Contract No. HY/2009/18
Central – Wan Chai Bypass – Central Interchange

Landscape Plan

Prepared by:

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Environmental Engineer

Approved by:

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Site Agent

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Revision History and Plan Approval

Revision	Date	Prepared by:	Approved by:	Updated Sections
00	03 Dec 10	Anfernee Chow	Brian Gillon	-
01	24 Dec 10	Anfernee Chow	Brian Gillon	Introduction, Parts A2, C1, D & Appendices
02	15 Jan 11	Anfernee Chow	Brian Gillon	Introduction, Part A2
03	23 May 11	Anfernee Chow	Brian Gillon	Revised according to EPD’s initial observations
04	28 Jul 11	Anfernee Chow	Brian Gillon	Revised according to ETL’s and IEC’s comments
05	12 Mar 12	Anfernee Chow	Brian Gillon	Part C, Appendix J
06	24 Mar 14	Donald Ip	Desmond Sze	Introduction, Part A, Part D, Appendix K, L, M, N

Introduction

The purpose of this Landscape Plan is to fulfil the Condition 2.10 under Environmental Permit number: FEP-05/364/2009/A.

This Landscape Plan shows the details, locations, implementation programme, maintenance and management schedules, and drawings of the landscape and visual mitigation measures for mitigation of the landscape and visual impact arising from the construction of the Central-Wan Chai Bypass – Central Interchange Project. Layout plans showing the site boundary and locations of the sensitive receivers are attached in Appendix A.

The Figure 7.5 in Appendix A was extracted from the Central – Wan Chai Bypass and IEC Link EIA Report (Register No.: AEIAR-041/2001) (EIA Report) and the locations of key visual sensitive receivers refer to Table 7.4 of the EIA Report for summary of visual impact assessment – impacts on visual receivers.

It is identified that VSR numbers 1-26, 28-29, 78-85 and 98-99 would be the key visual sensitive receivers related to this Project.

With reference to the Urban Design Study for the New Central Harbourfront (UDS) and the Master Greening Plan (MGP), it is noted that the development in the UDS area might require associated transplanting to be addressed in the future. However, the development works in the UDS area and the associated MGP is not covered in the project scope of HY/2009/18.

The operational phase mitigation measures as mentioned in EIA Reports, will not be carried out under this contract. The permanent landscape works covered under this contract are included in the Appendices E, F & G in this Plan.

Part A – Landscape Works

1. Soil Mix

1.1. New soil mix shall be used for new planting areas.

1.2. Soil mix shall be tested by HOKLAS accredited laboratory and submitted to the Engineer's Representative for approval before installation.

1.3. Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical.

2. Tree Preservation, Transplanting, Felling and Planting

2.1. Initial tree survey was carried out before the commencement of major works of the Project and the tree survey report with schedules and photos was submitted to the Engineer's Representative for approval.

2.2. 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.

2.3. Tree inspection would be carried out bi-monthly for retained trees and reports would be submitted to the Engineer's Representative.

2.4. The method statement for tree preservation and protection is attached in *Appendix B*.

2.5. The tree preservation, transplanting and felling plans for the Project are attached in *Appendix C*.

2.6. The existing trees which are recommended for transplanting in situation that the final location would be available before the construction works would be relocated directly to the receptor site.

2.7. The existing trees which are recommended for transplanting in situation that the final location would be available after the construction works would be relocated to suitable nursery approved by the Engineer's Representative.

2.8. Tree inspection would be carried out bi-monthly for transplanting trees and reports would be submitted to the Engineer's Representative.

2.9. Tree progress report and Tree Preservation Report would be submitted to the Planning Department directly by the Contractor on bi-monthly basis.

2.10. The method statement for tree transplanting is attached in *Appendix D*.

2.11. The tree planting plans for the Project are attached in *Appendix E*.

2.12. The shrub planting plans for the Project are attached in *Appendix F*.

2.13. The hard landscape sections and details are attached in *Appendix G*.

2.14. In order to facilitate the construction of Elevated Lay-by at Man Po Street, some trees near the Elevated Lay-by construction area have to be felled or transplanted to allow access for works, tree felling approval from DLO is attached in Appendix K, the compensatory plan, tree preservation and protection plan are attached in Appendix L.

2.15. In case of additional 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.

Part B – Hoarding

1. Screen Hoarding

1.1. Screen hoarding with height of at least 2m shall be erected in stages according to the procession of site area and progress of the Works.

1.2. The hoarding plans (in stages) for the Project are attached in *Appendix H*.

2. Hoarding Surface Treatment

2.1. Surface treatment suitable to the urban context shall be applied to the screen hoarding.

2.2. The surface treatment figures are attached in *Appendix I*.

Part C – Control of Night Lighting

1. Night Lighting Arrangement

1.1. Any night-time works required would be carefully planned to minimise the amount of unnatural lighting.

1.2. The usage of lighting equipments would be minimised, assessment would be conducted carefully to evaluate the necessity basing on the work tasks.

1.3. The lighting equipments shall be directed to the site area and controlled to divert from adjoining residential and hotel development.

1.4. The layout and alignment of construction activities would be carefully planned to reduce the lighting impact.

2. On-site Supervision

2.1. During night-time works, the lighting impact would be monitored, assessed and controlled by designated site supervision staff.

2.2. Upon receipt of any public concerns and/or complaints, the lighting equipments would be repositioned, shielded, redirected, dimmed and/or lowered where necessary.

Part D – Implementation Programme, Maintenance and Management Schedule

1. Implementation Programme

1.1. Under the Contract HY/2009/18, no tree was highlighted in the EIA reports (AEIAR-041/2001 and AEIAR-125/2008). Therefore, all trees under the Contract HY/2009/18 will be maintained and managed under contract requirements and mitigation measures listed in the below table.

1.2. Under the Contract HY/2009/18 PS Clause 1.114, trees temporarily stored at CWB(T1) Contract's holding nursery will be transplanted to Central Interchange. The transplanting works will be carried out by the CWB(CI) Contractor from the temporary holding nursery to permanent locations within the Site as indicated in the planting plan.

Item	Mitigation Measures	Location / Timing
A1.	Approved new soil-mix for new planting areas.	New planting areas / Entire construction period.
A2.	Retention and protection of existing trees where feasible and transplanting of trees those are in conflict with the road works (where practical). All in accordance with the tree preservation, transplanting and felling plans.	Entire works area / Entire construction period. (tree protection and transplanting to be carried in stages to suit the programme of the works)
B.	Screen hoarding to be installed, where appropriate, with surface treatment suitable to the urban context.	Entire works area / Entire construction period. (hoarding erection to be carried in stages to suit the programme of the works)
C.	Control of night time lighting.	Entire works area / Entire construction period.

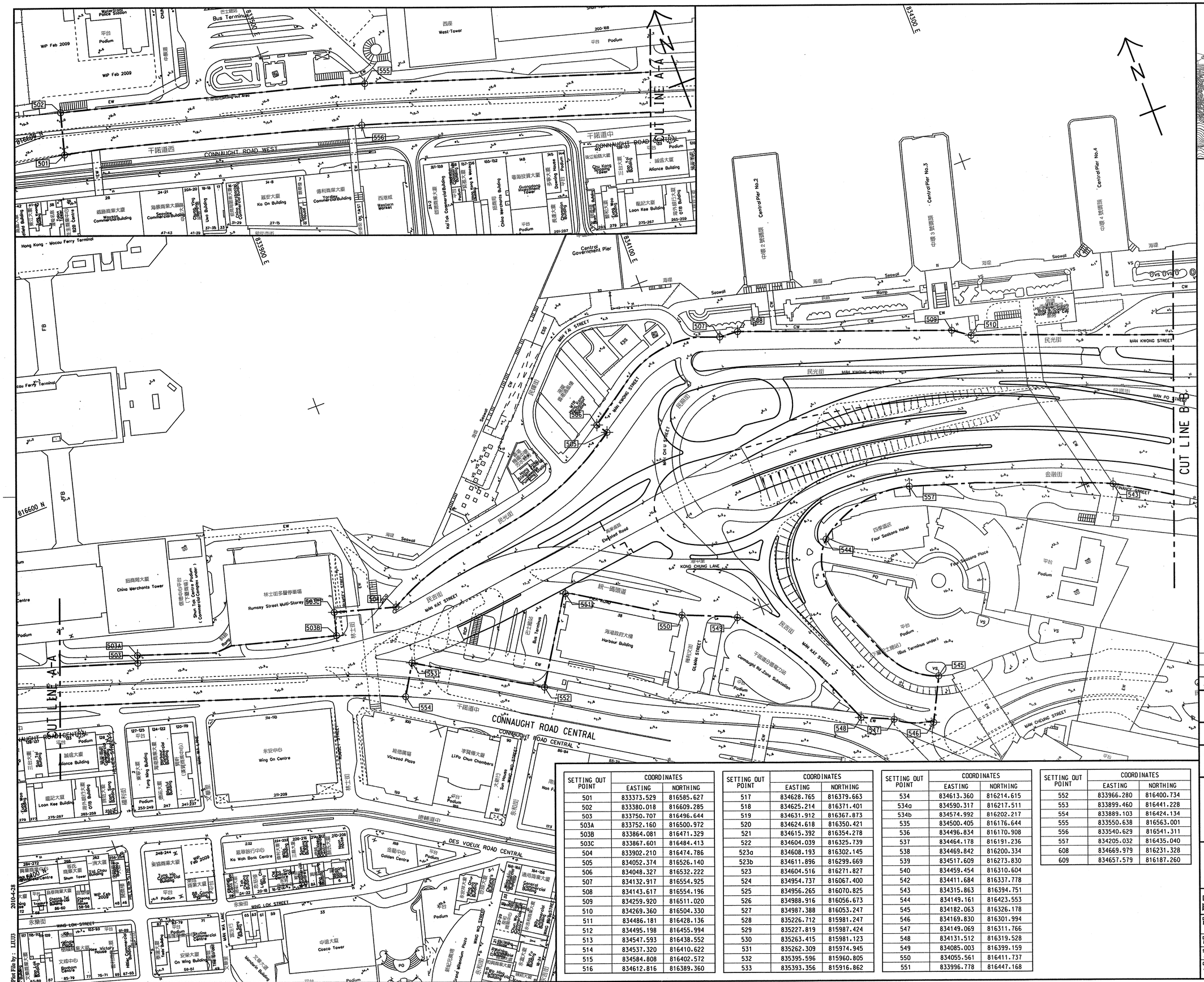
The above mitigation measures are in compliance with relevant requirements in EIA Reports.

2. Maintenance and Management Schedule

Item	Maintenance and Management Schedule
A1.	Soil mix shall be tested and submitted to Engineer's Representative for approval before installation.
A2.	Tree protection measures shall be checked during routine inspections and shall be repaired wherever necessary. Tree transplanting works would only be carried out by experienced transplanting sub-contractor and under the supervision of a registered landscape architect / certified arborist / experienced transplanting supervisor approved by the Engineer's Representative. Transplanted trees would be closely monitored and maintained by the experienced transplanting sub-contractor.
B.	Screen hoarding and surface treatment figures shall be checked during routine inspections and shall be repaired wherever necessary.
C.	Spotlights (if any) shall be checked every night to ensure that they are controlled to divert from adjoining residential and hotel development.

Implementation status of the mitigation measures are shown in Appendix J - Landscape Checklist.

Appendix A
Layout Plans showing the Site Boundary and Locations of Visual Sensitive Receivers



SETTING OUT POINT	COORDINATES	
	EASTING	NORTHING
501	833373.529	816585.627
502	833380.018	816609.285
503	833750.707	816496.644
503A	833752.160	816500.972
503B	833864.081	816471.329
503C	833867.601	816484.413
504	833902.210	816474.786
505	834052.374	816526.140
506	834048.327	816532.222
507	834132.917	816554.925
508	834143.617	816554.196
509	834259.920	816511.020
510	834269.360	816504.330
511	834486.181	816428.136
512	834495.198	816455.994
513	834547.593	816438.552
514	834537.320	816410.622
515	834584.808	816402.572
516	834612.816	816389.360
517	834628.765	816379.663
518	834625.214	816371.401
519	834631.912	816367.873
520	834624.618	816350.421
521	834615.392	816354.278
522	834604.039	816325.739
523a	834608.193	816302.145
523b	834611.896	816299.669
523	834604.516	816271.827
524	834954.737	816067.400
525	834956.265	816070.825
526	834988.916	816056.673
527	834987.388	816053.247
528	835226.712	815981.247
529	835227.819	815987.424
530	835263.415	815981.123
531	835262.309	815974.945
532	835395.596	815960.805
533	835393.356	815916.862
534	834613.360	816214.615
534a	834590.317	816217.511
534b	834574.992	816202.217
535	834500.405	816176.644
536	834496.834	816170.908
537	834464.178	816191.236
538	834469.842	816200.334
539	834517.609	816273.830
540	834459.454	816310.604
542	834411.684	816337.778
543	834315.863	816394.751
544	834149.161	816423.553
545	834182.063	816326.178
546	834169.830	816301.994
547	834149.069	816311.766
548	834131.512	816319.528
549	834085.003	816399.159
550	834055.561	816411.737
551	833996.778	816447.168
552	833966.280	816400.734
553	833899.460	816441.228
554	833889.103	816424.134
555	833550.638	816563.001
556	833540.629	816541.311
557	834205.032	816435.040
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609	834657.579	816187.260

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Plot File by : LIUJ3

2010-4-28

KEY PLAN

SCALE A1 1 : 25000
A3 1 : 50000

NOTES:

1. ALL COORDINATES GIVEN IS ACCORDING TO HONG KONG (1980) GRID IN METRE.
2. COORDINATES TO BE VERIFIED WITH THE ENGINEER ON SITE.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. NO. 60095653/CI/1212.

LEGEND:

— - —	SITE BOUNDARY
⌖ 501	SETTING OUT POINT

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 覆核 D.E.	CHECKED 覆核 P.E.	DATE 日期
A	WORKING DRAWING	ACHAN	BCC	OCT 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

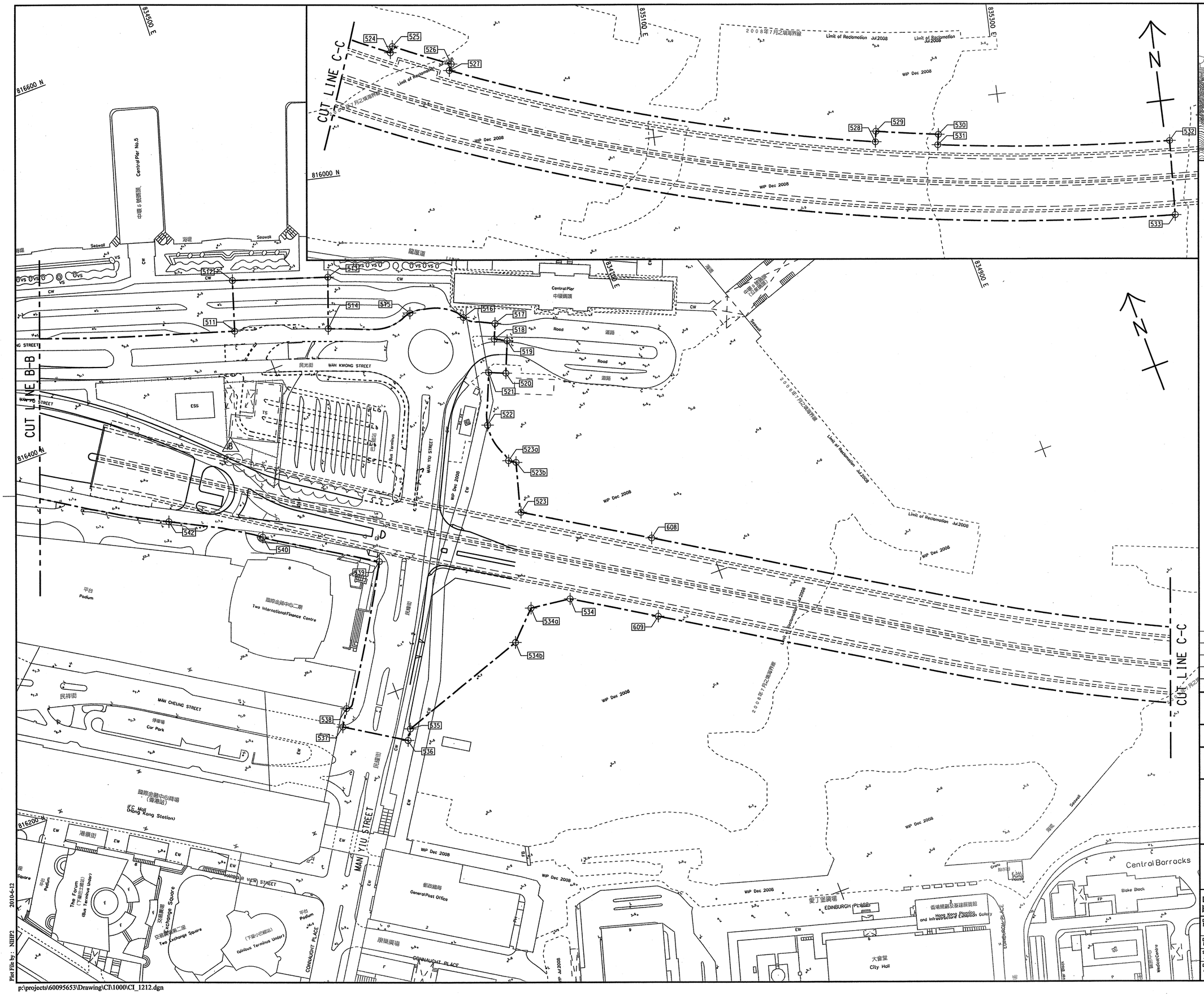
LIMIT OF SITE BOUNDARY SETTING OUT PLAN

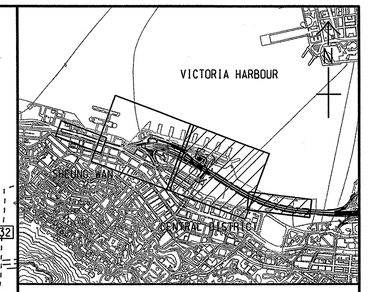
SHEET 1 OF 2

AECOM

DRG.NO. 圖紙編號 60095653/CI/1211 A

DESIGNED BY 設計 VLMK	CONTRACT NO. 合約編號 HY/2009/18	P. Dir. APPROVED 批准人 CW
DRAWN BY 繪圖 LJ	STATUS 階段 WORKING DRAWING	
SCALE 比例 A1 1 : 1000 A3 1 : 2000		
DIMENSIONS ARE IN 尺寸單位 METRES		





KEY PLAN
SCALE A1 1 : 25000
A3 1 : 50000

NOTE:
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. NO. 60095653/CI/1211.
2. PUBLIC TRANSPORT INTERCHANGE (PTI) AND PAVEMENT AT MAN KOWNG STREET AND MAN YIU STREET WILL BE CONSTRUCTED BY HyD'S TERM CONTRACTOR. THE CONTRACTOR SHALL CO_ORDINATE WITH HyD'S TERM CONTRACTOR IN ORDER TO FACILITATE THE CONSTRUCTION WORK.

LEGEND:

-------- WORKS TO BE CONSTRUCTED BY OTHERS (HyD'S TERM CONTRACTOR)

REV. 修訂	DESCRIPTION 內容摘要	BY 繪	CHECKED 審核	DATE 日期
C	WORKING DRAWING	ACHAN	BCC	OCT 10
B	TENDER ADDENDUM NO. 2	ACHAN	BCC	JUN 10
A	TENDER ADDENDUM NO. 1	ACHAN	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

LIMIT OF SITE BOUNDARY SETTING OUT PLAN

SHEET 2 OF 2

AECOM

DRG.NO. 圖紙編號 60095653/CI/1212 C

DESIGNED BY 設計 VLMK	CONTRACT NO. 合約編號 HY/2009/18	P. Dir. APPROVED 批准人 CW	
DRAWN BY 繪圖 LJ	STATUS 階段 WORKING DRAWING		
SCALE 比例 A1 1 : 1000 A3 1 : 2000			
DIMENSIONS ARE IN 尺寸單位 METRES	© COPYRIGHT RESERVED 版權所有		

Plot File by : NIHP2 2010-6-12

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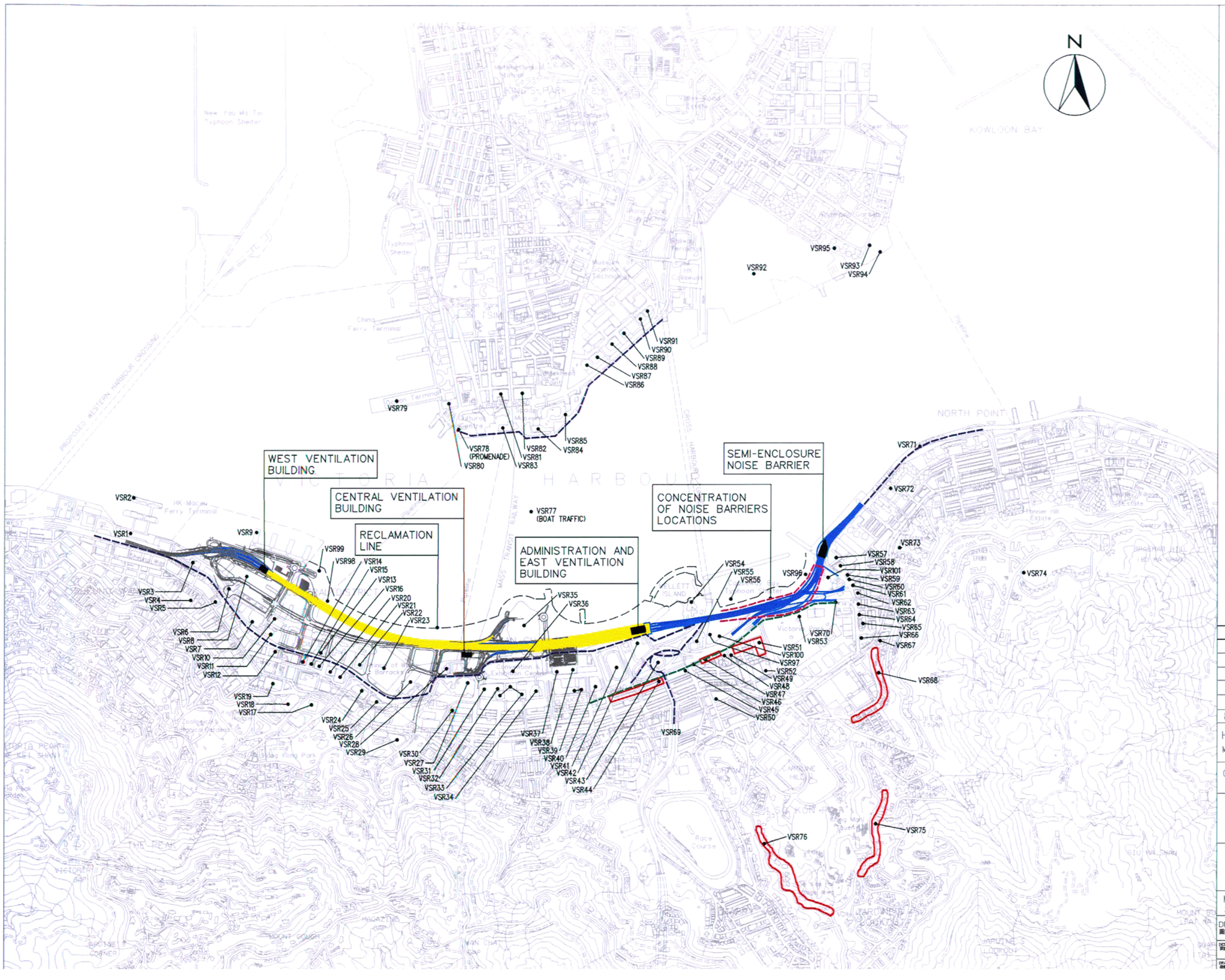


LEGEND :

- VSR1 TO VSR95 — LOCATIONS OF KEY VISUAL SENSITIVE RECEIVERS REFER TO TABLE 7.4 FOR SUMMARY OF VISUAL IMPACT ASSESSMENT-IMPACTS ON VISUAL RECEIVERS
- ELEVATED AND AT GRADE TRUNK ROAD AND SLIP ROADS
- TRUNK ROAD IN TUNNEL

REV.	DESCRIPTION	DRN.	CHK.	APPROVED	DATE
E	GENERAL REVISION				JUN 01
D	GENERAL REVISION				MAY 01
C	GENERAL REVISION				APR 01
B	GENERAL REVISION				MAR 01
A	ADDITIONAL VSRs				JAN 01
-	FIRST ISSUE				NOV 00

Highways Department 路政署
Major Works Project Management Office

CENTRAL – WAN CHAI BYPASS AND IEC LINK PROJECTS REVIEW STUDY

LOCATIONS OF KEY VISUAL SENSITIVE RECEIVERS

HASSELL
Hassell Limited
12/F Yue Tower 8
79 Wong Chuk Hang Road Aberdeen Hong Kong
Telephone 2552 9088 Facsimile 2580 1338

MAUNSELL CONSULTANTS ASIA LTD
茂盛亞洲工程顧問有限公司

DRG. NO. 圖紙編號 FIGURE 7.5

DESIGNED BY 設計 | CONTRACT NO. 合約編號 | DATE OF ISSUE 發出日期 JAN 2001

DRAWN BY 繪圖 EK | STATUS 狀況

maunsell

Appendix B
Method Statement for
Tree Preservation and Protection

1 Introduction

1.1 Overview

This Tree Preservation and Protection Plan is written for the Contract No. HY/2009/18 Central – Wan Chai Bypass Central Interchange to meet the contract requirements as stated in the General Specification Clause 26.02.

The works description for this Contract comprises the followings:

a) Approach roads leading to the CWB tunnel west portal;
b) At grade slip roads and associated roads;
c) The bridge deck for the westbound carriageway of Rumsey Street Flyover Extension;
d) The eastbound Slip Road D flyover;
e) Modification/demolition of the existing dual 2-lane tunnel under Man Yiu Street;
f) Cut-and cover tunnel between the CWB tunnel west portal and the limit of tunnel to be completed under the CRIII contract;
g) Sub-structure, basement and foundations for the West Ventilation Building;
h) Civil works provisions for tunnel Electrical & Mechanical and Traffic Control and Surveillance System works;
i) Widening/modification of existing Man Yiu Street; and junction for road P1;
j) Associated road works and drainage/sewerage works; and
k) Landscaping works including tree transplanting.

1.2 Purpose of the Plan

This Plan provides guidance on the physical and appropriate precautionary measures required in order to reduce significant or detrimental impact on the health or amenity of retained and transplant trees.

2 Preservation and Protection

2.1 General

a) The proper color label should be fixed on the tree trunk in order to identify the status of preservation, (Green – Retaining on Site)
b) The existing trees recommened to be retained shall be protected by means of fencing to prevent vehicular, construction machines or pedestrian intrusion which may potentially damage tree canopies, trunk and root zones.
c) The trees to be felled or transplant, which are adjacent to, or which lie within a continuous canopy of the preserved trees, shall be carefully removed, and if necessary in sections but not using bulldozers in any circumstances, so as not to cause damage to the preserved trees such as scraping bark off trunks or breaking branches of trees,
d) No stripping of surface vegetation or top layer of soil, and no paving or earth filling shall be carried out within the tree protection zones unless otherwise agreed by the

Engineer.

e) Where it is necessary to clear the existing undergrowth within the tree protection zones to allow access and visibility for, and operation of any construction work,
- Shrubs shall be pruned and grass or other herbaceous plants shall be cut to a height of not less than 50 mm above the ground level but not pulled out by equipment in any circumstances
- The agreement of the Engineer shall be obtained before vegetation clearance commences

f) No concrete mixing, gas tank filling, paintbrush and tool cleaning, or equipment maintenance shall be carried out within the tree protection zones,

g) Allowance shall be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards the trees,

h) All materials should be covered when idled.

i) No accumulation of debris to excessive shall be permitted.

j) Store the material in a designated area for temporary storage. The designated area should be kept a reasonable distance from the working area such that it will not obstruct the public and workers.

k) Repair any damage to the trees in accordance with the requirements stipulated in General Specification 26.16,

2.2 Tree Protection Zone

a) The tree protection zone of the retained trees will be the area within the dripline of the tree crown of individual tree.

b) Use of temporary protective mulching to cover the entire tree protection zones.

c) Any necessary scarification or cultivation within the tree protection zones shall be carried out carefully by hand so as not to cause damage to the trees, in particular the bark and the roots,

2.3 Branch Cutting

a) Branch cutting with diameter more than 25 mm will be carried out according to the following situation. The individual Tree Assessment Report is required and to be approved by the Project Manger of the project.
- Hazardous branches is necessary to remove branches of a tree when they are damaged in order to give clearance e.g. for pedestrian and vehicular traffic by taking away the lower branches, to help the tree to form a balanced crown and to remove crossed branches.
- Defect branches are necessary to remove branches of a tree when they are diseased, dying or dead.

b) Carefully lower all cut branches to the ground to prevent any damage to limbs being retained.

c) The procedure of the branch cutting as followed.
- If the location of cutting branch is located at the height higher than 3 meter. The Lifting platform will be used to lift the skilled labour to a suitable level for branch cutting.
- Two ropes will be used to fix at the tip of the cut branch that will be held by 2

labours on the ground in order to guide the direction of the falling branches.
- Cutting of branches will be carried out using 3-cut method in order to prevent tearing of tree bark in branch cutting.
- Pre-cut is carried out at the under-side of the tree to about 1/4 of the diameter of the cutting branch.
- A safety rope will be used to fix the ends of the remaining portion for 2nd cut.

2.4 Tree surgery

a) Cut out rotten wood from cavities, without exposing clean healthy wood.
b) The contractor shall carry out all necessary work of repair of any damage to the preserved trees and other plants affected.

2.5 Treatment of Wounds

a) All loose, dead or damaged barks should be removed. The back of crushed edges to undamaged wood should be trimmed with all margins round.
b) Any cut or wound over 25mm diameter should be painted with an approved fungicidal bituminous sealing compound afterwards.

2.6 Post-planting Fertilizer

Post-planting fertilizer shall be applied after the tree pruning, weeding and treatment of wounds.

2.7 Disease and Pest Control

a) The inspection will be carried out by the specialist bi-monthly and identify the infected area of tree body.
b) The approved chemical pesticide and fungicide will be applied using manual or gasoline sprayer according manufacturer's instruction

2.8 Tree Trunk Protection

a) The tree trunk should be wrapped and covered from the ground level and up to 2m of the tree trunk by armouring the Hessian Mat.
b) Removal of temporary protective armouring and mulching upon completion of work.

2.9 Bi-Monthly Inspection

An inspection report comprising updated photographic records should be submitted in every two month to identify the required horticultural maintenance works.

3 Risk assessment

Risk assessment is an important tool to identify the hazards associated with work activities to be carried out on site, and to develop and implement appropriate control measures to eliminate / minimize the risk of accident / incident caused by these hazards.

In term of tree preservation and protection plan, the project management should carry out a detail assessment to identify the potential hazards (e.g. Hit by live traffic) and their causes (e.g. narrow road) in the planning stage for identifying the special arrangements and/or control measures to deal with such hazards.

Table 3-1 Risk Summary of the Tree Preservation and Protection

Hazard	Risk Level	Action
a) Hit by live traffic	Medium	- Enclose the work area with suitable barriers or traffic cones - Flash light & signage arrangement should be strictly placed according to the approved TTA drawing - Reflective vest shall be mandatory and be worn all time on site - Provide trained banksman for traffic diversion if necessary - All the workers should be briefed in daily basis to remind the job hazard and remedial measures
b) Hit by Falling branches / equipment	Medium	- Fence off the working area - Provide competent tree surgeons - Provide safety helmet with chinstrap to workers (meets EN397 or equivalent) - Tie up the branch being cut off to control the fall and fasten up the equipment while in use - Branches to be cut in small section
c) Hit by moving crane / cherry picker	Medium	- Flash light & signage arrangement should be strictly placed according to the approved TTA drawing - Display sign and warning notices to aware the general public - Properly fencing should be provided to fence off the public - Secure the trees those near the trench work before excavation commence

d) Tree falling	Medium	- Flash light & signage arrangement should be strictly placed according to the approved TTA drawing - Display sign and warning notices to aware the general public - Properly fencing should be provided to fence off the public - Secure the trees those near the trench work before excavation commence
e) Tripping	Low	- Safety shoes shall be manadatory and be worn all the time on site - Provision of good housekeeping
f) Hand or back injury during manual handling operation	Low	- Provide sufficient labour force to carry out manual lifting works - Conduct manual handling training / briefing - Split work into small sections, avoid bending for long periods
g) Long exposure under the sun	Medium	- Ensure workers carrry enough water when working on site - Take short breaks if working for long periods
h) High noise level	Medium	- Conduct noise assessment and demarcate ear protection zone - Provide and ensure to wear approved type ear protector by person within ear protection zone (meets EN352 or equivalent)
i) Contact with overhead lines / Use of electric hand tools	Medium	- Check and ensure no work to be carried out in the vicinity of overhead line cables - Inspect the electrical hand tools by Registered Electrical Worker to ensure tools are in good working condition before use - Use low voltage electric hand tools (110V) - Use waterproof socket / plug, amour cable in outdoors - Provide fire extinguisher
j) Inhalation of wood dust and wood dust getting into eyes	Medium	- Provide and ensure to use safety eye protector (meet EN166 or equivalenet) during work - Provide and ensure to use mouth mask (N95 or equivalent)
k) Cut by sharp tools	Medium	- Provide proper gloves to workers - Provide training briefing to the workers

l) Toppling of crane / cherry picker / Man cage failure	Medium	- Inspect the ground to ensure stable condition before setting up of crane - Appoint licensed crane operator to operate crane - Appoint trained cherry picker operator to operate cherry picker - Display valid test certificate on crane - Inspect the crane by operator on weekly basis, include ASLI - Inspect the cherry picker at regular intervals - Extend the outrigger completely of the crane if practicable - Use tested lifting gear with marking and safe working load - Apply colour code system to LG - Check condition of lifting gear before use - Provide and ensure to use fall arresting device (meets EN361 or equivalent)
m) Contact with chemicals	Medium	- Provide masks if required - Ensure tree surgeons wear hand gloves and proper PPE to avoid contact with skin - Provide goggles - Perform the safety precautions those listed in MSDS

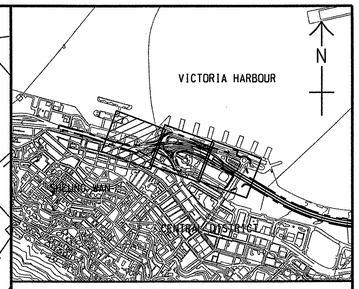
4 Emergency Contact

All Preservation and Protection related accident/ incident occurred within works area of this project shall be promptly reported to project safety department. Rescue, investigation and further reporting procedures shall follow the requirements as stated in the Safety Management Plan.

