

Appendix E.1

Summary of Tree Compensation

Table E.1

Tuen Mun - Chek Lap Kok Link (TM-CLKL)

Summary of Tree Felling & Tree Compensation Quantity

	Tree Quantity as in EIA Report (Approx. no.)					Tree Quantity as in Tree Removal Applications (no.)					** Tree Compensation Quantity as in Tree Removal Applications (no.) (CM10)				*** Tree Planting Quantity as in Approved Planting Proposals (no.)				Transplanted Tree Planting Quantity as in Approved Planting Proposals/ as in Landscape and Visual Plan (no.)	
	* Fell	Undersirable Species (Weed Tree)	**** Transplant	***** Retain	** Tree Compensation	* Fell (Living Tree)	Dead Tree	Undersirable Species (Weed Tree)	**** Transplant	***** Retain	Heavy Standard	Standard	Light Standard	Whip	Heavy Standard	Standard	Light Standard	Whip	**** Transplant	
EIA Report (Year 2009)	3460	480	100	1360	6300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tree Removal Application and Compensatory Planting Proposal (Ref. A35-03) (approved on 8 January 2013)	-	-	-	-	-	2293	701	652	182	2554	2965	0	893	0	-	-	-	-	-	
HY/2012/07	C1 - Supplementary Tree Removal Applications	-	-	-	-	886	28	0	8	154	372	44	298	90	-	-	-	-	-	
	C1 - Adjustments made from the approved Tree Removal Application (Ref. A35-03) through Supplementary Tree Removal Applications	-	-	-	-	-	-	-	-76	-136	-	-	-	-	-	-	-	-	-	
	C1 - Missing Tree Report	-	-	-	-	-168	0	0	-33	-86	-144	0	0	0	-	-	-	-	-	
C1 - Approved Planting Proposal	-	-	-	-	-	-	-	-	-	-	-	-	-	557	25	665	143	11		
HY/2012/08	C2 - Supplementary Tree Removal Applications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	C2 - Approved Planting Proposal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HY/2013/12	C3 - Supplementary Tree Removal Applications	-	-	-	-	1688	103	341	24	40	24	-	207	359	-	-	-	-	-	
	C3 - Adjustments made from the approved Tree Removal Application (Ref. A35-03) through Supplementary Tree Removal Applications	-	-	-	-	-	-	-	-7	-705	-	-	-	-	-	-	-	-	-	
	C3 - Missing Trees on site	-	-	-	-	-217	-30	-205	-14	-261	-	-	-	-	-	-	-	-	-	
C3 - Approved Planting Proposal	-	-	-	-	-	-	-	-	-	-	-	-	-	308	-	801	411	24		
HY/2017/10	C4 - Supplementary Tree Removal Applications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	C4 - Approved Planting Proposal	-	-	-	-	-	-	-	-	-	-	-	-	2997	-	-	-	-	-	
HY/2014/10	C5 - Supplementary Tree Removal Applications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	C5 - Approved Planting Proposal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Sub-Total	3460	480	100	1360	6300	4482	802	788	84	1560	3217	44	1398	449	3862	25	1466	554	35
	Total	* 3460	480	**** 100	1360	** 6300	*4482	802	788	**** 84	1560	** 5108				*** 5907				**** 35

Notes:

- * The tree felling quantity stated in the EIA report and in the Tree Removal Applications varied. The quantity in the EIA report was estimated in an early design stage of the Project and with the development of the Project design, either civil, site formation or slope designs, the trees required to be felled for the construction of works became more accurate. In addition, the trees in Year 2009 were likely to have grown to sizes that require the process of tree removal application which also contributed to the variation in the tree felling quantity.
- ** The tree compensation quantity stated in the EIA report and in the Tree Removal Applications varied. Mitigation Measure 'CM10' in Table 10.9 of the EIA report: "Compensatory tree planting shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process ...". The required number for Tree Compensation as listed in "Tree Compensation Quantity as in Tree Removal Applications" was agreed with the relevant Government departments through the applications "Tree Preservation and Removal Proposals". The locations and tree species were subsequently agreed with the relevant Government departments through the submissions on detailed planting design proposals. The quantity in the EIA report was estimated in an early design stage of the Project and with the development of the Project design, either civil, site formation or slope designs, the tree compensation quantity and quality as appropriate for the different environmental conditions of the site and the **Design Considerations** as listed in **Section 2** were agreed with the relevant Government departments.
- *** Through the detailed planting design proposals, the quantity of tree planting exceeds the required tree compensation quantity in the Tree Removal Applications.
- **** The possible change of condition of the trees to be transplanted and the development of the Project design contributed to the variation in the transplant tree quantity in the EIA and in the Landscape and Visual Plan. Missing transplant trees, 47 nos., were recorded from the initial tree surveys before works commenced. In Contract No. HY/2012/07, 18 nos. transplant trees could be retained on site instead of transplanting.
- ***** The quantity of trees to be retained in the EIA report and in the Tree Removal Applications varied. The quantity in the EIA report was estimated in an early design stage of the Project and with the development of the Project design, either civil, site formation or slope designs, and the possible change of condition of the trees, the retained tree quantity became more accurate in the Tree Removal Applications.
- To satisfy the tree compensation requirement, the higher quantity from the approved EIA report was used, i.e. 6,300 nos. instead of 5108 nos. from the tree removal applications. In order to meet 6,300 nos., compensatory tree planting outside the project boundary is necessary. Information on tree planting outside the project boundary is described in **Section 3.3** and in **Appendix E.3**.

