ARUP

Appendix K

Ecological Impact Assessment

Great China Limited

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Proposed Residential Development at Various Lots in D.D. 32 and Adjoining Government Land, Wong Yi Au, Tai Po, New Territories

Ecological Impact Assessment Report

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1. INTRODUCTION

1.1 Background

1.1.1 Ecosystems Limited has been commissioned by the Applicants to prepare this Ecological Impact Assessment (EcoIA) for the Proposed Amendment to the Draft Tai Po Outline Zoning Plan No. S/TP/31 (the "OZP") under Section 12A of the Town Planning Ordinance (Cap. 131), in support of the rezoning from "Green Belt" ("GB") to a tailormade "Residential (Group B) 13" ("R(B)13") zone (the "Proposed Amendment") at Various Lots in D.D.32 and Adjoining Government Land, Wong Yi Au, Tai Po (the "Application Site") to facilitate the proposed residential development (**Figure 1.1**).

1.1.2 The Application Site with a site area of about 1.5ha is located at the southern fringe of the well-developed Tai Po New Town and is about 750m from the Tai Po Market Mass Transit Railway Station. The proposed residential development is situated to the south of Ha Wong Yi Au (**Figure 1.2** and **1.2a**) and is zoned "Green Belt' under the Draft Tai Po Outline Zoning Plan No. S/TP/31. It is predominantly abandoned agricultural land colonized by pioneer herb species and scattered with limited trees.

1.1.3 An Indicative Scheme has been formulated to demonstrate the technical feasibility and suitability of the Proposed Amendment. An indicative access road is proposed to connect the Application Site and external transport network. In addition, a saltwater pumping station is proposed in the vicinity of the existing saltwater network near Yung Yi Road to support the proposed residential development.

1.2 Purpose of the Report

1.2.1 This EcoIA Report summarizes findings from both literature review and ecological surveys lasting for 6 consecutive months from July to December 2024, assesses ecological impacts arising from the construction and operation phases, and recommends mitigation measures from ecological perspective.

1.3 Assessment Area

1.3.1 The assessment area (~154.9ha) is defined as an area of 500m from the Indicative Scheme and does not include the Indicative Scheme.

2. LEGISLATION, STANDARDS AND GUIDELINES

2.1 General

2.1.1 The ordinances and associated regulations/guidelines of the Hong Kong Special Administrative Region, which are relevant to the present EcoIA report are listed as follows:

- Forests and Countryside Ordinance (Cap. 96) and its subsidiary legislation, the Forestry Regulations (Cap. 96A);
- Town Planning Ordinance (Cap. 131);
- Wild Animals Protection Ordinance (WAPO) (Cap. 170);
- Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM); and
- Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) and its subsidiary legislation.

2.1.2 The present EcoIA makes reference to the following guidelines and standards:

- Hong Kong Planning Standards and Guidelines Chapter 10, "Conservation";
- Planning, Environment &. Lands Branch Technical Circular No. 1/97 / Works Branch Technical Circular No. 4/97, "Guidelines for Implementing the Policy on Off-site Ecological Mitigation Measures";
- EIAO Guidance Note (GN) No. 3/2010 – Flexibility and Enforceability of Mitigation Measures Proposed in an EIA Report;
- EIAO GN No. 6/2010 – Some Observations on Ecological Assessment from the Environmental Impact Assessment Ordinance Perspective;
- EIAO GN No. 7/2023 – Ecological Baseline Survey for Ecological Assessment; and
- EIAO GN No. 10/2023 – Methodologies for Terrestrial and Freshwater Ecological Baseline Surveys.

2.1.3 This EcoIA also makes reference to the following Mainland legislations:

- List of Wild Animals under State Priority Conservation, promulgated by the National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs; and
- List of Wild Plants under the State Priority Protection, promulgated by the National Forestry and Grassland Administration and the Ministry of Agriculture and Rural Affairs.

2.1.4 Other international conventions and guidelines that are relevant to this EcoIA report are listed as follows:

- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- International Union for Conservation of Nature (IUCN) Red List of Threatened Species; and
- United Nations Convention on Biological Diversity.

3. LITERATURE REVIEW

3.1.1 Making reference to the Technical Memorandum on Environmental Impact Assessment Process under the Environmental Impact Assessment Ordinance (EIAO-TM), the findings of relevant studies/surveys listed below shall be reviewed. Literature review was conducted to collect ecological baseline information in and in the vicinity of the Application Site and assessment area. Information on all habitat/species of conservation importance such as their occurrence, distribution and abundance. Literature and websites reviewed include the followings:

- Historical and latest government aerial photos;
- Hong Kong Biodiversity Information Hub;
- Hong Kong Biodiversity – Newsletter of Agriculture, Fisheries and Conservation Department (AFCD);
- Other publications of AFCD, including but not limited to “A Field Guide to the Terrestrial Mammals of Hong Kong”;
- Annual report and other publications of The Hong Kong Bird Watching Society;
- Memoirs of Hong Kong Natural History Society;
- Porcupine! Newsletter of Ecology & Biodiversity, The School of Biological Sciences, The University of Hong Kong; and
- Other relevant literature

4. KEY ECOLOGICAL RESOURCES IN AND IN THE VICINITY OF THE ASSESSMENT AREA FROM THE REVIEWED LITERATURE

4.1 Recognized sites of conservation importance

4.1.1 Recognized sites of conservation importance are neither identified in the Indicative Scheme nor the assessment area. Tai Po Kau Nature (TPKNR), which is located at around 630m to the southeast of the Indicative Scheme, is the recognized site of conservation importance closest to the Indicative Scheme and its location is shown in **Figure 4.1**.

4.1.2 TPKNR was established as the first Nature Reserve and Special Area in Hong Kong, formally gazetted in 1977. Before its designation, it operated as an experimental forestry station dedicated to the preservation of native vegetation and facilitating recreation. Covering 460 ha from the eastern slopes of Grassy Hill to Tai Po Road, TPKNR features extensive mature secondary woodlands with a closed canopy, as well as the Tai Po Kau Forest Stream, which supports diverse plant and animal species, including more than one hundred tree species.

4.2 Ecologically Sensitive Resources

4.2.1 No ecologically sensitive resource has been identified in the Indicative Scheme or the assessment area.

4.3 Reviewed Studies

4.3.1 The southeastern and southern assessment area is covered by the institutional data of the Biodiversity Geographical Information System. In total, 109 species of conservation importance were recorded with potential occurrence in the assessment area, and they are tabulated in **Table 4.1**.

4.3.2 Terrestrial mammal: The terrestrial mammal species recorded with potential occurrence in the southern and southeastern parts of the assessment area include 9 of those of conservation importance (**Table 4.1**).

4.3.3 Bird: The bird species recorded with potential occurrence in the southern and southeastern parts of the assessment area, 31 of which is of conservation importance, comprise residents, visitors and passage migrants inhabiting woodlands (**Table 4.1**).

4.3.4 Herpetofauna: The amphibian species recorded with potential occurrence in the southern and southeastern parts of the assessment area, 13 of which is of conservation importance, are primarily associated with streams (**Table 4.1**).

4.3.5 Butterfly: 44 butterfly species of conservation importance were recorded with potential occurrence in the southern and southeastern parts of the assessment area (**Table 4.1**).

4.3.6 Odonate: The odonate species recorded with potential occurrence southern and southeastern parts of the assessment area, 10 of which is of conservation importance, comprises those inhabiting lentic waterbodies and woodland streams (**Table 4.1**).

4.3.7 Firefly: The firefly species recorded with potential occurrence in the southern and southeastern parts of the assessment area, 1 of which is of conservation

importance, generally inhabit forests (**Table 4.1**).

4.3.8 Freshwater fish: The freshwater fish species recorded with potential occurrence in the southern and southeastern parts of the assessment area, 1 of which is of conservation importance, inhabit hill streams in Hong Kong (**Table 4.1**).

Table 4.1 Species of Conservation Importance with Potential Occurrence in the Indicative Scheme and Assessment Area from the Literature

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
Terrestrial mammal						
1	Rhesus Macaque *Macaca mulatta*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Mainly distributed in Kam Shan, Shing Mun and Tai Po Kau; also found in Ma On Shan, Sai Kung, Tai Lam Country Parks and the North District.	China Red Data Book: VU Cap. 170 List of Wild Animals under State Priority Conservation: Class II
2	Red Muntjac *Muntiacus vaginalis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very common. Very widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): PRC
3	Leopard Cat *Prionailurus bengalensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon. Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.	China Red Data Book: VU Cap. 170 Cap. 586 List of Wild Animals under State Priority Conservation: Class II Red List of China's Vertebrates: VU CITES: Appendix II
4	East Asian Porcupine *Hystrix brachyura*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very common. Very widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.	Fellowes *et al*. (2002): PGC Cap. 170
5	Chinese Pipistrelle *Hypsugo pulveratus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare/Species of Conservation Concern. Only several records in the countryside areas at Ting Kau, Ma On Shan and Lin Ma Hang, and several records of stray individuals inside buildings.	Fellowes *et al*. (2002): (LC) Cap. 170
6	Whiskered Myotis *Myotis muricola*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare/Species of Conservation Concern. Only several records in the countryside areas in the New Territories and on Lantau.	/

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
7	Chinese Noctule *Nyctalus plancyi*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Fairly widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): PRC Cap. 170
8	Lesser Bamboo Bat *Tylonycteris fulvida*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very common. Fairly widely distributed in countryside areas throughout Hong Kong.	China Red Data Book: Rare Fellowes *et al*. (2002): (LC) Cap. 170
9	Small Indian Civet *Viverricula indica*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very common. Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island and northwestern New Territories.	Cap. 170 List of Wild Animals under State Priority Conservation: Class I Red List of China's Vertebrates: VU
Bird						
10	Striated Heron *Butorides striata*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common summer visitor. Widely distributed in Hong Kong.	Fellowes *et al*. (2002): LC
11	Little Egret *Egretta garzetta*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong.	Fellowes *et al*. (2002): PRC
12	Crested Serpent Eagle *Spilornis cheela*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common resident. Widely distributed in shrublands on hillsides throughout Hong Kong.	China Red Data Book: VU Fellowes *et al*. (2002): (LC) Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
13	Crested Goshawk *Accipiter trivirgatus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common resident. Widely distributed in woodlands and shrublands throughout Hong Kong.	China Red Data Book: Rare Cap. 586

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
						List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
14	Black Kite *Milvus migrans*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common resident and winter visitor. Widely distributed in Hong Kong.	Fellowes et al. (2002): (RC) Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
15	Greater Coucal *Centropus sinensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common resident. Widely distributed in Hong Kong.	China Red Data Book: VU List of Wild Animals under State Priority Conservation: Class II
16	Lesser Coucal *Centropus bengalensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon resident. Widely distributed in Hong Kong.	China Red Data Book: VU List of Wild Animals under State Priority Conservation: Class II
17	Silver-backed Needletail *Hirundapus cochinchinensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Scarce spring passage migrant. Widely distributed in Hong Kong.	List of Wild Animals under State Priority Conservation: Class II
18	Bay Woodpecker *Blythipicus pyrrhotis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Occasional visitor. Found in Tai Po Kau.	Fellowes *et al*. (2002): LC
19	Grey-chinned Minivet *Pericrocotus solaris*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Locally common resident. Found in Tai Po Kau, Shing Mun, Ho Chung, Kadoorie Farm & Botanic Garden, Tung Ping Chau.	Fellowes *et al*. (2002): LC
20	White-bellied Erpornis *Erpornis zantholeuca*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon resident. Found in Tai Po Kau, Shing Mun, Ho Chung, Kowloon Hills, Ng Tung Chai, Wu Kau Tang, Sha Tau Kok, A Ma Wat, Kop Tong, Lau Shui Heung.	Fellowes *et al*. (2002): LC

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
21	Ashy Drongo *Dicrurus leucophaeus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon winter visitor. Found in Shing Mun, Tai Po Kau.	Fellowes *et al*. (2002): LC
22	Amur Paradise Flycatcher *Terpsiphone incei*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Passage migrant, mainly autumn, and rare winter visitor. Found in Tai Po Kau, Lam Tsuen Country Park, Ng Tung Chai, Nam Chung, Chung Hom Kok, Ho Man Tin.	Fellowes *et al*. (2002): LC
23	Japanese Paradise Flycatcher *Terpsiphone atrocaudata*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon passage migrant. Found in Tai Po Kau, Mai Po, Pok Fu Lam, Victoria Peak.	Fellowes *et al*. (2002): LC
24	Grey-headed Canary-flycatcher *Culicicapa ceylonensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon winter visitor. Found in Mai Po, Lam Tsuen, Shing Mun Country Park, Cheung Chau, Wu Kau Tang, Tai Po Kau.	Fellowes *et al*. (2002): LC
25	Yellow-bellied Tit *Pardaliparus venustulus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare winter visitor. Found in Tai Po Kau, Lam Tsuen, Lamma, Zoological and Botanical Gardens, Tsim Bei Tsui, Mai Po, Mount Nicholson, Tai Mei Tuk.	Fellowes *et al*. (2002): LC
26	Pygmy Wren-babbler *Pnoepyga pusilla*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Locally common resident. Found in Tai Po Kau, Ng Tung Chai.	Fellowes *et al*. (2002): LC
27	Hartert's Leaf Warbler *Phylloscopus goodsoni*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Locally common winter visitor. Widely distributed in woodland throughout Hong Kong.	Fellowes *et al*. (2002): LC
28	White-spectacled Warbler *Phylloscopus intermedius*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare winter visitor. Found in Tai Po Kau.	/
29	Rufous-capped Babbler *Cyanoderma ruficeps*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common resident. Found in Shing Mun, Tai Po Kau, Tai Mek Tuk, Ng Tung Chai, Fo Tan, Tai Mo Shan, The Peak, Kadoorie Agricultural Research Centre.	Fellowes *et al*. (2002): LC
30	Chinese Hwamei *Garrulax canorus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common resident. Widely distributed in hillside shrubland througthout Hong Kong.	Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
31	Black-throated Laughingthrush	Not recorded	Not recorded	Southern and southeastern parts of	Common resident. Widely distributed in woodland and	List of Wild Animals under State Priority

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
	Pterorhinus chinensis			the assessment area	shrubland throughout Hong Kong.	Conservation: Class II
32	Silver-eared Mesia *Leiothrix argentauris*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common resident. Widely distributed in woodland throughout Hong Kong.	Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
33	Red-billed Leiothrix *Leiothrix lutea*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Locally uncommon resident. Found in Shing Mun, Tai Mo Shan, Tai Po Kau, Lam Tsuen Valley.	Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
34	Indochinese Yuhina *Staphida torqueola*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon but increasing winter visitor, scarce and localised in summer.	Fellowes *et al*. (2002): (LC)
35	Lesser Shortwing *Brachypteryx leucophris*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Locally common resident and winter visitor. Found in Tai Mo Shan, Ng Tung Chai, Tai Po Kau.	Fellowes *et al*. (2002): LC
36	Slaty-backed Forktail *Enicurus schistaceus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Occasional visitor. Found in Tai Po Kau, Ng Tung Chai, Tsing Tam Reservoir.	Fellowes *et al*. (2002): LC
37	Greyish-crowned Leafbird *Chloropsis lazulina*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon resident and winter visitor. Widely distributed in woodland throughout Hong Kong.	Fellowes *et al*. (2002): LC
38	Plain Flowerpecker *Dicaeum minullum*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare winter visitor. Found in Tai Po Kau, Mount Davis, Po Lin Monastery, Wu Kau Tang, Kadoorie Agricultural Research Centre, Ngong Ping, Ho Chung, Lung Fu Shan, Ho Sheung Heung, Green Island, Tai Lam.	/
39	Eurasian Siskin *Spinus spinus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Scarce winter visitor. Found in Tai Po Kau, Shek Kong, Tsim Bei Tsui, Mount Austin, Fanling Golf Course, Mai Po, The Chinese University of Hong Kong.	/
40	Mrs. Gould's Sunbird *Aethopyga gouldiae*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare visitor. Found in Tai Po Kau.	/
Herpetofauna						

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
41	Lau's Leaf-litter Toad *Leptobrachella laui*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Found on Lantau Island and Tai Mo Shan Country Park.	IUCN Red List of Threatened Species (2025): VU Fellowes *et al*. (2002): LC
42	Hong Kong Cascade Frog *Amolops hongkongensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Widely distributed in mountain streams in Hong Kong.	IUCN Red List of Threatened Species (2025): EN Fellowes *et al*. (2002): PGC Cap. 170 List of Wild Animals under State Priority Conservation: Class II Red List of China's Vertebrates: EN
43	Big-headed Frog *Limnonectes fujianensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Distributed in mountain streams in Tai Po Kau Nature Reserve, Kam Shan Country Park, Lam Tsuen Country Park and Plover Cove Country Park	Fellowes *et al*. (2002): LC
44	Lesser Spiny Frog *Quasipaa exilispinosa*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Widely distributed in upland forest streams throughout Hong Kong.	Fellowes *et al*. (2002): PGC Red List of China's Vertebrates: VU
45	Brown Wood Frog *Hylarana latouchii*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Distributed in woodlands in Tai Po Kau Nature Reserve, Shing Mun Country Park, Tai Mo Shan Country Park, Sai Kung West Country Park and Clear Water Bay Peninsula.	Fellowes *et al*. (2002): LC
46	Hong Kong Newt *Paramesotriton hongkongensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Widely distributed in mountain streams throughout New Territories, Lantau Island and Hong Kong Island.	Fellowes *et al*. (2002): PGC Cap. 170 Cap. 586 List of Wild Animals

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
						under State Priority Conservation: Class II CITES: Appendix II
47	Burmese Python *Python bivittatus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Widespread in Hong Kong.	China Red Data Book: CR IUCN Red List of Threatened Species (2025): VU Fellowes *et al*. (2002): PRC Cap. 170 Cap. 586 List of Wild Animals under State Priority Conservation: Class II Red List of China's Vertebrates: CR CITES: Appendix II
48	Anderson's Stream Snake *Opisthotropis andersonii*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common and widespread in Hong Kong.	Fellowes *et al*. (2002): LC
49	Mountain Water Snake *Trimerodytes percarinatus percarinatus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Distributed in woodlands in eastern and central New Territories.	Fellowes *et al*. (2002): LC Red List of China's Vertebrates: VU
50	Many-banded Krait *Bungarus multicinctus multicinctus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	China Red Data Book Status: VU; Fellowes et al. (2002): PRC; Red List of China's Vertebrates: EN	China Red Data Book: VU Fellowes *et al*. (2002): PRC Red List of China's Vertebrates: EN
51	King Cobra *Ophiophagus hannah*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common and widely distributed in Hong Kong.	China Red Data Book: XX

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
						IUCN Red List of Threatened Species (2025): VU Fellowes *et al*. (2002): PRC Cap. 586 List of Wild Animals under State Priority Conservation: Class II Red List of China's Vertebrates: EN CITES: Appendix II
52	Brown Forest Skink *Sphenomorphus incognitus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Widely distributed throughout Hong Kong.	Fellowes *et al*. (2002): LC
53	Indian Forest Skink *Sphenomorphus indicus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Distributed in streams in the New Territories.	Fellowes *et al*. (2002): LC
Butterfly						
54	Magpie Flat *Abraximorpha davidii*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong	/
55	White-banded Flat *Gerosis phisara*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong.	/
56	Oriental Straight Swift *Parnara bada*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong.	/
57	Yellow Dart *Potanthus pava*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Plover Cove	-
58	Dark Edged Snow Flat *Tagiades menaka*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon. Widely distributed throughout Hong Kong.	Fellowes *et al*. (2002): LC
59	Hainan Palm Dart *Telicota besta*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very Rare. Shing Mun, Pak Tam Chung, Tung Lung Chau	Fellowes *et al*. (2002): LC
60	Pale Palm Dart	Not recorded	Not recorded	Southern and	Rare. Widely distributed	Fellowes *et al*. (2002): LC

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
	Telicota colon			southeastern parts of the assessment area	throughout Hong Kong.	
61	Purple and Gold Flitter *Zographetus satwa*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Lung Kwu Tan, Siu Lang Shui, Tai Po Kau	Fellowes *et al*. (2002): RC
62	Bi-spot Royal *Ancema ctesia*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Wu Kau Tang, Tai Po Kau	Fellowes *et al*. (2002): LC
63	Plain Hedge Blue *Celastrina lavendularis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Chuen Lung, Kap Lung, Tai Po Kau, Shing Mun Country Park, Tai Lam Country Park, Kadoorie Farm and Botanic Garden, Ngau Ngak Shan.	Fellowes *et al*. (2002): LC
64	Cornelian *Deudorix epijarbas*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Lam Tsuen, Shan Liu, Wu Kau Tang, Pak Sha O, Fung Yuen	-
65	Banded Royal *Rachana jalindra*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Tai Po	/
66	Metallic Cerulean *Jamides alecto*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Victoria Peak, Fung Yuen, Chuen Lung, Mui Wo	/
67	Common Cerulean *Jamides celeno*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Shek Pik, High Junk Peak, Shek Mun Kap, Fung Yuen, Pui O, Ma On Shan	/
68	Broad Spark *Sinthusa chandrana*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong	/
69	Peacock Royal *Tajuria cippus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Ma On Shan, Wu Kau Tang, Tai Po Kau, Mount Nicholson, Victoria Peak, Cloudy Hill	Fellowes *et al*. (2002): LC
70	Spotted Royal *Tajuria maculata*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Tai Po Kau, Shing Mun, Tai Mo Shan	Fellowes *et al*. (2002): LC
71	Orange Punch *Dodona egeon*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Tai Po Kau, Shing Mun Reservoir, Ngau Ngak Shan, Kwun Yam Shan, Sam A Chung, Cheung Sheung, Tai Lam, Tai Mo Shan	Fellowes *et al*. (2002): RC
72	Chestnut Tiger *Parantica sita*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Shing Mun Reservoir, Victoria Peak, Tai Po Kau, Uk Tau, Pak Tam Chung, Mountain Parker, Deep Water Bay	/
73	Orange Staff Sergeant	Not recorded	Not recorded	Southern and	Very rare. Ngau Ngak Shan	Fellowes *et al*. (2002): LC

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
	Athyma cama			southeastern parts of the assessment area		
74	Black-vein Sergeant *Athyma ranga*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon. Shing Mun, Ngau Ngak Shan, Tai Mong Tsai, Tai Mo Shan, Tai Po Kau, Cloudy Hill	Fellowes *et al*. (2002): LC
75	Yellow Rajah *Charaxes marmax*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon. Cloudy Hill, Ma On Shan, Shing Mun, Yung Shue O, Fung Yuen, Ngong Ping	Fellowes *et al*. (2002): LC
76	Constable *Dichorragia nesimachus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong.	Fellowes *et al*. (2002): LC
77	Courtesan *Euripus nyctelius*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Tai Po, Kai Shan	/
78	Baron *Euthalia aconthea*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon. Widely distributed throughout Hong Kong.	Fellowes *et al*. (2002): LC
79	Green Skirt Baron *Cynitia whiteheadi*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. North New Territories.	/
80	Danaid Eggfly *Hypolimnas misippus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon. Ngau Ngak Shan, Lung Kwu Tan, Hong Kong Wetland Park, Mount Parker, Cloudy Hill, Lin Ma Hang	Fellowes *et al*. (2002): LC
81	Orange Oakleaf *Kallima inachus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Tai Po Kau, Tai Mo Shan, Kadoorie Farm and Botanic Garden, Shing Mun	Fellowes *et al*. (2002): LC
82	Sullied Sailer *Neptis soma*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Ma On Shan, Shing Mun, Tai Po Kau	Fellowes *et al*. (2002): LC
83	Eastern Courtier *Sephisa chandra*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Ngau Ngak Shan, Tai Po Kau, Tiu Tang Lung	Fellowes *et al*. (2002): LC
84	Vagrant *Vagrans egista*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Lam Chuen, Plover Cove, Kadoorie Farm and Botanic Garden	Fellowes *et al*. (2002): LC
85	Painted Lady *Vanessa cardui*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong	Fellowes *et al*. (2002): LC
86	Common Four-ring *Ypthima praenubila*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Very rare. Mount Nicholson, Tai Po Kau, Tai Tam, Quarry Bay, Ma On Shan	Fellowes *et al*. (2002): LC
87	Tawny Mime	Not recorded	Not recorded	Southern and	Very rare. Tai Po Kau, Shing Mun,	/

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
	Papilio agestor			southeastern parts of the assessment area	Lugard Road, Tai Mo Shan	
88	Glassy Bluebottle *Graphium cloanthus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon. Tai Po Kau, Shing Mun, Cloudy Hill, Kadoorie Farm and Botanic Garden, Lam Tsuen, Lai Chi Hang, Tai Lam Wu	Fellowes *et al*. (2002): LC
89	White Dragontail *Lamproptera curius*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong	Fellowes *et al*. (2002): LC
90	Common Rose *Pachliopta aristolochiae*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong	/
91	Swallowtail *Papilio xuthus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Kap Lung, Ma On Shan, Tai Tam, Sha Lo Wan, Kat O, Lung Kwu Tan, Wu Kau Tang, Lung Kwu Chau	/
92	Golden Birdwing *Troides aeacus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong	Fellowes *et al*. (2002): LC Cap. 586
93	Common Birdwing *Troides helena*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Uncommon. Widely distributed throughout Hong Kong	Cap. 170 Cap. 586 CITES: Appendix II
94	Red-breast Jezebel *Delias acalis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Tai Tam, Tai Mo Shan, Ngau Ngak Shan, Pat Sin Leng, Tai Po Kau, Wu Kau Tang, Wong Nai Chung, Fung Yuen, Plover Cove	Fellowes *et al*. (2002): LC
95	Tailed Sulphur *Dercas verhuelli*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong	/
96	Small Cabbage White *Pieris rapae*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Shep Mun Kap, Fan Lau, Ngong Ping, Kam Tin, Ho Chung, Luk Keng, Tuen Mun Ash Lagoon	/
97	Spotted Sawtooth *Prioneris thestylis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Rare. Widely distributed throughout Hong Kong	Fellowes *et al*. (2002): LC
Odonate						
98	Tiger Hawker *Polycanthagyna erythromelas*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Frequents small ponds or puddles in forests. Widespread in woodlands all over Hong Kong.	Fellowes *et al*. (2002): LC Reels (2019): Dragonfly species of conservation

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
						interest
99	Indochinese Copperwing *Mnais mneme*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Widely distributed in woodland streams throughout the New Territories.	Fellowes *et al*. (2002): LC
100	Guangdong Hooktail *Melligomphus guangdongensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Found in woodland streams with substrates of sand and gravel. Population scattered throughout Hong Kong.	IUCN Red List of Threatened Species (2025): VU Fellowes *et al*. (2002): GC Reels (2019): Dragonfly species of conservation interest
101	Chinese Yellowface *Agriomorpha fusca*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Abundant. Widely distributed in forest seepages and small woodland streams throughout Hong Kong.	Fellowes *et al*. (2002): LC
102	Ruby Darter *Rhodothemis rufa*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Widely distributed in ponds and marshes with dense floating plants.	Fellowes *et al*. (2002): LC
103	Sapphire Flutterer *Rhyothemis triangularis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Widely distributed in weedy ponds, sluggish rivers and marshes.	Fellowes *et al*. (2002): LC
104	Emerald Cascader *Zygonyx iris insignis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Abundant. Widely distributed in moderately clean, rapidly flowing forested streams throughout Hong Kong.	Fellowes *et al*. (2002): PGC
105	Ochre Titan *Philoganga vetusta*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Widely distributed in woodland streams in the New Territories.	Fellowes *et al*. (2002): LC Reels (2019): Dragonfly species of conservation interest
106	White-banded Shadowdamsel *Protosticta taipokauensis*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Found on mossy slopes with seepages in woodlands or small shady forest streams. Widely distributed in mature forests with permanent streams throughout Hong Kong.	Fellowes *et al*. (2002): GC Reels (2019): Dragonfly species of conservation interest
107	Dancing Shadow-emerald *Idionyx victor*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Common. Found high in the forest canopy or over wooded streams. Widely distributed in wooded streams throughout Hong Kong.	Fellowes *et al*. (2002): LC

Number	Species	Location			Rarity and distribution in Hong Kong [2 3 4 5]	Protection and/or conservation status [6 7 8 9 10 11 12 13 14 15 16 17]
		Indicative Scheme		Assessment area [1]		
		Indicative access road and saltwater pumping station	Application Site			
Firefly						
108	*Vesta sinuata*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	Widespread.	Endemic to Hong Kong
Freshwater fish						
109	Predaceous Chub *Parazacco spilurus*	Not recorded	Not recorded	Southern and southeastern parts of the assessment area	A widespread species occurring in most unpolluted hill streams in both upper and lower courses.	China Red Data Book: VU

Note
1. Agriculture, Fisheries and Conservation Department (2025). Biodiversity Geographical Information System.
2. Agriculture, Fisheries and Conservation Department (2022). Species Database of the Hong Kong Biodiversity Information Hub.
3. Chan *et al*. (2011). A review of the local restrictedness of Hong Kong Butterflies.
4. Shek (2006). A Field Guide to the Terrestrial Mammals of Hong Kong.
5. Tam *et al.* (2010). The Dragonflies of Hong Kong.
6. Convention on International Trade in Endangered Species of Wild Fauna and Flora (2025). Appendices I, II and III.
7. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
   - Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
8. International Union of Conservation for Nature (2025). The IUCN Red List of Threatened Species. Version 2025-1.
9. Jiang *et al.* (2016). Red List of China's Vertebrates.
10. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs (2023). List of Wild Animals under State Priority Conservation.
11. Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).
12. Reels (2019). An Annotated Checklist of Hong Kong Dragonflies and Assessment of Their Local Conservation Significance.
13. Wang (1998). China Red Data Book of Endangered Animals: Mammalia.
14. Wild Animals Protection Ordinance (Cap. 170).
15. Zhao and Wang (1998). China Red Data Book of Endangered Animals: Aves.
16. Zheng and Wang (1998). China Red Data Book of Endangered Animals: Amphibia and Reptilia.
17. Yiu (2025). Hong Kong Firefly Species.

Abbreviation
- Protection and/or conservation status: CR = Critically Endangered; EN = Endangered; GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Reginal Concern; VU = Vulnerable

4.4 Species of Conservation Importance

4.4.1 Making reference to Table 3, Annex 8 of the EIAO-TM, the ecological value of species is assessed in terms of protection status, distribution, and rarity. For faunal species, the protection status (e.g. fauna protected under the Wild Animals Protection Ordinance (except birds as all wild birds are protected under the ordinance but their conservation importance is not equal), Protection of Endangered Species of Animals and Plants Ordinance, and/or regional/global laws/conventions), the species distribution (e.g. endemic), and the rarity (e.g. rare or restricted, or level of concern highlighted in Fellowes *et al.* (2002)) are considered. Similarly, floral species of conservation importance are considered from protection status (e.g. listed under the Forestry Regulations and Protection of Endangered Species of Animals and Plants Ordinance in Hong Kong, being listed by IUCN or CITES, or listed as Category I or II protected species in mainland China); species distribution (e.g. endemic); and rarity (e.g. considered rare or very rare by Corlett *et al.* (2000) and regarded as rare by Yip *et al.* (2010)). However, exotic invasive species, escaped cultivars or captive species, vagrants and introduced species are excluded.

4.4.2 The following laws/regulations/conventions/books/publications are relevant to the evaluation of the conservation importance of flora and fauna species.

- Forestry Regulations (Cap. 96A) which are subsidiary legislation of the Forests and Countryside Ordinance (Cap. 96);
- Wild Animals Protection Ordinance (Cap. 170);
- Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586);
- The International Union for Conservation of Nature and Natural Resources (IUCN) Red List of Threatened Species (*Species which are classified by IUCN as Near Threatened (NT), Least Concern (LC), Data Deficient (DD), or Not Evaluated (NE), and not covered by any other laws/regulations/conventions are not considered of conservation importance in the present study*);
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- Category I/II/III in List of Wild Plants under State Priority Conservation;
- Rare and Precious Plants of Hong Kong
- China Plant Red Data Book;
- Considered 'Rare' or 'Very Rare' plant species listed by Corlett *et al.* (2000) and regarded as 'Rare' plant species by Yip *et al.* (2010);
- Threatened Species List of China's Higher Plants (Qin *et al.* 2017);
- Category I or II State Protected Wild Animals;
- PRC Wild Animal Protection Law;
- China Red Data Book of Endangered Animals;
- China Species Red List;
- Red List of China's Vertebrates (Jiang *et al.* (2016)); and
- Fauna species considered of concern in Fellowes *et al.* (2002).

4.4.3 The species identified from both literature review and the ecological surveys as having conservation importance are further categorized with reference to their relevance to potential impacts, which are assessed with reference to the criteria stipulated in EIAO-TM.

4.5 Data Gap

4.5.1 Comprehensive ecological information about the Indicative Scheme and the assessment area is not available in the public domain. Therefore, comprehensive ecological surveys are required to establish an ecological baseline to facilitate EcoIA and propose mitigation measures for the proposed development.

5. SURVEY METHODOLOGY

5.1 Objective

5.1.1 Ecological surveys were carried out within both the Indicative Scheme and assessment area (**Figure 5.1**), aiming at filling the information gap identified from literature review. The results collected in the assessment area do not include that collected in the Indicative Scheme.

5.2 Programme

5.2.1 Ecological surveys were undertaken from July to December 2024 (**Table 5.1**), in both dry and wet seasons to collect ecological baseline information. Survey transects for terrestrial mammals, avifauna, herpetofauna, butterflies, odonates, fireflies, intertidal sampling location for intertidal community, as well as sampling points for freshwater fishes and invertebrates are shown in **Figure 5.1**.

5.2.2 The recommended months and methodology of conducting surveys for specific taxa follows the EIAO GN No. 7/2023 "Ecological Baseline Survey for Ecological Assessment" and No. 10/2023 "Methodologies for Terrestrial and Freshwater Ecological Baseline Surveys". The survey methodology for each taxon is described in the following sections.

Table 5.1 Ecological Survey Programme

Types of ecological surveys	2024					
	Wet season			Transitional month	Dry season	
	July	August	September	October	November	December
Habitat and vegetation	D	D				D
Terrestrial mammal	D&Du&N	D&Du&N	D&Du&N	D&Du&N	D&Du&N	D&Du&N
Bird	EM&Du&N	EM&Du&N	EM&Du&N	EM&Du&N	EM&Du&N	EM&Du&N
Herpetofauna	D&N		D&N		D&N	
Butterfly	D		D		D	
Odonate	D		D		D	
Firefly	Du&N	Du&N	Du&N	Du&N	Du&N	Du&N
Freshwater fish	D&N		D&N		D&N	
Freshwater invertebrate	D		D		D	
Intertidal communities		Ebbing tides			Ebbing tides	

Note: D=Day; Du=Dusk; EM=Early Morning; N = Night. Reference is made to Appendix B of Annex 16: Guidelines for Ecological Assessment of the EIAO-TM.

5.3 Personnel

5.3.1 The ecological surveyors responsible for carrying out surveys on habitat and vegetation, terrestrial mammal, bird, herpetofauna, butterfly, odonate, firefly, freshwater fish, freshwater invertebrate and intertidal communities are detailed as follows.

5.3.2 Ken MOK (Ecological survey team leader): Mr. Mok graduated with a Master of Science degree in the Biodiversity and Taxonomy of Plants from the University of Edinburgh and received his Bachelor of Science degree with honours from the University of Hong Kong with majors in Ecology & Biodiversity and Environmental Science. He served as a coordinator for the Plant Identification Course organized by the University of Hong Kong. He was a member of Hong Kong Firefly Survey Team of the Hong Kong Entomological Society and is a team member of Hong Kong Bat Radar. He conducted surveys on habitat and vegetation, terrestrial mammals and fireflies. He possesses at least 5 years of relevant experience in ecological assessment.