5 Inspection and Testing Requirements

Complete photograph record of entire transplanting operation at various stages of works. ER will be informed to participate at various stages.

Appendix C
Tree Preservation, Transplanting and Felling Plans



KEY PLAN

SCALE A1 1 : 20000
A3 1 : 40000

NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60095653/CI/9002-9003.
2. TREES THAT ARE NOT AFFECTED BY THE PROJECT ARE NOT SHOWN FOR CLARITY.

LEGEND:

- SITE BOUNDARY
- T1140(R) EXISTING TREE TO BE RETAINED
- T1221(F) EXISTING TREE TO BE FELLED
- T1498(T) EXISTING TREE TO BE TRANSPLANTED

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 審核	DATE 日期
A	WORKING DRAWING	AS/IAN	BCC OCT 10
-	TENDER DRAWING	AS/IAN	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 PRESERVATION, TRANSPLANTING AND FELLING PLAN

SHEET 1 OF 3

AECOM

DRG.NO. 60095653/CI/9001A
圖紙編號

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

Plot File by : NIHP2 2010-4-28

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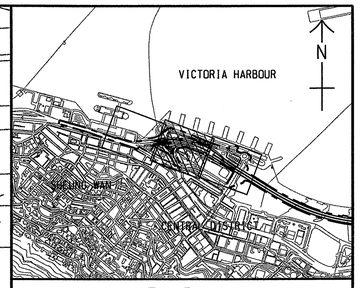

KEY PLAN
SCALE A1 1 : 20000
A3 1 : 40000

NOTE:
1. FOR NOTES AND LEGEND SEE DRG. NO. 60095653/CI/9001.

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 查核	DATE 日期
A	WORKING DRAWING	ARUP/AECOM	OCT 10
-	TENDER DRAWING	ARUP/AECOM	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 PRESERVATION, TRANSPLANTING AND FELLING PLAN

SHEET 2 OF 3

AECOM

DRG.NO. 圖紙編號 60095653/CI/9002A

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

Plot File by : NHP2 2010-4-28

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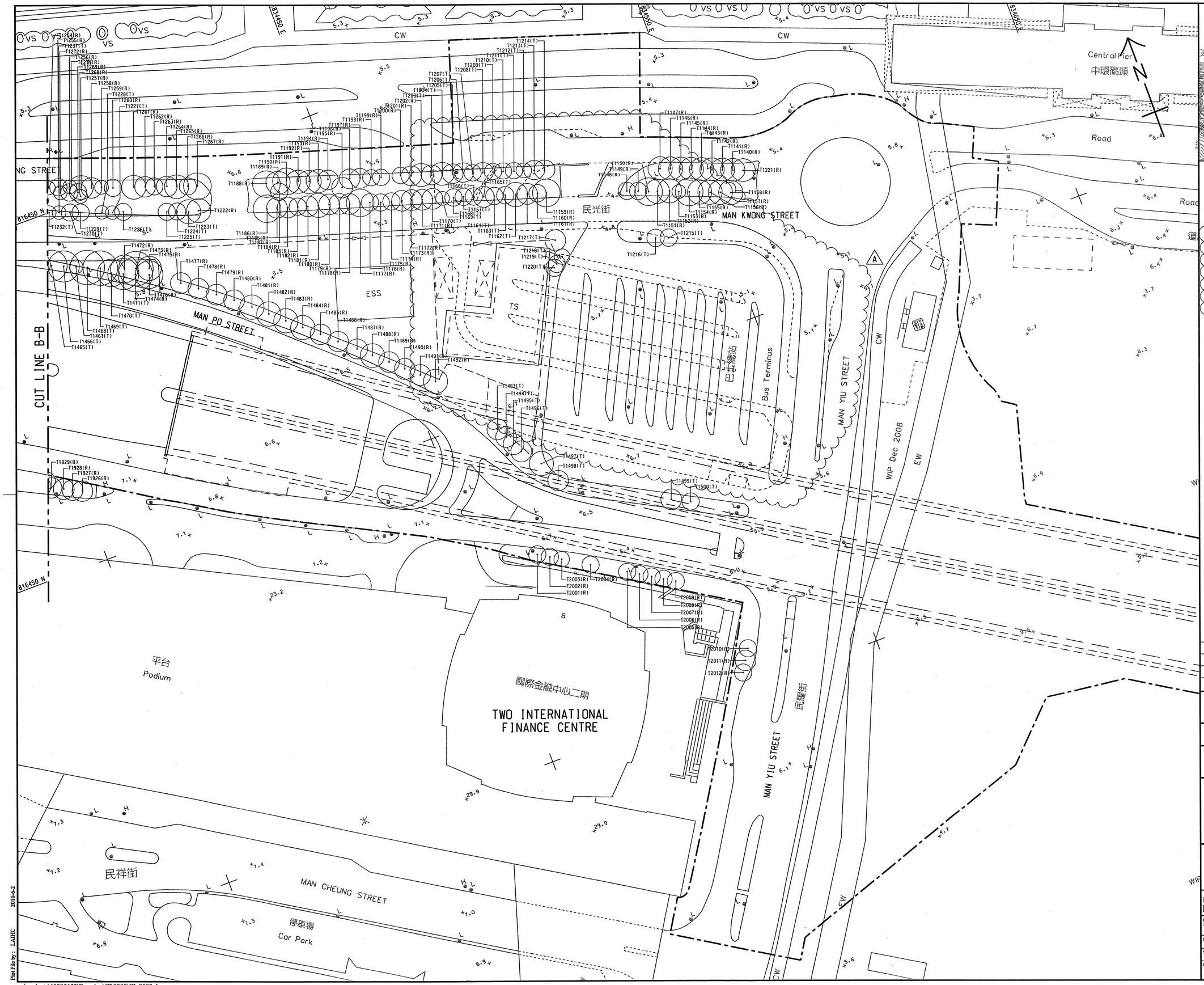

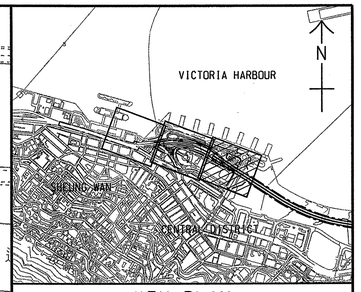

KEY PLAN

SCALE A1 1 : 20000
A3 1 : 40000

NOTES:

1. FOR NOTES AND LEGEND SEE DRG. NO. 60095653/CI/9001.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 60095653/CI/9001 AND 9002.
3. PUBLIC TRANSPORT INTERCHANGE (PTI) AND PAVEMENT AT MAN KOWNG STREET AND MAN YIU STREET WILL BE CONSTRUCTED BY HyD'S TERM CONTRACTOR. THE CONTRACTOR SHALL CO_ORDINATE WITH HyD'S TERM CONTRACTOR IN ORDER TO FACILITATE THE CONSTRUCTION WORK.

LEGEND:

-------- WORKS TO BE CONSTRUCTED BY OTHERS (HyD'S TERM CONTRACTOR)

A

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 審核	DATE 日期
B	WORKING DRAWING	ACHAN BCC	OCT 10
A	TENDER ADDENDUM NO. 1	ACHAN 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 PRESERVATION, TRANSPLANTING AND FELLING PLAN

SHEET 3 OF 3

AECOM

DRG.NO. 圖紙編號 60095653/CI/9003B

DESIGNED BY 設計	VLMK	CONTRACT NO. 合約編號	HY/2009/18
DRAWN BY 繪圖	LHC	P. Dir. APPROVED 批准人	CW
SCALE 比例	A1 1 : 500 A3 1 : 1000	STATUS 類別	WORKING DRAWING
DIMENSIONS ARE IN 尺寸單位	METRES		

Plot File by : LAIHC 2010-6-2

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Appendix D
Method Statement for Tree Transplanting

LEIGHTON
禮頓

Contract No. HY/2009/18
Central-Wan Chai Bypass – Central Interchange

Tree Transplanting Works

Method statement number: H2540-MS-OPR-014 Rev.1

Prepared by:	TOYO Greenland Company Ltd. Name Rachel Yan	4 Jan 2011 date
Reviewed by:	Eric Yuen Graduate Engineer	4 Jan 2011 date
Reviewed by:	Casey Lau Construction Manager	4/1/2011 date
Reviewed by:	CK Chan Safety Manager	4-1-2011 date
Reviewed by:	Stephen Moc Quality Manager	4 JAN 2011 date
Reviewed by:	Anfernee Chow Environment Officer	04/01/2011 date
Reviewed by:	Michael Ryan Engineering Manager	04/01/2011 date
Approved by:	Brian Gilon Site Agent	 date

This document is controlled in soft copy. Any hard copies seen are uncontrolled unless chopped with a red control stamp

Contents

1. Scope

This Method Statement provides guidance on the physical and appropriate precautionary measures required in order to reduce significant or detrimental impact on the health or amenity of transplant trees.

2. Construction Procedure

2.1 Preparatory Work

1) All safety equipments will be checked before use.
2) All safety tools and machinery certificates will be checked before use.
3) All the temporary traffic arrangements should be set up.
4) Safety precautions shall be taken to protect those engaged in operation as well as people and properties in the vicinity. Safety fence/barrier will be set up around the working area at outer 2 meters to avoid people walking closely and against the hazards of the falling objects.
5) Working area shall be restricted from outsiders.
6) The correct tree label with unique color should be marked in order to identify the correct tree to be transplanted.
7) All works should be supervised by our on-site tree work supervisor.
8) The extent of branch pruning should be identified as per the attachment prior to the pruning work.

2.2 Crown Pruning

1) To reduce water loss through transpiration by removal of foliage as necessary. The natural shape and form of a balanced crown shall be preserved. A crown may be reduced to not more than 1/3 of its original crown by selective pruning such as the removal of crossing or malformed branches.
2) During the branch pruning operation, a natural shape and form of a balanced crown shall be preserved.
3) Large branches shall be cut and removed by 3-cut method. In the beginning stage with the removal of the main weight of the branch with the final cut as close as to the main stem as possible without damaging the bark.
4) Small branches and twist shall be cut and removed by using clean, sharp implements to give a single, sloping surface, the ragged edges of bark shall be trimmed with hand saws or secateurs.
5) All cuts shall be made to avoid splintering or tearing of the bark.
6) Cracks, cavities or rotten wood shall be cut back to living tissue.
7) The dead and/or damaged branches of transplanting tree shall be pruned to produce a well-shaped balance crown.
8) The extent of the crown thinning shall be determined and approved by the ER as stipulated in PS 3.97(19).

2.3 Root Pruning

1) Provision shall be included to secure the trees on the site immediately during the root pruning.
2) The diameter of root ball to be cut shall be determined by the Contractor and approved by the ER. The rootball to be cut should be 8-10 times the trunk diameter at breast height and

not less than 1500mm diameter, and 750 – 1000mm deep. A maximum size of root ball will be maintained whereas practical and necessary to ensure the higher survival rate for transplanted trees. The rootball size will be determined and marked on the ground around the tree to get approval of the ER before root pruning

3) Roots which are severed in the course of root pruning shall be cut cleanly.

4) After completion of each stage of root pruning, trenches shall be backfilled with soil mix to encourage new growth of roots.

5) Root activator shall be applied at regular intervals according to the manufacturer's instruction.

6) Root pruning and lifting shall be carried out in four stages at one-month interval.

7) The circle will be divided into 6 equal segments. Before lifting, the outer edge of the previously dug trenches shall be loosened from the surrounding soil and the root ball will be undercut to allow the tree to be lifted free from the ground with the root ball intact.

- The first stage shall involve digging a trench on the outside of the marked circumference, in only two opposing segments
- The second stage shall involve digging a trench on the outside of the marked circumference, in only two opposing segments.
- The third stage shall involve digging a trench on the outside of the marked circumference in the last remaining two opposing segments.
- The last stage shall be the cutting of the underside of the root ball, followed by uplifting and transplanting.

8) The trunk and lower branches will be wrapped with approved hessian and tied with jute string at least one day prior to rootball preparation.

9) After the completion of each stage of root pruning, trenches made are to be backfilled with soil mix. Root ball shall be watered and kept moist from time to time during the preparatory period to stimulate re-generation of new roots.

10) At each stage of root pruning, those trees to be transplanted shall be inspected for signs of deterioration in their health. Any such signs shall be brought to the attention of the Engineer.

2.4 Preparation in Holding Nursery

1) Wooden or metal box shall be prepared in holding nursery before uplifting of transplanting tree.

2) Box shall have dimensions which are 500 mm greater than the size of the root ball of the tree to be transplanted.

2.5 Tree Lifting and transportation

1) Coir mat shall be used to wrap and protect the trunk, large branches and root ball.

2) Prior to lifting, the root ball shall have been thoroughly soaked with clean water. A crane lorry shall be used to lift trees using nylon straps fastened securely on the rootball.

3) Upon lifting, the root ball shall be wrapped and tied with coir mat and kept moist from the time of lifting until it is transplanted.

4) Trees shall be transplanted to the designated pit within 2 hours after lifting. The lifted trees will be placed lying flat on the truck platform. The whole tree including the aerial parts shall be immediately covered with a tarpaulin to protect against excessive sunlight, wind and drought. Care shall be taken in packing to prevent over-heating with its resultant loss of foliage.

2.6 Planting in Holding Nursery

1) The root balls must be supported by soil underneath to break-up for 300mm and then settled by water.
2) Trees shall be off loaded carefully to ensure that no damage is done to the root ball, trunk or branches. Trees will be planted in an upright position, allowing adequate space for growth.
3) Soil mix shall be used to backfill the prepared root ball box. Backfilling shall be done in layers each being firmly consolidated to eliminate air pockets.
4) Metal Tripod will be fixed in order to secure the transplanted tree.

2.7 Maintenance Work in Holding Nursery

1) Watering shall be carried out daily with automatic irrigation system
2) Weed removal and pest control will be carried out as necessary.
3) Monthly inspection and reporting will be carried out.

2.8 Tree Pit Preparation in Final Location

1) The location of the planting pit shall be agreed with the Engineer's representative at least 7 days' in advance prior to the transplanting work.
2) Tree pits shall be prepared in final location before uplifting for those trees required to be transplanted.
3) The depth of the tree pit should be 300-500mm greater than the size of the root ball of the tree to be transplanted. The base of tree pit shall be broken to a depth of 150mm and filled with water 24 hours before planting to ensure free drainage.

2.9 Planting at Final Location

1) Coco peat with 1/3 of the excavated soil shall be thoroughly incorporated into the existing soil excavated from the pits prior to backfilling.
2) The root balls must be supported by soil underneath to breakup to 300mm and settled by water.
3) Trees shall be off loaded carefully to ensure that no damage is done to the root ball, trunk or branches. Tree will be planted in an upright position, allowing adequate space for growth.
4) Once placed in the prepared pit, soil mix shall be used to backfill the prepared pit. Backfilling shall be done in layers each being firmly consolidated to eliminate air pockets.
5) Each tree shall be secured using 3 nos. of iron stake or wire guy.
6) The tree shall be thoroughly watered after planting.

3. Health and Safety Aspects

1) All personnel shall wear appropriate PPE when carrying out the works including but not limited to Safety Hat, High Visibility Vest and Safety Boots when carrying out the works.
2) Certified Competent Person will conduct the utilities detection.
3) All working areas, access points and dangerous openings shall be properly secured, fenced off from the general public and illuminated.
4) Any unsafe obstruction such accumulation of debris or shrubs shall be removed to enable the competent person to carry out the survey in a safe manner.
5) A detailed risk assessment will be conducted prior to the commencement of the works to assess all of the potential risk and its remedial measures to ensure that the works are carried out in a safe manner.
6) At no time will the competent person be allowed to conduct surveying public roads without the appropriate TTA in place to ensure his safety.

7) Safety is the highest priority for all project at Leighton's. The ultimate aim of strive for L.I.F.E is to change the safety behaviour of all staff and workers on site. As part of this programme, all personnel will be required to attend a 1 day "Advance Safety Induction Certificate Training" at Leighton's training facility at Strive for Life Knowledge and Skills Training Center

14th Floor, Unit B,
Wyler Center 2
Tai Lin Pai Road
Kwai Fong

8) All personnel shall also undertake site specific induction and be briefed on the system of works to ensure that all members including the subcontractor and its employees are aware of the risk involved.
9) Ad-hoc site tool box meetings shall be conducted to continuously refresh personnel to the associated risks and control measures in order to maintain a safe working environment. Training records of the workers shall be submitted to SO for record.
10) Ensure all works to be carried out in accordance with the current statutory regulations regarding safety and health at work.

4. Environmental Protection Requirements

Air: Regular cleaning of loading & unloading area and general surrounding areas to reduce dust emission.
Regular maintenance of the plant equipments to reduce the generation of undesirable exhausts fumes.

5. Subcontractors and Suppliers

Toyo Greenland Company Limited works closely with the landscaping works undertakers, contractors in a number of Landscaping contracts for the HKSAR Government Departments such as Highways Department (HD), Civil Engineering and Development (CEDD) etc.

Landscaping job Reference:
- Smithfield Extension - The Link & Pofulam Open Space (HY/94/20)
- Highways Department Term Contract (Management and Maintenance of High Speed Roads in New Territories West and Kowloon, and Roads in the Hong Kong Port Area 2008-2016)
- Greening Works in Kowloon City (CV/2009/04)
- Greening Works in Wong Tai Sin (CV/2009/05)
- Enhancement of Footbridges in Tsim Sha Tsui East (HY/2007/15)
- Provision of Lifts to Three Footbridges (HY/2009/07)
- Greening Works in Sham Shui Po (CV/2009/03)
- Greening Works in Western District (CV/2009/07)

6. Plant and Equipment

- Crane lorry
- Gasoline saws
- Hand saws
- Iron stakes
- Metal bar

- Metal tripod
- Nylon straps
- Secateurs
- Shovels
- Soil mix
- Wooden Broad

7. Materials

- Peatmoss
- Root activator
- Tarpaulins

8. Storage and Handling

1) All materials should be covered when idled.
2) No accumulation of debris to excessive shall be permitted.
3) Store the material in a designated area for temporary storage. The designated area should be kept a reasonable distance from the working area such that it will not obstruct the public and workers.

9. Inspection and Testing Requirements

Complete photograph record of entire transplanting operation at various stages of works. ER and landscape specialist will be informed to participate at various stages.

10. Risks

Refer to Appendix A - Risk Assessment

11. References

11.1 Attachments

- Appendix A – Risk Assessment
- Appendix B – Inspection and Test Plan (Reference No. H2540/ITP/003-0)

Appendix A

Risk Assessment

Leighton Contractors (Asia) Limited

LEIGHTON

RISK ASSESSMENT REPORT

Job No. / Name Doc. Ref. No.	H2540 Central - Wan Chai Bypass - Central Interchange	Assessor(s) :	Casey Lau, Eric Yuen, Benjamin Sung, MC Cheng
Activity :	Tree Transplanting Works	Anticipated commencement date: 20 Dec 2010	Assessment purpose : (Preparation/Supplementary to method statement /Following accident, review etc.)

Job / Task	People at Risk	Cause to Adverse Effect	Adverse Effect	Pre-assessment			Control Measure	Responsible Person	Re-assessment			Further Control Measure
				Likelihood	Severity	RFN			Likelihood	Severity	RR	
1. Preparation and Crown Pruning	Tree surgeons / labour	Falling branches / equipment	Body injury / Property damage	3	4	12	a) Fence off the working area	Foreman	1	3	3	
							b) Provide competent tree surgeons	Sub agent / Foreman				
							c) Provide trained signaller if required	Sub agent / Foreman				
							d) Tie up the branch being cut off to control the fall and fasten up the equipment while in use	Foreman				
							e) Branches to be cut in small section	Labour / Foreman				
							f) Provide safety helmet with chinstrap to workers (meets EN397 or equivalent)	Foreman				
							g) Check and ensure no work to be carried out in the vicinity of overhead line cables	Foreman				
	Tree surgeons	Contact with overhead lines / Use of electric hand tools	Body injury / Electric shock	2	5	10	a) Check and ensure no work to be carried out in the vicinity of overhead line cables	Foreman	1	3	3	
							b) Inspect the electrical hand tools by Registered Electrical Worker to ensure tools are in good working condition before use	Foreman				
							c) Use low voltage electric hand tools (110V)	Foreman				
							d) Use waterproof socket / plug, amour cable in outdoors	Foreman				
							e) Provide fire extinguisher	Foreman				
	Tree surgeons / Labour / Operator	Toppling of crane / cherry picker / Man cage failure	Fall of person / Body injury / Plant damage	3	4	12	a) Inspect the ground to ensure stable condition before setting up of crane	Foreman	1	4	4	
							b) Appoint licensed crane operator to operate crane	Foreman				
							c) Appoint trained cherry picker operator to operate cherry picker	Foreman				
							d) Display valid test certificate on crane	Foreman				
							e) Inspect the crane by operator on weekly basis, include ASLI	Foreman / Operator				

Job / Task	People at Risk	Cause to Adverse Effect	Adverse Effect	Pre-assessment			Control Measure	Responsible Person	Re-assessment			Further Control Measure
				Likelihood	Severity	RFN			Likelihood	Severity	RR	
							f) Inspect the cherry picker at regular intervals	Foreman / Operator				
							g) Extend the outrigger completely of the crane if practicable	Foreman / Operator				
							h) Use tested lifting gear with marking and safe working load	Foreman				
							i) Apply colour code system to LG	Foreman				
							j) Check condition of lifting gear before use	Foreman / Rigger				
							k) Provide and ensure to use fall arresting device (meets EN361 or equivalent)	Foreman				
	Labour, People nearby	Hit by moving crane / cherry picker	Body injury	2	4	8	a) Fence off the working area	Foreman	1	4	4	
							b) Appoint trained signaller to direct the movement of crane / cherry picker	Sub agent / Foreman				
							c) Appoint licensed crane operator to operate crane	Sub agent / Foreman				
							d) Appoint trained cherry picker operator to operate cherry picker	Sub agent / Foreman				
	Tree surgeons / Labour	Cut by chainsaw / hand saw	Body injury	2	4	8	a) Install guard to dangerous parts of the chainsaw	Foreman	2	2	4	
							b) Provide and ensure to use eye protector (meets EN166 or equivalent)	Foreman				
							c) Provide proper gloves to workers if required	Foreman				
	Tree surgeons / Labour	High noise level	Potential hearing loss	2	4	8	a) Conduct noise assessment and demarcate ear protection zone.	Foreman / Safety Officer	2	2	4	
							b) Provide and ensure to wear approved type ear protector by person within ear protection zone (meets EN352 or equivalent)	Foreman				
2. Root Pruning	Tree surgeons / labour	Manual excavation and back filling	Body injury	3	2	6	a) Provide sufficient labour force to carry out manual lifting works.	Foreman	2	2	4	
							b) Conduct manual handling training	Foreman / Safety Officer				
	Tree surgeons / Labour	Cut by chainsaw / hand saw	Body injury	2	4	8	a) Install guard to dangerous parts of the chainsaw	Foreman	2	2	4	
							b) Provide and ensure to use eye protector (meets EN166 or equivalent)	Foreman				
							c) Provide proper gloves to workers if required	Foreman				
	Tree surgeons / Labour	High noise level	Potential hearing loss	2	4	8	a) Conduct noise assessment and demarcate ear protection zone	Foreman / Safety Officer	2	2	4	

Job / Task	People at Risk	Cause to Adverse Effect	Adverse Effect	Pre-assessment			Control Measure	Responsible Person	Re-assessment			Further Control Measure
				Likelihood	Severity	RFN			Likelihood	Severity	RR	
							b) Provide and ensure to wear approved type ear protector by person within ear protection zone (meets EN352 or equivalent)	Foreman				
	Tree surgeons / Labour	Tree falling	Body injury	2	4	8	a) Fence off the working area	Foreman	1	4	4	
							b) Secure the tree before commencement of work	Foreman				
3. Tree Lifting and Transportation	Tree surgeons / Labour / Operator	Toppling of crane / cherry picker / Man cage failure	Fall of person / Body injury / Plant damage	3	4	12	a) Inspect the ground to ensure stable condition before setting up of crane	Foreman	1	4	4	
							b) Appoint licensed crane operator to operate crane	Sub agent / Foreman				
							c) Appoint trained cherry picker operator to operate cherry picker	Sub agent / Foreman				
							d) Display valid test certificate on crane	Foreman				
							e) Inspect the crane by operator on weekly basis, include ASLI	Foreman / Operator				
							f) Inspect the cherry picker at regular intervals	Foreman / Operator				
							g) Extend the outrigger completely of the crane if practicable	Foreman / Operator				
							h) Use tested lifting gear with marking and safe working load	Foreman				
							i) Apply colour code system to LG	Foreman				
							j) Check condition of lifting gear before use	Foreman / Rigger				
							k) Provide and ensure to use of fall arresting device (meets EN361 or equivalent)	Foreman				
	Labour	Hit by moving crane / cherry picker	Body injury	2	4	8	a) Fence off the working area	Foreman	1	4	4	
							b) Appoint trained signaller to direct the movement of crane / cherry picker	Sub agent / Foreman				
							c) Appoint licensed crane operator to operate crane	Sub agent / Foreman				
							d) Appoint trained cherry picker operator to operate cherry picker	Sub agent / Foreman				
	Tree surgeons / labour	Falling branches / Failure of lifting gear during lifting	Body injury / Property damage	3	4	12	a) Fence off the work place	Foreman	1	4	4	
							b) Provide trained rigger and signaller	Foreman				
							c) Use tested lifting gear with marking and safe working load	Foreman				

Job / Task	People at Risk	Cause to Adverse Effect	Adverse Effect	Pre-assessment			Control Measure	Responsible Person	Re-assessment			Further Control Measure
				Likelihood	Severity	RFN			Likelihood	Severity	RR	
							d) Apply colour code system	Foreman				
							e) Check condition of lifting gear before use	Foreman / Rigger				
	Road users/ Pedestrians	Tree/Tree branches falling from transport vehicle	Body injury, damage to other motor vehicles	2	4	8	a) Secure the tree on vehicle before the vehicle moves	Foreman	1	4	4	
	Tree surgeons / labour	Hit by live traffic	Body injury	2	4	8	a) Fence off the work place	Foreman	1	4	4	
							b) Provide trained banksman for traffic diversion if necessary	Sub agent / Foreman				
	Labour	Manual lifting	Cut, sprain, strain	3	2	6	a) Provide sufficient labour force to carry out manual lifting works.	Foreman	2	2	4	
							b) Provide protective gloves to workers	Foreman				
4. Planting and Holding in Nursery	refer to item 3.											
5. Tree Pit Preparation in Final Location	Tree surgeons / labour	Manual excavation and back filling	Body injury	3	2	6	a) Provide sufficient labour force to carry out manual lifting works	Foreman	2	2	4	
							b) Conduct manual handling training	Foreman / Safety Officer				
6. Planting at Final Location	refer to item 3.											

Prepared by : M.C. Cheng Signature: Date: 4/12/2010

Approved by : Desmond Sze Signature: Date: 4/12/10

Likelihood	x	Severity	=	Risk Factor Number (RFN) / Residual Risk (RR)
1 : Improbable		1 : Negligible		1-2 : Trivial / Acceptable
2 : Remote		2 : Slight		3-5 : Tolerable
3 : Quite possible		3 : Moderate		6-9 : Moderate / Acceptable with review
4 : Probable		4 : High		10-15 : Substantial
5 : Frequent		5 : Very High		16-25 : Intolerable / Unacceptable

* Prepare Job Hazard Analysis when residual risk is equal to or greater than 6.

* Date of next review : 20/12/2010

Appendix B

Inspection and Test Plan (Reference No. H2540/ITP/003-0)

Leighton Contractors (Asia) Limited

LEIGHTON 禮頓

Inspection and Test Plan

Contract:	Central-Wan Chai Bypass - Central Interchange	PLAN NO. :
Contract No. :	HY/2009/18	H2540/ITP/002-0
Process:	Tree Transplanting	

SCOPE: Transplanting and temporary storage in Toyo Greenland Co., Ltd.'s holding nursery at Lots in DD 106 and 113 of Kam Tin, N.T., -33,000 sq m

CONTENTS

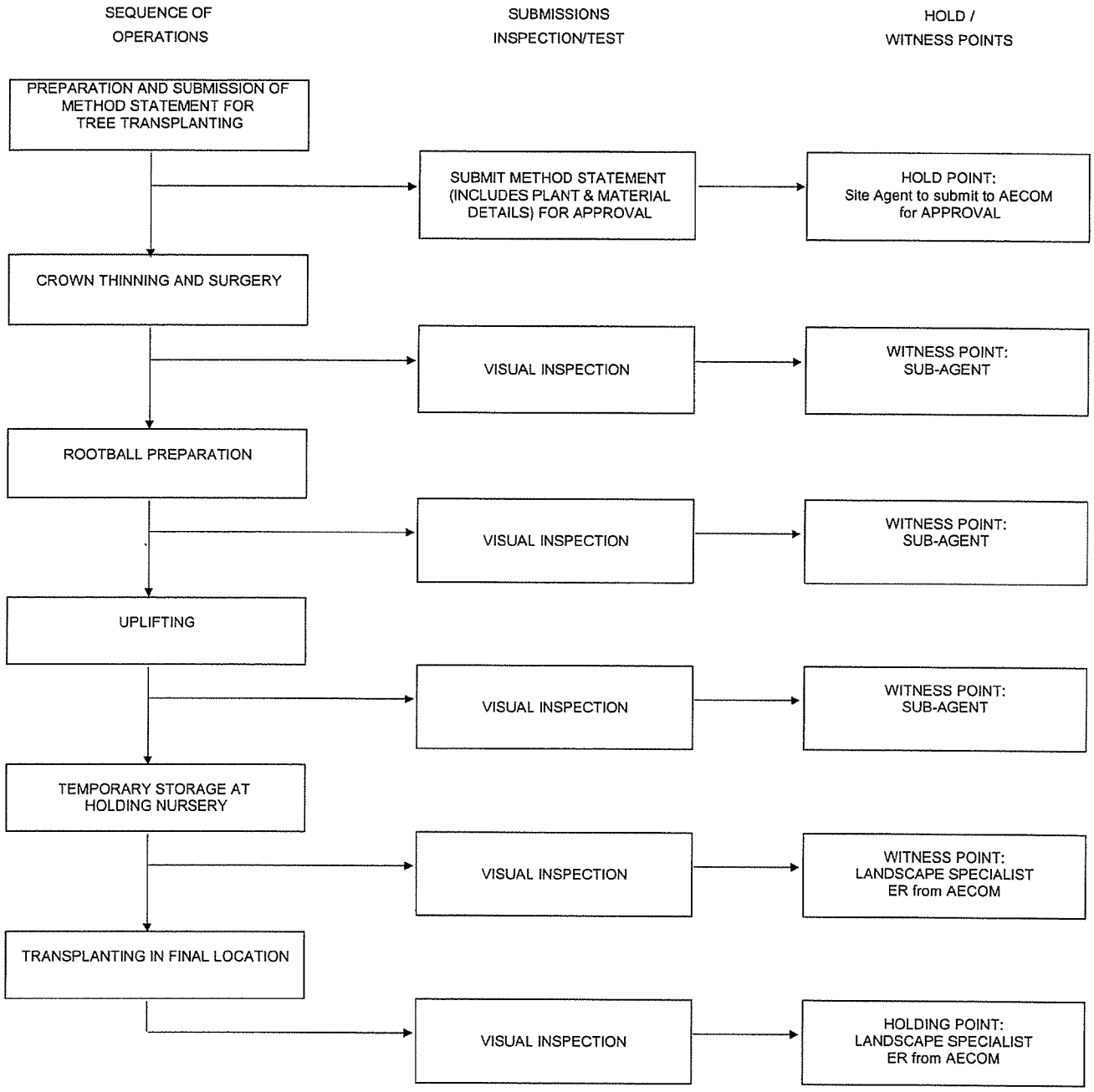
TERMINOLOGY

Prepared by:	eric yuen	Reviewed by:	Casey Lau	Approved by:	Desmond Sze
Signature:		Signature:	K. C. Lau	Signature:	
Date:	16th Dec 2010	Date:	16/12/2010	Date:	18/12/10

Revision status

Revision	Date	Section/Description	Authorized by
0	16-Dec-10	First issue	Project manager

Leighton Contractors (Asia) Limited		LEIGHTON 禮頓
Construction Flowchart		
Contract:	Central-Wan Chai Bypass - Central Interchange	PLAN NO. :
Contract No. :	HY/2009/18	H2540/ITP/002-0
Process:	Tree Transplanting	



Submission, Inspection and Testing Requirements

Contract:	Central-Wan Chai Bypass - Central Interchange	PLAN NO. :
Contract No. :	HY/2009/18	H2540/ITP/002-0
Process:	Tree Transplanting	

I/T NO	INSPECTION /TEST DETAILS	HOLD/WITNESS POINT		METHOD	CONFORMANCE CRITERIA	FREQUENCY	VERIFICATION RECORD	ACTION BY
		H	W					
1	Submit Method Statement	H		Submission to Engineer (AECOM)	P.S. 3.97	Once before tree transplanting works commence	Letter	Site Agent
2	Root pruning		W	Visual Inspection	P.S. 3.98	3 times	Photo	Sub agent
3	Crown thinning and surgery		W	Visual Inspection	P.S. 3.103	Once	Photo	Sub agent
4	Rootball preparation		W	Visual Inspection	P.S. 3.97	Once	Photo	Sub agent
5	Uplifting		W	Visual Inspection	P.S. 3.99	Once	Photo	Sub agent
6	Temporary storage at holding nursery	H		Visual Inspection	P.S. 3.101	Once	Monthly inspection report and photo	Landscape specialist ER from AECOM
7	Transplanting in new location	H		Visual Inspection	P.S. 3.100	Once	As-built drawing	Landscape specialist ER from AECOM

H = Hold Point; W = Witness Point

Contract No. HY/2009/18

Central – Wanchai Bypass, Central Interchange

LEIGHTON

INSPECTION REQUEST FORM

To Engineer's Representative

RISC No.: _____

(1) Location of Work	Date & Time
(2) Work to be Inspected:	
(3) Work Proposed after Approval of (2):	
(4) Remarks (if this is a re-submission state work carried out since last survey):	Enclosure: Yes / No*

REQUESTED BY: _____ TIME : _____

DESIGNATION : _____ DATE : _____

Received by ER TIME : _____ DATE : _____

NAME : _____ SIGNED : _____

Filled in by ER/SIOW Mr : _____ Please arrange inspection

SIGNED: _____ DATE : _____

Filled in by INSPECTOR

Work outlined in (2) above has been inspected. Permission to carry out proposed work outlined in (3) above is given / not given* for the following reason(s):

_____

_____

_____

_____

This in no way limits or alters the Contractor's obligations under the Contract.

