

Appendix 7

Details of Ecological Impact Assessment

**Appendix 7.1
Plant species recorded in the Study Area**

<i>Species</i>	Habit	Exotic	Relative Abundance								
			Woodland	Grassland/ Shrubland	Plantation	Agricultural Land	Stream/ Channel	Pond	Mangrove	Wasteland	Built-up Area
<i>Acacia auriculiformis</i>	Tree	Exotic	O								
<i>Acacia confusa</i>	Tree	Exotic	C								
<i>Acacia mangium</i>	Tree	Exotic	O								
<i>Acanthus ilicifolius</i>	Shrub							A	C	C	
<i>Acrostichum aureum</i>	Fern							O		O	
<i>Aglaiia odorata</i>	Shrub	Exotic			O	S					
<i>Albizia lebbbeck</i>	Tree	Exotic									O
<i>Allamanda schottii</i>	Shrub	Exotic			O						
<i>Alocasia macrorrhiza</i>	Herb		C			C		S			O
<i>Alternanthera philoxeroides</i>	Herb							O			
<i>Alyxia sinensis</i>	Climber		S								
<i>Amaranthus viridus</i>	Herb							O			
<i>Ananas comosus</i>	Herb	Exotic				S					
<i>Apluda mutica</i>	Grass										O
<i>Aporosa dioica</i>	Tree		C	C							
<i>Aquilaria sinensis</i>	Tree		S								
<i>Araucaria sp.</i>	Tree	Exotic			S						
<i>Archontophoenix alexandrae</i>	Tree	Exotic									S
<i>Artocarpus heterophylla</i>	Tree	Exotic			S	S					
<i>Auricularia heterophylla</i>	Tree	Exotic									S
<i>Bamboo</i>	Herb	Exotic	O								C

Hang Hau Tsuen Channel at Lau Fau Shan

<i>Species</i>	<i>Habit</i>	<i>Exotic</i>	Relative Abundance								
			<i>Woodland</i>	<i>Grassland/ Shrubland</i>	<i>Plantation</i>	<i>Agricultural Land</i>	<i>Stream/ Channel</i>	<i>Pond</i>	<i>Mangrove</i>	<i>Wasteland</i>	<i>Built-up Area</i>
<i>Bauhinia blakeana</i>	Tree										O
<i>Bauhinia purpurea</i>	Tree		C								
<i>Bauhinia variegata var. candida</i>	Tree		O								O
<i>Bidens pilosa</i>	Herb		A	C		A	A		C		C
<i>Blechnum orientalis</i>	Fern		O								
<i>Bougainvillea spectabilis</i>	Climber	Exotic									C
<i>Breynia fruticosa</i>	Shrub			C							
<i>Bridelia tomentosa</i>	Tree		A	C		S			O		
<i>Brucea javanica</i>	Tree			C							
<i>Caesalpinia crista</i>	Climber							O			
<i>Cairica papaya</i>	Tree	Exotic				S					
<i>Calliandra haematocephala</i>	Shrub	Exotic									O
<i>Callicarpa nudiflora</i>	Shrub			C							
<i>Callistemon rigida</i>	Tree	Exotic	O								
<i>Canna indica</i>	Herb	Exotic				S					
<i>Cassia surattensis</i>	Tree	Exotic							O		O
<i>Cassytha filiformis</i>	Climber		C					O			
<i>Casuarina equisetifolia</i>	Tree	Exotic	C								C
<i>Celtis sinensis</i>	Tree		A	C							A
<i>Cenchrus echinatus</i>	Grass	Exotic									O
<i>Christella parasitica</i>	Fern		O								
<i>Chukrasia tabularia</i>	Tree	Exotic	S								O
<i>Cinnamomum camphora</i>	Tree										O

