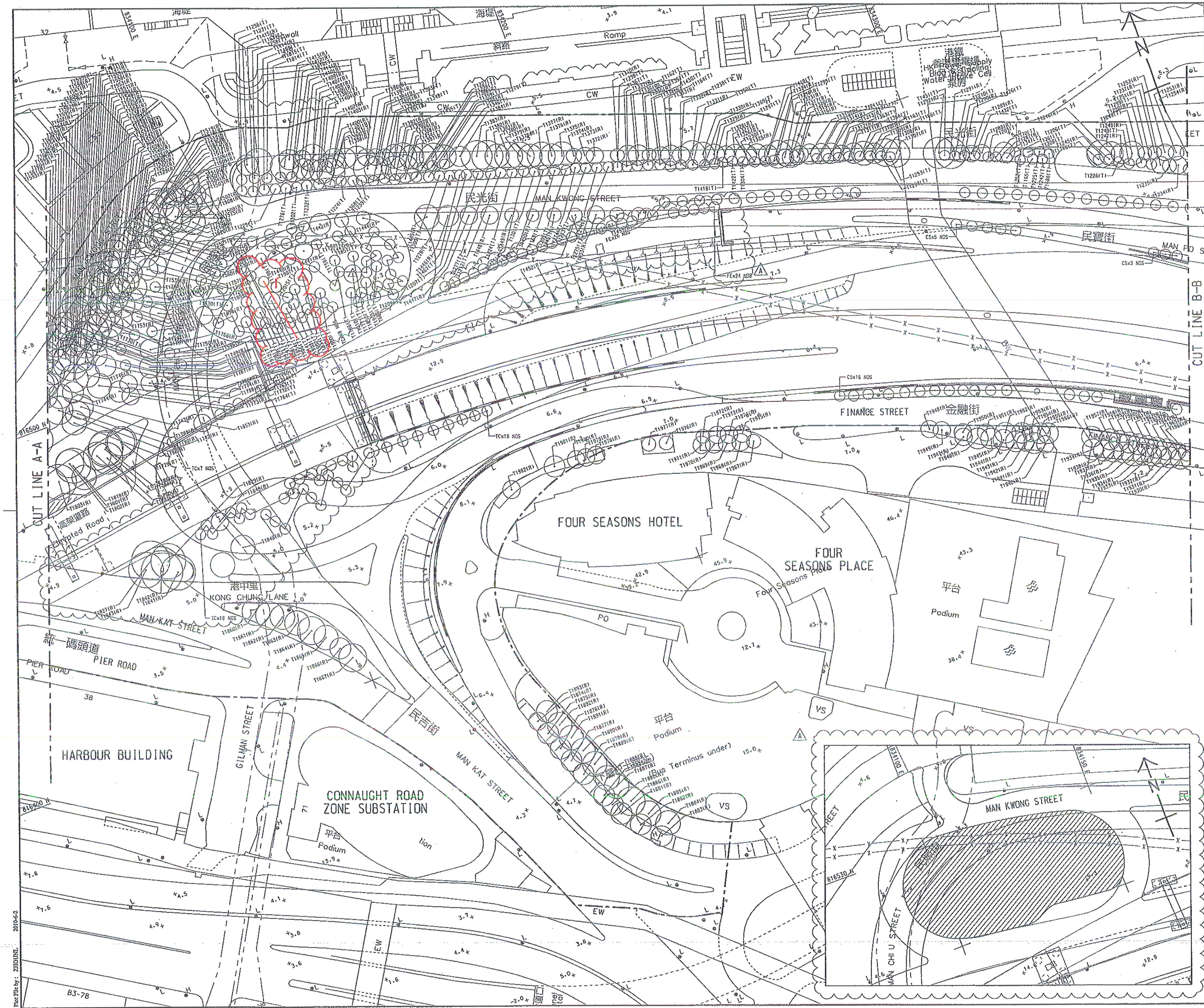

T1911
2014/10/20

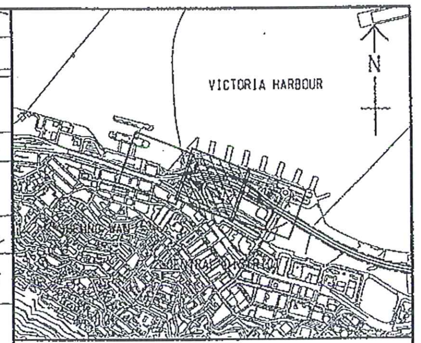

T1912
2014/02/20


T2015
2014/10/20

Appendix J

Permanent Location of Dead Trees T1906 & T1907





KEY PLAN
SCALE A1 1 : 20000
A3 1 : 40000

NOTE:
1. FOR NOTES AND LEGEND SEE DRG. NO. 60095653/CI/9011.

LEGEND:
LOCATION A

REV.	DESCRIPTION		CHKD	DATE
B	WORKING DRAWING		BCC	OCT 10
A	TENDER ADDENDUM NO. 1		BCC	JUN 10
-	TENDER DRAWING	ACHAN	BCC	APR 10

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK

PWP ITEM NO. 工務計劃項目編號 579 TH

CENTRAL - WAN CHAI BYPASS - CENTRAL INTERCHANGE

TREE PLANTING PLAN

SHEET 2 OF 3

AECOM

DRG.NO. 圖紙編號 60095653/CI/9012B

DESIGNED BY 設計 VLKK | CONTRACT NO. 合約編號 HY/2009/18 | APPROVED 批准人 CN
DRAWN BY 繪圖 LHC | STATUS 狀況 WORKING DRAWING
SCALE 比例 A1 1 : 500 A3 1 : 1000
DIMENSIONS ARE IN 尺寸單位 METRES
© COPYRIGHT RESERVED 版權所有

p:\projects\60095653\Drawing\CI\9000\CI_9012.dgn

AECOM
8/F, Grand Central Plaza, Tower 2,
138 Shatin Rural Committee Road,
Shatin, Hong Kong
香港新界沙田鄉事會路 138 號
新城市中央廣場第 2 座 8 樓
www.aecom.com

+852 2605 6262 tel
+852 2691 2649 fax

15B000278

Your Ref. :
Our Ref. : CWB/(HY/2009/15)/C30/940/15B000278

- 1 DEC 2010
C30/940

BY HAND

1 December 2010

Lands Department
Lands Administration Office
District Lands Office, Hong Kong East
19th floor, Southorn Centre, 130 Hennessy Road,
Wan Chai, Hong Kong

Attn.: Mr. Brian M. H. Au Yeung

Dear Sir,

Contract No. HY/2009/15
Central-Wan Chai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)

Submission of Tree Survey Report - Review of
Existing Trees Proposed to be Felled at Portions IV and XXII

I am pleased to submit herewith a Tree Survey Report enclosing a thorough condition review of 13 nos. of existing trees, located along the existing eastern breakwater of the Causeway Bay Typhoon Shelter, that need to be transplanted under the above Contract for your perusal and consideration.