Form is returned to the Contractor at time stated below.

SIGNED : _____ TIME : _____

DESIGNATION : _____ DATE : _____

COUNTERSIGNED : _____ TIME : _____

DESIGNATION : _____ DATE : _____

Received on behalf of Contractor by

NAME : _____ TIME : _____

SIGNED : _____ DATE : _____

N.B. Top copy -White; E.R.

Duplicates -Blue: Contractor; Pink: ER; Yellow: Contractor

* Delete where inappropriate

\# Countersigned by Resident Engineer may be required for critical items

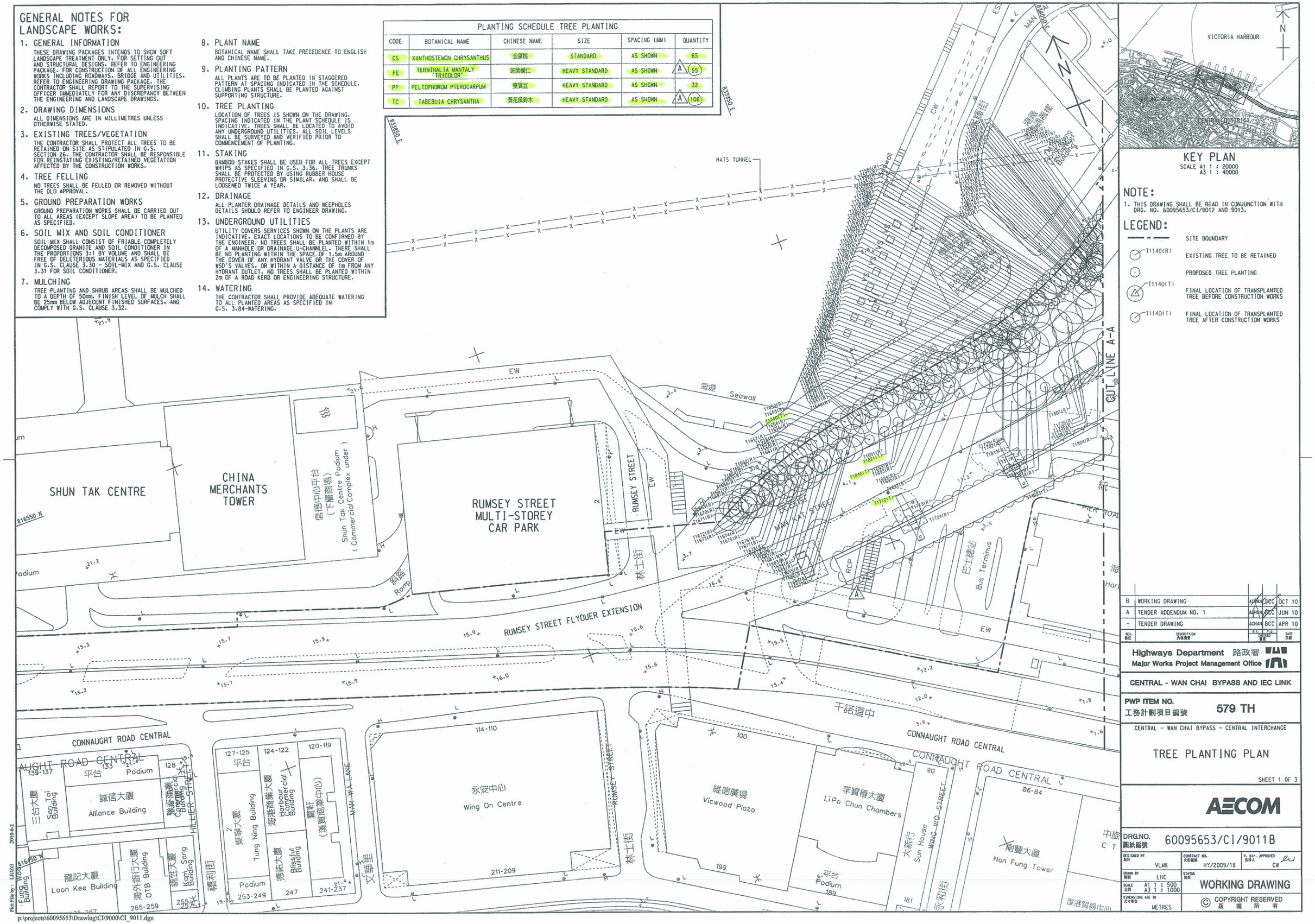
Appendix E
Tree Planting Plans

GENERAL NOTES FOR LANDSCAPE WORKS:

1. GENERAL INFORMATION
   THESE DRAWING PACKAGES INTENDS TO SHOW SOFT LANDSCAPE TREATMENT ONLY. FOR SETTING OUT AND STRUCTURAL DESIGNS, REFER TO ENGINEERING PACKAGE. FOR CONSTRUCTION OF ALL ENGINEERING WORKS INCLUDING ROADWAYS, BRIDGE AND UTILITIES, REFER TO ENGINEERING DRAWING PACKAGE. THE CONTRACTOR SHALL REPORT TO THE SUPERVISING OFFICER IMMEDIATELY FOR ANY DISCREPANCY BETWEEN THE ENGINEERING AND LANDSCAPE DRAWINGS.
2. DRAWING DIMENSIONS
   ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
3. EXISTING TREES/VEGETATION
   THE CONTRACTOR SHALL PROTECT ALL TREES TO BE RETAINED ON SITE AS STIPULATED IN G.S. SECTION 26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTATING EXISTING/RETAINED VEGETATION AFFECTED BY THE CONSTRUCTION WORKS.
4. TREE FELLING
   NO TREES SHALL BE FELLED OR REMOVED WITHOUT THE DLO APPROVAL.
5. GROUND PREPARATION WORKS
   GROUND PREPARATION WORKS SHALL BE CARRIED OUT TO ALL AREAS (EXCEPT SLOPE AREA) TO BE PLANTED AS SPECIFIED.
6. SOIL MIX AND SOIL CONDITIONER
   SOIL MIX SHALL CONSIST OF FRIABLE COMPLETELY DECOMPOSED GRANITE AND SOIL CONDITIONER IN THE PROPORTIONS 3:1 BY VOLUME AND SHALL BE FREE OF DELETERIOUS MATERIALS AS SPECIFIED IN G.S. CLAUSE 3.30 - SOIL-MIX AND G.S. CLAUSE 3.31 FOR SOIL CONDITIONER.
7. MULCHING
   TREE PLANTING AND SHRUB AREAS SHALL BE MULCHED TO A DEPTH OF 50mm. FINISH LEVEL OF MULCH SHALL BE 25mm BELOW ADJECENT FINISHED SURFACES, AND COMPLY WITH G.S. CLAUSE 3.32.
8. PLANT NAME
   BOTANICAL NAME SHALL TAKE PRECEDENCE TO ENGLISH AND CHINESE NAME.
9. PLANTING PATTERN
   ALL PLANTS ARE TO BE PLANTED IN STAGGERED PATTERN AT SPACING INDICATED IN THE SCHEDULE. CLIMBING PLANTS SHALL BE PLANTED AGAINST SUPPORTING STRUCTURE.
10. TREE PLANTING
    LOCATION OF TREES IS SHOWN ON THE DRAWING. SPACING INDICATED IN THE PLANT SCHEDULE IS INDICATIVE. TREES SHALL BE LOCATED TO AVOID ANY UNDERGROUND UTILITIES. ALL SOIL LEVELS SHALL BE SURVEYED AND VERIFIED PRIOR TO COMMENCEMENT OF PLANTING.
11. STAKING
    BAMBOO STAKES SHALL BE USED FOR ALL TREES EXCEPT WHIPS AS SPECIFIED IN G.S. 3.36. TREE TRUNKS SHALL BE PROTECTED BY USING RUBBER HOUSE PROTECTIVE SLEEVING OR SIMILAR, AND SHALL BE LOOSENED TWICE A YEAR.
12. DRAINAGE
    ALL PLANTER DRAINAGE DETAILS AND WEEPHOLES DETAILS SHOULD REFER TO ENGINEER DRAWING.
13. UNDERGROUND UTILITIES
    UTILITY COVERS SERVICES SHOWN ON THE PLANTS ARE INDICATIVE, EXACT LOCATIONS TO BE CONFIRMED BY THE ENGINEER. NO TREES SHALL BE PLANTED WITHIN 1m OF A MANHOLE OR DRAINAGE U-CHANNLEL. THERE SHALL BE NO PLANTING WITHIN THE SPACE OF 1.5m AROUND THE COVER OF ANY HYDRANT VALVE OR THE COVER OF WSD'S VALVES, OR WITHIN A DISTANCE OF 1m FROM ANY HYDRANT OUTLET. NO TREES SHALL BE PLANTED WITHIN 2m OF A ROAD KERB OR ENGINEERING STRUCTURE.
14. WATERING
    THE CONTRACTOR SHALL PROVIDE ADEQUATE WATERING TO ALL PLANTED AREAS AS SPECIFIED IN G.S. 3.84-WATERING.

PLANTING SCHEDULE TREE PLANTING

CODE	BOTANICAL NAME	CHINESE NAME	SIZE	SPACING (MM)	QUANTITY
CS	XANTHOSTEMON CHRYSANTHUS	金蟬花	STANDARD	AS SHOWN	65
FE	TERMINALIA MANTALY 'TRICOLOR'	斑葉欖仁	HEAVY STANDARD	AS SHOWN	A (55)
PP	PELTOPHORUM PTEROCARPUM	雙翼豆	HEAVY STANDARD	AS SHOWN	32
TC	TABEBUIA CHRYSANTHA	黃花風鈴木	HEAVY STANDARD	AS SHOWN	A (106)



KEY PLAN

SCALE A1 1 : 20000
A3 1 : 40000

NOTE:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. NO. 60095653/CI/9012 AND 9013.

LEGEND:

- SITE BOUNDARY
- T1140(R) EXISTING TREE TO BE RETAINED
- PROPOSED TREE PLANTING
- T1140(T) FINAL LOCATION OF TRANSPLANTED TREE BEFORE CONSTRUCTION WORKS
- T1140(T) FINAL LOCATION OF TRANSPLANTED TREE AFTER CONSTRUCTION WORKS

REV. 版記	DESCRIPTION 內容摘要	BY 由	CHECKED 審核	DATE 日期
B	WORKING DRAWING	ACHAN	BCC	OCT 10
A	TENDER ADDENDUM NO. 1	ACHAN	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 1 OF 3

AECOM

DRG.NO. 圖紙編號 60095653/CI/9011B

DESIGNED BY 設計	VLMK	CONTRACT NO. 合約編號	HY/2009/18
DRAWN BY 繪圖	LHC	P. DIR. APPROVED 負責人	CW
SCALE 比例	A1 1 : 500, A3 1 : 1000	STATUS 階段	WORKING DRAWING
DIMENSIONS ARE IN 尺寸單位	METRES		

Plot File by : LIUZG
2010-6-2
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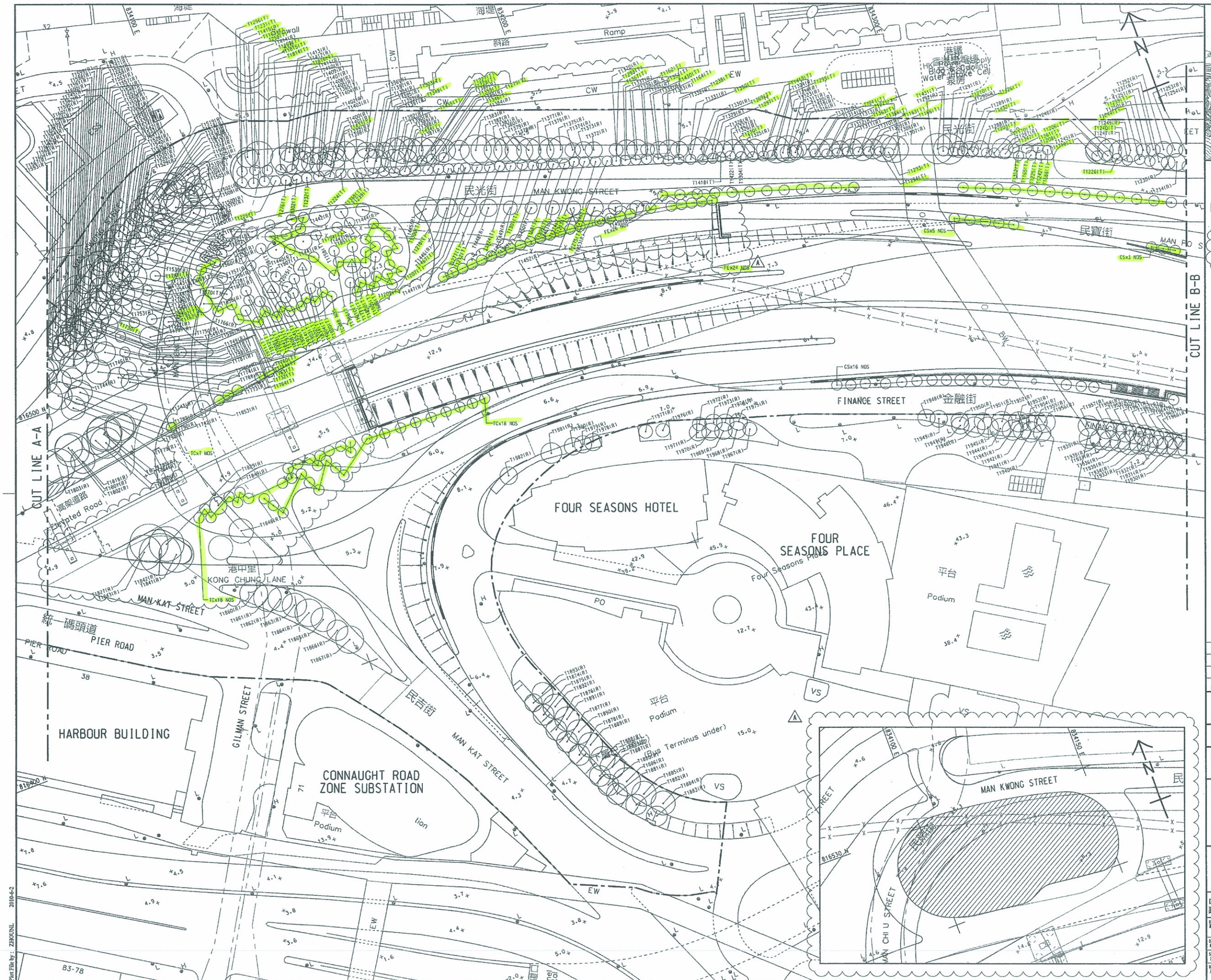

REV. 修訂	DESCRIPTION 內容摘要	DES'D 設計	CHK'D 審核	DATE 日期
B	WORKING DRAWING	ACHAN	BCC	OCT 10
A	TENDER ADDENDUM NO. 1	ACHAN	BCC	JUN 10
–	TENDER DRAWING	ACHAN	BCC	APR 10

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	CONTRACT NO. 合約編號	P. Dir. APPROVED 批准人
VLMK	HY/2009/18	CW
DRAWN BY 繪圖 LHC	STATUS 階段	WORKING DRAWING
SCALE 比例 A1 1 : 500, A3 1 : 1000	© COPYRIGHT RESERVED 版權所有	
DIMENSIONS ARE IN 尺寸單位 METRES		

Plot File by : ZHOUNL 2010-6-2

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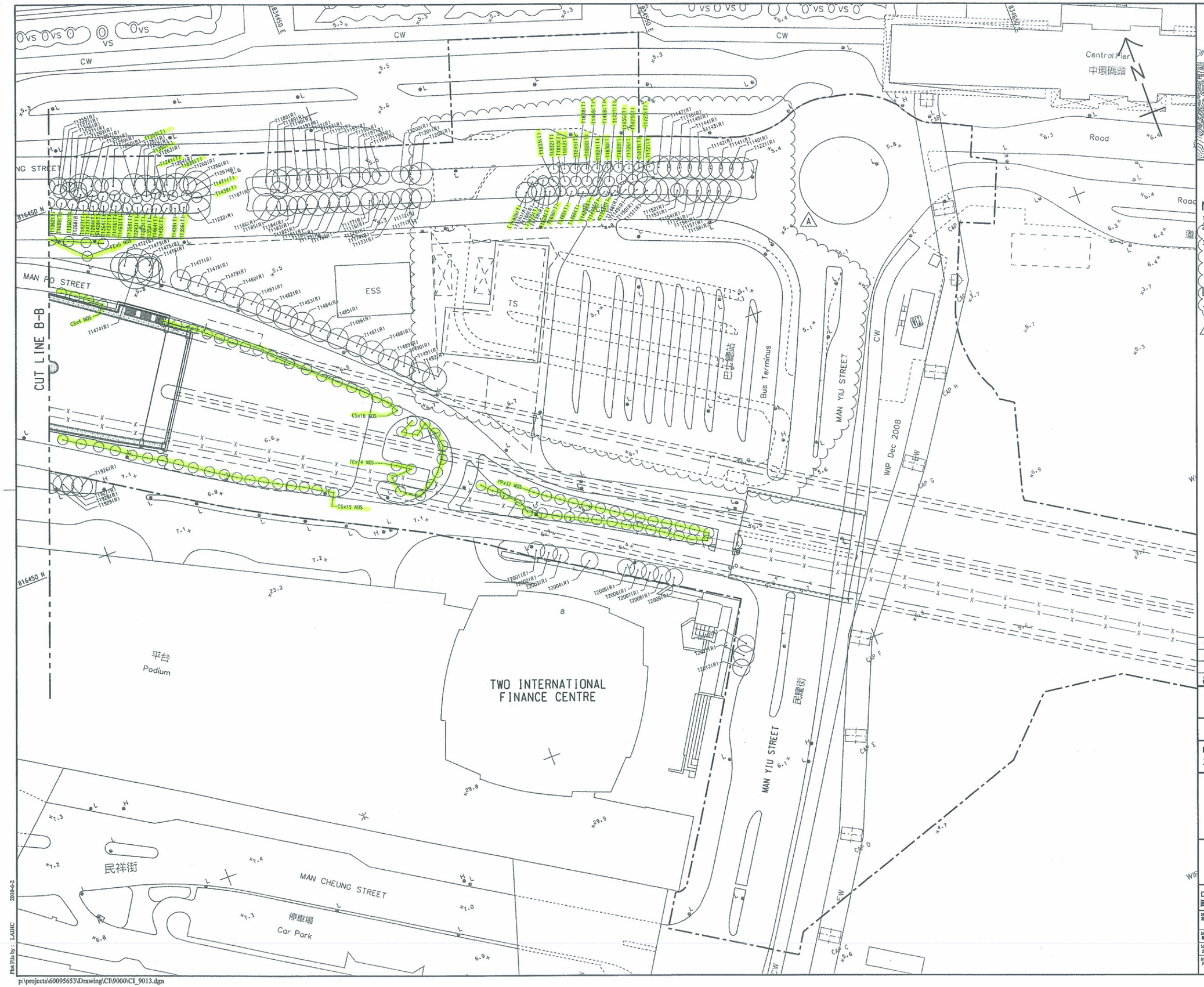

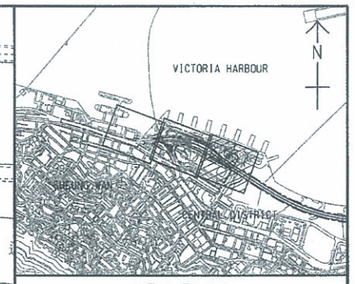

KEY PLAN
SCALE A1 1 : 20000
A3 1 : 40000

NOTES:

1. FOR NOTES AND LEGEND SEE DRG. NO. 60095653/CI/9011.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 60095653/CI/9011 AND 9012.
3. PUBLIC TRANSPORT INTERCHANGE (PTI) AND PAVEMENT AT MAN KOWNG STREET AND MAN YIU STREET WILL BE CONSTRUCTED BY HyD'S TERM CONTRACTOR. THE CONTRACTOR SHALL CO-ORDINATE WITH HyD'S TERM CONTRACTOR IN ORDER TO FACILITATE THE CONSTRUCTION WORK.

LEGEND:

WORKS TO BE CONSTRUCTED BY OTHERS (HyD'S TERM CONTRACTOR)

A

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 核對	DATE 日期
B	WORKING DRAWING	ACHAN BCC	OCT 10
A	TENDER ADDENDUM NO. 1	ACHAN 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 3 OF 3

AECOM

DRG.NO. 圖紙編號	60095653/CI/9013B
DESIGNED BY 設計	VLMK
CONTRACT NO. 合約編號	HY/2009/18
P. Dir. APPROVED 核准人	CW
DRAWN BY 繪圖	NHP
STATUS 狀況	WORKING DRAWING
SCALE 比例	A1 1 : 500 A3 1 : 1000
DIMENSIONS ARE IN 尺寸單位	METRES

Plot Plt by : LAIHC 2010-6-2

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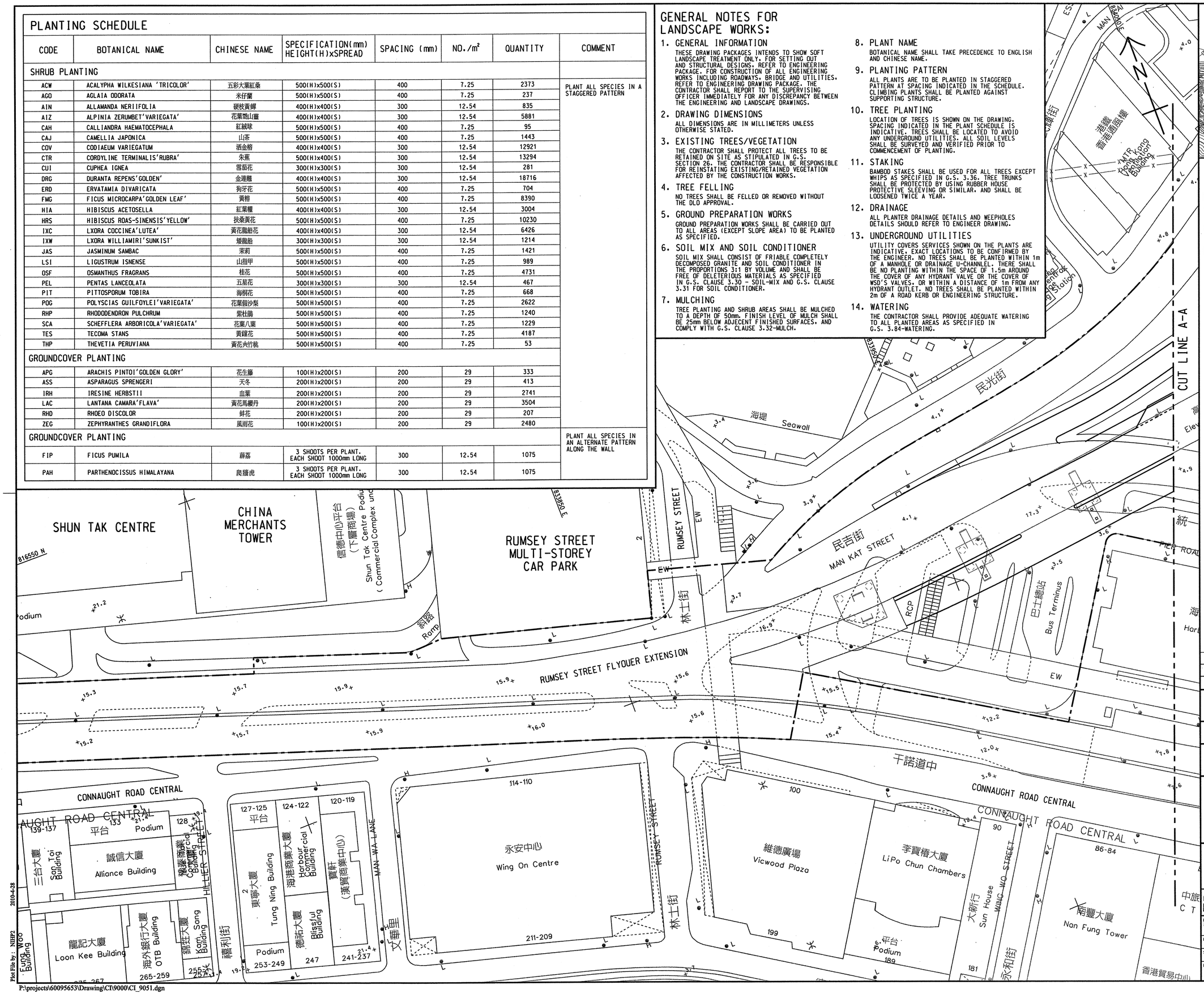
Appendix F
Shrub Planting Plans

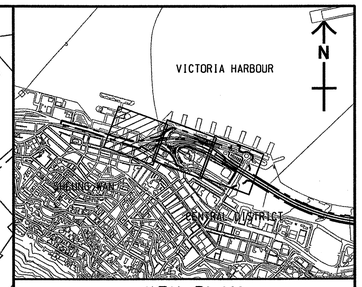
PLANTING SCHEDULE

CODE	BOTANICAL NAME	CHINESE NAME	SPECIFICATION(mm) HEIGHT(H)xSPREAD	SPACING (mm)	NO./m²	QUANTITY	COMMENT
SHRUB PLANTING							
ACW	ACALYPHA WILKESIANA 'TRICOLOR'	五彩大葉紅桑	500(H)x500(S)	400	7.25	2373	PLANT ALL SPECIES IN A STAGGERED PATTERN
AGO	AGLAIA ODORATA	米仔蘭	500(H)x500(S)	400	7.25	237	
AIN	ALLAMANDA NERIIFOLIA	硬枝黃蟬	400(H)x400(S)	300	12.54	835	
AIZ	ALPINIA ZERUMBET'VARIEGATA'	花葉艷山薑	400(H)x400(S)	300	12.54	5881	
CAH	CALLIANDRA HAEMATOCEPHALA	紅絨球	500(H)x500(S)	400	7.25	95	
CAJ	CAMELLIA JAPONICA	山茶	500(H)x500(S)	400	7.25	1443	
COV	CODIAEUM VARIEGATUM	洒金榕	400(H)x400(S)	300	12.54	12921	
CTR	CORDYLINE TERMINALIS'RUBRA'	朱蕉	500(H)x400(S)	300	12.54	13294	
CUI	CUPHEA IGNEA	雪茄花	300(H)x300(S)	300	12.54	281	
DRG	DURANTA REPENS'GOLDEN'	金連翹	400(H)x400(S)	300	12.54	18716	
ERD	ERVATAMIA DIVARICATA	狗牙花	500(H)x500(S)	400	7.25	704	
FMG	FICUS MICROCARPA'GOLDEN LEAF'	黃榕	500(H)x500(S)	400	7.25	8390	
HIA	HIBISCUS ACETOSELLA	紅葉櫬	400(H)x400(S)	300	12.54	3004	
HRS	HIBISCUS ROAS-SINENSIS'YELLOW'	扶桑黃花	500(H)x500(S)	400	7.25	10230	
IXC	LXORA COCCINEA'LUTEA'	黃花龍船花	400(H)x400(S)	300	12.54	6426	
IXW	LXORA WILLIAMIRI'SUNKIST'	矮龍船	300(H)x300(S)	300	12.54	1214	
JAS	JASMINUM SAMBAC	茉莉	500(H)x500(S)	400	7.25	1421	
LSI	LIGUSTRUM ISNENSE	山指甲	500(H)x500(S)	400	7.25	989	
OSF	OSMANTHUS FRAGRANS	桂花	500(H)x500(S)	400	7.25	4731	
PEL	PENTAS LANCEOLATA	五星花	300(H)x300(S)	300	12.54	467	
PIT	PITTOSPORUM TOBIRA	海桐花	500(H)x500(S)	400	7.25	668	
POG	POLYSCIAS GUILFOYLEI'VARIEGATA'	花葉假沙梨	500(H)x500(S)	400	7.25	2622	
RHP	RHODODENDRON PULCHRUM	紫杜鵑	500(H)x500(S)	400	7.25	1240	
SCA	SCHEFFLERA ARBORICOLA'VARIEGATA'	花葉八葉	500(H)x500(S)	400	7.25	1229	
TES	TECOMA STANS	黃鐘花	500(H)x500(S)	400	7.25	4187	
THP	THEVETIA PERUVIANA	黃花夾竹桃	500(H)x500(S)	400	7.25	53	
GROUNDCOVER PLANTING							
APG	ARACHIS PINTOI'GOLDEN GLORY'	花生藤	100(H)x200(S)	200	29	333	
ASS	ASPARAGUS SPRENGERI	天冬	200(H)x200(S)	200	29	413	
IRH	IRESINE HERBSTII	血葉	200(H)x200(S)	200	29	2741	
LAC	LANTANA CAMARA'FLAVA'	黃花馬纓丹	200(H)x200(S)	200	29	3504	
RHD	RHOEO DISCOLOR	蚌花	200(H)x200(S)	200	29	207	
ZEG	ZEPHYRANTHES GRANDIFLORA	風雨花	100(H)x200(S)	200	29	2480	
GROUNDCOVER PLANTING							PLANT ALL SPECIES IN AN ALTERNATE PATTERN ALONG THE WALL
FIP	FICUS PUMILA	薜荔	3 SHOOTS PER PLANT. EACH SHOOT 1000mm LONG	300	12.54	1075	
PAH	PARTHENOCISSUS HIMALAYANA	爬牆虎	3 SHOOTS PER PLANT. EACH SHOOT 1000mm LONG	300	12.54	1075	

GENERAL NOTES FOR LANDSCAPE WORKS:

1. **GENERAL INFORMATION**
   THESE DRAWING PACKAGES INTENDS TO SHOW SOFT LANDSCAPE TREATMENT ONLY. FOR SETTING OUT AND STRUCTURAL DESIGNS, REFER TO ENGINEERING PACKAGE. FOR CONSTRUCTION OF ALL ENGINEERING WORKS INCLUDING ROADWAYS, BRIDGE AND UTILITIES, REFER TO ENGINEERING DRAWING PACKAGE. THE CONTRACTOR SHALL REPORT TO THE SUPERVISING OFFICER IMMEDIATELY FOR ANY DISCREPANCY BETWEEN THE ENGINEERING AND LANDSCAPE DRAWINGS.
2. **DRAWING DIMENSIONS**
   ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
3. **EXISTING TREES/VEGETATION**
   THE CONTRACTOR SHALL PROTECT ALL TREES TO BE RETAINED ON SITE AS STIPULATED IN G.S. SECTION 26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTATING EXISTING/RETAINED VEGETATION AFFECTED BY THE CONSTRUCTION WORKS.
4. **TREE FELLING**
   NO TREES SHALL BE FELLED OR REMOVED WITHOUT THE DLO APPROVAL.
5. **GROUND PREPARATION WORKS**
   GROUND PREPARATION WORKS SHALL BE CARRIED OUT TO ALL AREAS (EXCEPT SLOPE AREA) TO BE PLANTED AS SPECIFIED.
6. **SOIL MIX AND SOIL CONDITIONER**
   SOIL MIX SHALL CONSIST OF FRIABLE COMPLETELY DECOMPOSED GRANITE AND SOIL CONDITIONER IN THE PROPORTIONS 3:1 BY VOLUME AND SHALL BE FREE OF DELETERIOUS MATERIALS AS SPECIFIED IN G.S. CLAUSE 3.30 - SOIL-MIX AND G.S. CLAUSE 3.31 FOR SOIL CONDITIONER.
7. **MULCHING**
   TREE PLANTING AND SHRUB AREAS SHALL BE MULCHED TO A DEPTH OF 50mm. FINISH LEVEL OF MULCH SHALL BE 25mm BELOW ADJACENT FINISHED SURFACES, AND COMPLY WITH G.S. CLAUSE 3.32-MULCH.
8. **PLANT NAME**
   BOTANICAL NAME SHALL TAKE PRECEDENCE TO ENGLISH AND CHINESE NAME.
9. **PLANTING PATTERN**
   ALL PLANTS ARE TO BE PLANTED IN STAGGERED PATTERN AT SPACING INDICATED IN THE SCHEDULE. CLIMBING PLANTS SHALL BE PLANTED AGAINST SUPPORTING STRUCTURE.
10. **TREE PLANTING**
    LOCATION OF TREES IS SHOWN ON THE DRAWING. SPACING INDICATED IN THE PLANT SCHEDULE IS INDICATIVE. TREES SHALL BE LOCATED TO AVOID ANY UNDERGROUND UTILITIES. ALL SOIL LEVELS SHALL BE SURVEYED AND VERIFIED PRIOR TO COMMENCEMENT OF PLANTING.
11. **STAKING**
    BAMBOO STAKES SHALL BE USED FOR ALL TREES EXCEPT WHIPS AS SPECIFIED IN G.S. 3.36. TREE TRUNKS SHALL BE PROTECTED BY USING RUBBER HOUSE PROTECTIVE SLEEVING OR SIMILAR, AND SHALL BE LOOSENED TWICE A YEAR.
12. **DRAINAGE**
    ALL PLANTER DRAINAGE DETAILS AND WEEPHOLES DETAILS SHOULD REFER TO ENGINEER DRAWING.
13. **UNDERGROUND UTILITIES**
    UTILITY COVERS SERVICES SHOWN ON THE PLANTS ARE INDICATIVE. EXACT LOCATIONS TO BE CONFIRMED BY THE ENGINEER. NO TREES SHALL BE PLANTED WITHIN 1m OF A MANHOLE OR DRAINAGE U-CHANNEL. THERE SHALL BE NO PLANTING WITHIN THE SPACE OF 1.5m AROUND THE COVER OF ANY HYDRANT VALVE OR THE COVER OF WSD'S VALVES, OR WITHIN A DISTANCE OF 1m FROM ANY HYDRANT OUTLET. NO TREES SHALL BE PLANTED WITHIN 2m OF A ROAD KERB OR ENGINEERING STRUCTURE.
14. **WATERING**
    THE CONTRACTOR SHALL PROVIDE ADEQUATE WATERING TO ALL PLANTED AREAS AS SPECIFIED IN G.S. 3.84-WATERING.