5.3.3 Alan LAM: Mr. Lam graduated with a Bachelor of Social Science degree with honours in Liberal Studies from the Open University of Hong Kong. He once served as an Assistant Project Manager at Fung Yuen Butterfly Reserve and was a surveyor of Waterbird Monitoring Programme at the Mai Po Inner Deep Bay Ramsar Site organized by Hong Kong Bird Watching Society. He was responsible for undertaking terrestrial mammal, bird, herpetofauna, butterfly, odonate, firefly, freshwater fish and freshwater invertebrate surveys.

5.3.4 Anson LEUNG: Mr. Leung graduated with a Bachelor of Science degree with honours in Environmental Science from the Hong Kong University of Science and Technology. Having participated in Fung Yuen Butterfly Reserve (FYBR) Butterfly Baseline Survey Program for Tertiary Students and Odonate Identification Course organized by FYBR and Outdoor Wildlife Learning Hong Kong, he is experienced in surveying and identifying local butterfly and odonate species. He was responsible for undertaking terrestrial mammal, bird, herpetofauna, butterfly, odonate, firefly, freshwater fish and freshwater invertebrate surveys.

5.3.5 Michael MA: Mr. Ma earned his Bachelor of Science degree with honours in Environmental Science from the University of Hong Kong. Mr. Ma is particularly interested in marine ecology and acquired practical knowledge and experience in marine biology, conservation biology, nearshore marine and estuarine ecology and experimental intertidal ecology from his academic background at the University of Hong Kong. He has deepened his interest in intertidal fauna when working as a Research Assistant at Simon F. S. Li Marine Science Laboratory on food web ecology in the Chinese University of Hong Kong with regular survey among marine parks, natural reserve and Sites of Special Scientific Interest (SSSI) with remarkable effort in Yan Chau Tong Marine Park, Mai Po Inner Deep Bay Ramsar Site and Ting Kok SSSI. He was responsible for undertaking intertidal community surveys.

5.3.6 Edward WONG: Mr. Wong graduated with a Master of Science degree in Environmental Management from the University of Hong Kong. He served as a part-time research assistant at Lingnan University and is particularly interested in herpetofauna and freshwater fauna. Having conducted extensive camera trap studies for multiple consultancy projects awarded by the Hong Kong Special Administrative Region Government, he is skilled in conducting terrestrial mammal surveys using camera traps. He was responsible for undertaking terrestrial mammal, bird, herpetofauna, butterfly, odonate, firefly, freshwater fish and freshwater invertebrate surveys.

5.4 Methodology

Habitat and Vegetation

5.4.1 Habitat and vegetation surveys were performed in July, August and December 2024, covering both dry and wet seasons to establish the general terrestrial ecological profile of the Indicative Scheme and assessment area. Habitats were mapped based on recent aerial photos and field ground-truthing. Representative areas of each habitat type were surveyed on foot. Special attention was paid to any habitat type showing seasonal patterns. Plant species of each habitat type encountered, and their relative abundance were recorded with special attention to rare or protected species. Nomenclature of plant species follows the latest Hong Kong Plant Database available from the website of the Hong Kong Herbarium. Habitats are characterized and defined with reference to size, vegetation type, flora species present, dominant species, species diversity and abundance, community structure and seasonality, as well as the presence of any feature of ecological

importance. Representative colour photos were taken for each habitat type and any important ecological features identified. Habitat maps of suitable scale (i.e. 1:1000 to 1:5000) were prepared.

Terrestrial Mammal

5.4.2 Monthly daytime, dusk and night-time terrestrial mammal surveys were carried out from July to December 2024, covering dry and wet seasons. As most terrestrial mammals often occur at low densities, all sightings, tracks, signs and droppings of terrestrial mammals were actively searched along the survey transects (**Figure 5.1**). Bat surveys were conducted through direct observations and using a bat detector. Particular attention was given to potential foraging and drinking sites such as fruiting trees and freshwater ponds. All bat calls recorded were identified according to species-specific echolocation call structure. In addition, infrared camera traps were deployed to survey cryptic non-flying terrestrial mammals. The locations of installing infrared camera traps are also illustrated in **Figure 5.1**. All terrestrial mammals observed were counted and identified to species whenever possible and a list of recorded terrestrial mammal species is provided. Nomenclature for terrestrial mammals follows that available from the Hong Kong Biodiversity Information Hub (HKBIH).

Avifauna

5.4.3 Monthly daytime, dusk, and night-time bird surveys were carried out from July to December 2024, covering both dry and wet seasons. Daytime surveys were conducted during the period of peak bird activity in the early morning, while dusk and night surveys were performed to record avifauna active during these times. The bird communities of each habitat type were surveyed along the survey transects (**Figure 5.1**). All birds seen or heard within 30m along the survey transects were counted and identified to species wherever possible, and a list of birds recorded in the surveys has been compiled. Signs of breeding (e.g., nests and/or recently fledged juveniles), especially in the Indicative Scheme, were also recorded and marked on the map, if any. Surveyors used 7X to 10X binoculars and/or a 30X to 65X spotting scope mounted on a tripod for the surveys, and photographic records were taken, if possible. Ornithological nomenclature in this report follows the latest List of Hong Kong Birds by the Hong Kong Bird Watching Society.

Herpetofauna

5.4.4 Daytime and night-time herpetofauna surveys were carried out in July, September and November 2024, covering both dry and wet seasons. Herpetofauna surveys were conducted through direct observation and active searching in all habitat types along the survey transects (**Figure 5.1**) and in potential hiding places such as among leaf litter, inside holes, under stones and logs. Particular attention was given to watercourses. Auditory detection of species-specific calls was used to survey frogs and toads. During the surveys, all reptiles and amphibians sighted and heard were counted and identified and a species list has been compiled. Locations of herpetofauna species with conservation importance were marked on map. Nomenclature for herpetofauna follows that available from the HKBIH.

Butterfly and Odonate

5.4.5 Daytime butterfly and odonate surveys were carried out in July, September and November 2024. Butterflies and odonates of different habitats were surveyed along the survey transects (**Figure 5.1**). Butterflies and odonates were further

identified and counted for each type of habitat and a species list for butterflies and odonates has been provided. Nomenclature for butterflies and odonates follows that available from the HKBIH.

Firefly

5.4.6 Monthly firefly surveys were carried out along the transects at dusk and night from July to December 2024. During the surveys, fireflies observed, including larvae and adults, were identified to the species level, where possible. The locations of firefly species of conservation importance or any notable behaviour (e.g. breeding) were recorded. Nomenclature and distribution of fireflies follow AFCD (2022).

Freshwater Fish and Invertebrate

5.4.7 Daytime and nighttime freshwater fish surveys, as well as daytime freshwater invertebrate surveys, were carried out in July, September and November 2024. Freshwater macro-invertebrates (e.g. freshwater crabs, shrimps, freshwater molluscs and aquatic insect larvae) and fishes, in the waterbodies were studied by direct observation and active searching. Sampling was carried out and the sampling locations are shown in **Figure 5.1**. Freshwater fishes and aquatic macro-invertebrates were recorded and identified to the lowest possible taxon and counted. The locations of freshwater species of conservation importance were recorded, along with notable behaviour. Nomenclature for freshwater fishes follows that available from HKBIH, while that for freshwater invertebrates follows Dudgeon (1999).

Intertidal Community

5.4.8 Qualitative walkthrough intertidal community surveys were conducted at the intertidal sampling location in Yuen Chau Tsai (**Figure 5.1**) during ebbing tides in August and November 2024. The distribution and relative abundance of intertidal communities were surveyed. Information about species richness and diversity, as well as relative abundance of intertidal community species, was obtained.

5.5 Habitat Survey Results

5.5.1 A total of eleven types of habitats, including Agricultural Land, Artificial Hard Shoreline, Developed Area, Mangrove, Modified Watercourse, Natural Rocky Shoreline, Natural Watercourse, Rural Plantation, Sea, Shrubland and Woodland, were identified during the survey period. A habitat map based on recent aerial photographs and results of ground-truthing is given in **Figure 5.2**. Photos of each habitat in the Indicative Scheme or assessment area are enclosed in **Figure 5.3**.

5.5.2 The size and/or length of each habitat type in the Indicative Scheme and assessment area, where applicable, are tabulated in **Table 5.2**.

Table 5.2 Approximate Size of Habitats in the Application Site, Indicative Scheme and Assessment Area

Habitat	Application Site		Indicative Scheme		Assessment area	
	Area (ha)	Length (m)	Area (ha)	Length (m)	Area (ha)	Length (m)
Agricultural Land	1.16	N.A.	1.16	N.A.	3.19	N.A.
Artificial Hard Shoreline	-	-	-	-	0.65	N.A.
Developed Area	-	-	0.24	N.A.	52.92	N.A.
Mangrove	-	-	-	-	0.05	N.A.
Modified Watercourse	N.A.	125	N.A.	142	N.A.	307
Natural Rocky Shoreline	-	-	-	-	0.13	N.A.
Natural Watercourse	N.A.	89	N.A.	208	N.A.	5,321
Rural Plantation	-	-	0.02	N.A.	11.11	N.A.

Habitat	Application Site		Indicative Scheme		Assessment area	
	Area (ha)	Length (m)	Area (ha)	Length (m)	Area (ha)	Length (m)
Sea	-	-	-	-	6.27	N.A.
Shrubland	-	-	-	-	9.28	N.A.
Woodland	0.33	N.A.	0.66	N.A.	80.29	N.A.
		Total	2.08	Not summed	163.89	N.A.

Note
1. For Agricultural Land, Artificial Hard Shoreline, Developed Area, Mangrove, Natural Rocky Shoreline, Natural Watercourse, Rural Plantation, Sea, Shrubland and Woodland, their area is expressed. For Modified Watercourses and Natural Watercourses, only their length is expressed.
2. Size and length of habitats are rounded off to 2 decimal places and nearest integer respectively.
3. "-" is used where a habitat is not present in the Application Site, Indicative Scheme or assessment area.
4. "N.A." ("Non-applicable") is used where the unit is non-applicable as specified in (1).

Agricultural Land

5.5.3 Patches of Agricultural Land were found in and in the vicinity of the Indicative Scheme, in Yuen Chau Tsai and Tai Po Kau Tsung Yuen Village. Some parts of the land were abandoned without management, and with weedy herbs (e.g. *Ageratum conyzoides*, *Bidens alba* and *Dicranopteris pedata*) prospered. Meanwhile, cultivated crop species (e.g. *Saccharum officinarum*) were observed occasionally.

5.5.4 Since 1945, the Application Site has been dominated by Agricultural Land and cultivated with crop and fruit tree species. However, the Application Site had also been left fallow or abandoned on numerous occasions and was subsequently colonized by herbaceous species rapidly. Grass cutting practices, nonetheless, had sporadically been practiced, restoring the Application Site for cultivation purpose. During the survey period, it was observed that pioneer and light-demanding herb species, such as *Ageratum houstonianum*, *Bidens alba*, *Ipomoea cairica*, *Microstegium ciliatum* and *Mikania micrantha* dominated.

Artificial Hard Shoreline

5.5.5 Artificial riprap seawall primarily made of rocks, aiming at stabilizing areas readily eroded by sea waves, was found along the seaward edge of Tolo Harbour Park. Due to limited availability of growing space, this seawall structure was floristically limited in diversity. No Artificial Hard Shoreline habitat was identified in the Indicative Scheme.

Developed Area

5.5.6 Developed area includes private residential estates (e.g. Marvelous Villa, Chateau de Maison and Grand Palisades), villages (Care village, Tai Po Kau Tsung Yuen Village, Ha Wong Yi Au and Sheung Wong Yi Au), roads (e.g. Tai Po road-Yuen Chau Tsai and Tai Po Kau, Wong Yi Au Road, Yung Yi Road and Shan Yin Road), carpark, school (Ling Liang Church M H Lau Secondary School), non-government-organization (Zonta White House-Family Retreat Centre) and expressway (Tolo Highway). The growing space was generally limited, weedy herbs were prosperous (e.g. *Alocasia macrorrhizos*, *Bidens alba* and *Wedelia trilobata*), street trees and ornamental species (*Bougainvillea spectabilis*, *Hibiscus rosa-sinensis* and *Ixora chinensis*) were prevalent.

Mangrove

5.5.7 The presence of mangrove communities indicates areas where the confluence of freshwater and brackish water occurs in intertidal regions. Subject to tidal influence, true mangrove species such as *Aegiceras corniculatum* and *Kandelia obovata* were observed in the mangrove stands in Yuen Chau Tsai. Mangrove associate

species such as *Hibiscus tiliaceus* were also frequently observed. No Mangrove habitat was identified within the Indicative Scheme.

Modified Watercourse

5.5.8 A few modified watercourses were identified and those falling in the Indicative Scheme are labelled in **Figure 5.4**, namely Modified Watercourses A and G.

5.5.9 Modified Watercourse A fell entirely within the Application Site. Currently, it is a narrow ditch overgrown with ruderal vegetation (e.g. *Microstegium* sp.). Water flow was minimal even in wet season, leaving it devoid of freshwater fauna throughout the survey period. As crops and fruit trees were once cultivated in the Application Site, it is suspected that Modified Watercourse A once served irrigation function decades ago, with rainwater discharging from northward.

5.5.10 Part of Modified Watercourse G, which was a straightened u-channel with concrete bed depauperate of freshwater fauna, fell in the indicative access road.

5.5.11 The modified watercourses in the assessment area (i.e. downstream of Watercourses E and G), meanwhile, were also straightened u-channels with concrete bed depauperate of freshwater fauna.

Natural Rocky Shoreline

5.5.12 In the assessment area, northeast-facing Natural Rocky Shoreline habitat is located at Yuen Chau Chai, fringing its coast. It consisted of gently sloping bedrock of volcanic origins. Being exposed to tides and lack of suitable substrate, this habitat was generally floristically limited in diversity terms. No Natural Rocky Shoreline habitat was identified within the Indicative Scheme.

Natural Watercourse

5.5.13 Several Natural Watercourses were found in the assessment area, a few of which flow through the Indicative Scheme. Their substrates mainly consisted of boulders and gravel. The quality of water was generally fair. Meanwhile, *Byttneria grandifolia*, *Colocasia esculenta* and *Daemonorops jenkinsiana* were dominant throughout the riparian zone. The location of Natural Watercourses B, C, D, E and F are illustrated in **Figure 5.4**.

5.5.14 Part of Natural Watercourses B and C were present in the Application Site, part of Natural Watercourses D and E lied in the indicative access road, while Natural Watercourse F fell outside the Indicative Scheme (**Figure 5.4**). Their substrate ranges from boulders, cobbles to gravel. In general, the quality of water is good. Natural Watercourse E was situated to the immediate southwest of Ling Liang Church M. H. Lau Secondary School and collects water flow, if any, from Modified Watercourse A and Natural Watercourses B, C, D and F. The northern end of Natural Watercourse E was culvertized.

Rural Plantation

5.5.15 Rural Plantation stands were established on the engineered slopes or hillslopes, such as Tai Po Road, for stabilizing slopes and aesthetic purposes. They were dominated by fast-growing species, such as *Acacia confusa*, *Livistona chinensis* and *Schefflera heptaphylla.* Besides, native tree, shrub and climber species were recruited in the available growing space in the understorey. For instance, *Schefflera heptaphylla, Ficus hispida, Ligustrum sinense* and *Ficus microcarpa*

were readily observed. Only the edge of Rural Plantation falls in the indicative access road.

Sea

5.5.16 Part of Tolo Harbour was only found within the northeastern part of the assessment area.

Shrubland

5.5.17 Shrubland was found on the hillside in the southern part of the assessment area. Due to topographical constraints, the area, covering Lai Chi Chan, was dominated by native shrub and herb species, such as *Dicranopteris pedata*, *Ilex asprella*, *Melastoma sanguineum* and Poaceae spp. Lai Chi Shan is a place for hill-topping butterflies. No Shrubland habitat was identified within the Indicative Scheme.

Woodland

5.5.18 Woodlands were mainly found downhill of Lai Chi Shan, and the edges were in proximity to developed areas. Both native and exotic species could be observed, but generally native species exhibit higher abundance. The canopies of woodland were dominated by native species, such as *Endospermum chinense* and *Machilus chekiangensis*. Several native and shade-tolerant species were prosperous in understorey where the canopy was dense enough, like *Psychotria asiatica*. Besides, the composition of flora was slightly different when the location was closer to developed areas and villages, exotic, fruit tree and ornamental species were naturally dispersed from nearby habitats (e.g. *Clerodendrum cyrtophyllum*, *Mangifera indica* and *Plumeria rubra*). During the survey period, lightings were found along the edges of the Woodland stands to the immediate northeast and east of the Indicative Scheme.

5.5.19 Woodland edge was dominated by native tree species, such as *Celtis sinensis*, *Dimocarpus longan* and *Machilus chekiangensis*. The height of the trees recorded in the Indicative Scheme ranges from 4m to 18m. The understorey was dominated by shade-tolerant shrub species (e.g. *Psychotria asiatica*) and saplings of native tree species.

5.6 Results of Vegetation, Terrestrial Mammal, Bird, Herpetofauna, Butterfly, Odonate, Firefly, Freshwater Fish and Freshwater Invertebrate Surveys

5.6.1 The abundance, presence or relative abundance of plant, terrestrial mammal, bird, herpetofauna, butterfly, odonate, firefly, freshwater fish and freshwater invertebrate recorded in the Indicative Scheme and assessment area are presented in **Appendices A1** to **I2**.

5.6.2 The locations of terrestrial mammal species of conservation importance recorded by camera traps and bat detectors are not pinpointed due to the following reasons. Owing to the static nature of the camera traps, pinpointing the locations of the terrestrial mammal species of conservation importance recorded by camera traps are not fruitful in context (i.e. overlapping with the location of camera traps) and therefore are not shown. Besides, due to the detection range of bat detectors, the condition that the assessment area comprises habitat mosaic over a short distance, and thus specific habitat utilization could not be confirmed by bat detector, locations of the bat species recorded by bat detector are not shown. A habitat map with locations of the species of conservation importance recorded in the Indicative Scheme and assessment area during the survey period, excluding those recorded

by camera traps and bat detectors, is presented in **Figures 5.3** and **5.4** where appropriate. Photos of selected plant species of conservation importance are enclosed in **Figure 5.5**.

5.6.3 Detailed results of vegetation, terrestrial mammal, bird, herpetofauna, butterfly, odonate, firefly, freshwater fish and freshwater invertebrate surveys are presented in the following sections and summarized in **Table 5.3**.

Table 5.3 Number of Plant, Terrestrial Mammal, Bird, Herpetofauna, Butterfly, Odonate, Firefly, Freshwater Fish, Freshwater Invertebrate and Intertidal Community Species Recorded in the Indicative Scheme and Assessment Area during the Survey Period

Taxa	Number of species recorded		
	Indicative Scheme and assessment area	Indicative Scheme	Assessment area
Plant	320 (14)	83 (3)	306 (13)
Terrestrial mammal	23 (19)	18 (15)	22 (18)
Bird	51 (15)	22 (1)	50 (14)
Herpetofauna	18 (6)	4 (3)	17 (6)
Butterfly	66 (3)	15 (0)	61 (3)
Odonate	16 (1)	5 (0)	16 (1)
Firefly	2 (0)	1 (0)	2 (0)
Freshwater fish	3 (0)	0 (0)	3 (0)
Freshwater invertebrate	8 (3)	3 (1)	8 (3)
Intertidal community	N.A.	N.A.	35 (0)

Note
- Brackets are used to indicate the number of species of conservation importance; and
- "N.A." ("Non-applicable) is used where a certain survey was not performed owing to the lack of relevant habitat

Vegetation and Higher Plant Species

5.6.4 A total of 320 plant species were recorded during the survey period, 222, 3 and 2 of which are native, exotic and of unknown origin to Hong Kong respectively (**Appendices A1** and **A2**). 14 flora species of conservation importance were recorded, including *Aquilaria sinensis*, *Aralia chinensis*, *Artocarpus tonkinensis*, *Cibotium barometz*, *Cyclobalanopsis edithiae*, *Dioscorea pentaphylla*, *Elaeocarpus dubius*, *Ixonanthes reticulata*, *Neottopteris nidus*, *Pavetta hongkongensis*, *Phrynium placentarium*, *Pyrenaria spectabilis*, *Rhynchotechum ellipticum* and *Torenia fordii*. The relative abundance of plant species recorded in the assessment area and Indicative Scheme during the survey period is tabulated in **Appendices A1** and **A2**.

5.6.5 Among the plant species recorded, 306 of them were recorded in the assessment area, among which 213, 90 and 3 are native, exotic and of unknown origin to Hong Kong respectively (**Appendix A1**). Among the 306 plant species recorded, a total of 13 plant species of conservation importance were recorded, including *Aquilaria sinensis*, *Aralia chinensis*, *Artocarpus tonkinensis*, *Cibotium barometz*, *Cyclobalanopsis edithiae*, *Dioscorea pentaphylla*, *Elaeocarpus dubius*, *Ixonanthes reticulata*, *Neottopteris nidus*, *Pavetta hongkongensis*, *Phrynium placentarium*, *Pyrenaria spectabilis* and *Torenia fordii* (**Table 5.14**).

5.6.6 Among the plant species recorded, 83 of them were recorded in the Indicative Scheme, 61, 20 and 2 of which are native, exotic and of unknown origin to Hong Kong respectively (**Appendix A2**). Among the 83 plant species recorded, a total of 3 plant species of conservation importance were recorded, including *Aralia chinensis*, *Cibotium barometz* and *Rhynchotechum ellipticum* (**Table 5.14**) and they are described in **Sections 5.6.7**, **5.6.8** and **5.6.9**.

5.6.7 *Aralia chinensis*, which is considered a globally vulnerable species in the IUCN Red List of Threatened Species (IUCN 2025), was recorded in the Developed Area of the indicative access road. In Hong Kong, *A*. *chinensis* is a tree species restricted to forest margins (Corlett *et al.* 2000).

5.6.8 Clusters of *Cibotium barometz* were recorded in the Woodland of the Indicative Scheme. *Cibotium barometz* was regarded as a very common herb species found in forest and shrubland in Hong Kong by Corlett *et al*. (2000), is listed in Appendix II of CITES and is protected under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).

5.6.9 An individual of *Rhynchotechum ellipticum*, which was considered a locally rare native herb species found streamsides in lowland forest (Corlett *et al*. 2000), was found in rock crevice of Natural Watercourse B in the Indicative Scheme.

Terrestrial Mammal

5.6.10 Summing the diversity of terrestrial mammal species captured by the following methodologies, a total of 23 terrestrial mammal species were recorded during the survey period, 19 of which are of conservation importance, including Rhesus Macaque, Red Muntjac, Leopard Cat, Himalayan Leaf-nosed Bat, East Asian Porcupine, Chinese Pangolin, Short-nosed Fruit Bat, Intermediate Horseshoe Bat, Least Horseshoe Bat, Pallas's Squirrel, Chinese Pipistrelle, Whiskered Myotis, Chinese Noctule, Japanese Pipistrelle, Least Pipistrelle, Lesser Bamboo Bat, Masked Palm Civet, Small Indian Civet and Unknown Pipistrelle (**Table 5.3** and **Appendices B1**, **B2** and **B3**). No sign of roosting/breeding/nursery behaviour was noted from the observed terrestrial mammal species.

Active Searching Results

5.6.11 Among the terrestrial mammal species recorded, 5 of them were recorded by active searching means, 4 of which are of conservation importance, including Rhesus Macaque, East Asian Porcupine, Short-nosed Fruit Bat and Pallas's Squirrel (**Appendix B1**). They are common or very common in Hong Kong and were all recorded in the assessment area, while no terrestrial mammal species was recorded in the Indicative Scheme by active searching.

Camera Trapping Results

5.6.12 Among the terrestrial mammal species recorded, 12 of them were recorded by camera trapping, 8 of which are of conservation importance, including Rhesus Macaque, Red Muntjac, Leopard Cat, East Asian Porcupine, Chinese Pangolin, Pallas's Squirrel, Masked Palm Civet and Small Indian Civet (**Appendix B2**). They are all very common and widely distributed in Hong Kong.

5.6.13 12 terrestrial mammal species, 8 of which are of conservation importance (Rhesus Macaque, Red Muntjac, Leopard Cat, East Asian Porcupine, Chinese Pangolin, Pallas's Squirrel, Masked Palm Civet and Small Indian Civet), were recorded in the assessment area by camera trapping (**Appendix B2**).

5.6.14 8 terrestrial mammal species, 5 of which are of conservation importance (Rhesus Macaque, Red Muntjac, East Asian Porcupine, Masked Palm Civet and Small Indian Civet), were recorded in the Indicative Scheme by camera trapping (**Appendix B2**).

Bat Detector Results

5.6.15 Among all terrestrial mammal species recorded, a total of 10 bat species were identified based on their echolocation calls emitted during the survey period and 9 of them were recorded in the assessment area, including Himalayan Leaf-nosed Bat, Intermediate Horseshoe Bat, Least Horseshoe Bat, Chinese Pipistrelle, Chinese Noctule, Japanese Pipistrelle, Least Pipistrelle, Lesser Bamboo Bat and Unknown Pipistrelle. (**Appendix B3**). All bat species are of conservation importance and most of them are common and/or widespread in Hong Kong.

5.6.16 Meanwhile, all bat species recorded during the survey period were recorded in the Indicative Scheme, including Himalayan Leaf-nosed Bat, Intermediate Horseshoe Bat, Least Horseshoe Bat, Chinese Pipistrelle, Whiskered Myotis, Chinese Noctule, Japanese Pipistrelle, Least Pipistrelle, Lesser Bamboo Bat and Unknown Pipistrelle (**Appendix B3**).

Avifauna

5.6.17 A total of 51 bird species were recorded during the survey period, 15 of which are of conservation importance, including Black-crowned Night Heron, Grey Heron, Great Egret, Little Egret, Crested Serpent Eagle, Crested Goshawk, Black Kite, Greater Coucal, White-throated Kingfisher, Grey-chinned Minivet, Ashy Drongo, Collared Crow, Rufous-capped Babbler, Black-throated Laughingthrush and Silver-eared Mesia (**Appendices C1** and **C2**). Most of the recorded bird species are common and/or widespread in Hong Kong. They are mainly residents. Only a small proportion of them is passage migrant or winter visitor. No sign of breeding, nesting or roosting behaviour was exhibited by the observed bird species. The abundance of each bird species recorded in each habitat in the assessment area and Indicative Scheme is summed throughout the survey period and tabulated in **Appendices C1** and **C2** respectively.

5.6.18 Among the bird species recorded during the survey period, 50 of them were recorded in the assessment area, 14 of which are of conservation importance, including Black-crowned Night Heron, Grey Heron, Great Egret, Little Egret, Crested Serpent Eagle, Crested Goshawk, Black Kite, Greater Coucal, White-throated Kingfisher, Grey-chinned Minivet, Ashy Drongo, Collared Crow, Rufous-capped Babbler and Black-throated Laughingthrush (**Appendix C1**).

5.6.19 Among the bird species recorded during the survey period, 22 of them were recorded in the Indicative Scheme, with Silver-eared Mesia being the only one of conservation importance (**Appendix C2**).

Herpetofauna

5.6.20 A total of 18 herpetofauna species were recorded during the survey period, 6 of which are of conservation importance, including Chinese Bullfrog, Big-headed Frog, Lesser Spiny Frog, Brown Wood Frog, Four-clawed Gecko and Indian Forest Skink (**Appendices D1** and **D2**). Most of the recorded herpetofauna species are widely distributed in Hong Kong. No sign of mating or breeding behaviour was exhibited by the observed herpetofauna species. The abundance of each bird species recorded in each habitat in the assessment area and Indicative Scheme is summed throughout the survey period and tabulated in **Appendices D1** and **D2** respectively.

5.6.21 Among the herpetofauna species recorded during the survey period, 17 of them were recorded in the assessment area, 6 of which is of conservation importance, including Chinese Bullfrog, Big-headed Frog, Lesser Spiny Frog, Brown Wood

Frog, Four-clawed Gecko and Indian Forest Skink.

5.6.22 Among the herpetofauna species recorded during the survey period, 4 of them were recorded in the Indicative Scheme, 3 of which is of conservation importance, including Lesser Spiny Frog, Big-headed Frog and Indian Forest Skink (**Appendix D1**).

Butterfly

5.6.23 A total of 65 butterfly species were recorded during the survey period, 3 of which are of conservation importance, including Metallic Cerulean, Blackvein Sergeant and Danaid Eggfly (**Appendices E1** and **E2**). Most of the recorded butterfly species are widely distributed throughout Hong Kong. No sign of mating or breeding behaviour was exhibited by the observed butterfly species. The abundance of each butterfly species recorded in each habitat in the assessment area and Indicative Scheme is summed throughout the survey period and tabulated in **Appendices E1** and **E2** respectively.

5.6.24 Among the butterfly species recorded during the survey period, 61 of them were recorded in the assessment area, 3 of which are of conservation importance, including Metallic Cerulean, Blackvein Sergeant and Danaid Eggfly (**Appendix E1**).

5.6.25 Among the butterfly species recorded during the survey period, 15 of them were recorded in the Indicative Scheme and none of them is of conservation importance (**Appendix E2**).

Odonate

5.6.26 A total of 16 odonate species were recorded during the survey period, 1 of which is of conservation importance (**Appendices F1** and **F2**). Among the 16 odonate species recorded, 5 of them were recorded in the Indicative Scheme (**Appendices F1** and **F2**). Most of the recorded odonate species are common/abundant and widely distributed in Hong Kong. The abundance of each odonate species recorded in each habitat in the assessment area and Indicative Scheme is summed throughout the survey period and tabulated in **Appendices F1** and **F2** respectively.

5.6.27 Among the odonate species recorded during the survey period, all of them were recorded in the assessment area, 1 of which is of conservation importance, namely Emerald Cascader (**Appendix F1**).

5.6.28 Among the odonate species recorded during the survey period, 5 of them were recorded in the Indicative Scheme and none of them is of conservation importance (**Appendix F2**).

Firefly

5.6.29 A total of 2 firefly species were recorded during the survey period, none of which is known to be of conservation importance (**Appendices G1** and **G2**). The abundance of each firefly species recorded in each habitat in the assessment area and Indicative Scheme is summed throughout the survey period and tabulated in **Appendices G1** and **G2**.

5.6.30 Among the firefly species recorded during the survey period, all of them were recorded in the assessment area (**Appendix G1**).

5.6.31 Among the firefly species recorded, Lunate Window Firefly was the only firefly

species recorded in the Indicative Scheme (**Appendix G2**).

Freshwater Fish

5.6.32 3 freshwater fish species were recorded in the assessment area and none of them is considered of conservation importance (**Appendix H**). Their relative abundance recorded in the assessment area during the survey period is tabulated in **Appendix H**.

5.6.33 No freshwater fish species was recorded in the Indicative Scheme.

Freshwater Invertebrate

5.6.34 8 freshwater invertebrate species were recorded during the survey period, 3 of which is of conservation importance, including *Nanhaipotamon hongkongense*, *Somanniathelphusa zanklon* and *Cryptopotamon anacoluthon* (**Appendix I2**). Their relative abundance recorded in the assessment area and Indicative Scheme during the survey period is tabulated in **Appendix I1** and **I2** respectively.

5.6.35 8 freshwater invertebrate species were recorded in the assessment area, 3 of which is of conservation importance, including *N*. *hongkongense*, *S*. *zanklon* and *C*. *anacoluthon* (**Appendix I1**).

5.6.36 3 freshwater invertebrate species were recorded in the Indicative Scheme, 1 of which is of conservation importance (i.e. *N*. *hongkongense*) (**Appendix I2**). *N*. *hongkongense* was recorded in the section of Natural Watercourse C falling in the footprint of the proposed residential development, which will be retained.

Intertidal Community

5.6.37 A total of 35 intertidal community species was recorded during the qualitative survey in the assessment area (**Appendix I**). *Ligia exotica* and *Saccostrea cucullata* were the dominant species. All species recorded are considered common and widespread as in other natural rocky shorelines in Hong Kong. No species of conservation importance was recorded.

5.7 Ecological Evaluation of Habitats and Species of Conservation Importance

5.7.1 The ecological importance of all terrestrial and freshwater habitats in the Indicative Scheme and assessment area was evaluated with reference to the criteria stipulated in Annex 8 of EIAO-TM *(***Table 5.4** to **Table 5.14**). For species of conservation importance recorded in the Indicative Scheme or assessment area in the literature, if their exact locations and/or habitat usage were not specified, they are not assigned to **Table 5.5** to **Table 5.15**.

5.7.2 Meanwhile, bat species are not specifically assigned to specific habitats, as bat detectors were used along transects where high habitat heterogeneity deters confirmation of specific habitat usage by bats. However, please refer to the baseline results in **Section 5.6** and appendices for relationship with particular habitats.