Based on a survey carried out recently by my Contractor, China State Construction Engineering Ltd., the report reveals that 11 of the trees will have a very slim chance of survival after transplanting owing to their existing growing condition such as, the root system in rock with sloping topography making root ball preparation difficult which will severally inhibit the trees chances of withstanding the stress of transplanting or in some cases where the existing trees grow at an angle that will have a distorted root structure making them unable to be located upright in any new-level ground location, whilst the remaining 2 nos. of trees are found dead.

In light of the report findings, I am in support of my Contractor's recommendation to fell the 13 nos. of existing trees with compensatory planting as outlined in the report and would be most grateful to your approval of my Contractor's proposal. For ease of reference, Section 5 of the enclosed report presents the proposed compensatory tree planting for the tree felling.

Should you have any queries on this submission, please feel free to contact the undersigned or my Resident Engineer, Ms Fanny Lau, at 6463 3080.

Yours faithfully,
For and on behalf of
AECOM Asia Co. Ltd.

Denis Norton
Senior Resident Engineer
Encl.

c.c. CE3/MW, HyD - Attn.: Mr. Kelvin Lo (w/o)
AECOM - Attn.: Mr. Conrad Ng (w/o)
See distribution list

DAN/FL/AL/imww

AECOM

Distribution List

1. Leisure and Cultural Services Department
9/F, Lockhart Road Complex,
225 Hennessy Road,
Wanchai, Hong Kong

Attn.: Mr. Hoo Lam

(By hand) (w/e)

2. Home Affairs Department
Eastern District Office
Causeway Bay Liaison Team
1/F, 7 Fook Yum Road,
Causeway Bay,
Hong Kong

Attn.: Ms. Grace Chan

(By hand) (w/e)

3 Agriculture, Fisheries and Conservation Department
7/F, Cheung Sha Wan Government Offices
303 Cheung Sha Wan Road
Kowloon, Hong Kong

Attn.: Dr. K. H. Cheung

(By hand) (w/e)

Contract No. HY/2009/15
Central – Wanchai Bypass - Tunnel
(Causeway Bay Typhoon Shelter Section)

Tree Survey Report

Review of Existing Trees Proposed to be Felled at Portion 4 and 22

Date : 26 November 2010

Prepared by :

David Bloxham Dip La BA (Hons) MLI (UK Chartered)
China State Construction Engineering Ltd
Senior Landscape Architect.

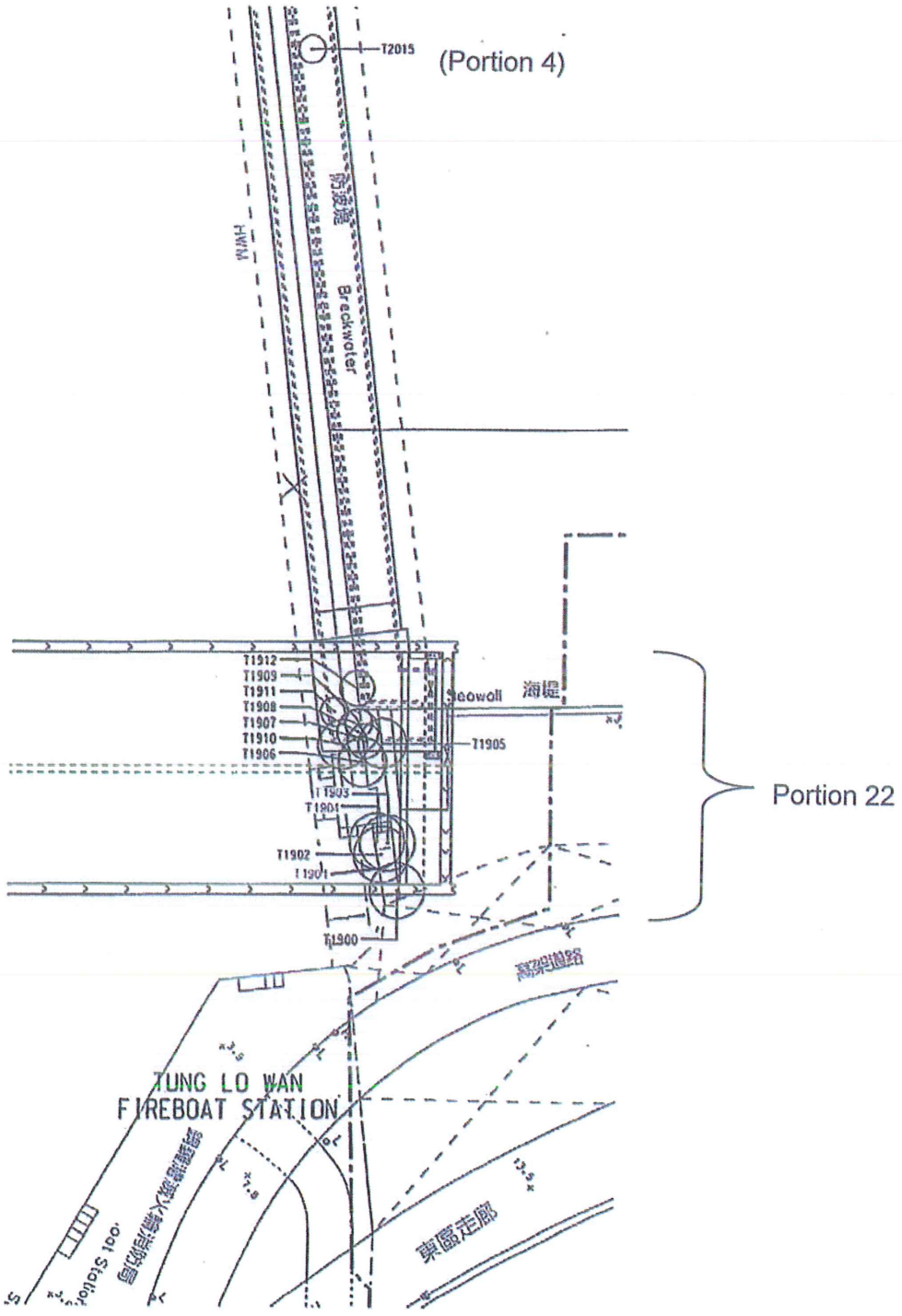
Contents –

1. Tree Survey Schedule

Site Tree survey - November 2010
(Read in conjunction with photographic record and attached location plan)