KEY PLAN
SCALE A1 1 : 20000
A3 1 : 40000

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. NO. 60095653/CI/9052 AND 9053.
2. EXISTING TREES NOT SHOWN WILL NOT BE AFFECTED BY THE PROJECT.

LEGEND:

- SITE BOUNDARY
- PROPOSED CLIMBER PLANTING ALONG THE WALL IN ALTERNATE PATTERN
- EXISTING PLANTER WILL BE AFFECTED BY THE PROJECT AND REPLANTED THE EXISTING VEGETATION
- LANDSCAPE FEATURE AND LIGHTING (DETAILS REFER TO DWG. NO. 60095653/CI/9031, 9041, 9042 AND 9061)
- STONE FACING FINISHING
- AGO / 50 — SHRUB CODE / QUANTITY

REV. 修訂	DESCRIPTION 內容摘要	DRN. 繪圖	CHK'D 覆核	DATE 日期
A	WORKING DRAWING	ADMAN	BCC	OCT 10
–	TENDER DRAWING	ADMAN	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

SHRUB PLANTING PLAN

SHEET 1 OF 3

AECOM

DRG.NO. 圖紙編號 60095653/CI/9051A

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

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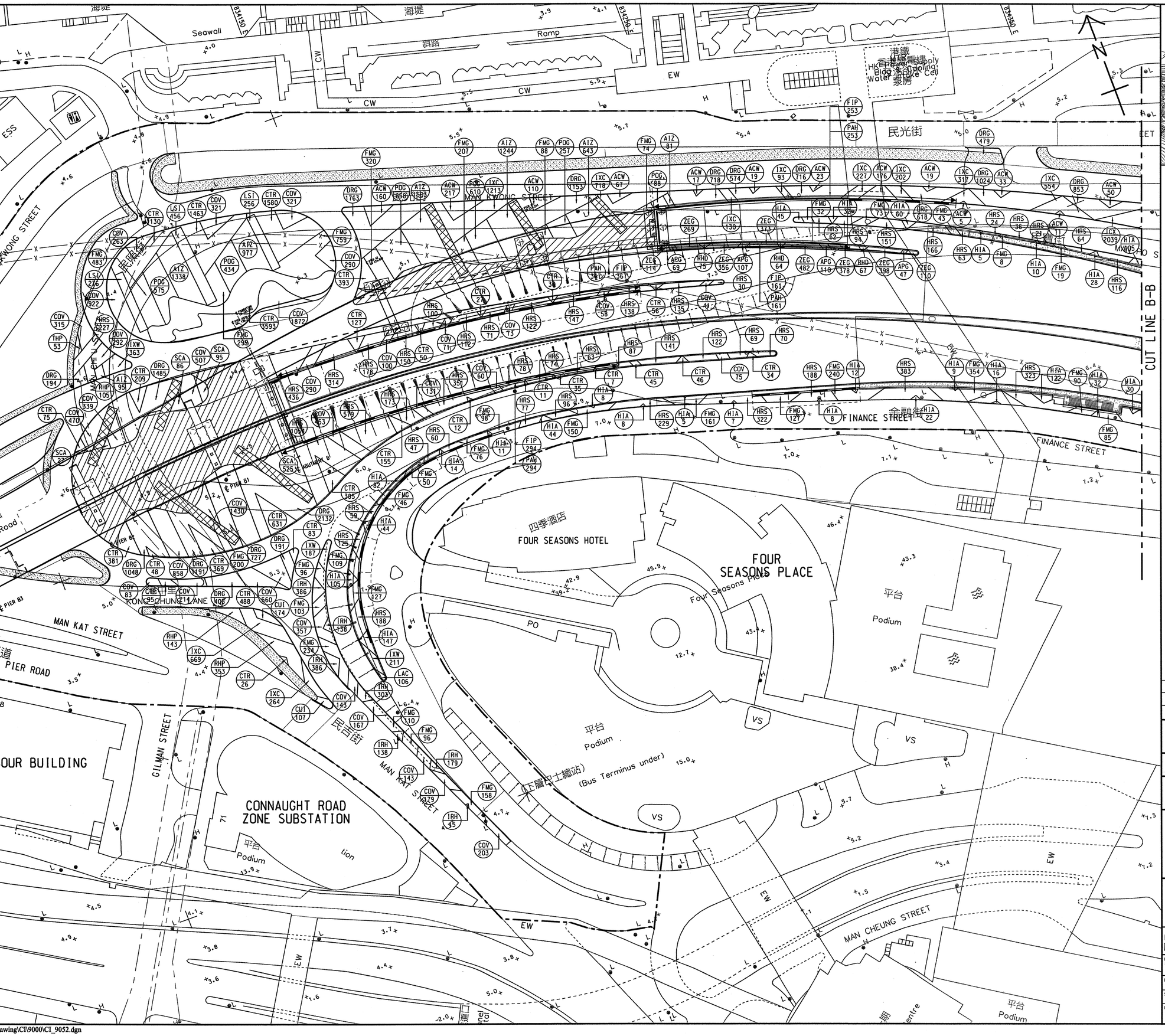

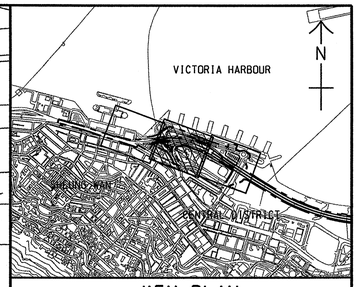

KEY PLAN
SCALE A1 1 : 20000
A3 1 : 40000

NOTE:
1. FOR NOTES AND LEGEND SEE DRG. NO. 60095653/CI/9051.

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 審核	DATE 日期
A	WORKING DRAWING	ADMAN BCC	OCT 10
-	TENDER DRAWING	ADMAN BCC	MAR 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

SHRUB PLANTING PLAN

SHEET 2 OF 3

AECOM

DRG.NO. 圖紙編號 60095653/CI/9052A

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

Plot File by : NIEP2
2010-4-28
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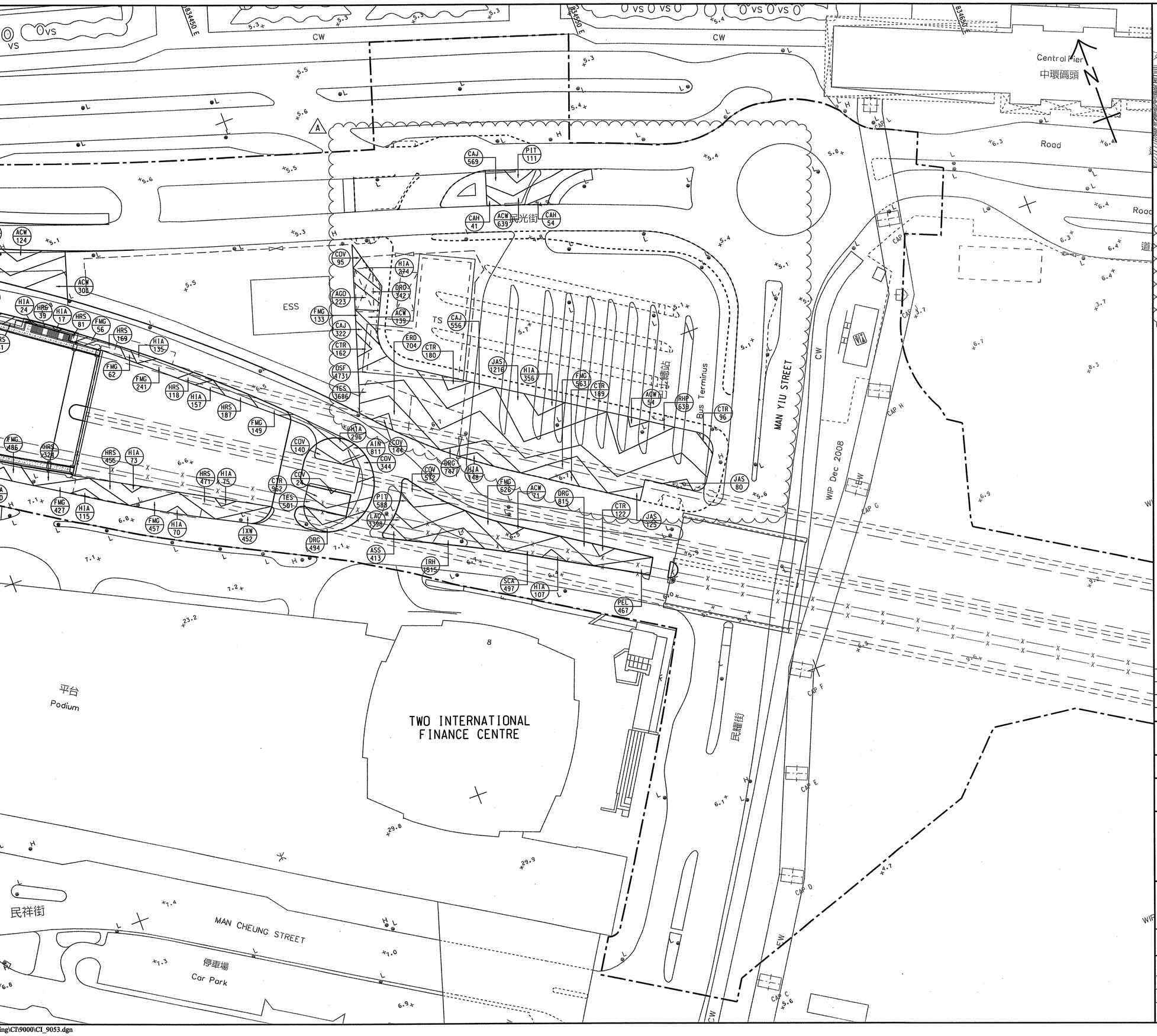
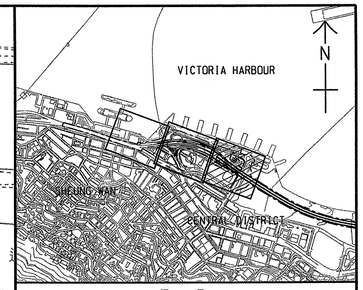




KEY PLAN

SCALE A1 1 : 20000
A3 1 : 40000

NOTES:

1. FOR NOTES AND LEGEND SEE DRG. NO. 60095653/CI/9051.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 60095653/CI/9051 AND 9052.
3. PUBLIC TRANSPORT INTERCHANGE (PTI) AND PAVEMENT AT MAN KOWNG STREET AND MAN YIU STREET WILL BE CONSTRUCTED BY HyD'S TERM CONTRACTOR. THE CONTRACTOR SHALL CO_ORDINATE WITH HyD'S TERM CONTRACTOR IN ORDER TO FACILITATE THE CONSTRUCTION WORK.

LEGEND:

WORKS TO BE CONSTRUCTED BY OTHERS (HyD'S TERM CONTRACTOR)

REV. 修訂	DESCRIPTION 內容摘要	DSN. 設計	CHECKED 審核	DATE 日期
B	WORKING DRAWING	ACHAN	BCC	OCT 10
A	TENDER ADDENDUM NO. 1	ACHAN	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

SHRUB PLANTING PLAN

SHEET 3 OF 3

AECOM

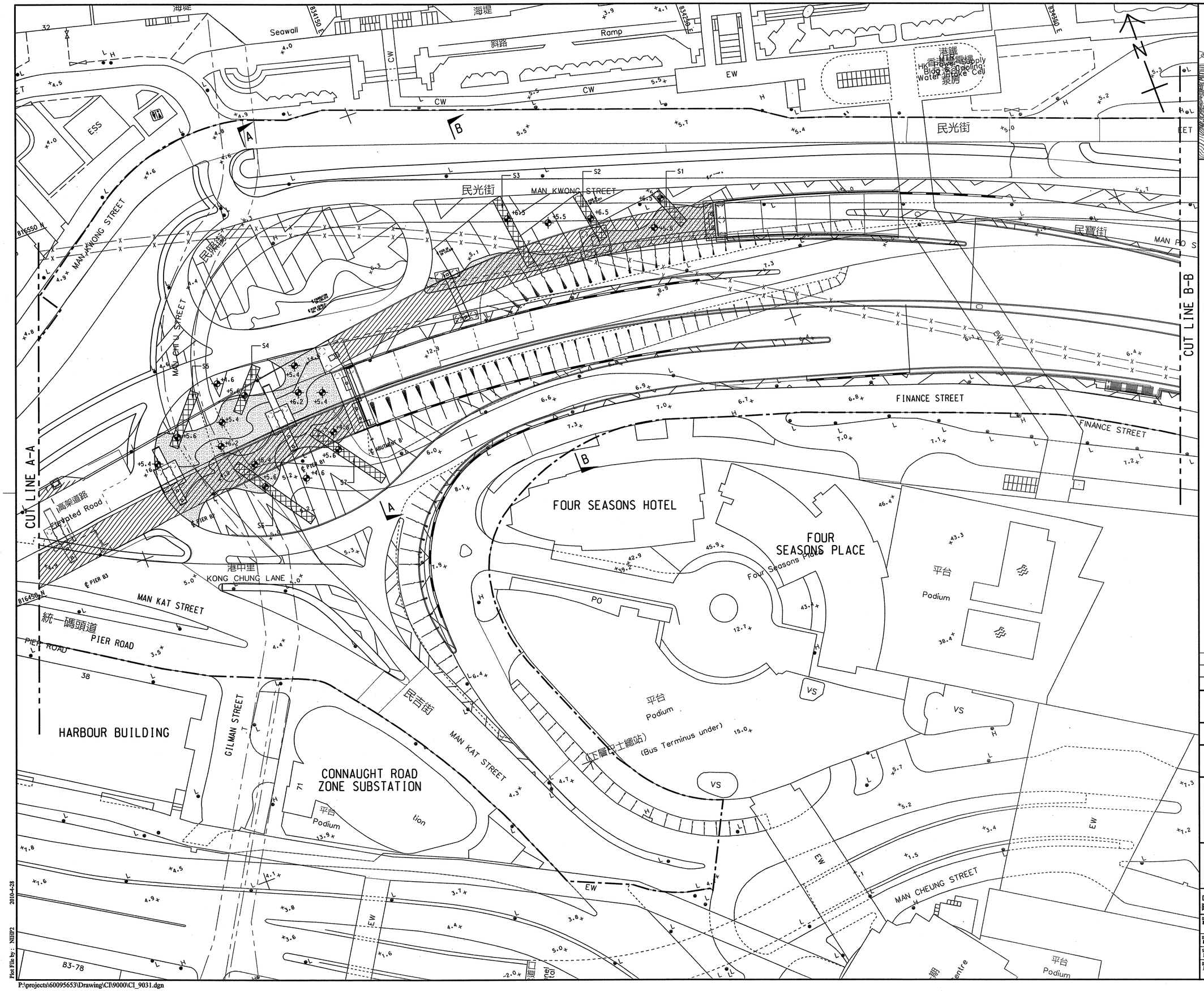
DRG.NO. 圖紙編號 60095653/CI/9053B

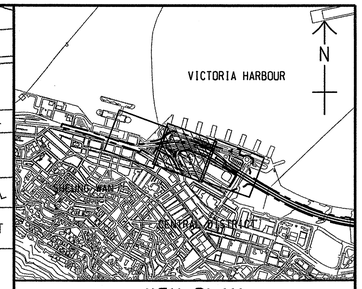
DESIGNED BY 設計 VLMK	CONTRACT NO. 合約編號 HY/2009/18	P. Dir. APPROVED 批准人 CW	
DRAWN BY 繪圖 LJ	STATUS 狀況 WORKING DRAWING		
SCALE 比例 A1 1 : 500 A3 1 : 1000			
DIMENSIONS ARE IN 尺寸單位 METRES	© COPYRIGHT RESERVED 版權所有		

Plot File by : LAIHC 2010-6-2

p:\projects\60095653\Drawing\CI\9000\CI_9053.dgn

Appendix G
Hard Landscape Sections and Details





KEY PLAN

SCALE A1 1 : 20000
A3 1 : 40000

NOTES:

1. ALL LEVELS ARE IN METRES AND REFER TO PRINCIPAL DATUM.
2. FOR SECTIONS REFER TO DRAWING NO. 60095653/CI/9041.
3. DETAILS OF THE LANDSCAPE FEATURES AND STONE FACING FINISHING REFER TO DRAWING NO. 60095653/CI/9042.
4. SIZES OF LANDSCAPE FEATURES
   - S1 11L x 1W x 1H
   - S2 14L x 1W x 1H
   - S3 19L x 1W x 1H
   - S4 13L x 1W x 1H
   - S5 15L x 1W x 1H
   - S6 24L x 1W x 1H
   - S7 22L x 1W x 1H

LEGEND:

LANDSCAPE FEATURE S1 TO S7

STONE FACING FINISHING

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 審核	DATE 日期
A	WORKING DRAWING	ACHAN/BCC	OCT 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

HARD LANDSCAPE PLAN

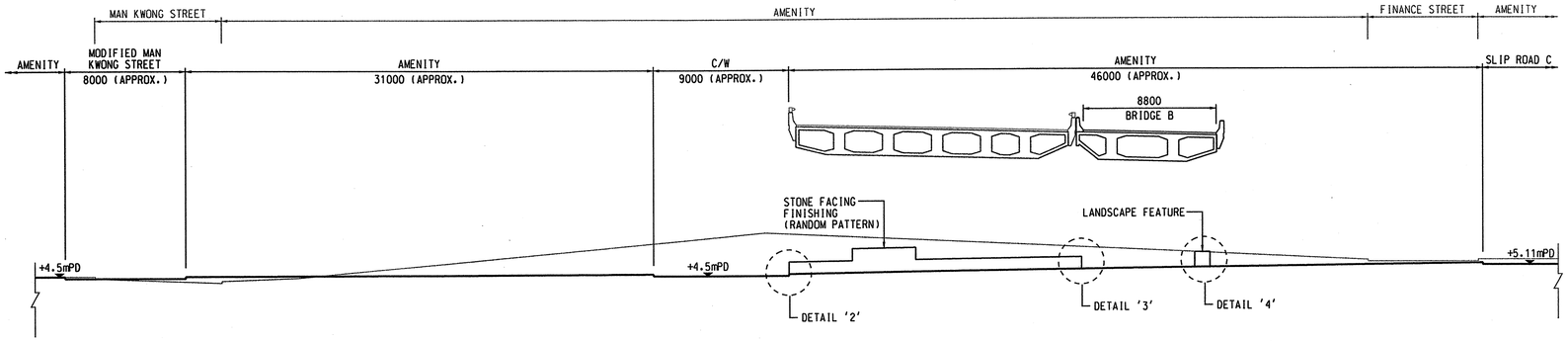
AECOM

DRG.NO. 圖紙編號 60095653/CI/9031A

DESIGNED BY 設計	CONTRACT NO. 合約編號	P. Dir. APPROVED 批准人
VLMK	HY/2009/18	CW
DRAWN BY 繪圖 WYP	STATUS 狀態 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	

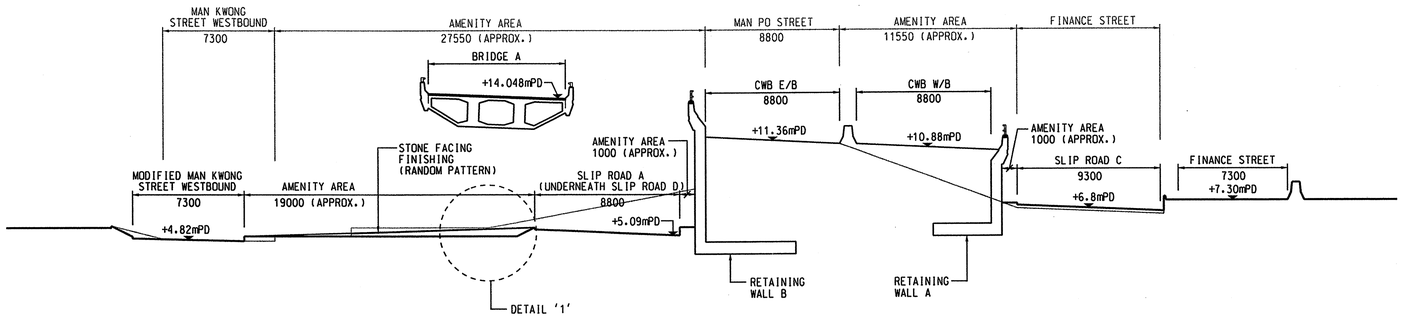
Plot File by : NIHP2 2010-4-28

P:\projects\60095653\Drawing\CI\9000\CI_9031.dgn



SECTION A - A

SCALE A1 1 : 200
A3 1 : 400



SECTION B - B

SCALE A1 1 : 200
A3 1 : 400

NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60095653/CI/9031.
2. ALL DIMENSION ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
3. THE DIMENSIONS AND LEVELS AS SHOWN ON THIS DRAWING IS INDICATIVE ONLY. THE EXACT LEVELS AND DIMENSION FOR THE PROPOSED WORKS SHALL REFER TO RELEVANT DRAWING.

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 複核	DATE 日期
A	WORKING DRAWING	ACHAN BCC	OCT 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 BYBASS - CENTRAL INTERCHANGE

HARD LANDSCAPE SECTIONS AND DETAILS

SHEET 1 OF 2

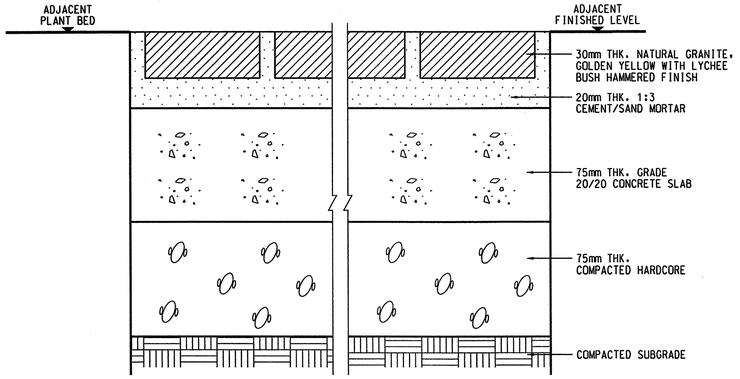
AECOM

DRG.NO. 圖紙編號 60095653/CI/9041A

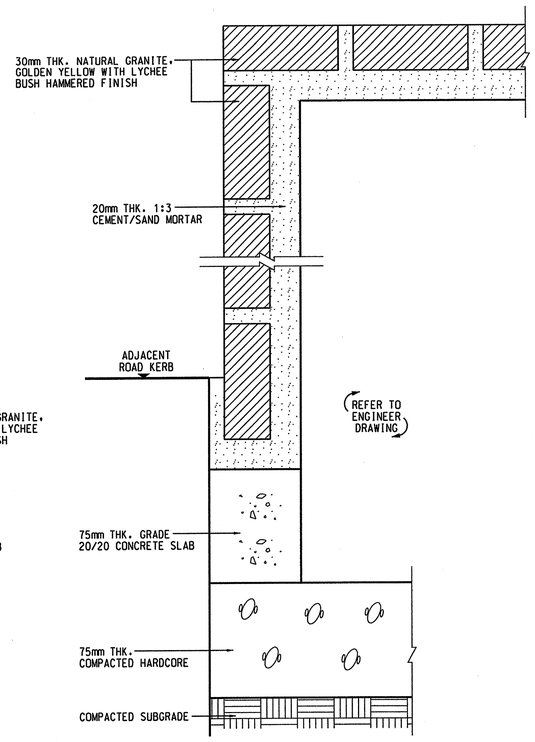
DESIGNED BY 設計 VLMK	CONTRACT NO. 合約編號 HY/2009/18	P. Dir. APPROVED 批准人 CW
DRAWN BY 繪圖 NHP	STATUS 狀態 WORKING DRAWING	
SCALE 比例 A1 1 : 200 A3 1 : 400		
DIMENSIONS ARE IN 尺寸單位 MILLIMETERS		

Plot File by : NHP2 2010-4-28

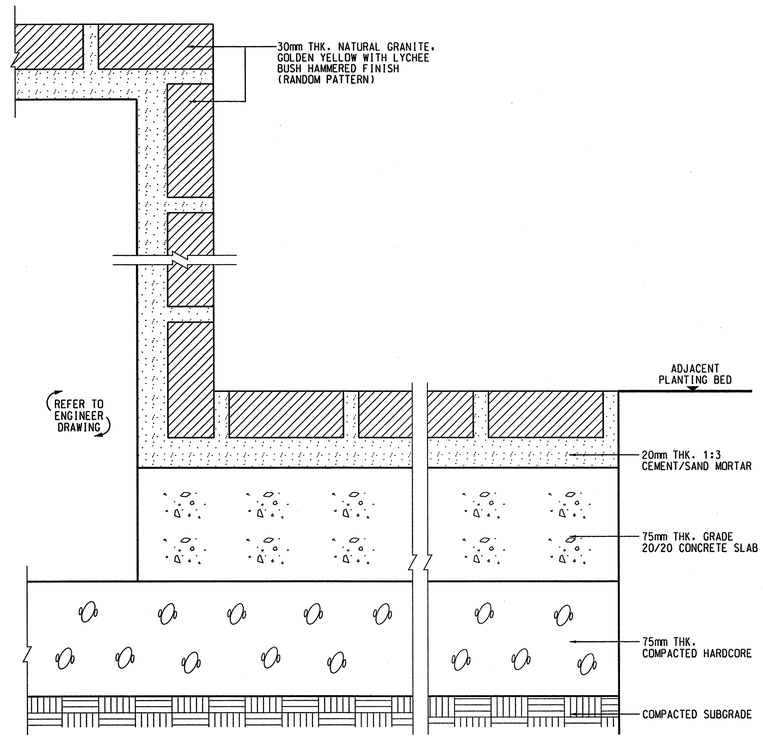
P:\projects\60095653\Drawing\CI\9000\CI_9041.dgn



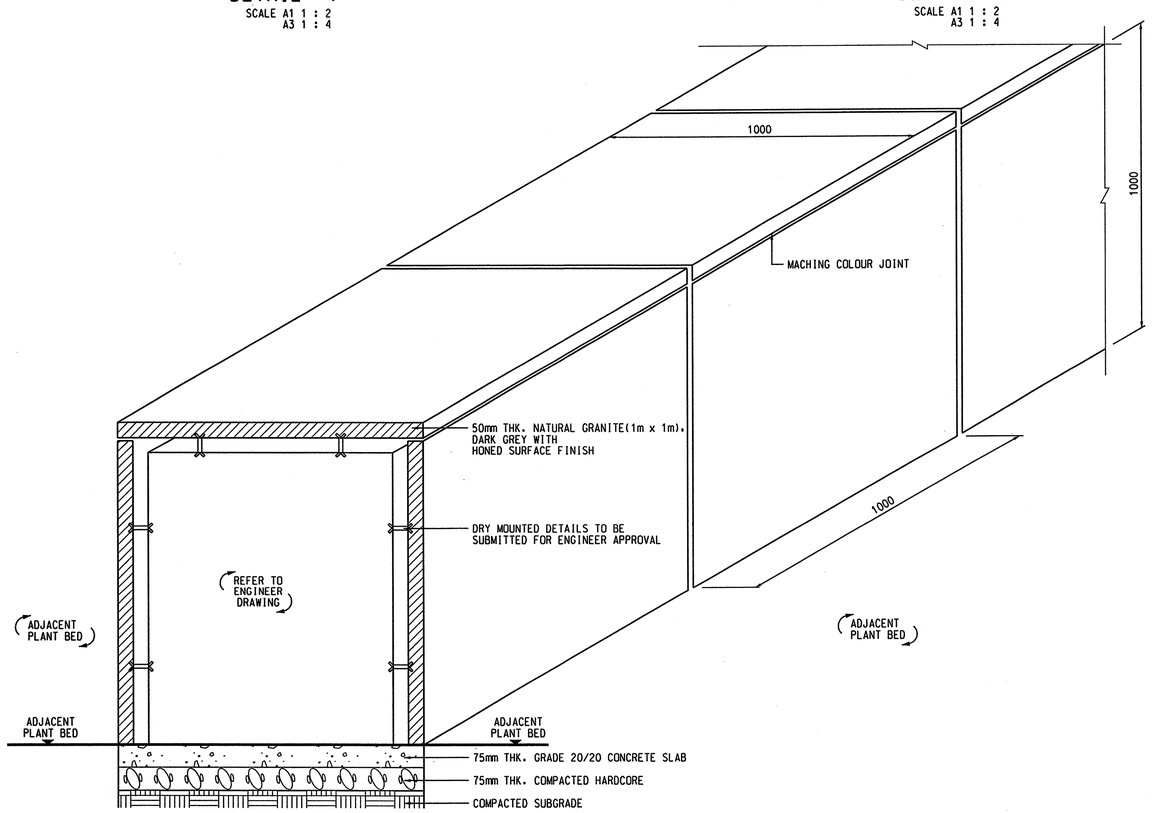
DETAIL '1'
SCALE A1 1 : 2
A3 1 : 4



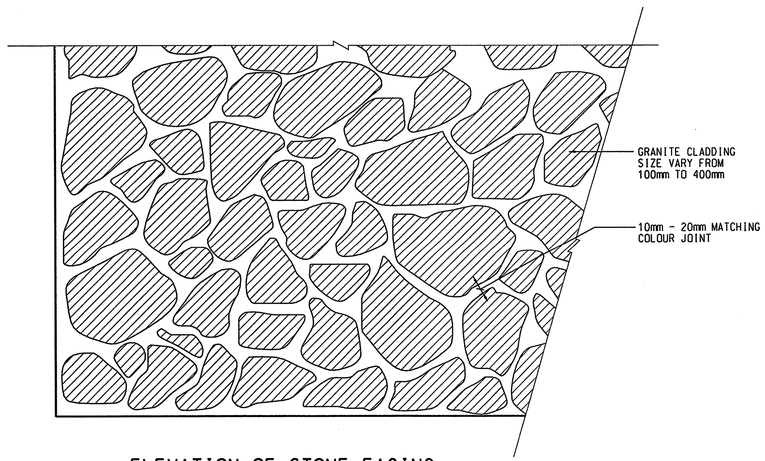
DETAIL '2'
SCALE A1 1 : 2
A3 1 : 4



DETAIL '3'
SCALE A1 1 : 2
A3 1 : 4



DETAIL '4'
SCALE A1 1 : 10
A3 1 : 20



ELEVATION OF STONE FACING
(RANDOM PATTERN)
SCALE A1 1 : 10
A3 1 : 20

NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60095653/CI/9041.
2. ALL DIMENSION ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
3. THE DIMENSIONS AND LEVELS AS SHOWN ON THIS DRAWING IS INDICATIVE ONLY. THE EXACT LEVELS AND DIMENSION FOR THE PROPOSED WORKS SHALL REFER TO RELEVANT DRAWING.
4. NATURAL GRANITE FINISHING FOR THE HARD LANDSCAPE FEATURES SHALL BE DRY MOUNT.
5. CONTRACTOR SHALL PROVIDE SHOP DRAWING SHOWING THE DETAILS AND DETAILED SETTING OUT OF THE HARD LANDSCAPE FEATURES AND THE DETAILS OF THE STONE FACING FINISHING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 審核		DATE 日期
A	WORKING DRAWING	ACHAN	BCC	OCT 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 BYBASS - CENTRAL INTERCHANGE

HARD LANDSCAPE SECTIONS AND DETAILS

SHEET 2 OF 2

AECOM

DRG.NO. 圖紙編號 60095653/CI/9042A

DESIGNED BY 設計	VLMK	CONTRACT NO. 合約編號	HY/2009/18
P. DIr. APPROVED 批准人	CW	DRAWN BY 繪圖	LHC
STATUS 程度	WORKING DRAWING	SCALE 比例	A1 AS SHOWN A3 AS SHOWN
DIMENSIONS ARE IN 尺寸單位	MILLIMETERS		

Plot File by : NHEP2 2010-4-28

P:\projects\60095653\Drawing\CI\9000\CI_9042.dgn

Appendix H
Hoarding Plans

DO NOT SCALE DRAWINGS,VERIFY ALL DIMENSIONS ON SITE

NOTES :

1. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

LEGEND :

- HOARDING(NEW)
- HOARDING(RELOCATED)
- HOARDING(RETAINED)
- ROAD BARRIER(NEW)
- ROAD BARRIER(RELOCATED)
- ROAD BARRIER(RETAINED)
- EXISTING CHAINLINK FENCE

REV. 修訂	DESCRIPTION 內容摘要	BY	CHECKED 審核	DATE 日期
-	FIRST ISSUE	EY	EY	MAR.11

CAD FILE 電子檔案: 110316_hoarding and barrier plan_EY_GARY.DGN

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Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK
CENTRAL - WAN CHAI BYPASS
CENTRAL INTERCHANGE

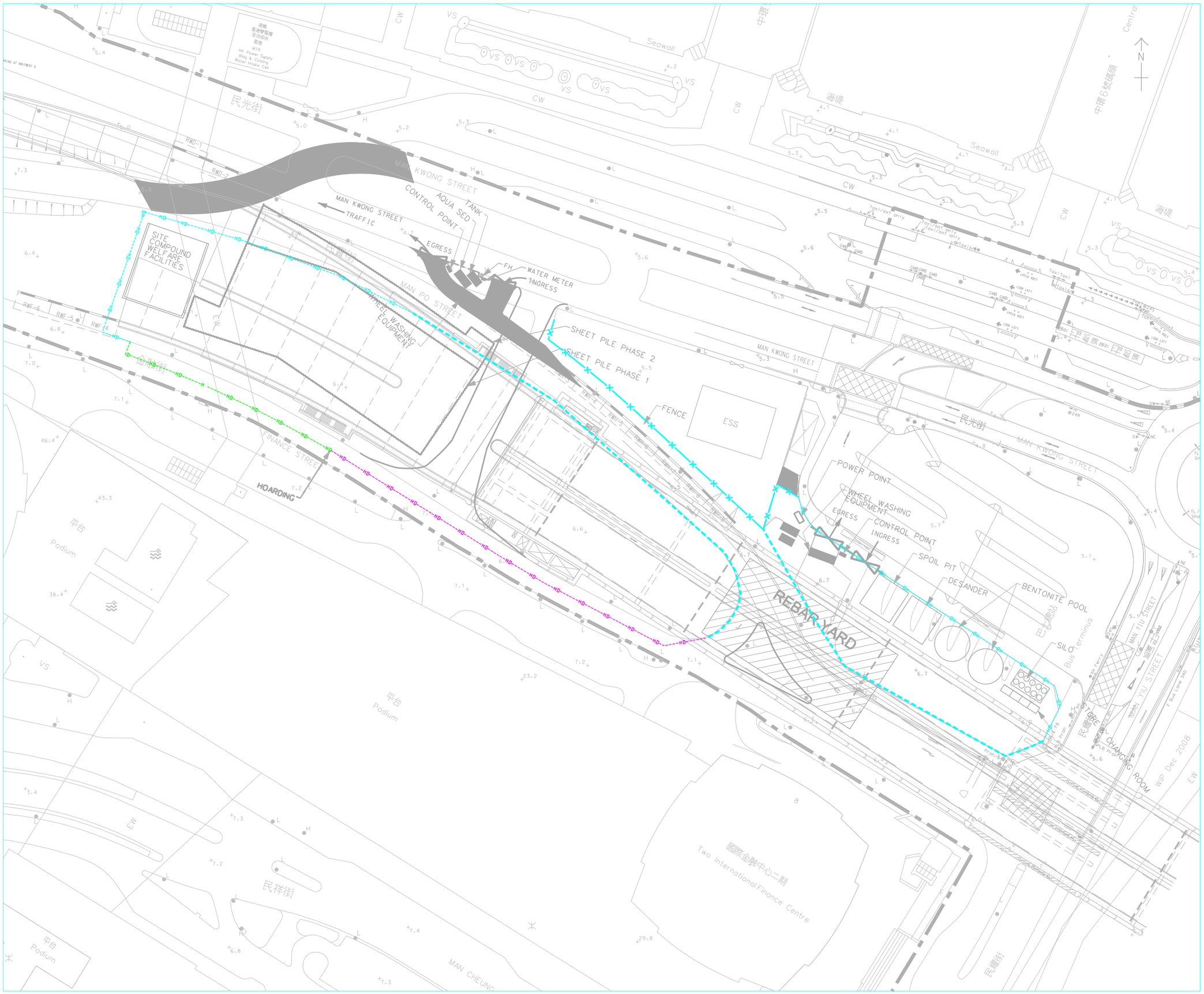
CONSULTANT ENGINEER
AECOM
AECOM Asia Co. Ltd.
(Formerly known as Maunsell Consultants Asia Ltd.)

