

SECTION 16 PLANNING APPLICATION

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in “Agriculture” Zone

Various Lots in D.D. 89 and Adjoining Government Land, Man Kam To, New Territories

Ecological Impact Assessment Report

October 2024



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1 INTRODUCTION

1.1 Background

- 1.1.1 Ecosystems Ltd. was commissioned by Standard Billion Limited (the Applicant) to be the Ecological Consultant for the Planning Application. The applicant seeks planning permission from the Town Planning Board under Section 16 of the Town Planning Ordinance (Cap 131) to use Various Lots in D.D. 89 and Adjoining Government Land at Man Kam To (Application Site) for "proposed temporary warehouse (excluding dangerous goods godown) with ancillary facilities for a period of 3 years and associated filling of land.
- 1.1.2 The Application Site falls within an area zoned as "Agriculture" on the Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18. The Site occupies an area of about 16,256m².
- 1.1.3 This Ecological Impact Assessment (EcolA) presents any potential direct and indirect impacts to ecology arising from construction and operation of the Project. Ecological baseline conditions of the Application Site, the Development Site and its surroundings are described, potential ecological impacts including losses or damages to habitats and other potential impacts on the inhabiting flora and fauna have been assessed, with the need for mitigation measures such as avoidance, minimization and compensation explored. The potential ecological impacts on the identified species and habitats have also been evaluated.

2 LEGISLATION, STANDARDS AND GUIDELINES ON ECOLOGICAL SURVEY

2.1 General

- 2.1.1 The HKSAR ordinances and regulations relevant to ecological impact assessment (EcolA) of this project include the following:
- 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);
 - Country Parks Ordinance (Cap. 208) and its subsidiary legislation;
 - Environmental Impact Assessment Ordinance ("the EIAO", Cap. 499) and the associated Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM), in particular Annexes 8 and 16; and
 - Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) and its subsidiary legislation.
- 2.1.2 This EcolA also made reference to the following guidelines and standards:
- EIAO Guidance Note No. 3/2010 – Flexibility and Enforceability of Mitigation Measures Proposed in an EIA Report;

- EIAO Guidance Note No. 6/2010 – Some Observations on Ecological Assessment from the Environmental Impact Assessment Ordinance Perspective;
- EIAO Guidance Note No. 7/2023 – Ecological Baseline Survey for Ecological Assessment;
- EIAO Guidance Note No. 10/2023 – Methodologies for Terrestrial and Freshwater Ecological Baseline Surveys;
- ETWB Technical Circular (Works) No. 5/2005, "Protection of natural streams/rivers from adverse impacts arising from construction works";
- Environment, Transport and Works Bureau Technical Circular (Works) No. 3/2006. Tree Preservation. 25 May 2006.;
- Hong Kong Planning Standards and Guidelines (HKPSG) Chapter 10, "Conservation"; and
- PELB Technical Circular 1/97 / Works Branch Technical Circular 4/97, "Guidelines for Implementing the Policy on Off-site Ecological Mitigation Measures";

2.1.3 This EcolA also made reference to the following People's Republic of China (PRC) legislation:

- List of Wild Animals under State Priority Conservation; and
- List of Wild Plants under State Priority Conservation

2.1.4 International conventions and guidelines that are relevant to this study include the following:

- Convention on International Trade in Endangered Species of Wild Fauna and Flora ("CITES"). This Convention regulates international trade in animal and plant species considered to be at risk from such trade. The main categories of species relevant to Hong Kong are Appendices I and II. Species listed in Appendix I are species threatened with extinction that are or may be affected by trade; species listed in Appendix II are those that, while not necessarily under current threat of extinction, may become threatened unless trade is subject to strict regulation. Hong Kong's obligations under this Convention are enforced via the Protection of Endangered Species of Animals and Plants Ordinance;
- The International Union for Conservation of Nature (IUCN). The World Conservation Union maintains, through its Species Survival Commission, a Red List of globally threatened species of wild plants and animals (see <http://www.redlist.org>). The Red List is considered the authoritative publication to classify species as critically endangered, endangered, vulnerable, or lower-risk; and
- United Nations Convention on Biological Diversity. This convention requires parties to regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use. It also requires parties to promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings. The

People's Republic of China (PRC) ratified the Convention on Biological Diversity on 5th January 1993. The HKSAR Government has stated that it is "committed to meeting the environmental objectives" of the Convention (PELB 1996).

2.2 Key Ecological Resources & Important Habitats

2.2.1 Key ecological issues that are identified within the Study Area and the surrounding environment include the following:

- Man Kam To Road Egretty and Ho Sheung Heung Egretty (**Figure 1**);
- Active agricultural lands that support land birds;
- Ponds that support waterbirds; and
- Species of conservation importance (e.g. Eurasian Otter)

3 ECOLOGICAL SURVEY METHODOLOGY

3.1 Application Site and Study Area

3.1.1 The Application Site is located approximately 10m west of Man Kam To Road. Although the Application Site falls within area zoned as "Agriculture" on the Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18, it is currently vacant with no active agricultural activity.

3.1.2 The Study Area includes the area of 500 metres distance from the boundary of the Application Site (**Figure 1**). The western part of the Application Site contains agricultural lands and ponds that support both land birds and waterbirds, while the southern part to be in semi-rural character and area predominately occupied by temporary structures for logistics centres, open storage yards and vacant land. The locations of the Application Site and Study Area are shown in **Figure 1**.

3.2 Review of Existing Information

3.2.1 In accordance with Section 5.1.2.1 of the Annex 16 of EIAO-TM, existing information regarding the Application Site and its vicinity shall be reviewed. Literature review characterises the existing ecological baseline information within the Study Area. The literature review covers Government and private sector reports, independent and Government published literature, academic studies, vegetation maps and land use maps.

3.2.2 Reviewed information included, but not limited to the following:

- Register No. AEIAR-201/2016 – Police Facilities in Kong Nga Po
- Register No. AEIAR-198/2016 – Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery;
- Annual report and other publications of The Hong Kong Bird Watching Society;
- Draft Outline Zoning Plans and Outline Zoning Plans of Town Planning Board;
- Hong Kong Biodiversity – Newsletter of Agriculture, Fisheries and Conservation Department (AFCD);

- Porcupine! Newsletter of Ecology & Biodiversity, The School of Biological Sciences, The University of Hong Kong;
- Publications of AFCD;
- The International Union for Conservation of Nature (IUCN); and
- Relevant EIA reports.

3.3 Programme

3.3.1 The Survey Area covers terrestrial area only. The study on terrestrial ecology was mainly focus on the Application Site and adjacent areas of the Application Site. The Survey Area for the purpose of ecological baseline surveys includes all area within 500m distance from the boundary of the Application Site (**Figure 2**).

3.3.2 Due to the scale and nature of the proposed development, ecological survey conducted August and October 2024 covering major season of fauna to collect ecological baseline information is considered adequate (**Table 3.1**).

3.3.3 The survey methodology for each item is described in the following sections.

Table 3.1 Ecological Survey Programme

| Survey Type | Wet Season | | |
|----------------------|------------|-----------|-----------|
| | August | September | October |
| Habitat & vegetation | D | D | D |
| Avifauna | E, D, S&N | E, D, S&N | E, D, S&N |
| Butterfly | D | D | D |
| Odonate | D | D | D |
| Herpetofauna | D&N | D&N | D&N |
| Terrestrial mammal | D, S&N | D, S&N | D, S&N |
| Freshwater community | D&N | | D&N |
| Firefly | S & N | S & N | S & N |

Note:

E: Early morning, D: Daytime; N: Night-time, S: Dusk

3.4 Methodology

Habitat and Vegetation

3.4.1 Habitats within the Study Area were identified, sized and mapped based on the latest government aerial photos and field ground-truthing. Representative areas of each habitat type were surveyed on foot. Flora species encountered in each habitat type and their relative abundance were recorded with special attention to rare or protected species. Nomenclature and conservation status of flora species follows the latest Hong Kong Plant Database available from the website of the Hong Kong Herbarium, whilst their rarity in Hong Kong followed Corlett *et al.* (2000) and Yip *et al.* (2010) where applicable. Habitats were characterized and defined with reference to size, vegetation type, flora species present, dominant species, species diversity and abundance, community structure, as well as the presence of any feature of ecological importance. Representative colour photos will be 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.

Avifauna

- 3.4.2 Daytime and nighttime avifauna surveys were carried out monthly. Daytime surveys were carried out in the early morning at the period of peak avifauna activity, while night surveys were conducted during and after dusk to record nocturnal avifauna. The avifauna communities of each habitat type within the Study Area were surveyed using transect count method (**Figure 2**). All avifauna observed or heard within 30m along the survey transects were counted and identified to species wherever possible and a list of avifauna recorded in the surveys is provided. The location(s) of any avifauna species of conservation importance encountered were recorded, along with notable behaviour. Major foraging and roosting sites of avifauna species were marked on map, if any. Signs of breeding (e.g. nests and/ or recently fledged juveniles) within the Study Area, especially in the Application Site, were also recorded and marked on map. Surveyors were using a 7X to 10X binoculars for the surveys and photographic records were taken, if possible. Ornithological nomenclature in this report follows the latest List of Hong Kong Birds by Hong Kong Bird Watching Society.