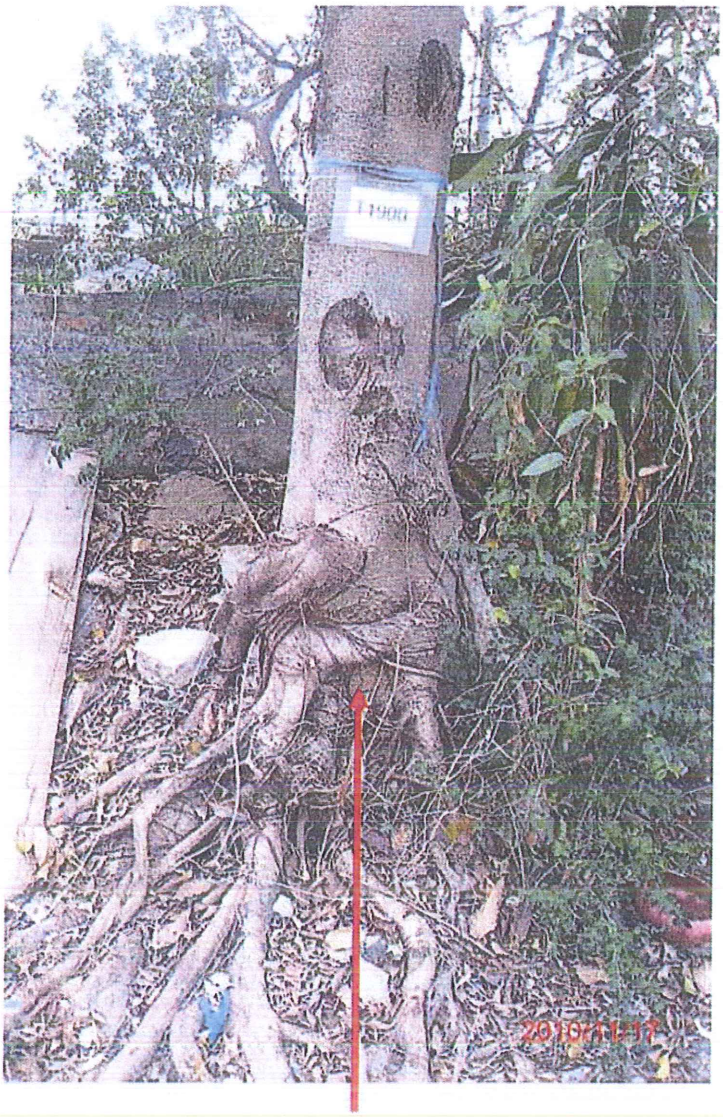
Tree No.	Botanical Name	Chinese Name	Location	Size (m)			Form (G/F/P)	Health (G/F/P)	Amenity Value (H/M/L)	Transplanting Survival Rate (H/M/L)	CSCE Recommendation	Remarks
				Height (m)	Crown Spread (m)	Girth (mm)						
T1900	Ficus virens	大葉榕,黃葛樹	At Portion 22	8	10	300	F	F	L	L	Fell	Refer to site report
T1901	**Ficus benjamina**	**垂葉榕**	**At Portion 22**	**7**	**8**	**382**					**Fell**	**Dead Tree**
T1902	Ficus benjamina	垂葉榕	At Portion 22	8	10	370	F	F	L	L	Fell	Refer to site report
T1903	Ficus benjamina	垂葉榕	At Portion 22	11	10	360	F	F	L	L	Fell	Refer to site report
T1904	Ficus benjamina	垂葉榕	At Portion 22	11	8	385	F	F	M	L	Fell	Refer to site report
T1905	Macaranga tanarius	血桐	At Portion 22	7	5	330	P	F	L	L	Fell	Crown branches have been damaged by other works
T1906	Celtis sinensis	朴樹	At Portion 22	8.5	6	380	F	F	M	L	Fell	Refer to site report
T1907	Ficus variegata	青果榕	At Portion 22	8	4	190	F	F	L	L	Fell	Refer to site report
T1908	Albizia lebbeck	大葉合歡	At Portion 22	8.5	7	280	F	F	L	L	Fell	Refer to site report
T1909	**Bombax ceiba**	**木棉**	**At Portion 22**	**4.5**	**0**	**170**					**Fell**	**Dead Tree**
T1910	Ficus virens	大葉榕,黃葛樹	At Portion 22	6	5	600	F	F	L	L	Fell	Refer to site report
T1911	Albizia lebbeck	大葉合歡	At Portion 22	2.5	5	130	P	F	L	L	Fell	Refer to site report
T1912	Ficus benjamina	垂葉榕	At Portion 22	3.5	4	170	P	F	L	L	Fell	Refer to site report
T2015	Ficus microcarpa	榕樹,細葉榕	At Portion 4	3.5	7	212	F	F	L	L	Fell	Refer to site report

2. Location Plan of Existing Trees



3. Existing Tree Photographs

(a) Tree no. T1900 - Ficus virens 大葉榕,黃葛樹



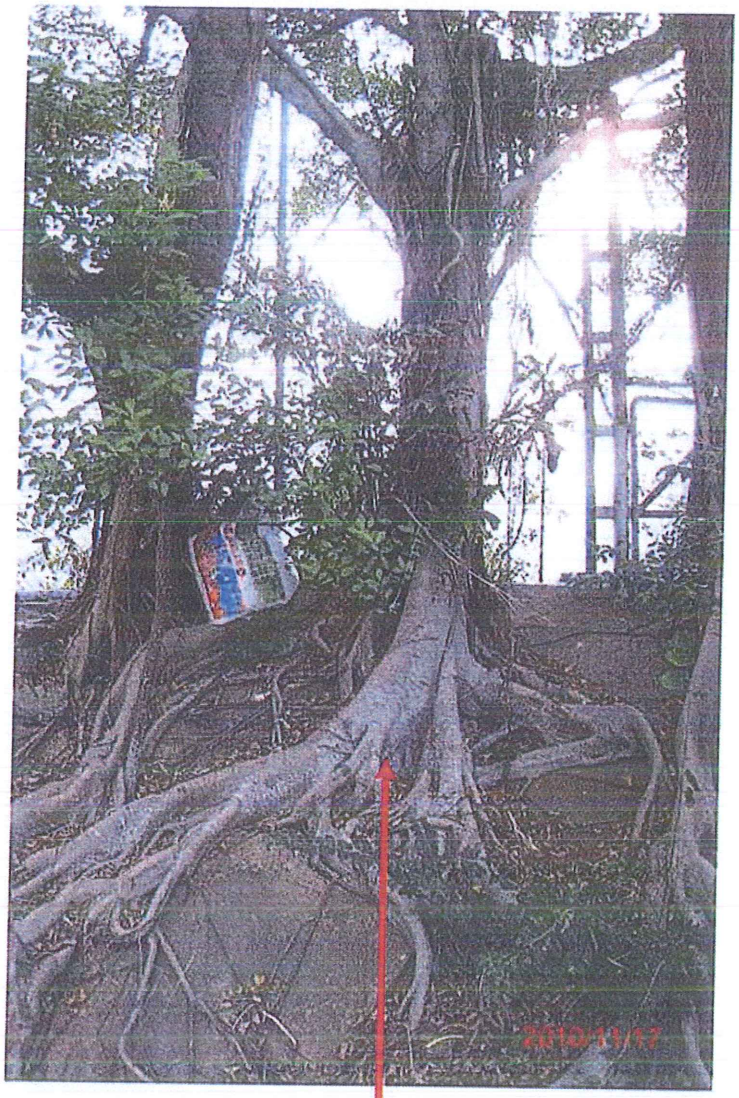
Root system distorted due to confined growing space between rock. Preparation of rootball is unfeasible for survival of transplanting