CONTRACTOR
LEIGHTON CONTRACTORS (ASIA) LTD.

DRAWING TITLE

HOARDING AND BARRIER PLAN STAGE 1 - CONTRACT COMMENCEMENT TO 22 MARCH 2011

DRG. NO. 圖紙編號	H2540/LCAL/TW/0065	REV. 修訂 -
DESIGN BY 設計 EY	DRAWN BY 繪圖 GARY	CHECKED BY 審核 EY
DATE 日期 MAR.11	DATE 日期 MAR.11	DATE 日期 MAR.11
SCALE 比例 A3 1 : 1000	STATUS 階段 SKETCH	
DIMENSIONS ARE IN 尺寸單位 METRES		
CONTRACT NO 合約編號 HY/2009/18		



DO NOT SCALE DRAWINGS,VERIFY ALL DIMENSIONS ON SITE

NOTES :

1. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

LEGEND :

- HOARDING(NEW)
- HOARDING(RELOCATED)
- HOARDING(RETAINED)
- ROAD BARRIER(NEW)
- ROAD BARRIER(RELOCATED)
- ROAD BARRIER(RETAINED)
- EXISTING CHAINLINK FENCE

REV. 修訂	DESCRIPTION 內容摘要	BY	CHECKED 覆核	DATE 日期
-	FIRST ISSUE	EY	EY	MAR.11

CAD FILE 電子檔案: 110316_hoarding and barrier plan_EY_GARY.DGN

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Major Works Project Management Office

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CENTRAL INTERCHANGE

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

CONTRACTOR
LEIGHTON CONTRACTORS (ASIA) LTD.

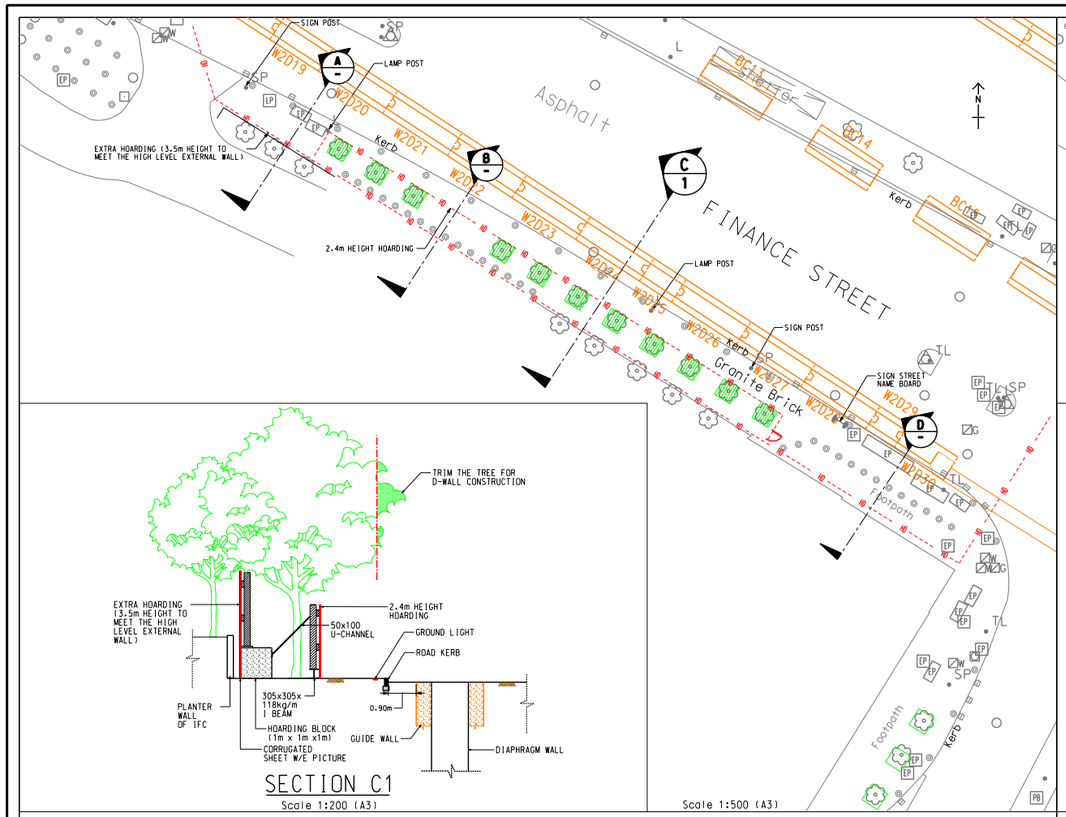
DRAWING TITLE

HOARDING AND BARRIER PLAN STAGE 2 - 22 MARCH 2011 TO 22 APRIL 2011

DRG. NO. 圖紙編號: H2540/LCAL/TW/0066 — REV. 修訂: -

DESIGN BY 設計	DRAWN BY 繪圖	CHECKED BY 覆核
EY	GARY	EY
DATE 日期: MAR.11	DATE 日期: MAR.11	DATE 日期: MAR.11

SCALE 比例: A3 1 : 1000
DIMENSIONS ARE IN 尺寸單位: METRES
CONTRACT NO 合約編號: HY/2009/18
STATUS 階段: SKETCH

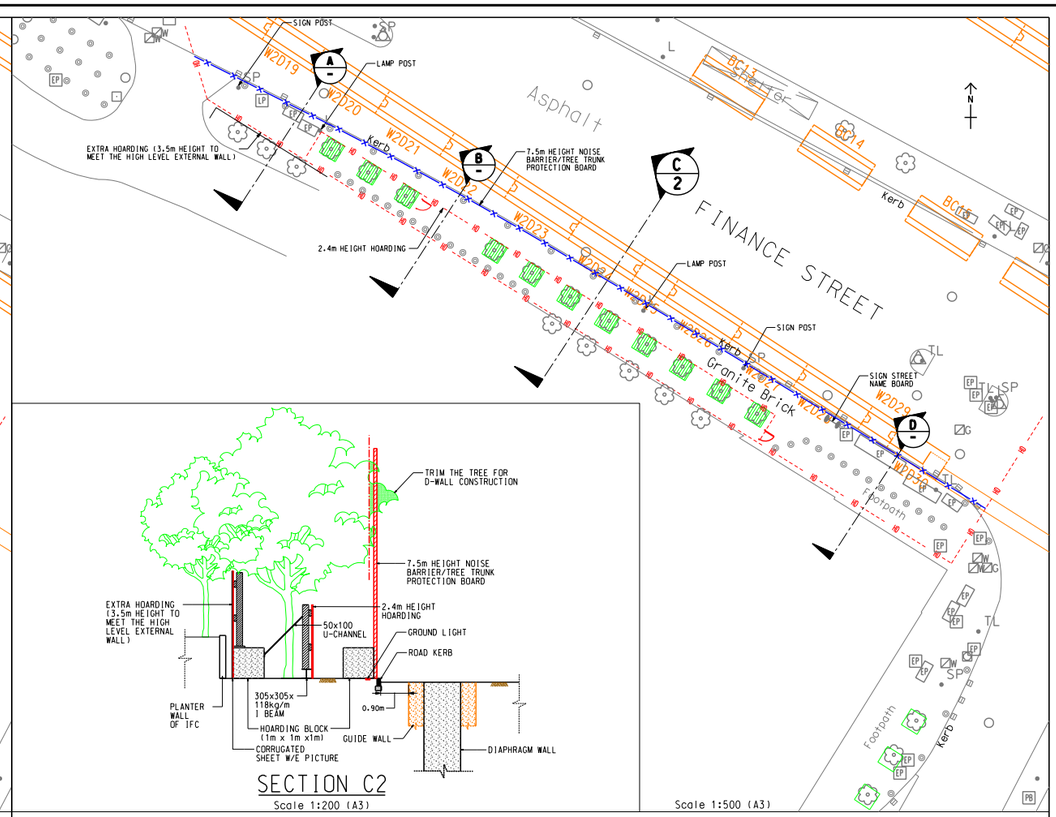


SECTION C1

Scale 1:200 (A3)

Scale 1:500 (A3)

[1] DURING NORMAL SITUATION

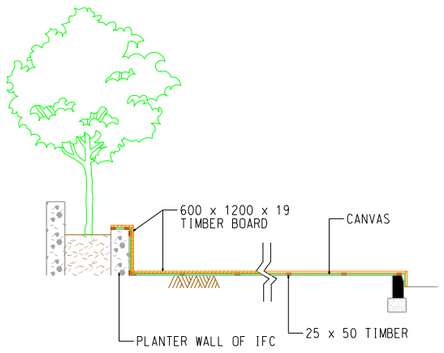


SECTION C2

Scale 1:200 (A3)

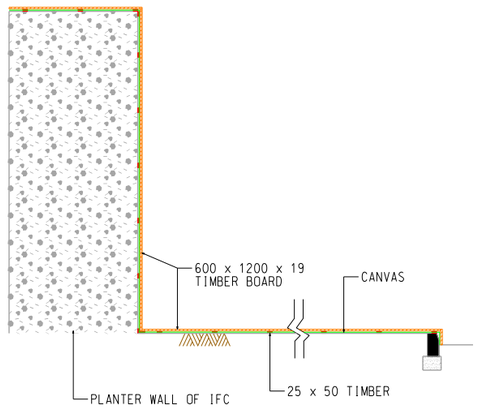
Scale 1:500 (A3)

[2] DURING DIAPHRAGM WALL



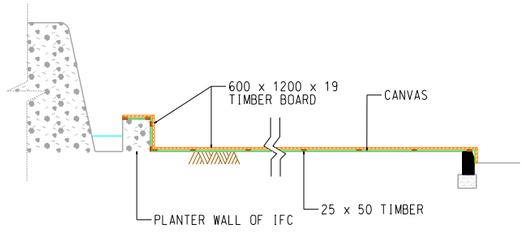
SECTION A

N.T.S



SECTION B

N.T.S



SECTION D

N.T.S

LEGEND :

- BALCONY / CANOPY
- TS TEMPORARY STRUCTURE
- GATE
- FENCE
- HD HOARDING
- NOISE BARRIER
- HAND RAILING (STAINLESS STEEL)
- CD CABLE DUCT
- W WATER MAIN
- 225 UC 225 U-CHANNEL (LEVEL SHOWN ARE CHANNEL TOP LEVEL)
- 225 CC 225 COVERED-CHANNEL (LEVEL SHOWN ARE CHANNEL TOP LEVEL)
- STAIR / STEPS
- T MANHOLE (TELEPHONE)
- W MANHOLE (WATER WORKS)
- MANHOLE (FOUL WATER)
- MANHOLE (STORM WATER)
- MANHOLE (UNKNOWN)
- CATCH PIT
- GRATING
- TK TELEPHONE KIOSK
- TB TRAFFIC LIGHT CONTROL BOX
- VG VALVE (GAS)
- VF VALVE (FIRE)
- VW VALVE (WATER)
- V VALVE (UNKNOWN)
- H FIRE HYDRANT
- TREES
- FB FLOWER BED
- FP FOOTPATH
- ESS ELECTRIC SUB-STATION
- TREE COVER (STAINLESS STEEL) & GROUND LIGHT
- UNKNOW PIT
- BN BENCH
- EP ELECTRIC PIT
- DP DRAW PIT
- PB PILLER BOX
- LP LIGHTING PIT
- FL BLOODLIGHT MAST
- GROUND LIGHT
- SIGN STREET NAME BOARD
- SP SIGN POST
- L LAMP POST
- T TELEPHONE POLE
- E ELECTRIC POLE
- UNKNOW POST
- TL TRAFFIC LIGHT
- LB LETTER BOX

DO NOT SCALE DRAWINGS,VERIFY ALL DIMENSIONS ON SITE

NOTES :

1. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

REV. 修訂	DESCRIPTION 內容摘要	BY	CHECKED 核對	DATE 日期
-	FIRST ISSUE	GL	GL	NOV.11

CAD FILE 電子檔案: 111102 Stages of Hoarding Plan On Footpath of Finance St.dgn

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK
CENTRAL - WAN CHAI BYPASS
CENTRAL INTERCHANGE

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

CONTRACTOR
LEIGHTON CONTRACTORS (ASIA) LTD.

DRAWING TITLE

STAGES OF HOARDING PLAN ON FOOTPATN OF FINANCE STREET

DRG. NO. 圖紙編號: H2540/LCAL/TW/0185 REV. 修訂: -

DESIGN BY 設計	GL	DRAWN BY 繪圖	SS
CHECKED BY 核對	GL	DATE 日期	NOV.11
DATE 日期	NOV.11	DATE 日期	NOV.11
SCALE 比例	A3 1 : 500	STATUS 階段	SKETCH
DIMENSIONS ARE IN 尺寸單位	METRES		
CONTRACT NO 合約編號	HY/2009/18		

DO NOT SCALE DRAWINGS.VERIFY ALL DIMENSIONS ON SITE

NOTES :

1. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

LEGEND :

- HOARDING(NEW)
- HOARDING(RELOCATED)
- HOARDING(RETAINED)
- EXISTING CHAINLINK FENCE
- SITE BOUNDARY
- PLASTIC SAFETY BARRIER
- WATER BARRIER

REV. 修訂	DESCRIPTION 內容摘要	BY 由	CHECKED 核實	DATE 日期
-	MINOR REVISED	YLS	YLS	NOV.11
-	FIRST ISSUE	YLS	YLS	NOV.11

CAD FILE 電子檔案: 111104_Hoarding and barrier plan Stage 3_rev4.dgn

Highways Department 路政署
Major Works Project Management Office

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CENTRAL - WAN CHAI BYPASS
CENTRAL INTERCHANGE

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

CONTRACTOR
LEIGHTON CONTRACTORS (ASIA) LTD.

DRAWING TITLE

HOARDING AND BARRIER PLAN STAGE 3

DRG. NO. 圖紙編號: H2540/LCAL/TW/0189 A

DESIGN BY 設計	DRAWN BY 繪圖	CHECKED BY 核實
YLS	SS	YLS
DATE 日期 NOV.11	DATE 日期 NOV.11	DATE 日期 NOV.11

SCALE 比例: A3 1 : 1000
DIMENSIONS ARE IN 尺寸單位: METRES
CONTRACT NO 合約編號: HY/2009/18
STATUS 狀態: SKETCH

AS-BUILT PLAN UPDATED: AS ON 10 NOVEMBER 2011

DO NOT SCALE DRAWINGS,VERIFY ALL DIMENSIONS ON SITE

NOTES :

1. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

LEGEND :

- HOARDING(NEW)
- HOARDING(RELOCATED)
- HOARDING(RETAINED)
- HOARDING(NEW) 3.5m HIGH
- SITE BOUNDARY
- WATER FILLED BARRIER
- WATER FILLED BARRIER WITH PERSPECT SCREEN

REV. 修訂	DESCRIPTION 內容摘要	BY	CHECKED 核核	DATE 日期
-	FIRST ISSUE	YLS	YLS	NOV.11

CAD FILE 電子檔案: 111104_Hoarding and barrier plan Stage 4.dgn

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK
CENTRAL - WAN CHAI BYPASS
CENTRAL INTERCHANGE

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

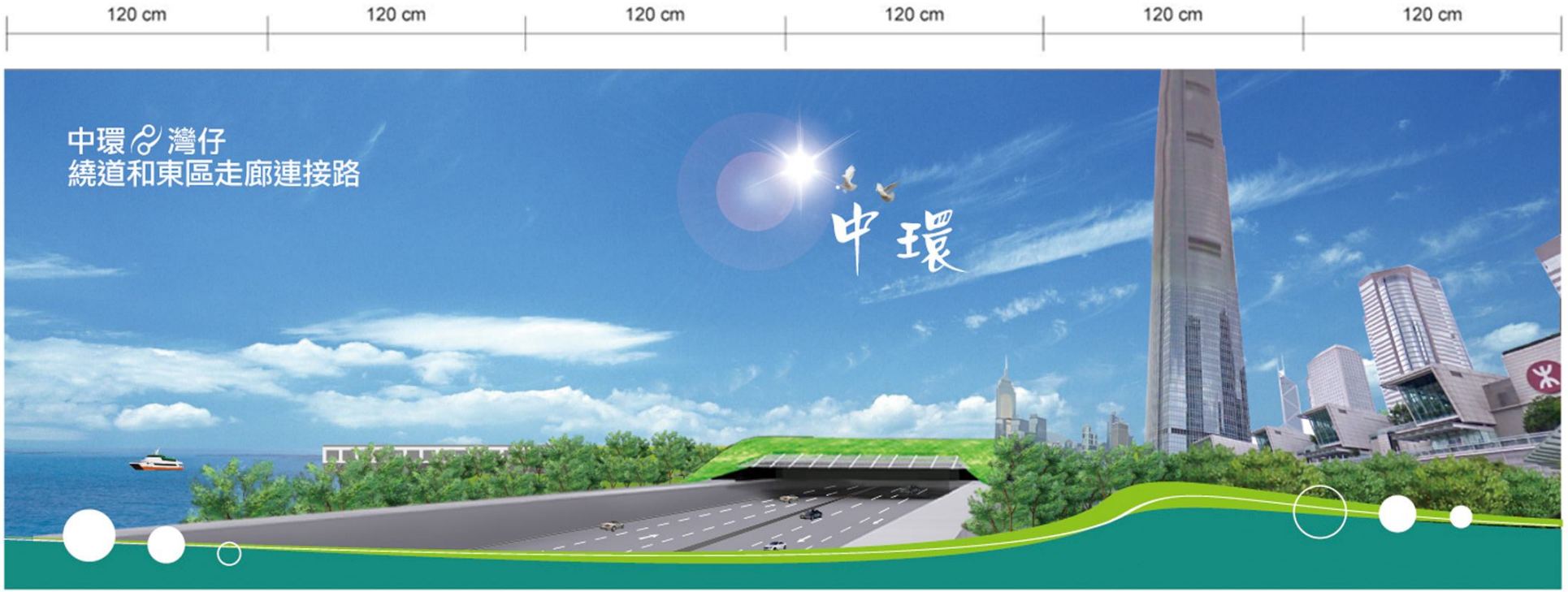
CONTRACTOR
LEIGHTON CONTRACTORS (ASIA) LTD.

DRAWING TITLE

HOARDING AND BARRIER PLAN STAGE 4

DRG. NO. 圖紙編號	H2540/LCAL/TW/0190		REV. 修訂 -
DESIGN BY 設計	YLS	DRAWN BY 繪圖 SS	CHECKED BY 核核 YLS
DATE 日期	NOV.11	DATE 日期 NOV.11	DATE 日期 NOV.11
SCALE 比例	A3 1 : 1500	STATUS 階段	SKETCH
DIMENSIONS ARE IN 尺寸單位	METRES		
CONTRACT NO 合約編號	HY/2009/18		

Appendix I
Surface Treatment Figures



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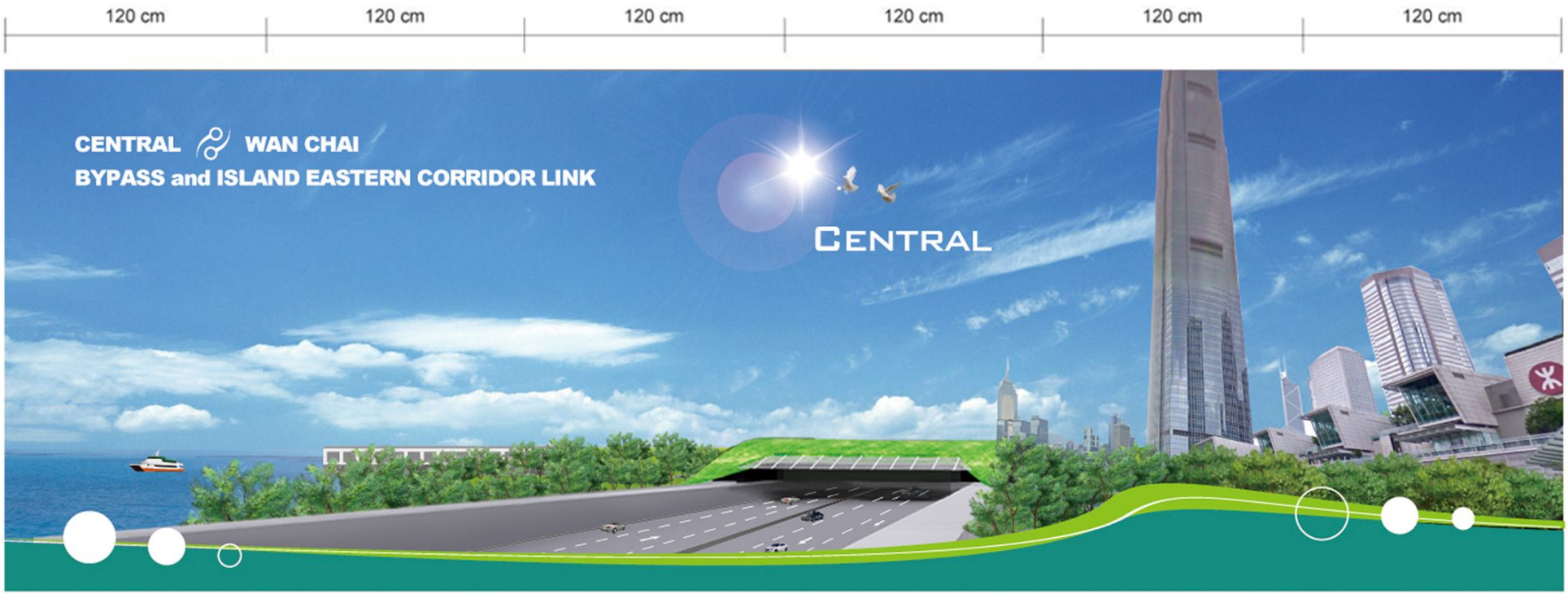

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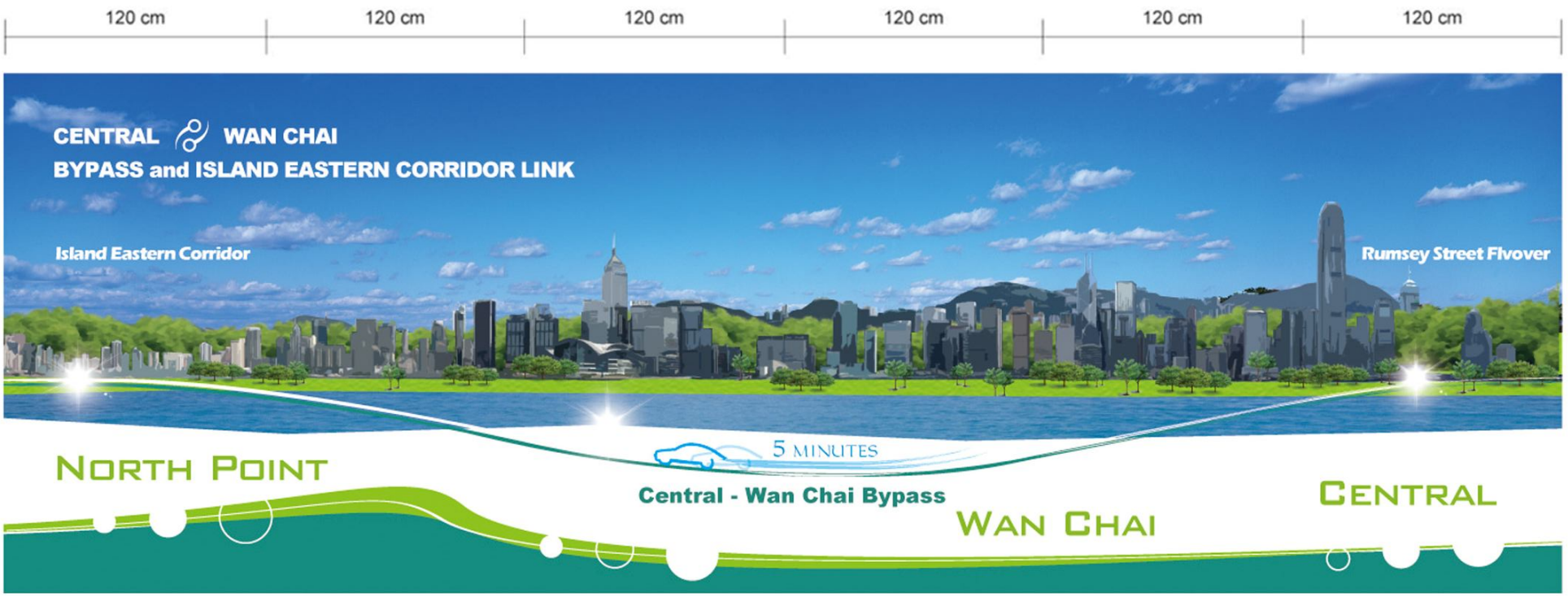

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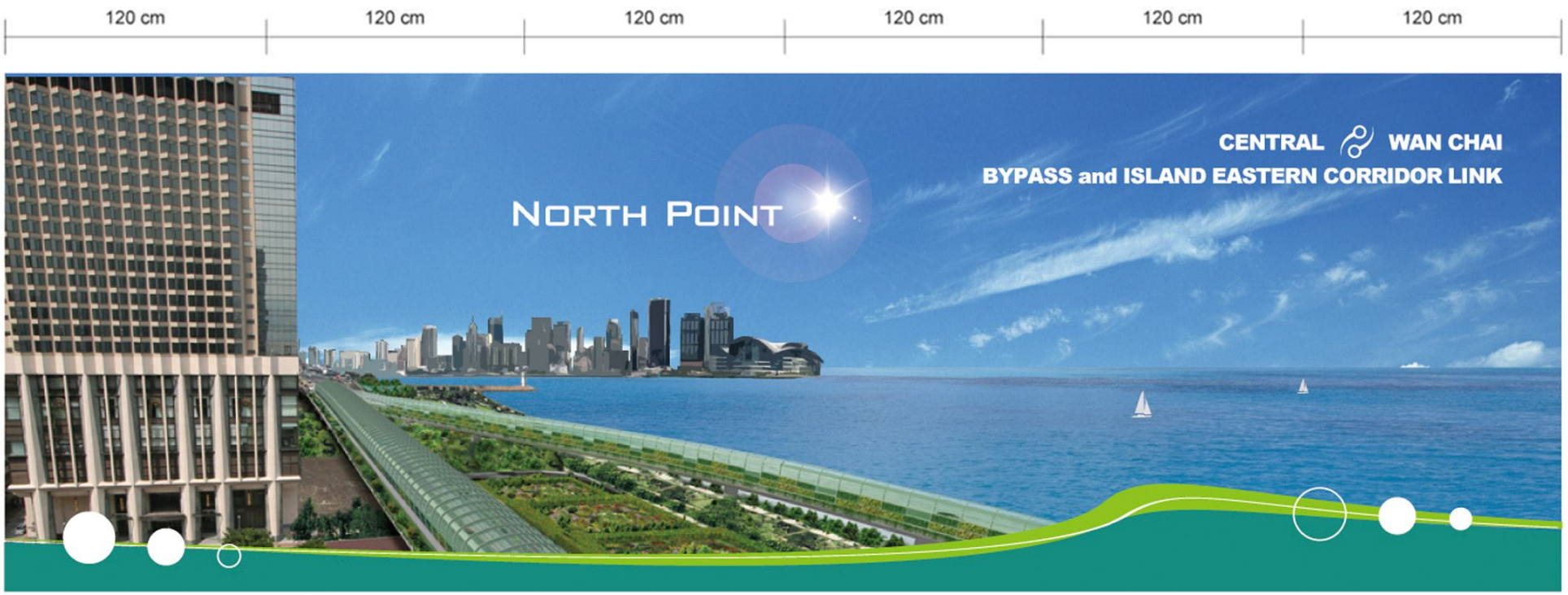

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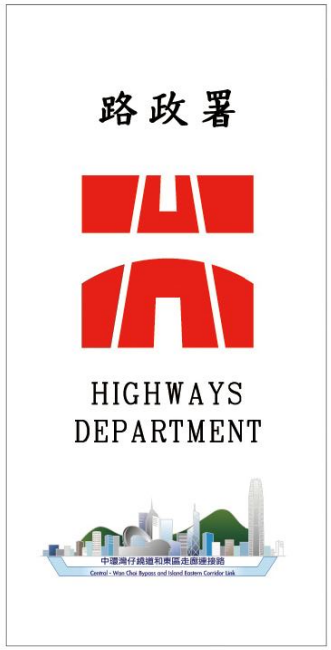

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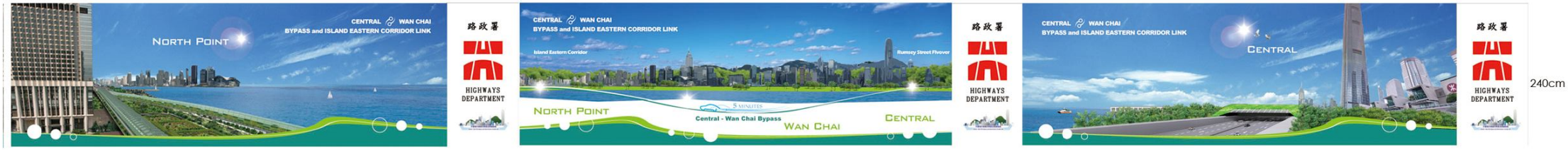
2520cm



240cm

720cm 120cm 720cm 120cm 720cm 120cm

Graphic Hoarding - GROUPED
17JAN2011

GA+D
DATHAN WUN

Appendix J
Landscape Checklist

Proposal Mitigation Measures for CWB within CRI and CRIII

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages				Relevant Legislation and Guidelines	Implementation status	Ref.
				Des	C	O	Dec			
S7.6	Site hoarding to be installed, where appropriate, with surface treatment suitable to the urban context.	Entire works area during entire construction period	Contractor		√			-	Implemented, relocation works would be continuously carried out to suit the progress of the works	Part D - S.1 – Item B
S7.6	Control of night time lighting	Entire works area during entire construction period	Contractor		√			-	Implemented	Part D - S.1 - Item C
S7.6	Approved new soil-mix for new planting areas.	New planting areas	Contractor		√			WBTC 18/94 and LCSD's Annex 1	Works at new planting areas not yet started	Part D - S.1 - Item A1
S7.6	Soil mounding to be implemented at expansive amenity areas. Mounding to be profiled to ensure ease of maintenance.	Work sites within CRI & CRIII as shown in Figure 7.6.1 to 7.6.3 Mitigation Measures of the approved EIA Report**.	HyD's Landscape consultant & contractor	√	√	√		WBTC 18/94	Not Applicable	-
S7.6	Reinstatement of road and amenity planting and roadside mass screening (Approximately 37, 000 m^3)	Work site within CRI & CRIII as shown in Figure 7.6.1 to 7.6.3 Mitigation Measures of the approved EIA Report**	HyD's Landscape consultant & contractor	√	√	√		WBTC 18/94 and LCSD's Annex 1	Not Applicable	-

S7.6	Soft landscape treatment under elevated structures and on columns (where practical) by use of suitably shade tolerant plant material.	At area where optimum light levels allow. Subject to detailed design.	HyD's Landscape consultant & contractor	√	√	√		WBTC 18/94 and LCSD's Annex 1	Works on elevated structures not yet started	Part D - S1 - Item A2, and App. G
S7.6	Landscape design within boundary of ancillary service buildings. Inclusive of soft landscape treatment.	Work sites within CRI & CRIII as shown in Figures 7.2.1 to 7.2.2 Works Layout Plans of the approved EIA Report**	HyD's Landscape consultant & contractor	√	√	√		WBTC 18/94	Not Applicable	-
S7.6	Retention and protection of existing trees where feasible and transplanting of trees that are in conflict with the road works (where practical). All in accordance with Tree Survey Report/Felling Application. Advance planning and programming to be initiated.	As shown with Tree Survey Report as mentioned in the approved EIA Report**	HyD's Landscape consultant & contractor	√	√	√		WBTC 24/94	Implemented, protection and/or transplanting works in progress	Part D - S.1 - Item A2

S7.6.3	Quality and integrated design f Ancillary Buildings, tunnel portals wing walls abutments, noise barrier systems and landscape screen wall panel.	Work sites within CRI & CRIII as shown in Figures 7.2.1 to 7.2.2 and Figure 7.6.1 to 7.6.3 Mitigation Measures of the approved EIA Report**	HyD's Architectural Landscape consultant	√	√	√		ACABAS	Not Applicable	-
Table 7.3	Advance planning and programme of transplanting of existing trees and reinstatement of roadside planting to early completion areas or unaffected areas.	At roadside amenity areas.	HyD's Landscape consultant & contractor	√	√			WBCT 24/94	Implemented, transplanting works in progress	Part D - S.1 - Item A2

Des – Design, C – Construction, O – Operation, and Dec – Decommissioning
LCSD's Annex I: General Requirements of Soft Landscaping Design for Areas under LCSD's Maintenance Responsibilities.
** Central – Wan Chai Bypass and Island Eastern Corridor Link Environmental Impact Assessment Report (Register No.: AWIAR-041/2001)

Implementation Schedule for Landscape and Visual

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages				Relevant Legislation and Guidelines	Implementation status & date	Ref.
				Des	C	O	Dec			
Construction Phase										
For the Whole Project										
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	Contractor	√	√			EIAO TM	According to S7.6, new soil mix shall be used	Part D - S.1 - Item A1
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM	Implemented, continuous effort	Part D - S.1 - Item A2
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM	Implemented, transplanting works in progress	Part D - S.1 - Item A2
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM	Planting works to be started at later stage	Part D - S.1 - Item A2
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM	Implemented	Part D - S.1 - Item C
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM	Implemented, relocation works would be continuously carried out to suit the progress of the works	Part D - S.1 - Item B

For DP1 – CWB (Within the Project Boundary)										
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	Contractor		√			EIAO TM	According to S7.6, new soil mix shall be used	Part D - S.1 - Item A1
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM	Implemented, continuous effort	Part D - S.1 - Item A2
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM	Implemented, transplanting works in progress	Part D - S.1 - Item A2
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM	Planting works to be started at later stage	Part D - S.1 - Item A2
Table 10.5	CM5 Control of night-time lighting	Work site / During Construction Phase	Contractor		√			EIAO TM	Implemented	Part D - S.1 - Item C
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM	Implemented, relocation works would be continuously carried out to suit the progress of the works	Part D - S.1 - Item B

Appendix K
Tree Felling Approval from DLO

Please quote our file reference in reply

Urgent By Fax

MEMO

From	District Lands Officer/Hong Kong West & South	*To*	CE3/MW, MWPMO, HyD
Ref.	(4) *in* LD DLO/HW 663/DMS/82 (XVII)	*(Attn.:*	Mr. Ray LAI)
Tel. No.	2835 1634	*Your Ref.*	_____ *in* _____
Fax. No.	2833 1945	*dated*	_____
E-mail	eshkwc@landsd.gov.hk	*Fax. No.*	2714 5289
Date	20 March 2013	*Total Pages*	2

Contract No. HY/2009/18
Central – Wan Chai Bypass – Central Interchange

Application to (A) Felling 30 nos. and (B) Transplanting 5 nos. of tree at the planter adjacent to Man Kat Street

I refer to your Consultant, AECOM Asia Co. Limited's letter dated 3 October 2012 ("the Submission") and its subsequent e-mails dated 6 February and 4 March 2013 regarding a Tree Treatment Proposal for (A) felling 30 nos. of tree and (B) transplanting of 5 nos. of tree at the planter adjacent to Man Kat Street to facilitate the construction of an Elevated Lay-by at Rumsey Street Flyover and its associated piling works.