Butterfly and Odonate

- 3.4.3 Butterfly and Odonate surveys were conducted by transect count method monthly during daytime (**Figure 2**). All the butterflies and odonates encountered were recorded with their abundance and two species lists for butterflies and odonates were provided respectively. The location(s) of butterfly and odonate species with conservation importance were marked on map, if any. Nomenclature for butterflies and odonates follows that available from the Hong Kong Biodiversity Information Hub, whilst conservation status for butterflies and dragonflies follows Chan *et al.* (2011) and Tam *et al.* (2011) respectively where applicable.

Herpetofauna (Reptile and Amphibian)

- 3.4.4 Daytime and nighttime herpetofauna surveys were carried out. Herpetofauna surveys were conducted through direct observation and active searching in all habitat types along the survey transects (**Figure 2**), and in potential hiding places such as among leaf litter, inside holes, under stones and logs within the Study Area. Particular attention was given to watercourses or other water bodies. 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 along with notable behaviour. A herpetofauna species list was provided according to the records. Location(s) of herpetofauna species with conservation importance were marked on map. Nomenclature and conservation status for herpetofauna follows that available from the Hong Kong Biodiversity Information Hub, Karsen *et al.* (1998) and Chan *et al.* (2005).

Terrestrial Mammal

- 3.4.5 Terrestrial mammal surveys were carried out during daytime and night-time on a monthly basis. As most mammals often occur at low densities, all sightings, tracks, and signs of mammals (including droppings) were actively searched along the survey transects (**Figure 2**). Night surveys were conducted to survey nocturnal

mammal species (e.g. rodents and bats). Hand torch was used to active search for the nocturnal mammals. Camera traps were installed to survey cryptic terrestrial mammals at representative locations within the Study Area. Bat surveys were conducted during and after dusk through direct observations and recorded by ultrasonic bat detector. Particular attention was given to potential foraging and drinking sites such as fruit trees and freshwater ponds (Tong, 2016). Roosting site(s) of bat species was marked on map. All bat calls recorded were identified according to species-specific echolocation call structure (Tong, 2016). All the mammals observed during the survey were counted and identified to species level whenever possible and a list of mammal species recorded was provided. Nomenclature for mammals follows that available from the Hong Kong Biodiversity Information Hub and Shek (2006).

Freshwater Community

- 3.4.6 Daytime and nighttime freshwater fauna surveys were carried out. Freshwater fauna, including freshwater macro-invertebrates (e.g. freshwater crabs, shrimps, freshwater molluscs and aquatic insect larvae) and fishes, in watercourses within the Study Area were studied by direct observation and active searching. Sampling was carried out and the sampling locations were shown in **Figure 2**. Freshwater fishes and aquatic macro-invertebrates were recorded and identified to the lowest possible taxon and their relative abundances were reported. The location(s) of freshwater fauna species of conservation importance were recorded. Nomenclature for freshwater fishes follows that available from the Hong Kong Biodiversity Information Hub, while those for the macro-invertebrates will follow Dudgeon (2003).

Firefly

- 3.4.7 Firefly surveys were carried out along the transects (**Figure 2**) at dusk and night (started shortly after sunset and continued until 120 minutes after sunset when the fireflies are most active). During the survey, any firefly observed, including larvae and adults, was identified to the species level, where possible. The location(s) of firefly species of conservation importance or any notable behavior (e.g. breeding) were recorded. Nomenclature and conservation status of fireflies (e.g. endemic to Hong Kong) follow Yiu (2023).

3.5 Impact Assessment

- 3.5.1 An ecological impact assessment was conducted to assess the impacts of the proposed development upon terrestrial and aquatic ecology.
- 3.5.2 The objectives of the ecological impact assessment included the followings:
- to identify and evaluate as far as possible the potential terrestrial and aquatic ecological impacts associated to the proposed development, both directly (e.g. by physical disturbance) and indirectly (e.g. by disturbance or change of water quality);
 - to identify recognized sites of conservation importance, important habitats, and the associated wildlife groups/species; and
 - where needed, to propose mitigation measures to minimize adverse impacts for the development.

- 3.5.3 The ecological assessment made reference to the criteria and guidelines as stated in Annexes 8 and 16 of the EIAO-TM.

4 RESULTS OF LITERATURE REVIEW

4.1 Recognized Sites of Conservation Importance & Important Habitats

Man Kam To Road Egretty and Ho Sheung Heung Egretty

- 4.1.1 The Man Kam To Road Egretty is located at Man Kam To Road, approximately 900m from the Application Site. The egretty has been first discovered in June 2009 during the course of ecological surveys conducted under the NENT NDAs Study. It has been mainly used by Chinese Pond Heron. It was recorded with a maximum of 24 Chinese Pond Heron nests and 14 Little Egret nests in 2022 (Anon 2022).
- 4.1.2 According to the results of Summer 2022 Report conducted by the Hong Kong Bird watching Society, only 4 nests of Chinese Pond Heron were recorded in Ho Sheung Heung Egretty (Anon 2022).
- 4.1.3 With reference to the approved EIA report of North East New Territories New Development Areas (Register no.: AEIAR – 175/2013), the major flight-lines of Ho Sheung Heung Egretty were observed over the Lo Wu Correctional Institution towards the Kwu Tung North New Development Area, towards Long Valley, along Shek Sheung River and along the Ng Tung River towards the Fanling North New Development Area. For Man Kam To Road Egretty, most birds flew towards the south-west, either following the Ng Tung River or directly over the developed area to the south-west. The flight-lines of breeding ardeids from both egretties were towards away from the Application Site.

Agricultural Land

- 4.1.4 A biodiversity study of selected farmlands in the proposed Northern Metropolis was conducted by Kadoorie Farm and Botanic Garden (KFBG), farmland in Sandy Ridge is one of the study areas. According to the study results, Sandy Ridge, Chow Tin (Lei Uk) and Tai Po Tin (Shan Kai Wat) were the top three sites in terms of bird species richness. A total of 98 bird species were recorded, 39 species are considered as species of conservation importance (**Table 4.1**). Agricultural lands are mostly located to the west and south-west of the Application Site. Locations of the recorded species of conservation importance were not available.

4.2 Flora and Fauna Species of Conservation Importance

- 4.2.1 Both the assessment area of EIA studies Register No. AEIAR-201/2016 and AEIAR-198/2016 partially covered the present Application Site and Study Area. Among the species of conservation importance, only two butterflies and one bird species with relatively good mobility were recorded within the Application Site. Details of the species of conservation importance recorded in the two EIA studies are shown in **Table 4.1**, while the locations are shown in **Figure 3**. Although *Rhododendron pulchrum* and *Rhododendron mucronatum* were considered as species of conservation importance in AEIAR-198/2016, they are cultivated and

exotic species, which are not considered as species of conservation importance in the present study.

- 4.2.2 With reference to information from AFCD's Biodiversity Survey (i.e. List of Species Recorded near Lo Wu Station Road by AFCD), 43 species of birds, 3 species of reptiles, 7 species of amphibians, 20 species of butterflies, 29 species of dragonflies, and 6 species of fishes were recorded within the 500m Study from the present Application Site. These species were accumulated since 2002. Among the species, 9 species of birds, 1 species of butterflies, and 3 dragonflies were considered as species of conservation importance. Details of the species of conservation importance recorded by AFCD are shown in **Table 4.1**. However, locations of those species are not available.

Table 4.1 List of Flora and Fauna Species of Conservation Importance Recorded within or in the vicinity of the Present Study Area from Reviewed Literature