(b) Tree no. T1901 - Ficus benjamina 垂葉榕

Dead tree

(c) Tree no. T1902 - Ficus benjamina 垂葉榕

T1902



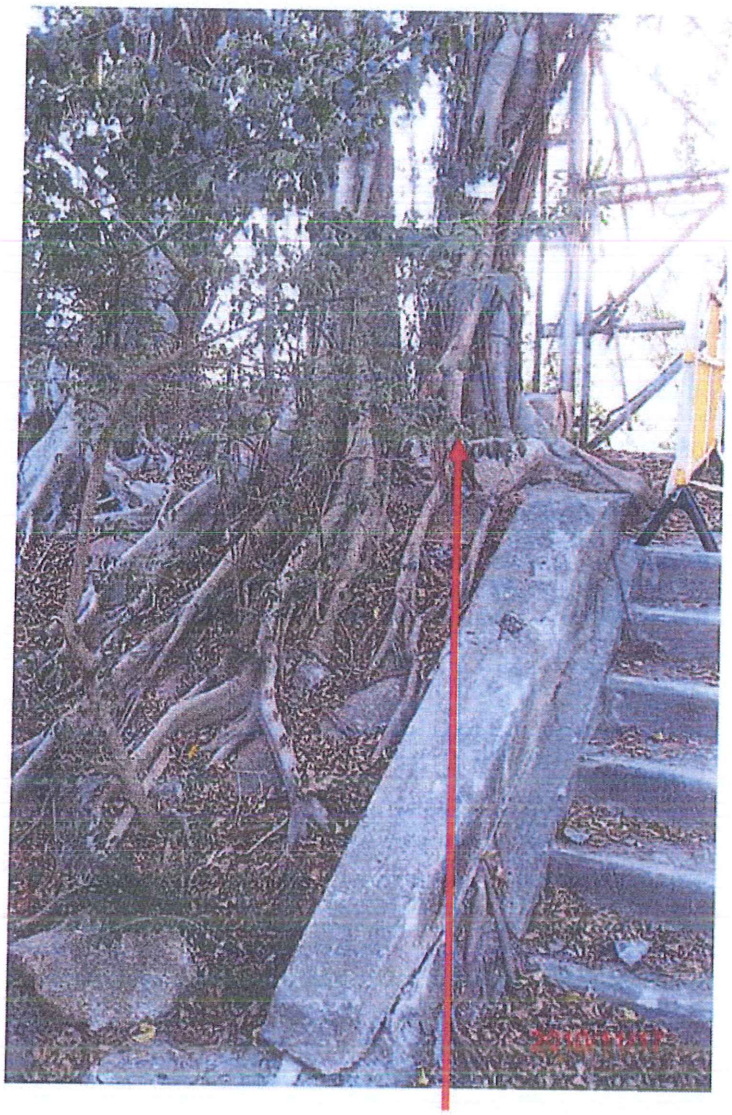
Rootball locates on large boulder at slope and clashing with adjacent roots of trees. Preparation would drastically affect rootball and structural stability

(d) Tree no. T1903 - Ficus benjamina 垂葉榕

Growing on slope area

Root system distorted due to confined growing space between rock. Preparation of rootball is unfeasible for survival of transplanting.

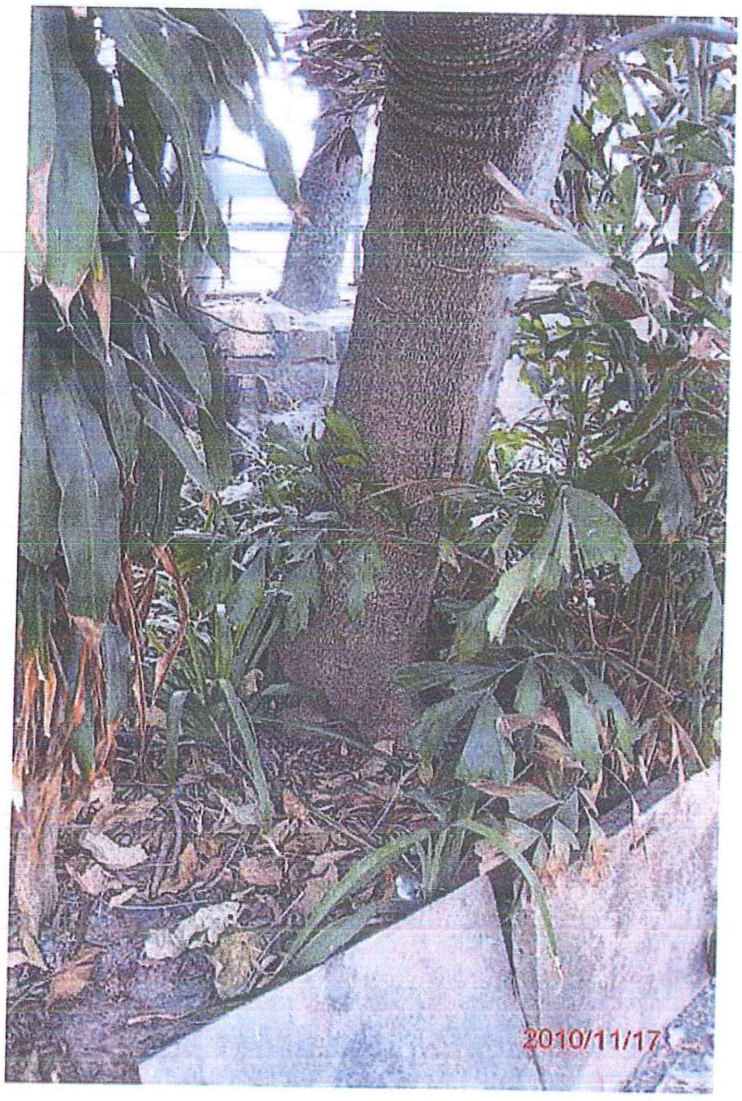
(e) Tree no. T1904 - Ficus benjamina 垂葉榕



Rootball locates on large boulder at slope and clashes with adjacent roots of trees. Preparation would drastically affect rootball and structural stability

Contract No. HY/2009/15
Central – Wanchai Bypass - Tunnel
(Causeway Bay Typhoon Shelter Section)

(f) Tree no. T1905 - Macaranga tanarius 血桐


2010/11/17

(g) Tree no. T1906 - Celtis sinensis 朴樹

Tree locates on uneven levels

Root system distorted due to confined growing space between rock. Preparation of rootball is unfeasible for survival of transplanting

(h) Tree no. T1907 - Ficus variegate 青果榕

Contract No. HY/2009/15
Central – Wanchai Bypass - Tunnel
(Causeway Bay Typhoon Shelter Section)

Root system distorted due to rock.
Limited root system coverage for stability.

