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**HONG KONG SECTION OF GUANGZHOU - SHENZHEN - HONG KONG EXPRESS RAIL LINK  
(No. EP-349/2009/L)**

**TREE PLANTING AND LANDSCAPE PLAN  
TLP-4: WORKS IN TSUEN WAN DISTRICT  
SUPPLEMENTARY PAPER (rev.3)**

*Environmental Team Leader:* \_\_\_\_\_

A handwritten signature in black ink, appearing to read 'R. Kwan'.

Richard Kwan, MTR Corporation

19 January 2015

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Date



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**Tree Planting and Landscape Plan for XRL – TLP-4: Works In Tsuen Wan District**

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# ***Chapter 1***

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## ***Introduction***

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## 1 INTRODUCTION

### 1.1 THE XRL PROJECT

- 1.1.1 The Guangzhou-Shenzhen-Hong Kong Express Rail Link is a committed cross boundary transport infrastructure project to provide high-speed rail services between Hong Kong (HK) and Guangzhou, and a connection to the national high-speed passenger rail network serving major mainland cities outside of Guangdong province. This network, which will comprise some 12,000 km, is now under construction in the Mainland. It is understood that the section from Guangzhou to Shenzhen (Futian) will start operation in 2010. The Hong Kong section of the Express Rail Link (XRL) is scheduled for urgent implementation, following the announcement by the Chief Executive (CE) of the HKSAR in the 2007-08 Policy Address. The XRL, measuring about 26 km from West Kowloon to the boundary, will use a dedicated corridor to ensure that the required line capacity can be achieved and to ensure operational compatibility with the Mainland.
- 1.1.2 The XRL Scheme consists of an underground terminus in West Kowloon, approximately 26 km of tunnels from the terminus to the boundary at Mai Po, tunnel ventilation shafts/adits and associated buildings and facilities, an emergency rescue siding, stabling sidings and associated facilities in Shek Kong, approach tunnel to the stabling sidings, and access roads to the ventilation buildings. After crossing the boundary, the Mainland section of the high-speed railway runs north for a further 116 km to Guangzhou, with new stations at Futian, Longhua (New Shenzhen Station), Gongming, Dongchung, Humen and Shibi (New Guangzhou Station). Trains on the Hong Kong section are intended to operate at speed up to 200 kmph.
- 1.1.3 With a footprint of about 10 ha., the XRL West Kowloon Terminus (WKT) is an underground station located immediately north of the proposed West Kowloon Cultural District (WKCD) between the Airport Railway Kowloon Station to the west and the future West Kowloon (Austin) Station to the east.
- 1.1.4 The XRL tunnel configuration will vary depending upon the geological conditions and methods of construction. The TBM tunnels will adopt a twin cell tunnel configuration with interconnecting cross passages. Twin bore tunnels are envisaged for the section of tunnel underneath the Mai Po Marshes and the RAMSAR Site for final crossing over into the Mainland.
- 1.1.5 Seven intermediate ventilation shafts/adits, with associated ventilation buildings, are proposed along the alignment of the XRL tunnel alignment providing ventilation for the main tunnels. The ventilation shafts/adits also function as emergency access points (EAPs) for emergency rescue teams in case of incident or emergency inside the tunnels. One additional EAP (EAP3) is provided at Tai Kong Po.
- 1.1.6 A depressed emergency rescue siding (ERS) is to be provided in Shek Kong for emergency evacuation of passengers from an incident train. Two tunnel ventilation plants will also be located at either end of the SSS. The Shek Kong Stabling Sidings (SSS), will provide at grade stabling sidings and running maintenance tracks to the east of the ERS.
- 1.1.7 The XRL Project will resume about 114 ha. surface land area together with underground strata on a permanent and temporary basis for construction of the XRL related facilities.

### 1.2 TREE PLANTING AND LANDSCAPE PLAN

- 1.2.1 A number of trees are affected by the proposed works with about 3900 to be felled and 1200 to be transplanted. In order to compensate for the felled trees, around 6300 compensatory trees will be planted.
- 1.2.2 In accordance with the Environmental Permit (EP No. 349/2009) of the Express Rail Link (XRL), the Permit holder is required to submit Tree Planting and Landscape Plans (the Plans), including the compensatory

woodland, in consultation with the Planning Department and Agriculture, Fisheries and Conservation Department, for approval by the Director.