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|---|-------------------------------------|---------------|---|---|-----------------------------------|
| | Application Site | Study Area | | | |
| Flora | | | | | |
| <i>Aquilaria sinensis</i> | - | √ | Common. Found in lowland forest and fung shui woods. | IUCN Red List of Threatened Species (2024): VU; Appendix II of CITES; Threatened Species List of China's Higher Plants: VU; China Plant Red Data Book: VU; Included in Illustrations of Rare & Endangered Plant in Guangdong Province; Listed in "Rare and Precious Plants of Hong Kong"; Cap. 586; State Protection (Category II) | AEIAR-198/2016 AEIAR-201/2016 |
| Avifauna (all avifauna in Hong Kong are protected under Cap 170) | | | | | |
| Eurasian Teal <i>Anas crecca</i> | Not available | Not available | Common winter visitor. Found in Deep Bay area, Shuen Wan, Tai Lam Chung Reservoir, Victoria Harbour, urban parks. | Fellowes et al. (2002): RC | KFBG |
| Chinese Francolin <i>Francolinus pintadeanus</i> | Not available | Not available | Common resident. Widely distributed in grassland throughout Hong Kong. | - | KFBG |
| Japanese Quail | Not available | Not available | Uncommon autumn passage migrant and rare winter visitor. Found in Long | Fellowes et al. (2002): LC | KFBG |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|--|-------------------------------------|---------------|---|---|-----------------------------------|
| | Application Site | Study Area | | | |
| <i>Coturnix japonica</i> | | | Valley, Mai Po, Kam Tin, Lam Tsuen, Tin Shui Wai. | | |
| Little Grebe <i>Tachybaptus ruficollis</i> | - | √ | Common resident. Found in Deep Bay area. | Fellowes et al. (2002): LC | AEIAR-201/2016 KFBG |
| Black-winged Stilt <i>Himantopus himantopus</i> | Not available | Not available | Common migrant and winter visitor. Found in Deep Bay area, Long Valley, Kam Tin. | Fellowes et al. (2002): RC | KFBG |
| Little Ringed Plover <i>Charadrius dubius</i> | Not available | Not available | Resident, common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong. | Fellowes et al. (2002): (LC) | KFBG |
| Common Greenshank <i>Tringa nebularia</i> | Not available | Not available | Abundant passage migrant and winter visitor. Found in Deep Bay area. | Fellowes et al. (2002): RC | KFBG |
| Great Cormorant <i>Phalacrocorax carbo</i> | Not available | Not available | Common winter visitor. Widely distributed in coastal areas throughout Hong Kong. | Fellowes et al. (2002): PRC | KFBG |
| Yellow Bittern <i>Ixobrychus sinensis</i> | - | √ | Uncommon summer visitor and common passage migrant. Found in Deep Bay area, Chek Keng, Tai Long Wan. | Fellowes et al. (2002): (LC) | AEIAR-201/2016 KFBG |
| Cinnamon Bittern <i>Ixobrychus cinnamomeus</i> | Not available | Not available | Uncommon passage migrant and scarce summer visitor. Found in Deep Bay area, Long Valley, Tai Yuen (Sheung Shui), Pui O. | Fellowes et al. (2002): LC | KFBG |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|---|-------------------------------------|---------------|--|---|-----------------------------------|
| | Application Site | Study Area | | | |
| Black-crowned Night Heron <i>Nycticorax nycticorax</i> | Not available | Not available | Common resident and migrant. Widely distributed in Hong Kong. | Fellowes et al. (2002): LC | KFBG |
| Grey Heron <i>Ardea cinerea</i> | - | √ | Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar. | Fellowes et al. (2002): PRC | AFCD AEIAR-201/2016 |
| Purple Heron <i>Ardea purpurea</i> | Not available | Not available | Uncommon passage migrant. Found in Deep Bay area. | Fellowes et al. (2002): RC | KFBG |
| Chinese Pond Heron <i>Ardeola bacchus</i> | - | √ | Common resident. Widely distributed in Hong Kong. | Fellowes et al. (2002): PRC | AFCD AEIAR-201/2016 KFBG |
| Eastern Cattle Egret <i>Bubulcus coromandus</i> | - | √ | Resident and common passage migrant. Widely distributed in Hong Kong. | Fellowes et al. (2002): LC | AFCD AEIAR-201/2016 KFBG |
| Great Egret <i>Ardea alba</i> | Not available | Not available | Common resident, migrant and winter visitor. Widely distributed in Hong Kong. | Fellowes et al. (2002): PRC | KFBG |
| Intermediate Egret <i>Ardea intermedia</i> | Not available | Not available | Resident and passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape D'Aguilar. | Fellowes et al. (2002): RC | KFBG |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|--|-------------------------------------|---------------|---|---|-----------------------------------|
| | Application Site | Study Area | | | |
| Little Egret <i>Egretta garzetta</i> | - | √ | Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong. | Fellowes et al. (2002): PRC | AEIAR-201/2016 KFBG |
| Crested Serpent Eagle <i>Spilornis cheela</i> | Not available | Not available | Common resident. Widely distributed in shrublands on hillsides throughout Hong Kong. | China Red Data Book Status: VU; Fellowes et al. (2002): (LC); Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II | KFBG |
| Eastern Imperial Eagle <i>Aquila heliaca</i> | Not available | Not available | Common winter visitor. Found in Deep Bay area, Ma Tso Lung. | China Red Data Book Status: VU; IUCN Red List: VU; Fellowes et al. (2002): GC; Cap. 586; List of Wild Animals under State Priority Conservation: Class I; Red List of China's Vertebrates: EN; CITES: Appendix II | KFBG |
| Common Kestrel <i>Falco tinnunculus</i> | Not available | Not available | Common autumn migrant and winter visitor. Widely distributed in Hong Kong. | Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II | AFCD |
| Black Kite <i>Milvus migrans</i> | - | √ | 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 | AFCD AEIAR-201/2016 KFBG |
| Asian Barred Owlet <i>Glaucidium cuculoides</i> | Not available | Not available | Locally common resident. Widely distributed in woodland of the north and central New Territories. | Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II | KFBG |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|--|-------------------------------------|---------------|---|--|-----------------------------------|
| | Application Site | Study Area | | | |
| Eastern Buzzard <i>Buteo japonicus</i> | Not available | Not available | Common winter visitor. Widely distributed in Hong Kong. | Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II | KFBG |
| Crested Goshawk <i>Accipiter trivirgatus</i> | - | √ | Common resident. Widely distributed in woodlands and shrublands throughout Hong Kong. | China Red Data Book Status: Rare; Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II | AEIAR-201/2016 KFBG |
| Collared Crow <i>Corvus torquatus</i> | - | √ | 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: VU; Fellowes et al. (2002): LC | AFCD AEIAR-201/2016 KFBG |
| White-throated Kingfisher <i>Halcyon smyrnensis</i> | - | √ | 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 | AEIAR-201/2016 KFBG |
| Black-capped Kingfisher <i>Halcyon pileata</i> | Not available | Not available | 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 | KFBG |
| Pied Kingfisher <i>Ceryle rudis</i> | Not available | Not available | Uncommon passage migrant and winter visitor. Widely distributed in coastal areas throughout Hong Kong. | Fellowes et al. (2002): (LC) | KFBG |
| Common Greenshank <i>Tringa nebularia</i> | Not available | Not available | Abundant passage migrant and winter visitor. Found in Deep Bay area. | Fellowes et al. (2002): RC | AFCD |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|--|-------------------------------------|---------------|---|--|-----------------------------------|
| | Application Site | Study Area | | | |
| Eurasian Coot <i>Fulica atra</i> | Not available | Not available | Uncommon winter visitor. Found in Deep Bay area, Plover Cove Reservoir, Shuen Wan. | Fellowes et al. (2002): RC | KFBG |
| Greater Coucal <i>Centropus sinensis</i> | √ | √ | Common resident. Widely distributed in Hong Kong. | China Red Data Book Status: VU; List of Wild Animals under State Priority Conservation: Class II | AEIAR-201/2016 KFBG |
| Lesser Coucal <i>Centropus bengalensis</i> | - | √ | Uncommon resident. Widely distributed in Hong Kong. | China Red Data Book Status: VU; List of Wild Animals under State Priority Conservation: Class II | AEIAR-201/2016 KFBG |
| White-bellied Erpornis <i>Erpornis zantholeuca</i> | Not available | Not available | 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 | AFCD |
| White-cheeked Starling <i>Spodiopsar cineraceus</i> | Not available | Not available | Locally common winter visitor. Found in Deep Bay area, Kam Tin, Long Valley. | Fellowes et al. (2002): PRC | AFCD |
| Speckled Piculet <i>Picumnus innominatus</i> | Not available | Not available | Rare resident. Found in Wong Chuk Yeung, Tai Po Kau. | Fellowes et al. (2002): LC | KFBG |
| Alexandrine Parakeet <i>Psittacula eupatria</i> | Not available | Not available | Locally common resident. Found in Kowloon Park. | Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II | KFBG |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|--|-------------------------------------|---------------|--|---|-----------------------------------|
| | Application Site | Study Area | | | |
| Chinese Hwamei <i>Garrulax canorus</i> | Not available | Not available | Common resident. Widely distributed in hillside shrubland throughout Hong Kong. | Cap. 586; List of Wild Animals under State Priority Conservation: ; CITES: Appendix II | KFBG |
| White-cheeked Starling <i>Spodiopsar cineraceus</i> | Not available | Not available | Locally common winter visitor. Found in Deep Bay area, Kam Tin, Long Valley. | Fellowes et al. (2002): PRC | KFBG |
| Siberian Rubythroat <i>Calliope calliope</i> | Not available | Not available | Common winter visitor and passage migrant. Widely distributed in Hong Kong. | List of Wild Animals under State Priority Conservation: Class II | KFBG |
| Chinese Grosbeak <i>Eophona migratoria</i> | Not available | Not available | Common winter visitor. Found in Kam Tin, Nam Chung, Shek Kong, Deep Bay area, Ho Chung, Lam Tsuen, Hok Tau, Island House and Kowloon Park. | Fellowes et al. (2002): LC | KFBG |
| Common Rosefinch <i>Carpodacus erythrinus</i> | Not available | Not available | Rare winter visitor and migrant. Widely distributed in Hong Kong. | Fellowes et al. (2002): LC | KFBG |
| Grey-capped Greenfinch <i>Chloris sinica</i> | Not available | Not available | Scarce resident. Found in Shing Mun River, Lam Tsuen, Ping Shan, Lung Kwu Tang, Ho Man Tin, Tuen Mun. | Fellowes et al. (2002): LC | KFBG |
| Butterfly | | | | | |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|--|-------------------------------------|---------------|--|---|-----------------------------------|
| | Application Site | Study Area | | | |
| Swallowtail <i>Papilio xuthus</i> | √ | | Rare. Kap Lung, Ma On Shan, Tai Tam, Sha Lo Wan, Kat O, Lung Kwu Tan, Wu Kau Tang, Lung Kwu Chau | - | AFCD AEIAR-201/2016 |
| Pale Palm Dart <i>Telicota colon</i> | Not available | Not available | Rare. Widely distributed throughout Hong Kong. | Fellowes et al. (2002): LC | KFBG |
| Metallic Cerulean <i>Jamides alecto</i> | Not available | Not available | Very rare. Victoria Peak, Fung Yuen, Chuen Lung, Mui Wo | - | KFBG |
| Danaid Eggfly <i>Hypolimnas misippus</i> | Not available | Not available | Uncommon. Ngau Ngak Shan, Lung Kwu Tan, Hong Kong Wetland Park, Mount Parker, Cloudy Hill, Lin Ma Hang | Fellowes et al. (2002): LC | KFBG |
| Pigmy Scrub Hopper <i>Aeromachus pygmaeus</i> | - | √ | Very rare. Cheung Sheung, Yung Shue O, Kuk Po | Fellowes et al. (2002): RC | AEIAR-198/2016 |
| Tailed Sulphur <i>Dercas verhuelli</i> | - | √ | Rare. Widely distributed throughout Hong Kong | - | AEIAR-198/2016 |
| Plain Hedge Blue <i>Celastrina lavendularis</i> | - | √ | 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 | AEIAR-198/2016 |
| Grass Demon | √ | √ | Rare. Widely distributed throughout Hong Kong. | - | AEIAR-201/2016 |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|---|-------------------------------------|---------------|---|--|--|
| | Application Site | Study Area | | | |
| <i>Udaspes folus</i> | | | | | |
| Odonate | | | | | |
| Blue Chaser <i>Potamarcha congener</i> | Not available | Not available | Common. Found in small weedy ponds, puddles and marshes. Widely distributed in the New Territories. | Fellowes et al. (2002): LC | AFCD KFBG |
| Scarlet Basker <i>Urothemis signata</i> | - | √ | Common. Common in areas with abandoned fish ponds throughout Hong Kong. | Fellowes et al. (2002): LC | AFCD AEIAR-198/2016 AEIAR-201/2016 KFBG |
| Amphibian | | | | | |
| Chinese Bullfrog <i>Hoplobatrachus chinensis</i> | - | √ | 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 | AEIAR-198/2016 2014 |
| Mammal | | | | | |
| Short-nosed Fruit Bat <i>Cynopterus sphinx</i> | - | √ | Very common. Very widely distributed in urban and countryside areas throughout Hong Kong. | Cap. 170 | AEIAR-198/2016 |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|---|-------------------------------------|---|---|--|-----------------------------------|
| | Application Site | Study Area | | | |
| Unidentified Bat Species 1 | - | √ | - | Cap. 170 | AEIAR-201/2016 |
| Unidentified Bat Species 2 | - | √ | - | Cap. 170 | AEIAR-201/2016 |
| Porcupine scat | - | √ | Very common. Very widely distributed in countryside areas throughout Hong Kong, except for Lantau Island. | Fellowes et al. (2002): PGC; Cap. 170 | AEIAR-198/2016 |
| Eurasian Otter | - | Near border of Yuen Leng Tsai (<900m from Study Area) | Rare/Species of Conservation Concern. Restricted to Mai Po, Lok Ma Chau, Hoo Hok Wai, and nearby areas. | China Red Data Book Status: VU; Fellowes et al. (2002): RC; Cap. 170; Cap. 586; List of Wild Animals under State Priority Conservation: Class II; Red List of China's Vertebrates: EN; CITES: Appendix I | AFCD |
| Aquatic fauna | | | | | |
| Small snakehead <i>Channa asiatica</i> | - | √ | Uncommon in the wild. Records from a few streams in North district and on Lantau Island. The fish is also cultivated in some fish farms and are available from fish market. | Fellowes et al. (2002): LC | AEIAR-198/2016 |