2. Approval is hereby given to (A) felling of 30 nos. of tree [Tree Nos. T1727, T1730, T1732, T1736, T1739, T1742, T1771, T1781-1785, T1789-Y1796, T1798-T1799, T1801-T1803, T1806 and AT023-AT026] and (B) transplanting of 5 nos. of tree [Tree Nos. AT22, AT28, T1807, T1811 and T1817] as shown in Appendix B of the Submission subject to following conditions:

In respect of (A) Felling 30 nos. of trees :-

(a) Compensatory planting of 33 nos. of tree with DBH 75mm as shown in Appendix F – Compensatory Plan – Option 2 of the Submission, but the 33 compensatory trees should be of the same species of Bauhinia variegate 宮粉羊蹄甲 instead of four different species as proposed in Appendix F of the Submission.

(b) Compensatory planting of 2 nos. of tree with DBH 75mm as shown on Tree Planting Plan Drg. No. 60095653/CI/9012B of e-mail dated 4 March 2013.

(c) Compensatory planting of 1 no. of tree with tree DBH 75mm as shown on Tree Planting Plan Option 2 with Sketch No. 60095653/CI/DF0206 of e-mail dated 4 March 2013.

(d) Compensatory planting of 13 nos. of tree with tree DBH 75mm at original location of Tree No. T1736, T1739, T1742, T1781, T1784, T1785, T1789 – T1791, T1801 – T1803 and T1806 as shown on Proposed Treatment of Trees Plan in Appendix B of the Submission.

(e) Compensatory planting of 4 nos. of tree with tree DBH 75mm at original location of Tree No. AT23 – AT26 as shown on Proposed Treatment of

Trees Plan in Appendix B of the Submission.

In respect of (B) Transplanting 5 nos. of tree :-

(f) Replanting AT28, T1807 and T 1811 at original location as shown on Proposed Treatment of Trees Plan in Appendix B of the Submission.

(g) Transplanting AT22 to the recipient site as shown on Final Transplant Location Plan of AT22 with Sketch No. 60095653/CI/DF0286 attached to e-mail dated 4 March 2013.

(h) Transplanting AT1817 to the recipient site as show on Final Transplant Location Plan of T1817 with Sketch No. 60095653/CI/DF0285 attached to e-mail dated 4 March 2013.

In respect of both (A) Felling 30 nos. of trees and (B) Transplanting 5 nos. of tree :-

(i) You should ensure good workmanship and proper techniques for compensatory planting and tree transplanting works.

(j) Adequate aftercare and maintenance work shall be arranged for the transplanted trees by the horticultural contractor throughout the course of tree nursing period

(k) You shall maintain an establishment period of 1 to 3 years for the trees when they are replanted back to the site. Joint site meetings with LSCD's colleagues shall be arranged by your horticultural contractor before commencement and after satisfactory completion of the establishment period.

(l) Regarding the proposed location of the tree works which falls upon the site tentatively allocated in-principle to CE3/MW, MWPMO, HyD for demolition of the Rumsey Street Flyover for a period of 2 years from 1.1.2017 or such other date as advised by me, please liaise and sort out with CE3/MW, MWPMO to ensure that the tree works will not be affected by the flyover demolition works.

(m) You shall consult MTR Corporation Limited prior to commencing works and take adequate and proper precautions to ensure that the tree felling, transplanting and replanting works will not affect MTR Corporation Limited's railway protection boundary, railway reserve (Airport Railway Area Plan No. 24B) and MTR Lot No. 2 RP.

(Ernest WONG)
for District Lands Officer
Hong Kong West and South

c.c.
LCSD (Attn: Mr. T.M BAR, Fax No. 2530 1202)
CE3/MW, MWPMO, HyD Attn: Mr. MAN Moon-shing
Internal: 876/SHMS/82 (G)

Appendix L
Tree Compensation Plan

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

Engineer's Representative's Office
25 Hung Hing Road,
Causeway Bay, Hong Kong
香港銅鑼灣鴻興道 25 號
+852 3912 3000 tel
+852 3912 3010 fax

18B003827

- 3 OCT 2012

Your Ref. : -
Our Ref. : CWB/(HY/2009/18)/M45/800/18B003827

3 October 2012

By Post only

Refer to Distribution List

Dear Sir / Madam,

Contract No. HY/2009/18
Central - Wan Chai Bypass – Central Interchange

Revised Tree Treatment Proposal for the Works under Elevated Lay-by of Rumsey Street Flyover

Further to my previous letter ref. CWB/(HY/2009/18)M45/800/18B003163 dated 5 June 2012 and Ms. Tam's (LCSD) email (see attached) dated 9 August 2012 regarding a Tree Treatment Proposal to facilitate the construction of elevated lay-by at Rumsey Street Flyover and its associated piling work at the planter adjacent to Man Kat Street, a revised submission from our Contractor (ref. H2540/CSF/OPR/01029-R3) is attached herewith for your comment/approval. I would be grateful if you could provide your comment/approval on or before 31 October 2012 in accordance with Technical Circular 3/2006.

Should you have any queries, please contact my RE, Mr. Nelson Chin at 6461 8784.

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

David Kwan
Chief Resident Engineer

Encl.

c.c.	CE3/MW, HyD	-	Attn : Mr. Ray Lai	] – w/o encl.
	AECOM	-	Attn : Mr. Alex Li	] – w/o encl.
	LCSD	-	Attn : Ms. Yoki Yuen	] – w/o encl.

Response required : Yes / ~~No~~

DK/RY/NC/WC/al

AECOM

Our Ref. : CWB/(HY/2009/18)/M45/800/18B003827

Distribution List

Lands Department
Lands Administration Office
District Lands Office, Hong Kong West and South
3rd, 19th and 20th floor, Southorn Centre,
130 Hennessy Road,
Wan Chai,
Hong Kong.

Attn.: Mr. T. K. WONG, Ernest

Leisure and Cultural Services Department
Tree Team (HKW)
3/F., Hong Kong Squash Centre,
19 Cotton Tree Drive,
Central,
Hong Kong

Attn.: Mr. BAR Ting Ming

Leisure and Cultural Services Department
Leisure Services Branch – Division 2
Leisure Management / Hong Kong West
Central and Western District Leisure Services Office
Room 1001, 10/F., Sheung Wan Municipal Services Building,
345 Queen's Road Central,
Kong Kong.

Attn.: Miss Y.T. TAM, Pat

Winnie Cheung

From: e7cwb.mw@hyd.gov.hk
Sent: 2012年8月10日星期五 9:13
To: Nelson Chin
Cc: Chiu Cheuk Siu - Highways; Winnie Cheung
Subject: Re: 轉寄: Fw: Contract . HY/2009/18 - Central-Wan Chai Bypass - Central Interchange - Tree Treatment Proposal for Works at Elevated Lay-by in Protion VI

Dear Nelson,

As verbally advised by Ernest Wong of DLO yesterday, our proposal will be processed shortly. To avoid abortive works, your office may inform him that a revised submission will be sent to his office soon.

Please also take note of LCSD's advice.

Regards,
Ray LAI
E7/CWB, MWPMO, HyD
Tel: 2762 3570

From: YT TAM/LCSD/HKSARG@LCSD
To: Ray YC LAI/HYD/HKSARG@HYD
Cc: TM BAR/LCSD/HKSARG@LCSD, Nelson Chin <nelson.chin@cwbaecom.com>, Cheuk Siu CHIU/HYD/HKSARG@HYD
Date: 09/08/2012 19:42
Subject: 轉寄: Fw: Contract . HY/2009/18 - Central-Wan Chai Bypass - Central Interchange - Tree Treatment Proposal for Works at Elevated Lay-by in Protion VI

Dear Mr LAI,

We spoke.

I have relayed the message to your Miss Winnie CHEUNG that a revised submission recommending only one option is required. Also, the submission should address to DLO and cc to LCSD. For the copies to LCSD, pl send individual copy to the following addresses -

Tree Team (HKW)
Attn: Mr BAR Ting-ming
Address: 3/F, Hong Kong Squash Centre, 19 Cotton Tree Drive, Central, Hong Kong

C&W District Leisure Services Office
Attn: Ms Pat TAM
Address: Rm 1001, 10/F, Sheung Wan Municipal Services Building, 345 Queen's Road Central, HK

Regards.

Pat TAM
DDLM(C&W)2
Tel: 2853 2568

----- Forwarded by YT TAM/LCSD/HKSARG on 09/08/2012 19:27 -----

From: Ray YC LAI/HYD/HKSARG@HYD
To: TM BAR/LCSD/HKSARG@LCSD
Cc: Nelson Chin <nelson.chin@cwbaecom.com>, Cheuk Siu CHIU/HYD/HKSARG@HYD
Date: 07/08/2012 09:14
Subject: Contract . HY/2009/18 - Central-Wan Chai Bypass - Central Interchange - Tree Treatment Proposal for Works at Elevated Lay-by in Protion VI

Dear Mr BAR,

I refer to AECOM's letter (copy attached) dated 15 June 2012 regarding the captioned subject.

[attachment "18B003250.pdf" deleted by Ray YC LAI/HYD/HKSARG]

As stated in the letter, the construction works at the lawn area adjacent to Man Kat Street is scheduled to commence in September 2012, we would like to carry out the treatment works as early as possible. Grateful if your office could let us have your reply at your earliest convenience please.

Should you have any query, please feel free to contact me at 2762 3570 or our resident engineer, Mr Nelson CHIN, at 3912 3208.

Regards,
Ray LAI
E7/CWB, MWPMO, HyD
Tel: 2762 3570

Contractor's Submission Form

Leighton Contractors
(Asia) Limited

39/F Sun Hung Kai Centre
30 Harbour Road, Hong Kong

t: +852 2823 1111

18A006841

Ref: H2540/CSF/OPR/01029-R3
Date: 18 September 2012

Contract: HY/2009/18 – Central-Wan Chai Bypass - Central Interchange

To: Engineer's Representative, The Chief Resident Engineer Mr. David Kwan
Your Ref: CWB/(HY/2009/18)/M25/220/18B003162
Title of Submission: Tree Treatment Proposal for Works at Elevated Lay-by in Portion VI

Specification: N/A

We are pleased to submit the following for your review and comment

Description:

We hereby supplement the previously submitted Tree Treatment Proposal for works under the Elevated Lay-by in Portion VI for your review and comment.

Purpose of Submission: ☒ FOR APPROVAL ☐ FOR RECORD OR INFORMATION

Contractor's Representative
Signature:

pp **Name: Brian Gillon**
Position: Site Agent
Date: 18 Sept 2012

Distribution: BG / RW / CL / RaC / EcL / JL

Prepared by: Dorothy SHING

Tree Treatment Proposal for Works at Elevated Lay-by in Portion VI

Contract No. : HY/2009/18

Project : Central - Wan Chai Bypass - Central Interchange

Location : Portion VI

Main Contractor : Leighton Contractors (Asia) Limited

Prepared By : Toyo Greenland Co., Ltd

Date : 13 September 2012

TABLE OF CONTENT

Appendix

Tree Treatment Proposal for Works at Elevated Lay-by in Portion VI

1. Introduction

To facilitate the construction of the proposed Elevated Lay-by at Man Po Street and its associated piling works at the lawn area adjacent to Man Kat Street, some of the existing trees have to be transplanted to allow access for the work. Together with those trees which originally need to be transplanted under the Contract, proposal for treatment to the affected trees is hereby submitted for necessary application to relevant Authorities.

As per joint site inspection amongst LSCD, AECOM and LCAL on 28th March 2012 and the subsequent conversation on 7th August 2012 via e-mail. We submit this proposal regarding the comments from various parties.

This tree treatment proposal aims at evaluating the condition of trees, providing the recommendations for the trees to be retained, transplanted or felled.

2. Observation

2.1 Works Area

2.1.1 Works area as shown in Figure 1.

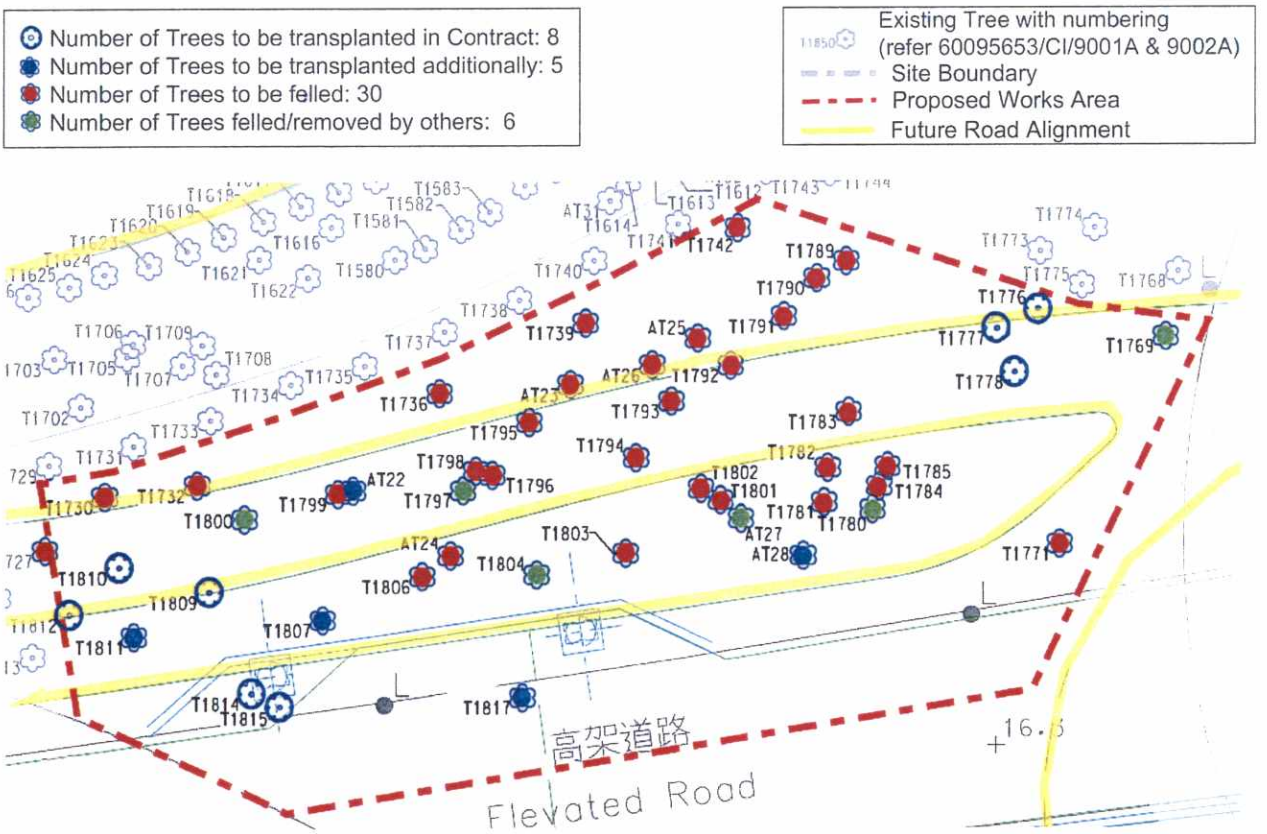


Figure 1 – Work area

2.1.2 Detailed information

Appendix B – Proposed Treatment of Trees

Appendix C – Tree Assessment Schedule

Appendix D – Detail Photos of trees

Appendix E – Site Layout Plan for Piling Works

Appendix F – Compensatory Plan

Appendix A – Existing Tree Plan

Legend:

T1850 Existing tree with numbering (refer 60095653/CI/9001A & 9002A)

Future Road Alignment

Site Boundary

CONTRACT NO. HY/2009/18 C.I.(H2540)

TITLE: Existing Tree Plan

LOCATION: MAN KAT STREET

Appendix B – Proposed Treatment of Trees

Legend:

Existing Tree with numbering
(refer 60095653/CI/9001A & 9002A)

- Number of Trees to be transplanted in Contract: 8
- Number of Trees to be transplanted additionally: 5
- Number of Trees to be felled: 30
- Number of Trees felled/removed by others: 6

Site Boundary
Proposed Works Area
Future Road Alignment

816520 N
816460 N
816400 N
834000 E
834060 E

海堤 Seawall
民光街
民吉街 MAN KAT STREET
MAN KWONG STREET
MTR Hong Kong Ventilation Building
香港機場中區污水泵房 Hong Kong International Airport Central Sewage Pumping Station
高架道路 Elevated Road
巴士總站 Bus Terminus
統一碼頭道 PIER ROAD
海港政府大樓 Harbour Building
港中里 KONG CHUNG LANE
ABUTMENT
RCP
EW

CONTRACT NO. HY/2009/18 C.I.(H2540)
TITLE: Proposed Treatment of Trees Plan
LOCATION: MAN KAT STREET

Appendix C - Tree Assessment Schedule

Contract No. : HY/2009/18
Project : Central - Wan Chai Bypass - Central Interchange Portion
Revision Date: 12 September 2012

Tree Survey Schedule for Elevated Layby Area

Tree No.	Tree Species	Chinese Name	Size			Tree Form (Good, Fair, Poor)	Health (Good, Fair, Poor, Dead)	Amenity Value (High, Medium, Low)	Survival of Transplantation (High, Medium, Low)	Propose Recommendation (Retain / Transplant / Fell)	mPD (m)	Justification	Remark	Remark after Typhoon No. 10		Final Location
			Tree Height (m)	Diameter at Breast Height (mm)	Tree Crown Spread (m)									Defect After Typhoon No. 10	Remark After Typhoon No. 10 (Retain/ Transplant /Fell)	
AT022	*Bauhinia blakeana*	洋紫荊	6.0	100	5.0	Fair	Fair	Medium	Low	Transplant	4.6	Affected by proposed roadworks	1/ Lean 20 degree 2/ Poor structure	Leaning, damaged branches	Transplant	To be coordinated by Project Office
AT023	*Macaranga tanarius*	血桐	7.0	120	7.0	Fair	Fair	Medium	Medium	Transplant	4.7	Affected by temporary work access.	1/ Lean 20 degree 2/ Unbalance form	Main trunk broken by typhoon, recommend fell	Fell	To be re-planted to orignial location
AT024	*Macaranga tanarius*	血桐	7.0	155	6.0	Fair	Fair	Medium	Low	Fell	4.6	We highly believe a cohesive root system have been developed with T1806 and T1804, this tree is supressed for its life time, The transplanting work for T1806 and T1804 will expose this previous supressed tree into wild open environment. High possibility of whole tree falling. We assessed that this tree condition is not suitable for transplant, reasons at Remarks colum. Our final suggestion is to fell this tree	1/ Serious insects infection 2/ Horizontal decay in main trunk 3/ Sign of internal decay	Main trunk broken by typhoon, recommend fell	Fell	To be re-planted with compensatory trees at original location
AT025	*Bauhinia variegata*	宮粉羊蹄甲	6.5	115	6.0	Fair	Poor	Low	Low	Fell	4.4	Affected by temporary work access.	1/ Abnormal lean 2/ Not recommend for transplant	Serious leaning / Broken Bark / Exposed Root	Fell	To be re-planted with compensatory trees of same species at original location
AT026	*Bauhinia variegata*	宮粉羊蹄甲	7.0	115	10.0	Fair	Fair	Medium	Medium	Fell	4.4	Affected by temporary work access.	1/ Serious decay and splitting on main trunk 2/ Insects infection	Leaning / 3 Trunks	Fell	To be re-planted with compensatory trees of same species at original location
AT027	*Bauhinia variegata*	肯氏南洋杉	6.0	120	2.0	-	Dead	-	-	Fell	4.4	Dead Tree	Dead Tree	Removed by Others	-	-
AT028	Bauhinia variegata	肯氏南洋杉	7.0	95	2.0	Fair	Fair	Medium	Medium	Transplant	4.4	Affected by temporary work access.	Broken Bark	Half of the branches broken by typhoon. Recommend pruning before transplant.	Transplant	To be re-planted to orignial location
T1727	*Roystonea regia*	王棕	10.0	370	4.5	Fair	Fair	Medium	Medium	Fell	4.3	Affected by proposed roadworks	1/ Bottle neck trunk 2/ Poor taper	Not affected	Fell	Refer to Planting Plan Dwg. 60095653/CI/9013B and to be re-planted with compensatory trees of same species
T1730	*Bauhinia variegata*	宮粉羊蹄甲	8.0	130	5.0	Poor	Fair	Low	Medium	Transplant	4.3	Affected by proposed roadworks	-	Abrupt bend, poor tree form. Recommend fell	Fell	To be coordinated by Project Office
T1732	*Bauhinia variegata*	宮粉羊蹄甲	7.0	120	7.0	Poor	Fair	Low	Low	Fell	4.3	Affected by proposed roadworks	1/Poor form 2/ Abrupt bends 3/ Lean 30 degree	Main trunk broken by typhoon, recommend fell	Fell	Refer to Planting Plan Dwg. 60095653/CI/9012B and to be replanted with compensatory trees of same species
T1736	*Bauhinia blakeana*	洋紫荊	10.0	200	10.0	Fair	Fair	Medium	Medium	Transplant	4.4	Affected by temporary work access.	1/ Lean 20 degree	Main trunk broken by typhoon, serious leaning, poor tree form, recommend fell	Fell	To be re-planted to orignial location
T1739	*Bauhinia blakeana*	洋紫荊	11.0	320	10.0	Fair	Fair	Medium	Medium	Transplant	4.5	Affected by temporary work access.	1/ Lean 2/ On slope 3/ Unbalance form 4/ Bark crack	Most branches broken by typhoon, serious leaning, poor tree form, recommend fell	Fell	To be re-planted to orignial location
T1742	*Bauhinia variegata*	宮粉羊蹄甲	8.0	240	8.0	Fair	Fair	Low	Medium	Fell	4.5	Affected by temporary work access.	1/ Multipal trunk, included bark 2/ Unbalance form 3/ Broken branch	Poor tree from, very low live crown ratio, multipal trunks with included bark, recommend fell	Fell	To be re-planted with compensatory trees of same species at original location
T1769	Bauhinia blakeana	洋紫荊	7.0	220	6.0	Fair	Fair	Medium	Medium	Fell	4.6	Affected by proposed roadworks	1/ Abnormal swelling 2/ Bad taper 3/ Lean 15 degree	Tree Failure / Broken Bark / Exposed Root	Felled by Others	Refer to Planting Plan Dwg. 60095653/CI/9012B and to be re-planted with compensatory trees of same species
T1771	*Ficus elastica*	印度榕(印度橡樹)	9.0	610	10.0	Fair	Fair	Medium	Low	Transplant	4.7	Affected by proposed roadworks	-	Main trunk broken by typhoon, poor tree form, not possible to transplant due to the DBH 610mm, recommend fell	Fell	Refer to Planting Plan Dwg. 60095653/CI/9012B and to be re-planted with compensatory trees of same species
T1780	Bauhinia variegata	宮粉羊蹄甲	10.0	240	8.0	Poor	Poor	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Lean 45 degree 2/ Exposed very strong reation roots 3/ Trunk cavity and decay 4/ Internal structural problem with swelling 5/ Insects infection	Leaning / Broken Bark / Exposed Root / Trunk Cavity	Felled by Others	To be re-planted with compensatory trees of same species at original location
T1781	*Bauhinia variegata*	宮粉羊蹄甲	9.0	170	8.0	Poor	Poor	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Lean 5-10 degree 2/ 1M decay in trunk 3/ Unbalance crown 4/ Splitting main trunk	Leaning / Broken Bark / Trunk Cavity / Trunk bend / Main trunk broken	Fell	To be re-planted with compensatory trees of same species at original location
T1782	*Bauhinia variegata*	宮粉羊蹄甲	8.0	230	8.0	Poor	Poor	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Main trunk with abnormal sunk 2/ Lean 10 degree 3/ Main trunk splitting	Leaning / Broken Bark / Damaged Branch / Trunk bend / Main trunk broken	Fell	To be transplanted to other Contract and replanted with compensatory trees of same species
T1783	*Bauhinia variegata*	宮粉羊蹄甲	8.0	208	9.0	Poor	Poor	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Serious trunk decay over 1meter 2/ Lean 14 degree	Leaning / Broken Bark / Damaged Branch / Trunk Cavity / Main trunk is broken	Fell	To be transplanted to other Contract and replanted with compensatory trees of same species
T1784	*Bauhinia variegata*	宮粉羊蹄甲	10.0	170	8.0	Poor	Poor	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Lean 45 degree 2/ Cavity in root collar 3/ Unbalance crown 4/ Splitting main trunk	Serious leaning / Broken Bark	Fell	To be re-planted with compensatory trees of same species at original location
T1785	*Bauhinia blakeana*	洋紫荊	10.0	200	10.0	Poor	Poor	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ 1.5M bark crack with sign of decay 2/ Splitting branches 3/ Co-dominant branch 4/ Suspected topping before	Main trunk broken by typhoon, recommend fell	Fell	To be re-planted with compensatory trees of same species at original location
T1789	*Bauhinia variegata*	宮粉羊蹄甲	8.0	210	7.0	Fair	Fair	Medium	Medium	Fell	4.8	Affected by proposed roadworks	1/ Multipal trunks (3) just 10cm above soil 2/ Poor structure 3/ Wound on one of the trunk 4/ Not recommend for transplant	Broken Bark / Damaged branches	Fell	To be re-planted with compensatory trees of same species at original location

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Tree Survey Schedule for Elevated Layby Area

Tree No.	Tree Species	Chinese Name	Size			Tree Form (Good, Fair, Poor)	Health (Good, Fair, Poor, Dead)	Amenity Value (High, Medium, Low)	Survival of Transplantation (High, Medium, Low)	Propose Recommendation (Retain / Transplant / Fell)	mPD (m)	Justification	Remark	Remark after Typhoon No. 10		Final Location
			Tree Height (m)	Diameter at Breast Height (mm)	Tree Crown Spread (m)									Defect After Typhoon No. 10	Remark After Typhoon No. 10 (Retain/ Transplant /Fell)	
T1790	*Bauhinia variegata*	宮粉羊蹄甲	7.0	200	7.0	Fair	Fair	Medium	Medium	Fell	4.8	Affected by proposed roadworks	1/ Abrupt bend in main trunk 2/ Big wound in main trunk 3/ Abnormal swelling 4/ Unbalance crown 5/ Not recommend for transplant	Main trunk broken by typhoon, recommend fell	Fell	To be re-planted with compensatory trees of same species at original location
T1791	*Bauhinia variegata*	宮粉羊蹄甲	7.0	160	7.0	Fair	Fair	Medium	Medium	Fell	4.8	Affected by proposed roadworks	1/ Lean 15 degree 2/ Decay in main trunk 3/ Mulitpal splitting branches	Main trunk broken by typhoon, recommend fell	Fell	To be re-planted with compensatory trees of same speciesat original location
T1792	*Bauhinia variegata*	宮粉羊蹄甲	7.0	150	6.0	Fair	Fair	Medium	Medium	Transplant	4.8	Affected by proposed roadworks	-	Main trunk broken by typhoon, recommend fell	Fell	Refer to Planting Plan Dwg. 60095653/CI/9012B and to be re-planted with compensatory trees of same species
T1793	*Bauhinia variegata*	宮粉羊蹄甲	3.0	130	2.0	Poor	Poor	Low	Low	Fell	4.8	Affected by proposed roadworks	1/ Serious trunk decay over 1meter 2/ Unbalance form 3/ Not recommend for transplant	Leaning / Broken Bark / Trunk Cavity / Main trunk is broken	Fell	To be transplanted to other Contract and of same species replanted with compensatory trees
T1794	*Bauhinia blakeana*	洋紫荊	10.0	210	10.0	Poor	Fair	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Leaning 2/Exposed Root 3/ Trunk Cavity 4/Topping cut before 5/ Full of watersprouts 6/ Not recommend for transplant	Leaning / Broken Bark / Exposed Root / Trunk Cavity	Fell	Refer to Planting Plan Dwg. 60095653/CI/9012B and to be replanted with compensatory trees of same species
T1795	*Bauhinia variegata*	宮粉羊蹄甲	7.0	150	7.0	Poor	Fair	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Leaning 2/ Heavy pruning before, decay in wound	Main trunk broken by typhoon, recommend fell	Fell	To be transplanted to other Contract and replanted with compensatory trees of same species
T1796	*Bauhinia blakeana*	洋紫荊	12.0	320	10.0	Poor	Fair	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Termite infection before 2/ Serious decay in main trunk 3/ Broken main branch with decay	Main trunk broken by typhoon, recommend fell	Fell	Refer to Planting Plan Dwg. 60095653/CI/9012B and to be replanted with compensatory trees of same species
T1797	Bauhinia blakeana	洋紫荊	8.0	180	10.0	Poor	Fair	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Lean 2/ Broken branch and splitting with decay	Tree failure / Broken Bark	Felled by Others	Refer to Planting Plan Dwg. 60095653/CI/9012B and to be replanted with compensatory trees of same species
T1798	*Bauhinia blakeana*	洋紫荊	9.0	130	9.0	Poor	Fair	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Co-dominant stem, poor structure and taper, decay in the V point 2/ Dead trunk 3/ Lean 4/ Sign of termite infection before	Main trunk broken by typhoon, recommend fell	Fell	Refer to Planting Plan Dwg. 60095653/CI/9012B and to be replanted with compensatory trees of same species
T1799	*Bauhinia variegata*	宮粉羊蹄甲	9.0	160	9.0	Poor	Fair	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Lean 35 degree 2/ Decay in previous pruning wound	Tree was collasped by typhoon, recommend remove.	Fell	To be transplanted to other Contract and replanted with compensatory trees of same species
T1800	Bauhinia blakeana	洋紫荊	7.0	208	7.0	Poor	Fair	Low	Low	Fell	4.7	Affected by proposed roadworks	1/ Lean over 45 degree 2/ Poor structure and tree form 3/ Abrupt bends 4/ Not recommend for transplant	Tree failure / Broken Bark	Felled by Others	To be transplanted to other Contract and replanted to compensatory trees of same species
T1801	*Bauhinia blakeana*	洋紫荊	10.0	180	8.0	Poor	Fair	Low	Low	Transplant	4.7	Affected by proposed roadworks	1/ Lean 40 degree 2/ Poor tree structure and tree form	Serious leaning / Broken Bark	Fell	To be re-planted to orignial location
T1802	*Bauhinia blakeana*	洋紫荊	10.0	220	8.0	Poor	Fair	Low	Low	Fell	4.7	Affected by temporary work access.	1/ Lean 40 degree 2/ Poor tree structure and tree form 3/ Splitting main branch 4/ Topping before	Serious leaning / Broken Bark	Fell	To be re-planted with compensatory trees of same species at original location
T1803	*Delonix regia*	鳳凰木	13.0	355	12.0	Poor	Fair	Low	Low	Fell	4.7	Tree located just 3.7M next to the pile cap. High possibility affected by the excavation, within the drip line, we estimated over 40-50% structural, lateral and absorbing roots will be damaged. Damage over 40% of root system is a extreme stress factor,	1/ Insects infection 2/ Lean 20 degree 3/ Serious branch damaged 4/ It is negotiated that this tree is location at the middle of the site, Pile Cap located 2.6M next to the tree, estimate over 40% of root system will be seriously damaged or cut. 5/ It is not possbile for transplant, due to heaving topping on main trunk to 9M (not included root ball), also crown reduction to within 2.5M, in order to load to the 40ft platform trailer. This mature tree will be survive accroding to this kind of pruning 6/ Recommend for fell.	Most branches broken by typhoon, remain around 10% live crown ratio, tree will not survive after root pruning, recomment fell	Fell	To be re-planted with compensatory trees of same species at original location
T1804	Delonix regia	鳳凰木	15.0	335	10.0	Fair	Fair	Medium	Low	Fell	4.6	Tree located just 2.6M next to the pile cap. High possibility affected by the excavation, within the drip line, we estimated over 40-50% structural, lateral and absorbing roots will be damaged. Damage over 40% of root system is a extreme stress factor,	1/ Insects infection 2/ It is negotiated that this tree is location at the middle of the site, Pile Cap located 3.7M next to the tree, root system will be seriously damaged, which must be removed or transplanted. 3/ It is not possbile for transplant, due to heaving topping on main trunk to 9M (not included root ball), also crown reduction to within 2.5M, in order to load to the 40ft platform trailer. This mature tree will be survive accroding to this kind of pruning 4/ Recommend for fell.	Cavity at basal area / Wilting	Felled by Others	To be re-planted with compensatory trees of same species at original location