Hang Hau Tsuen Channel at Lau Fau Shan

<i>Species</i>	Habit	Exotic	Relative Abundance								
			Woodland	Grassland/ Shrubland	Plantation	Agricultural Land	Stream/ Channel	Pond	Mangrove	Wasteland	Built-up Area
<i>Citrus maximum</i>	Tree	Exotic	S								
<i>Clausena lansium</i>	Tree	Exotic				C					C
<i>Clerodendrum fortunatum</i>	Shrub			O							
<i>Colocasia esculenta</i>	Herb	Exotic						O		S	
<i>Conyza canadensis</i>	Herb	Exotic				O					
<i>Cratoxylum cochinchinensis</i>	Tree		A	C	O						
<i>Cyclosorus interruptus</i>	Fern					O					
<i>Cynodon dactylon</i>	Grass					C					
<i>Cyperus sp.</i>	Herb							C			
<i>Cyrtococcum patens</i>	Grass									C	
<i>Delonix regia</i>	Tree	Exotic	S					O			
<i>Derris trifoliata</i>	Climber							C		C	
<i>Desmos chinensis</i>	Shrub		O								
<i>Dicranopteris pedata</i>	Fern		C	A							
<i>Dimocarpus longan</i>	Tree	Exotic	O			A		O			C
<i>Dioscorea sp.</i>	Climber		S								
<i>Dracaena sp.</i>	Shrub	Exotic	O		O	S					
<i>Duranta repens</i>	Shrub	Exotic	O								S
<i>Echinochloa crusgalli</i>	Grass					O					
<i>Eichhornia crassipes</i>	Herb	Exotic						O			
<i>Embelia laeta</i>	Climber			C							
<i>Eucalyptus citriodora</i>	Tree	Exotic	O								O
<i>Eurya chinensis</i>	Shrub			O							

Hang Hau Tsuen Channel at Lau Fau Shan

Species	Habit	Exotic	Relative Abundance								
			Woodland	Grassland/ Shrubland	Plantation	Agricultural Land	Stream/ Channel	Pond	Mangrove	Wasteland	Built-up Area
<i>Ficus benjamina</i>	Tree	Exotic									O
<i>Ficus hirta</i>	Shrub		C								
<i>Ficus hispida</i>	Tree		C			O		O			
<i>Ficus microcarpa</i>	Tree		C								C
<i>Fimbristylis sp.</i>	Herb									O	
<i>Glycosmis citrifolia</i>	Shrub		O								
<i>Grevillea robusta</i>	Tree	Exotic							O		
<i>Hedychium coronarium</i>	Herb	Exotic				O					
<i>Hedyotis hedyotideae</i>	Climber		S								
<i>Helicteres angustifolia</i>	Shrub			O							
<i>Hibiscus rosa-sinensis</i>	Shrub	Exotic				S					
<i>Hibiscus tiliaceus</i>	Tree								C		
<i>Ilex pubescens</i>	Shrub		O								
<i>Ipomoea aquatica</i>	Climber	Exotic				C					
<i>Ipomoea batatas</i>	Climber	Exotic				O					
<i>Ipomoea cairica</i>	Climber					A		C	C		C
<i>Ixora chinensis</i>	Shrub			O							
<i>Juniperus chinensis</i>	Tree	Exotic	O								
<i>Kandelia obovata</i>	Tree							C		A	
<i>Lantana camara</i>	Shrub	Exotic	C	C							O
<i>Leucaena leucocephala</i>	Tree	Exotic	C	C				O		C	A
<i>Ligustrum sinensis</i>	Shrub		C								
<i>Liriope spicata</i>	Herb		O			S					