| Species | Location ^{1 3 6 7 9 10 11} | | Rarity and Distribution in Hong Kong ^{2 8 11} | Conservation status ^{4 5 7 11} | Source ^{1 3 6 7 9 10 11} |
|---------------------------------|-------------------------------------|------------|--|--|-----------------------------------|
| | Application Site | Study Area | | | |
| <i>Somaniathelphusa zanklon</i> | - | √ | Hong Kong (New Territories: lower course of Lam Tsuen River and Su Kwun) | Fellowes et al. (2002): GC IUCN: Endangered | AEIAR-198/2016 |

Notes:

1. Agreement No. AEIAR-198/2016 Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery – Design and Construction Final Environmental Impact Assessment Report
2. Agreement No. AEIAR-201/2016 Engineering Study for Police Facilities in Kong Nga Po – Feasibility Study
3. List of Species Recorded near Lo Wu Station Road by AFCD (extracted from data collected in the territorial-wide long-term monitoring survey on major taxon groups from 2002)
4. AFCD (2023). AFCD Biodiversity Information Hub.
5. Cap. 170 Wild Animals Protection Ordinance.
6. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
 - For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
7. International Union of Conservation for Nature (2023). The IUCN Red List of Threatened Species. Version 2022-2.
8. Reels (2019). An annotated check list of Hong Kong dragonflies and assessment of their local conservation significance.
9. Tam *et al.* (2011). The Dragonflies of Hong Kong.
10. Wilson, K.D.P. (1997). An annotated checklist of the Hong Kong dragonflies with recommendations for their conservation. *Memoirs of Hong Kong Natural History Society*. 21. 1 – 69.

Abbreviations:

Conservation Status in Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern

5 RESULTS OF ECOLOGICAL BASELINE SURVEYS

5.1 Ecological Survey

Habitat

5.1.1 Twelve types of habitats were identified within the Study Area, including agricultural land, developed area, grassland/shrubland, marsh, natural watercourse, modified watercourse, orchard, plantation, pond, wasteland, wet grassland, and woodland (**Figure 4**). The area of the respective habitats within the Study Area and the Application Site are tabulated in **Table 5.1**. Representative photo of each habitat is shown in **Figure 5**.

Table 5.1 Sizes of Habitats within the Study Area

| Habitat | Application Site | Study Area |
|----------------------|------------------|------------|
| | Size (ha) | Size (ha) |
| Agricultural Land | - | 8.7 |
| Developed Area | - | 43.1 |
| Grassland/Shrubland | - | 18.6 |
| Marsh | - | 0.24 |
| Modified Watercourse | - | 0.6 |
| Natural Watercourse | - | 0.9 |
| Orchard | - | 2.4 |
| Plantation | - | 14.0 |
| Pond | - | 5.0 |
| Wasteland | 1.4 | 0.2 |
| Wet Grassland | 0.2 | 4.3 |
| Woodland | - | 8.2 |
| Total | 1.6 | 106.2 |

Note:

The size of habitats is rounded off to the nearest one decimal place.

Agricultural Land

5.1.2 Agricultural land within the Study Area have scattered distribution mainly at the western and eastern parts of the Study Area. The agricultural land in western side of the Application Site is still active, while most of the agricultural land in the eastern side were fallow land, which is left unplanted or uncultivated for a period. Thus, weedy species, such as *Bidens alba* and *Echinochloa colona*, were commonly found.

Developed Area

- 5.1.3 Developed area within the Study Area consisted of villages, residential areas, roads, and other anthropogenic structures. This habitat was largely paved with concrete and was prone to human disturbance. Vegetation colonizing in this habitat mainly consisted of plantation/ornamental species such as *Ficus microcarpa*, *Melaleuca cajuputi* subsp. *Cumingiana* and *Tabebuia* sp. and weedy species such as *Kyllinga nemoralis* and *Pilea microphylla*.

Grassland/Shrubland

- 5.1.4 Grassland/Shrubland was found at the hillside and hilltop of the hills at the northern and southern parts of the Study Area. This habitat was formed where trees are difficult to re-colonising due to some unfavourable conditions such as frequent hill fires, poor soil quality or strong wind. Grass and herb species such as *Dicranopteris pedate*, *Neyraudia reynaudiana* and *Ischaemum barbatum*, and shrub species such as *Baeckea frutescens* and *Rhodomyrtus tomentosa* could also commonly encountered in this habitat.

Marsh

- 5.1.5 A patch of Marsh was found at the western part of the Study Area. Standing water beneath the vegetation was observed in most area of the marsh during survey. As there was no obvious water source (such as watercourse) linked to the marsh, indicating that this marsh was likely to be nourished by sub-surface water from adjacent areas. This habitat was derived from abandoned agricultural land and the marsh is surrounded by agricultural land in fact. Wetland-associated herbal species (such as *Persicaria orientalis*, *Brachiaria mutica* and *Commelina diffusa*) made up the major component of the vegetation assemblage. Weedy species such as *Paspalum conjugatum* and *Bidens alba* could also be occasionally observed in this habitat. Terrestrial woody species was hardly found in this habitat, displaying the tendency to undergo succession to a more terrestrial environment was not apparent.

Modified Watercourse

- 5.1.6 Sections of modified watercourse were identified at the north-eastern and south-western part of the Application Site. The modified watercourses were associated with developed area, agricultural land and wet grassland inside the Study Area. The beds and banks of the watercourse were modified and muddy. Associating with the village and urbanized areas, this section of watercourse was prone to human disturbance, and exotic species, such as *Kyllinga polyphylla* and *Ludwigia erecta*, were commonly found.

Natural Watercourse

- 5.1.7 Sections of natural watercourse were identified within the Study Area and these sections are mainly associating with plantation, grassland/shrubland and woodland. The substrate of this section of watercourse consisted of sand, rocks and/or stones. These sections of watercourse were likely to be free of human disturbance due to limited accessibility.