Table 5.4 Evaluation of Agricultural Land in the Indicative Scheme and Assessment Area

Criterion	Description	
	Indicative Scheme	**Assessment area**
Naturalness	Semi-natural, the abandonment of man-made Agricultural Land led to rapid and extensive colonization of pioneer herb species	Ranging from man-made to semi-natural, depending on the duration of abandonment
Size	About 1.16ha	About 3.19ha
Diversity	Low floral and terrestrial faunal diversity	Low floral and terrestrial faunal diversity
Rarity	1 fauna species of conservation importance: Silver-eared Mesia	• 1 flora species of conservation importance: *Neottopteris nidus* • 4 faunal species of conservation importance: Short-nosed Fruit Bat, Chinese Bullfrog, Brown Wood Frog and Metallic Cerulean
Re-creatability	Readily re-created	Readily re-created
Fragmentation	None observed	Occurred as distinct patches
Ecological linkage	No significant ecological linkage with the remaining habitats, except Modified Watercourse A which once served as a ditch for irrigation purpose	No significant ecological linkage with the remaining habitats
Potential value	Low	Low
Nursery/breeding ground	No significant nursery or breeding ground known or observed	No significant nursery or breeding ground known or observed
Age	Ecologically non-applicable	Ecologically non-applicable
Abundance/richness of wildlife	Low terrestrial faunal abundance	Low terrestrial faunal abundance
Overall ecological value	**Low**	**Low**

Table 5.5 Evaluation of Artificial Hard Shoreline in the Assessment Area

Criterion	Description
Naturalness	Man-made
Size	About 0.65ha
Diversity	Low floral and faunal diversity
Rarity	3 faunal species of conservation importance: Grey Heron, Great Egret and Little Egret
Re-creatability	Readily re-created
Fragmentation	None observed
Ecological linkage	Ecologically connected to the sea
Potential value	Very low, unless with eco-shoreline enhancement
Nursery/breeding ground	No significant nursery or breeding ground known or observed
Age	Ecologically non-applicable
Abundance/richness of wildlife	Low terrestrial faunal abundance

Criterion	Description
Overall ecological value	**Low**

Table 5.6 Evaluation of Developed Area in the Indicative Scheme and Assessment Area

Criterion	Description	
	Indicative Scheme	**Assessment area**
Naturalness	Man-made and subject to intensive and incessant anthropogenic disturbance	Man-made and subject to intensive and incessant anthropogenic disturbance
Size	About 0.24ha	About 52.92ha
Diversity	• Very low native floral diversity; and • Low terrestrial faunal diversity, mainly consisting of disturbance-tolerant and locally widespread fauna species	• Very low native floral diversity; and • Low terrestrial faunal diversity, mainly consisting of disturbance-tolerant and locally widespread fauna species
Rarity	1 flora species of conservation importance: *Aralia chinensis*	• 2 flora species of conservation importance: *Aquilaria sinensis* and *Aralia chinensis* • 2 fauna species of conservation importance: Great Egret and Black Kite
Re-creatability	Readily re-created	Readily re-created
Fragmentation	None observed	None observed
Ecological linkage	None observed	None observed
Potential value	Very low, given the intensive and incessant anthropogenic disturbance	Very low, given the intensive and incessant anthropogenic disturbance
Nursery/breeding ground	No significant nursery or breeding ground known or observed	No significant nursery or breeding ground known or observed
Age	Ecologically non-applicable	Ecologically non-applicable
Abundance/richness of wildlife	Very low faunal abundance in general, comprising mainly locally widespread and disturbance-tolerant species	Very low faunal abundance in general, comprising mainly locally widespread and disturbance-tolerant species
Overall ecological value	**Very low**	**Very low**

Table 5.7 Evaluation of Mangrove in the Assessment Area

Criterion	Description
Naturalness	Natural
Size	About 0.05ha
Diversity	Low terrestrial faunal and intertidal epifaunal diversity
Rarity	None observed
Re-creatability	Re-creatable but the mangrove community and associated mangrove species require time to develop and mature to their structural complexity and composition
Fragmentation	No major fragmentation was observed

Criterion	Description
Ecological linkage	Ecologically connected to Natural Rocky Shoreline and Sea
Potential value	Medium, as the climax floral and faunal community have seemingly established
Nursery/breeding ground	Nursery and breeding ground of intertidal and mangrove-associated species, although not observed during the ecological surveys
Age	Not ecologically applicable
Abundance/richness of wildlife	Low terrestrial and intertidal epifaunal abundance
Overall ecological value	**Medium**

Table 5.8 Evaluation of Modified Watercourse in the Indicative Scheme and Assessment Area

Criterion	Description	
	Indicative Scheme	**Assessment area**
Naturalness	Man-made	Man-made, made of concrete
Size	About 142m	About 307m
Diversity	Devoid of freshwater faunal diversity	Devoid of freshwater faunal diversity
Rarity	None observed	None observed
Re-creatability	Readily re-created	Readily re-created
Fragmentation	None observed	None observed
Ecological linkage	Modified Watercourse A in the Application Site once served as a ditch for irrigation purpose	Some of them are connected to upstream Natural Watercourses
Potential value	Low	Low
Nursery/breeding ground	No significant nursery or breeding ground known or observed	No significant nursery or breeding ground known or observed
Age	Ecologically non-applicable	Ecologically non-applicable
Abundance/richness of wildlife	Devoid of freshwater fauna	Devoid of freshwater fauna
Overall ecological value	**Low**	**Low**

Table 5.9 Evaluation of Natural Rocky Shoreline in the Assessment Area

Criterion	Description
Naturalness	Natural
Size	About 0.13ha
Diversity	Low floral and faunal diversity
Rarity	3 fauna species of conservation importance: Little Egret, White-throated Kingfisher and Collared Crow
Re-creatability	Difficult to re-create
Fragmentation	None observed
Ecological linkage	Ecologically connected to Mangrove and Sea
Potential value	Low to medium

Criterion	Description
Nursery/breeding ground	No significant nursery or breeding ground known or observed
Age	Not ecologically applicable
Abundance/richness of wildlife	Low faunal abundance
Overall ecological value	**Low to medium**

Table 5.10 Evaluation of Natural Watercourse in the Indicative Scheme and Assessment Area

Criterion	Description	
	Indicative Scheme	**Assessment area**
Naturalness	Natural	Natural
Size	About 208m	About 5,321m
Diversity	Low floral and faunal diversity	Low floral and faunal diversity
Rarity	• 1 floral species of conservation importance: *Rhynchotechum ellipticum*; and • 4 fauna species of conservation importance: Big-headed Frog, Lesser Spiny Frog and *Nanhaipotamon anacoluthon*	8 fauna species of conservation importance: Little Egret, Big-headed Frog, Lesser Spiny Frog, Brown Wood Frog, Emerald Cascader, *Cryptopotamon anacoluthon*, *Nanhaipotamon hongkongense* and *Somanniathelphusa zanklon*
Re-creatability	Difficult to re-create	Difficult to re-create
Fragmentation	None observed	None observed
Ecological linkage	Ecologically connected to the upstream and/or downstream Natural Watercourses in the assessment area	Some of them are ecologically connected to downstream Modified Watercourses in the assessment area, while some are ecologically connected to the Natural Watercourses in the Indicative Scheme
Potential value	Low to medium	Low to medium
Nursery/breeding ground	No significant nursery or breeding ground known or observed	No significant nursery or breeding ground known or observed
Age	Not ecologically applicable	Not ecologically applicable
Abundance/richness of wildlife	Low freshwater faunal abundance	Low freshwater faunal abundance
Overall ecological value	**Low to medium**	**Low to medium**

Table 5.11 Evaluation of Rural Plantation in the Indicative Scheme and Assessment Area

Criterion	Description	
	Indicative Scheme	**Assessment area**
Naturalness	Artificial and relatively disturbed, exotic trees were planted but native plant species in the understorey were naturally recruited from habitats nearby.	Artificial and relatively disturbed, exotic trees were planted but native plant species in the understorey were naturally recruited from habitats nearby.

Criterion	Description	
	Indicative Scheme	**Assessment area**
Size	About 0.02ha	About 11.11ha
Diversity	• Low floral diversity. The canopy and edges were dominated by exotic tree and herb species respectively but diverse naturally recruited native species were frequently encountered in the understorey; and • Low terrestrial fauna diversity, as the dominating exotic trees do not offer suitable foraging rewards for local fauna, while naturally recruited native flora offer suitable foraging rewards (e.g. nectar and fruits) for them	• Low floral diversity. The canopy and edges were dominated by exotic tree and herb species respectively but diverse naturally recruited native species were frequently encountered in the understorey; and • Low terrestrial fauna diversity, as the dominating exotic trees do not offer suitable foraging rewards for local fauna, while naturally recruited native flora offer suitable foraging rewards (e.g. nectar and fruits) for them
Rarity	None recorded	1 fauna species of conservation importance: Short-nosed Fruit Bat
Re-creatability	Readily re-created	Readily re-created
Fragmentation	Occurred as distinct stands on engineered slopes	Occurred as distinct stands on engineered slopes
Ecological linkage	No significant ecological linkage known or observed, although native plant species were possibly dispersed from nearby habitats, especially woodland	No significant ecological linkage known or observed, although native plant species were possibly dispersed from nearby habitats, especially woodland
Potential value	Low due to the dominance of exotic flora	Low due to the dominance of exotic flora
Nursery/breeding ground	No significant nursery or breeding ground known or observed	No significant nursery or breeding ground known or observed
Age	Vary, some might be over 30 years of age	Vary, some might be over 30 years of age
Abundance/richness of wildlife	Low abundance in general, complexed by the dominance of exotic flora deterring local fauna from utilization but naturally recruited native flora offer foraging ground for them	Low abundance in general, complexed by the dominance of exotic flora deterring local fauna from utilization but naturally recruited native flora offer foraging ground for them
Overall ecological value	**Low**	**Low**

Table 5.12 Evaluation of Sea in the Assessment Area

Criterion	Description
Naturalness	Natural
Size	About 6.27ha
Diversity	Not readily determined as no marine fauna surveys were conducted
Rarity	4 fauna species of conservation importance: Black-crowned Night Heron, Grey Heron, Great Egret and Little Egret

Criterion	Description
Re-creatability	Difficult to re-create
Fragmentation	None observed
Ecological linkage	Ecologically connected to intertidal habitats and marine waters beyond the assessment area and being part of the marine ecosystem in Tolo Harbour
Potential value	Not assessed due to insufficient data
Nursery/breeding ground	Potentially nursery and breeding ground of marine fauna, but no significant nursery or breeding ground known or observed
Age	Not ecologically applicable
Abundance/richness of wildlife	Not readily described as no marine fauna surveys were conducted
Overall ecological value	**Not assessed due to insufficient data**

Table 5.13 Evaluation of Shrubland in the Assessment Area

Criterion	Description
Naturalness	A natural habitat commonly found in the hillside of Hong Kong. Formed by natural succession from bare ground, with those in the vicinity of developed area subject to more frequent disturbance and exhibiting lower naturalness.
Size	About 9.28ha
Diversity	Low floral and faunal diversity
Rarity	• 1 flora species of conservation importance: *Aquilaria sinensis*; and • 4 fauna species of conservation importance: Rhesus Macaque, Indian Forest Skink, Blackvein Sergeant and Danaid Eggfly
Re-creatability	Readily re-created
Fragmentation	None observed
Ecological linkage	Contiguous shrubland connected to woodland
Potential value	Low, as its extent has largely remained unchanged and natural succession has been arrested as a result of topographical limitations (e.g. granitic substrate does not favour the colonization and establishment of many native tree species) and lack of seed sources of native tree species.
Nursery/breeding ground	No significant nursery or breeding ground known or observed
Age	Extent and condition have largely remained unchanged at least over the last 30 years
Abundance/richness of wildlife	Low faunal abundance
Overall ecological value	**Low**

Table 5.14 Evaluation of Woodland in the Indicative Scheme and Assessment Area

Criterion	Description	
	Indicative Scheme	**Assessment area**
Naturalness	Largely natural, subject to disturbance posed by vegetation clearance in the past	Largely natural, albeit with sporadic signs of cultivated exotic tree species and signs of disturbance near villages
Size	About 0.66ha	About 80.29ha
Diversity	• Low diversity of flora, birds, herpetofauna, butterflies, odonates and fireflies; and • Low to medium diversity of terrestrial mammals	• Low diversity of birds, herpetofauna, odonates and fireflies; and • Medium diversity of flora, terrestrial mammals and butterflies
Rarity	• 1 flora species of conservation importance: *Cibotium barometz*; and • 6 fauna species of conservation importance: Rhesus Macaque, Red Muntjac, East Asian Porcupine, Masked Palm Civet, Small Indian Civet and Indian Forest Skink	• 12 flora species of conservation importance: *Aquilaria sinensis*, *Aralia chinensis*, *Artocarpus tonkinensis*, *Cibotium barometz*, *Cyclobalanopsis edithiae*, *Dioscorea pentaphylla*, *Elaeocarpus dubius*, *Ixonanthes reticulata*, *Pavetta hongkongensis*, *Phrynium placentarium*, *Pyrenaria spectabilis* and *Torenia fordii*; and • 24 fauna species of conservation importance: Red Muntjac, Leopard Cat, East Asian Porcupine, Chinese Pangolin, Short-nosed Fruit Bat, Pallas's Squirrel, Masked Palm Civet, Small Indian Civet, Great Egret, Little Egret, Crested Serpent Eagle, Crested Goshawk, Black Kite, Greater Coucal, Grey-chinned Minivet, Ashy Drongo, Collared Crow, Rufous-capped Babbler, Black-throated Laughingthrush, Brown Wood Frog, Four-clawed Gecko, Indian Forest Skink, Metallic Cerulean and Blackvein Sergeant
Re-creatability	Re-creatable but need time to mature	Re-creatable but need time to mature
Fragmentation	Occurred as distinct stands due to site clearance performed for agricultural purpose	Mainly fragmented by Tai Po Road (Tai Po Kau) and Tolo Highway
Ecological linkage	Ecologically connected to Woodland in the assessment area	Ecologically connected to Woodland beyond the assessment area

Criterion	Description	
	Indicative Scheme	**Assessment area**
Potential value	Medium due to lack of signs of further succession (e.g. colonization of shade-tolerant tree species typical of other more mature woodlands in Hong Kong) to become more mature woodland	Medium due to lack of signs of further succession (e.g. colonization of shade-tolerant tree species typical of other more mature woodlands in Hong Kong) to become more mature woodland
Nursery/breeding ground	No significant nursery or breeding ground known or observed during the ecological surveys	No significant nursery or breeding ground known or observed during the ecological surveys
Age	Over 30 years of age	Over 30 years of age
Abundance/richness of wildlife	Low faunal abundance	Low faunal abundance
Overall ecological value	**Medium**	**Medium**

5.7.3 With reference to Table 3, Annex 8 of EIAO-TM, the ecological value of species recorded in the Indicative Scheme and assessment area was assessed in terms of protection/conservation status (e.g. fauna protected under WAPO (except birds), and flora and fauna protected under regional/global legislation/conventions), species distribution (e.g. endemic), and rarity (e.g. rare or restricted). Flora and fauna species of conservation importance recorded in the Indicative Scheme and assessment area were evaluated with reference to EIAO-TM *(***Table 5.15**).

Table 5.15 Species of Conservation Importance Recorded during the Survey Period

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
Plant						
1	*Aquilaria sinensis*	/	/	1. Developed Area 2. Shrubland 3. Woodland	Common. Distributed in lowland forest and fung shui woods.	Cap. 586 Rare and Precious Plants of Hong Kong China Plant Red Data Book: VU Illustrations of Rare & endangered plant in Guangdong Province List of Wild Plants under State Priority Conservation: Class 2 Threatened Species List of China's Higher Plants: VU, endemic species IUCN Red List of Threatened Species (2025): VU CITES Appendix II
2	*Aralia chinensis*	Developed Area	/	Woodland	Restricted. Distributed in forest margins.	IUCN Red List of Threatened Species (2025): VU
3	*Artocarpus tonkinensis*	/	/	Woodland	Rare. Distributed in forest.	/
4	*Cibotium barometz*	Woodland	Woodland	Woodland	Very common. Distributed in forest and shrubland.	Cap. 586 Rare and Precious Plants of Hong Kong: VU in China List of Wild Plants under State Priority Conservation: Class 2 CITES Appendix II

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
5	*Cyclobalanopsis edithiae*	/	/	Woodland	Restricted. Distributed in forest.	IUCN Red List of Threatened Species (2025): EN
6	*Dioscorea pentaphylla*	/	/	Woodland	Rare. Distributed in shrubland and forest.	/
7	*Elaeocarpus dubius*	/	/	Woodland	Rare. Recorded in Sheung Wo Hang and Wu Kau Tang fung shui woods.	/
8	*Ixonanthes reticulata*	/	/	Woodland	Common. Distributed in forests.	China Red Data Book: VU IUCN Red List of Threatened Species (2025): VU Rare and Precious Plants of Hong Kong: VU Threatened Species List of China's Higher Plants: VU
9	*Neottopteris nidus*	/	/	Agricultural Land	Restricted. Epiphytic and epilithic in forest.	Cap. 96A
10	*Pavetta hongkongensis*	/	/	Woodland	Common. Distributed in fung shui woods and lowland forest.	Cap. 96A
11	*Phrynium placentarium*	/	/	Woodland	Rare. Distributed in lowland forest and streamsides.	/
12	*Pyrenaria spectabilis*	/	/	Woodland	Restricted. Distributed in forest.	Cap. 96A
13	*Rhynchotechum ellipticum*	/	Natural Watercourse	/	Rare. Recorded in Tai Mo Shan, Tai Po Kau, Lantau Peak and Sunset Peak.	/
14	*Torenia fordii*	/	/	Woodland	Very rare. Recorded in Ng Tung Chai and Shing Mun.	/
Terrestrial mammal						
15	Rhesus Macaque *Macaca mulatta*	Woodland	Woodland	Shrubland	Common. Mainly distributed in Kam Shan, Shing Mun and Tai Po Kau; also found in Ma On Shan, Sai Kung, Tai Lam Country Parks and the North District.	China Red Data Book: VU Cap. 170 List of Wild Animals under State Priority Conservation: Class II

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
16	Red Muntjac *Muntiacus vaginalis*	Woodland	Woodland	Woodland	Very common. Very widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): PRC
17	Leopard Cat *Prionailurus bengalensis*	/	/	Woodland	Uncommon. Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.	China Red Data Book: VU Cap. 170 Cap. 586 List of Wild Animals under State Priority Conservation: Class II Red List of China's Vertebrates: VU CITES: Appendix II
18	Himalayan Leaf-nosed Bat *Hipposideros armiger*	/	/	✓	Very common. Widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): (LC) Cap. 170
19	East Asian Porcupine *Hystrix brachyura*	Woodland	Woodland	Woodland	Very common. Very widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.	Fellowes *et al*. (2002): PGC Cap. 170
20	Chinese Pangolin *Manis pentadactyla*	/	/	Woodland	Rare/Species of Conservation Concern. Thinly distributed in forested areas throughout Hong Kong.	China Red Data Book: VU IUCN Red List of Threatened Species (2025): CR Fellowes *et al*. (2002): RC Cap. 170 Cap. 586 List of Wild Animals under State Priority Conservation: Class I

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
						Red List of China's Vertebrates: CR CITES: Appendix I
21	Short-nosed Fruit Bat *Cynopterus sphinx*	/	/	1. Agricultural land 2. Rural plantation 3. Woodland	Very common. Very widely distributed in urban and countryside areas throughout Hong Kong.	Cap. 170 China Red Data Book: Indeterminate
22	Intermediate Horseshoe Bat *Rhinolophus affinis*	✓	/	✓	Uncommon. Widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): (LC) Cap. 170
23	Least Horseshoe Bat *Rhinolophus pusillus*	✓	/	✓	Uncommon. Widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): PRC Cap. 170
24	Pallas's Squirrel *Callosciurus erythraeus*	/	/	Woodland	Common. Fairly widely distributed, with the *styani* subspecies found in the New Territories (e.g. Tai Lam, Shing Mun and Tai Po Kau), and the *thai* subspecies found on the Hong Kong Island (e.g. Tai Tam and Pok Fu Lam).	Cap. 170
25	Chinese Pipistrelle *Hypsugo pulveratus*	✓	/	✓	Rare/Species of Conservation Concern. Only several records in the countryside areas at Ting Kau, Ma On Shan and Lin Ma Hang, and several records of stray individuals inside buildings.	Fellowes *et al*. (2002): (LC) Cap. 170
26	Whiskered Myotis *Myotis muricola*	✓	/	/	Rare/Species of Conservation Concern. Only several records in the countryside areas in the New Territories and on Lantau.	/
27	Chinese Noctule *Nyctalus plancyi*	✓	/	✓	Common. Fairly widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): PRC Cap. 170
28	Japanese Pipistrelle *Pipistrellus abramus*	✓	✓	✓	Very common. Widely distributed throughout Hong Kong.	Cap. 170
29	Least Pipistrelle *Pipistrellus tenuis*	✓	/	✓	Uncommon. Ten-something records found in Nam Chung,	Cap. 170

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
					Sheung Wo Hang, Lin Ma Hang, Plover Cove Country Park, Yuen Long, Shek Pik, Deep Water Bay, Ho Pui and Ho Chung.	
30	Lesser Bamboo Bat *Tylonycteris pachypus*	✓	/	✓	Very common. Fairly widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): (LC) Cap. 170
31	Masked Palm Civet *Paguma larvata*	/	Woodland	Woodland	Common. Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island and northwestern New Territories.	Fellowes *et al*. (2002): PRC Cap. 170
32	Small Indian Civet *Viverricula indica*	Woodland	/	Woodland	Very common. Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island and northwestern New Territories.	Cap. 170 List of Wild Animals under State Priority Conservation: Class I Red List of China's Vertebrates: VU
33	Unknown Pipistrelle *Pipistrellus* sp.	✓	/	✓	/	Cap. 170
Avifauna						
34	Black-crowned Night Heron *Nycticorax nycticorax*	/	/	Sea	Common resident and migrant. Widely distributed in Hong Kong.	Fellowes *et al*. (2002): LC
35	Grey Heron *Ardea cinerea*	/	/	1. Artificial Hard Shoreline 2. Sea	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.	Fellowes *et al*. (2002): PRC
36	Great Egret *Ardea alba*	/	/	1. Artificial Hard Shoreline 2. Developed Area 3. Sea 4. Woodland	Common resident, migrant and winter visitor. Widely distributed in Hong Kong.	Fellowes *et al*. (2002): PRC
37	Little Egret *Egretta garzetta*	/	/	1. Artificial Hard Shoreline 2. Natural Rocky Shoreline 3. Natural Watercourse 4. Sea 5. Woodland	Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong.	Fellowes *et al*. (2002): PRC

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
38	Crested Serpent Eagle *Spilornis cheela*	/	/	Soaring above Woodland	Common resident. Widely distributed in shrublands on hillsides throughout Hong Kong.	China Red Data Book: VU Fellowes *et al*. (2002): (LC) Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
39	Crested Goshawk *Accipiter trivirgatus*	/	/	Soaring above Woodland	Common resident. Widely distributed in woodlands and shrublands throughout Hong Kong.	China Red Data Book: Rare Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
40	Black Kite *Milvus migrans*	/	/	Soaring above Developed Area and Woodland	Common resident and winter visitor. Widely distributed in Hong Kong.	Fellowes et al. (2002): (RC) Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
41	Greater Coucal *Centropus sinensis*	/	/	Woodland	Common resident. Widely distributed in Hong Kong.	China Red Data Book: VU List of Wild Animals under State Priority Conservation: Class II
42	White-throated Kingfisher *Halcyon smyrnensis*	/	/	Natural Rocky Shoreline	Common resident. Widely distributed in coastal areas throughout Hong Kong.	Fellowes *et al*. (2002): (LC) List of Wild Animals

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
						under State Priority Conservation: Class II
43	Grey-chinned Minivet *Pericrocotus solaris*	/	/	Woodland	Locally common resident. Found in Tai Po Kau, Shing Mun, Ho Chung, Kadoorie Farm & Botanic Garden, Tung Ping Chau.	Fellowes *et al*. (2002): LC
44	Ashy Drongo *Dicrurus leucophaeus*	/	/	Woodland	Uncommon winter visitor. Found in Shing Mun, Tai Po Kau.	Fellowes *et al*. (2002): LC
45	Collared Crow *Corvus torquatus*	/	/	Woodland	Locally common resident. Found in Inner Deep Bay area, Nam Chung, Kei Ling Ha, Tai Mei Tuk, Pok Fu Lam, Chek lap Kok, Shuen Wan, Lam Tsuen.	IUCN Red List of Threatened Species (2025): VU Fellowes *et al*. (2002): LC
46	Rufous-capped Babbler *Cyanoderma ruficeps*	/	/	Woodland	Common resident. Found in Shing Mun, Tai Po Kau, Tai Mek Tuk, Ng Tung Chai, Fo Tan, Tai Mo Shan, The Peak, Kadoorie Agricultural Research Centre.	Fellowes *et al*. (2002): LC
47	Black-throated Laughingthrush *Garrulax chinensis*	/	/	Woodland	Common resident. Widely distributed in woodland and shrubland throughout Hong Kong.	List of Wild Animals under State Priority Conservation: Class II
48	Silver-eared Mesia *Leiothrix argentauris*	Agricultural Land	/	/	Common resident. Widely distributed in woodland throughout Hong Kong.	Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II
Herpetofauna						
49	Chinese Bullfrog *Hoplobatrachus chinensis*	/	/	Agricultural Land	Widely distributed in Lantau Island and New Territories.	Fellowes *et al*. (2002): PRC List of Wild Animals under State Priority Conservation: Class II Red List of China's Vertebrates: EN
50	Big-headed Frog *Limnonectes fujianensis*	/	Natural Watercourse	Natural Watercourse	Distributed in mountain streams in Tai Po Kau Nature Reserve, Kam Shan Country Park, Lam Tsuen Country Park and Plover Cove	Fellowes *et al*. (2002): LC

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
					Country Park.	
51	Lesser Spiny Frog *Quasipaa exilispinosa*	/	Natural Watercourse	Natural Watercourse	Widely distributed in upland forest streams throughout Hong Kong.	Fellowes *et al*. (2002): PGC IUCN Red List of Threatened Species (2025): VU Red List of China's Vertebrates: VU
52	Brown Wood Frog *Hylarana latouchii*	/	/	1. Agricultural Land 2. Natural Watercourse 3. Woodland	Distributed in woodlands in western and central New Territories.	Fellowes *et al*. (2002): LC
53	Four-clawed Gecko *Gehyra mutilata*	/	/	Woodland	Widely distributed throughout Hong Kong.	Red List of China's Vertebrates: VU
54	Indian Forest Skink *Sphenomorphus indicus*	/	Woodland	1. Shrubland 2. Woodland	Distributed in woodlands in eastern and central New Territories.	Fellowes *et al*. (2002): LC
Butterfly						
55	Metallic Cerulean *Jamides alecto*	/	/	1. Agricultural land 2. Woodland	Very rare. Victoria Peak, Fung Yuen, Chuen Lung, Mui Wo	/
56	Blackvein Sergeant *Athyma ranga*	/	/	1. Shrubland 2. Woodland	Uncommon. Shing Mun, Ngau Ngak Shan, Tai Mong Tsai, Tai Mo Shan, Tai Po Kau, Cloudy Hill	Fellowes *et al*. (2002): LC
57	Danaid Eggfly *Hypolimnas misippus*	/	/	Shrubland	Uncommon. Ngau Ngak Shan, Lung Kwu Tan, Hong Kong Wetland Park, Mount Parker, Cloudy Hill, Lin Ma Hang.	Fellowes *et al*. (2002): LC
Odonate						
58	Emerald Cascader *Zygonyx iris*	/	/	Flying above Natural Watercourse	Abundant. Widely distributed in moderately clean, rapidly flowing forested streams throughout Hong Kong.	Fellowes *et al*. (2002): PGC
Freshwater invertebrate						
59	*Cryptopotamon anacoluthon*	/	/	Natural Watercourse	Widely distributed within Hong Kong; recorded throughout the New Territories, Hong Kong and Lantau Islands.	Fellowes *et al*. (2002): PGC IUCN Red List of Threatened Species (2025): VU
60	*Nanhaipotamon*	/	Natural Watercourse	Natural Watercourse	Widely distributed within Hong	Fellowes *et al*. (2002):

Number	Species	Location			Rarity and distribution in Hong Kong [1 2 3 4 5 6 7 8]	Protection and/or conservation status [9 10 11 12 13 14 15 16 17 18 19 20 21 22 23]
		Indicative Scheme		Assessment area		
		Indicative access road and saltwater pumping station	Application Site			
	hongkongense				Kong; recorded throughout the New Territories, Hong Kong, Lamma and Lantau Islands.	PGC
61	*Sommanianthelphua zanklon*	/	/	Natural Watercourse	Widely located in the northwestern as well as northeastern New Territories and Lantau Island.	Fellowes *et al*. (2002): GC IUCN Red List of Threatened Species (2025): EN

Note
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6. Stanton and Leven (2016). Distribution, habitat utilisation and conservation status of the freshwater crab, *Somanniathelphusa zanklon* Ng & Dudgeon, 1992 (Crustacea: Brachyura: Gecarcinucidae) endemic to Hong Kong.
7. Stanton *et al*. (2018). Distribution of *Nanhaipotamon hongkongense* (Shen, 1940) (Crustacea: Brachyura: Potamidae), a freshwater crab endemic to Hong Kong.
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9. Convention on International Trade in Endangered Species of Wild Fauna and Flora (2025). Appendices I, II and III.
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    - Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
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12. Fu & Chin (1992). China Plant Red Data Book – Rare and Endangered Plants.
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20. Wang (1998). China Red Data Book of Endangered Animals: Mammalia.
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23. Zheng and Wang (1998). China Red Data Book of Endangered Animals: Aves.

Abbreviation
- Protection and/or conservation status: EN = Endangered; GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; VU = Vulnerable

6. IMPACT IDENTIFICATION AND PREDICTION

6.1 Design Considerations

Avoidance of Encroachment on Natural Watercourses

6.1.1 In view of the naturalness and low re-creatability of the Natural Watercourses in the Indicative Scheme and assessment area, they have been ranked with low to medium ecological value. Through elevating the gradient of the portion of the Access Road above Natural Watercourse E (**Figure 6.1**) and preserving the remaining Natural Watercourses in the Indicative Scheme (i.e. Natural Watercourses B, C and D), encroachment on Natural Watercourse will be avoided and no direct impact will be exerted on Natural Watercourse by the proposed development. In total, about 200m of Natural Watercourse in the Indicative Scheme will be preserved.

6.1.2 Aligning with natural topography, the elevated portion of the Access Road begins at the immediate north of Natural Watercourse E (**Figure 6.1**) and will be constructed above Natural Watercourse E. Besides, its piles will avoid falling on Natural Watercourse E. In the absence of physical disturbance due to its construction, water flow and discharge in Natural Watercourse E will be maintained in natural rainfall regime.

6.1.3 Meanwhile, Natural Watercourses B, C and D will be protected from construction works. As riparian vegetation is also important for maintaining the integrity of riparian habitats, vegetation in the immediate vicinity of Natural Watercourses B, C and D will also be preserved onsite.

Preservation of Multiple Woodland Patches in the Application Site

6.1.4 Considering the ecological value and importance of the Woodland in the Application Site and their connectivity with the Woodland in the assessment area, they will be preserved onsite, except the Woodland patch situated near the western boundary of the Application Site (**Figure 6.1**). In total, about 0.32ha of Woodland in the Application Site will be preserved.

Minimization of Habitat Fragmentation and Potential Roadkill Incidents

6.1.5 4 terrestrial mammal species of conservation importance, namely Rhesus Macaque, Red Muntjac, East Asian Porcupine and Small Indian Civet were recorded in the Woodland to the southwest of Ling Liang Church MH Lau Secondary School using camera traps. The preservation of vegetation and Natural Watercourse E beneath the elevated portion of the indicative access road (**Figure 6.1**) will ensure habitat connectivity and wildlife movement will not be hampered. Non-flying terrestrial wildlife, including terrestrial mammals and reptiles, may opt to move across the indicative access road via the headroom beneath its elevated portion. Habitat fragmentation impact and the incidence rate of potential roadkill events will thus be minimized.

6.2 Key Development Parameters

6.2.1 The proposed development consists of the following and the building layout is shown in **Figure 5.4**:

- 4 nos. of residential buildings with a plot ratio of not more than 2.4 and a

building height of not more than 96mPD with 11-13 storeys;
- a one-storey clubhouse with a building height of not mot than 58.2mPD; and
- an emergency vehicular access (EVA)

6.2.2 Currently, vehicular access leading to the Application Site is lacking and the construction of an access road is unavoidable and crucial to support the residential development in the Application Site. Compared to the proposed residential development and construction of the saltwater pumping station, the construction works associated with the indicative access road will incur a larger area of Woodland loss. The northern section of the indicative access road starts at Ha Wong Yi Au Road with minimal encroachment on Woodland north of Chaleau Villas, and its middle section has been designed to align with the eastern edge of the Woodland situated to the west of Ling Liang Church M.H. Lau Secondary School, which has been subject to frequent disturbance, as far as practicable. The indicative access road crosses Developed Area, the edges of Rural Plantation along Yung Yi Road, a patch of Woodland to the southwest of Ling Liang Church M H Lau Secondary School, and lies above Natural Watercourses D and E.

6.2.3 The residential buildings, clubhouse and EVA will be constructed mainly on abandoned Agricultural Land largely covered with weeds and fringed with scattered trees. All Woodland in the Application Site, except that at its western edge, will be preserved.

6.3 Assessment Methodology and Impact Evaluation Criteria

6.3.1 Making reference to Annexes 8 and 16 of the EIAO-TM, the potential direct and indirect ecological impacts arising from the proposed development are identified and assessed.

6.3.2 The significance of ecological impacts has been evaluated with reference to the criteria set out in Table 1 of Annex 8 of the EIAO-TM:

- Habitat quality;
- Species affected;
- Size/abundance of habitats/species affected;
- Duration of impacts;
- Reversibility of impacts; and
- Magnitude of environmental changes.

6.4 Construction Phase

Direct Impact – Permanent Habitat Loss

6.4.1 Woodland patches in the Application Site, except the one at its western edge, along with all Natural Watercourses in the Indicative Scheme, will be preserved onsite and will not be directly impacted. A total of 5 habitat types, including Agricultural Land, Developed Area, Modified Watercourse, Rural Plantation and Woodland, will be directly affected by construction works. The estimated area and evaluated ecological value of each habitat type in the Indicative Scheme is summarized in **Table 6.1**.

6.4.2 The Indicative Scheme will incur permanent loss of around 1.16ha of Agricultural Land, 0.24ha of Developed Area, 142m of Modified Watercourse and 0.02ha of

Rural Plantation are anticipated to be permanently lost. Owing to their low or very low ecological value, the resulting impacts are considered **Minor** or **Insignificant**. As such, no specific ecological mitigation measure is required.

6.4.3 Though the Woodland in the Indicative Scheme is connected to those in the assessment area, relatively low faunal diversity and abundance were recorded there during the survey period. Unavoidable permanent loss of around 0.36ha of Woodland, which is evaluated with Medium ecological value, is anticipated to incur **Minor to Moderate** impact and will be mitigated by woodland compensation (**Section 0**).

Table 6.1 Estimated Habitat Loss Arising from the Indicative Scheme

Habitats in the Indicative Scheme	Approximate area/length of habitats (ha/m) to be permanently lost	Ecological value	Impact ranking
Agricultural Land	1.16ha	Low	**Minor**
Developed Area	0.24ha	Very low	**Insignificant**
Modified Watercourse	142m	Low	**Minor**
Rural Plantation	0.02ha	Low	**Minor**
Woodland	0.36ha	Medium	**Minor to Moderate**

Note
1. Size and length of habitats are rounded off to 2 decimal places and nearest integer respectively.

6.4.4 Overall, no significant ecological linkage was identified between the habitats in the Indicative Scheme and the habitats with relatively higher ecological values in the assessment area, especially woodland in the vicinity. According to the principles in the Annex 16 of EIAO-TM and EIAO GN No. 3/2010, ecological impacts on important habitats and the associated wildlife caused by the proposed Project should be avoided, minimized, and mitigated where practicable.

Direct Impact – Habitat Fragmentation

6.4.5 Although construction works for the proposed residential development will not result in habitat fragmentation impact, the construction of the indicative access road will nonetheless fragment Woodland to a certain extent. However, the connectivity with the remaining Woodland in the assessment area is not expected to be considerably impaired as alternative passage. The space beneath the elevated road, are available for trespassing fauna to move across. Furthermore, no notable ecological corridor was noted during the ecological surveys. Neither significant barrier to fauna movement nor considerable breakage of linkage with the remaining Woodland in the assessment area is anticipated. Thus, construction works will only pose **Insignificant** habitat fragmentation impact.

Direct Impact – Harm/Mortality to Flora and Fauna

Flora

6.4.6 Prior to construction works, vegetation clearance will be performed in the Indicative Scheme, resulting in the loss of vegetation and potential direct impact on flora species of conservation importance. In the Indicative Scheme, a small number of 3 plant species of conservation importance, including an individual of *Aralia chinensis*, multiple patches of *Cibotium barometz* and an individual of *Rhynochotechum formosanum*, were recorded. *Rhynochotechum formosanum* was only recorded in rock crevices of Natural Watercourse B, which will be preserved onsite, and is not anticipated to be directly impacted. The impact on flora species of conservation importance is anticipated to be **Minor to Moderate**,

if unmitigated. The identified individuals will be labelled onsite. In the case of unavoidable direct impact on the plant species of conservation importance, transplantation should be implemented to minimize the resulting impact, should onsite preservation be deemed impractical or unfeasible.

Fauna

6.4.7 Construction works may also pose unintended impact on trespassing fauna, including those of conservation importance. Fauna species of conservation importance recorded in the Indicative Scheme include Rhesus Macaque, Red Muntjac, East Asian Porcupine, Masked Palm Civet, Small Indian Civet, Japanese Pipistrelle, Silver-eared Mesia, Indian Forest Skink, Lesser Spiny Frog, Big-headed Frog, Emerald Cascader and *Nanhaipotamon anacoluthon*.

6.4.8 Bats, birds, butterflies and firefly adults are relatively more mobile and can readily use and forage in the same type of or similar habitat nearby. It is highly unlikely that they will be directly impacted.

6.4.9 The range of non-flying terrestrial mammals is potentially restricted, while herpetofauna, firefly larvae and freshwater invertebrates are non-volant and relatively less mobile. Their entry to the Indicative Scheme, if any, will be prevented by the erection of construction hoardings around the Indicative Scheme properly to ensure no direct impact will be exerted on them.