(i) Tree no. T1908 - Albizia lebbeck 大葉合歡

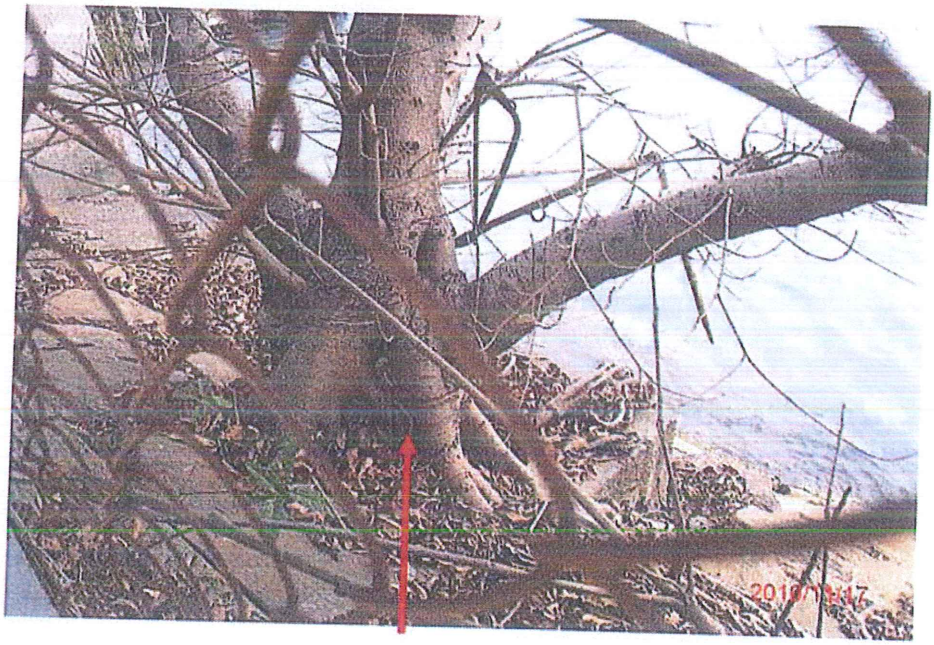
Contract No. HY/2009/15
Central – Wanchai Bypass - Tunnel
(Causeway Bay Typhoon Shelter Section)

Tree is leaning using adjacent steel as support for main canopy

Rootball locates in rocks.
Limited area due to rock and adjacent slope profile.
Root system distorted within ground profile.

(j) Tree no. T1909 - Bombax ceiba 木棉

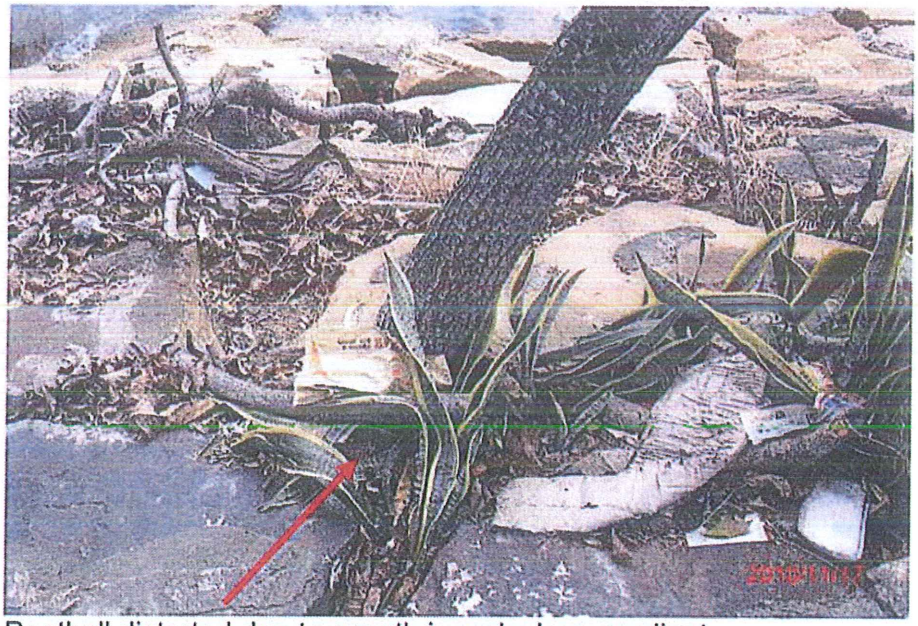
(k) Tree no. T1910 - Ficus virens 大葉榕, 黃葛樹