Hang Hau Tsuen Channel at Lau Fau Shan

<i>Species</i>	<i>Habit</i>	<i>Exotic</i>	Relative Abundance								
			<i>Woodland</i>	<i>Grassland/ Shrubland</i>	<i>Plantation</i>	<i>Agricultural Land</i>	<i>Stream/ Channel</i>	<i>Pond</i>	<i>Mangrove</i>	<i>Wasteland</i>	<i>Built-up Area</i>
<i>Litchi chinensis</i>	Tree	Exotic	O			C					
<i>Litsea cubeba</i>	Tree		C	C							
<i>Litsea glutinosa</i>	Tree		A	O							O
<i>Litsea rotundifolia</i>	Shrub		C								
<i>Ludwigia octovalvis</i>	Herb									O	
<i>Ludwigia perennis</i>	Herb									O	
<i>Lygodium japonicum</i>	Fern		O								
<i>Macaranga tanarius</i>	Tree		A	C		O			O		A
<i>Mallotus paniculatus</i>	Tree			C							
<i>Mangifera indica</i>	Tree	Exotic									S
<i>Manihot esculenta</i>	Herb		O	S		S					C
<i>Manilkara zapota</i>	Tree	Exotic				S					
<i>Melaleuca quinquenervia</i>	Tree	Exotic									O
<i>Melastoma sanguineum</i>	Shrub			O							
<i>Melia azedarach</i>	Tree	Exotic	C	O					O		C
<i>Michelia alba</i>	Tree	Exotic			S						
<i>Microcos paniculatus</i>	Tree		A	C					O		
<i>Microstegium ciliatum</i>	Grass					O					
<i>Mikania micrantha</i>	Climber	Exotic	C	C	C	A	C	C	C	C	C
<i>Mimosa pudica</i>	Shrub	Exotic	O								
<i>Mirabilis jalapa</i>	Herb	Exotic						O			
<i>Miscanthus sinensis</i>	Grass			C							
<i>Morus alba</i>	Tree	Exotic			S						

Hang Hau Tsuen Channel at Lau Fau Shan

Species	Habit	Exotic	Relative Abundance								
			Woodland	Grassland/ Shrubland	Plantation	Agricultural Land	Stream/ Channel	Pond	Mangrove	Wasteland	Built-up Area
<i>Musa paradisiaca</i>	Tree	Exotic				C					O
<i>Mussaenda erosa</i>	Climber		C	C							
<i>Mussaenda pubescens</i>	Shrub		O	C							
<i>Neyraudia reynaudiana</i>	Grass		C	A				O		C	A
<i>Oxalis corymbosa</i>	Herb					S					
<i>Pandanus sp.</i>	Shrub		O								
<i>Panicum maximum</i>	Grass		C	C			C	C			C
<i>Panicum repens</i>	Grass					O					
<i>Parthenocissus dalzielii</i>	Climber	Exotic									O
<i>Paspalum conjugatum</i>	Grass					O					
<i>Passiflora foetida</i>	Climber			C							
<i>Pennisetum purpureum</i>	Grass	Exotic				C					
<i>Phoenix hanceana</i>	Shrub		O	O							
<i>Phyllanthus cochinchinensis</i>	Shrub			O							
<i>Phyllanthus emblica</i>	Tree		C								
<i>Pinus massoniana</i>	Tree		O	O							
<i>Pittosporum tobira</i>	Shrub	Exotic									S
<i>Plantago major</i>	Herb					O					
<i>Pluchea indica</i>	Herb						O		C		
<i>Plumeria rubra</i>	Tree				S						O
<i>Polygonum chinense</i>	Herb		O			C					
<i>Portulaca oleracea</i>	Herb					O					
<i>Prunus persica</i>	Tree	Exotic			S						

Hang Hau Tsuen Channel at Lau Fau Shan

Species	Habit	Exotic	Relative Abundance								
			Woodland	Grassland/ Shrubland	Plantation	Agricultural Land	Stream/ Channel	Pond	Mangrove	Wasteland	Built-up Area
<i>Psidium guajava</i>	Tree		O	O		S					
<i>Psychotria asiatica</i>	Shrub		C								
<i>Pteris ensiformis</i>	Fern		O								
<i>Pueraria phaseoloides</i>	Climber	Exotic	O	O							O
<i>Rhaphiolepis indica</i>	Shrub		C	C							
<i>Rhodomyrtus tomentosa</i>	Shrub			C							
<i>Rhus chinensis</i>	Tree			A							
<i>Rhynchelytrum repens</i>	Grass	Exotic		O							
<i>Ricinus communis</i>	Shrub	Exotic						O			
<i>Rosa laevigata</i>	Climber		O								
<i>Rumex maritimus</i>	Herb					S					
<i>Saccharum arundinaceum</i>	Grass			C						C	
<i>Saccharum officinarum</i>	Grass	Exotic				S					
<i>Sageretia thea</i>	Climber		C								
<i>Sapium sebiferum</i>	Tree		O								
<i>Schefflera arboricola</i>	Shrub	Exotic	O								
<i>Scolopia chinensis</i>	Tree		O								
<i>Sesbania cochinchinensis</i>	Shrub	Exotic								C	
<i>Setaria sp.</i>	Grass			O							
<i>Smilax china</i>	Climber			A							
<i>Solanum nigrum</i>	Herb							S			O
<i>Sonneratia caseolaris</i>	Tree	Exotic							C		
<i>Spathodea campanulata</i>	Tree	Exotic									O