6.4.10 To sum up, potential impact on fauna, including those of conservation importance, is considered **Minor**.

Indirect Impacts – Construction Disturbance Impact on Terrestrial Habitats, Vegetation and Fauna

Dust

6.4.11 The increased amount of dust due to construction works may also temporarily reduce the abundance and affect the distribution of fauna in habitats adjacent to the Indicative Scheme, such as Woodland. Unmitigated construction works would create significant levels of dust under certain weather conditions due to the operation of the construction vehicles and the phenomenon of wind-blown dust from the Indicative Scheme. Subsequently, the dust would be deposited on nearby habitats, which can cause vegetation damage and, as a secondary effect, have an impact on terrestrial fauna. Impacts from dust deposition of these types will, however, be temporary and reversible, and standard construction good practices as mitigation measures can be implemented to negate harmful impacts. Dust deposition impacts arising from construction, therefore, is considered **Minor**.

Noise and Ground-borne Vibration

6.4.12 The construction activities, including excavation and piling during foundation works, materials loading/unloading, and concreting during superstructure works, have the potential to produce noise and ground-borne vibration and cause disturbance to wildlife. In general, high level of disturbance could cause deterioration of habitat quality and a decrease of wildlife usage as well as subsequent decrease in wildlife density of the sensitive habitats in the vicinity of the noise and ground-borne vibration sources. Hence, wildlife may use less disturbed areas within their noise and ground-borne vibration tolerances instead or their foraging efficiency in the affected area may be reduced. However, in view of

the transient nature of the construction works, the noise and ground-borne vibration impact on wildlife is anticipated to be **Minor**.

Light Glare

6.4.13 During the survey period, fireflies were mostly recorded in the assessment area, while only a small number of fireflies were recorded in the Indicative Scheme. Fireflies were mentioned with potential occurrence in the southern and southeastern parts of the assessment area in the literature, including the primarily diurnal *Vesta sinuata* being the only one of conservation importance. The habitats in the Indicative Scheme are not considered unique and irreplaceable to fireflies, potentially due to the following reasons. The proposed residential development is vastly dominated by Agricultural Land not favourable to the fireflies recorded during the survey period, which are generally associated to natural streams (i.e. *Pygoluciola qingyu*) or woodlands (*Pyrocoelia lunata*). While no night-time construction works is required, only limited lighting is expected to be deployed at the construction site for security purpose. The ambient light level of the Indicative Scheme is subject to the streetlights, traffic lights and village lightings in Wong Yi Au all year round. The impacts on surrounding habitats and wildlife due to increased ambient light level or night-time light is considered **Minor**. Implementation of good site practices will still be recommended to minimize the impacts of artificial lighting/glare as much as possible.

Indirect Impacts – Water Quality Impact

6.4.14 As described in Section 9 of the Water Quality Impact Assessment, water quality impact may arise from construction site runoff, construction works in close proximity of inland waters, sewage from workforce and alteration of watercourses. Water quality impacts include increase in suspended solid levels, pH, biochemical oxygen demand, ammonia, *E. coli*. and oil/grease of the receiving waterbodies, toxic effects to freshwater fish and invertebrates and their prey species, and reduced decay rate of faecal microorganisms and photosynthetic rate due to the decreased light penetration. The waterbodies of the most concern in the proximity of the Indicative Scheme include Modified Watercourse and Natural Watercourse, which are ranked with low and low to medium ecological values respectively. Sediments may enter Modified Watercourse and Natural Watercourse via run-off, particularly during periods of heavy rain. This can lead to high turbidity which can block the gills of freshwater fish and invertebrates and eutrophication because of nutrient enrichment. The density of aquatic macrophytes may be reduced due to reduced light penetration or increased free-floating algae populations following eutrophication. Severe eutrophication can lead to oxygen depletion and the impoverishment of freshwater fish and invertebrates, as well as animals that prey on them (e.g. Birds). The potential water quality impact during the construction phase is ranked as **Minor to Moderate** if unmitigated. In accordance with Practice Note for Professional Persons on Construction Site Drainage, EPD, 2023 (ProPECC PN 2/23), the proposed construction phase mitigation measures are detailed in Section 9 of the Water Quality Impact Assessment.

6.4.15 The Indicative Scheme is located outside of any recognized sites of conservation importance. TPKNR, being the closest recognized site of conservation importance, is located around 628m away from the Indicative Scheme and will be screened from construction disturbance by Lai Chi Shan with an elevation of about 282mPD at its peak. The impacts of construction disturbance on TPKNR are considered **Insignificant**.

6.5 Operation Phase

Direct Impact – Absence of Additional Habitat Loss and Habitat Fragmentation

6.5.1 The areas to be permanently occupied by the development during operation, and in this case would be the same as the permanent loss in habitats during the construction phase. Neither additional habitat loss nor extra habitat fragmentation is anticipated during the operation phase.

Direct Impact – Direct Harm/Mortality to Wildlife

6.5.2 If wildlife accidentally enters the operating indicative access road, traffic flow may potentially lead to injury or mortality to wildlife (e.g. roadkill). Although no wildlife movement corridor has been noted during the survey period, parapet/crush barrier will be installed along the indicative access road for traffic safety purpose, which would prevent the entry of non-volant terrestrial fauna species (e.g. Terrestrial mammal and herpetofauna) and thus roadkill risk. In addition, wildlife may instead opt to move underneath the elevated portion of the indicative access road. Therefore, it is anticipated that the potential roadkill impact will be **Minor**.

Indirect Impact – Bird Collision

6.5.3 Increased risk of bird collision with the proposed vertical noise barriers as at-source noise mitigation measures is anticipated during the operation phase. The noise barriers will be erected along part of the eastern boundary of the indicative access road (i.e. next to Ling Liang Church M. H. Lau Secondary School). However, neither bird species of conservation importance nor flight corridor was identified near the proposed location of noise barriers. In addition, the noise barriers are proposed to be erected at existing Developed Area which is already subject to frequent disturbance. Nonetheless, transparent noise barrier panels should be provided with either embedded/superimposed opaque stripes or embedded/superimposed opaque dots/visual markers. The potential bird collision impact is considered **Minor**.

Indirect Impact – Operation Disturbance on Terrestrial Habitat, Flora and Fauna

6.5.4 The operation of the indicative access road, saltwater pumping station and proposed residential development would generate disturbance to the nearby natural habitats (e.g. Natural Watercourse and Woodland), flora and fauna. These disturbance impacts include dust, glare, noise, surface runoff.

6.5.5 The Indicative Scheme, however, is situated in areas subject to disturbance. The surroundings have also been inhabited by species tolerant of human disturbance. The indicative access road and saltwater pumping station are situated on a Woodland hillslope where graveyards are present, whereas cultivation and weeding were once irregularly practiced in the proposed residential development extent.

6.5.6 Furthermore, buffer shrub planting and roadside planting around the Indicative Scheme under the current landscape design, along with the preservation of multiple woodland matches in the Application Site (**Figure 6.1**), would help screen off glare and noise from the proposed development.

6.5.7 To summarize, it is anticipated that operation disturbance to the natural habitats, vegetation and fauna in the vicinity will be **Minor**.

Indirect Impact – Water Quality Impact

6.5.8 As stated in Section 9 of the Water Quality Impact Assessment, water quality impact during the operation phase may originate from runoff and sewage from the development, as well as the use of fertilisers and pesticides for landscaping, posing indirect impacts on the quality of water at the adjoining Watercourses. The proposed development will lead to an increase in area of impermeable surfaces and hence the peak surface runoff rates. Vehicle dust, tyre scraps and oils might be washed away from the road surface to the nearby watercourses by surface runoff or road surface cleaning. The water quality impact during the operation phase is anticipated to be **Minor to Moderate**, if unmitigated. The proposed development, however, is a residential development and pollutants on road surface would be very limited, and the presence of significant bare grounds will be unlikely. Also, the proposed development will be properly sewered by the time of population intake in 2030. Thus, adverse water quality impact is not anticipated. The handling, treatment and disposal of various effluent discharges to stormwater drains and foul sewers, in conjunction with the design of site drainage and disposal of site effluents generated should follow relevant guidelines and practices given in the Professional Persons Environmental Consultative Committee Practice Note 1/23 Drainage Plans subject to Comment by the Environmental Protection Department – Building (Standards of Sanitory Fitments, Plumbing, Drainage Works and Latrines) Regulations.

6.6 Impact on Recognized Sites of Conservation Importance and Species of Conservation Importance

Recognized Sites of Conservation Importance

6.6.1 There is no recognized site of conservation importance in the assessment area and TPKNR is the recognized site of conservation importance closest to the Indicative Scheme (~628m). Lai Chi Shan, the hilltop of which is at an altitude of around 282m and is situated at around 362m to the southwest of the Indicative Scheme, will screen most construction and operation disturbance from the core area of TPKNR, which is of substantial size and is subject to less frequent disturbance owing to its altitude. It is not anticipated that the integrity or ecological functions will be significantly affected by the proposed development. The construction and operation disturbance impact on TPKNR is considered **Insignificant**.

Species of Conservation Importance

6.6.2 Direct impact on flora species of conservation importance has been discussed in **Section 6.4.6**. The fauna species of conservation importance recorded in the Indicative Scheme and assessment area from the literature and current study are tabulated in **Table 5.1** and **Table 5.16** respectively. The impact of construction and operation disturbances on them are elaborated in **Sections 6.6.3**, **6.6.5** and **6.6.6**.

6.6.3 The bat, bird, butterfly and adult odonate species of conservation importance are volant, highly mobile and can forage in the same kind of or similar habitats nearby. The impact of construction and operation disturbance on them is expected to be **Minor**.

6.6.4 The only firefly species of conservation importance, the primarily diurnal *Vesta sinuata*, was recorded in Kowloon Peak and will be shielded from the artificial lightings during the construction and operation phases, which have been addressed in **Section 6.4.13**.

6.6.5 The non-flying terrestrial mammal and reptile species of conservation importance, though may be restricted in their range, can still forage in the same kind of or similar habitats in the assessment area. The impact of construction and operation disturbance on them is expected to be **Minor**.

6.6.6 Amphibian, freshwater fish and freshwater invertebrate species of conservation importance are generally associated with waterbodies. As all Natural Watercourses in the Indicative Scheme will be preserved, amphibian and freshwater invertebrate species of conservation importance will not be directly impacted. The potential impact of construction and operation disturbance on them, meanwhile, is expected to be **Minor** only. In addition, freshwater fish species of conservation importance was only recorded with potential occurrence in the southern and southeastern parts of the assessment area from the literature. No impact on it due to construction and operation disturbance is anticipated.

6.7 Evaluation of Ecological Impact

6.7.1 Potential ecological impacts on the identified habitats associated with the construction and operation of the Indicative Scheme have been evaluated in accordance with the Annex 8 of the EIAO-TM. Impacts on the habitats, except the Sea, are summarized in **Tables 6.2** to **6.11**.

Table 6.2 Potential Ecological Impacts on Agricultural Land

Criterion	Description
Habitat quality	Low
Species	• Low floral and faunal diversity; • 1 flora species of conservation importance: *Neottopteris nidus*; and • 5 faunal species of conservation importance: Short-nosed Fruit Bat, Silver-eared Mesia, Chinese Bullfrog, Brown Wood Frog and Metallic Cerulean
Size/Abundance	Permanent loss About 1.16ha

Duration	Construction phase
	• Direct impacts
	  ○ Direct loss of Agricultural Land would be permanent
	• Indirect impacts
	  ○ Increase in dust, noise, ground-borne vibration and glare impact would be temporary
	
	Operation phase
	Indirect impacts during operation phase (noise, glare and increase in human disturbance) would be permanent.

Reversibility	Construction phase
	• Direct impacts
	  ○ Permanent loss of Agricultural Land is irreversible
	• Indirect impacts
	  ○ Dust, noise, ground-borne vibration and glare impact would be reversible.
	
	Operation phase
	Indirect impacts during the operation phase (noise, glare and increase in human disturbance) would be irreversible.

Magnitude	Low
Overall impact severity	**Minor**

Table 6.3 Potential Ecological Impacts on Artificial Hard Shoreline

Criterion	Description
Habitat quality	Low
Species	• Low floral and faunal diversity; and • 3 faunal species of conservation importance: Grey Heron, Great Egret and Little Egret
Size/Abundance	No loss of Artificial Hard Shoreline is expected
Duration	Construction phase Indirect impacts (Dust, noise, ground-borne vibration and glare) during the construction phase would be temporary. Operation phase Indirect impacts (Dust, noise, ground-borne vibration and glare) during the operation phase would be permanent.
Reversibility	Construction phase Indirect impact (Dust, noise, ground-borne vibration and glare) during the construction phase would be reversible. Operation phase Indirect impacts (Dust, noise, ground-borne vibration and glare) during the operation phase would be irreversible.

Criterion	Description
Magnitude	Very low
Overall impact severity	**Insignificant**

Table 6.4 Potential Ecological Impacts on Developed Area

Criterion	Description
Habitat quality	Very low
Species	• Very low native floral and faunal diversity; • 2 flora species of conservation importance: *Aquilaria sinensis* and *Aralia chinensis*; and • 2 fauna species of conservation importance: Great Egret and Black Kite
Size/Abundance	Permanent loss About 0.24ha

Duration	Construction phase
	• Direct impacts
	  ○ Direct loss of Developed Area would be permanent
	• Indirect impacts
	  ○ Dust, noise, ground-borne vibration and glare impact would be temporary
	
	Operation phase
	Indirect impacts during the operation phase (noise, glare and increase in human disturbance) would be permanent.

Reversibility	Construction phase
	• Direct impacts
	  ○ Direct loss of Developed Area is irreversible
	• Indirect impacts
	  ○ Dust, noise, ground-borne vibration and glare impact would be reversible.
	
	Operation phase
	Indirect impacts during operation phase (noise, glare and increase in human disturbance) would be permanent.

Magnitude	Very low
Overall impact severity	**Insignificant**

Table 6.5 Potential Ecological Impacts on Mangrove

Criterion	Description
Habitat quality	Low
Species	Low floral and faunal diversity
Size/Abundance	No loss of Mangrove is expected
Duration	Construction phase Indirect impacts during the construction phase (dust, noise, ground-borne vibration and glare) would be temporary. Operation phase Indirect impacts during the operation phase (dust, noise, ground-borne vibration and glare) would be permanent.

Criterion	Description
Reversibility	Construction phase Indirect impact during the construction phase (dust, noise, ground-borne vibration and glare) would be reversible. Operation phase Indirect impacts during the operation phase (dust, noise, ground-borne vibration and glare) would be irreversible.
Magnitude	Very low
Overall impact severity	**Insignificant**

Table 6.6 Potential Ecological Impacts on Modified Watercourse

Criterion	Description
Habitat quality	Low
Species	Devoid of freshwater faunal diversity
Size/Abundance	Permanent loss About 142m

Duration	Construction phase
	• Direct impacts
	  ○ Direct loss of Modified Watercourses A and G would be permanent
	• Indirect impacts
	  ○ Construction site runoff would be temporary
	
	Operation phase
	Indirect impacts during the operation phase (Road runoff) would be permanent.

Reversibility	Construction phase
	• Direct impacts
	  ○ Direct loss of Modified Watercourses A and G is irreversible
	• Indirect impacts
	  ○ Construction site runoff would be reversible.
	
	Operation phase
	Indirect impacts during the operation phase (Road runoff) would be irreversible.

Magnitude	Low
Overall impact severity	**Minor** for the direct impact on Modified Watercourse **Minor to Moderate** for the indirect impact on Modified Watercourse

Table 6.7 Potential Ecological Impacts on Natural Rocky Shoreline

Criterion	Description
Habitat quality	Low to medium
Species	• Low floral and faunal diversity; and • 3 fauna species of conservation importance: Little Egret, White-throated Kingfisher and Collared Crow
Size/Abundance	No loss of Natural Rocky Shoreline is expected

Criterion	Description
Duration	Construction phase Indirect impacts during the construction phase (dust, noise, ground-borne vibration and glare) would be temporary. Operation phase Indirect impacts during the operation phase (dust, noise, ground-borne vibration and glare) would be permanent.
Reversibility	Construction phase Indirect impact during the construction phase (dust, noise, ground-borne vibration and glare) would be reversible. Operation phase Indirect impacts during the operation phase (dust, noise, ground-borne vibration and glare) would be irreversible.
Magnitude	Very low
Overall impact severity	**Insignificant**

Table 6.8 Potential Ecological Impacts on Natural Watercourse

Criterion	Description
Habitat quality	Low to medium
Species	• Low floral and faunal diversity; • 1 floral species of conservation importance: *Rhynchotechum ellipticum*; and • 8 fauna species of conservation importance: Little Egret, Big-headed Frog, Lesser Spiny Frog, Brown Wood Frog, Emerald Cascader, *Cryptopotamon anacoluthon*, *Nanhaipotamon hongkongense* and *Somanniathelphusa zanklon*
Size/Abundance	No loss of Natural Watercourse is expected
Duration	Construction phase Indirect impact during the construction phase (e.g. Construction site runoff, sewage from workforce) would be temporary. Operation phase Indirect impact during the operation phase (Runoff and sewage from the development) would be permanent.
Reversibility	Construction phase Indirect impact during the construction phase (e.g. Construction site runoff, sewage from workforce) would be reversible. Operation phase Indirect impacts during the operation phase (Runoff and sewage from the development) would be irreversible.
Magnitude	Low
Overall impact severity	**Minor to Moderate** for the indirect impact on Natural Watercourse

Table 6.9 Potential Ecological Impacts on Rural Plantation

Criterion	Description
Habitat quality	Low
Species	• Low floral and faunal diversity • 1 fauna species of conservation importance: Short-nosed Fruit Bat
Size/Abundance	Permanent loss About 0.02ha

Criterion	Description

Duration	Construction phase
	• Direct impacts
	  ○ Direct loss of Plantation would be permanent
	• Indirect impacts
	  ○ Noise, ground-borne vibration and glare impact would be temporary
	
	Operation phase
	Indirect impacts during the operation phase (noise, glare and increase in human disturbance) would be permanent.

Reversibility	Construction phase
	• Direct impacts
	  ○ Direct loss of Rural Plantation is irreversible
	• Indirect impacts
	  ○ Indirect impacts during the operation phase (dust, noise, ground-borne vibration and glare impact) would be reversible.
	
	Operation phase
	Indirect impacts during the operation phase (noise, glare and increase in human disturbance) would be irreversible.

Magnitude	Low
Overall impact severity	**Minor**

Table 6.10 Potential Ecological Impacts on Shrubland

Criterion	Description
Habitat quality	Low
Species	• Low floral and faunal diversity; • 2 flora species of conservation importance: *Aquilaria sinensis*; and • 4 fauna species of conservation importance: Rhesus Macaque, Indian Forest Skink, Blackvein Sergeant and Danaid Eggfly
Size/Abundance	No loss of Shrubland is expected
Duration	Construction phase Indirect impact (Dust, noise, ground-borne vibration, and glare) during the construction phase would be temporary. Operation phase Indirect impact (noise, glare and increase in human disturbance) during the operation phase would be permanent.
Reversibility	Construction phase Indirect impact during the construction phase (Dust, noise, ground-borne vibration, and glare) would be reversible. Operation phase Indirect impact (noise, glare and increase in human disturbance) during the operation phase would be irreversible.
Magnitude	Low
Overall impact severity	**Minor**

Table 6.11 Potential Ecological Impacts on Woodland

Criterion	Description
Habitat quality	Medium

Criterion	Description
Species	• Low diversity of birds, herpetofauna, odonate and firefly; and • Medium diversity of flora, terrestrial mammal and butterfly • 12 flora species of conservation importance: *Aquilaria sinensis*, *Aralia chinensis*, *Artocarpus tonkinensis*, *Cibotium barometz*, *Cyclobalanopsis edithiae*, *Dioscorea pentaphylla*, *Elaeocarpus dubius*, *Ixonanthes reticulata*, *Pavetta hongkongensis*, *Phrynium placentarium*, *Pyrenaria spectabilis* and *Torenia fordii*; and • 25 fauna species of conservation importance: Rhesus Macaque, Red Muntjac, Leopard Cat, East Asian Porcupine, Chinese Pangolin, Short-nosed Fruit Bat, Pallas's Squirrel, Masked Palm Civet, Small Indian Civet, Great Egret, Little Egret, Crested Serpent Eagle, Crested Goshawk, Black Kite, Greater Coucal, Grey-chinned Minivet, Ashy Drongo, Collared Crow, Rufous-capped Babbler, Black-throated Laughingthrush, Brown Wood Frog, Four-clawed Gecko, Indian Forest Skink, Metallic Cerulean and Blackvein Sergeant
Size/Abundance	<u>Permanent loss</u> About 0.36ha

Duration	<u>Construction phase</u>
	• Direct impacts
	  ○ Direct loss of Woodland would be permanent
	• Indirect impacts
	  ○ Indirect impacts during the operation phase (Dust, noise, ground-borne vibration and glare impact) would be temporary
	
	<u>Operation phase</u>
	Indirect impacts during the operation phase (Dust, noise, glare and increase in human disturbance) would be permanent.

Reversibility	<u>Construction phase</u>
	• Direct impacts
	  ○ Direct loss of Woodland is irreversible
	• Indirect impacts
	  ○ Indirect impacts during the operation phase (Dust, noise, ground-borne vibration and glare impact) would be reversible
	
	<u>Operation phase</u>
	Indirect impacts during the operation phase (Dust, noise, glare and increase in human disturbance) would be irreversible

Magnitude	Low to medium for the direct impact on Woodland during the construction phase Low for the indirect impact on Woodland during the construction and operation phases
Overall impact severity	**Minor to Moderate** for the direct impact on Woodland during the construction phase **Minor** for the indirect impact on Woodland during the construction and operation phases

7. MITIGATION OF ECOLOGICAL IMPACTS

7.1 General

7.1.1 Making reference to the principles in Annex 16 of EIAO-TM and EIAO GN No. 3/2010, ecological impacts on important habitats and the associated wildlife caused by the proposed development should be avoided, minimized and mitigated where practicable. The potential impacts arising from the construction and operation of the proposed development have been assessed. Most anticipated ecological impacts are considered **Minor** or **Insignificant**, specific ecological mitigation measures are not required.

7.2 Avoidance

Avoidance of Recognized Site of Conservation Importance

7.2.1 The Indicative Scheme does not fall within any recognized sites of conservation importance. No direct impact will thus be exerted on them.

7.3 Minimization

Preservation, Transplantation and/or Compensatory Planting of Plant Species of Conservation Importance

7.3.1 In view of records of plant species of conservation importance in the Indicative Scheme (i.e. *Aralia chinensis*, *Cibotium barometz* and *Rhynochotechum formosanum*), preservation, transplantation and/or compensatory planting of plant species of conservation importance, including but not limited to *Aralia chinensis*, *Cibotium barometz* and *Rhynochotechum formosanum*, will be conducted before construction works. Priority should be given to on-site preservation, especially for large-sized individuals, and followed by transplantation, which is more feasible for small-sized individuals/seedlings. Compensatory planting of plant species of conservation importance would be the last resort if on-site preservation and transplantation are considered unfeasible. Prior to construction, plant species of conservation importance will be identified and those intended to be preserved will be fenced off onsite. The proposed recipient site for individuals of plant species of conservation importance to be transplanted is the Woodland Compensation Site as recommended in **Figure 7.1**.

Minimization of Water Quality Impacts

7.3.2 In accordance with the Practice Note for Professional Persons on Construction Site Drainage, EPD, 2024 (ProPECC PN 2/24), mitigation measures for construction site runoff detailed as follows should be adopted for mitigating water quality impact during the construction phase.

- At the commencement of site establishment, perimeter cut-off drains should be created to divert off-site water around the site, along with internal drainage works and erosion and sediment control facilities. The site should feature channels (both temporary and permanent drainage pipes and culverts), earth bunds, or sandbag barriers to direct stormwater to silt removal facilities. The contractor will undertake the design of the temporary on-site drainage system prior to starting construction;
- Natural stormwater diversion should be implemented wherever feasible. The design of temporary on-site drainage must ensure that runoff does not flow over the site surface, construction machinery, or equipment to minimize or prevent polluted runoff. It is advisable to use sedimentation

tanks with adequate capacity, consisting of pre-formed individual cells of about 6 to 8m³ each, as a general mitigation measure for settling surface runoff before disposal. The system should be adaptable to manage multiple inputs from various sources and suitable for situations where the influent is pumped;

- Dikes or embankments for flood protection should be constructed around the edges of earthwork areas. Temporary ditches must be installed to direct runoff into a suitable watercourse, utilizing a silt/sediment trap. These traps should be integrated into the permanent drainage channels to improve sediment deposition rates.
- Efficient silt removal facilities should be designed in accordance with the guidelines found in Appendix A1 of ProPECC PN 2/24. The contractor is responsible for the detailed design of the sand/silt traps before construction begins.
- To minimize surface excavation during the rainy season (April to September), construction works should be planned carefully. All exposed earth areas should be finished and vegetated promptly after earthworks are completed. If soil excavation cannot be avoided during the rainy season or when rainstorms are likely, exposed slopes should be protected with tarpaulin or other coverings. Temporary access roads should be fortified with crushed stone or gravel as excavation proceeds. Intercepting channels should be created (for instance, at the edge of the excavation) to redirect storm runoff away from exposed soil surfaces. There should always be arrangements in place to ensure that sufficient surface protection measures can be safely executed before rainstorms arrive.
- The final surfaces of earthworks should be thoroughly compacted, and any subsequent permanent work or surface protection must be implemented immediately after the surfaces are formed to prevent erosion from rainstorms. Appropriate drainage, such as intercepting channels, should be installed where needed;
- All drainage systems and erosion and sediment control structures should be inspected and maintained regularly to ensure they operate efficiently at all times, especially after rainstorms. Deposited silt and grit should be removed routinely and disposed of by spreading it evenly over stable, vegetated areas;
- Actions should be taken to limit the flow of site drainage into excavations. If it is necessary to excavate trenches during wet periods, this should be done in short sections whenever possible. Water extracted from trenches or foundation excavations should be released into storm drains through silt removal systems;
- During rainstorms, it is important to cover all open stockpiles of construction materials, such as aggregates, sand, and fill, with tarpaulin or comparable fabric. Measures should be taken to prevent the runoff of construction materials, soil, silt, or debris into any drainage system.
- Manholes, including those that are newly built, should always be adequately covered and temporarily sealed to prevent silt, construction materials, or debris from being washed into the drainage system, as well as stopping storm runoff from entering foul sewers. It is important to prevent surface runoff from discharging into foul sewers to avoid overloading the sewer system;
- Precautions should be taken throughout the year when rainstorms are likely, with specific actions outlined for when a storm is imminent or predicted, as well as during and after the storm. A summary of these actions can be found in Appendix A2 of ProPECC PN 2/24. Particular emphasis should be placed on controlling silty surface runoff during storm events.

- All vehicles and equipment must be washed before exiting a construction site to ensure no earth, mud, or debris is left on roads. Adequately designed wheel washing facilities should be available at every construction site exit where practical. The wash water should have sand and silt removed weekly to ensure the process remains effective. The access road leading to and exiting from the wheel wash bay to the public road should be paved with a sufficient slope toward the bay to prevent tracking of soil and silty water onto public roads and drainage systems.
- Oil interceptors need to be placed in the drainage system downstream from sources of oil or fuel pollution. They should be emptied and cleaned regularly to prevent oil and grease from entering the stormwater drainage system after accidental spillage. A bypass should be established to prevent flushing during intense rain.
- Construction debris, solid waste, and rubbish present on-site must be managed, collected, and disposed of properly to avoid water quality impact.
- All fuel tanks and storage facilities must be locked and situated on sealed areas, within bunds that have a capacity equal to 110% of the largest tank's storage to prevent spilled fuel oils from reaching nearby water-sensitive environments.
- When groundwater is pumped out of wells to lower the groundwater level for basement or foundation construction, it should be discharged into storm drains after clearing silt in silt removal facilities; and
- In the context of site investigation or rock/soil anchoring, water used for ground boring and drilling should ideally be recirculated after sedimentation. When disposal is unavoidable, the wastewater should be discharged to storm drains using silt removal apparatus.

7.3.3 For managing sewage from the construction workforce, portable chemical toilets and sewage holding tanks should be set up. A licensed contractor should be employed to ensure the provision and proper upkeep of these facilities. Notices should be posted in easily noticeable spots to remind workers not to discharge any sewage or wastewater into the nearby environment during construction. Regular environmental audits are necessary to control any improper practices and to ensure continuous improvements in environmental performance on site.

7.3.4 Besides, measures described in Environment, Transport and Works Bureau (ETWB) Technical Circular (TC) (Works) No. 5/2005 “Protection of natural streams / rivers from adverse impacts arising from construction works” should be adopted for works near watercourses where applicable. The major measures for constriction works in close proximity of inland waters include the following.

- Construction and dusty materials should be stockpiled and located away from watercourses, contained in bunded areas and covered with tarpaulin;
- During storage, construction debris and soil must be covered with tarpaulins. Arrangements should be made for the prompt disposal of materials to keep them from entering nearby watercourses;
- Water pumps should be utilized to gather wastewater and surface runoff from construction activities. The collected wastewater should be treated properly before being discharged;
- Along the edge of the work area, toe-boards and bunds must be set up to prevent debris and wastewater from spilling into nearby water bodies;
- To prevent soil and mud from washing into inland water bodies, appropriate shoring may need to be erected;
- Construction wastewater, site runoff, and sewage should be collected and treated appropriately;

- Whenever feasible, construction work near inland waters should take place in the dry season, particularly when surface channel or stream flow is low; and
- To reduce the disturbance to surface water, the use of smaller or fewer construction plants could be recommended in areas near watercourses.

7.3.5 Prior to the proposed removal and diversion of the watercourses, it is recommended that a U-channel and a temporary channel should be built and implemented before the proposed removal and diversion of the watercourses. The watercourses should remain undisturbed during the construction process. In addition, good site practices as described in ETWB TC (Works) No. 5/2005 "Protection of natural streams / rivers from adverse impacts arising from construction works" and ProPECC PN 2/24 "Construction Site Drainage" should be adopted where applicable. The following major measures should be implemented.

- Appropriate installation of cofferdams and impermeable sheet piles is required to isolate the water flow from the construction site;
- Before construction begins, dewatering or flow diversion should be carried out to avoid water overflow into the surrounding area;
- It is preferable to conduct watercourse removal and flow diversion in the dry season, as long as water flow is low;
- Water that is drained from the course will be rerouted to either new or temporary drainage for the purpose of diversion. For watercourse removal, the drained water should be collected and treated to comply with WPCO and TM-DSS standards before discharge; and
- Any land-based sediment excavated in the process of watercourse removal or diversion must be stored in bunded zones, away from watercourses, and covered with tarpaulin before it is transported out of the area.

7.3.6 To mitigate water quality impact arising from runoff from the development during the operation phase, proper drainage systems with silt traps and oil interceptors should be installed and connected to the existing drainage system. Control of runoff will be achieved through best management practices. Runoff will be intercepted by effectively designed silt traps placed at appropriate intervals to capture roadside debris, refuse, and fallen leaves before they drain into the drainage system. The Project Proponent or assigned operational teams should clean roads and open areas at the drainage outlets before a storm occurs. It is recommended that these cleaning activities take place during low traffic times, preferably using manual methods or mechanical devices such as vacuum trucks with side brooms to enhance pollutant removal efficiency. Collected pollutants will be transported off-site for disposal in landfills. This process will greatly reduce pollution levels in stormwater.

7.3.7 Using fertilizers or pesticides in landscaping during the operation phase can result in surface runoff into adjacent water bodies. Fertilizers and pesticides should be applied according to a proper schedule and within the recommended dosage to avoid excessive use. Alternatively, considering organic or more environmentally friendly options can help minimize water quality impacts from surface runoff.

Minimization of Construction and Operation Disturbance

7.3.8 During the construction phase, hoarding would be erected along the construction site boundary. Together with general good site practices which will be undertaken during the construction phase, potential construction disturbance to the wildlife inhabiting nearby areas could be minimized.

7.3.9 During the operation phase, landscape buffer mostly consisting of shrubs, and roadside planting would be established around the Application Site and part of the indicative access road respectively. Along with the retained trees in the Application Site, they will screen operation disturbance (e.g. light glare and traffic flow) to a certain extent. The impact on nearby habitats and species due to operation disturbance will thus be minimized.

7.4 Compensation

Woodland Compensation

7.4.1 Woodland compensation will be required for the permanent loss of about 0.36ha of Woodland. The option of on-site woodland compensation is not considered feasible due to limited space in the Indicative Scheme and on-site impracticability. Off-site compensatory woodland planting is considered the only feasible option.

7.4.2 Compensation Principle – Following the "like-for-like" basis for provision of offsite mitigation measures to the extent that is practicable with reference to Annex 16 of EIAO-TM, a compensatory woodland planting ratio of 1:1 in terms of compensatory planting area will be considered and thorough justification for any scenario deviating from the aforesaid ratio to be eventually adopted will be provided.

7.4.3 Compensation Site Consideration – During the site selection process, terrestrial areas not mapped as Woodland and with a slope angle about or smaller than 35° on leased land owned by the Applicants and outside recognized sites of conservation importance will be considered as potential woodland compensation sites. Compensatory woodlands can be established on Agricultural Land or Shrubland to facilitate succession to Woodland. At this stage, areas east and west of the Indicative Scheme fulfilling the criteria above, are identified as potential woodland compensation sites (**Figure 7.1**). Photos of the habitats characterizing the potential woodland compensation sites are provided in **Figure 7.2**. These lots are in close vicinity to the adjacent Woodland. It is anticipated that upon successful establishment of the in-planted species described in **Section 7.4.4**, the compensatory woodland will connect to the existing Woodland, further enhancing the connectivity between different patches of Woodland in the assessment area.

7.4.4 Planting Composition – Native tree species are preferred for the purpose of compensatory planting. The native tree species to be selected should be referenced to the native trees recorded in the existing similar habitat in the assessment area. Early and timely arrangement with plant nurseries for propagation of native tree seedlings should be made to ensure the availability of both the species and the quantity required. At maturity, the compensatory planting sites would create a habitat with layer stratification (i.e. canopy, middle layer and understorey), which promotes habitat complexity and enhances the ecological value. A list of potential native tree species is tabulated in **Table 7.1**.

Table 7.1 Potential Native Tree Species for Woodland Compensation

Potential species	Chinese name	Growth form
Bischofia javanica	秋楓	Tree
Celtis sinensis	朴樹	Tree
Endospermum chinense	黃桐	Tree
Ficus fistulosa	水同木	Tree

Potential species	Chinese name	Growth form
Ficus hispida	對葉榕	Tree
Ficus variegata	青果榕	Tree
Ficus virens	黃葛樹	Tree
Litsea monopetala	假柿木薑子	Tree
Machilus chekiangensis	浙江潤楠	Tree
Machilus pauhoi	刨花潤楠	Tree
Prunus topengii	腎果木	Tree
Saurauia tristyla	水東哥	Tree
Schefflera heptaphylla	鵝掌柴	Tree
Sterculia lanceolata	假蘋婆	Tree

7.4.5 Establishment and Maintenance – The project proponent or future property management of the proposed development will be responsible for the maintenance of the woodland compensation sites.

7.5 Precautionary Measures

Good Practice of Night-time Light

7.5.1 Although mitigation measures would not be required for the potential night-time light impact, it is recommended to avoid orientating any external flood light towards the direction of TPKNR during both construction and operation phases to minimize any potential disturbance.

7.6 Residual Impact

7.6.1 With the abovementioned mitigation measures, the only residual impacts would be the permanent loss of around 1.16ha of Agricultural Land, 0.24ha of Developed Area, 142m of Modified Watercourse and 0.02ha of Rural Plantation. The level of residual impact is considered acceptable.