Summary of Tree Compensation - Approved EIA Report and Landscape and Visual Plan Comparison (Table E.1i)

Description	Approved EIA Report (nos.)	Landscape and Visual Plan (nos.)	
		Within Project Boundary	Outside Project Boundary
Nos. of Compensatory Tree Planting	6,300 approx. (Tree Size: Light Standard, Heavy Standard)	5,353	1,040
Total	6,300	6,393 (Tree Size: Light Standard - Heavy Standard)	

Summary of Tree Transplant - Approved EIA Report and Landscape and Visual Plan Comparison (Table E.1ii)

Description	Approved EIA Report (nos.)	Landscape and Visual Plan (nos.)		Remarks
		Within Project Boundary	Outside Project Boundary	
Nos. of Tree Transplant	100	35	0	47 nos. transplant trees surveyed as missing on site; 18 nos. transplant trees retained on site in Contract No. HY/2012/07; 35 nos. actual transplant trees.
Total	100	35		100

Table E.3

Tuen Mun - Chek Lap Kok Link - Northern Connection Toll Plaza and Associated Works

Contract No. HY/2013/12 (Contract 3)

Tree Planting Schedule

BOTANICAL NAME	CHINESE NAME	SIZE (mm) HEIGHT (H) X SPREAD (S)	SPACING (mm)	QUANTITY (nos.)	IDENTIFICATION NO. FOR PLANTING AREA IN CONTRACT 3																					
					PA01	PA02	PA03	PA04	PA05	PA06	PA07	PA08	PA09	PA10	PA11	PA12	PA13	PA14	PA15	PA16	PA17	PA18	PA19	PA20	PA21	PA22
WHIP																										
<i>Bauhinia variegata</i>	宮粉羊蹄甲	WHIP	1000	52	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-	-	-	-	
<i>Bridelia tomentosa</i>	土密樹	WHIP	1000	93	-	-	-	-	-	-	-	-	68	25	-	-	-	-	-	-	-	-	-	-	-	
<i>Gordonia axillaris</i>	大頭茶	WHIP	1000	140	-	-	-	-	-	-	-	-	18	52	-	-	-	70	-	-	-	-	-	-	-	
<i>Litsea glutinosa</i>	潺槁樹	WHIP	1000	38	-	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-	-	-	
<i>Mallotus paniculatus</i>	白楸	WHIP	1000	38	-	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-	-	-	
<i>Phyllanthus emblica</i>	餘甘子	WHIP	1000	38	-	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-	-	-	
<i>Sapium discolor</i>	山烏柏	WHIP	1000	12	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	
			Subtotal	411	0	0	0	0	0	0	0	0	86	255	0	0	0	70	0	0	0	0	0	0	0	
TREE (HEAVY STANDARD)																										
<i>Bauhinia variegata</i>	宮粉羊蹄甲	HEAVY STANDARD	4000-4500	41	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Bombax ceiba</i>	木棉	HEAVY STANDARD	4500-5000	16	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Brachychiton acerifolius</i>	槭葉蘋婆	HEAVY STANDARD	4500-5000	36	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-	
<i>Cinnamomum burmannii</i>	陰香	HEAVY STANDARD	4500-5000	23	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Sterculia lanceolata</i>	假蘋婆	HEAVY STANDARD	4500-5000	13	10	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Delonix regia</i>	鳳凰木	HEAVY STANDARD	N/A	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Melaleuca cajuputi subsp. cumingiana</i>	白千層	HEAVY STANDARD	4000	51	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	16	-	16	11	
<i>Tabebuia chrusantha</i>	黃花風鈴木	HEAVY STANDARD	4500-5000	4	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	