Orchard

- 5.1.8 Orchards were identified at eastern and south-western adjacent to the Project Site within the Study Area. This habitat is man-made and was under management for fruit production. *Musa x paradisiaca*, *Dimocarpus longan* and *Psidium guajava* were the major fruit trees cultivated in the orchard. Other fruit trees could be found in this habitat includes *Mangifera indica* and *Eriobotrya japonica*.

Plantation

- 5.1.9 Plantation was mainly found at roadside, hillside and on engineering slopes. The canopy of this habitat was dominated by plantation/landscape species in general, such as *Acacia confusa* and *Ficus microcarpa*. Plantation next to developed area was prone to human disturbance, weedy species such as *Asystasia micrantha*, *Bidens alba* and *Eragrostis tenella* could be commonly encountered at the understorey.

Pond

- 5.1.10 This habitat was abandoned pond with overgrown vegetation and lentic waterbodies with surface water extensively covered with both weedy and aquatic species, such as *Eichhornia crassipes*, *Mikania micrantha*, *Nelumbo nucifera* and *Commelina diffusa*, and obviously without fish farming practice. They mainly scattered at the western and central part of the Study Area.

Wasteland

- 5.1.11 Wasteland refers to land without determined use but was largely colonized by weedy species. Wasteland within the Application Site were barren land in the past according to aerial photos, which was prone to human disturbance. The species found was mainly fast-colonizing species, such as *Sesbania cannabina*, *Leucaena leucocephala* and *Bidens alba*. While wasteland outside the Application Site were the surrounding area of the wasteland habitat, thus, the description of these habitats within the Study Area are the same as that mentioned under description of habitats within the Application Site.

Wet Grassland

- 5.1.12 Wet grassland was identified at north-western part inside the Application Site and western part of the Study Area. They were formed by abandoned agricultural land and wet in nature, growing with both hydrophilic and weedy herbal species, such as *Brachiaria mutica*, *Callipteris esculenta* and *Mikania micrantha* were commonly found within Application Site, while *Alocasia macrorrhizos*, *Brachiaria mutica*, *Colocasia esculenta*, *Ipomoea cairica* and *Mikania micrantha* were commonly found in outside Application Site.

Woodland

- 5.1.13 Woodland stands were identified at the eastern, north-eastern and north-western parts of the Study Area. The woodland habitat was largely natural, the canopy of woodland composed of lowland forest species such as *Celtis sinensis*, *Melia azedarach*, *Aporosa dioica*, *Macaranga tanarius* var. *tomentosa* and *Cinnamomum camphora*, reaching 5 to 12 meters. It had a complex structure with dense and well-developed understorey where native climbers (e.g. *Paederia scandens*, *Diploclisia glaucescens* and *Embelia laeta*), shrubs (e.g. *Ficus hispida*, *Litsea rotundifolia* var. *oblongifolia* and *Maesa perlaris*) and herbs (such as *Cyclosorus parasiticus*, *Pteris semipinnata* and *Liriope spicata*) could be found.

Vegetation

- 5.1.14 A total of 206 plant species were recorded within the Study Area, among which 116 and 88 are known to be native and exotic to Hong Kong respectively and the remaining 2 species are of uncertain origin (**Appendix A**). *Aquilaria sinensis*, *Ichnocarpus frutescens* and *Persicaria orientalis* are the 3 flora species of conservation importance recorded within the Study Area. Locations of these species of conservation importance within the Study Area are shown in **Figure 6**.
- 5.1.15 Photos of selected plant species of conservation importance are enclosed in **Figure 7**. Plant species and their relative abundance within each habitat are listed in **Appendix A**. Details of the flora species of conservation importance recorded are summarized in **Table 5.15**.
- 5.1.16 *Dimocarpus longan* and *Podocarpus macrophyllus* are exotic to Hong Kong and not considered of conservation importance, despite being listed as Vulnerable by IUCN (2023), listed as endangered or vulnerable in Threatened Species List of China's Higher Plants, listed as vulnerable in China Plant Red Data Book, and/or listed under Category II in the List of Wild Plants under State Protection.
- 5.1.17 *Araucaria heterophylla* is listed as Vulnerable by IUCN (2023), however, it is exotic and the recorded individual was cultivated. Thus, they are not considered as species of conservation.
- 5.1.18 *Citrus reticulata* and *Nelumbo nucifera* are exotic to Hong Kong and not considered of conservation importance, despite being listed under Category II in the List of Wild Plants under State Protection.
- 5.1.19 *Michelia figo* is protected under Cap. 96A and are also regarded as rare and very rare respectively by Corlett (2000). However, it is exotic and the recorded individuals were cultivated. Thus, they are not considered as species of conservation.
- 5.1.20 *Livistona chinensis* is exotic to Hong Kong and not considered of conservation importance, despite being listed as vulnerable in Threatened Species List of China's Higher Plants. Thus, they are not considered as species of conservation.
- 5.1.21 *Keteleeria fortunei* were found in the orchard outside the Project Site but within the Study Area which is cultivated and not considered as species of conservation importance, despite being regarded as very rare in shrubland of Hong Kong (Corlett et al. 2000) and protected under Cap. 96A, included in "Rare and Precious Plants of Hong Kong" (Hu et al. 2003), China Plant Red Data Book (Fu and Chin 1992), Illustration of Rare & Endangered plant in Guangdong Province (Wu and Hu 1988, Category II of the List of Wild Plants under State Protection (State Forestry Administration & Ministry of Agriculture 2021), and categorized as "Vulnerable" in China Red Data Book (Fu and Chin 1992) and the Threatened Species List of China's Higher Plants (Qin et al. 2017).
- 5.1.22 *Ocimum basilicum* is regarded as very rare by Corlett (2000), yet it is cultivated in developed area outside the Project Site but within the Study Area. It is not considered as species of conservation.

- 5.1.23 *Cyperus odoratus*, *Mimosa diplotricha* and *Typha angustifolia* are regarded as rare by Corlett (2000), yet it is exotic. It is not considered as species of conservation.

Avifauna

- 5.1.24 Thirty avifauna species were recorded within the Study Area (**Appendix B**). Most of the avifauna species are common resident and widely distributed in Hong Kong. No roosting, breeding or nursery behaviour was observed within the Study Area. All wild avifauna are protected under Cap. 170 Wild Animals Protection Ordinance. Among the avifauna species recorded, 6 avifauna species were considered as species of conservation importance i.e. Chinese Pond Heron, Black-crowned Night Heron, Grey Heron, Crested Serpent Eagle, Black Kite and Greater Coucal. All of them are common in Hong Kong. However, none of them were recorded within the Application Site.

- 5.1.25 Location of avifauna species of conservation importance is shown in **Figure 6**, while evaluation of the species of conservation importance is stated in **Table 5.16**.

Butterfly

- 5.1.26 A total of 20 butterfly species were recorded within the Study Area (**Appendix C**). Most of the recorded butterfly species are regarded as very common or common in Hong Kong, and widely distributed throughout Hong Kong (AFCD, 2022). Only one butterfly species i.e. Metallic Cerulean was considered as species of conservation importance. Metallic Cerulean was recorded outside the Application Site, in agricultural land away from the Application Site.

- 5.1.27 Location of butterfly species of conservation importance is shown in **Figure 6**, while evaluation of the species of conservation importance is stated in **Table 5.16**.

Odonate

- 5.1.28 Thirteen odonate species were recorded within the Study Area (**Appendix D**). All of the odonate species are abundant and common in Hong Kong, and/or widely distributed throughout Hong Kong (AFCD, 2022 & Tam *et al.*, 2011). Only one odonate species, Scarlet Basker was considered as species of conservation importance. Hainan Clubtail is found in pond habitat outside the Application Site.

- 5.1.29 Location of odonate species of conservation importance is shown in **Figure 6**, while evaluation of the species of conservation importance is stated in **Table 5.16**.

Firefly

- 5.1.30 Only one species of firefly i.e. Rimmed Window Firefly with low number was recorded within the Study Area (**Appendix E**). The species is common in Hong Kong and is not considered as species of conservation importance.

Herpetofauna (Reptile and Amphibian)

- 5.1.31 Two reptile species were identified within the Study Area (**Appendix F**). All the reptile species are widely distributed in Hong Kong (AFCD, 2022). No species are considered as species of conservation importance.

- 5.1.32 Six amphibian species were identified within the Study Area (**Appendix F**). Most of the amphibian species are widely distributed in Hong Kong (AFCD, 2022). No species are considered as species of conservation importance.

Terrestrial Mammal

- 5.1.33 A total of 9 terrestrial mammal species was identified by active searching, ultrasonic bat detector and camera trapping. Seven species of them were bat species, only 1 of the species was recorded during active searching and camera trapping, others are recorded by ultrasonic bat detector.
- 5.1.34 During the active search of survey and camera trapping, only one terrestrial mammal species i.e. Wild Boar was identified within the Study Area (**Appendix G1**). It is not considered as species of conservation importance in Hong Kong.
- 5.1.35 Of the bat species recorded by ultrasonic bat detector, 8 bat species was identified within the Study Area (**Appendix G2**). As all wild bats are protected under Cap. 170 Wild Animals Protection Ordinance, all bats are considered as species of conservation importance. However, no roosting sites of those bat species were found within the Application Site as well as the Study Area.
- 5.1.36 Due to the mobility of bats, and no specific habitat utilization was observed, location of the recorded bat species is not shown. Evaluation of the bat species of conservation importance is stated in **Table 5.16**.