7.7 Cumulative Impact

7.7.1 **Section 2.4** states that only one concurrent project is identified within 500m from the boundary of the Project.

- Proposed Minor Relaxation of Building Height Restriction for Proposed Social Welfare Facility (Residential Care Home for Persons with Disabilities) in "Government, Institution or Community" and "Green Belt" Zones, Government Land at "Former Fish Marketing Organization Tai Po Primary School", Wong Yi Au, Tai Po

7.7.2 The Application Site of this concurrent project comprises buildings and structures and the Planning Application is to seek approval from TPB on the Proposed Social Welfare Facility at the Site. The implementation programme of the concurrent Project states that the road access and demolition works is anticipated to be completed at the end of 2024, while the construction of the Proposed Development is tentatively scheduled to be commenced at the start and for completion by the

end of 2026. The relocation of Home of Loving Faithfulness is tentatively scheduled to be start in early 2027.

7.7.3 As the timeframe of the works for the concurrent Project does not overlap with that of the current Project, no cumulative ecological impact is anticipated.

7.8 Summary of Potential Ecological Impacts and Mitigation Measures

7.8.1 A summary of potential ecological impacts anticipated to occur in construction and operation phases, with sources, receivers, nature, significance and mitigation required, are provided in **Table 7.2**.

Table 7.2 Summary of Potential Ecological Impacts

Impact	Source	Receiver	Nature of impact	Overall impact significance in the absence of mitigation	Requirement of mitigation	Residual impact
Construction Phase – Direct Impact						
Permanent loss of habitats	Site formation works	Agricultural Land, Developed Area, Modified Watercourse, Rural Plantation and Woodland in the Indicative Scheme	• Agricultural Land: About 1.16ha • Developed Area: About 0.24ha • Modified Watercourse: About 142m • Rural Plantation: About 0.02ha • Woodland: About 0.36ha	• Agricultural Land: **Minor** • Developed Area: **Insignificant** • Modified Watercourse: **Minor** • Rural Plantation: **Minor** • Woodland: **Minor to Moderate**	• Woodland compensation for permanent loss of Woodland in 1:1 area ratio • Nil for Agricultural Land, Developed Area, Modified Watercourse and Rural Plantation	• Agricultural Land: About 1.16ha • Developed Area: About 0.24ha • Modified Watercourse: About 142m • Rural Plantation: About 0.02ha
Habitat fragmentation	Site formation works	Woodland	Fragmentation of Woodland	**Insignificant**	Nil	Nil
Direct impact on flora, including those of conservation importance	Site formation works	*Aralia chinensis*, *Cibotium barometz* and *Rhynochotechum formosanum*	Direct loss of *Aralia chinensis*, *Cibotium barometz* and *Rhynochotechum formosanum*	**Minor to Moderate**	Onsite preservation, transplantation and/or compensatory planting	Nil
Direct impact on fauna, including those of conservation importance	Site formation works	All wildlife recorded in the Indicative Scheme, including those of conservation importance	• Loss of habitat and foraging ground • Potential direct injury/mortality	**Minor**	Nil	Nil
Construction Phase – Indirect Impact						
Construction disturbance	Construction activities	• Recognized site of conservation	Construction disturbance including noise,	• TPKNR: **Insignificant** • Agricultural Land, Rural Plantation,	Nil	Nil

Impact	Source	Receiver	Nature of impact	Overall impact significance in the absence of mitigation	Requirement of mitigation	Residual impact
		importance (i.e. TPKNR) • Habitats and associated wildlife, including those of conservation importance	glare, dust, ground-borne vibration and other human activities	Shrubland and Woodland: **Minor** • Artificial Shoreline, Developed Area, Mangrove, Natural Rocky Shoreline: **Insignificant** • Wildlife, including those of conservation importance: **Minor**		
Water quality impact	Construction site runoff, discharge and accidental spillage	Modified Watercourses and Natural Watercourses	Potentially deterioration of water quality, increase in suspended solids and potential contaminants	**Minor to Moderate**	Minimization of water quality impacts in accordance with Section 7.3	Nil
Operation Phase – Direct Impact						
Habitat loss and fragmentation	Operation of the Indicative Scheme	Habitats and associated wildlife	Neither additional habitat loss nor habitat fragmentation would occur	No	Nil	Nil

Impact	Source	Receiver	Nature of impact	Overall impact significance in the absence of mitigation	Requirement of mitigation	Residual impact
Direct injury / mortality to wildlife	Operation of the Indicative Scheme	All wildlife, including birds	• Potential direct injury / mortality to non-volant fauna species (e.g. Terrestrial mammal and herpetofauna species) • Birds potentially colliding with the vertical noise barriers along the indicative access road	**Minor**	Nil	Nil
Operation Phase – Indirect Impact						
Operation disturbance	Operation of the Indicative Scheme	• Recognized site of conservation importance (i.e. TPKNR) • Habitats and associated wildlife, including those of conservation importance	Increase in dust, glare, noise, surface runoff	• TPKNR: **Insignificant** • Agricultural Land, Rural Plantation, Shrubland and Woodland: **Minor** • Artificial Shoreline, Developed Area, Mangrove, Natural Rocky Shoreline: **Insignificant** • Habitats and wildlife, including those of conservation importance: **Minor**	Nil	Nil
Water quality impact	Runoff and sewage from the development, and the use of fertilisers and	Modified Watercourse and Natural Watercourse	Potentially deterioration of water quality, increase in	**Minor to Moderate**	Minimization of water quality impacts in	Nil

Impact	Source	Receiver	Nature of impact	Overall impact significance in the absence of mitigation	Requirement of mitigation	Residual impact
	pesticides for landscaping due to the operation of the Indicative Scheme		suspended solids and potential contaminants		accordance with Section 7.3	

8. CONCLUSION

8.1.1 This Ecological Impact Assessment Report comprises results of literature review and ecological surveys conducted for filling data gap, identifying ecological impacts and proposing associated mitigation measures for the Indicative Scheme. Eleven types of habitats, including Agricultural Land, Artificial Hard Shoreline, Developed Area, Mangrove, Modified Watercourse, Natural Rocky Shoreline, Natural Watercourse, Rural Plantation, Sea, Shrubland and Woodland, were identified during the survey period. Habitats and species of conservation importance were evaluated with reference to the criteria provided in Annex 8 of EIAO-TM.

8.1.2 Potential direct impacts during the construction phase include permanent habitat loss, habitat fragmentation and harm/mortality to flora and fauna. Around 1.16ha of Agricultural Land, 0.24ha of Developed Area, 142m of Modified Watercourse, 0.02ha of Rural Plantation and 0.36ha of Woodland are anticipated to be permanently lost. Ther permanent loss of Agricultural Land, Developed Area, Modified Watercourse and Rural Plantation is considered **Minor** or **Insignificant**. As the permanent loss of around 0.36ha of Woodland is expected to incur **Minor to Moderate** impact, it would be mitigated by provision of woodland compensation in 1:1 area ratio. Habitat fragmentation impact during the construction phase, meanwhile, is expected to be **Minor**, and no specific mitigation measure would be required. A total of three flora species of conservation importance, including *Aralia chinensis*, *Cibotium barometz* and *Rhynchotechum ellipticum* were recorded in the Indicative Scheme. **Minor to Moderate** impact on flora species of conservation importance is expected in the absence of mitigation. To mitigate potential impact on them, a detailed preservation, transplantation and or compensatory planting plan would be prepared and submitted prior to the commencement of works. Meanwhile, no specific mitigation would be required for the **Minor** impact on fauna, including those of conservation importance.

8.1.3 Potential indirect impacts during the construction phase include construction disturbance on terrestrial habitats, flora and fauna, as well as water quality impacts. While the former is anticipated to produce **Minor** impact only, the latter is considered **Minor to Moderate** and mitigation measures for water quality detailed in Section 7.3 are recommended to be adopted.

8.1.4 During the operation phase, the only potential direct impact expected to occur is direct injury / mortality to wildlife, while the potential indirect impacts include operation disturbance and water quality impact. While direct injury / mortality to wildlife and operation disturbance impact are expected to be **Minor** and no specific mitigation is required, water quality impact is considered Minor to Moderate and mitigation measures detailed in Section 7.3 are recommended to be adopted.

8.1.5 With the implementation of the aforementioned mitigation measures, no unacceptable ecological impacts are anticipated to arise from the Project.

Figure 1.1 Location of the Application Site and the Draft Tai Po Outline Zoning Plan No. S/TP/31

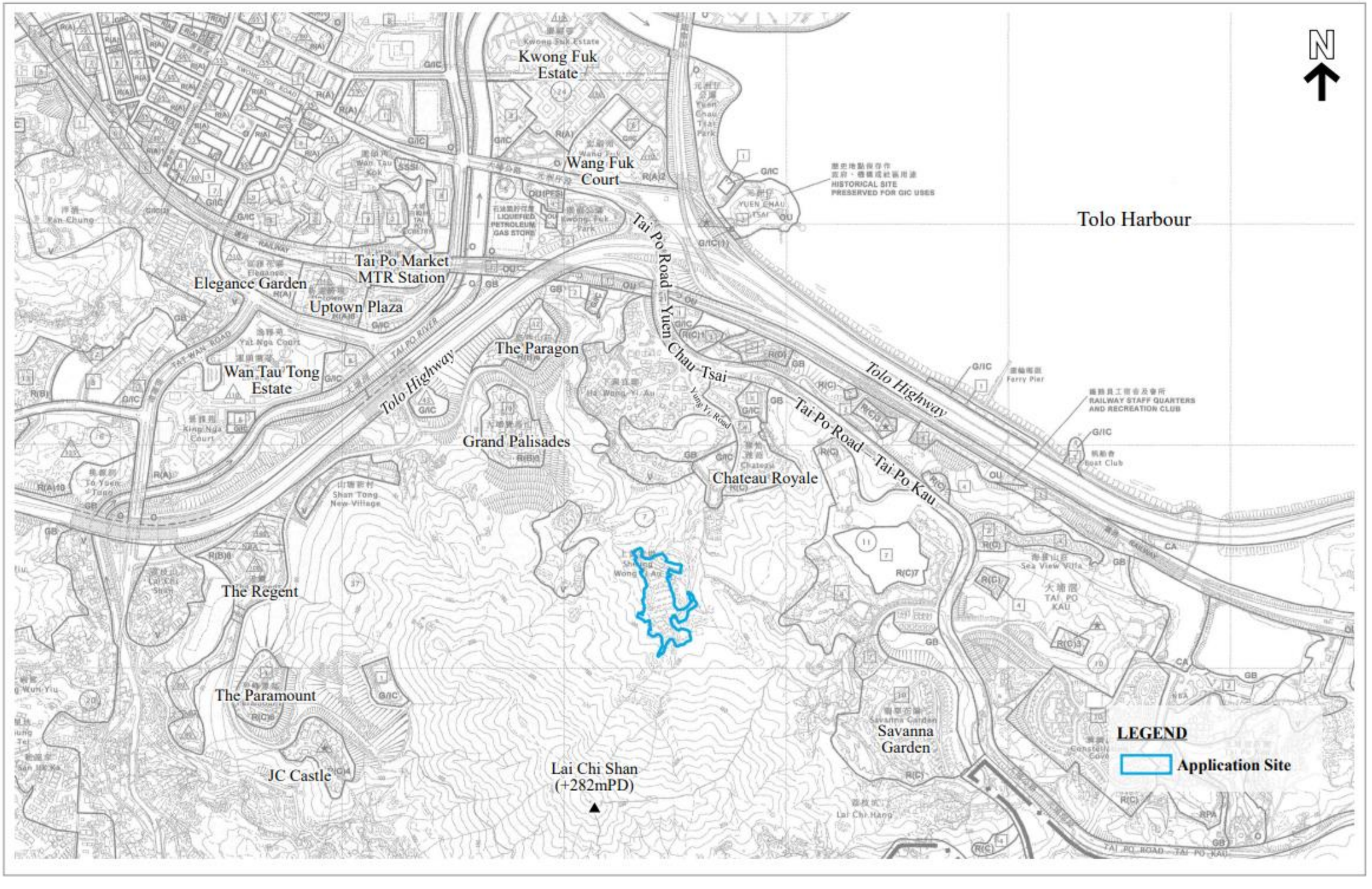


Figure 1.2 Locations of the Application Site, Indicative Access Road and Saltwater Pumping Station, and Assessment Area

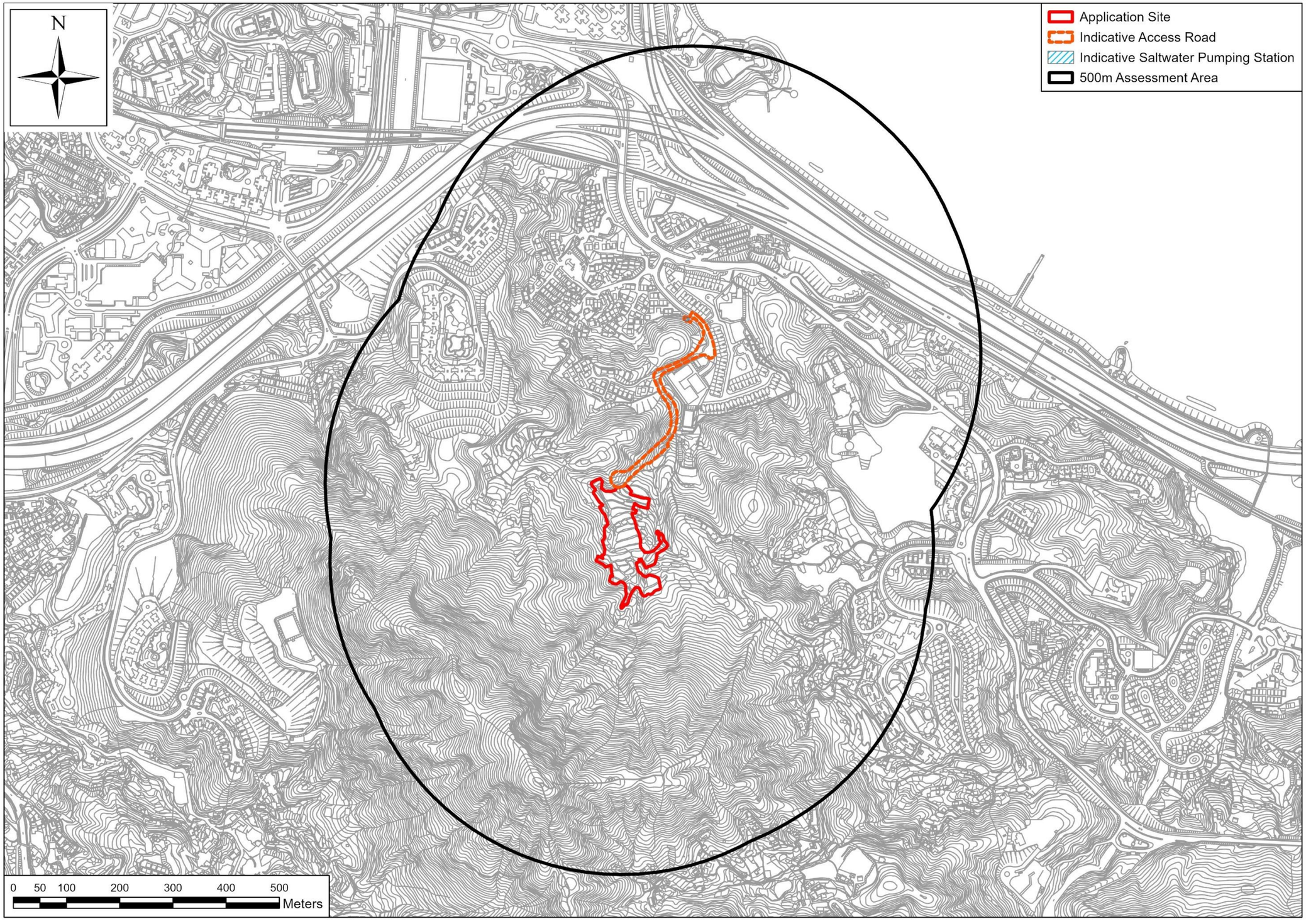


Figure 1.2a Locations of the Indicative Access Road and Saltwater Pumping Station (Zoom-In)

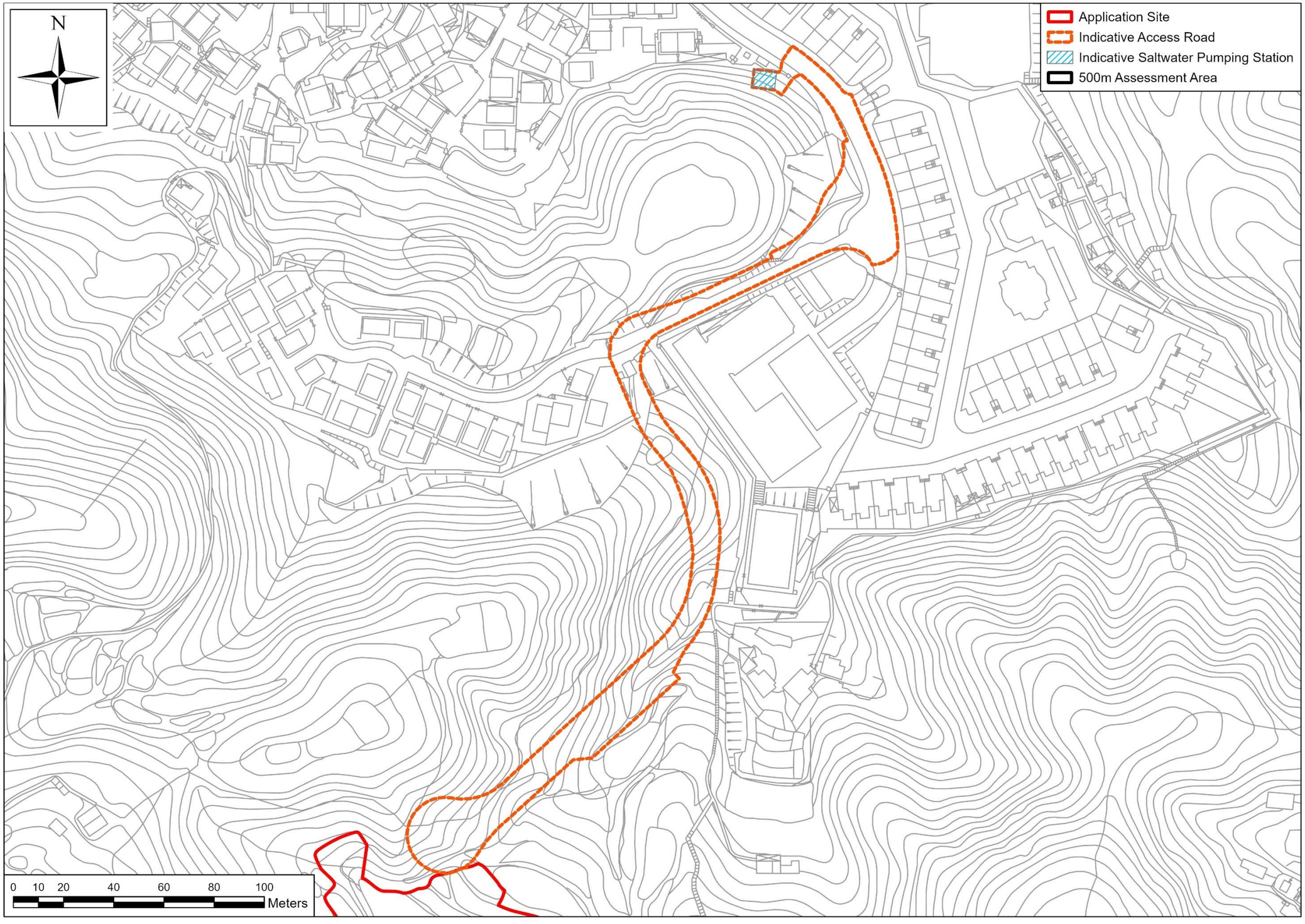


Figure 4.1 Location of Tai Po Kau Nature Reserve

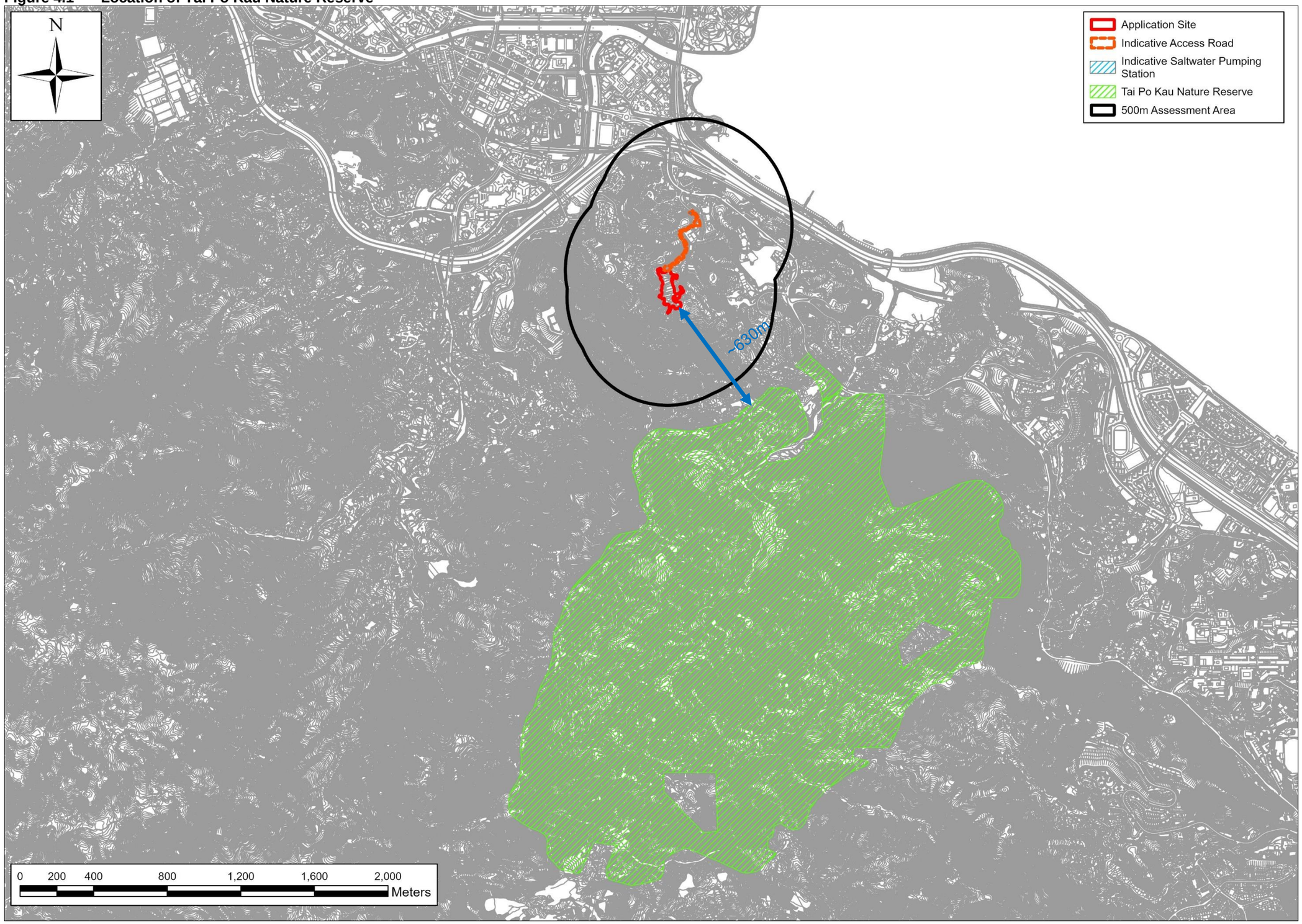
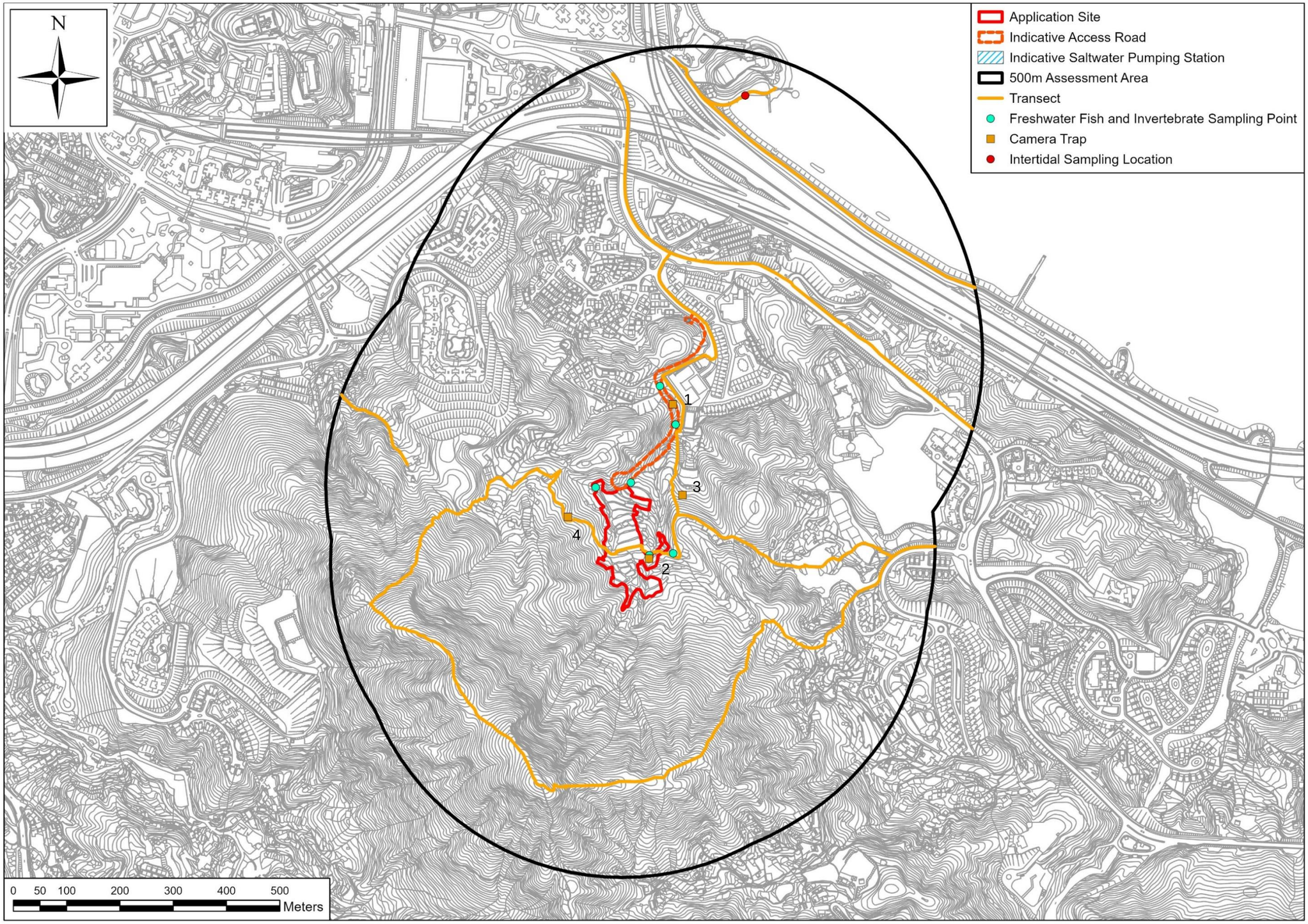
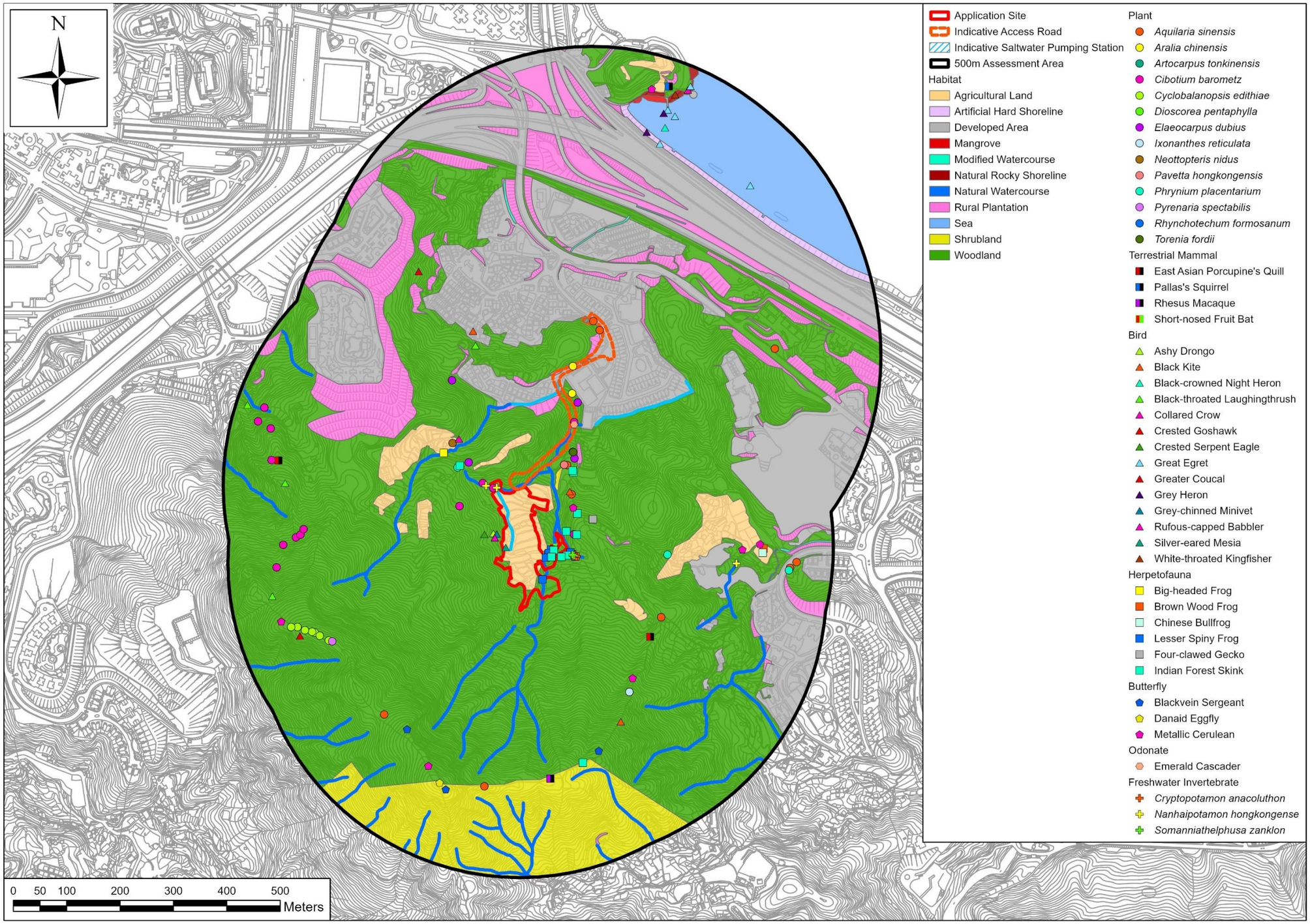


Figure 5.1 Locations of Transects, Freshwater Fish and Invertebrate Sampling Points, Camera Traps and Intertidal Sampling Location



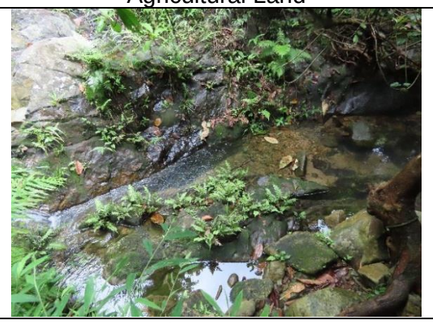
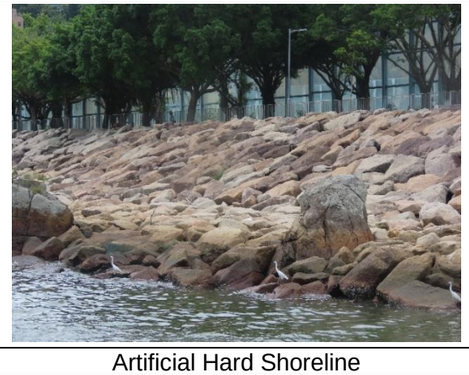
Note: The location of camera traps is denoted by numbers (**Appendix B2** refers).

Figure 5.2 Habitats and Locations of Species of Conservation Importance Recorded in the Indicative Scheme and Assessment Area during the Survey Period (Excluding Camera Trap and Bat Detector Findings)



Note: As Little Egret was abundantly recorded during the survey period, the location of this species is not specifically pinpointed.