Distored rootball grows in 45 degree rock slope

(l) Tree no. T1911 - Albizia lebbeck 大葉合歡

Leaning severely within existing rock slope

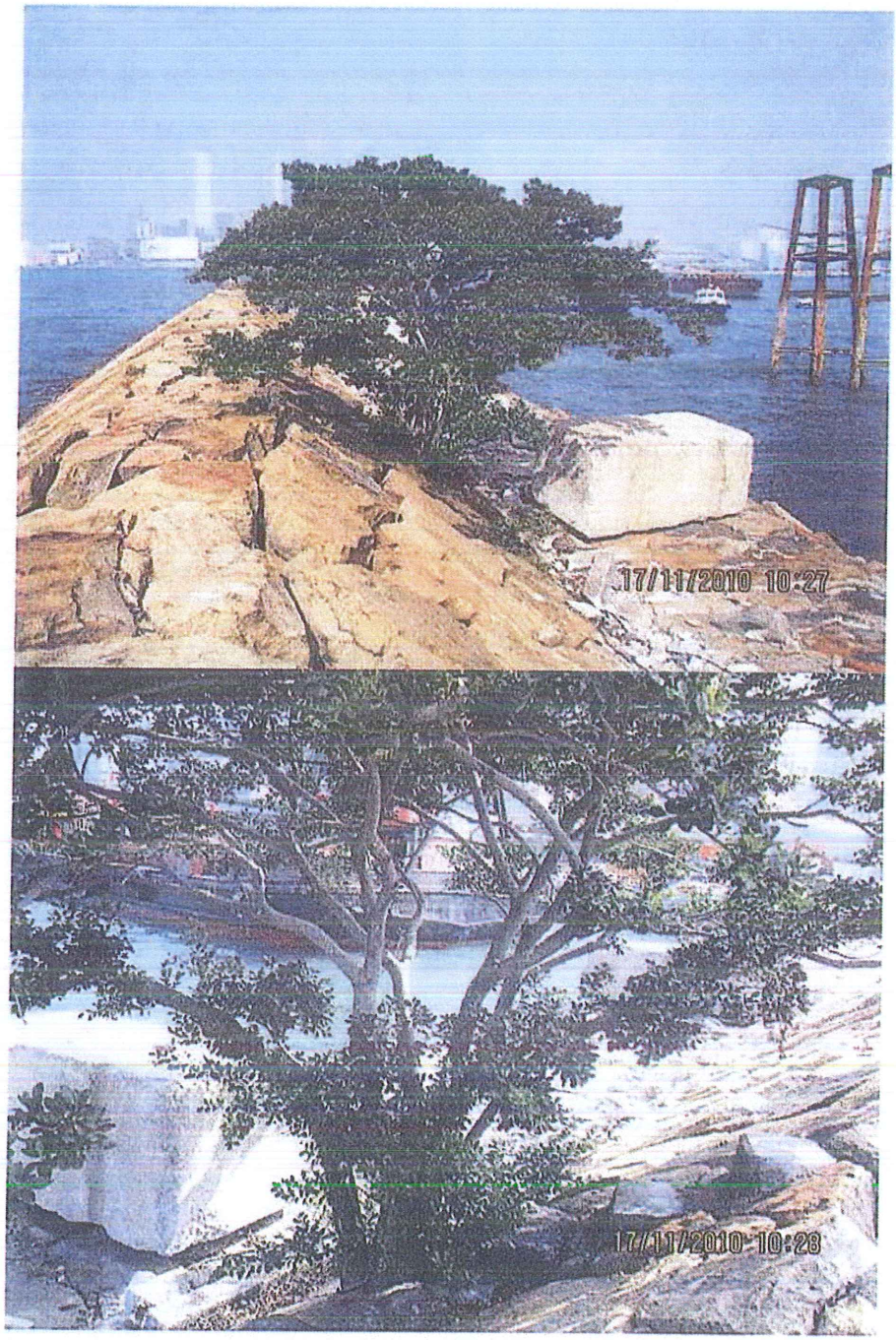


Rootball distorted due to growth in rock slope gradient

(m) Tree no. T1912 - Ficus benjamina 垂葉榕

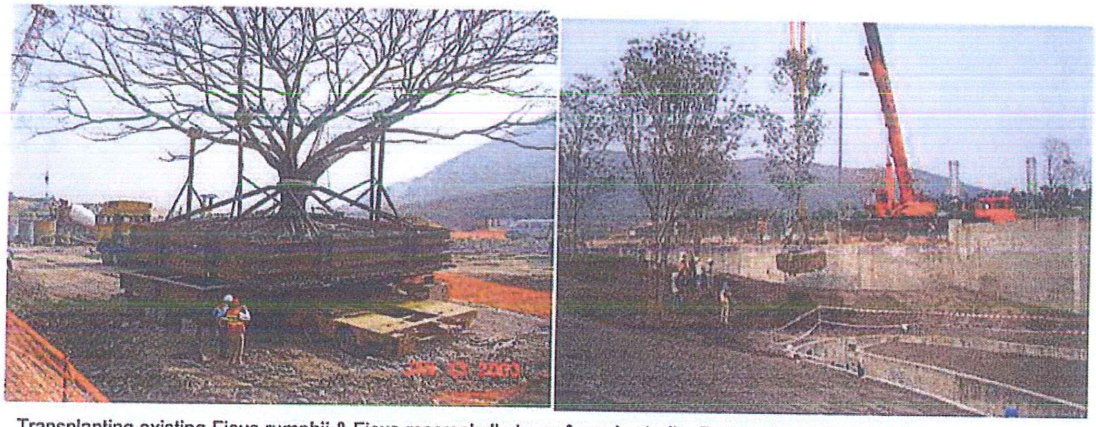
Root system distorted due to confined growing space between rocks.
Preparation of rootball is unfeasible for survival of transplanting.

(n) Tree no. T2015 - Ficus microcarpa 榕樹, 細葉榕

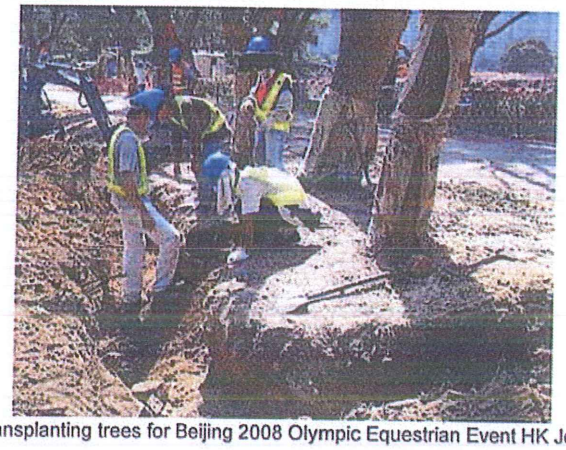


Root system has developed at a 45 degree slope elevation in rocks.
Root system distorted due to confined growing space between rocks.

4. Previous Experience of Successful and Practical Tree Transplanting



Transplanting existing Ficus rumphii & Ficus macrophylla trees from Australia .Pennys Bay Infrastructure



Transplanting trees for Beijing 2008 Olympic Equestrian Event HK Jockey Club

Tree Transplanting works - Wideneing of Tolo Highway NT

5. Tree Survey Report

Review of existing trees condition and trees proposed to be felled

Introduction

This report has been prepared as part of the works for the Central – Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under Highways Department Contract No.: HY/2009/15 at Causeway Bay, Hong Kong.

14 nos. existing trees are proposed to be felled. This tree survey report provides a review of their current up to date site condition as part of the requirements of the General Specification.

Following a site field survey, we have undertaken a detailed review to assess and evaluate the captioned trees and their suitability for transplanting looking at the potential risks for preparation methods to survive transplanting. We also review the timeline process for transplanting twice as stated in the specification.

Site and Situation

The existing trees are situated along a narrow strip of existing marine breakwater and an old dilapidated utility building at the eastern boundary of the Causeway Bay Typhoon Shelter in Victoria harbour. The majority of trees are grouped at one main location and a single tree is found towards the northern end of the Breakwater. The Breakwater consists of loose laid large rock boulders installed to form steep sloping sides (approx 45 degree) with a narrow flat profile section at the top of the slope.

There is no evidence of topsoil or that the trees were specifically planned to form part of the breakwater design. It would appear that if soil had been incorporated into the structure that the soil would have been subject to erosion over time due to its function.