<i>Tabebuia impetiginosa</i>	風鈴木	HEAVY STANDARD	4500-5000	52	24	-	-	-	-	10	-	-	3	12	-	-	-	-	-	-	-	-	-	-	-	
<i>Terminalia mantaly</i>	小葉欖仁	HEAVY STANDARD	4500-5000	8	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			Subtotal	224	114	0	1	0	0	10	8	0	6	12	0	8	18	4	0	0	0	16	0	16	11	
TREE (LIGHT STANDARD)																										
<i>Bauhinia variegata</i>	宮粉羊蹄甲	LIGHT STANDARD	3000	225	-	-	-	-	-	8	-	-	34	180	-	-	-	-	-	-	-	-	3	-	-	
<i>Bridelia tomentosa</i>	土密樹	LIGHT STANDARD	3000	81	-	-	-	-	-	-	-	-	15	46	-	-	-	-	-	-	-	-	20	-	-	
<i>Bombax ceiba</i>	木棉	LIGHT STANDARD	3000	32	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-	-	-	
<i>Cinnamomum burmannii</i>	陰香	LIGHT STANDARD	3000	51	-	-	-	-	-	-	-	-	-	43	2	-	-	-	-	-	-	-	6	-	-	
<i>Liquidambar formosana</i>	楓香	LIGHT STANDARD	3000	32	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-	-	-	
<i>Litsea glutinosa</i>	潺槁樹	LIGHT STANDARD	3000	19	-	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Machilus chekiangensis</i>	浙江潤楠	LIGHT STANDARD	3000	61	-	-	-	-	-	-	-	-	17	44	-	-	-	-	-	-	-	-	-	-	-	
<i>Reevesia thyrsoidea</i>	梭羅樹	LIGHT STANDARD	3000	36	-	-	-	-	-	4	-	-	7	25	-	-	-	-	-	-	-	-	-	-	-	
<i>Schima superba</i>	木荷(荷樹)	LIGHT STANDARD	3000	32	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-	-	-	
<i>Sterculia lanceolata</i>	假蘋婆	LIGHT STANDARD	3000	53	-	-	-	-	-	-	-	-	6	30	3	-	-	-	-	-	-	-	14	-	-	
<i>Viburnum odoratissimum</i>	珊瑚樹	LIGHT STANDARD	3000	74	-	-	-	-	-	-	-	-	16	58	-	-	-	-	-	-	-	-	-	-	-	
<i>Garcinia subelliptica</i>	福木	LIGHT STANDARD	3000	30	-	-	-	-	-	-	-	-	-	-	4	-	3	7	-	-	4	-	-	12	-	
			Subtotal	726	0	0	0	0	0	12	0	0	114	522	5	4	0	3	7	0	0	4	43	0	12	
PALM																										
<i>Archontophoenix alexandrae</i>	假檳榔	HEAVY STANDARD 3500(H) X 1500(S)	4000	58	-	-	-	-	-	-	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Livistona chinensis</i>	蒲葵	LIGHT STANDARD 2000(H) X 1500(S)	2500	21	-	-	-	-	-	10	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	
<i>Phoenix roebelenii</i>	日本葵	LIGHT STANDARD 2000(H) X 1500(S)	2500-3000	54	13	-	18	-	-	-	-	-	4	19	-	-	-	-	-	-	-	-	-	-	-	
<i>Wodyetia bifurcata</i>	狐尾椰子	HEAVY STANDARD 2500(H) X 1500(S)	3500	26	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-	-	
			Subtotal	159	13	0	18	0	0	10	58	0	4	30	0	0	0	26	0	0	0	0	0	0	0	
			Contract 3 Total	1520	127	0	19	0	0	32	66	0	210	819	5	12	18	103	7	0	0	20	43	16		

NOTE:

- All proposed plant species and specifications are subject to change during construction to suit the site conditions.
- Locations of tree planting area subject to change during construction to suit the site conditions.
- The standards of trees follow General Specification for Civil Engineering Works Clause 3.11-3.16; the sizes are also subject to the special feature according to species.
- The palms are accounted as heavy or light standard trees according to species and sizes for tree compensation accounting purpose.
- Refer to drawing nos. C3/LM/001, C3/LM/002 in Appendix D for the locations of planting area in Contract 3.