Figure 5.3 Representative Photos of Habitats Taken during the Survey Period

Indicative Scheme		
		
Agricultural Land	Developed Area	Modified Watercourse A
		
Natural Watercourse B	Natural Watercourse C	Natural Watercourse D
		
Natural Watercourse E	Modified Watercourse G	Woodland
Assessment area		
		
Agricultural Land	Artificial Hard Shoreline	Developed Area

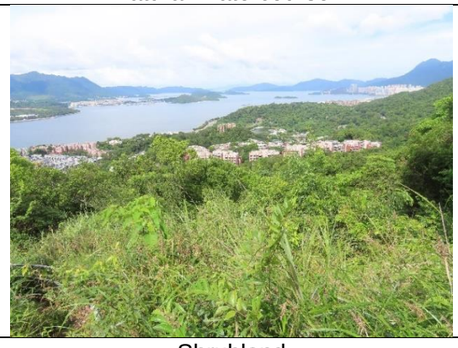
		
Mangrove	Modified Watercourse G	Natural Rocky Shoreline
		
Natural Watercourse C	Natural Watercourse F	Rural Plantation
		
Sea	Shrubland	Woodland

Figure 5.4 Habitats and Locations of Non-Bat Species of Conservation Importance Recorded in the Indicative Scheme during the Survey Period (Excluding Camera Trap and Bat Detector Findings)

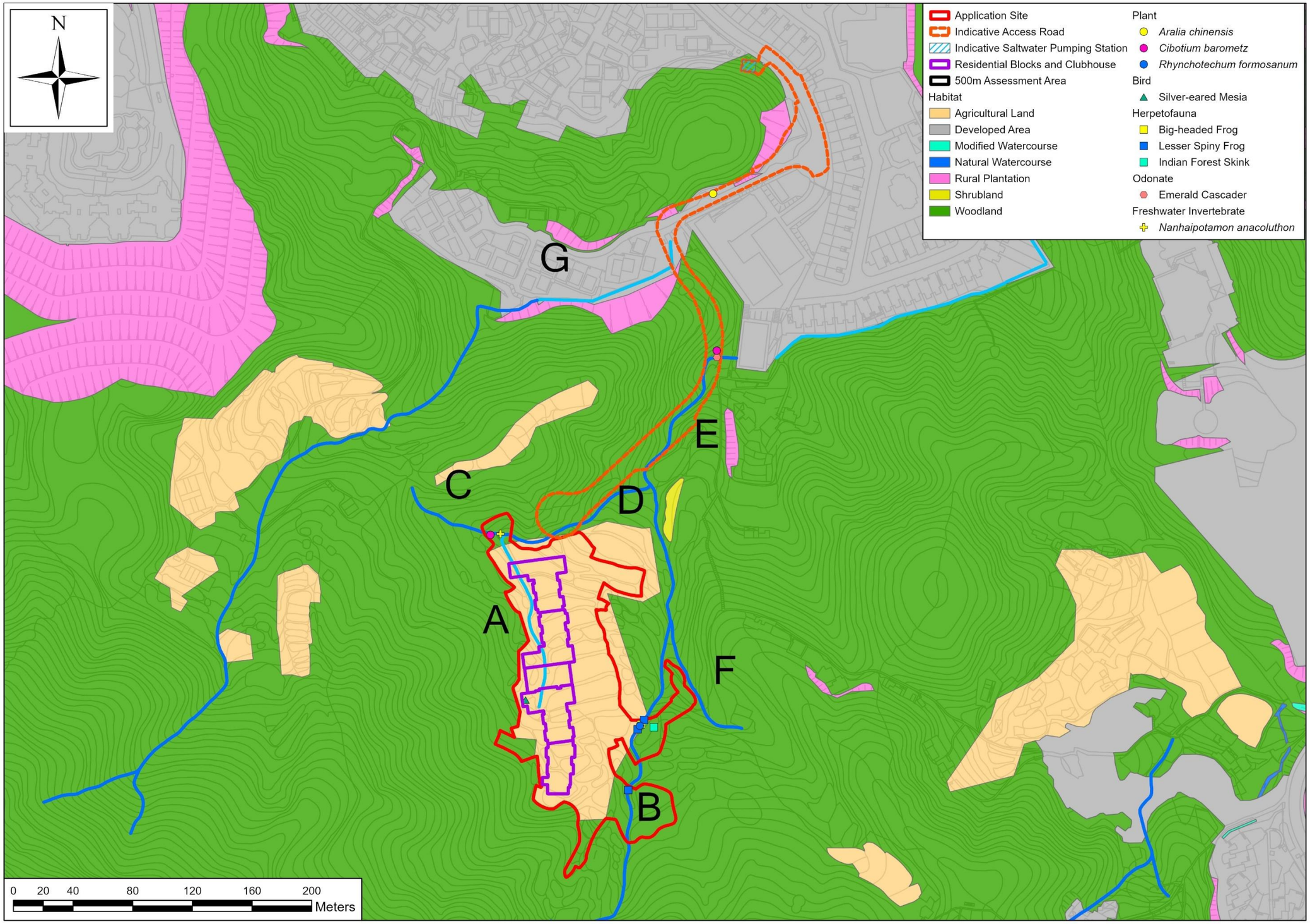


Figure 5.5 Photos of Selected Species of Conservation Importance Recorded during the Survey Period

Plant		
		
Aquilaria sinensis	*Aralia chinensis*	*Artocarpus tonkinensis*
		
Cibotium barometz	*Cyclobalanopsis edithiae*	*Dioscorea pentaphylla*
		
Elaeocarpus dubius	*Ixonanthes reticulata*	*Neottopteris nidus*

		
Pavetta hongkongensis	*Phrynium placentarium*	*Pyrenaria spectabilis*
		
Rhynchotechum ellipticum	*Torenia fordii*	
Terrestrial mammal		
		
Rhesus Macaque	Red Muntjac	East Asian Porcupine

		
Chinese Pangolin	Masked Palm Civet	Small Indian Civet
Bird		
		
Little Egret	Great Egret	Grey-chinned Minivet
Herpetofauna		
		
Big-headed Frog	Brown Wood Frog	
Butterfly		
		
Metallic Cerulean	Blackvein Sergeant	Danaid Eggfly

Freshwater invertebrate		
		
Cryptopotamon anacoluthon	*Nanhaipotamon hongkongense*	

Figure 6.1 Approximate Extent of the Elevated Road and Preserved Woodland

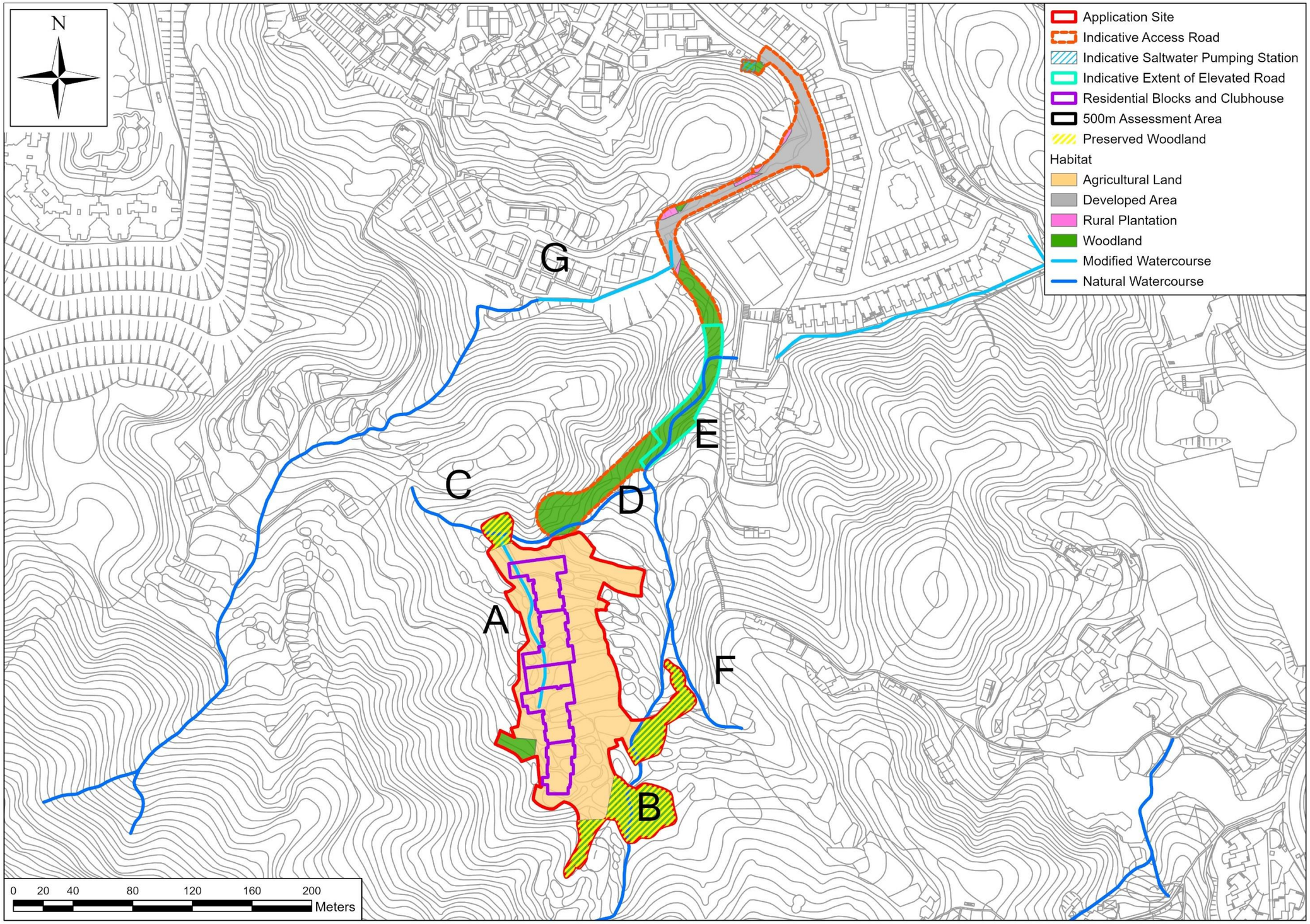


Figure 7.1 Location of Woodland Compensation Sites

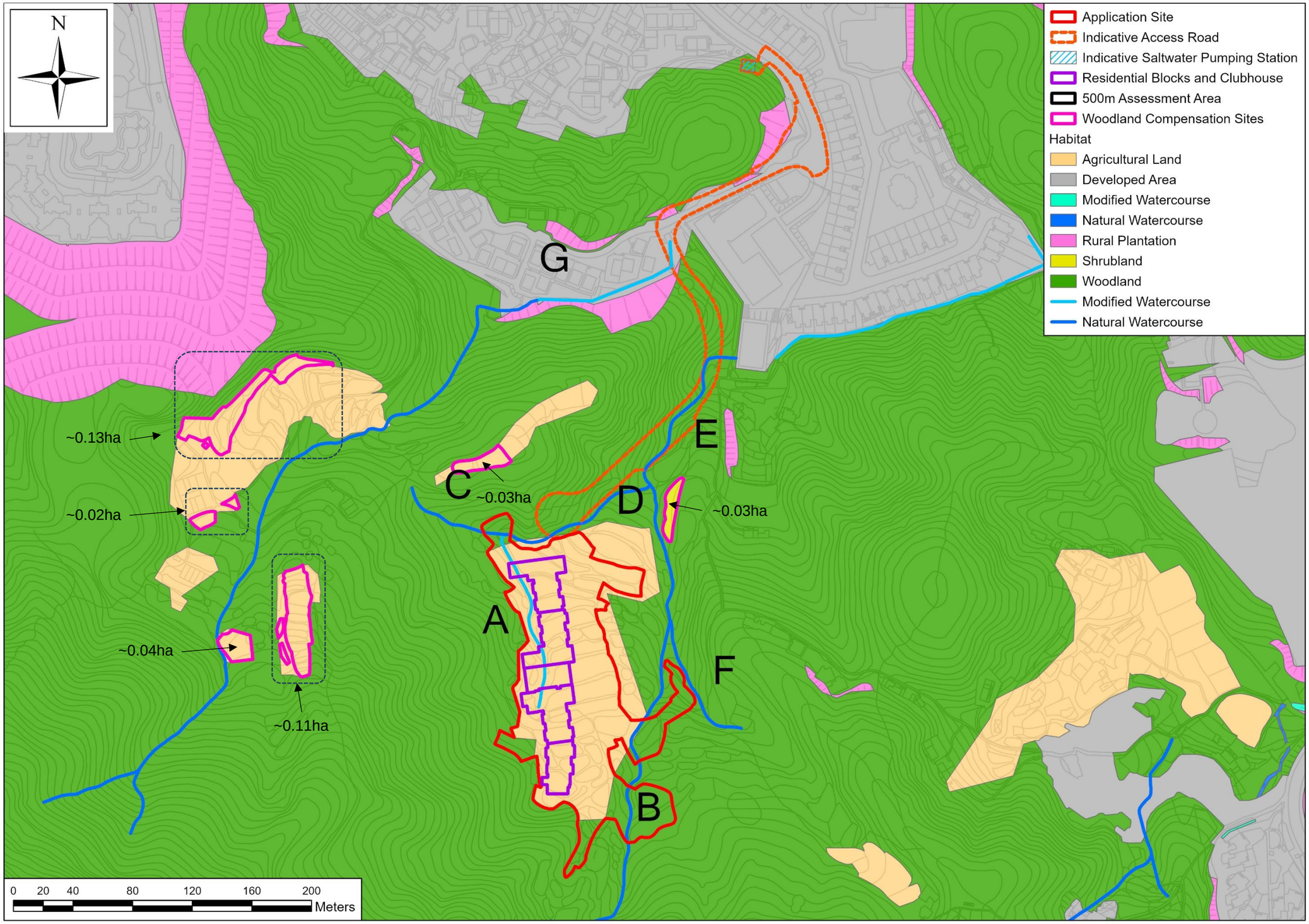


Figure 7.2 Photos of Habitats Characterizing the Woodland Compensation Sites

		
Agricultural Land	Shrubland	

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Appendix A1 Plant Species Recorded in the Assessment Area during the Survey Period

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
1	*Abelmoschus moschatus*	黃葵	Native	Herb	Restricted	-			S								
2	*Acacia auriculiformis*	耳果相思	Exotic	Tree	-	-											S
3	*Acacia confusa*	台灣相思	Exotic	Tree	-	-			O					O			
4	*Acronychia pedunculata*	山油柑	Native	Tree	Very common	-											O
5	*Adenanthera microsperma*	海紅豆	Native	Tree	Restricted	-											S
6	*Adenosma glutinosum*	毛麝香	Native	Herb	Very common	-										S	
7	*Aegiceras corniculatum*	蠟燭果	Native	Shrub	Common	-				C							
8	*Agave americana*	龍舌蘭	Exotic	Herb	-	-											S
9	*Ageratum conyzoides*	藿香薊	Exotic	Herb	Common	-	C										S
10	*Aglaia odorata* var. *microphyllina*	小葉米仔蘭	Exotic	Shrub	-	-											S
11	*Aglaonema modestum*	廣東萬年青	Exotic	Herb	-	-											S
12	*Aidia pycnantha*	多毛茜草樹	Native	Tree	Common	-											S
13	*Alangium chinense*	八角楓	Native	Tree	Common	-										O	S
14	*Aleurites moluccana*	石栗	Exotic	Tree	-	-			O								
15	*Allamanda cathartica*	軟枝黃蟬	Exotic	Climber	-	-								O			
16	*Alocasia macrorrhizos*	海芋	Native	Herb	Very common	-	O		O					C		O	C
17	*Alpinia hainanensis*	草豆蔻	Native	Herb	Very common	-	S										
18	*Alpinia oblongifolia*	華山薑	Native	Herb	Common	-											O
19	*Alternanthera philoxeroides*	空心莧	Exotic	Herb	Common	-	S										
20	*Alternanthera pungens*	刺花蓮子草	Exotic	Herb	-	-	S										
21	*Ampelopsis cantoniensis*	廣東蛇葡萄	Native	Climber	Very common	-											S

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
22	*Andropogon* sp.	鬚芒草屬	Native	Herb	-	-	O										
23	*Anisomeles indica*	廣防風	Native	Herb	Common	-											S
24	*Antidesma fordii*	黃毛五月茶	Native	Tree	Restricted	-											S
25	*Aphananthe cuspidata*	滇糙葉樹	Native	Tree	Common	-											S
26	*Aporosa dioica*	銀柴	Native	Tree	Very common	-											O
27	***Aquilaria sinensis***	**土沉香**	**Native**	**Tree**	**Common**	**Cap. 586** **Rare and Precious Plants of Hong Kong** **China Plant Red Data Book: VU** **Illustrations of Rare & endangered plant in Guangdong Province** **List of Wild Plants under State Priority Conservation: Class 2** **Threatened Species List of China's Higher Plants: VU, endemic species** **IUCN Red List of Threatened Species (2025): VU**			**S**							**S**	**O**

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
						CITES Appendix II											
28	***Aralia chinensis***	**楤木**	**Native**	**Shrub**	**Restricted**	**IUCN Red List of Threatened Species (2025): VU**											**S**
29	*Araucaria cunninghamii*	南洋杉	Exotic	Tree	-	-								O			
30	*Archidendron clypearia*	猴耳環	Native	Tree	Common	-											O
31	*Archontophoenix alexandrae*	假檳榔	Exotic	Tree	-	-			O								
32	*Ardisia quinquegona*	羅傘樹	Native	Shrub	Very common	-											S
33	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	Tree	-	-								S			
34	***Artocarpus tonkinensis***	**胭脂樹**	**Native**	**Tree**	**Rare**	**-**											**S**
35	*Arundinella nepalensis*	石芒草	Native	Herb	Common	-										S	
36	*Averrhoa carambola*	楊桃	Exotic	Tree	-	-											S
37	*Bauhinia championii*	缺葉藤	Native	Climber	Common	-											O
38	*Bauhinia purpurea*	紅花羊蹄甲	Exotic	Tree	-	-			S								
39	*Begonia cucullata* var. *hookeri*	四季秋海棠	Exotic	Herb	-	-			S								
40	*Berchemia floribunda*	多花勾兒茶	Native	Climber	Common	-											O
41	*Bidens alba*	白花鬼針草	Exotic	Herb	Very common	-	C		C								C
42	*Bischofia javanica*	秋楓	Native	Tree	Common	-											S
43	*Blastus cochinchinensis*	柏拉木	Native	Shrub	Common	-											S
44	*Blechnum orientale*	烏毛蕨	Native	Herb	Very common	-											S
45	*Boehmeria nivea* var. *tenacissima*	青葉苧麻	Native	Shrub	-	-	S										
46	*Bougainvillea spectabilis*	葉子花	Exotic	Climber	-	-			O								
47	*Breynia fruticosa*	黑面神	Native	Shrub	Very common	-										S	O

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
48	*Bridelia tomentosa*	土蜜樹	Native	Shrub	Very common	-								S			
49	*Broussonetia kaempferi* var. *australis*	藤構	Native	Climber	Restricted	-											S
50	*Byttneria grandifolia*	刺果藤	Native	Climber	Very common	-							O				
51	*Callicarpa kochiana*	枇杷葉紫珠	Native	Shrub	Common	-											S
52	*Carex cruciata*	十字薹草	Native	Herb	Very common	-											
53	*Carica papaya*	番木瓜	Exotic	Tree	-	-								S			
54	*Caryota mitis*	短穗魚尾葵	Exotic	Tree	-	-											S
55	*Cassytha filiformis*	無根藤	Native	Climber	Very common	-											S
56	*Cayratia corniculata*	角花烏蘞莓	Native	Climber	Very common	-							S				
57	*Celastrus monospermus*	獨子藤	Native	Climber	Common	-											S
58	*Celtis sinensis*	朴樹	Native	Tree	Common	-			S								S
59	*Cerbera manghas*	海杧果	Native	Tree	Common	-	S			S							
60	***Cibotium barometz***	**金毛狗**	**Native**	**Herb**	**Very common**	**Cap. 586** **Rare and Precious Plants of Hong Kong: VU in China** **List of Wild Plants under State Priority Conservation: Class 2** **CITES Appendix II**											**O**
61	*Cinnamomum burmannii*	陰香	Native	Tree	-	-											S
62	*Cinnamomum camphora*	樟	Native	Tree	Common	-			O								O
63	*Citrus maxima*	柚	Exotic	Tree	-	-			S								

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
64	*Citrus reticulata*	柑橘	Exotic	Tree	-	-			S								
65	*Clausena lansium*	黃皮	Exotic	Tree	-	-											O
66	*Cleome rutidosperma*	皺子白花菜	Exotic	Herb	Restricted	-											S
67	*Clerodendrum cyrtophyllum*	大青	Native	Shrub	Common	-			O								O
68	*Codonopsis javanica*	金錢豹	Native	Climber	Restricted	-											S
69	*Colocasia esculenta*	芋	Native	Herb	-	-							O				
70	*Commelina diffusa*	節節草	Native	Herb	Common	-	O										O
71	*Conyza canadensis*	小蓬草	Exotic	Herb	Very common	-			S								
72	*Cordyline fruticosa*	朱蕉	Exotic	Shrub	-	-											S
73	*Cratoxylum cochinchinense*	黃牛木	Native	Tree	Very common	-											S
74	*Curcuma phaeocaulis*	莪朮	Exotic	Herb	-	-											S
75	*Cyathula prostrata*	杯莧	Native	Herb	Common	-											S
76	*Cyclea hypoglauca*	粉葉輪環藤	Native	Climber	Common	-											S
77	***Cyclobalanopsis edithiae***	**華南青岡**	**Native**	**Tree**	**Restricted**	**IUCN Red List of Threatened Species (2025): EN**											**O**
78	*Cyclosorus parasiticus*	華南毛蕨	Native	Herb	Very common	-								C			C
79	*Daemonorops jenkinsiana*	黃藤	Native	Climber	Very common	-			C				C				
80	**Dalbergia benthamii*	兩廣黃檀	Native	Climber	Common	Cap. 586 CITES Appendix II										S	O
81	*Daphniphyllum calycinum*	牛耳楓	Native	Tree	Common	-										S	O
82	*Dendrotrophe varians*	寄生藤	Native	Climber	Very common	-											S
83	*Desmodium heterocarpon* var.	糙毛假地豆	Native	Shrub	-	-											S

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
	strigosum																
84	*Desmodium reticulatum*	顯脈山綠豆	Native	Shrub	Restricted	-											S
85	*Desmos chinensis*	假鷹爪	Native	Shrub	Common	-											S
86	*Dianella ensifolia*	山菅蘭	Native	Herb	Very common	-										S	
87	*Dicranopteris pedata*	芒萁	Native	Herb	Very common	-	O									C	
88	*Digitaria* sp.	馬唐屬	Unknown	Herb	-	-	O										C
89	#*Dimocarpus longan*	龍眼	Exotic	Tree	Restricted	China Plant Red Data Book: VU List of Wild Plants under State Priority Conservation: Class 2 Threatened Species List of China's Higher Plants: VU											S
90	*Dioscorea fordii*	山薯	Native	Climber	Common	-											S
91	***Dioscorea pentaphylla***	**五葉薯蕷**	**Native**	**Climber**	**Rare**	**-**											**S**
92	*Diospyros morrisiana*	羅浮柿	Native	Tree	Very common	-										S	
93	*Diplazium subsinuatum*	單葉雙蓋蕨	Native	Herb	Common	-											S
94	*Diplospora dubia*	狗骨柴	Native	Tree	Common	-											S
95	*Dracaena fragrans*	巴西鐵樹	Exotic	Shrub	-	-											O
96	*Dracaena marginata*	紅邊鐵樹	Exotic	Shrub	-	-								O			
97	*Dracaena sanderiana*	辛氏龍樹	Exotic	Shrub	-	-											S
98	*Drymaria cordata*	荷蓮豆	Native	Herb	Common	-	S										
99	*Duranta erecta*	假連翹	Exotic	Climber	-	-											S
100	*Dypsis lutescens*	散尾葵	Exotic	Shrub	-	-			S								

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
101	*Elaeocarpus chinensis*	中華杜英	Native	Tree	Common	-											S
102	***Elaeocarpus dubius***	**顯脈杜英**	**Native**	**Tree**	**Rare**	**-**											**S**
103	*Eleusine indica*	牛筋草	Native	Herb	Very common	-			S								
104	*Embelia ribes*	白花酸藤子	Native	Climber	Common	-	S										
105	*Endospermum chinense*	黃桐	Native	Tree	Restricted	-										S	
106	*Epipremnum aureum*	綠蘿	Exotic	Climber	-	-											S
107	*Eragrostis tenella*	鯽魚草	Native	Herb	Very common	-			S								
108	#*Euphorbia hirta*	飛揚草	Exotic	Herb	Very common	CITES Appendix II			S								
109	*Eurya nitida*	細齒葉柃	Native	Shrub	Very common	-											S
110	*Ficus elastica*	印度榕	Exotic	Tree	-	-								S			
111	*Ficus fistulosa*	水同木	Native	Tree	Common	-							O				
112	*Ficus hirta*	粗葉榕	Native	Shrub	Common	-											O
113	*Ficus hispida*	對葉榕	Native	Shrub	Very common	-	O						O	O			O
114	*Ficus microcarpa*	榕樹	Native	Tree	Common	-								O			
115	*Ficus pumila*	薜荔	Native	Climber	Very common	-								S			
116	*Ficus subulata*	假斜葉榕	Native	Climber	Common	-											S
117	*Ficus variegata var. chlorocarpa*	青果榕	Native	Tree	Common	-								O			O
118	*Ficus variolosa*	變葉榕	Native	Tree	Very common	-										O	
119	*Fimbristylis* sp.	飄拂草屬	Native	Herb	-	-			S								
120	*Floscopa scandens*	聚花草	Native	Herb	Common	-							O				
121	*Fraxinus chinensis*	白蠟樹	Exotic	Tree	-	-											S
122	*Garcinia oblongifolia*	嶺南山竹子	Native	Tree	Very common	-											S
123	*Gardenia jasminoides*	梔子	Native	Shrub	Common	-											S
124	*Glochidion eriocarpum*	毛果算盤子	Native	Shrub	Very common	-											O

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
125	*Glochidion wrightii*	白背算盤子	Native	Shrub	Very common	-											S
126	*Gnetum luofuense*	羅浮買麻藤	Native	Climber	Very common	-										S	S
127	*Grewia biloba*	扁擔捍	Native	Shrub	Common	-										S	
128	*Hedychium coronarium*	薑花	Exotic	Herb	-	-	C										
129	*Hedyotis acutangula*	金草	Native	Herb	Very common	-											S
130	*Hedyotis corymbosa*	傘房花耳草	Native	Herb	-	-			O								
131	*Hedyotis hedyotidea*	牛白藤	Native	Shrub	Very common	-	S										S
132	*Helicteres angustifolia*	山芝麻	Native	Shrub	Very common	-											S
133	*Hibiscus rosa-sinensis*	朱槿	Exotic	Shrub	-	-			O								
134	*Hibiscus tiliaceus*	黃槿	Native	Tree	Very common	-				C							
135	*Ilex asprella*	梅葉冬青	Native	Shrub	Very common	-										O	O
136	*Ilex rotunda*	小果鐵冬青	Exotic	Tree	Common	-											S
137	*Imperata cylindrica* var. *major*	大白茅	Native	Herb	Very common	-											S
138	*Ipomoea cairica*	五爪金龍	Exotic	Climber	Very common	-	O							C			
139	*Ipomoea nil*	牽牛	Exotic	Climber	Common	-			S								
140	*Ipomoea triloba*	三裂葉薯	Native	Herb	-	-			S								
141	*Ischaemum* sp.	鴨嘴草屬	Unknown	Herb	-	-			S								
142	*Itea chinensis*	老鼠刺	Native	Shrub	Very common	-										S	
143	*Ixora chinensis*	龍船花	Native	Shrub	Restricted	-			C								
144	***Ixonanthes reticulata***	**黏木**	**Native**	**Tree**	**Common**	**Rare and Precious Plants of Hong Kong: VU in China** **China Plant Red Data Book: VU** **Illustrations of**											**S**

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
						Rare & endangered plant in Guangdong Province **IUCN Red List of Threatened Species (2025): VU**												
145	*Juniperus chinensis*	圓柏	Exotic	Tree	-	-	S		S								
146	*Kalanchoe pinnata*	落地生根	Exotic	Herb	Common	-											S
147	*Kandelia obovata*	秋茄樹	Native	Shrub	Very common	-				C							
148	*Kyllinga nemoralis*	單穗水蜈蚣	Native	Herb	Very common	-	S										O
149	#*Lagerstroemia indica*	紫薇	Exotic	Shrub	Rare	Cap. 96A							O				O
150	#*Lagerstroemia speciosa*	大花紫薇	Exotic	Tree	-	Cap. 96A								O			
151	*Lantana camara*	馬纓丹	Exotic	Shrub	Very common	-			O							O	C
152	*Leucaena leucocephala*	銀合歡	Exotic	Tree	Common	-			O					O			
153	*Ligustrum sinense*	山指甲	Native	Tree	Common	-								O			O
154	*Limnophila sessiliflora*	石龍尾	Native	Herb	-	-	C										
155	*Lindernia crustacea*	母草	Native	Herb	Restricted	-	O		O								
156	*Lindernia rotundifolia*	圓葉母草	Exotic	Herb	-	-	O										
157	*Lindsaea orbiculata*	團葉鱗始蕨	Native	Herb	Very common	-											S
158	*Liquidambar formosana*	楓香	Native	Tree	Common	-			O								
159	*Liriope spicata*	山麥冬	Native	Herb	Very common	-											S
160	#*Litchi chinensis*	荔枝	Exotic	Tree	Restricted	China Plant Red Data Book: VU Threatened Species List of											S

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
						China's Higher Plants: EN											
161	*Litsea glutinosa*	潺槁樹	Native	Tree	Very common	-											S
162	*Litsea monopetala*	假柿木薑子	Native	Tree	Restricted	-	S							S			S
163	*Litsea rotundifolia* var. *oblongifolia*	豺皮樟	Native	Shrub	Very common	-										O	S
164	#*Livistona chinensis*	蒲葵	Exotic	Tree	-	Threatened Species List of China's Higher Plants: VU								C			
165	*Lonicera macrantha*	大花忍冬	Native	Climber	Common	-											S
166	*Lophatherum gracile*	淡竹葉	Native	Herb	Very common	-											C
167	*Lophostemon confertus*	紅膠木	Exotic	Tree	-	-			S								
168	*Ludwigia hyssopifolia*	草龍	Native	Herb	-	-	S		S								
169	*Lygodium japonicum*	海金沙	Native	Herb	Very common	-										O	C
170	*Macaranga tanarius* var. *tomentosa*	血桐	Native	Tree	Common	-	O							O			C
171	*Machilus breviflora*	短序潤楠	Native	Tree	Very common	-										S	C
172	*Machilus chekiangensis*	浙江潤楠	Native	Tree	Very common	-			S								O
173	*Machilus gamblei*	黃心樹	Native	Tree	Restricted	-			S								S
174	*Machilus kwangtungensis*	廣東潤楠	Native	Tree	-	-											S
175	*Machilus pauhoi*	刨花潤楠	Native	Tree	-	-											C
176	*Macrothelypteris torresiana*	普通針毛蕨	Native	Herb	Very common	-											O
177	*Maesa perlarius*	鯽魚膽	Native	Shrub	Common	-											S
178	*Mallotus apelta*	白背葉	Native	Shrub	Common	-											S
179	*Mallotus paniculatus*	白楸	Native	Tree	Very common	-											O
180	*Mallotus repandus*	石岩楓	Native	Climber	Common	-											S

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
181	*Malvaviscus penduliflorus*	垂花懸鈴花	Exotic	Shrub	-	-	O										O
182	*Mangifera indica*	杧果	Exotic	Tree	-	-											S
183	*Maranta bicolor*	花葉竹芋	Exotic	Herb	-	-								S			
184	*Melaleuca cajuputi* subsp. *Cumingiana*	白千層	Exotic	Tree	-	-			C								
185	*Melastoma malabathricum*	野牡丹	Native	Shrub	Common	-										O	
186	*Melastoma sanguineum*	毛蕊	Native	Shrub	Common	-										O	O
187	*Melicope pteleifolia*	蜜茱萸	Native	Shrub	Common	-											O
188	*Melodinus suaveolens*	山橙	Native	Climber	Common	-										O	O
189	*Merremia umbellata* subsp. *Orientalis*	山豬菜	Native	Climber	Common	-	O		S								
190	[#]*Michelia* x *alba*	白蘭	Exotic	Tree	-	Cap. 96A											S
191	*Microstegium ciliatum*	剛莠竹	Native	Herb	Very common	-	C							S			S
192	*Mikania micrantha*	薇甘菊	Exotic	Herb	Very common	-	O							O			O
193	*Millettia nitida*	亮葉崖豆藤	Native	Climber	Very common	-										S	
194	*Millettia speciosa*	美麗雞血藤	Native	Climber	Common	-											S
195	*Miscanthus floridulus*	五節芒	Native	Herb	Common	-	O										O
196	*Morella rubra*	楊梅	Native	Tree	Common	-										O	
197	*Morus alba*	桑	Native	Tree	Common	-											S
198	*Mucuna birdwoodiana*	白花油麻藤	Native	Climber	Common	-											O
199	*Musa* x *paradisiaca*	大蕉	Exotic	Herb	-	-							O				
200	*Mussaenda pubescens*	玉葉金花	Native	Climber	Very common	-										S	
201	***Neottopteris nidus***	**巢蕨**	**Native**	**Herb**	**Restricted**	**Cap. 96A**	**S**										
202	*Neyraudia reynaudiana*	類蘆	Native	Herb	Very common	-											O

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
203	*Oplismenus compositus*	竹葉草	Native	Herb	Very common	-											S
204	*Oreocnide frutescens* subsp. *insignis*	細梗紫麻	Native	Shrub	Restricted	-											O
205	*Pachira aquatica*	瓜栗	Exotic	Tree	-	-											S
206	*Paederia scandens*	雞矢藤	Native	Climber	Very common	-	O										
207	*Panicum brevifolium*	短葉黍	Native	Herb	Very common	-			S								
208	*Panicum maximum*	大黍	Exotic	Herb	Common	-			S								
209	*Parthenocissus dalzielii*	爬牆虎	Exotic	Climber	-	-								S			
210	*Paspalum conjugatum*	兩耳草	Native	Herb	Common	-											O
211	*Passiflora foetida*	龍珠果	Exotic	Climber	Very common	-	S							S			
212	***Pavetta hongkongensis***	**香港大沙葉**	**Native**	**Tree**	**Common**	**Cap. 96A**											**S**
213	*Peperomia pellucida*	草胡椒	Exotic	Herb	Common	-							S				
214	*Pericampylus glaucus*	細圓藤	Native	Climber	Restricted	-			S								
215	*Persicaria chinensis*	火炭母	Native	Herb	Very common	-											O
216	***Phrynium placentarium***	**尖苞柊葉**	**Native**	**Herb**	**Rare**	**-**											**S**
217	*Phyllanthus urinaria*	葉下珠	Native	Herb	Common	-			S								
218	*Pilea microphylla*	小葉冷水花	Exotic	Herb	Very common	-											S
219	*Piper hancei*	山蔴	Native	Climber	-	-											S
220	*Plumeria rubra*	雞蛋花	Exotic	Tree	-	-							S				O
221	[#]*Podocarpus macrophyllus*	羅漢松	Native	Tree	Restricted	List of Wild Plants under State Priority Conservation: Class 2 Threatened Species List of			S								

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
						China's Higher Plants: VU											
222	*Polyspora axillaris*	大頭茶	Native	Shrub	Very common	-											O
223	*Pouzolzia zeylanica*	霧水葛	Native	Herb	Common	-											S
224	*Praxelis clematidea*	假臭草	Exotic	Herb	Very common	-			S								
225	*Pronephrium simplex*	單葉新月蕨	Native	Herb	Very common	-											S
226	*Prunus persica*	桃	Exotic	Tree	-	-											S
227	*Pseudocalymma* sp.	蒜香藤	Native	Climber	-	-			S								
228	*Psidium guajava*	番石榴	Exotic	Tree	Common	-	S										
229	*Psychotria asiatica*	九節	Native	Tree	Very common	-										O	O
230	*Pteris ensiformis*	劍葉鳳尾蕨	Native	Herb	Common	-											S
231	*Pteris linearis*	線羽鳳尾蕨	Native	Herb	Restricted	-											O
232	*Pteris semipinnata*	半邊旗	Native	Herb	Very common	-											S
233	*Pueraria lobata* var. *montana*	葛麻姆	Native	Climber	Common	-	O		O					O			
234	*Pueraria lobata* var. *thomsonii*	粉葛	Exotic	Climber	-	-			C								
235	*Pueraria phaseoloides*	三裂葉野葛	Native	Climber	Very common	-											S
236	*Pygeum topengii*	臀果木	Native	Tree	Common	-											S
237	***Pyrenaria spectabilis***	**石筆木**	**Native**	**Tree**	**Restricted**	**Cap. 96A**											**S**
238	*Pyrostegia venusta*	炮仗花	Exotic	Climber	-	-											S
239	*Pyrrosia adnascens*	貼生石韋	Native	Herb	Common	-								S			
240	*Quisqualis indica*	使君子	Exotic	Climber	Restricted	-											S
241	*Reevesia thyrsoidea*	梭羅樹	Exotic	Tree	Common	-											S
242	*Rhaphidophora hongkongensis*	獅子尾	Native	Herb	Restricted	-											S
243	*Rhapis excelsa*	棕竹	Native	Shrub	Common	-								S			

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
244	*Rhodomyrtus tomentosa*	桃金娘	Native	Shrub	Very common	-										S	
245	*Rhus succedanea*	木蠟樹	Native	Shrub	Common	-	S									S	
246	*Ricinus communis*	蓖麻	Exotic	Shrub	Restricted	-											S
247	*Rourea microphylla*	小葉紅葉藤	Native	Climber	Common	-											S
248	*Roystonea regia*	大王椰子	Exotic	Tree	-	-			S								
249	*Rubus reflexus*	鏽毛莓	Native	Climber	Very common	-											O
250	*Ruellia coerulea*	蘭花草	Exotic	Herb	-	-	O										
251	*Sabia limoniacea*	檸檬清風藤	Native	Climber	Very common												S
252	*Saccharum officinarum*	甘蔗	Exotic	Herb	-	-	O										
253	*Sapium discolor*	山烏桕	Native	Tree	Very common	-										O	
254	*Sarcosperma laurinum*	肉實樹	Native	Tree	Very common	-											S
255	*Saurauia tristyla*	水東哥	Native	Tree	Common	-											S
256	*Sauropus spatulifolius*	龍脷葉	Exotic	Shrub	-	-											S
257	*Schefflera arboricola*	鵝掌藤	Exotic	Climber	-	-			O								
258	*Schefflera heptaphylla*	鵝掌柴	Native	Tree	Very common	-								O		O	C
259	*Schima superba*	木荷	Native	Tree	Common	-							g				O
260	*Scleria* sp.	珍珠茅屬	Native	Herb	-	-										O	
261	*Scolopia saeva*	廣東刺柊	Native	Tree	Common	-											S
262	*Selaginella* sp.	卷柏屬	Unknown	Herb	-	-											
263	*Setaria plicata*	皺葉狗尾草	Native	Herb	Restricted	-							S				
264	*Setaria verticillata*	倒刺狗尾草	Native	Herb	-	-								O			
265	*Smilax china*	菝葜	Native	Climber	Very common	-										S	
266	*Smilax hypoglauca*	粉背菝葜	Native	Climber	-	-											S
267	*Solanum torvum*	水茄	Exotic	Shrub	Common	-	S							S			
268	*Spermacoce mauritiana*	二葉豐花草	Native	Herb	-	-	S										