Freshwater Community

- 5.1.37 Four freshwater species were recorded within the Study Area (**Appendix H**). Among the freshwater species, 3 fish species and 1 invertebrate species were recorded. Not only native fish species were recorded but also exotic species were observed. All of the species including the invertebrate are widely distributed in Hong Kong.

5.2 Evaluation of Habitats and Species of Conservation Importance

- 5.2.1 The ecological importance of habitats, flora and fauna species of conservation importance recorded within the Ecological Study Area are evaluated in **Table 5.2** to **5.14** according to the EIAO-TM.
- 5.2.2 A total of 3 flora, 6 avifauna, 1 butterfly, 1 odonate and 8 terrestrial mammal species of conservation importance were identified in the Study Area during the ecological survey for present study. Besides, according to the reviewed literature, some other species of conservation importance were also recorded in the vicinity of the Application Site or Study Area.
- 5.2.3 In accordance with Table 3, Annex 8 of the EIAO-TM, the ecological value of species was assessed in terms of protection status e.g. fauna protected under WAPO except avifauna, 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 within the Study Area from both the present study and reviewed literature were evaluated according to the EIAO-TM in **Table 5.15** and **Table 5.16** respectively. As the locations of the species from AFCD and KFBG are not available, they are not put in **Table 5.12** to **Table 5.16**. However, the ecological values of the habitats already took those species into consideration.

5.2.4 Species of flora and fauna with conservation importance were given special attention. In accordance with Table 3, Annex 8 of the EIAO-TM, the ecological value of species was assessed in terms of protection status, distribution, and rarity. Flora or fauna species protected by the following laws/regulations, listed under the following conventions and/or endemic to Hong Kong, were considered to be species of conservation importance. However, this excludes exotic weeds, escaped cultivars or captive species, vagrants and introduced species which have lower ecological value. 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.

- Category I or II in List of Wild Animals under State Priority Conservation;
- Category I/II/III in List of Wild Plants under State Priority Conservation;
- China Plant Red Data Book;
- China Red Data Book of Endangered Animals;
- China Species Red List;
- Fauna species considered of concern in Fellowes *et al.* (2002);
- Forestry Regulations (Cap. 96A) which are subsidiary legislation of the Forests and Countryside Ordinance (Cap. 96);
- Illustration of Rare & Endangered Plant in Guangdong Province;
- Plant species considered 'Rare' or 'Very Rare' listed by Corlett *et al.* (2000), or regarded as rare by Yip *et al.* (2010) where applicable;
- PRC Wild Animal Protection Law;
- Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586);
- Rare and Precious Plants of Hong Kong;
- Red List of China's Vertebrates by Jiang *et al.* (2016);
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- The International Union for Conservation of Nature and Natural Resources (IUCN) Red List of Threatened Species;
- Threatened Species List of China's Higher Plants (Qin *et al.* 2017); and
- Wild Animals Protection Ordinance (Cap. 170) (except birds as all wild birds are protected under the ordinance but their conservation importance is not equal)

Table 5.2 Evaluation of Habitats within the Application Site

| Criteria | Application Site | |
|------------------------------------|--|--|
| | Habitat | |
| | Wasteland | Wet grassland |
| | Description | |
| Naturalness | Man-made and subject to intensive and incessant anthropogenic disturbance | Semi-natural, comprising exotic species |
| Size | About 1.4ha | About 0.2ha |
| Diversity | Low floral diversity, comprising a high proportion of exotic flora species, and low faunal diversity | Low floral and faunal diversity |
| Rarity | From survey of present study: none; From reviewed literature: Greater Coucal, Grass Demon and Swallowtail | Neither flora nor fauna species of conservation importance was recorded |
| Re-creatability | Readily re-created | Readily re-created |
| Fragmentation | None observed | None observed |
| Ecological linkage | None observed | Ecologically connected to the modified watercourse just outside the Application Site |
| Potential value | Very 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 | Less than 10 years of age |
| Abundance/ richness of wildlife | Very low faunal abundance | Very low faunal abundance |
| Overall ecological value | Low | Low |

Table 5.3 Evaluation of Agricultural Land within the Study Area

| Criteria | Description |
|--------------------------------|---|
| Naturalness | Man-made |
| Size | About 8.7ha |
| Diversity | Low floral diversity; moderate faunal diversity |
| Rarity | From survey of present study: Black-crowned Night Heron, Chinese Pond Heron, Greater Coucal and Metallic Cerulean; From reviewed literature: Little Egret, Chinese Pond Heron, Eastern Cattle Egret, Grey Heron, Black Kite, Crested Goshawk, Chinese Bullfrog, Grass Demon, Scarlet Basker, <i>Channa asiatica</i> ; 39 bird species of conservation importance were recorded by a study of KFBG |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | Agricultural land to the west of the Application Site functionally linked to woodland, pond, natural watercourse |
| Potential value | Low due to its man-made nature |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | Ecologically non-applicable |
| Abundance/richness of wildlife | High diversity of birds to the west of the Application Site |
| Overall ecological value | Agricultural land to the west of the Application Site: Medium; agricultural land to the east of the Application Site: Low |

Table 5.4 Evaluation of Developed Area within the Study Area

| Criteria | Description |
|--------------------|--|
| Naturalness | Man-made and subject to intensive and incessant anthropogenic disturbance |
| Size | About 43.1ha |
| Diversity | Low floral diversity, comprising a high proportion of exotic flora species; low overall faunal diversity, mainly consisting of disturbance-tolerant and locally widespread fauna species |
| Rarity | From survey of present study: <i>Aquilaria sinensis</i> , Scarlet Basker From reviewed literature: <i>Aquilaria sinensis</i> , unidentified bat sp. 2 |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | Ecologically non-applicable |
| Potential value | Very low, given the intensive and incessant anthropogenic disturbance |

| Criteria | Description |
|--------------------------------|---|
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | Ecologically non-applicable |
| Abundance/richness of wildlife | Low |
| Overall ecological value | Very Low |

Table 5.5 Evaluation of Grassland/Shrubland within the Study Area

| Criteria | Description |
|--------------------------------|---|
| Naturalness | Semi-natural |
| Size | About 18.6ha |
| Diversity | Very low floral diversity and very low faunal diversity |
| Rarity | From survey of present study: Crested Serpent Eagle From reviewed literature: Porcupine scat |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | Functionally linked to woodland |
| Potential value | Low due to human disturbance and hill fire |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | Ecologically non-applicable |
| Abundance/richness of wildlife | Very low faunal abundance |
| Overall ecological value | Low |

Table 5.6 Evaluation of Marsh within the Study Area

| Criteria | Description |
|--------------------------------|--|
| Naturalness | Semi-natural. Its fringes have been subject to frequent disturbance, owing to the vicinity to active agricultural land |
| Size | About 0.24ha |
| Diversity | Low floral and faunal diversity |
| Rarity | From survey of present study: <i>Persicaria orientalis</i> From reviewed literature: none |
| Re-creatability | Re-creatable but need time to mature |
| Fragmentation | None observed |
| Ecological linkage | Ecologically connected to wet grassland |
| Potential value | Low due to small size of the habitat |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | About 5 years of age in general |
| Abundance/richness of wildlife | Low |

| Criteria | Description |
|--------------------------|---------------|
| Overall ecological value | Medium |

Table 5.7 Evaluation of Modified Watercourse within the Study Area

| Criteria | Description |
|--------------------------------|--|
| Naturalness | Subject to modification for irrigation purposes |
| Size | About 0.6ha |
| Diversity | Very low floral and faunal diversity |
| Rarity | From survey of present study: none From reviewed literature: <i>Somanniathelphusa zanklon</i> |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | Ecologically linked to wet grassland |
| Potential value | Low given its current condition |
| Nursery/breeding ground | Might be the breeding ground of <i>Somanniathelphusa zanklon</i> and other aquatic fauna |
| Age | Ecologically non-applicable |
| Abundance/richness of wildlife | Very low faunal abundance |
| Overall ecological value | Low to medium |

Table 5.8 Evaluation of Natural Watercourse within the Ecological Study Area

| Criteria | Description |
|--------------------------------|--|
| Naturalness | Mostly natural, but subject to human disturbance in some sections |
| Size | About 0.9ha |
| Diversity | Low floral and faunal diversity |
| Rarity | From survey of present study: none From reviewed literature: none |
| Re-creatability | Natural sections are difficult to re-create |
| Fragmentation | The lower courses of the watercourses are fragmented by modified section, although the stream flow is still maintained |
| Ecological linkage | Ecologically connected to woodland, wet grassland and agricultural land |
| Potential value | Medium, if proper enhancement can be applied |
| Nursery/breeding ground | Might be the breeding ground of aquatic fauna |
| Age | Not ecologically applicable |
| Abundance/richness of wildlife | Low |
| Overall ecological value | Medium |

Table 5.9 Evaluation of Orchard within the Study Area

| Criteria | Description |
|--------------------------------|---|
| Naturalness | Artificial, comprising mostly of exotic fruit tree species |
| Size | About 2.4ha |
| Diversity | Low floral and faunal diversity |
| Rarity | From survey of present study: none From reviewed literature: Greater Coucal, Collared Crow, unidentified bat sp. 1 |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | Ecological linkage with agricultural land |
| Potential value | Low |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | At least 10 years of age in general |
| Abundance/richness of wildlife | Low faunal abundance |
| Overall ecological value | Low |