- 1.2.3 The Plans for the XRL works have been split into eight submissions based on the District boundaries and the Works programme had been submitted to EPD between November 2009 and November 2011 and approved. The separate Plans include:
- TLP-1 : Works in Yau Tsim Mong District;
  - TLP-2 : Works in Sham Shui Po District;
  - TLP-3 : Works in Kwai Tsing District
  - TLP-4 : Works in Tsuen Wan District
  - TLP-5 : Works in Tuen Mun District
  - TLP-6 : Works in Yuen Long District - Mai Po
  - TLP-7 : Works in Yuen Long District - Remainder
  - TLP-10: Works in Yuen Long District – Tai Shu Ha

### 1.3 CHANGES TO THE PLANS SINCE NOVEMBER 2011

- 1.3.1 In the previous submission of Tree Planting and Landscape Plan in 2010, compensatory tree planting are in general proposed on unallocated government land that has been allocated to XRL temporarily for construction purpose. According to the Technical Circular ETWB TCW Np. 2/2004, trees on unallocated government land shall be maintained by Lands Department. The proposal was confirmed as not acceptable by the Lands Department at a meeting on 4 July 2013 as it will sterilize future land use. These lands include the magazine site in So Kwun Wat and temporary works areas covered by TGLAs in Tai Kong Po, Shek Kong and Ngau Tam Mei. As a consequence, the plans covered by TLP-4, TLP-5 and TLP-7 have to be reviewed and Supplementary Papers for each affected TLP will be submitted to EPD separately
- 1.3.2 At the meeting with Lands Department on 4 July 2013, it was agreed that the feasibility of planting some of the compensatory trees inside country parks should be explored.
- 1.3.3 A meeting was held with AFCD and Lands Department was held on 13 September 2013. AFCD did not prefer the proposed planting of compensatory trees inside country parks. AFCD instead suggested consideration should be given to plant these compensatory trees at some comparatively barren lands at the fringe of country parks to improve the local landscape. The site at Ha Fa Shan in Tsuen Wan was subsequently selected.
- 1.3.4 A tree compensatory proposal was subsequently developed including 12 native tree species which require no maintenance. AFCD has been consulted on the choice of species and considers the proposed species are suitable for planting at Ha Fa Shan.

### 1.4 OBJECTIVE OF THIS PLAN

- 1.4.1 This Plan is a supplementary plan to the TLP4 submitted in March 2010. The objective of this plan is to update the changes to the arrangement of compensatory tree planting indicated in Section 1.3.



## ***Chapter 2***

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# ***Tree Survey Findings and Recommendations***

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## **2 TREE SURVEY FINDINGS AND RECOMMENDATIONS**

[SEE TLP4 submitted in March 2010]



## ***Chapter 3***

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# ***Compensatory Tree Planting & Transplanting Proposal***

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### **3 COMPENSATORY TREE PLANTING AND TRANSPLANTING PROPOSAL**

#### **3.1 COMPENSATORY TREE PLANTING**

##### ***Compensatory Tree Planting Strategy***

- 3.1.1 As vehicular access to the Ha Fa Shan is not available, seedlings will be planted in lieu of standard trees. Planting of seedlings in form of woodland mix is considered more appropriate for slope works in accordance with Technical Circular (Works) No. 10/2013 Tree Preservation.
- 3.1.2 The Ha Fa Shan site will be returned to DLO (Tsuen Wan & Kwai Chung) together with the 5,000 planted seedlings. DLO (Tsuen Wan & Kwai Chung) has agreed to take over the maintenance responsibilities of those seedlings. As noted above, the species selected are those that require no maintenance. In order to give a higher level of confidence to DLO (Tsuen Wan & Kwai Chung) that the seedlings will be in healthy conditions upon handover, MTR has agreed to extend the normal establishment period from 1 year to 2 years. This has been agreed by DLO (Tsuen Wan & Kwai Chung). It is appreciated that by the end of the 2-year establishment period the seedlings will not be mature enough to be considered as “trees”. MTR has considered a number of different arrangements to record the completion of XRL’s commitment to plant a total of 5500 compensatory trees. MTR would conduct a survey of the seedlings planted at Ha Fa Shan just before the XRL is put into operation expected by end 2017. A further survey, to be scheduled based on the findings of the survey in 2017, would be conducted to review the condition of the “trees” at Ha Fa Shan and record the number of mature trees. The compliance with the requirements of compensatory tree will be recorded and confirmed through submission of audit results.

##### ***Numbers of Compensatory Trees***

- 3.1.3 Please refer to **Table 4.1** for updated figures of compensatory tree planting.