Tree Survey Schedule for Elevated Layby Area

Tree No.	Tree Species	Chinese Name	Size			Tree Form (Good, Fair, Poor)	Health (Good, Fair, Poor, Dead)	Amenity Value (High, Medium, Low)	Survival of Transplantation (High, Medium, Low)	Propose Recommendation (Retain / Transplant / Fell)	mPD (m)	Justification	Remark	Remark after Typhoon No. 10		Final Location
			Tree Height (m)	Diameter at Breast Height (mm)	Tree Crown Spread (m)									Defect After Typhoon No. 10	Remark After Typhoon No. 10 (Retain/ Transplant /Fell)	
T1806	*Delonix regia*	鳳凰木	14.0	530	16.0	Fair	Fair	Medium	Low	Fell	4.6	Tree located just 8.4M next to the pile cap. High possibility affected by the excavation, within the drip line, we estimated over 40-50% structural, lateral and absorbing roots will be damaged. Damage over 40% of root system is a extreme stress factor,	1/ Insects infection 2/ It is negotiated that this tree is location at the middle of the site, Pile Cap located 8.4M next to the tree, root system will be seriously damaged,which must be removed or transplanted. 3/ It is not possbile for transplant, due to heaving topping on main trunk to 9M (not included root ball), also crown reduction to within 2.5M, in order to load to the 40ft platform trailer. This mature tree will be survive accroding to this kind of pruning 4/ Recommend for fell.	Most branches broken by typhoon, remain around 10% live crown ratio, tree will not survive after root pruning, recomment fell	Fell	To be replanted with compensatory trees of same species at original location
T1807	*Macaranga tanarius*	血桐	7.0	180	6.0	Fair	Fair	Medium	Low	Transplant	4.6	Tree located just 2.9M next to the pile cap. High possibility affected by the excavation, we estimated over 40-50% structural, lateral and absorbing roots will be damged. We highly suggest for transplant.	-	Not affected	Transplant	To be re-planted to orignial location
T1811	*Roystonea regia*	王棕	11.0	300	4.5	Fair	Fair	Medium	Medium	Transplant	4.5	Tree located just 7.0M next to the pile cap, tree trunk may be damaged by excavator during excavation work. It is measured low possibility for setting up tree protetion zone, due to the different grading level.	-	Not affected	Transplant	To be re-planted to original location
T1817	*Ficus elastica*	印度榕(印度橡樹)	5.0	108	3.0	Fair	Fair	Medium	Low	Fell	4.4	Tree located just 3.4M next to the pile cap. Highly posibility affected by the excavation, we estimated over 30-40% structural, lateral and absorbing roots will be damged. We assessed that this tree condition is not suitable for transplant, reasons at R	1/ Leaning 2/Trunk Cavity 3/ Broken branch with decay	Leaning / Broken Bark / Trunk Cavity / Trunk bend	Transplant	To be transplanted to other Contract and replanted with compensatory trees of same species

Appendix D - Detail Photos of trees

Contract No. : HY/2009/18
Central - Wan Chai Bypass - Central Interchange Portion 6
Photographic Record
Revision Date: 12 September 2012

AT022-A

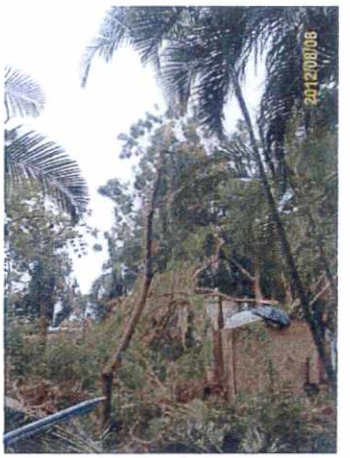
AT022-B

AT023-A

AT023-B

AT023-C

AT024-A



AT024-B

AT024-C

AT024-D

AT025-A

AT025-B

AT026-A

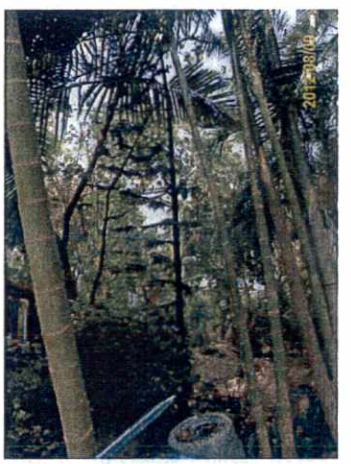
AT026-B

AT027-A

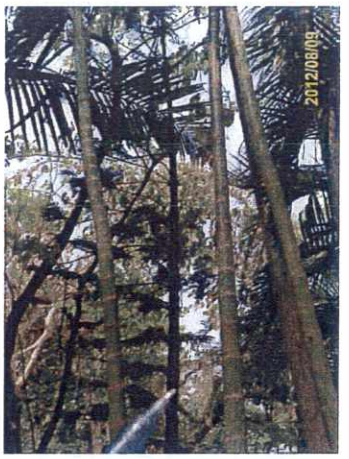
AT027-B

AT027-C

AT028-A

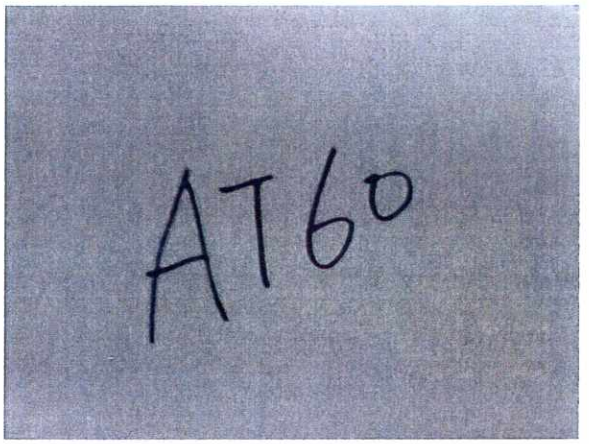


AT028-B



AT028-C

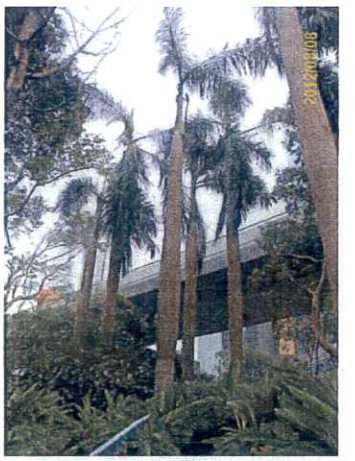
AT028-D



AT060-A

AT060-B

T1727-A



T1727-B

T1730-A

T1730-B

T1732-A

T1732-B

T1732-C

T1736-A

T1736-B

T1736-C

T1736-D

T1736-E

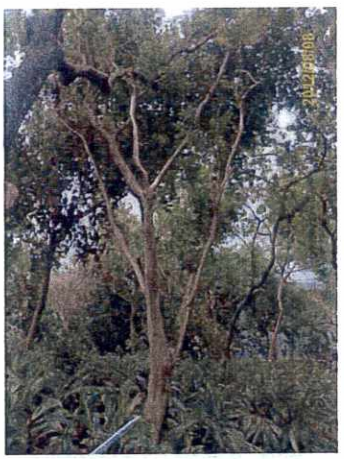
T1739-A

T1739-B

T1739-C

T1739-D

T1742-A



T1742-B

T1769-A

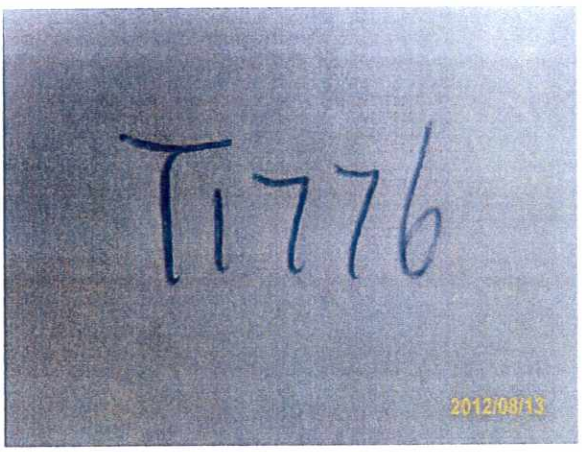
T1769-B

T1769-C

T1771-A

T1771-B

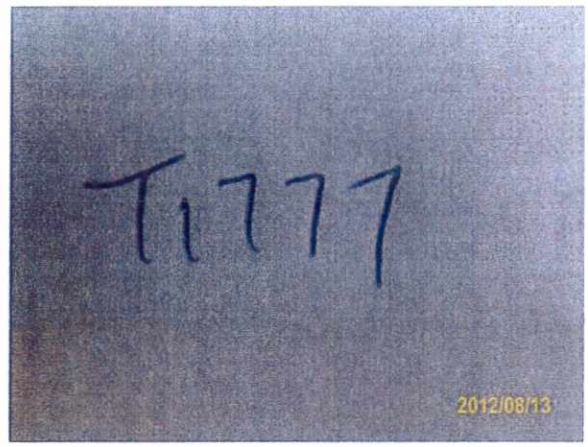
T1771-C



T1776-A

T1776-B

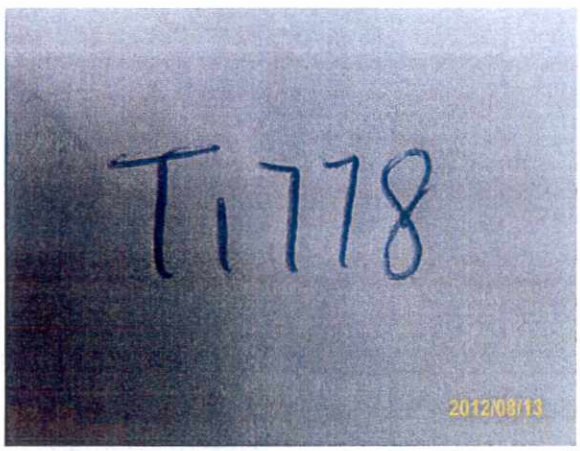
T1776-C



T1777-A

T1777-B

T1777-C

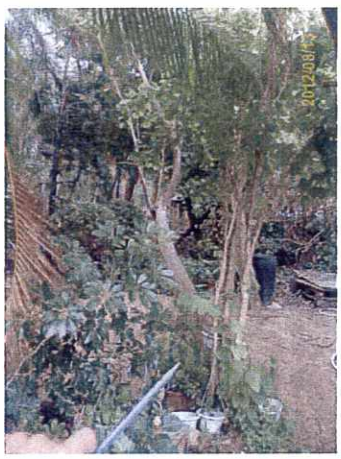


T1778-A

T1778-B

T1780-A

T1780-B



T1780-C

T1781-A

T1781-B

T1781-C

T1782-A

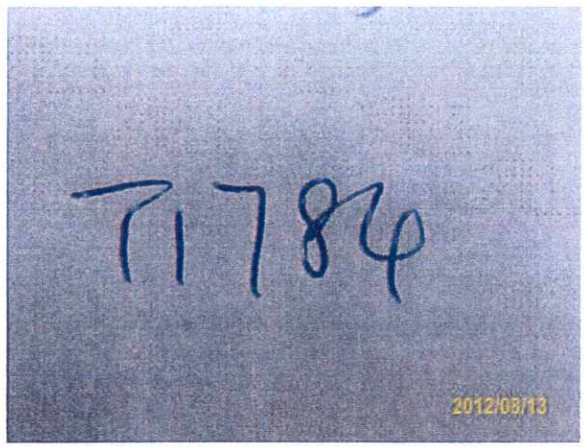
T1782-B

T1782-C

T1783-A

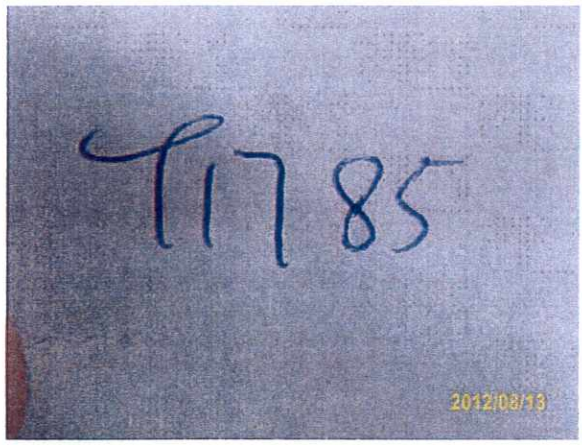
T1783-B

T1783-C



T1784-A

T1784-B

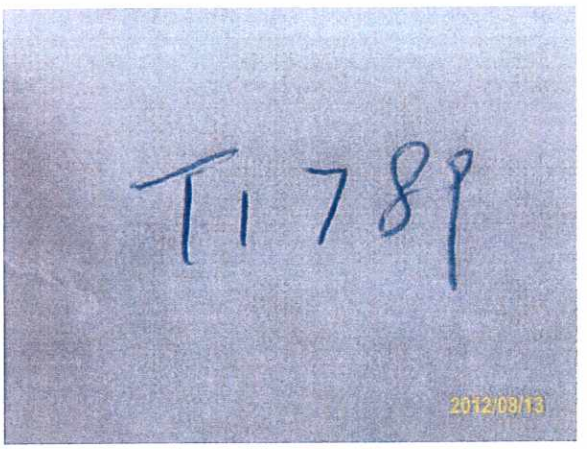


T1785-A

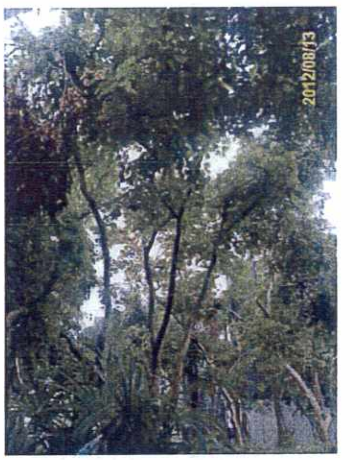
T1785-B

T1785-C

T1785-D



T1789-A

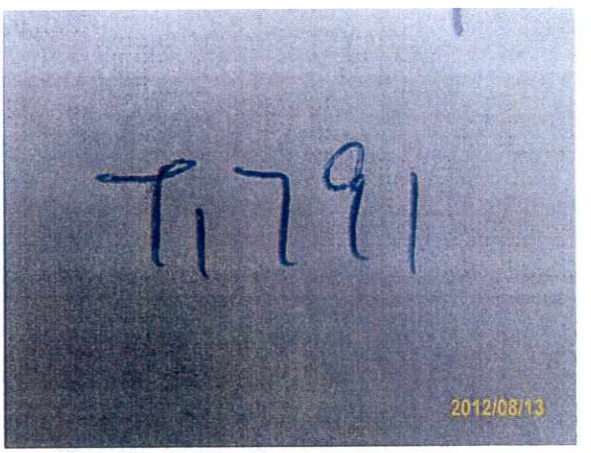


T1789-B

T1789-C

T1790-A

T1790-B



T1791-A

T1791-B

T1791-C

T1791-D

T1792-A

T1792-B

T1792-C

T1793-A

T1793-B

T1793-C

T1794-A

T1794-B

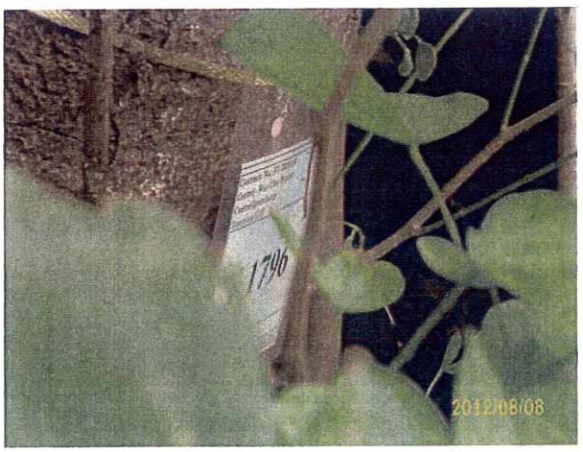
T1794-C

T1794-D

T1795-A

T1795-B

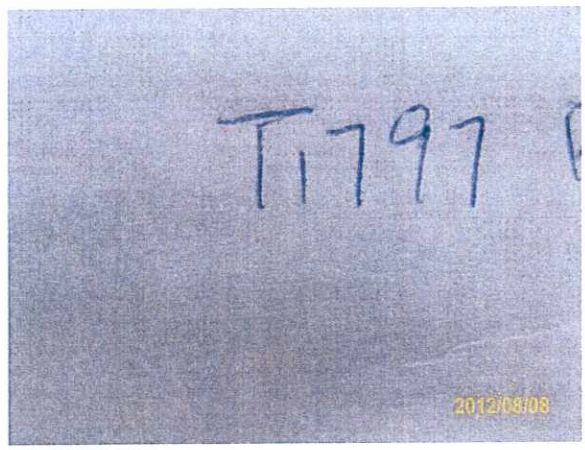
T1795-C



T1796-A

T1796-B

T1796-C



T1797-A

T1797-B

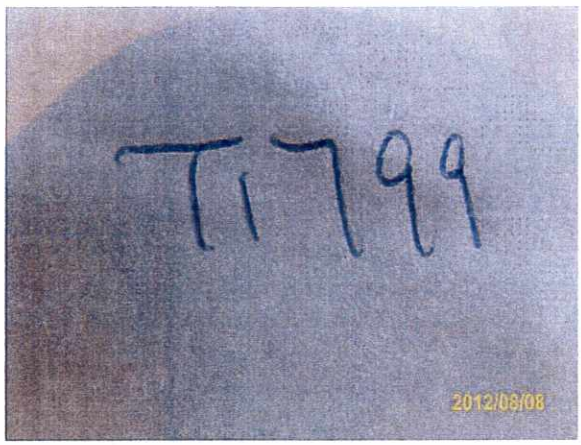
T1797-C

T1797-D

T1798-A

T1798-B

T1798-C



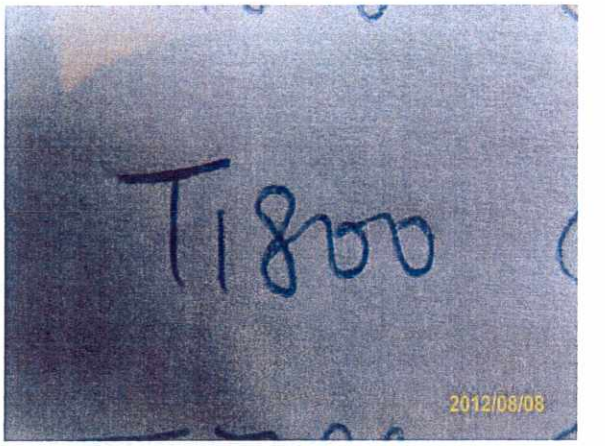
T1799-A

T1799-B

T1799-C

T1799-D

T1799-E



T1800-A

T1800-B

T1801-A

T1801-B

T1801-C

T1802-A

T1802-B

T1802-C

T1803-A

T1803-B

T1803-C

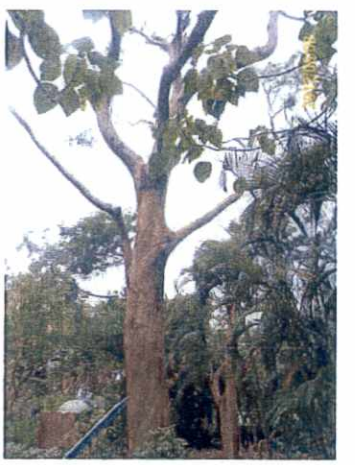
T1803-D

T1804-A

T1804-B

T1804-C

T1806-A



T1806-B

T1806-C

T1806-D

T1807-A

T1807-B

T1807-C

T1809-A

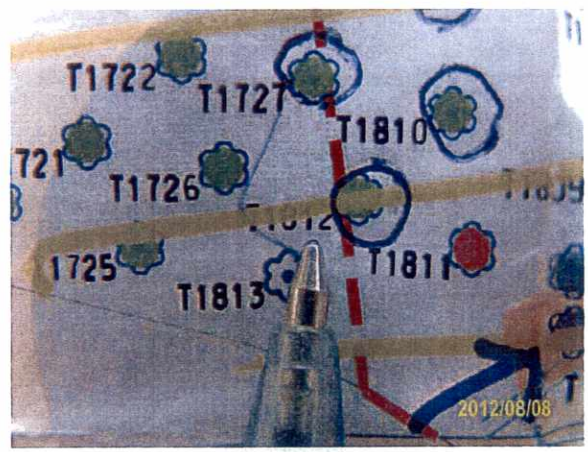
T1809-B

T1810-A

T1810-B

T1811-A

T1811-B



T1812-A

T1812-B

T1814-A

T1814-B

T1815-A

T1815-B

T1817-A

T1817-B

Appendix E – Site Layout Plan for Piling Works

816540 N

816500 N

816460 N

834000 E

834040 E

834080 E

MAN KWONG STREET

MAN CHI U STREET

香港機鐵中環污水泵房

Hong Kong Station Central Sewage Pumping Station

REINFORCEMENT CAGE

14m

6m

18m

12m

6m

BENDING YARD

MATERIAL STORAGE AREA

HAUL ROAD

AQUA SED 5.2X2.3

SEDIMENT TANK FOR AQUA SED

TANK

E1

E2

CONTAINER

CONTAINER

6m

2.5m

高架道路

Elevated Road

巴士總站

Terminus

PIER ROAD

KONG CHUNG LANE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

N

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE

NOTES :

1. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

LEGEND :

WORK ACCESS (AREA= 1819m²)

MAJOR PLANT / EQUIPMENT AND MATERIAL	
1	CRAWLER CRANE (120 TON)
2	ROTATOR / OSCILLATOR
3	GRAB & CHISEL
4	REVERSE CIRCULATION DRILL
5	POWER PACK
6	GENERATOR
7	WELDING SET
8	BACKHOE
9	AIR COMPRESSOR
10	SUBMERSIBLE PUMP
11	WATER TREATMENT TANK
12	BENDING MACHINE
13	DUMP TRUCK
14	CRANE LORRY
15	STEEL CASING
16	SEDIMENTATION TANK

REV. 修訂	DESCRIPTION 內容摘要	BY 繪圖	CHECKED 核對	DATE 日期
-	FIRST ISSUE	WHL	WHL	MAY.12

CAD FILE 電子檔名 120502 Site Layout Plan for Piling Works (Option 2)_WHL_AS.dgn

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK
CENTRAL - WAN CHAI BYPASS
CENTRAL INTERCHANGE

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

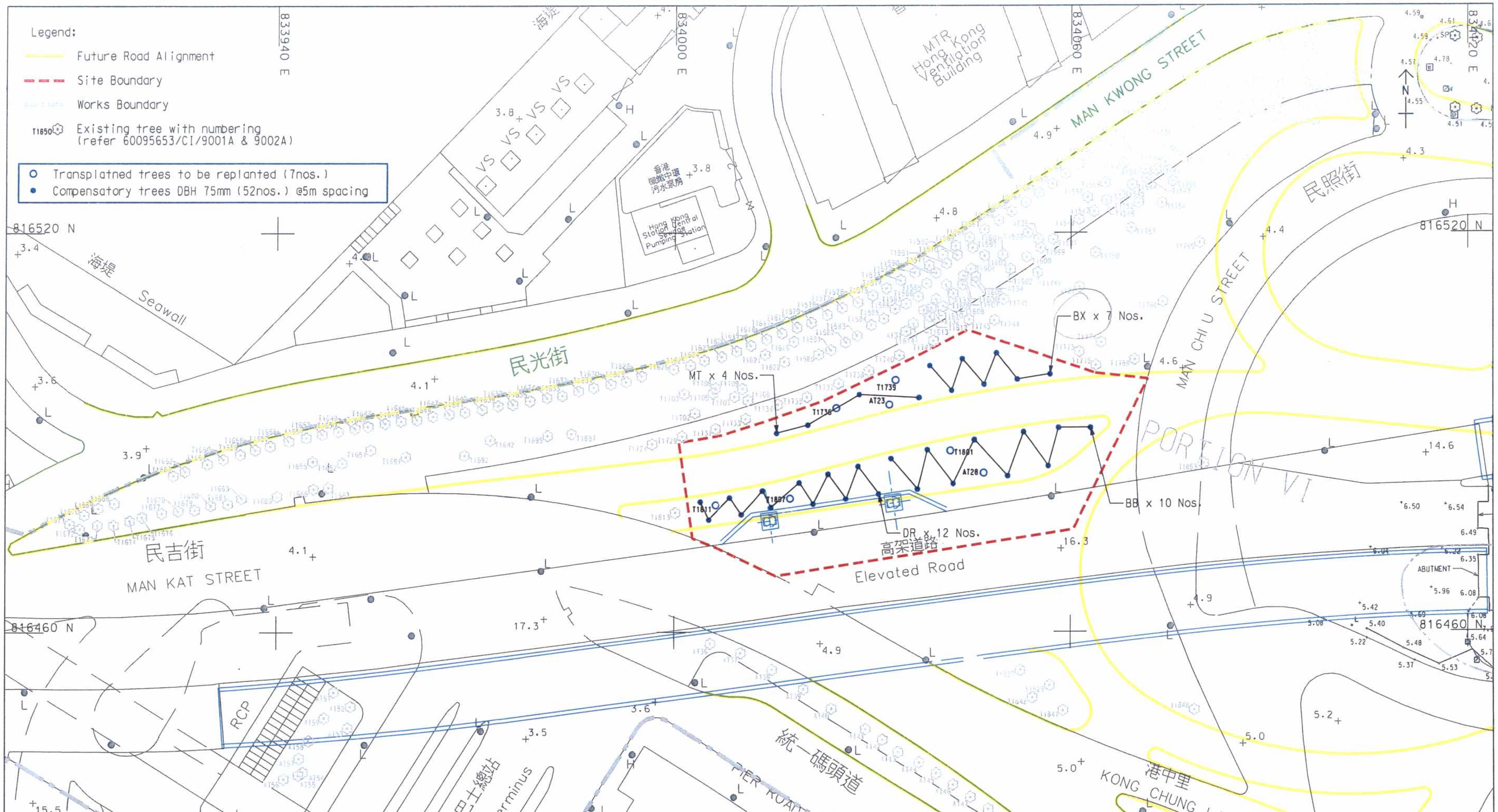
CONTRACTOR
LEIGHTON CONTRACTORS (ASIA) LTD.

DRAWING TITLE

SITE LAYOUT PLAN FOR PILING WORKS - ELEVATED LAYBY (OPTION 2)

DRG. NO. 圖紙編號	H2540/LCAL/RD/0305		- REV. 修訂
DESIGN BY 設計	WHL	DRAWN BY 繪圖	AS	CHECKED BY 核對	WHL
DATE 日期	MAY.12	DATE 日期	MAY.12	DATE 日期	MAY.12
SCALE 比例	A3 1 : 400	STATUS 狀況	SKETCH		
DIMENSIONS ARE IN 尺寸單位	METRES				
CONTRACT NO 合約編號	HY/2009/18				

Appendix F – Compensatory Plan


Legend:
Future Road Alignment
Site Boundary
Works Boundary
T1850 Existing tree with numbering (refer 60095653/CI/9001A & 9002A)
Transplatned trees to be replanted (7nos.)
Compensatory trees DBH 75mm (52nos.) @5m spacing
833940 E
834000 E
834060 E
834120 E
816520 N
816460 N
816400 N
海堤
Seawall
MTR Hong Kong Ventilation Building
MAN KWONG STREET
民光街
民照街
MAN CHI U STREET
BX x 7 Nos.
MT x 4 Nos.
BB x 10 Nos.
DR x 12 Nos.
高架道路
Elevated Road
民吉街
MAN KAT STREET
PORTION VI
ABUTMENT
RCP
統一碼頭道
PIER ROAD
巴士總站
Terminus
港中里
KONG CHUNG LANE

Species	Total DBH of Felled Trees	No. of Felled Trees	No. of Compensatory Trees	Legend
Bauhinia blakeana 洋紫荊	740 mm	3	10	BB
Bauhinia variegata 宮粉羊蹄甲	470 mm	3	7	BV
Delonix regia 鳳凰木	885 mm	2	12	DR
Macaranga tanarius 血桐	235 mm	2	4	MT
		10	33	

CONTRACT NO. HY/2009/18 C.I.(H2540)

TITLE: COMPENSATORY PLAN - OPTION 2

LOCATION: MAN KAT STREET

...\120917 Compensatory Plan - opt 17-Sep-12 17:52:14 SCALE 1:600(A3) AS/DSh

Appendix G – Tree Preservation and Protection Plan

Contractor's Submission Form

Ref: H2540/CSF/OPR/00031-R0
Date: 24/12/2010

Leighton Contractors (Asia) Limited

39/F Sun Hung Kai Centre
30 Harbour Road, Hong Kong

t: +852 2823 1111
f: +852 2529 8784

Contract: HY/2009/18 – Central-Wan Chai Bypass - Central Interchange

To: Engineer's Representative, The Chief Resident Engineer Mr. David Kwan

Title of Submission: Tree Preservation and Protection Plan

Specification: G.S. 26.02

We are pleased to submit the following for your review and comment

Description:
We herewith submit the Tree Preservation and Protection Plan prepared by the landscape specialist Toyo Greenland Co. Ltd. for your review and approval

Purpose of Submission: ☑ FOR APPROVAL ☐ FOR RECORD OR INFORMATION

Contractor's Representative
Signature:

Name: Brian Gillon
Position: Site Agent
Date:

Distribution: BG / DS / CL

Prepared by: EY

TOYO GREENLAND CO., LTD.
東陽綠化有限公司

Leighton Contractors (Asia) Limited
39th Floor, Sun Hung Kai Centre
30 Harbour Road
Hong Kong

Ref.: C2241/10/TGD6023
Date: 21 December 2010

Tel: (9613 5836)
By Fax: (2866 7141)
By E-Mail: Patrick.chiu@leightonasia.com

Attn: Mr. Patrick CHIU

Dear Sir,

Contract No.: HY/2009/18
Central - Wan Chai Bypass - Central Interchange
Submission of Tree Preservation and Protection Plan

We are pleased to submit herein the Tree Preservation and Protection Plan for your onward submission.

If you require further information, please feel free to contact our Mr. Rachel YAN on 3760 1930 or the undersigned on 9090 9912.

Yours faithfully,
TOYO GREENLAND CO., LTD.

Mr. HO Tat Pui, Daniel
Managing Director
DH/DA/EP/ry

Encl. Tree Preservation and Protection Plan

LEIGHTON
禮頓

H2540 – HY/2009/18

Tree Preservation and Protection Plan

Checked by:

K. C. Lau

Casey Lau
Construction Manager

Approved by:

Desmond Sze
Deputy Site Agent

About this Document

This document is available for all project employees via the project network. We regularly revise this document and the latest version is always available electronically. Once printed, the document should no longer be considered to be the latest version. It may be distributed to the Highways Department and the Engineer on the understanding that any such document may not be the latest version or it may be distributed to the Highways Department and the Engineer as a controlled document in which case the front cover is to be stamped "Controlled Copy" in red and a copy number added.

The status of this plan is identified by a revision number and date on each page. Changes to the document are identified by a vertical single line in the right-hand margin. On revision, the plan will be uploaded as a whole to the project server or within the Leighton Asia Document Management System Technical Documents Module.

If you have any enquiry relating to this plan, please contact the Construction Manager (Roadworks).

Revision History and Plan Approval

Revision	Date	Prepared by:	Checked by:	Approved by:
00	24 Dec. 10	Eric Yuen	Casey Lau	Desmond Sze

Contents

List of Tables

1 Introduction

1.1 Overview

This Tree Preservation and Protection Plan is written for the Contract No. HY/2009/18 Central – Wan Chai Bypass Central Interchange to meet the contract requirements as stated in the General Specification Clause 26.02.

The works description for this Contract comprises the followings:

a) Approach roads leading to the CWB tunnel west portal;
b) At grade slip roads and associated roads;
c) The bridge deck for the westbound carriageway of Rumsey Street Flyover Extension;
d) The eastbound Slip Road D flyover;
e) Modification/demolition of the existing dual 2-lane tunnel under Man Yiu Street;
f) Cut-and cover tunnel between the CWB tunnel west portal and the limit of tunnel to be completed under the CRIII contract;
g) Sub-structure, basement and foundations for the West Ventilation Building;
h) Civil works provisions for tunnel Electrical & Mechanical and Traffic Control and Surveillance System works;
i) Widening/modification of existing Man Yiu Street; and junction for road P1;
j) Associated road works and drainage/sewerage works; and
k) Landscaping works including tree transplanting.