Table 5.10 Evaluation of Plantation within the Study Area

| Criteria | Description |
|--------------------------------|---|
| Naturalness | Artificial, comprising mostly of exotic tree species |
| Size | About 14ha |
| Diversity | Low floral and faunal diversity |
| Rarity | From survey of present study: none From reviewed literature: <i>Aquilaria sinensis</i> , White-throated Kingfisher, Lesser Coucal, Short-nosed Fruit Bat, unidentified bat sp. 2 |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | Some patches of plantation are ecologically linked with woodland |
| Potential value | Low to medium if active management implemented |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | At least 20 years of age in general |
| Abundance/richness of wildlife | Low faunal abundance |
| Overall ecological value | Low to medium |

Table 5.11 Evaluation of Pond within the Study Area

| Criteria | Description |
|-------------|-------------|
| Naturalness | Man-made |
| Size | About 5ha |

| Criteria | Description |
|--------------------------------|---|
| Diversity | Very low floral and faunal diversity |
| Rarity | From survey of present study: Grey Heron, Black Kite and Scarlet Basker From reviewed literature: Little Grebe, Little Egret, Chinese Pond Heron, Yellow Bittern |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | Not hydrologically connected to other waterbodies within the Study Area |
| Potential value | Medium if active management implemented |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | Not readily determinable |
| Abundance/richness of wildlife | Low faunal abundance |
| Overall ecological value | Low to medium |

Table 5.12 Evaluation of Wasteland within the Study Area

| Criteria | Description |
|--------------------------------|--|
| Naturalness | Man-made and subject to intensive and incessant anthropogenic disturbance |
| Size | About 0.2ha |
| Diversity | Low floral diversity, comprising a high proportion of exotic flora species; and low faunal diversity |
| Rarity | From survey of present study: none From reviewed literature: none |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | None observed |
| Potential value | Very low |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | Ecologically non-applicable |
| Abundance/richness of wildlife | Very low faunal abundance |
| Overall ecological value | Low |

Table 5.13 Evaluation of Wet Grassland within the Study Area

| Criteria | Description |
|-------------|---|
| Naturalness | Semi-natural, comprising exotic species |
| Size | About 4.3ha |
| Diversity | Low floral and faunal diversity |

| Criteria | Description |
|--------------------------------|--|
| Rarity | From survey of present study: none |
| | From reviewed literature: Pigmy Scrub Hopper, Plain Hedge Blue |
| Re-creatability | Readily re-created |
| Fragmentation | None observed |
| Ecological linkage | Ecologically connected to woodland, pond and watercourse |
| Potential value | Low |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | Less than 10 years of age |
| Abundance/richness of wildlife | Very low faunal abundance |
| Overall ecological value | Low |

Table 5.14 Evaluation of Woodland within the Study Area

| Criteria | Description |
|--------------------------------|---|
| Naturalness | Largely natural |
| Size | About 8.2ha |
| Diversity | Low floral and faunal diversity |
| Rarity | From survey of present study: <i>Aquilaria sinensis</i> and <i>Ichnocarpus frutescens</i> |
| | From reviewed literature: Tailed Sulphur |
| Re-creatability | Can be recreated but takes time |
| Fragmentation | None observed |
| Ecological linkage | Some patches of plantation are ecologically linked with woodland, wetland grassland, pond and watercourse |
| Potential value | Medium if active management implemented |
| Nursery/breeding ground | No significant nursery or breeding ground known or observed |
| Age | At least 30 years of age in general |
| Abundance/richness of wildlife | Low faunal abundance |
| Overall ecological value | Medium |

Table 5.15 Evaluation of Flora Species of Conservation Importance

| Scientific Names | Rarity and Distribution in Hong Kong ^{1 10} | Conservation status ^{2 3 4 5 6 7 8 9} | Location | |
|-------------------------------|--|---|------------------|---|
| | | | Application Site | Study Area |
| <i>Aquilaria sinensis</i> | Common. Found in lowland forest and fung shui woods. | IUCN Red List of Threatened Species (2024): VU; Appendix II of CITES; Threatened Species List of China's Higher Plants: VU; China Plant Red Data Book: VU; Included in Illustrations of Rare & Endangered Plant in Guangdong Province; Listed in "Rare and Precious Plants of Hong Kong"; Cap. 586; State Protection (Category II) | - | Developed area, plantation and woodland |
| <i>Ichnocarpus frutescens</i> | Very rare, forest. | - | - | Woodland |
| <i>Persicaria orientalis</i> | Very rare (Corlett <i>et al.</i> 2000); Rare (Yip <i>et al.</i> 2010) | - | - | Marsh |

Table 5.16 Evaluation of Fauna Species of Conservation Importance

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7 8 9 10 11 12 13 14} | Location | |
|-----------------|------------------|---|---|------------------|------------|
| | | | | Application Site | Study Area |
| Avifauna | | | | | |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7 8 9 10 11 12 13 14} | Location | |
|--|-------------------------------|---|---|------------------|-------------------------|
| | | | | Application Site | Study Area |
| Little Grebe (from reviewed literature) | <i>Tachybaptus ruficollis</i> | Common resident. Found in Deep Bay area. | Fellowes et al. (2002): LC | - | Pond |
| Little Egret (from reviewed literature) | <i>Egretta garzetta</i> | Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong. | Fellowes et al. (2002): PRC | - | Agricultural land, pond |
| Eastern Cattle Egret (from reviewed literature) | <i>Bubulcus coromandus</i> | Resident and common passage migrant. Widely distributed in Hong Kong. | Fellowes et al. (2002): LC | - | Agricultural land |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | Common resident. Widely distributed in Hong Kong. | Fellowes et al. (2002): PRC | - | Agricultural land, pond |
| Black-crowned Night Heron | <i>Nycticorax nycticorax</i> | Common resident and migrant. Widely distributed in Hong Kong. | Fellowes et al. (2002): LC | - | Agricultural land |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7 8 9 10 11 12 13 14} | Location | |
|--|----------------------------|--|--|------------------|-------------------------|
| | | | | Application Site | Study Area |
| Grey Heron | <i>Ardea cinerea</i> | Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguliar. | Cap. 170; Fellowes et al. (2002): PRC | - | Agricultural land, pond |
| Yellow Bittern (from reviewed literature) | <i>Ixobrychus sinensis</i> | Uncommon summer visitor and common passage migrant. Found in Deep Bay area, Chek Keng, Tai Long Wan. | Fellowes et al. (2002): (LC) | - | Pond |
| Black Kite | <i>Milvus migrans</i> | 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 | - | Agricultural land, pond |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | Common resident. Widely distributed in shrublands on hillsides throughout Hong Kong. | Fellowes et al. (2002): (LC); Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II; China Red Data Book Status: Vulnerable | - | Grassland/shrubland |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7} 8 9 10 11 12 13 14 | Location | |
|--|------------------------------|---|---|------------------|-------------------|
| | | | | Application Site | Study Area |
| Crested Goshawk (from reviewed literature) | <i>Accipiter trivirgatus</i> | Common resident. Widely distributed in woodlands and shrublands throughout Hong Kong. | Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II; China Red Data Book Status: Rare | - | Agricultural land |
| White-throated Kingfisher (from reviewed literature) | <i>Halcyon smyrnenis</i> | 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 | - | Plantation |
| Greater Coucal | <i>Centropus sinensis</i> | Common resident. Widely distributed in Hong Kong. | List of Wild Animals under State Priority Conservation: Class II; China Red Data Book Status: Vulnerable | Wasteland | Agricultural land |
| Lesser Coucal (from reviewed literature) | <i>Centropus bengalensis</i> | Uncommon resident. Widely distributed in Hong Kong. | China Red Data Book Status: VU; List of Wild Animals under State Priority Conservation: Class II | - | Plantation |
| Collared Crow (from reviewed literature) | <i>Corvus torquatus</i> | 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. | Cap. 170; IUCN Red List: VU; Fellowes et al. (2002): LC | - | Orchard |
| Butterfly | | | | | |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7} 8 9 10 11 12 13 14 | Location | |
|---|--------------------------------|--|--|------------------|---|
| | | | | Application Site | Study Area |
| Metallic Cerulean | <i>Jamides alecto</i> | Very rare. Victoria Peak, Fung Yuen, Chuen Lung, Mui Wo | - | - | Agricultural land |
| Plain Hedge Blue (from reviewed literature) | <i>Celastrina lavendularis</i> | 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 | - | Wet grassland |
| Grass Demon (from reviewed literature) | <i>Udaspes folus</i> | Rare. Widely distributed throughout Hong Kong. | - | Wasteland | Agricultural land |
| Swallowtail (from reviewed literature) | <i>Papilio xuthus</i> | Rare. Kap Lung, Ma On Shan, Tai Tam, Sha Lo Wan, Kat O, Lung Kwu Tan, Wu Kau Tang, Lung Kwu Chau | - | Wasteland | - |
| Pigmy Scrub Hopper (from reviewed literature) | <i>Aeromachus pygmaeus</i> | Very rare. Cheung Sheung, Yung Shue O, Kuk Po | Fellowes et al. (2002): RC | - | Wet Grassland |
| Tailed Sulphur (from reviewed literature) | <i>Dercas verhuelli</i> | Rare. Widely distributed throughout Hong Kong | - | - | Woodland |
| Odonate | | | | | |
| Scarlet Basker | <i>Urothemis signata</i> | Common. Common in areas with abandoned fish ponds throughout Hong Kong. | Fellowes et al. (2002): LC | - | Agricultural land, developed area, pond |
| Herpetofauna | | | | | |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7 8 9 10 11 12 13 14} | Location | |
|---|---------------------------------|--|--|------------------|-------------------|
| | | | | Application Site | Study Area |
| Chinese Bullfrog (from reviewed literature) | <i>Hoplobatrachus chinensis</i> | 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 | - | Agricultural land |
| Terrestrial Mammal | | | | | |
| Chinese Noctule | <i>Nyctalus plancyi</i> | Fairly widely distributed in countryside areas throughout Hong Kong. | Fellowes et al. (2002): PRC; Cap. 170 | | Present |
| Chinese Pipistrelle | <i>Hypsugo pulveratus</i> | 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 | | Present |
| Greater Bent-winged Bat | <i>Miniopterus magnater</i> | Data deficient. | Fellowes et al. (2002): PRC; Cap. 170 | | Present |
| Himalayan Leaf-nosed Bat | <i>Hipposideros armiger</i> | Very common. Widely distributed in countryside areas throughout Hong Kong. | Fellowes et al. (2002): (LC); Cap. 170 | | Present |
| Japanese Pipistrelle | <i>Pipistrellus abramus</i> | Widely distributed throughout Hong Kong. | Cap. 170 | | Present |
| Least Pipistrelle | <i>Pipistrellus tenuis</i> | 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 | | Present |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7 8 9 10 11 12 13 14} | Location | |
|---|------------------------------|---|---|------------------|----------------------------|
| | | | | Application Site | Study Area |
| Lesser Bamboo Bat | <i>Tylonycteris pachypus</i> | Fairly widely distributed in countryside areas throughout Hong Kong. | Fellowes et al. (2002): (LC); Cap. 170 | Present | |
| Lesser Yellow Bat | <i>Scotophilus kuhlii</i> | Uncommon. Fairly widely distributed in countryside areas throughout Hong Kong. | Fellowes et al. (2002): (LC); Cap. 170 | Present | |
| Short-nosed Fruit Bat (from reviewed literature) | <i>Cynopterus sphinx</i> | Very widely distributed in urban and countryside areas throughout Hong Kong. | Cap. 170 | - | Plantation |
| Unidentified bat sp. 1 (from reviewed literature) | - | - | Cap. 170 | - | Orchard |
| Unidentified bat sp. 2 (from reviewed literature) | - | - | Cap. 170 | - | Developed area, plantation |
| Porcupine (from reviewed literature) | <i>Hystrix brachyura</i> | Very common. Very widely distributed in countryside areas throughout Hong Kong, except for Lantau Island. | Fellowes et al. (2002): PGC; Cap. 170 | - | Grassland/shrubland |
| Freshwater Community | | | | | |
| Small Snakehead (from reviewed literature) | <i>Channa asiatica</i> | Uncommon in the wild. Records from a few streams in North district and on Lantau Island. The fish is also cultivated in some fish | Fellowes et al. (2002): LC | - | Agricultural land |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7 8 9 10 11 12 13 14} | Location | |
|--|----------------------------------|---|--|------------------|----------------------|
| | | | | Application Site | Study Area |
| | | farms and are available from fish market. | | | |
| Freshwater Crab (from reviewed literature) | <i>Somanniathelphusa zanklon</i> | Distributed quite widely in the northern and western New Territories and Lantau Island of Hong Kong | Fellowes et al. (2002): GC; IUCN Red List Status: EN; Endemic to Hong Kong | - | Modified watercourse |