The site is open, exposed and receives full sunshine and prevailing winds along the Victoria Harbour. It can be classed as an exposed open low caliber site that has some physical constraints for growth that is eminently conducive to robust tree performance.

Tree Species

The species identified on site are not rare and are commonly cultivated in Hong Kong and Southern China for botanical and landscape tree planting use. The following botanical species are found to be:

- Albizia lebbeck 大葉合歡 (Tree no. T1908 and T1911)

  Native of Africa and Asia that can commonly 15 – 20 meters in height with spreading canopy, stands up to wind moderately well and is tolerant to salt

- Bombax ceiba 木棉 (Tree no. T 1909)

  Common to India , Malaysia and South China region that can reach a height of 25 meters with a clear straight central trunk commonly seen on roadsides and flowering in Spring in the New Territories.

- Celtis sinensis 朴樹 (Tree no. T1906)

  Growing within Asia that is slow growing and can reach a height of 20 metres . it has a hardy nature that thrives in poor soil conditions and is frequently planted in Hong Kong roadside verges and parks.

- Ficus benjamina 垂葉榕 (Tree no. T1901, T1902, T1903, T1904 and T1912)

  Evergreen fig of medium to large size with a fine leaved canopy and smooth bark. Aerial roots develop in mature trees

- Ficus microcarpa 榕樹, 細葉榕 (Tree no. T2015)

  Large wide spreading evergreen tree with aerial roots. A popular native tree will grow in almost any site and can be found clinging to rocks, retaining walls and other unlikely locations.

- Ficus virens sublanceolata 大葉榕,黃葛樹 (Tree no. T1900 and T1910)

  A native tree, slow growing but develops into a large 20 metre high tree requiring plenty of space to develop buttress root system and canopy.

- Macaranga tanarius 血桐 (Tree no. T1905)

  Common fast growing species, often self propagates in woodland planting and seashore in large thickets. Stands up in well in wind conditions

All the trees identified on site are not found to be of exceptional size for their species or of High Amenity Value. The age of trees are estimated between 10 to 30 years old. From their condition some of the trees are deformed due to growing in between large rocks on a slope exposed to the prevailing winds in the harbour. There are evidence of previous damage has occurred to some of the trees. There is little indication that the trees have undergone any arboricultural maintenance over the past 30 years or are currently having any ongoing reasonable maintenance. 2 nos. of trees are found dead and void of any canopy during initial inspection at handover of the site and Macaranga tanarius tree has previously suffered damage to its branches by other Contractor's works.

Existing growing conditions

Any transplanting operation will have significant impact on the health and welfare of a tree. When proposing any tree for transplanting, factors regarding the ground conditions and growing habit should be considered to assess the risk viability and survival rate of re-establishment after transplanting to a new location.

One of the fundamental risks during the process will be the loss of root system under any staged root cutting preparation for up rooting to a new site. The physical method of breaking rock to form an intact root ball for transportation will cause damage to the existing limited root system. Once bare roots are exposed they cause stress to the health of the tree. A tree should always be transplanted with an intact root ball of existing soil for any chance of survival.

The existing trees have a poor contorted root system that has primarily developed by attaching to the rocks and crevices within the breakwater with little access to develop in any significant topsoil growing medium. Roots have limited development to certain sides of the tree for their structural support for growing on a slope of rocks and boulders. Any root system will be unbalanced for a root ball preparation.

Feasibility assessment for successful Transplanting works

In estimating the feasibility for tree transplanting operations the following issues must be thoroughly investigated to identify the risks of tree survival rates :-

Form and Health of a Tree

If a tree has an unbalanced form and poor growth it is unlikely to withstand the stress of transplanting. Subsequently following crown thinning works as part of the preparation will further reduce the amenity visual value of the tree

Root Extent

A tree growing on rocky ground surrounded by large boulders is going to have a distorted root system seriously reducing the physical preparation of preparing a large root ball for transplanting.

Root ball preparation

Existing site topography needs to be considered, a tree growing in a sloping ground will be unable to be located in an upright position at its final receptor due to its original distorted root formation. Relocating a tree onto a new slope is a potential tree safety hazard to public due to period required for successful new root regeneration for structural stability. Changing the growing form of a tree will cause stress on the trees overall health.

Conclusion

Based on the existing onsite growing conditions, it is not feasible to transplant the trees successfully because of the root system growth in rock with sloping topography. There will be substantial loss of an already distorted root system. This will inhibit the trees chances to withstand the stress of transplanting.

Any preparation to break out rocks and boulders to form a root ball box will severely affect the trees structural integrity since the trees are located in little or no existing soil. The trees are required to be transplanted more than once. Leaving such trees containerized as root balls in any holding nursery to comply with the programme would also reduce their chance of survival. We therefore have little confidence that the trees can be handed over to another Contract in good condition.

Existing trees growing at an angle will have a distorted root structure making them unable to be located upright in any new level-ground location. Semi-mature trees if transplanted into sloping ground would also pose a long term safety hazard as they will be unbalanced, lacking in root support and liable to fall in inclement weather conditions.

Based on the evidence collected from the joint site investigation and professional analysis, there is little confidence on the success of transplanting the trees located on the existing Breakwater, we would therefore advise and seek the Engineer's approval to obtain the relevant permission to fell the said trees and procure a quantity of new trees from a Nursery to the Engineer's requirement as a compensation tree planting proposal as part of the works.

Compensatory Tree Planting for Tree felling

Subject to approval of tree removal by felling, compensatory planting shall be provided in accordance with the requirements of WBTC 3/2006. This being of a ratio not less than 1:1 in terms of the total numbers of aggregated girth size of compensatory trees shall not be less than that of trees felled.

Compensatory trees = 3707mm ÷ 100mm dbh = 37 nos. Heavy Standard Trees based on proposed 12 nos. existing growing trees to be felled based on compensation ratio requirement.

The proposed compensatory trees shall be of minimum Heavy Standard size with girth diameter of 100mm. Actual species shall be confirmed and agreed with Engineer / HyD.

AECOM Asia Co., Ltd.

HY/2009/15 Central Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter section)

Report of Serious Incidents of Fallen Tree

1. Location of the Incident: At Portion 22
2. Tree No.: T1905
3. Species of Trees: *Macaranga tanarius* 血桐
4. Size of Trees: Height 7m, Crown Spread 5m, DBH 330mm
5. Status: Transplant
6. Date and Time (incident occurred): 24/1/2011, 15:00
7. Nature and Brief Account of the Incident:
   i. Termite attack
   ii. Less than 20% of sound wood (xylem) remains. (Refer to appendix A)
8. Follow-up Actions being taken:
   i. Removed the infected tree
   ii. Used the registered pesticide to prevent further infection to other trees. (Refer to appendix B)
   iii. Inspection the other trees to check whether the invasion of termites.