Hang Hau Tsuen Channel at Lau Fau Shan

<i>Species</i>	Habit	Exotic	Relative Abundance								
			Woodland	Grassland/ Shrubland	Plantation	Agricultural Land	Stream/ Channel	Pond	Mangrove	Wasteland	Built-up Area
<i>Stephania longa</i>	Climber		O								
<i>Sterculia lanceolata</i>	Tree		C								
<i>Strophanthus divaricatus</i>	Shrub		O								
<i>Suaeda australis</i>	Herb								C		
<i>Syzygium jambos</i>	Tree		S								S
<i>Tetracera asiatica</i>	Climber		O								
<i>Tetradium glabrifolium</i>	Tree		C	C							
<i>Thuja orientalis</i>	Tree	Exotic			O	S					
<i>Urochloa mutica</i>	Grass	Exotic						A		A	
<i>Uvaria microcarpa</i>	Shrub		O								
<i>Wedelia trilobata</i>	Climber	Exotic	O			C	C				
<i>Wollastonia biflora</i>	Herb								C		
<i>Youngia japonica</i>	Herb					O					
<i>Zanthoxylum avicennae</i>	Tree		C								
<i>Zanthoxylum nitidum</i>	Climber		C								

Relative Abundance: A = abundant, C = common, O = Occasional, S = scarce. Species in bold-face = specie of conservation interest

**Appendix 7.2
Avifauna species and their cumulative abundance recorded in the Assessment Area**

Common name	Latin name	U	Co	AC	S	FP	W/P	G/S	Commonness and distribution
Little Egret	<i>Egretta garzetta</i>		25						CW
Chinese Pond Heron	<i>Ardeola bacchus</i>		26		1	1			CW
Black Kite	<i>Milvus lineatus</i>		2						CW
Common Redshank	<i>Tringa totanus</i>		4						CL
Common Greenshank	<i>Tringa nebularia</i>		6						CL
Common Sandpiper	<i>Actitis hypoleucos</i>		2			1			CW
Little Ringed Plover	<i>Charadrius dubius</i>		12						CW
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		1	1	1				CW
Common Kingfisher	<i>Alcedo atthis</i>		2		2	4			CW
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		3		1				CW
Black-capped Kingfisher	<i>Halcyon pileata</i>		2						CL
Feral Pigeon	<i>Columba livia</i>	30					2		CL
Oriental Turtle Dove	<i>Streptopelia orientalis</i>	2		2			3		CW
Spotted Dove	<i>Streptopelia chinensis</i>		1	2			5	1	CW
Common Koel	<i>Eudynamis scolopacea</i>						3		CW
Greater Coucal	<i>Centropus sinensis</i>					1			CW
Barn Swallow	<i>Hirundo rustica</i>	22	17	16	5	9			CW
White Wagtail	<i>Motacilla alba</i>	1	2						CW
Yellow Wagtail	<i>Motacilla flava</i>	1							CW
Eurasian Wryneck	<i>Jynx torquilla</i>			1					R
Olive-backed Pipit	<i>Anthus hodgsoni</i>			9					CW
Chinese Bulbul	<i>Pycnonotus sinensis</i>	15	13	32	2		28	2	CW
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	18	6	21	3		18	6	CW
Siberian Rubythroat	<i>Luscinia calliope</i>			1					CL
Magpie Robin	<i>Copsychus saularis</i>		2			4	9		CW
Daurian Redstart	<i>Phoenicurus aureoreus</i>			1					CL
Asian Brown Flycatcher	<i>Muscicapa dauurica</i>			1					CL
Long-tailed Shrike	<i>Lanius schach</i>		2	1	3				CW
Black Drongo	<i>Dicrurus macrocercus</i>				2				CW
Japanese White-eye	<i>Zosterops japonica</i>	12		14					CW
Plain Prinia	<i>Prinia inornatus</i>					1			CL
Yellow-bellied Prinia	<i>Prinia flaviventris</i>			2				3	CW
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>			2			3		CW
Dusky Warbler	<i>Phylloscopus fuscatu</i>		3			1			CL
Common Tailorbird	<i>Orthotomus sutorius</i>						1	1	CW
Masked Laughingthrush	<i>Garrulax perspicillatus</i>		6	5			6		CW
Great Tit	<i>Parus major</i>	2		2			2		CW
Scarlett-backed	<i>Dicaeum cruentatum</i>						1		R