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
269	*Spermacoce stricta*	豐花草	Native	Herb	Restricted	-			O				S				
270	*Sporobolus fertilis*	鼠尾粟	Native	Herb	Very common	-			S								
271	*Sporobolus virginicus*	鹽地鼠尾粟	Native	Herb	Very common	-				C							
272	*Sterculia lanceolata*	假蘋婆	Native	Tree	Very common	-											O
273	*Stromanthe sanguinea*	紫背竹芋	Exotic	Herb	-	-											S
274	*Synedrella nodiflora*	金腰箭	Exotic	Herb	Very common	-								S			
275	*Syngonium podophyllum*	合果芋	Exotic	Herb	-	-											S
276	*Syzygium hancei*	韓氏蒲桃	Native	Tree	Common	-											O
277	*Syzygium jambos*	蒲桃	Exotic	Tree	Common	-											O
278	*Syzygium levinei*	山蒲桃	Native	Tree	Common	-											O
279	*Tadehagi triquetrum*	葫蘆茶	Native	Shrub	Very common	-										S	S
280	*Taxillus chinensis*	廣寄生	Native	Shrub	Common	-											S
281	*Tectaria subtriphylla*	叉蕨	Native	Herb	Common	-											S
282	*Terminalia catappa*	欖仁樹	Exotic	Tree	Very rare	-	S										
283	*Tetradium glabrifolium*	楝葉吳茱萸	Native	Tree	Common	-			S								
284	*Thunbergia alata*	翼葉老鴉嘴	Exotic	Climber	Restricted	-								O			
285	*Thunbergia erecta*	硬枝老鴉嘴	Exotic	Shrub	-	-			S								
286	*Thunbergia grandiflora*	大花老鴉嘴	Exotic	Climber	Common	-											O
287	*Torenia concolor*	單色蝴蝶草	Native	Herb	Common	-											O
288	***Torenia fordii***	**紫斑蝴蝶草**	**Native**	**Herb**	**Very rare**	-											**S**
289	*Trema tomentosa*	山黃麻	Native	Shrub	Common	-	S										S
290	*Tridax procumbens*	羽芒菊	Exotic	Herb	Very common	-			S								
291	*Triumfetta rhomboidea*	刺蒴麻	Native	Shrub	Common	-											S

Number	Scientific name	Chinese name	Origin	Growth form	Rarity in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8 9 10]	Relative abundance in each habitat in the assessment area										
							AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
292	*Turpinia montana*	山香圓	Native	Shrub	Common	-											S
293	*Typhonium blumei*	犁頭尖	Native	Herb	Restricted	-											S
294	*Uraria crinita*	貓尾草	Native	Shrub	Common	-											S
295	*Urena lobata*	肖梵天花	Native	Herb	Common	-											S
296	*Uvaria grandiflora*	大花紫玉盤	Native	Climber	Restricted	-										S	
297	*Vernonia cinerea*	夜香牛	Native	Herb	Very common	-			S								
298	*Viburnum odoratissimum*	珊瑚樹	Native	Shrub	Very common	-			S								
299	*Viburnum sempervirens*	常綠莢迷	Native	Shrub	Very common	-										S	
300	*Vitex quinata*	山牡荊	Native	Tree	Common	-											S
301	*Wedelia trilobata*	三裂葉蟛蜞菊	Exotic	Herb	Common	-			C								
302	*Wikstroemia nutans*	細軸荛花	Native	Shrub	Common	-										S	
303	*Youngia japonica*	黃鵪菜	Native	Herb	Very common	-							S				
304	*Zanthoxylum avicennae*	簕欓花椒	Native	Tree	Common	-											O
305	*Zanthoxylum nitidum*	兩面針	Native	Climber	Very common	-											S
306	*Zanthoxylum scandens*	花椒簕	Native	Climber	Common	-										S	
Number of plant species recorded in each habitat in the assessment area							43	0	58	5	0	0	15	34	0	39	181
Total number of plant species recorded in the assessment area							306										

Note
1. Corlett *et al.* (2000). Hong Kong vascular plants: distribution and status.
2. Convention on International Trade in Endangered Species of Wild Fauna and Flora (2025). Appendices I, II and III.
3. Forestry Regulations, the subsidiary legislation of the Forests and Countryside Ordinance (Cap. 96A).
4. Fu & Chin (1992). China Plant Red Data Book – Rare and Endangered Plants.
5. Hu *et al.* (2003). Rare and Precious Plants of Hong Kong.
6. International Union of Conservation for Nature. (2025). The IUCN Red List of Threatened Species. Version 2025-1.
7. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2023). List of Wild Plants under the State Priority Protection.
8. Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).
9. Qin *et al.* (2017). Threatened Species List of China's Higher Plants.
10. Wu *et al.* (1988). Illustration of Rare & endangered plant in Guangdong Province.

- **Species in bold is considered of conservation importance.**
- #The encountered individuals of *Dimocarpus longan*, *Euphorbia hirta*, *Lagerstroemia indica*, *Lagerstroemia speciosa*, *Litchi chinensis*, *Livistona chinensis*, *Michelia* x *alba* and *Podocarpus macrophyllus* are all cultivated and are therefore not considered of conservation importance.

Abbreviation

- Habitats: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland
- Relative abundance: C = Common; O = Occasional; S = Scarce
- Protection or conservation status: EN = Endangered; VU = Vulnerable

Appendix A2 Plant Species Recorded in the Indicative Scheme during the Survey Period

Number	Scientific name	Chinese name	Origin	Growth form	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8]	Relative abundance in each habitat in the Indicative Scheme								
							Indicative access road and saltwater pumping station					Application Site			
							DA	MW	NW	RP	W	AL	MW	NW	W
1	*Acronychia pedunculata*	山油柑	Tree	Native	Very common	-					S				S
2	*Adiantum flabellulatum*	扇葉鐵線蕨	Herb	Native	Very common	-									S
3	*Alangium chinense*	八角楓	Tree	Native	Common	-					S				S
4	*Alocasia macrorrhizos*	海芋	Herb	Native	Very common	-					S				C
5	*Alpinia hainanensis*	草豆蔻	Herb	Native	Very common	-									S
6	*Alpinia oblongifolia*	華山薑	Herb	Native	Common	-					S				S
7	*Aporosa dioica*	銀柴	Tree	Native	Very common	-									S
8	***Aralia chinensis***	**楤木**	**Shrub**	**Native**	**Restricted**	**IUCN Red List of Threatened Species (2025): VU**	**S**								
9	*Archontophoenix alexandrae*	假檳榔	Tree	Exotic	-	-					S				S
10	*Averrhoa carambola*	楊桃	Tree	Exotic	-	-					C				O
11	*Bidens alba*	白花鬼針草	Herb	Exotic	Very common	-	C				O				S
12	*Bischofia javanica*	秋楓	Tree	Native	Common	-					O				O
13	*Bridelia tomentosa*	土蜜樹	Shrub	Native	Very common	-					S				S
14	*Byttneria grandifolia*	刺果藤	Climber	Native	Very common	-					S				S
15	*Celtis sinensis*	朴樹	Tree	Native	Common	-					S				S
16	***Cibotium barometz***	**金毛狗**	**Herb**	**Native**	**Very common**	**Cap. 586** **Rare and Precious Plants of Hong Kong: VU in China** **List of Wild Plants under State Priority Conservation: Class 2** **CITES Appendix II**					**S**				**S**
17	*Cinnamomum camphora*	樟	Tree	Native	Common	-									S
18	*Citrus maxima*	柚	Tree	Exotic	-	-					S				S

Number	Scientific name	Chinese name	Origin	Growth form	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8]	Relative abundance in each habitat in the Indicative Scheme								
							Indicative access road and saltwater pumping station					Application Site			
							DA	MW	NW	RP	W	AL	MW	NW	W
19	**Citrus reticulata*	柑橘	Tree	Exotic	-	List of Wild Plants under State Priority Conservation: Class 2					S				S
20	*Clausena lansium*	黃皮	Tree	Exotic	-	-									S
21	*Clerodendrum cyrtophyllum*	大青	Shrub	Native	Common	-									S
22	*Cratoxylum cochinchinense*	黃牛木	Tree	Native	Very common	-					S				S
23	*Daemonorops jenkinsiana*	黃藤	Climber	Native	Very common	-						S			
24	*#Dalbergia benthamii*	兩廣黃檀	Climber	Native	Common	Cap. 586 CITES Appendix II									C
25	*Daphniphyllum calycinum*	牛耳楓	Tree	Native	Common	-					S				S
26	*Desmos chinensis*	假鷹爪	Shrub	Native	Common	-					S				S
27	**Dimocarpus longan*	龍眼	Tree	Exotic	Restricted	China Plant Red Data Book: VU List of Wild Plants under State Priority Conservation: Class 2 Threatened Species List of China's Higher Plants: VU					C				O
28	*Endospermum chinense*	黃桐	Tree	Native	Restricted	-									S
29	*Eurya nitida*	細齒葉柃	Shrub	Native	Very common	-									S
30	*Ficus fistulosa*	水同木	Tree	Native	Common	-					C				S
31	*Ficus hispida*	對葉榕	Shrub	Native	Very common	-					O				C
32	*Ficus variegata var. chlorocarpa*	青果榕	Tree	Native	Common	-									S
33	*Glochidion eriocarpum*	毛果算盤子	Shrub	Native	Very common	-				S	S				S
34	*Hibiscus rosa-sinensis*	朱槿	Shrub	Exotic	-	-									S
35	*Ilex asprella*	梅葉冬青	Shrub	Native	Very common	-					S				S
36	*Ilex rotunda*	鐵冬青	Tree	Exotic	Common	-									S
37	*Ipomoea cairica*	五爪金龍	Climber	Exotic	Very common	-				C					
38	*Ipomoea* sp.	番薯屬	Climber	Unknown	-	-				S					

Number	Scientific name	Chinese name	Origin	Growth form	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8]	Relative abundance in each habitat in the Indicative Scheme								
							Indicative access road and saltwater pumping station					Application Site			
							DA	MW	NW	RP	W	AL	MW	NW	W
39	*Ixora chinensis*	龍船花	Shrub	Native	Restricted	-				C					
40	*Juniperus chinensis 'Kaizuca'*	龍柏	Tree	Exotic	-	-				S	O	S			S
41	*Lantana camara*	馬纓丹	Shrub	Exotic	Very common	-	C			S					
42	*Leucaena leucocephala*	銀合歡	Tree	Exotic	Common	-				O					
43	*Ligustrum sinense*	山指甲	Tree	Native	Common	-				S					
44	*Liquidambar formosana*	楓香	Tree	Native	Common	-				S					
45	*Litsea cubeba*	木薑子	Shrub	Native	Common	-				S					
46	*Litsea glutinosa*	潺槁樹	Tree	Native	Very common	-				S					
47	*Litsea monopetala*	假柿木薑子	Tree	Native	Restricted	-				S		S			O
48	*Litsea rotundifolia var. oblongifolia*	豺皮樟	Shrub	Native	Very common	-				S					
49	*Litsea verticillata*	輪葉木薑子	Shrub	Native	Common	-				S					
50	*Lophatherum gracile*	淡竹葉	Herb	Native	Very common	-	S			S					
51	*Macaranga tanarius* var. *tomentosa*	血桐	Tree	Native	Common	-				S					
52	*Machilus chekiangensis*	浙江潤楠	Tree	Native	Very common	-				S					
53	*Machilus pauhoi*	刨花潤楠	Tree	Native	-	-				S					
54	*Machilus* sp.	潤楠屬	Tree	Native	-	-				S					
55	*Maesa perlarius*	鯽魚膽	Shrub	Native	Common	-					S				
56	*Melicope pteleifolia*	蜜茱萸	Shrub	Native	Common	-	S								
57	*Melothria pendula*	美洲馬飽兒	Climber	Unknown	-	-				S					
58	*Merremia umbellata* subsp. *Orientalis*	山豬菜	Climber	Native	Common	-					S				
59	*Mikania micrantha*	薇甘菊	Herb	Exotic	Very common	-					S				
60	*Millettia nitida*	亮葉崖豆藤	Climber	Native	Very common	-					S				
61	*Paederia scandens*	雞矢藤	Climber	Native	Very common	-					S				

Number	Scientific name	Chinese name	Origin	Growth form	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7 8]	Relative abundance in each habitat in the Indicative Scheme								
							Indicative access road and saltwater pumping station					Application Site			
							DA	MW	NW	RP	W	AL	MW	NW	W
62	*Pandanus austrosinensis*	露兜草	Herb	Native	-	-					S				
63	**Phoenix roebelenii*	江邊刺葵	Tree	Exotic	-	Threatened Species List of China's Higher Plants: VU						S			
64	*Pseudocyclosorus ciliatus*	溪邊假毛蕨	Herb	Native	Common	-								S	
65	*Psychotria asiatica*	九節	Tree	Native	Very common	-				S					
66	*Psychotria serpens*	蔓九節	Climber	Native	Very common	-					S	S			S
67	*Pteris semipinnata*	半邊旗	Herb	Native	Very common	-					S	S			
68	*Pueraria lobata* var. *thomsonii*	粉葛	Climber	Exotic	-	-					S	S			S
69	*Pygeum topengii*	臀果木	Tree	Native	Common	-					S				
70	*Roystonea regia*	大王椰子	Tree	Exotic	-	-					S				
71	***Rhynchotechum ellipticum***	**線柱苣苔**	**Shrub**	**Native**	**Rare**	-								**S**	
72	*Sarcandra glabra*	草珊瑚	Shrub	Native	Very common	-									S
73	*Saurauia tristyla*	水東哥	Tree	Native	Common	-					C				C
74	*Schefflera arboricola*	鵝掌藤	Climber	Exotic	-	-						S			
75	*Schefflera heptaphylla*	鵝掌柴	Tree	Native	Very common	-						S			
76	*Scleria* sp.	珍珠茅屬	Herb	Native	-	-					S				
77	*Sterculia lanceolata*	假蘋婆	Tree	Native	Very common	-					S	S			S
78	*Syzygium jambos*	蒲桃	Tree	Exotic	Common	-					S				S
79	*Tetracera asiatica*	錫葉藤	Climber	Native	Very common	-					S				
80	*Viburnum odoratissimum*	珊瑚樹	Shrub	Native	Very common	-					S	S			
81	*Vitex quinata*	山牡荊	Tree	Native	Common	-					S	S			
82	*Wedelia trilobata*	三裂葉蟛蜞菊	Herb	Exotic	Common	-	C				S				
83	*Zanthoxylum nitidum*	兩面針	Climber	Native	Very common	-					S				
Number of plant species recorded in each habitat along the indicative access road, in the saltwater pumping station and Application Site							6	0	0	21	43	12	0	2	42
Number of plant species recorded along the indicative access road, in the saltwater pumping station and Application Site							64					51			
Total number of plant species recorded in the Indicative Scheme							83								

Note

1. Corlett *et al.* (2000). Hong Kong vascular plants: distribution and status.
2. Convention on International Trade in Endangered Species of Wild Fauna and Flora (2025). Appendices I, II and III.
3. Fu & Chin (1992). China Plant Red Data Book – Rare and Endangered Plants.
4. Hu *et al.* (2003). Rare and Precious Plants of Hong Kong.
5. International Union of Conservation for Nature. (2025). The IUCN Red List of Threatened Species. Version 2025-1.
6. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2021). List of Wild Plants under the State Priority Protection.
7. Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).
8. Qin *et al.* (2017). Threatened Species List of China's Higher Plants.

- **Species in bold are considered of conservation importance.**
- [*]*Citrus reticulata*, *Dimocarpus longan* and *Phoenix roebelenii* are exotic to Hong Kong and therefore not considered of conservation importance.
- [#]Although *Dalbergia* spp. are listed in Appendix II of CITES and is protected under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) owing to timber harvesting reason, *Dalbergia benthamii* is native climber species and is not known to be exposed to exploitation for timber purposes. Therefore, *Dalbergia benthamii* is not considered of conservation importance.

Abbreviation
- Habitats: AL = Agricultural Land; DA = Developed Area; MW = Modified Watercourse; NW = Natural Watercourse; RP = Rural Plantation; W = Woodland
- Relative abundance: C = Common; O = Occasional; S = Scarce
- Protection or conservation status: VU = Vulnerable

Appendix B1 Terrestrial Mammal Species Recorded in the Assessment Area by Active Searching during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1,2]	Protection and/or conservation status [3,4,5]	Abundance/Signs recorded in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
1	**Rhesus Macaque**	***Macaca mulatta***	**Common. Mainly distributed in Kam Shan, Shing Mun and Tai Po Kau; also found in Ma On Shan, Sai Kung, Tai Lam Country Parks and the North District.**	**China Red Data Book: VU** **Cap. 170** **List of Wild Animals under State Priority Conservation: Class II**										**1**	
2	**East Asian Porcupine**	***Hystrix brachyura***	**Very common. Very widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.**	**Fellowes *et al*. (2002): PGC** **Cap. 170**											**Quill**
3	**Short-nosed Fruit Bat**	***Cynopterus sphinx***	**Very common. Very widely distributed in urban and countryside areas throughout Hong Kong.**	**Cap. 170**	**1**							**1**			**1**
4	**Pallas's Squirrel**	***Callosciurus erythraeus***	**Common. Fairly widely distributed, with the styani subspecies found in the New Territories (e.g. Tai Lam, Shing Mun and Tai Po Kau), and the thai subspecies found on the Hong Kong Island (e.g. Tai Tam and Pok Fu Lam).**	**Cap. 170**											**1**
5	Eurasian Wild Pig	*Sus scrofa*	Very common. Very widely distributed in countryside areas throughout Hong Kong.	/											2
Number of terrestrial mammal species recorded in each habitat in the assessment area by active searching					1	0	0	0	0	0	0	1	0	1	4
Total number of terrestrial mammal species recorded in the assessment area by active searching					5										

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Shek (2006). A Field Guide to the Terrestrial Mammals of Hong Kong.
3. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2023). List of Wild Animals under State Priority Conservation.
4. Wang (1998). China Red Data Book of Endangered Animals: Mammalia.
5. Wild Animals Protection Ordinance (Cap. 170).
- **Species in bold is considered of conservation importance.**

Abbreviation
- Habitats: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland
- Protection or conservation status: VU = Vulnerable

Appendix B2 Terrestrial Mammal Species Recorded in the Indicative Scheme and Assessment Area by Camera Trapping during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2]	Protection and/or conservation status [3 4 5 6 7]	Camera trap location			
					Indicative Scheme		Assessment area	
					Indicative access road	Application Site		
					1	2	3	4
1	Domestic Dog	*Canis lupus familiaris*	Common. Widely distributed in urban and countryside areas throughout Hong Kong.	/		✓		✓
2	**Rhesus Macaque**	***Macaca mulatta***	**Common. Mainly distributed in Kam Shan, Shing Mun and Tai Po Kau; also found in Ma On Shan, Sai Kung, Tai Lam Country Parks and the North District.**	**China Red Data Book: VU** **Cap. 170** **List of Wild Animals under State Priority Conservation: Class II**	✓	✓	✓	
3	**Red Muntjac**	***Muntiacus vaginalis***	**Very common. Very widely distributed in countryside areas throughout Hong Kong.**	**Fellowes *et al*. (2002): PRC**	✓	✓	✓	✓
4	Domestic Cat	*Felis catus*	Uncommon. Widely distributed in urban and countryside areas throughout Hong Kong.	/		✓	✓	
5	**Leopard Cat**	***Prionailurus bengalensis***	**Uncommon. Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.**	**China Red Data Book: VU** **Cap. 170** **Cap. 586** **List of Wild Animals under State Priority Conservation: Class II** **Red List of China's Vertebrates: VU** **CITES: Appendix II**			✓	
6	**East Asian Porcupine**	***Hystrix brachyura***	**Very common. Very widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.**	**Fellowes *et al*. (2002): PGC** **Cap. 170**	✓	✓	✓	✓
7	**Chinese Pangolin**	***Manis pentadactyla***	**Rare/Species of Conservation Concern. Thinly distributed in forested areas throughout Hong Kong.**	**China Red Data Book: VU** **IUCN Red List of Threatened Species (2025): CR** **Fellowes *et al*. (2002): RC** **Cap. 170** **Cap. 586** **List of Wild Animals under State Priority Conservation: Class I**				✓

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1,2]	Protection and/or conservation status [3,4,5,6,7]	Camera trap location			
					Indicative Scheme		Assessment area	
					Indicative access road	Application Site		
					1	2	3	4
				Red List of China's Vertebrates: CR **CITES: Appendix I**				
8	**Pallas's Squirrel**	***Callosciurus erythraeus***	**Common. Fairly widely distributed, with the styani subspecies found in the New Territories (e.g. Tai Lam, Shing Mun and Tai Po Kau), and the thai subspecies found on the Hong Kong Island (e.g. Tai Tam and Pok Fu Lam).**	**Cap. 170**				✓
9	Eurasian Wild Pig	*Sus scrofa*	Very common. Very widely distributed in countryside areas throughout Hong Kong.	/	✓	✓	✓	✓
10	**Masked Palm Civet**	***Paguma larvata***	**Common. Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island and northwestern New Territories.**	**Fellowes *et al*. (2002): PRC** **Cap. 170**		✓		✓
11	**Small Indian Civet**	***Viverricula indica***	**Very common. Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island and northwestern New Territories.**	**Cap. 170** **List of Wild Animals under State Priority Conservation: Class I** **Red List of China's Vertebrates: VU**	✓		✓	✓
12	Unknown rat	/	/	/			✓	
Number of terrestrial mammal species recorded by each camera trap along the indicative access road, in the Application Site and assessment area					5	7	8	8
Number of terrestrial mammal species recorded in the Indicative Scheme and assessment area					8		12	
Total number of terrestrial mammal species recorded by camera traps					12			

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Shek (2006). A Field Guide to the Terrestrial Mammals of Hong Kong.
3. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
   - Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
4. Jiang *et al.* (2016). Red List of China's Vertebrates.
5. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2023). List of Wild Animals under State Priority Conservation.
6. Wang (1998). China Red Data Book of Endangered Animals: Mammalia.
7. Wild Animals Protection Ordinance (Cap. 170).

- **Species in bold are considered of conservation importance.**
- All camera traps were installed in Woodland.

Abbreviation
- Protection or conservation status: CR = Critically Endangered; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern; VU = Vulnerable

Appendix B3 Bat Species Recorded in the Indicative Scheme and Assessment Area by Bat Detector during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2]	Protection and/or conservation status [3 4]	Location of record		
					Indicative Scheme		Assessment area
					Indicative access road and saltwater pumping station	Application Site	
1	**Himalayan Leaf-nosed Bat**	***Hipposideros armiger***	**Very common. Widely distributed in countryside areas throughout Hong Kong.**	**Fellowes *et al*. (2002): (LC)** **Cap. 170**	✓		✓
2	**Intermediate Horseshoe Bat**	***Rhinolophus affinis***	**Uncommon. Widely distributed in countryside areas throughout Hong Kong.**	**Fellowes *et al*. (2002): (LC)** **Cap. 170**	✓		✓
3	**Least Horseshoe Bat**	***Rhinolophus pusillus***	**Uncommon. Widely distributed in countryside areas throughout Hong Kong.**	**Fellowes *et al*. (2002): PRC** **Cap. 170**	✓		✓
4	**Chinese Pipistrelle**	***Hypsugo pulveratus***	**Rare/Species of Conservation Concern. Only several records in the countryside areas at Ting Kau, Ma On Shan and Lin Ma Hang, and several records of stray individuals inside buildings.**	**Fellowes *et al*. (2002): (LC)** **Cap. 170**	✓		✓
5	**Whiskered Myotis**	***Myotis muricola***	**Rare/Species of Conservation Concern. Only several records in the countryside areas in the New Territories and on Lantau.**	**/**	✓		
6	**Chinese Noctule**	***Nyctalus plancyi***	**Common. Fairly widely distributed in countryside areas throughout Hong Kong.**	**Fellowes *et al*. (2002): PRC** **Cap. 170**	✓		✓
7	**Japanese Pipistrelle**	***Pipistrellus abramus***	**Very common. Widely distributed throughout Hong Kong.**	**Cap. 170**	✓	✓	✓
8	**Least Pipistrelle**	***Pipistrellus tenuis***	**Uncommon. Ten-something records found in Nam Chung, Sheung Wo Hang, Lin Ma Hang, Plover Cove Country Park, Yuen Long, Shek Pik, Deep Water Bay, Ho Pui and Ho Chung.**	**Cap. 170**	✓		✓
9	**Lesser Bamboo Bat**	***Tylonycteris pachypus***	**Very common. Fairly widely distributed in countryside areas throughout Hong Kong.**	**Fellowes *et al*. (2002): (LC)** **Cap. 170**	✓		✓
10	**Unknown Pipistrelle**	***Pipistrellus* sp.**	**/**	**Cap. 170**	✓		✓
Number of bat species recorded along the indicative access road, in the Application Site and assessment area by bat detector					10	1	9
Total number of bat species recorded in the Indicative Scheme and assessment area by bat detector					10		

Note
1. Agriculture, Fisheries and Conservation Department (2022). Species Database of the Biodiversity Information Hub.
2. Shek (2006). A Field Guide to the Terrestrial Mammals of Hong Kong.
3. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
   - Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
4. Wild Animals Protection Ordinance (Cap. 170).

- **Species in bold are considered of conservation importance.**

- Due to the detection range of Echo Meter Touch 2 Pro and the relatively high habitat heterogeneity observed, it is not considered accurate to determine the exact habitat usage by the bat species recorded by it.

Abbreviation

- Protection or conservation status: LC = Local Concern; PRC = Potential Regional Concern

Appendix C1 Bird Species Recorded in the Assessment Area during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
1	Black-crowned Night Heron	*Nycticorax nycticorax*	Common resident and migrant. Widely distributed in Hong Kong.	Fellowes *et al*. (2002): LC									1		
2	Grey Heron	*Ardea cinerea*	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.	Fellowes *et al*. (2002): PRC		2							1		
3	Great Egret	*Ardea alba*	Common resident, migrant and winter visitor. Widely distributed in Hong Kong.	Fellowes *et al*. (2002): PRC		5	1						1		2
4	Little Egret	*Egretta garzetta*	Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong.	Fellowes *et al*. (2002): PRC		283				23	1		2		1
5	Crested Serpent Eagle	*Spilornis cheela*	Common resident. Widely distributed in shrublands on hillsides throughout Hong Kong.	China Red Data Book: VU Fellowes *et al*. (2002): (LC) Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II											2
6	Crested Goshawk	*Accipiter trivirgatus*	Common resident. Widely distributed in woodlands and shrublands throughout Hong Kong.	China Red Data Book: Rare Cap. 586 List of Wild Animals under State Priority Conservation: Class II CITES: Appendix II											1
7	Black Kite	*Milvus migrans*	Common resident and winter visitor. Widely distributed in Hong Kong.	Fellowes *et al*. (2002): (RC) Cap. 586			1								2

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
				List of Wild Animals under State Priority Conservation: Class II **CITES: Appendix II**											
8	Common Sandpiper	*Actitis hypoleucos*	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.	-						2					
9	Spotted Dove	*Spilopelia chinensis*	Abundant resident. Widely distributed in Hong Kong.	-			5	1							
10	**Greater Coucal**	***Centropus sinensis***	**Common resident. Widely distributed in Hong Kong.**	**China Red Data Book: VU** **List of Wild Animals under State Priority Conservation: Class II**											**1**
11	Plaintive Cuckoo	*Cacomantis merulinus*	Passage migrant and common visitor. Widely distributed in open area throughout Hong Kong.	-											1
12	House Swift	*Apus nipalensis*	Abundant spring migrant and common resident. Widely distributed in Hong Kong.	-											1
13	**White-throated Kingfisher**	***Halcyon smyrnensis***	**Common resident. Widely distributed in coastal areas throughout Hong Kong**	**Fellowes *et al*. (2002): (LC)** **List of Wild Animals under State Priority Conservation: Class II**						**1**					
14	Common Kingfisher	*Alcedo atthis*	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.	-		1									
15	Great Barbet	*Megalaima virens*	Uncommon resident. Widely distributed in woodland throughout Hong Kong.	-								1			3
16	Black-winged Cuckooshrike	*Lalage melaschistos*	Common passage migrant and scarce winter visitor. Widely distributed in woodland throughout Hong Kong.	-											1

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
17	**Grey-chinned Minivet**	***Pericrocotus solaris***	**Locally common resident. Found in Tai Po Kau, Shing Mun, Ho Chung, Kadoorie Farm & Botanic Garden, Tung Ping Chau.**	**Fellowes *et al*. (2002): LC**											**20**
18	Scarlet Minivet	*Pericrocotus speciosus*	Common resident. Found in Tai Po Kau, the Peak, Lam Tsuen, Cape D'Aguilar Road, Peel Rise, Shing Mun.	-											22
19	**Ashy Drongo**	***Dicrurus leucophaeus***	**Uncommon winter visitor. Found in Shing Mun, Tai Po Kau.**	**Fellowes *et al*. (2002): LC**											**1**
20	Red-billed Blue Magpie	*Urocissa erythroryncha*	Common resident. Widely distributed in woodland edges throught Hong Kong	-											2
21	**Collared Crow**	***Corvus torquatus***	**Locally common resident. Found in Inner Deep Bay area, Nam Chung, Kei Ling Ha, Tai Mei Tuk, Pok Fu Lam, Chek lap Kok, Shuen Wan, Lam Tsuen.**	**IUCN Red List of Threatened Species (2025): VU** **Fellowes *et al*. (2002): LC**											**1**
22	Large-billed Crow	*Corvus macrorhynchos*	Common resident. Widely distributed in Hong Kong	-											1
23	Cinereous Tit	*Parus cinereus*	Common resident. Widely distributed in Hong Kong.	-			2							2	3
24	Yellow-cheeked Tit	*Parus spilonotus*	Locally uncommon resident. Found in Tai Po Kau, Ng Tung Chai, Shing Mun Country Park, Plover Cove, lady Clementi's Ride, Mount Nicholson, Mount Butler, Tai Tam, Kowloon Park.	-											1
25	Red-whiskered Bulbul	*Pycnonotus jocosus*	Abundant resident. Widely distributed in Hong Kong.	-	5		6					5			32
26	Chinese Bulbul	*Pycnonotus sinensis*	Abundant resident. Widely distributed in	-			1			1					3

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
			Hong Kong.												
27	Chestnut Bulbul	*Hemixos castanonotus*	Common resident and winter visitor. Widely distributed in woodland throughout Hong Kong.	-								2			12
28	Mountain Tailorbird	*Phyllergates cucullatus*	Uncommon resident and locally common winter visitor. Found in woodland throughout Hong Kong.	-											4
29	Pallas's Leaf Warbler	*Phylloscopus proregulus*	Common winter visitor and migrant. Found in woodland throughout Hong Kong.	-											2
30	Yellow-browed Warbler	*Phylloscopus inornatus*	Abundant winter visitor and migrant. Widely distributed in woodland throughout Hong Kong.	-								1			2
31	Arctic Warbler	*Phylloscopus borealis*	Common passage migrant. Widely distributed in woodland throughout Hong Kong.	-											1
32	Yellow-bellied Prinia	*Prinia flaviventris*	Common resident. Widely distributed in Hong Kong.	-											1
33	Common Tailorbird	*Orthotomus sutorius*	Common resident. Widely distributed in Hong Kong.	-			1								7
34	**Rufous-capped Babbler**	***Stachyridopsis ruficeps***	**Common resident. Found in Shing Mun, Tai Po Kau, Tai Mek Tuk, Ng Tung Chai, Fo Tan, Tai Mo Shan, The Peak, Kadoorie Agricultural Research Centre.**	**Fellowes *et al*. (2002): LC**											**2**
35	Huet's Fulvetta	*Alcippe hueti*	Uncommon resident. Found in Tai Po Kau, Ng Tung Chai, Shing Mun, Tai Lam Country Park.	-											6
36	Masked Laughingthrush	*Pterorhinus perspicillatus*	Abundant resident. Widely distributed in shrubland throughout Hong Kong.	-											1
37	Greater Necklaced	*Garrulax*	Locally common	-											6

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4 5 6 7]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
	Laughingthrush	*pectoralis*	resident. Widely distributed in shrubland and woodland throughout Hong Kong.												
38	**Black-throated Laughingthrush**	***Garrulax chinensis***	**Common resident. Widely distributed in woodland and shrubland throughout Hong Kong.**	**List of Wild Animals under State Priority Conservation: Class II**											**7**
39	Blue-winged Minla	*Minla cyanouroptera*	Locally common resident. Found in Shing Mun, Tai Po Kau, Ng Tung Chai, Kowloon Hills, Ho Chung, Tai Lam Country Park, Lam Tsuen Country Park, Hong Kong Island.	-											8
40	Swinhoe's White-eye	*Zosterops simplex*	Abundant resident. Widely distributed in Hong Kong.	-											37
41	Crested Myna	*Acridotheres cristatellus*	Abundant resident. Widely distributed in Hong Kong.	-		6		1		1					
42	Black-collared Starling	*Gracupica nigricollis*	Common resident. Widely distributed in Hong Kong.	-		1	1								
43	Oriental Magpie-Robin	*Copsychus saularis*	Abundant resident. Widely distributed in Hong Kong.	-	1		1					1			3
44	Blue Whistling Thrush	*Myophonus caeruleus*	Common resident. Widely distributed in shrubland and woodland throughout Hong Kong.	-										1	1
45	Scarlet-backed Flowerpecker	*Dicaeum cruentatum*	Common resident. Widely distributed in wooded area throughout Hong Kong.	-								1			5
46	Fork-tailed Sunbird	*Aethopyga christinae*	Common resident and winter visitor. Widely distributed in Hong Kong.	-											6
47	Eurasian Tree Sparrow	*Passer montanus*	Abundant resident. Widely distributed in Hong Kong.	-			17								8
48	White-rumped Munia	*Lonchura striata*	Common resident. Widely distributed in	-	1										

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2,3,4,5,6,7]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
			Hong Kong.												
49	White Wagtail	*Motacilla alba*	Resident, common passage migrant and winter visitor. Widely distributed in Hong Kong.	-			3	1		2					
50	White-rumped Shama	*Copsychus malabaricus*	-	-											1
Number of bird species recorded in each habitat in the assessment area					3	6	10	4	0	6	1	6	4	3	40
Total number of bird species recorded in the assessment area					50										

Remark: all wild bird species are protected under Cap. 170 Wild Animals Protection Ordinance in Hong Kong

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Convention on International Trade in Endangered Species of Wild Fauna and Flora (2025). Appendices I, II and III.
3. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
4. International Union of Conservation for Nature. (2025). The IUCN Red List of Threatened Species. Version 2025-1.
5. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2023). List of Wild Animals under State Priority Conservation.
6. Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).
7. Zheng and Wang. (1998). China Red Data Book of Endangered Animals: Aves.