##### ***Locations for Compensatory Tree Planting***

- 3.1.4 It was previously proposed to plant the compensatory trees at Yam O Barging Point and this proposal was not accepted by the relevant Authority. Therefore, the compensation will be incorporated at Ha Fa Shan.
- 3.1.5 The approximate locations of the compensatory tree planting are indicated in the Compensatory Tree Planting Plans attached in **Appendix I**. The exact final locations for the compensatory trees will depend on the detailed design of the engineering works.

##### ***Fire Preventive Measures***

- 3.1.6 In view of the planting site at Ha Fa Shan is located close to the Ha Fa Shan and Yau Kam Tau Permitted Burial Grounds, the following fire preventive measures will be adopted:
- The Contractor will clear the weed frequently at the edge of the site and conduct grass cutting before fire seasons to provide a 10 m fire break (refer to Appendix I - Drawing No. 801/B/HFS/OAP/A58/010);
  - Fire Beaters will be provided by the Contractor; and
  - Green fire break will be provided by planting fire-resistant species (e.g. *Acacias*, *Schima superba* etc.) at the periphery of the site.





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**Tree Planting and Landscape Plan for XRL – TLP-4: Works In Tsuen Wan District**

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## ***Chapter 4***

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# ***Tree Impacts and Tree Compensation***

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## 4 TREE FELLING AND TREE COMPENSATION FOR TSUEN WAN DISTRICT

4.1.1 **Table 4.1** summarises the total tree felling, transplanting and compensatory tree planting in Tsuen Wan District. There were 26 trees felled and 40 compensatory trees in form of seedlings will be planted at Ha Fa Shan under this TLP.

**Table 4.1 Summary of Tree Felling, Transplanting and Compensation**

	(1)	(2)	(3)	(4)	(5)	(6)
Tree Planting and Landscape Plan	Trees Surveyed in Site Boundary	Trees to be Retained	Trees to be Retained and Pruned	Trees to be transplanted	Trees to be Felled	Compensatory Tree Planting
**TLP-4: Works in Tsuen Wan District	371(383)*	303 (312)*	0	42	26 (29)*	4150 (40 of those are seedlings for the trees felled under TLP-4, and the rest are for the trees felled under TLP-5 and TLP-7)

\*Under ETWBTC(W)3/2006 *Leucaena leucocephala* is considered a self-seeded weed tree and can be felled w/o compensation. Totals without brackets exclude *Leucaena*. Totals in brackets include *Leucaena*.

\*\* TLP Submission at this date



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**Tree Planting and Landscape Plan for XRL – TLP-4: Works In Tsuen Wan District**

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***Appendix I***

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***Compensatory Tree Planting & Transplanting Plans***