Hang Hau Tsuen Channel at Lau Fau Shan

Common name	Latin name	U	Co	AC	S	FP	W/P	G/S	Commonness and distribution
Flowerpecker									
Crested Myna	<i>Acridotheres cristatellus</i>	19	12	78					CW
Black-necked Starling	<i>Sturnus nigricollis</i>	6	12	2		2			CW
Red-billed Starling	<i>Sturnus sericeus</i>	120		3					CL
Black-billed Magpie	<i>Pica pica</i>	1		3					CW
Large-billed Crow	<i>Corvus macrorhynchus</i>		2				1	1	CW
Collared Crow	<i>Corvus torquatus</i>	1							CL
Scaly-breasted Munia	<i>Lonchura punctulata</i>				8	2		2	CL
Eurasian Tree Sparrow	<i>Passer montanus</i>	25	10	30	6	15	12		CW
Total species		15	24	22	11	11	14	7	
Total birds		275	173	229	34	41	94	16	

U = urbanized area, Co = coastal habitats, including mangroves, AC = abandoned cultivated lands, S = stream, W/P = woodland and plantation, G = grassland

CW = common and widespread, CL = common/uncommon and localised, R = uncommon/rare and localised

**Appendix 7.3
Butterfly species and their cumulative abundance recorded in the Assessment Area**

Common name	Latin name	U	Co	AC	S	FP	W/P	G/S	Commonness
Great Mormon	<i>Papilio memnon</i>				1				C
Red Helen	<i>Papilio helenus</i>	1			1				VC
Common Mormon	<i>Papilio polytes</i>				2				VC
Paris Peacock	<i>Papilio paris</i>	1							VC
Red-base Jezebel	<i>Delias pasithoe</i>		2						VC
Great Orange Tip	<i>Hebomoia glaucippe</i>		1						C
Common Gull	<i>Cepora nerissa</i>			5		1			C
Indian Cabbage White	<i>Pieris canidia</i>			6		3			VC
Lemon Emigrant	<i>Catopsilia pomona</i>				1				C
Common Grass Yellow	<i>Eurema hecabe</i>	2		6		2			VC
Lime Blue	<i>Chilades lajus</i>			7	2				VC
Tailed Cupid	<i>Everes lacturnus</i>			1	1				C
Plum Judy	<i>Abisara echerius</i>			1				1	VC
Angled Castor	<i>Ariadne ariadne</i>			1				1	C
Rustic	<i>Cupha erymanthis</i>		1				1		VC
Peacock Pansy	<i>Junonia almana</i>						1		C
Blue Pansy	<i>Junonia orithya</i>	1							UC
Blue Admiral	<i>Kaniska canace</i>		1			1			C
Common Mapwing	<i>Cyrestis thyodamas</i>						1		C
Straight Five-ring	<i>Ypthima lisandra</i>						1		C
Blue-spotted Crow	<i>Euploea midamus</i>						2		VC
Total species		4	4	7	6	4	5	2	
Total butterflies		5	5	27	8	7	6	2	

U = urbanized area, Co = coastal habitats, including mangroves, AC = abandoned cultivated lands, S = stream/channel, W/P = woodland and plantation, G = grassland
VC = very common, C = common, UC = uncommon