9. Relevant Background Information: recently photos for T1905

Photo taken on 18 Oct 2010

Photo taken on 11 Nov 2010

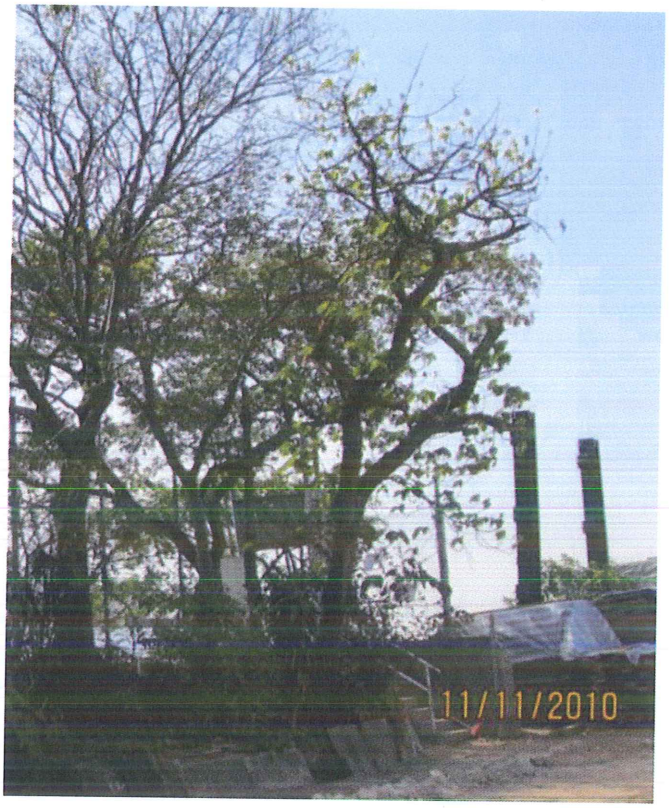
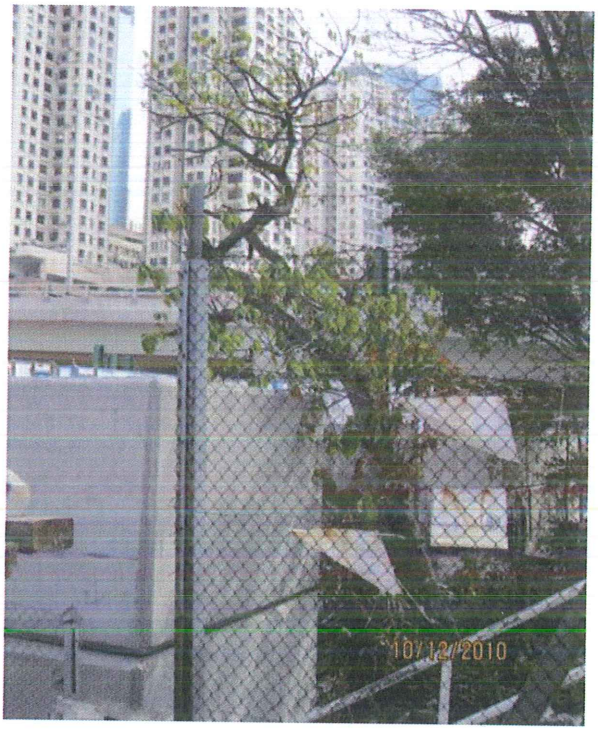


Photo taken on 10 Dec 2010



Submitted By: Ken Tin (RFOI)

27/1/2011

Landscape Team

Appendix A

Photo taken on 25 Jan 2011 Tree No. T1905

Photo taken on 25 Jan 2011

Tree No. T1905

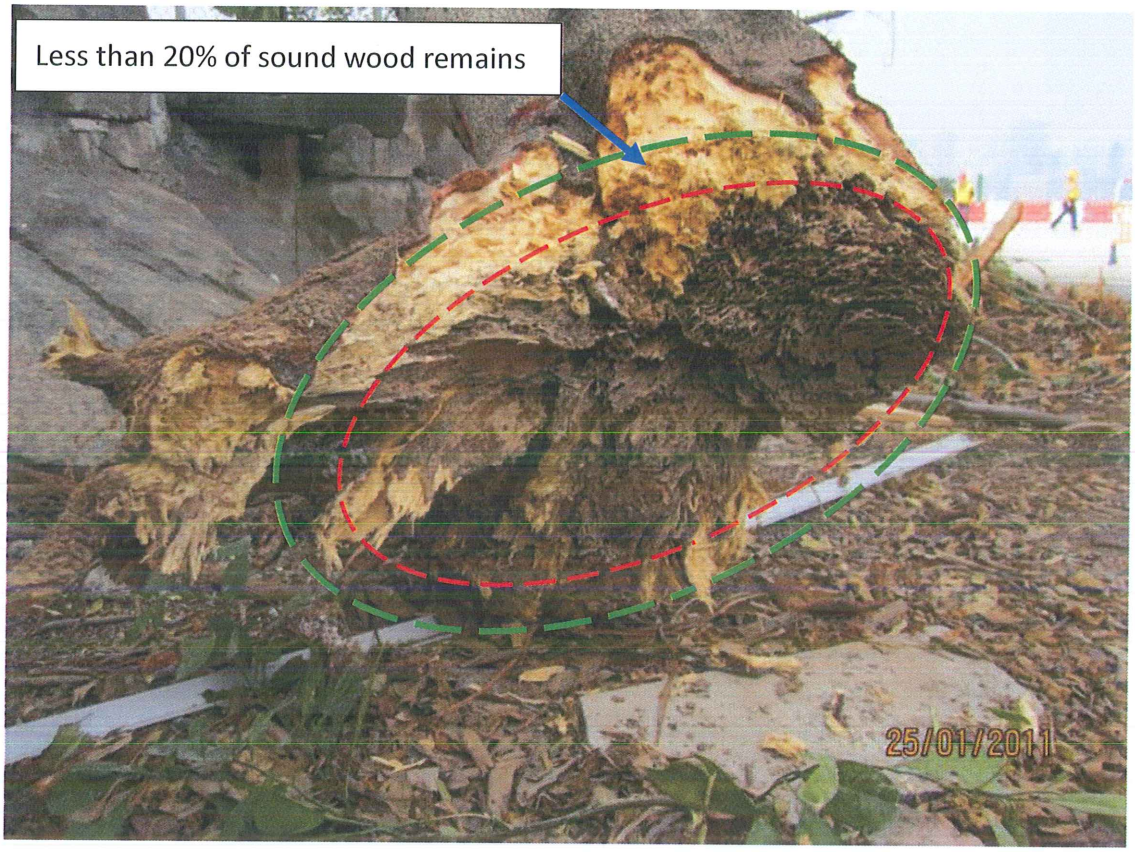


Photo taken on 25 Jan 2011

Tree No. T1905

Termite nest

Appendix B

Pest control