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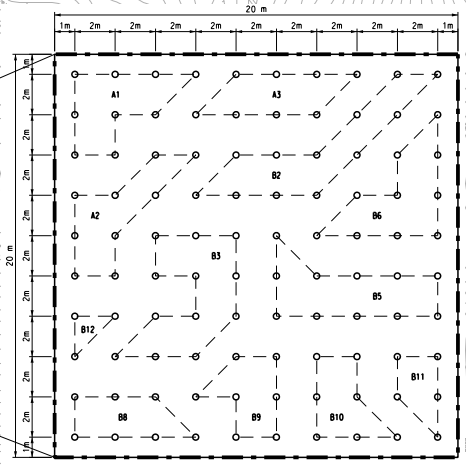
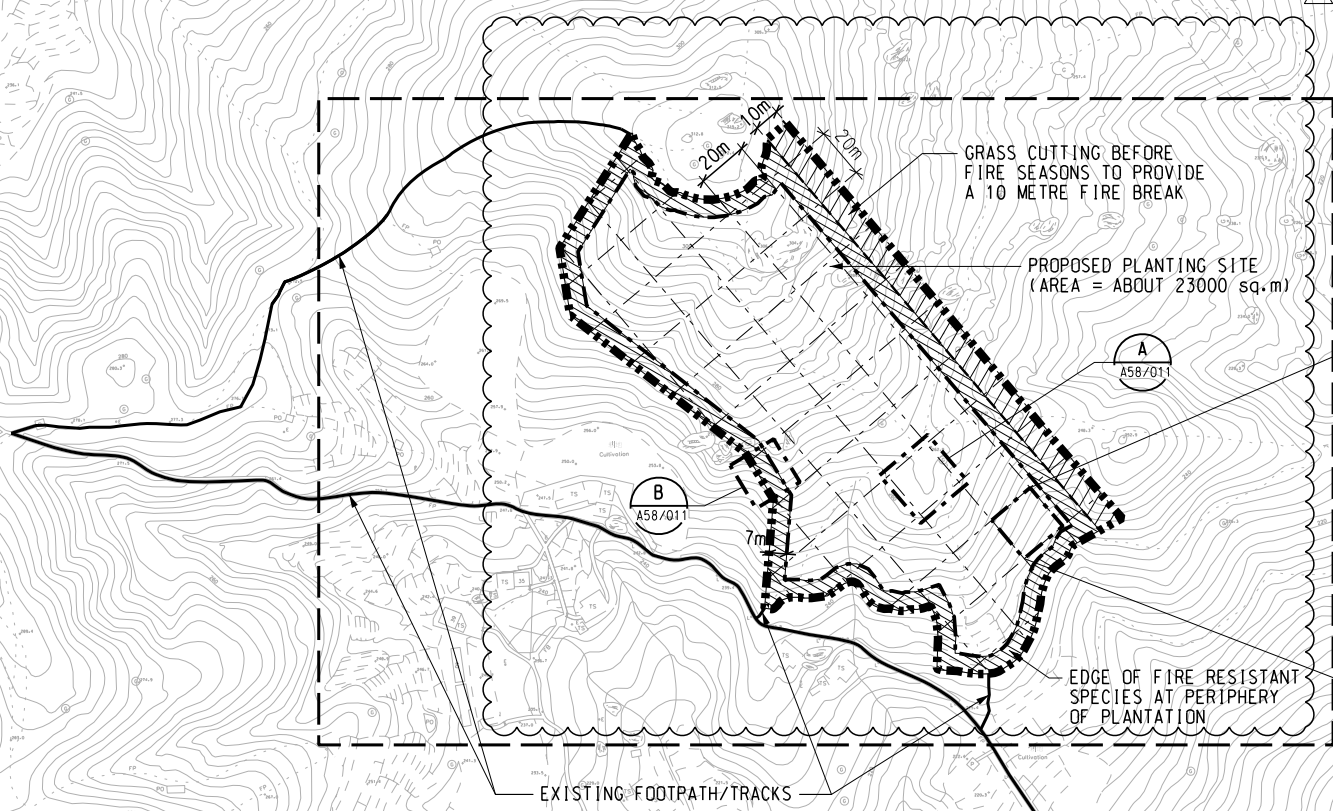
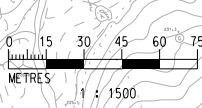
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**Drawing List of Appendix I**

**Landscape Plan of Planting Site at Ha Fa Shan**

Drawing	Revision	Title
801/B/HFS/OAP/A58/010	F1	Tree Planting at Soiling Key Plan
801/B/HFS/OAP/A58/011	E	Compensatory Planting Woodland Mix Planting Matrix

**Note:**  
 This drawing does not indicate precise no. and locations of compensatory planting woodland mix planting matrix. The arrangement of woodland mix planting matrix shown in drawing are indicative only.