**Appendix 7.4
Dragonfly species and their cumulative abundance recorded in the Assessment Area**

Common names	Latin names	U	Co	AC	S	FP	W/P	G	Commonness
Orange-tailed Midget	<i>Agriocnemis femina</i>			12					A
Wandering Midget	<i>Agriocnemis pygmaea</i>			16					C
Orange-tailed Sprite	<i>Ceriagrion auranticum</i>			5					A
Common Bluetail	<i>Ischnura senegalensis</i>			26		6			A
Pale-spotted Emperor	<i>Anax guttatus</i>					1			
Blue Dasher	<i>Brachydiplax chalybea</i>			2					C
Asian Amberwing	<i>Brachythemis contaminata</i>			6	2	4			A
Red-faced Skimmer	<i>Orthetrum chrysis</i>				1				C
Common Red Skimmer	<i>Orthetrum pruinosum</i>			1	1				A
Green Skimmer	<i>Orthetrum sabina</i>			2	2				A
Common Blue Skimmer	<i>Orthetrum glaucum</i>			1					A
Wandering Glider	<i>Pantala flavescens</i>	6	15	18	9	2	4	3	A
Total species		1	1	10	5	4	1	1	
Total dragonflies		6	15	89	15	13	4	3	

U = urbanized area, Co = coastal habitats, including mangroves, AC = abandoned cultivated lands, S = stream/channel, W/P = woodland and plantation, G = grassland
A = abundant, C = common

**Appendix 7.5
Herpetofauna and mammal within the Study Area**

Common name	Latin name	U	Co	AC	S	FP	W/P	G	Commonness
Amphibian									
Asian Common Toad	<i>Bufo melanostictus</i>	+							C
Asiatic Painted Frog	<i>Kaloula pulchra</i>			+					C
Gunther's Frog	<i>Rana guentheri</i>			+		+			C
Brown Tree Frog	<i>Polypedates megacephalus</i>			+					C
Reptile									
Long-tailed Skink	<i>Mabuya longicaudata</i>	+							C
Changeable Lizard	<i>Calotes versicolor</i>			+					C
Red-necked Keelback	<i>Rhabdophis subminiatus</i>			+					C
Checkered Keelback	<i>Xenochrophis piscator</i>			+					C
Mammal									
Greater Bandicoot Rat	<i>Bandicota indica</i>			+					C
Roof Rat	<i>Rattus rattus</i>	+		+					C
Japanese Pipistrelle	<i>Pipistrellus abramus</i>	+	+	+	+	+	+		C

U = urbanized area, Co = coastal habitats, including mangroves, AC = abandoned cultivated lands, S = stream/channel, W/P = woodland and plantation, G = grassland
C = common

**Appendix 7.6
Results of transect survey on the mudflats**

Transect S																				
Station	S1		S2		S3		S4		S5		S6		S7		S8		S9		S10	
Core	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams
Polychaeta																				
<i>Neanthes glandicincta</i>	14	0.15	9	0.25	8	0.16	14	0.07	1	0.01	1	0.01								
<i>Sigambra hanaokai</i>							1	0.01												
Amphipoda																				
<i>Corophium</i> sp.			3	0.01			1	0.01	2	0.01	1	0.01	6	0.03	3	0.02				
Decapoda																				
<i>Ilyoplax formosensis</i>	3	0.36			1	0.1														
<i>Macrophthalmus latreillei</i>											1	0.29								
Quadrat																				
Burrows	39		37		17		2		3											
<i>Cerithidea djadjariensis</i>	4		10		1		1													
<i>Terebralia sulcata</i>	4																			
Assiminea sp.	50																			

Hang Hau Tsuen Channel at Lau Fau Shan

Transect N																				
Station	N1		N2		N3		N4		N5		N6		N7		N8		N9		N10	
Station	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams	No.	grams
Core																				
Polychaeta																				
<i>Neanthes glandicincta</i>	10	0.10	12	0.20	5	0.10	19	0.20	1	0.01	2	0.02								
<i>Sigambra hanaokai</i>			1	0.01					1	0.01										
Amphipoda																				
<i>Corophium</i> sp.	1	0.01	2	0.01	1	0.01	1	0.01	1	0.01	2	0.01	2	0.01						
Decapoda																				
<i>Ilyoplax formosensis</i>	5	0.45	3	0.32	1	0.1														
<i>Macrophthalmus latreillei</i>					1	0.22			1	0.20										
Quadrat																				
Burrows																				
	25		31		20		5		4											
<i>Cerithidea djadjariensis</i>	8		8		4				1											
<i>Terebralia sulcata</i>	2		1																	
<i>Assimineia</i> sp.																				