1.2 Purpose of the Plan

This Plan provides guidance on the physical and appropriate precautionary measures required in order to reduce significant or detrimental impact on the health or amenity of retained and transplant trees.

2 Preservation and Protection

2.1 General

a) The proper color label should be fixed on the tree trunk in order to identify the status of preservation, (Green – Retaining on Site)
b) The existing trees recommened to be retained shall be protected by means of fencing to prevent vehicular, construction machines or pedestrian intrusion which may potentially damage tree canopies, trunk and root zones.
c) The trees to be felled or transplant, which are adjacent to, or which lie within a continuous canopy of the preserved trees, shall be carefully removed, and if necessary in sections but not using bulldozers in any circumstances, so as not to cause damage to the preserved trees such as scraping bark off trunks or breaking branches of trees,
d) No stripping of surface vegetation or top layer of soil, and no paving or earth filling shall be carried out within the tree protection zones unless otherwise agreed by the

Engineer.

e) Where it is necessary to clear the existing undergrowth within the tree protection zones to allow access and visibility for, and operation of any construction work,
- Shrubs shall be pruned and grass or other herbaceous plants shall be cut to a height of not less than 50 mm above the ground level but not pulled out by equipment in any circumstances
- The agreement of the Engineer shall be obtained before vegetation clearance commences

f) No concrete mixing, gas tank filling, paintbrush and tool cleaning, or equipment maintenance shall be carried out within the tree protection zones,

g) Allowance shall be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards the trees,

h) All materials should be covered when idled.

i) No accumulation of debris to excessive shall be permitted.

j) Store the material in a designated area for temporary storage. The designated area should be kept a reasonable distance from the working area such that it will not obstruct the public and workers.

k) Repair any damage to the trees in accordance with the requirements stipulated in General Specification 26.16,

2.2 Tree Protection Zone

a) The tree protection zone of the retained trees will be the area within the dripline of the tree crown of individual tree.

b) Use of temporary protective mulching to cover the entire tree protection zones.

c) Any necessary scarification or cultivation within the tree protection zones shall be carried out carefully by hand so as not to cause damage to the trees, in particular the bark and the roots,

2.3 Branch Cutting

a) Branch cutting with diameter more than 25 mm will be carried out according to the following situation. The individual Tree Assessment Report is required and to be approved by the Project Manger of the project.
- Hazardous branches is necessary to remove branches of a tree when they are damaged in order to give clearance e.g. for pedestrian and vehicular traffic by taking away the lower branches, to help the tree to form a balanced crown and to remove crossed branches.
- Defect branches are necessary to remove branches of a tree when they are diseased, dying or dead.

b) Carefully lower all cut branches to the ground to prevent any damage to limbs being retained.

c) The procedure of the branch cutting as followed.
- If the location of cutting branch is located at the height higher than 3 meter. The Lifting platform will be used to lift the skilled labour to a suitable level for branch cutting.
- Two ropes will be used to fix at the tip of the cut branch that will be held by 2

labours on the ground in order to guide the direction of the falling branches.
- Cutting of branches will be carried out using 3-cut method in order to prevent tearing of tree bark in branch cutting.
- Pre-cut is carried out at the under-side of the tree to about 1/4 of the diameter of the cutting branch.
- A safety rope will be used to fix the ends of the remaining portion for 2nd cut.

2.4 Tree surgery

a) Cut out rotten wood from cavities, without exposing clean healthy wood.
b) The contractor shall carry out all necessary work of repair of any damage to the preserved trees and other plants affected.

2.5 Treatment of Wounds

a) All loose, dead or damaged barks should be removed. The back of crushed edges to undamaged wood should be trimmed with all margins round.
b) Any cut or wound over 25mm diameter should be painted with an approved fungicidal bituminous sealing compound afterwards.

2.6 Post-planting Fertilizer

Post-planting fertilizer shall be applied after the tree pruning, weeding and treatment of wounds.

2.7 Disease and Pest Control

a) The inspection will be carried out by the specialist bi-monthly and identify the infected area of tree body.
b) The approved chemical pesticide and fungicide will be applied using manual or gasoline sprayer according manufacturer's instruction

2.8 Tree Trunk Protection

a) The tree trunk should be wrapped and covered from the ground level and up to 2m of the tree trunk by armouring the Hessian Mat.
b) Removal of temporary protective armouring and mulching upon completion of work.

2.9 Bi-Monthly Inspection

An inspection report comprising updated photographic records should be submitted in every two month to identify the required horticultural maintenance works.

3 Risk assessment

Risk assessment is an important tool to identify the hazards associated with work activities to be carried out on site, and to develop and implement appropriate control measures to eliminate / minimize the risk of accident / incident caused by these hazards.

In term of tree preservation and protection plan, the project management should carry out a detail assessment to identify the potential hazards (e.g. Hit by live traffic) and their causes (e.g. narrow road) in the planning stage for identifying the special arrangements and/or control measures to deal with such hazards.

Table 3-1 Risk Summary of the Tree Preservation and Protection

Hazard	Risk Level	Action
a) Hit by live traffic	Medium	- Enclose the work area with suitable barriers or traffic cones - Flash light & signage arrangement should be strictly placed according to the approved TTA drawing - Reflective vest shall be mandatory and be worn all time on site - Provide trained banksman for traffic diversion if necessary - All the workers should be briefed in daily basis to remind the job hazard and remedial measures
b) Hit by Falling branches / equipment	Medium	- Fence off the working area - Provide competent tree surgeons - Provide safety helmet with chinstrap to workers (meets EN397 or equivalent) - Tie up the branch being cut off to control the fall and fasten up the equipment while in use - Branches to be cut in small section
c) Hit by moving crane / cherry picker	Medium	- Flash light & signage arrangement should be strictly placed according to the approved TTA drawing - Display sign and warning notices to aware the general public - Properly fencing should be provided to fence off the public - Secure the trees those near the trench work before excavation commence

d) Tree falling	Medium	- Flash light & signage arrangement should be strictly placed according to the approved TTA drawing - Display sign and warning notices to aware the general public - Properly fencing should be provided to fence off the public - Secure the trees those near the trench work before excavation commence
e) Tripping	Low	- Safety shoes shall be manadatory and be worn all the time on site - Provision of good housekeeping
f) Hand or back injury during manual handling operation	Low	- Provide sufficient labour force to carry out manual lifting works - Conduct manual handling training / briefing - Split work into small sections, avoid bending for long periods
g) Long exposure under the sun	Medium	- Ensure workers carrry enough water when working on site - Take short breaks if working for long periods
h) High noise level	Medium	- Conduct noise assessment and demarcate ear protection zone - Provide and ensure to wear approved type ear protector by person within ear protection zone (meets EN352 or equivalent)
i) Contact with overhead lines / Use of electric hand tools	Medium	- Check and ensure no work to be carried out in the vicinity of overhead line cables - Inspect the electrical hand tools by Registered Electrical Worker to ensure tools are in good working condition before use - Use low voltage electric hand tools (110V) - Use waterproof socket / plug, amour cable in outdoors - Provide fire extinguisher
j) Inhalation of wood dust and wood dust getting into eyes	Medium	- Provide and ensure to use safety eye protector (meet EN166 or equivalenet) during work - Provide and ensure to use mouth mask (N95 or equivalent)
k) Cut by sharp tools	Medium	- Provide proper gloves to workers - Provide training briefing to the workers

l) Toppling of crane / cherry picker / Man cage failure	Medium	- Inspect the ground to ensure stable condition before setting up of crane - Appoint licensed crane operator to operate crane - Appoint trained cherry picker operator to operate cherry picker - Display valid test certificate on crane - Inspect the crane by operator on weekly basis, include ASLI - Inspect the cherry picker at regular intervals - Extend the outrigger completely of the crane if practicable - Use tested lifting gear with marking and safe working load - Apply colour code system to LG - Check condition of lifting gear before use - Provide and ensure to use fall arresting device (meets EN361 or equivalent)
m) Contact with chemicals	Medium	- Provide masks if required - Ensure tree surgeons wear hand gloves and proper PPE to avoid contact with skin - Provide goggles - Perform the safety precautions those listed in MSDS

4 Emergency Contact

All Preservation and Protection related accident/ incident occurred within works area of this project shall be promptly reported to project safety department. Rescue, investigation and further reporting procedures shall follow the requirements as stated in the Safety Management Plan.

5 Inspection and Testing Requirements

Complete photograph record of entire transplanting operation at various stages of works. ER will be informed to participate at various stages.

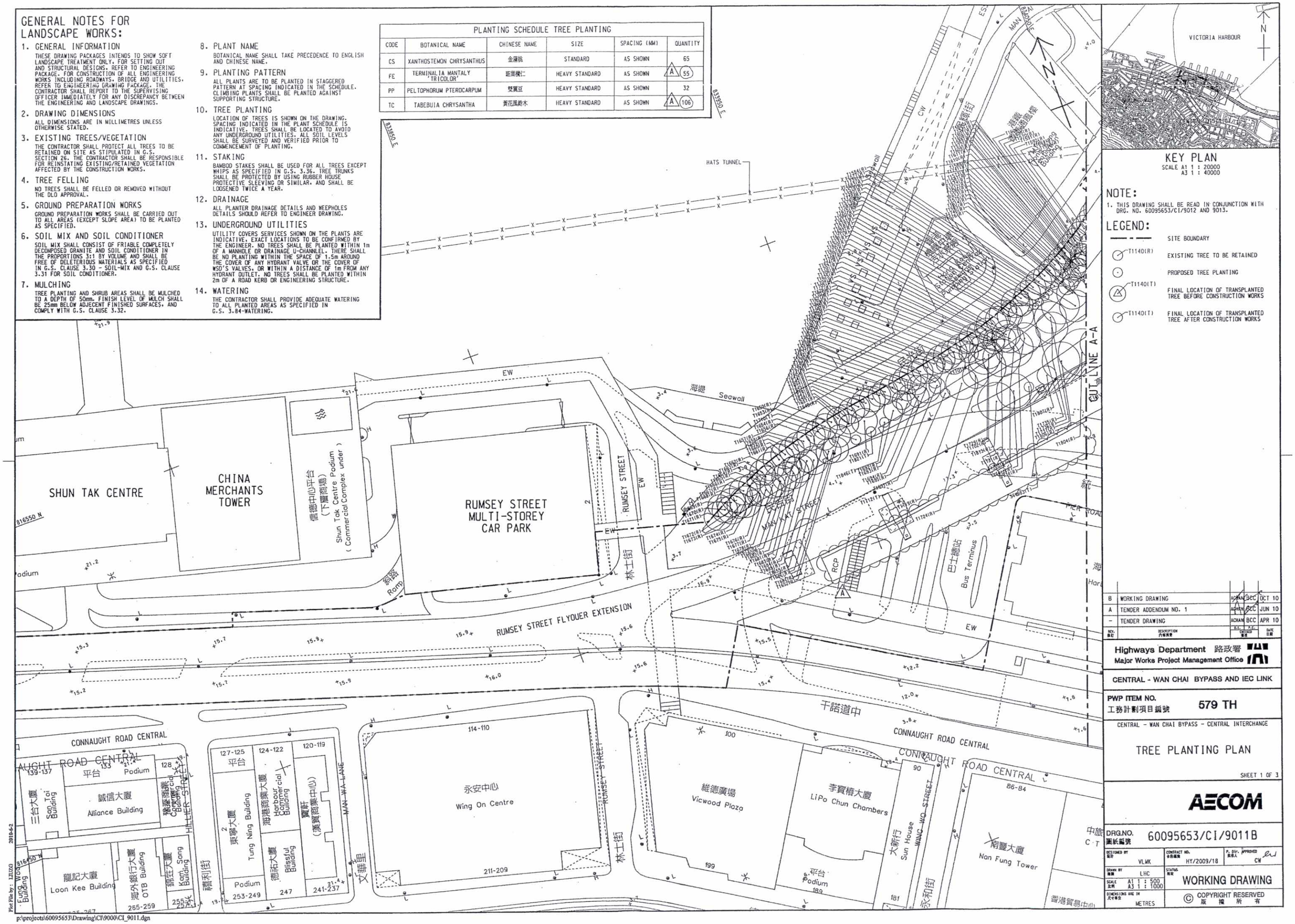
Appendix H – Tree Planting Plan (Contract Drawings No. 60095653/CI/9011B, 60095653/CI/9012B)

GENERAL NOTES FOR LANDSCAPE WORKS:

1. GENERAL INFORMATION
   THESE DRAWING PACKAGES INTENDS TO SHOW SOFT LANDSCAPE TREATMENT ONLY. FOR SETTING OUT AND STRUCTURAL DESIGNS, REFER TO ENGINEERING PACKAGE. FOR CONSTRUCTION OF ALL ENGINEERING WORKS INCLUDING ROADWAYS, BRIDGE AND UTILITIES, REFER TO ENGINEERING DRAWING PACKAGE. THE CONTRACTOR SHALL REPORT TO THE SUPERVISING OFFICER IMMEDIATELY FOR ANY DISCREPANCY BETWEEN THE ENGINEERING AND LANDSCAPE DRAWINGS.
2. DRAWING DIMENSIONS
   ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
3. EXISTING TREES/VEGETATION
   THE CONTRACTOR SHALL PROTECT ALL TREES TO BE RETAINED ON SITE AS STIPULATED IN G.S. SECTION 26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTATING EXISTING/RETAINED VEGETATION AFFECTED BY THE CONSTRUCTION WORKS.
4. TREE FELLING
   NO TREES SHALL BE FELLED OR REMOVED WITHOUT THE DLO APPROVAL.
5. GROUND PREPARATION WORKS
   GROUND PREPARATION WORKS SHALL BE CARRIED OUT TO ALL AREAS (EXCEPT SLOPE AREA) TO BE PLANTED AS SPECIFIED.
6. SOIL MIX AND SOIL CONDITIONER
   SOIL MIX SHALL CONSIST OF FRIABLE COMPLETELY DECOMPOSED GRANITE AND SOIL CONDITIONER IN THE PROPORTIONS 3:1 BY VOLUME AND SHALL BE FREE OF DELETERIOUS MATERIALS AS SPECIFIED IN G.S. CLAUSE 3.30 - SOIL-MIX AND G.S. CLAUSE 3.31 FOR SOIL CONDITIONER.
7. MULCHING
   TREE PLANTING AND SHRUB AREAS SHALL BE MULCHED TO A DEPTH OF 50mm. FINISH LEVEL OF MULCH SHALL BE 25mm BELOW ADJECENT FINISHED SURFACES, AND COMPLY WITH G.S. CLAUSE 3.32.
8. PLANT NAME
   BOTANICAL NAME SHALL TAKE PRECEDENCE TO ENGLISH AND CHINESE NAME.
9. PLANTING PATTERN
   ALL PLANTS ARE TO BE PLANTED IN STAGGERED PATTERN AT SPACING INDICATED IN THE SCHEDULE. CLIMBING PLANTS SHALL BE PLANTED AGAINST SUPPORTING STRUCTURE.
10. TREE PLANTING
    LOCATION OF TREES IS SHOWN ON THE DRAWING. SPACING INDICATED IN THE PLANT SCHEDULE IS INDICATIVE. TREES SHALL BE LOCATED TO AVOID ANY UNDERGROUND UTILITIES. ALL SOIL LEVELS SHALL BE SURVEYED AND VERIFIED PRIOR TO COMMENCEMENT OF PLANTING.
11. STAKING
    BAMBOO STAKES SHALL BE USED FOR ALL TREES EXCEPT WHIPS AS SPECIFIED IN G.S. 3.36. TREE TRUNKS SHALL BE PROTECTED BY USING RUBBER HOUSE PROTECTIVE SLEEVING OR SIMILAR, AND SHALL BE LOOSENED TWICE A YEAR.
12. DRAINAGE
    ALL PLANTER DRAINAGE DETAILS AND WEEPHOLES DETAILS SHOULD REFER TO ENGINEER DRAWING.
13. UNDERGROUND UTILITIES
    UTILITY COVERS SERVICES SHOWN ON THE PLANTS ARE INDICATIVE, EXACT LOCATIONS TO BE CONFIRMED BY THE ENGINEER. NO TREES SHALL BE PLANTED WITHIN 1m OF A MANHOLE OR DRAINAGE U-CHANNEL. THERE SHALL BE NO PLANTING WITHIN THE SPACE OF 1.5m AROUND THE COVER OF ANY HYDRANT VALVE OR THE COVER OF WSD'S VALVES, OR WITHIN A DISTANCE OF 1m FROM ANY HYDRANT OUTLET. NO TREES SHALL BE PLANTED WITHIN 2m OF A ROAD KERB OR ENGINEERING STRUCTURE.
14. WATERING
    THE CONTRACTOR SHALL PROVIDE ADEQUATE WATERING TO ALL PLANTED AREAS AS SPECIFIED IN G.S. 3.84-WATERING.

PLANTING SCHEDULE TREE PLANTING

CODE	BOTANICAL NAME	CHINESE NAME	SIZE	SPACING (MM)	QUANTITY
CS	XANTHOSTEMON CHRYSANTHUS	金蒲桃	STANDARD	AS SHOWN	65
FE	TERMINALIA MANTALY 'TRICOLOR'	斑葉欖仁	HEAVY STANDARD	AS SHOWN	A 55
PP	PELTOPHORUM PTEROCARPUM	雙翼豆	HEAVY STANDARD	AS SHOWN	32
TC	TABEBUIA CHRYSANTHA	黃花風鈴木	HEAVY STANDARD	AS SHOWN	A 106



KEY PLAN
SCALE A1 1 : 20000
A3 1 : 40000

NOTE:
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. NO. 60095653/CI/9012 AND 9013.

LEGEND:
- SITE BOUNDARY
- T1140(R) EXISTING TREE TO BE RETAINED
- PROPOSED TREE PLANTING
- T1140(T) FINAL LOCATION OF TRANSPLANTED TREE BEFORE CONSTRUCTION WORKS
- T114D(T) FINAL LOCATION OF TRANSPLANTED TREE AFTER CONSTRUCTION WORKS

NO. 編訂	DESCRIPTION 內容摘要	DRAWN 繪圖	CHECKED 核對	DATE 日期
B	WORKING DRAWING	ACHAN	BCC	OCT 10
A	TENDER ADDENDUM NO. 1	ACHAN	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 1 OF 3

AECOM

DRG.NO. 圖紙編號 60095653/CI/9011B

DESIGNED BY 設計	VLWK	CONTRACT NO. 合約編號	HY/2009/18
DRAWN BY 繪圖	LHC	P. DIR. APPROVED 負責人	CW
SCALE 比例	A1 1 : 500, A3 1 : 1000	STATUS 狀況	WORKING DRAWING
DIMENSIONS ARE IN 尺寸單位	METRES	© COPYRIGHT RESERVED 版權所有	

Plot File by : LIUZG 2010-6-2
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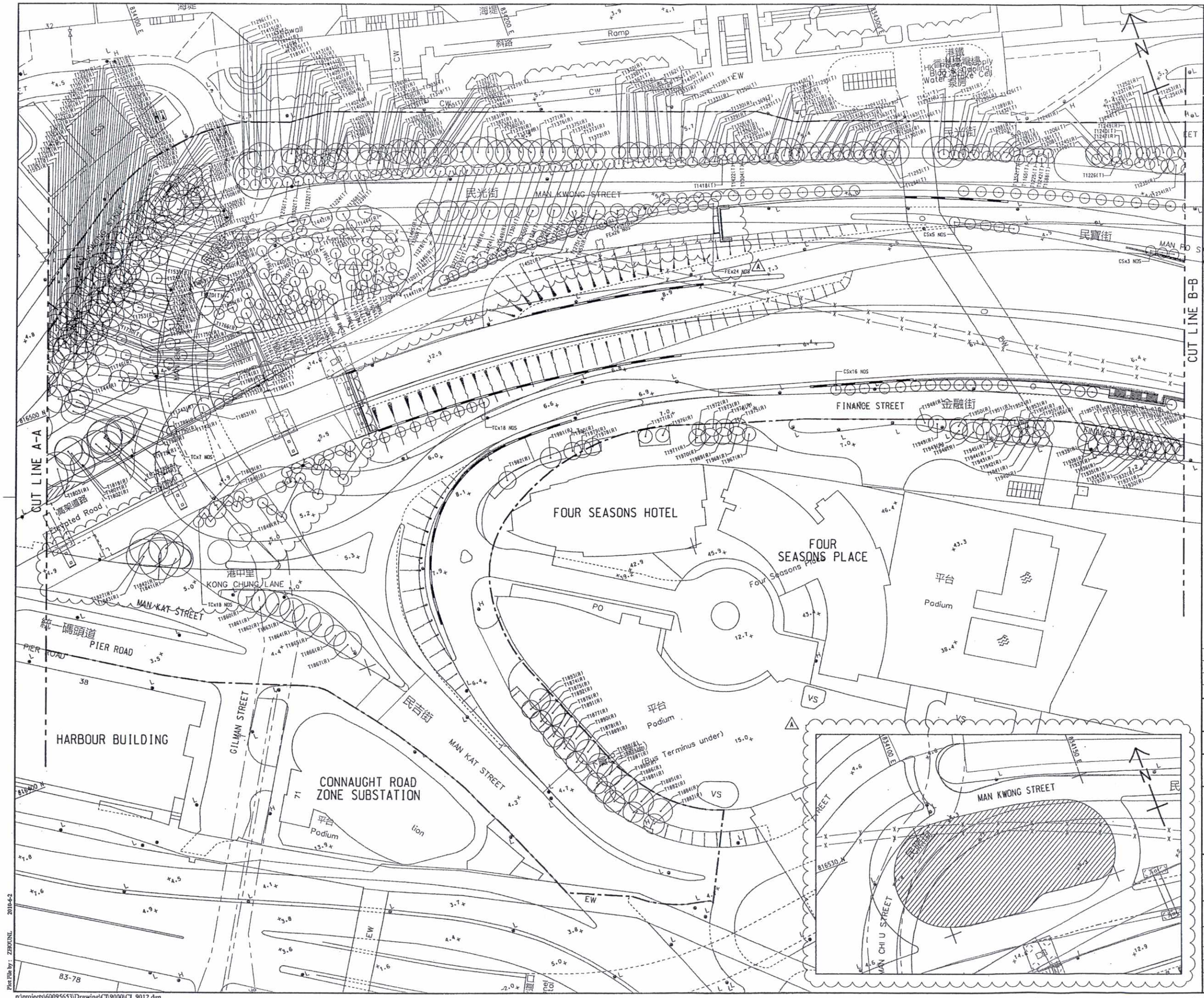


KEY PLAN
SCALE A1 1 : 20000
A3 1 : 40000

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

LEGEND:
LOCATION A

REV. 修訂	DESCRIPTION 內容摘要	CHECKED 審核	DATE 日期
B	WORKING DRAWING	ACHAN BCC	OCT 10
A	TENDER ADDENDUM NO. 1	ACHAN 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	CONTRACT NO. 合約編號	P. Dir. APPROVED 負責人
VLMK	HY/2009/18	CW
DRAWN BY 繪圖	STATUS 狀態	
LHC	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	

Plot File by : ZHKUNL 2010-6-2

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

highlight the location &

3. Analysis

Propose Treatment of Trees	Contract Trees	Additional Trees for works access
No. of trees to be transplanted	8 Nr.	5 Nr.
	13 Nr.	
No. of trees to be felled DBH 100-199	11 Nr.	4 Nr.
No. of trees to be felled DBH 200-299	6 Nr.	3 Nr.
No. of trees to be felled DBH 300-399	2 Nr.	2 Nr.
No. of trees to be felled DBH over 400	1 Nr.	1 Nr.
Total No. of trees to be felled	20 Nr.	10 Nr.
	30 Nr.	
Total DBH of the felled trees	4208 mm	2370 mm
	6578 mm	
Compensatory Trees	57 Nr. @ original DBH	33 Nr. @ DBH 75mm

* Contract Tree means Trees that are transplanted under Contract

Recommendations

There will be total 16 Nr. of trees to be felled with DBH 100-199.
With normal compensatory tree DBH 75-95mm, within 3-5 years, canopy rate will be recovered to original.

There will be total 9 Nr. of trees to be felled with DBH 200-299.
With normal compensatory trees with DBH 75-95mm, within 6-12 years, canopy rate will be recovered to original.

There will be total 4 Nr. of trees to be felled with DBH 300-399.
With normal compensatory trees with DBH 75-95mm, according to our estimation, it will take minimum 12 -20 years to recover to original canopy rate.

There will be total 2 Nr. of trees to be felled with DBH over 400.
With normal compensatory trees with DBH 75-95mm, according to our estimation, it will take minimum 15 -25 years to recover to original canopy rate.

Conclusion:

For this proposal, within 20 years, estimate canopy rate will be recovered to recover the canopy rate to 90-95%.

Appendix M
Location Plan for Holding Nursery

TOYO GREENLAND CO., LTD.
東陽綠化有限公司

Silver 銀禧 jubilee 30

Leighton Constructor (Asia) Limited
39th Floor, Sun Hung Kai Centre
30 Harbour Road
Hong Kong

Ref.: C2241/13/TGD2851
Date: 30 September 2013

Tel: (2214 7730)
By Fax: (2866 7141)
By Email: (wayne.law@leightonasia.com)

Attn: Ms. Wayne LAW

Dear Madam,

Contract No.: HY/2009/18
Central - Wan Chai Bypass - Central Interchange
Submission of Location Plan for the Transplanted Trees in Holding Nursery

We would like to submit herewith the tree location plan for the transplanted trees in Kam Tin holding nursery for your perusal.

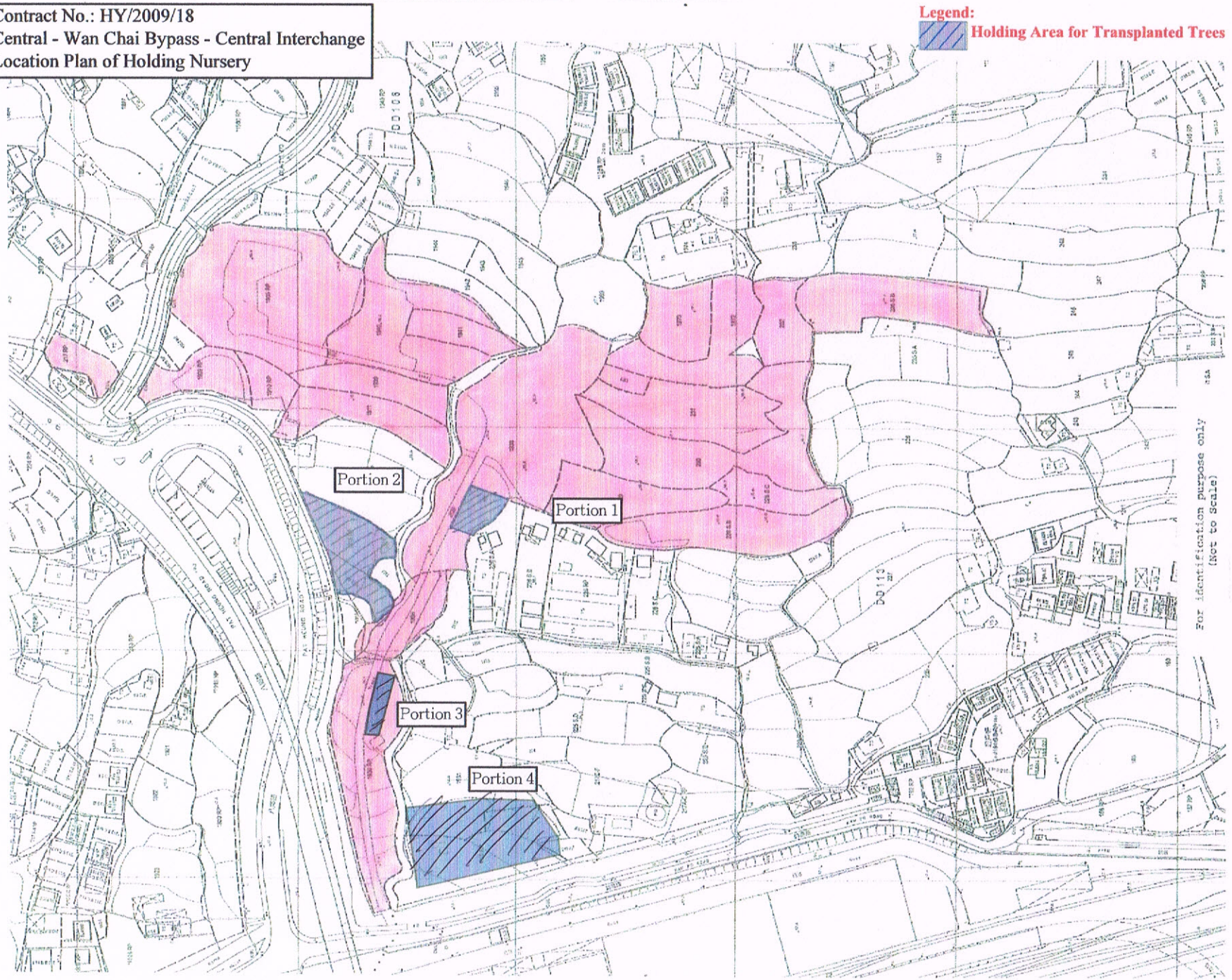
If you require further information, please feel free to contact our Ms. Rachel YAN on 3760 1930 or the undersigned on 9090 9912.

Yours faithfully,
TOYO GREENLAND CO., LTD.

Mr. HO Tat Pui, Daniel
Managing Director
DH/DA/EP/RY/jl

Encl. Tree Location Plan for Transplanted Trees

Contract No.: HY/2009/18
Central - Wan Chai Bypass - Central Interchange
Location Plan of Holding Nursery




Portion 1
T1273
T1274
T1243
T1244
T1242
T1240


Portion 2


Portion 3
T1343
T1344
T1338
T1456
T1236
AT008
T1341
T1233
T1457
T1421
AT005
T1420
AT009
T1339
T1306
AT003
AT004
T1322
T1283
T1305
T1285
T1281
T1284
T1286
T1345
T1282
T1342


Portion 4
AT059
AT058
T1778
T1776
T1817
T1777
T1838
T1807
AT060
AT062
T1452
T1458
T1449
T1445
T1453
AT007
T1450
T1451
T1833
T1835
AT017
T1856
T1857
AT016
AT006
T1446
T1447
T1855
T1854
T1455
T1448
T1454

Appendix N
List of Transplanted Tree from HY/2009/15

Transplanted Tree from HY/2009/15

Contract No: HY/2009/18

Tree Preservation Schedule

Inspection Date: 24/10/2013

Tree No.	Tree Species	Chinese Name	Jurisdiction	Maintenance Dept./Agent	Size			Form	Health condition	Amenity value	Survival rate after transplanting	Recom-mendation	Holding Nursery * (Lau Fau Shan)	Container ** (Yes / No)	Final Transplanting Location	Diameter of Rootball (m)	Remarks
					Overall Height (m)	Trunk Diameter (mm)	Average Crown Spread (m)	(Good/ Fair/Poor)	(Good/ Fair/Poor)	(High/ Medium/ Low)	(High / Medium / Low)	(Retain/ Transplant /Fell)					
T1900	*Ficus virens*	大葉榕	LCSD	FEHD	8.0	300	3.5	F	F	M	L	T	16/1/2013	No	Central Interchange Contract	2.0	Root grows on rock
T1902	*Ficus benjamina*	垂葉榕	LCSD	FEHD	7.5	370		F	F	L	M	T	16/1/2013	No	Central Interchange Contract	2.4	Root grows on rock
T1903	*Ficus benjamina*	垂葉榕	LCSD	FEHD	9.0	360	3.5	F	F	M	M	T	16/1/2013	No	Central Interchange Contract	2.1	Root grows on rock
T1904	*Ficus benjamina*	垂葉榕	LCSD	FEHD	8.0	385	3.5	F	F	L	M	T	16/1/2013	No	Central Interchange Contract	2.0	Root grows on rock
T1905	*Macaranga tanarius*	血桐	LCSD	FEHD	7.0	330	5.0	-	*** Dead	-	L	T	-	-	Central Interchange Contract		Root grows on rock,termite attack and removal before tree transplant. Compensation shall be responsible by contract HY200915.
T1906	*Celtis sinensis*	朴樹	LCSD	FEHD	8.5	380	6.0	-	*** Dead	-	M	T	-	-	Central Interchange Contract		Root grows on rock, refer to CCW/CSF/LDS/002073. Compensation shall be responsible by contract HY200915.
T1907	*Ficus variegata*	青果榕	LCSD	FEHD	8.0	190	3.5	-	*** Dead	-	L	T	-	-	Central Interchange Contract		Root grows on rock, refer to CCW/CSF/LDS/002073. Compensation shall be responsible by contract HY200915.
T1908	*Albizia lebbeck*	大葉合歡	LCSD	FEHD	8.5	280	7.0	P	F	L	M	T	16/1/2013	No	Central Interchange Contract	2.0	Root grows on rock
T1909	*Bombax ceiba*	木棉	LCSD	FEHD	-	-	-	-	*** Dead	-	-	T	-	-	Central Interchange Contract		Root grows on rock, dead before handover. Compensation shall be responsible by contract HY200915.
T1910	*Ficus virens*	大葉榕	AFCD	LandsD	9.0	600	4.0	F	F	M	L	T	16/1/2013	No	Central Interchange Contract	2.5	Root grows on rock.
T1911	*Albizia lebbeck*	大葉合歡	AFCD	LandsD	2.5	130	2.5	F	P	L	M	T	16/1/2013	No	Central Interchange Contract	1.6	Root grows on rock
T1912	*Ficus benjamina*	垂葉榕	AFCD	LandsD	4.0	170	2.5	F	F	M	M	T	16/1/2013	No	Central Interchange Contract	2.0	Root grows on rock
T2015	*Ficus microcarpa*	細葉榕	AFCD	LandsD	3.5	212	5.0	F	F	M	L	T	16/1/2013	No	Central Interchange Contract	2.4	Root grows on rock

Note: * The transplanted trees have been relocated from Tai Po Lam Tsuen Nolding Nursery to Lau Fau Shan Holding Nursery on 16/1/2013.

** No container was needed as per agreed working method at the holding nursery.

*** Under PSA 1.27 clause 2.3, CWB(CI) shall be responsible for taking up the responsibilities as specified in PS Clause 3.101(2) for the trees within CWB(T1) holding nursery once CWB(CI) commence his final transplanting works Since the final transplanting works have not started yet, the compensation for 4 dead trees shall be responsible by Contract HY/2009/15.