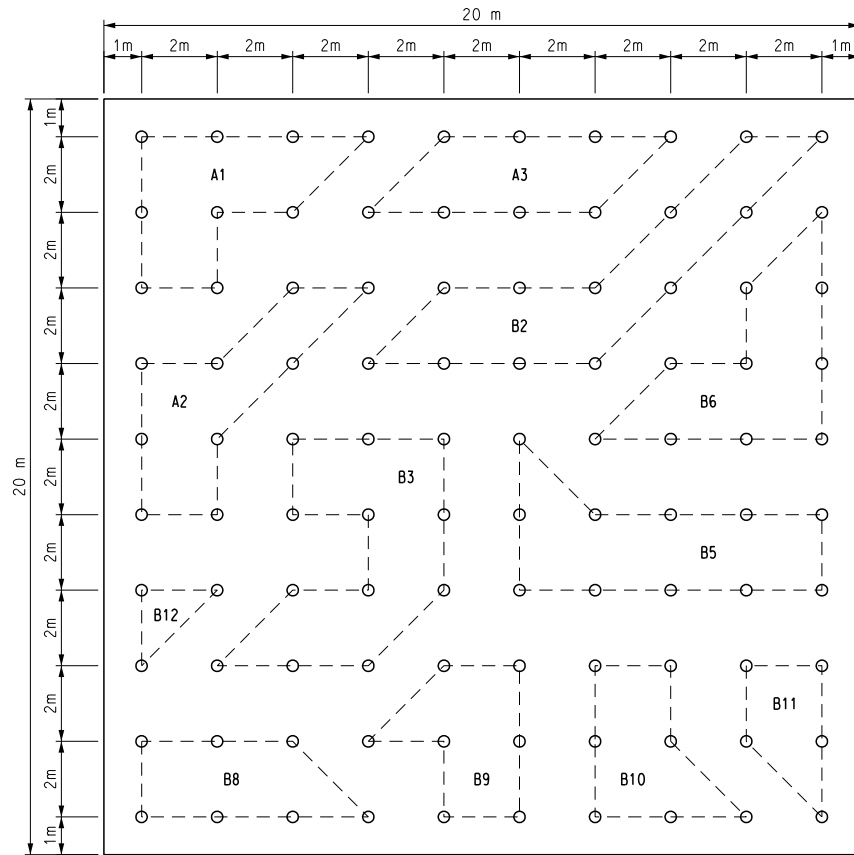
ID	Botanical Name	Chinese Name	Size	Percentage	Qty.	
<b>Exotic Species</b>						
A1	Acacia confusa	台湾相思	Seedlings	9%	450	
A2	Acacia mangium	大葉相思	Seedlings	9%	450	
A3	Syzygium jambos	蒲桃	Seedlings	8%	400	
<b>Native Species</b>						
B1	Ficus microcarpa	連環松	Seedlings	8%	400	
B2	Gordonia axillaris	大頭茶	Seedlings	12%	600	
B3	Rhaphtolepis indica	石斑木	Seedlings	12%	600	
B4	Caletia sinensis	科樹	Seedlings	8%	400	
B5	Phyllanthus emblica	餘甘子	Seedlings	11%	550	
B6	Liquidambar formosana	種香	Seedlings	10%	500	
B7	Sapindus sibiricum	烏桕	Seedlings	6%	300	
B8	Schinus molle	木荷	Seedlings	7%	350	
B9	Viburnum odoratissimum	珊瑚樹	Seedlings	7%	350	
B10	Castanopsis fissa	栗樹 (裂斗栗)	Seedlings	7%	350	
B11	Machilus thunbergii	烏精	Seedlings	3%	150	
B12	Machilus breviflora	短序烏精	Seedlings	3%	150	
				<b>TOTAL</b>	<b>100%</b>	<b>5000</b>

Remark: The proposed planting site (Area = about 23000 sq.m) to be filled with the compensatory planting woodland mix planting matrix (Area = 400 sq.m) for compensatory planting under TLP-4, TLP-5 and TLP-7. Please refer to drawing 801/B/HFS/OAP/A58/011 for detail.

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
F	GOVERNMENT SUBMISSION		25SEP14	JM	DESIGNED	AC			FL
E	GOVERNMENT SUBMISSION		28AUG14	JM	CHECKED	TO			TO
D	GOVERNMENT SUBMISSION		15AUG14	JM	APPROVED	JM			JM
C	GOVERNMENT SUBMISSION		05AUG14	JM	DATE	27/MAR/2009			
B	GOVERNMENT SUBMISSION		30APR14	JM	DO NOT SCALE DRAWINGS. ALL DIMENSIONS SHALL BE VERIFIED ON SITE. MTR CORPORATION LIMITED 2008 COPYRIGHT IN RESPECT OF THIS DRAWING / DOCUMENT IS OWNED BY MTR CORPORATION LIMITED OF HONG KONG. NO REPRODUCTION OF THIS DRAWING / DOCUMENT OR ANY PART BY WHATEVER MEANS IS PERMITTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE MTR CORPORATION LIMITED.				
A	GOVERNMENT SUBMISSION		FEB14	JM					