- **Species in bold is considered of conservation importance.**

Abbreviation
- Habitats: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland
- Protection or conservation status: LC = Local Concern; PRC = Potential Regional Concern; RC = Regional Concern; VU = Vulnerable

Appendix C2 Bird Species Recorded in the Indicative Scheme during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4]	Relative abundance in each habitat in the Indicative Scheme								
					Indicative access road and saltwater pumping station					Application Site			
					DA	MW	NW	RP	WO	AL	MW	NW	WO
1	Spotted Dove	*Spilopelia chinensis*	Abundant resident. Widely distributed in Hong Kong.	-	5								
2	House Swift	*Apus nipalensis*	Abundant spring migrant and common resident. Widely distributed in Hong Kong.	-	1								
3	Scarlet Minivet	*Pericrocotus speciosus*	Common resident. Found in Tai Po Kau, the Peak, Lam Tsuen, Cape D'Aguilar Road, Peel Rise, Shing Mun.	-					1				
4	Red-billed Blue Magpie	*Urocissa erythroryncha*	Common resident. Widely distributed in woodland edges throught Hong Kong	-	1								
5	Large-billed Crow	*Corvus macrorhynchos*	Common resident. Widely distributed in Hong Kong	-									1
6	Cinereous Tit	*Parus cinereus*	Common resident. Widely distributed in Hong Kong.	-	1								
7	Red-whiskered Bulbul	*Pycnonotus jocosus*	Abundant resident. Widely distributed in Hong Kong.	-	2			1		4			4
8	Chinese Bulbul	*Pycnonotus sinensis*	Abundant resident. Widely distributed in Hong Kong.	-					2				
9	Chestnut Bulbul	*Hemixos castanonotus*	Common resident and winter visitor. Widely distributed in woodland throughout Hong Kong.	-					2				1
10	Yellow-browed Warbler	*Phylloscopus inornatus*	Abundant winter visitor and migrant. Widely distributed in woodland throughout Hong Kong.	-					2				2
11	Yellow-bellied Prinia	*Prinia flaviventris*	Common resident. Widely distributed in Hong Kong.	-						3			
12	Common Tailorbird	*Orthotomus sutorius*	Common resident. Widely distributed in Hong Kong.	-					5				2
13	Masked Laughingthrush	*Pterorhinus perspicillatus*	Abundant resident. Widely distributed in shrubland throughout Hong Kong.	-	2								
14	**Silver-eared Mesia**	***Leiothrix argentauris***	**Common resident. Widely distributed in woodland throughout Hong Kong.**	**Cap. 586** **List of Wild Animals under State Priority Conservation: Class II** **CITES: Appendix II**						**5**			

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3 4]	Relative abundance in each habitat in the Indicative Scheme								
					Indicative access road and saltwater pumping station					Application Site			
					DA	MW	NW	RP	WO	AL	MW	NW	WO
15	Swinhoe's White-eye	*Zosterops simplex*	Abundant resident. Widely distributed in Hong Kong.	-					10				1
16	Black-collared Starling	*Gracupica nigricollis*	Common resident. Widely distributed in Hong Kong.	-	5								
17	Oriental Magpie-Robin	*Copsychus saularis*	Abundant resident. Widely distributed in Hong Kong.	-	1								
18	Scarlet-backed Flowerpecker	*Dicaeum cruentatum*	Common resident. Widely distributed in wooded area throughout Hong Kong.	-					2				
19	Fork-tailed Sunbird	*Aethopyga christinae*	Common resident and winter visitor. Widely distributed in Hong Kong.	-					1				1
20	Eurasian Tree Sparrow	*Passer montanus*	Abundant resident. Widely distributed in Hong Kong.	-	10								
21	White-rumped Munia	*Lonchura striata*	Common resident. Widely distributed in Hong Kong.	-						3			
22	White Wagtail	*Motacilla alba*	Resident, common passage migrant and winter visitor. Widely distributed in Hong Kong.	-	1								
Number of bird species recorded in each habitat along the indicative access road, in the saltwater pumping station and Application Site					10	0	0	1	8	4	0	0	7
Number of bird species recorded along the indicative access road, in the saltwater pumping station and Application Site					18					10			
Total number of bird species recorded in the Indicative Scheme					22								

Remark: all wild bird species are protected under Cap. 170 Wild Animals Protection Ordinance in Hong Kong.

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Convention on International Trade in Endangered Species of Wild Fauna and Flora (2025). Appendices I, II and III.
3. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2023). List of Wild Animals under State Priority Conservation.
4. Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).

Abbreviation
- Habitat: AL = Agricultural Land; DA = Developed Area; MW = Modified Watercourse; NW = Natural Watercourse; RP = Rural Plantation; WO = Woodland

Appendix D1 Herpetofauna Species Recorded in the Assessment Area during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2] [3] [4]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
Amphibian															
1	Asian Common Toad	*Duttaphrynus melanostictus*	Widely distributed in Hong Kong.	/			14							6	12
2	Butler's Pigmy Frog	*Microhyla butleri*	Widely distributed in Hong Kong.	/	5										
3	Paddy Frog	*Fejervarya limnocharis*	Widely distributed in Hong Kong.	/	14										
4	**Chinese Bullfrog**	***Hoplobatrachus chinensis***	**Widely distributed in Lantau Island and New Territories.**	**Fellowes *et al*. (2002): PRC** **List of Wild Animals under State Priority Conservation: Class II** **Red List of China's Vertebrates: EN**	**3**										
5	**Big-headed Frog**	***Limnonectes fujianensis***	**Distributed in mountain streams in Tai Po Kau Nature Reserve, Kam Shan Country Park, Lam Tsuen Country Park and Plover Cove Country Park.**	**Fellowes *et al*. (2002): LC**							**3**				
6	**Lesser Spiny Frog**	***Quasipaa exilispinosa***	**Widely distributed in upland forest streams throughout Hong Kong.**	**Fellowes *et al*. (2002): PGC** **Red List of China's Vertebrates: VU**							**3**				
7	Gunther's Frog	*Sylvirana guentheri*	Widely distributed throughout Hong Kong.	/	1		12				9	1			
8	**Brown Wood Frog**	***Hylarana latouchii***	**Distributed in woodlands in Tai Po Kau Nature Reserve, Shing Mun Country Park, Tai Mo Shan Country Park, Sai Kung West Country Park and Clear Water Bay Peninsula.**	**Fellowes *et al*. (2002): LC**	**2**						**2**				**2**
9	Brown Tree Frog	*Polypedates*	Widely distributed	/	2		3				Egg				1

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2] [3] [4]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
		megacephalus	throughout Hong Kong.												
10	Greenhouse Frog	*Eleutherodactylus planirostris*	Widely distributed throughout Hong Kong.	/											1
Reptile															
11	Changeable Lizard	*Calotes versicolor*	Widely distributed throughout Hong Kong.	/			1								1
12	Large-spotted Cat Snake	*Boiga multomaculata*	Distributed in New Territories, Lantau Island and Hong Kong Island.	/										1	
13	**Four-clawed Gecko**	***Gehyra mutilate***	**Widely distributed throughout Hong Kong.**	**Red List of China's Vertebrates: VU**											**1**
14	Bowring's Gecko	*Hemidactylus bowringii*	Distributed throughout Hong Kong.	/			1								
15	Long-tailed Skink	*Eutropis longicaudata*	Widely distributed throughout Hong Kong.	/										1	
16	**Indian Forest Skink**	***Sphenomorphus indicus***	**Distributed in woodlands in eastern and central New Territories.**	**Fellowes *et al*. (2002): LC**										**4**	**17**
17	Chinese Waterside Skink	*Tropidophorus sinicus*	Widely distributed in streams throughout Hong Kong.	/							1				
Number of herpetofauna species recorded in each habitat in the assessment area					6	0	5	0	0	0	6	1	0	4	7
Total number of herpetofauna species recorded in the assessment area					17										

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
3. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2023). List of Wild Animals under State Priority Conservation.
4. Jiang *et al.* (2016). Red list of China's vertebrates.

- **Species in bold are considered of conservation importance.**

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- Habitat: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland
- Protection or conservation status: EN = Endangered; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; VU: Vulnerable

Appendix D2 Herpetofauna Species Recorded in the Indicative Scheme during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status [2 3]	Relative abundance in each habitat in the Indicative Scheme								
					Indicative access road and saltwater pumping station					Application Site			
					DA	MW	NW	RP	WO	AL	MW	NW	WO
Amphibian													
1	Asiatic Painted Frog	*Kaloula pulchra*	Widely distributed in Hong Kong.	/						3			
2	**Lesser Spiny Frog**	***Quasipaa exilispinosa***	**Widely distributed in upland forest streams throughout Hong Kong.**	**Fellowes *et al*. (2002): PGC** **Red List of China's Vertebrates: VU**								**2 + tadpole**	
3	**Big-headed Frog**	***Limnonectes fujianensis***	**Distributed in mountain streams in Tai Po Kau Nature Reserve, Kam Shan Country Park, Lam Tsuen Country Park and Plover Cove Country Park.**	**Fellowes *et al*. (2002): LC**								**1**	
Reptile													
4	**Indian Forest Skink**	***Sphenomorphus indicus***	**Distributed in woodlands in eastern and central New Territories.**	**Fellowes *et al*. (2002): LC**									**2**
Number of herpetofauna species recorded in each habitat along the indicative access road, in the saltwater pumping station and Application Site					0	0	0	0	0	1	0	2	1
Number of herpetofauna species recorded along the indicative access road, in the saltwater pumping station and Application Site					0					4			
Total number of herpetofauna species recorded in the Indicative Scheme					4								

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
3. Jiang *et al.* (2016). Red list of China's vertebrates.
- **Species in bold are considered of conservation importance.**

Abbreviation
- Habitat: AL = Agricultural Land; DA = Developed Area; MW = Modified Watercourse; NW = Natural Watercourse; RP = Rural Plantation; WO = Woodland
- Protection or conservation status: LC = Local Concern; PGC = Potential Global Concern; VU = Vulnerable

Appendix E1 Butterfly Species Recorded in the Assessment Area during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1,2]	Protection and/or conservation status [3]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
1	Formosan Swift	*Borbo cinnara*	Common. Widely distributed throughout Hong Kong.	-	1										
2	Tree Flitter	*Hyarotis adrastus*	Uncommon. Widely distributed in woodland throughout Hong Kong	-											1
3	Water Snow Flat	*Tagiades litigiosus*	Common. Widely distributed throughout Hong Kong.	-											4
4	Common Hedge Blue	*Acytolepis puspa*	Common. Widely distributed throughout Hong Kong.	-										3	2
5	Purple Sapphire	*Heliophorus epicles*	Common. Widely distributed throughout Hong Kong.	-											1
6	Silver Streak Blue	*Iraota timoleon*	Uncommon. Widely distributed throughout Hong Kong.	-										1	
7	**Metallic Cerulean**	***Jamides alecto***	**Very rare. Victoria Peak, Fung Yuen, Chuen Lung, Mui Wo.**	**-**	**2**										**6**
8	Dark Cerulean	*Jamides bochus*	Common. Widely distributed throughout Hong Kong.	-											2
9	Long-tailed Blue	*Lampides boeticus*	Common. Widely distributed throughout Hong Kong.	-										2	
10	Transparent 6-line Blue	*Nacaduba kurava*	Common. Widely distributed throughout Hong Kong.	-										1	
11	Pale Grass Blue	*Pseudozizeeria maha*	Very common. Widely distributed	-			1								5

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2]	Protection and/or conservation status [3]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
			throughout Hong Kong												
12	Chocolate Royal	*Remelana jangala*	Common. Widely distributed throughout Hong Kong	-											1
13	Plum Judy	*Abisara echerius*	Very common. Widely distributed throughout Hong Kong.	-											2
14	Punchinello	*Zemeros flegyas*	Common. Widely distributed throughout Hong Kong.	-	1						1				3
15	Blue-spotted Crow	*Euploea midamus*	Very common. Widely distributed throughout Hong Kong.	-	5										2
16	Ceylon Blue Glassy Tiger	*Ideopsis similis*	Very common. Widely distributed throughout Hong Kong.	-	1						1				
17	Glassy Tiger	*Parantica aglea*	Common. Widely distributed throughout Hong Kong.	-											1
18	Indian Fritillary	*Argyreus hyperbius*	Common. Widely distributed throughout Hong Kong.	-										1	
19	Angled Castor	*Ariadne ariadne*	Common. Widely distributed throughout Hong Kong.	-											1
20	Colour Sergeant	*Athyma nefte*	Common. Widely distributed throughout Hong Kong.	-											1
21	**Blackvein Sergeant**	***Athyma ranga***	**Uncommon. Shing Mun, Ngau Ngak Shan, Tai Mong Tsai, Tai Mo Shan, Tai Po Kau, Cloudy Hill.**	**Fellowes *et al*. (2002): LC**										**1**	**2**

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2]	Protection and/or conservation status [3]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
22	Tawny Rajah	*Charaxes bernardus*	Common. Widely distributed throughout Hong Kong.	-										2	2
23	Rustic	*Cupha erymanthis*	Very common. Widely distributed throughout Hong Kong.	-	1										4
24	Common Mapwing	*Cyrestis thyodamas*	Common. Widely distributed throughout Hong Kong.												1
25	Gaudy Baron	*Euthalia lubentina*	Uncommon. Widely distributed throughout Hong Kong.	-										1	
26	Red Ring Skirt	*Hestina assimilis*	Common. Widely distributed throughout Hong Kong.	-										1	1
27	Great Eggfly	*Hypolimnas bolina*	Common. Widely distributed throughout Hong Kong.	-	2	1	1				1			3	7
28	**Danaid Eggfly**	***Hypolimnas misippus***	**Uncommon. Ngau Ngak Shan, Lung Kwu Tan, Hong Kong Wetland Park, Mount Parker, Cloudy Hill, Lin Ma Hang.**	**Fellowes *et al*. (2002): LC**										**1**	
29	Chocolate Pansy	*Junonia iphita*	Common. Widely distributed throughout Hong Kong.	-	1		1								2
30	Lemon Pansy	*Junonia lemonias*	Common. Wu Kau Tang, Shan Liu, Shui Long Wo, Tong Fuk, Pak Tam Chung.	-			1								
31	Blue Admiral	*Kaniska canace*	Common. Widely distributed throughout Hong Kong	-			1								1
32	Common Archduke	*Lexias pardalis*	Suspected species.	-											2

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2]	Protection and/or conservation status [3]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
			Widely distributed throughout Hong Kong.												
33	Common Sailer	*Neptis hylas*	Very common. Widely distributed throughout Hong Kong.	-										1	2
34	Common Lascar	*Pantoporia hordonia*	Uncommon. Widely distributed throughout Hong Kong.	-										1	2
35	White Commodore	*Parasarpa dudu*	Common. Widely distributed throughout Hong Kong.	-										1	
36	Black Prince	*Rohana parisatis*	Common. Widely distributed throughout Hong Kong.	-											1
37	Indian Red Admiral	*Vanessa indica*	Uncommon. Widely distributed throughout Hong Kong.	-										1	
38	Common Palmfly	*Elymnias hypermnestra*	Common. Widely distributed throughout Hong Kong.	-	1										5
39	Common Evening Brown	*Melanitis leda*	Common. Widely distributed throughout Hong Kong.	-											1
40	Dark Evening Brown	*Melanitis phedima*	Uncommon. Widely distributed throughout Hong Kong.	-											1
41	Dark-brand Bush Brown	*Mycalesis mineus*	Very common. Widely distributed throughout Hong Kong.	-			1				1				7
42	South China Bush Brown	*Mycalesis zonata*	Common. Widely distributed throughout Hong Kong.	-											3
43	Muirhead's Labyrinth	*Neope muirheadii*	Uncommon. Tai	-											1

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2]	Protection and/or conservation status [3]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
			Lam, Shing Mun, Tai Po Kau, Pat Sin Leng												
44	Common Five-ring	*Ypthima baldus*	Very common. Widely distributed throughout Hong Kong.	-			1								4
45	Tailed Jay	*Graphium agamemnon*	Common. Widely distributed throughout Hong Kong.	-	1										6
46	Common Jay	*Graphium doson*	Common. Widely distributed throughout Hong Kong.	-											1
47	Common Bluebottle	*Graphium sarpedon*	Very common. Widely distributed throughout Hong Kong.	-	1		1							1	4
48	Chinese Peacock	*Papilio bianor*	Common. Widely distributed throughout Hong Kong.	-										1	1
49	Red Helen	*Papilio helenus*	Very common. Widely distributed throughout Hong Kong.	-	1									2	
50	Great Mormon	*Papilio memnon*	Very common. Widely distributed throughout Hong Kong.	-			1								2
51	Paris Peacock	*Papilio paris*	Very common. Widely distributed throughout Hong Kong.	-			1							2	1
52	Common Mormon	*Papilio polytes*	Very common. Widely distributed throughout Hong Kong.	-			3							2	6
53	Spangle	*Papilio protenor*	Very common. Widely distributed throughout Hong Kong.	-	2									2	5
54	Lemon Emigrant	*Catopsilia pomona*	Common. Widely	-	2		3	1				1		1	8

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1,2]	Protection and/or conservation status [3]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
			distributed throughout Hong Kong.												
55	Mottled Emigrant	*Catopsilia pyranthe*	Very common. Widely distributed throughout Hong Kong.	-	1										
56	Painted Jezebel	*Delias hyparete*	Uncommon. Widely distributed throughout Hong Kong	-										1	
57	Red-base Jezebel	*Delias pasithoe*	Very common. Widely distributed throughout Hong Kong.	-	1									1	2
58	Common Grass Yellow	*Eurema hecabe*	Very common. Widely distributed throughout Hong Kong.	-	1									1	3
59	Great Orange Tip	*Hebomoia glaucippe*	Common. Widely distributed throughout Hong Kong.	-	1										
60	Indian Cabbage White	*Pieris canidia*	Very common. Widely distributed throughout Hong Kong.	-			1								2
61	Fluffy Tit	*Zeltus amasa*	-	-											1
Number of butterfly species recorded in each habitat in the assessment area					18	1	13	1	0	0	4	1	0	25	47
Total number of butterfly species recorded in the assessment area					61										

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Chan *et al.* (2011). A review of the local restrictedness of Hong Kong Butterflies.
3. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.

Abbreviation
- Habitat: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland
- Protection or conservation status: LC = Local Concern

Appendix E2 Butterfly Species Recorded in the Indicative Scheme during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2]	Protection and/or conservation status	Relative abundance in each habitat in the Indicative Scheme								
					Indicative access road and saltwater pumping station					Application Site			
					DA	MW	NW	RP	WO	AL	MW	NW	WO
1	Tree Flitter	*Hyarotis adrastus*	Uncommon. Widely distributed in woodland throughout Hong Kong	-						1			
2	Restricted Demon	*Notocrypta curvifascia*	Uncommon. Widely distributed throughout Hong Kong.	-						2			
3	Club Silverline	*Spindasis syama*	Uncommon. Widely distributed throughout Hong Kong.	-						1			
4	Ceylon Blue Glassy Tiger	*Ideopsis similis*	Very common. Widely distributed throughout Hong Kong	-					1				1
5	Rustic	*Cupha erymanthis*	Very common. Widely distributed throughout Hong Kong	-	1				2				3
6	White-edged Blue Baron	*Euthalia phemius*	Common. Widely distributed throughout Hong Kong.	-						1			
7	Common Jester	*Symbrenthia lilaea*	Common. Widely distributed throughout Hong Kong	-									1
8	Common Five-ring	*Ypthima baldus*	Very common. Widely distributed throughout Hong Kong.	-					2	3			2
9	Tailed Jay	*Graphium agamemnon*	Common. Widely distributed throughout Hong Kong	-					1				1
10	Common Bluebottle	*Graphium sarpedon*	Very common. Widely distributed throughout Hong Kong	-						2			
11	Great Mormon	*Papilio memnon*	Very common. Widely distributed throughout Hong Kong	-									1
12	Spangle	*Papilio protenor*	Very common. Widely distributed throughout Hong Kong	-	2			1	1	1			
13	Painted Jezebel	*Delias hyparete*	Uncommon. Widely distributed throughout Hong Kong	-						1			
14	Common Grass Yellow	*Eurema hecabe*	Very common. Widely distributed throughout	-									1

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1,2]	Protection and/or conservation status	Relative abundance in each habitat in the Indicative Scheme								
					Indicative access road and saltwater pumping station					Application Site			
					DA	MW	NW	RP	WO	AL	MW	NW	WO
			Hong Kong										
15	Swift sp.	/	/	/									1
Number of butterfly species recorded in each habitat along the indicative access road, in the saltwater pumping station and Application Site					2	0	0	1	5	8	0	0	8
Number of butterfly species recorded along the indicative access road, in the saltwater pumping station and Application Site					5					15			
Total number of butterfly species recorded in the Indicative Scheme					15								

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Chan *et al.* (2011). A review of the local restrictedness of Hong Kong Butterflies.

Abbreviation
- Habitat: AL = Agricultural Land; DA = Developed Area; MW = Modified Watercourse; NW = Natural Watercourse; RP = Rural Plantation; WO = Woodland

Appendix F1 Odonate Species Recorded in the Assessment Area during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2]	Protection and/or conservation status [3]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
1	Black-banded Gossamerwing	*Euphaea decorata*	Abundant. Widely distributed in all streams of Hong Kong.	/							2				1
2	Asian Pintail	Acisoma panorpoides	Common. Widely distributed in marshes and weedy ponds throughout Hong Kong.	/	2										
3	Forest Chaser	*Lyriothemis elegantissima*	Common. Frequents marshes beside woodlands. Widespread throughout Hong Kong.	/											2
4	Russet Percher	*Neurothemis fulvia*	Common. Found in marshes, cultivated areas, streams, tanks and irrigation feeders, sometimes even found in nearly dried out marshy areas. Widely distributed throughout Hong Kong.	/	1		2								2
5	Red-faced Skimmer	*Orthetrum chrysis*	Abundant. Widely distributed in pools and marshy areas adjacent to flowing streams throughout Hong Kong.	/							2				1
6	Common Blue Skimmer	*Orthetrum glaucum*	Abundant. Widely distributed in streams, conduits, drainage channels, seepages and road gutters throughout Hong Kong.	/	2						3			1	3
7	Marsh Skimmer	*Orthetrum luzonicum*	Abundant. Widely distributed in abandoned paddies, marshy swampy and boggy locations.	/	1						1				
8	Common Red Skimmer	*Orthetrum pruinosum neglectum*	Abundant. Widely distributed in slow streams, ponds, rain puddles and irrigation conduits.	/							1				
9	Green Skimmer	*Orthetrum sabina sabina*	Abundant. Widely distributed in all wetland habitats throughout Hong Kong.	/										1	
10	Wandering Glider	*Pantala flavescens*	Abundant. Widely distributed all over Hong Kong.	/	1		24				2	20		1	5
11	Saddlebag Glider	*Tramea virginia*	Abundant. Widely distributed in trees adjacent to ponds and lakes throughout Hong Kong.	/			1								1
12	Crimson Dropwing	*Trithemis aurora*	Abundant. Found in marshes, ponds, streams, andor even ornamental ponds in urban areas. Widely distributed throughout Hong Kong.	/							1				
13	Indigo Dropwing	*Trithemis*	Abundant. Favours sluggish	/							4				

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1,2]	Protection and/or conservation status [3]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
		festiva	sections of streams with a strong current or the small rock pools inof mountain streams. Widespread in Hong Kong.												
14	**Emerald Cascader**	***Zygonyx iris***	**Abundant. Widely distributed in moderately clean, rapidly flowing forested streams throughout Hong Kong.**	**Fellowes *et al*. (2002): PGC**							**1**				
15	Yellow Featherlegs	*Copera marginipes*	Abundant. Widely distributed in lowland streams, ditches, and weedy margins of pond throughout Hong Kong.	/							1				
16	Black Threadtail	*Prodasineura autumnalis*	Abundant. Often perches on the plants near streams. Widely distributed in streams throughout Hong Kong.	/							2				
Number of odonate species recorded in each habitat in the assessment area					5	0	3	0	0	0	11	1	0	3	7
Total number of odonate species recorded in the assessment area					16										

Note
1. Agriculture, Fisheries and Conservation Department (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Tam *et al.* (2010). The Dragonflies of Hong Kong.
3. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.

- **Species in bold are considered of conservation importance.**

Abbreviation
- Habitat: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland
- Protection or conservations status: PGC = Potential Global Concern

Appendix F2 Odonate Species Recorded in the Indicative Scheme during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1,2]	Protection and/or conservation status	Relative abundance in each habitat in the Indicative Scheme								
					Indicative access road and saltwater pumping station					Application Site			
					DA	MW	NW	RP	WO	AL	MW	NW	WO
1	Black-banded Gossamerwing	*Euphaea decorata*	Abundant. Widely distributed in all streams of Hong Kong.	/			1						1
2	Common Blue Skimmer	*Orthetrum glaucum*	Abundant. Widely distributed in streams, conduits, drainage channels, seepages and road gutters throughout Hong Kong.	/		1				3			
3	Marsh Skimmer	*Orthetrum luzonicum*	Abundant. Widely distributed in abandoned paddies, marshy swampy and boggy locations.	/						1			
4	Common Red Skimmer	*Orthetrum pruinosum neglectum*	Abundant. Widely distributed in slow streams, ponds, rain puddles and irrigation conduits.	/						1			
5	Wandering Glider	*Pantala flavescens*	Abundant. Widely distributed all over Hong Kong.	/	3					3			
Number of odonate species recorded in each habitat along the indicative access road, in the saltwater pumping station and Application Site					1	1	1	0	0	4	0	0	1
Number of odonate species recorded along the indicative access road, in the saltwater pumping station and Application Site					3					5			
Total number of odonate species recorded in the Indicative Scheme					5								

Note
1. Agriculture, Fisheries and Conservation Department (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Tam *et al.* (2010). The Dragonflies of Hong Kong.

Abbreviation
Habitat: AL = Agricultural Land; DA = Developed Area; MW = Modified Watercourse; NW = Natural Watercourse; RP = Rural Plantation; WO = Woodland

Appendix G1 Firefly Species Recorded in the Assessment Area during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MR	MW	NRS	NW	RP	S	SH	W
1	Lunate Window Firefly	*Pyrocoelia lunata*	Widespread.	/											45
2	Stream Flicker	*Pygoluciola qingyu*	Widespread.	/							65				
Number of firefly species recorded in each habitat in the assessment area					0	0	0	0	0	0	1	0	0	0	1
Total number of firefly species recorded in the assessment area					2										

Note
1. Agriculture, Fisheries and Conservation Department (2022). Species Database of the Hong Kong Biodiversity Information Hub.

Abbreviation
- Habitat: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland

Appendix G2 Firefly Species Recorded in the Indicative Scheme during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status	Relative abundance in each habitat in the Indicative Scheme								
					Indicative access road and saltwater pumping station					Application Site			
					DA	MW	NW	RP	WO	AL	MW	NW	WO
1	Lunate Window Firefly	*Pyrocoelia lunata*	Widespread.	/						1			1
Number of firefly species recorded in each habitat along the indicative access road, in the saltwater pumping station and Application Site					0	0	0	0	0	1	0	0	1
Total number of firefly species recorded along the indicative access road, in the saltwater pumping station and Application Site					1								

Note
1. Agriculture, Fisheries and Conservation Department (2022). Species Database of the Hong Kong Biodiversity Information Hub.

Abbreviation
- Habitat: AL = Agricultural Land; DA = Developed Area; MW = Modified Watercourse; NW = Natural Watercourse; RP = Rural Plantation; WO = Woodland

Appendix H Freshwater Fish Species Recorded in the Assessment Area during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1]	Protection and/or conservation status	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
1	/	*Pterocryptis anomala*	Common. North District, Tai Po, Tsuen Wan, Sai Kung, and on Lantau Island.	/							++				
2	/	*Rhinogobius duospilus*	Probably the commonest goby in Hong Kong and is widely distributed in upper and middle course of streams, sometimes occurs in lowland streams.	/							+				
3	Mosquito Fish	*Gambusia affinis*	Introduced as a mosquito-control agent, widespread in local freshwater bodies.	/							+++				
Number of freshwater fish species recorded in each habitat in the assessment area					0	0	0	0	0	0	3	0	0	0	0
Total number of freshwater fish species recorded in the assessment area					3										

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.

Abbreviation
- Habitat: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland
- Relative abundance: + = Scarce, ++ = Occasional, +++ = Abundant

Appendix I1 Freshwater Invertebrate Species Recorded in the Assessment Area during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2 3 4 5]	Protection and/or conservation status [2 3 4 6 7]	Relative abundance in each habitat in the assessment area										
					AL	AHS	DA	MG	MW	NRS	NW	RP	S	SH	W
1	/	Gerridae sp. 1	/	/							+				
2	/	*Sulcospira hainanensis*	/	/							+++				
3	**/**	***Nanhaipotamon hongkongense***	**Widely distributed within Hong Kong; recorded throughout the New Territories, Hong Kong, Lamma and Lantau Islands.**	**Endemic to Hong Kong** **Fellowes *et al*. (2002): PGC**							**+**				
4	/	*Caridina cantonensis*	Widely distributed within Hong Kong; recorded throughout the New Territories, Hong Kong, Lamma and Lantau Islands.	/							**+**				
5	/	*Eriocheir hepuensis*	/	/							**+**				
6	**/**	***Somanniathelphusa zanklon***	**Widely located in the northwestern as well as northeastern New Territories and Lantau Island.**	**Endemic to Hong Kong** **Fellowes *et al*. (2002): GC** **IUCN Red List of Threatened Species (2025): EN**							**+**				
7	**/**	***Cryptopotamon anacoluthon***	**Widely distributed within Hong Kong; recorded throughout the New Territories, Hong Kong and Lantau Islands.**	**Endemic to Hong Kong** **Fellowes *et al*. (2002): GC** **IUCN Red List of Threatened Species (2025): VU**							**+**				
8	Giant River Hawker	*Tetracanthagyna waterhousei*	Common. Widely distributed in forested areas throughout the New Territories.	/							+				
Number of freshwater invertebrate species recorded in each habitat in the assessment area					0	0	0	0	0	0	8	0	0	0	0
Total number of freshwater invertebrate species recorded in the assessment area					8										

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.

2. Stanton and Leven (2016). Distribution, habitat utilisation and conservation status of the freshwater crab, *Somanniathelphusa zanklon* Ng & Dudgeon, 1992 (Crustacea: Brachyura: Gecarcinucidae) endemic to Hong Kong.
3. Stanton *et al*. (2017). Distribution of *Cryptopotamon anacoluthon* (Kemp, 1918) (Crustacea: Brachyura: Potamidae), a freshwater crab endemic to Hong Kong.
4. Stanton *et al*. (2018). Distribution of *Nanhaipotamon hongkongense* (Shen, 1940) (Crustacea: Brachyura: Potamidae), a freshwater crab endemic to Hong Kong.
5. Tam *et al.* (2010). The Dragonflies of Hong Kong.
6. Fellowes *et al*. (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
7. International Union of Conservation for Nature (2025). The IUCN Red List of Threatened Species. Version 2025-1.

- **Species in bold are considered of conservation importance.**

Abbreviation

- Habitat: AL = Agricultural Land; AHS = Artificial Hard Shoreline; DA = Developed Area; MG = Mangrove; MW = Modified Watercourse; NRS = Natural Rocky Shoreline; NW = Natural Watercourse; RP = Rural Plantation; S = Sea; SH = Shrubland; W = Woodland
- Protection or conservation status: EN = Endangered; GC = Global Concern; PGC = Potential Global Concern; VU = Vulnerable
- Relative abundance: + = Scarce, ++ = Occasional, +++ = Abundant

Appendix I2 Freshwater Invertebrate Species Recorded in the Indicative Scheme during the Survey Period

Number	Common name	Scientific name	Rarity and distribution in Hong Kong [1 2 3]	Protection and/or conservation status [2 4]	Relative abundance in each habitat in the Indicative Scheme								
					Indicative access road and saltwater pumping station					Application Site			
					DA	MW	NW	RP	WO	AL	MW	NW	WO
Freshwater invertebrate													
1	Giant River Hawker	*Tetracanthagyna waterhousei*	Common. Widely distributed in forested areas throughout the New Territories.	/			+						
2	/	*Caridina cantonensis*	/	/			+++					+++	
3	**/**	***Nanhaipotamon hongkongense***	**Widely distributed within Hong Kong; recorded throughout the New Territories, Hong Kong, Lamma and Lantau Islands.**	**Endemic to Hong Kong** **Fellowes *et al*. (2002): PGC**								**+**	
Number of freshwater invertebrate species recorded in each habitat along the indicative access road, in the saltwater pumping station and Application Site					0	0	2	0	0	0	0	2	0
Number of freshwater invertebrate species recorded along the indicative access road, in the saltwater pumping station and Application Site					2					2			
Total number of freshwater invertebrate species recorded in the Indicative Scheme					3								

Note
1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Stanton *et al*. (2018). Distribution of *Nanhaipotamon hongkongense* (Shen, 1940) (Crustacea: Brachyura: Potamidae), a freshwater crab endemic to Hong Kong.
3. Tam *et al.* (2010). The Dragonflies of Hong Kong.
4. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.

- **Species in bold is considered of conservation importance.**

Abbreviation
- Habitats: AL = Agricultural Land; DA = Developed Area; MW = Modified Watercourse; NW = Natural Watercourse; RP = Rural Plantation; WO = Woodland
- Relative abundance: + = Scarce, ++ = Occasional, +++ = Abundant
- Protection or conservation status: PGC = Potential Global Concern

Appendix J Intertidal Community Species Recorded in the Assessment Area during the Qualitative Surveys in Dry and Wet Seasons

Number	Scientific name	Yuen Chau Chai		Protection and/or conservation status
		November 2024 (i.e. Dry season)	August 2024 (i.e. Wet season)	
Algae				
1	*Harveylithon* sp.	++	++	/
2	*Hildenbrandia* sp.	++	++	/
3	*Kyrtuthrix maculans*	++	++	/
4	*Neoralfsia expansa*	+	+	/
5	*Ulva* sp.	+++	+++	/
Polychaete				
6	*Hydroides* sp.	++	++	/
7	*Spirorbis* sp.	+	+	/
8	*Thylacodes adamsii*	+	+	/
Chiton				
9	*Liolophura japonica*	+	+	/
Limpet/False limpet				
10	*Cellana grata*	+	+	/
11	*Cellana toreuma*	++	++	/
12	*Patelloida saccharina*	+	+	/
13	*Siphonaria laciniosa*	+	+	/
Snail				
14	*Echinolittorina malaccana*	+	+	/
15	*Echinolittorina radiata*	++	++	/
16	*Echinolittorina vidua*	+	+	/
17	*Lunella coronata*	+	+	/
18	*Monodonta labio*	+	++	/
19	*Nerita chamaeleon*	+	++	/
20	*Reishia clavigera*	+	+	/
Bivalve				
21	*Brachidontes variabilis*	++	++	/
22	*Isognomon isognomum*	+	++	/
23	*Mytilisepta virgata*	+	+	/
24	*Saccostrea cucullata*	+++	+++	/
Barnacle				
25	*Amphibalanus amphitrite*	++	++	/
26	*Captiulum mitella*	+	+	/
27	*Tetraclita japonica*	+	+	/
28	*Tetraclita squamosa*	+	+	/
Crab				
29	*Clibanarius* sp.	+	++	/
30	*Gaetice* sp.		+	/
31	*Metopograpsus* sp.	+	+	/
32	*Nanosesarma minutum*	+	++	/
33	*Parasesarma pictum*	+	+	/

Number	Scientific name	Yuen Chau Chai		Protection and/or conservation status
		November 2024 (i.e. Dry season)	August 2024 (i.e. Wet season)	
	Thalamita danae		+	/
Others				
34	*Amphipoda* sp.	++	++	/
35	*Ligia exotica*	+++	+++	/

Abbreviation

- Relative abundance of recorded fauna +: Scarce, ++: Occasional, +++: Abundant