Tree Size	C3	
Whip	411	
Subtotal	411	411
Light Standard	801	
Standard	0	
Heavy Standard	308	
Subtotal	1109	1109
	Total	1520

Table E.4
Tuen Mun - Chek Lap Kok Link - Northern Connection Tunnel Buildings, Electrical and Mechanical Works
Contract No. HY/2017/10 (Contract 4)
Tree Planting Schedule

BOTANICAL NAME	CHINESE NAME	SIZE (mm) HEIGHT (H) X SPREAD (S)	SPACING (mm)	QUANTITY (nos.)	IDENTIFICATION NO. FOR PLANTING AREA IN CONTRACT 4									
					PA01	PA02	PA03	PA04	PA05	PA06	PA07	PA08	PA09	PA10
PALM (TUEN MUN)														
<i>Wodyetia bifurcata</i>	狐尾椰子	HEAVY STANDARD 3000(H) X 1500(S)	4500	4										
				Subtotal	4	4	0	0	0	0	0	0	0	0
TREE (NORTHERN LANDFALL)														
<i>Bauhinia x blakeana</i>	洋紫荊	HEAVY STANDARD	4500-5000	10								10		
<i>Bauhinia variegata</i>	宮粉羊蹄甲	HEAVY STANDARD	4500-5000	38								38		
<i>Elaeocarpus hainanensis</i>	水石榕	HEAVY STANDARD	5000	18					18					
<i>Elaeocarpus apiculatus</i>	尖葉杜英	HEAVY STANDARD	6000	6		6								
<i>Garcinia subelliptica</i>	福木	HEAVY STANDARD	3500-4000	3		3								
<i>Grevillea robusta</i>	銀樺	HEAVY STANDARD	4500-5000	18								18		
<i>Melaleuca quinquenervia</i>	白千層	HEAVY STANDARD	4500-5000	18								18		
<i>Plumeria rubra</i> (multi-colour flower)	雞蛋花(多色花)	HEAVY STANDARD	4000-4500	13		5	8							
<i>Plumeria rubra</i> (yellow flower)	雞蛋花(黃花)	HEAVY STANDARD	4000-4500	46			46							
<i>Plumeria rubra</i> (red flower)	雞蛋花(紅花)	HEAVY STANDARD	4000-4500	100		78			22					
<i>Pongamia pinnata</i>	水黃皮	HEAVY STANDARD	5000-6000	51		6			19			26		
<i>Sterculia lanceolata</i>	假蘋婆	HEAVY STANDARD	4500-5000	54								54		
<i>Terminalia catappa</i>	欖仁樹	HEAVY STANDARD	6000-7000	38		2						36		
<i>Viburnum odoratissimum</i>	珊瑚樹	HEAVY STANDARD	4500-5000	10								10		
<i>Xanthostemon chrysanthus</i>	金蒲桃	HEAVY STANDARD	5000	13					13					
				Subtotal	436	0	100	54	0	72	0	0	210	0
PALM (NORTHERN LANDFALL)														
<i>Areca catechu</i>	檳榔	HEAVY STANDARD 3000(H) X 1500(S)	4000	48		48								
<i>Hyophorbe lagenicaulis</i>	酒瓶椰子	HEAVY STANDARD 2000(H) X 1500(S)	3000	16			2		14					
<i>Livistona chinensis</i>	蒲葵	HEAVY STANDARD 3000(H) X 2000(S)	4000-4500	245		9	5		10	57		158	6	
<i>Roystonea regia</i>	王棕	HEAVY STANDARD 4000(H) X 2000(S)	4500-5000	44		44								
<i>Wodyetia bifurcata</i>	狐尾椰子	HEAVY STANDARD 3000(H) X 1500(S)	4500	77			10					67		
				Subtotal	430	0	101	17	0	24	57	0	225	6
				Northern Landfall Total	870									
TREE (SOUTHERN LANDFALL)														
<i>Callistemon viminalis</i>	串錢柳	HEAVY STANDARD	4000-5000	135										135
<i>Grevillea robusta</i>	銀樺	HEAVY STANDARD	4000-5000	306										306
<i>Plumeria rubra</i> (red flower)	雞蛋花(紅花)	HEAVY STANDARD	4000-5000	574										574
<i>Plumeria rubra</i> (yellow flower)	雞蛋花(黃花)	HEAVY STANDARD	4000-5000	1100										1100
<i>Plumeria rubra</i> (multi-colour flower)	雞蛋花(多色花)	HEAVY STANDARD	4000-5000	12										12
				Southern Landfall Total	2127									2127
				Contract 4 Total	2997									

NOTE:

- All proposed plant species and specifications are subject to change during construction to suit the site conditions.
- Locations of tree planting area subject to change during construction to suit the site conditions.
- The standards of trees follow General Specification for Civil Engineering Works Clause 3.11-3.16; the sizes are also subject to the special feature according to species.
- The palms are accounted as heavy or light standard trees according to species and sizes for tree compensation accounting purpose.
- Refer to drawing nos. C3/LM/001, C4/LM/003, C4/LM/004, C4/LM/005, C4/LM/006, C4/LM/007, C4/LM/008 in Appendix D for the locations of planting area in Contract 4.

Tree Size	C4	
Whip	0	
Subtotal	0	0
Light Standard	0	
Standard	0	
Heavy Standard	2997	
Subtotal	2997	2997
	Total	2997