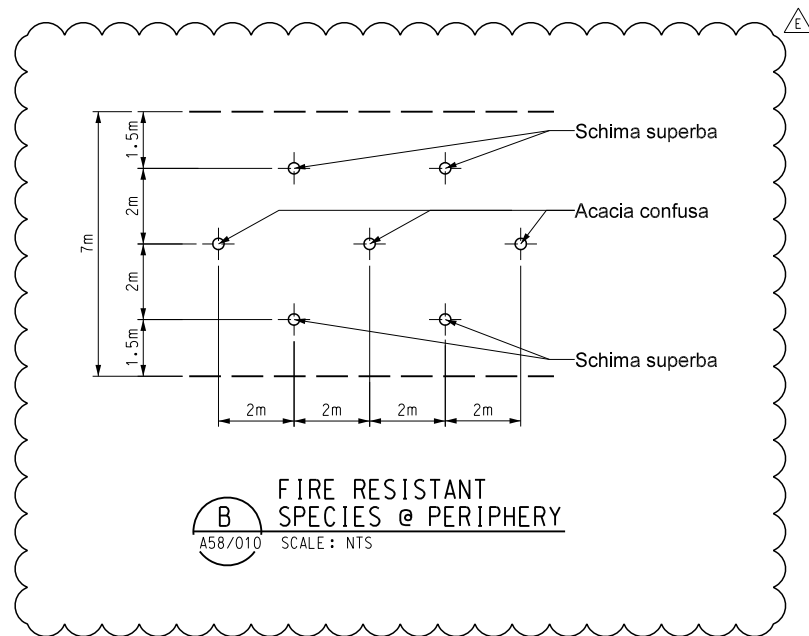
**MTR**  
 EXPRESS RAIL LINK  
 ORIGINATOR  
**ARUP**  
 Supported by :  
 Atkins, TFP Farrells, DLS,  
 Knight Frank, SIYUAN,  
 Urbis, BMT Asia  
 CADD REF. 801\_B\_HFS\_OAP\_A58\_010F.dgn

TITLE  
**CONTRACT 801**  
**PLANTING SITE AT HA FA SHAN, TSUEN WAN**  
**TREE PLANTING & SOILING KEYPLAN**  
 SCALE 1 : 1500 (A1)  
 DRAWING NO. 801/B/HFS/OAP/A58/010  
 REV. F1



Note:  
 The planting matrix shown is indicative only. The actual planting arrangement will be subjected to the site condition.

**A PLANTING MATRIX**  
 A58/010 SCALE: NTS



**B FIRE RESISTANT SPECIES @ PERIPHERY**  
 A58/010 SCALE: NTS

ID	Botanical Name	Chinese Name	Size	Percentage	Qty.
<b>Exotic Species</b>					
A1	Acacia confusa	台灣相思	Seedlings	9%	450
A2	Acacia mangium	大葉相思	Seedlings	9%	450
A3	Syzygium jambos	蒲桃	Seedlings	8%	400
<b>Native Species</b>					
<del>B1</del>	<del>Ficus microcarpa</del>	<del>細葉榕</del>	<del>Seedlings</del>	<del>8%</del>	<del>400</del>
B2	Gordonia axillaris	大頭茶	Seedlings	12%	600
B3	Rhaphiolepis indica	石斑木	Seedlings	12%	600
<del>B4</del>	<del>Celtis sinensis</del>	<del>朴樹</del>	<del>Seedlings</del>	<del>8%</del>	<del>400</del>
B5	Phyllanthus emblica	餘甘子	Seedlings	11%	550
B6	Liquidambar formosana	楓香	Seedlings	10%	500
<del>B7</del>	<del>Sapium sebiferum</del>	<del>烏柏</del>	<del>Seedlings</del>	<del>6%</del>	<del>300</del>
B8	Schima superba	木荷	Seedlings	7%	350
B9	Viburnum odoratissimum	珊瑚樹	Seedlings	7%	350
B10	Castanopsis fissa	蠟莪錐 (裂斗錐栗)	Seedlings	7%	350
B11	Machilus thunbergii	紅楠	Seedlings	5%	250
B12	Machilus breviflora	短序潤楠	Seedlings	3%	150
<b>TOTAL</b>				<b>100%</b>	<b>5000</b>

**C PLANTING SCHEDULE**  
 SCALE: NTS

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
E	GOVERNMENT SUBMISSION		TO 25SEP14	JM					
D	GOVERNMENT SUBMISSION		TO 28AUG14	JM					
C	GOVERNMENT SUBMISSION		TO 05AUG14	JM					
B	GOVERNMENT SUBMISSION		TO 30APR14	JM					
A	GOVERNMENT SUBMISSION		TO FEB14	JM					

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 Supported by :  
 Atkins, TFP Farrells, DLS,  
 Knight Frank, SIYUAN,  
 Urbis, BMT Asia

TITLE <b>CONTRACT 801</b> <b>PLANTING SITE AT HA FA SHAN, TSUEN WAN</b> <b>COMPENSATORY PLANTING WOODLAND MIX PLANTING MATRIX</b>	
SCALE N.T.S. (A1)	DRAWING NO. 801/B/HFS/OAP/A58/011
REV. E	

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