Remark: all wild avifauna species are protected under Cap. 170 Wild Animals Protection Ordinance in Hong Kong².

Notes:

1. AFCD (2023). AFCD Biodiversity Information Hub.
2. Cap. 170 Wild Animals Protection Ordinance.
3. Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance.
4. Convention on International Trade in Endangered Species of Wild Flora and Fauna. Appendices I, II and III.
5. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
 - For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
6. International Union of Conservation for Nature (2023). The IUCN Red List of Threatened Species. Version 2022-2.
7. Jiang, Z. G., Jiang, J. P., Wang, Y. Z., Zhang, E., Zhang, Y. Y., Li, L. L., ... & Dong, L. (2016). Red list of China's vertebrates.
8. List of Wild Animals under State Priority Conservation (2021).
9. Reels (2019). An annotated check list of Hong Kong dragonflies and assessment of their local conservation significance.
10. Stanton & Leven (2016). Distribution, habitat utilisation and conservation status of the freshwater crab, *Somanniathelphusa zanklon* Ng & Dudgeon, 1992 (Crustacea: Brachyura: Gecarcinucidae) endemic to Hong Kong.
11. Tam *et al.* (2011). The Dragonflies of Hong Kong.
12. Wang (1999). China Red Data Book of Endangered Animals: Mammalia.
13. Zhao & Wang (1998). China Red Data Book of Endangered Animals: Amphibia and Reptilia.
14. Zheng & Wang (1998). China Red Data Book of Endangered Animals: Aves.

- As bats are very mobile, and no specific habitat utilization of the recorded bats was observed (except Short-Nosed Fruit Bat), locations of bats were recorded by within the Application Site or outside the Application Site.

Abbreviations:

- Conservation Status in Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern
- Conservation Status: CR = Critically Endangered; EN = Endangered; VU = Vulnerable

6 IMPACT IDENTIFICATION AND EVALUATION

6.1 Proposed Construction Works and Operation Mode

- 6.1.1 The Application Site is about 1.6ha. A total of two 2-storey structures are proposed at the Application Site for warehouses, offices and washrooms, and the remaining area is reserved for parking and loading/unloading spaces and circulation area. The Site is proposed to be filled wholly with concrete for site formation of the abovementioned items.
- 6.1.2 The Application Site will be used as warehouse for storage of miscellaneous goods, including but not limited to packaged food, package beverage, apparel, footwear, electronic goods, etc. The operation hours of the proposed development are Monday to Saturday from 7am to 7pm.

6.2 Impact Evaluation Criteria

- 6.2.1 Ecological impacts of the proposed development were assessed based upon the ecological resources considered at risk. Measures were proposed to mitigate negative impacts, and residual impacts were predicted assuming implementation of all feasible mitigation measures. Impact assessment and planning of mitigation measures were conducted in accordance with the Technical Memorandum (TM) on EIA Process.
- 6.2.2 The significance of ecological impacts was evaluated based primarily on the criteria set forth in Table 1, Annex 8 of the TM:
- habitat quality;
 - species affected;
 - size/abundance of habitats/organisms affected;
 - duration of impacts;
 - reversibility of impacts; and
 - magnitude of environmental changes.
- 6.2.3 Direct, indirect and cumulative impacts are generally ranked as "minor", "moderate" or "severe", although in a few cases a ranking of "insignificant" (less than "minor") may be given. The ranking of a given impact varied based on the criteria listed above. For example, an impact might be ranked as "minor" if it affected only common species and habitats, or if it affected only small numbers of individuals or small areas, whereas it might be ranked as "severe" if it affected rare species or habitats, large numbers of individuals or large areas. The major factors giving rise to a ranking are explained in the text. As noted in Annex 16 of the TM, a degree of professional judgment is involved in the evaluation of impacts.
- 6.2.4 The potential ecological impacts arising from the construction works, including loss of habitats, removal of vegetation, and disturbance to animals, were assessed with reference to the criteria stated in Annexes 8 and 16 of the EIAO-TM, which are currently the most comprehensive guidance for ecological impact assessment.
- 6.2.5 The major ecological impacts associated with the proposed works include:
- Direct habitat loss, either permanent or temporary, due to site formation and construction works within the Application Site;

- Direct and indirect impacts to flora and fauna species, in particular those of conservation importance, arising from mortality;
- Disturbance impacts to surrounding habitats and fauna during construction;
- Disturbance impacts to surrounding fauna, habitats and recognized sites of conservation importance during operation;
- Night-time light impacts.

6.3 Construction Phase

Direct Impact – Habitat Loss

6.3.1 Direct impact of the implementation of proposed construction works would be loss of habitats including wasteland and wet grassland. The estimated loss of the two types of habitats is shown in **Table 6.1**.

Table 6.1 Estimated Size of Habitats Affected by the Proposed Construction Works

| Habitat | Ecological Value | Size of Habitat Loss |
|---------------|------------------|----------------------|
| Wasteland | Low | 1.4ha |
| Wet grassland | Low | 0.2ha |
| Total | | 1.6 ha |

6.3.2 Loss of habitats and associated vegetation due to site formation will constitute direct ecological impacts of the construction. The works area will be limited to the Application Site, no additional site clearance is expected.

6.3.3 Estimated habitat loss within the Application Site would be about 1.4ha of wasteland, and about 0.2ha of wet grassland.

6.3.4 The impact of the loss of wasteland and the associated flora and fauna is considered **minor** due to its small extent of low overall ecological value and the presence of low abundance of common species. While for the wet grassland is also of low ecological value, and only common native and exotic species were recorded, loss of a small area would have an impact of low magnitude and considered **minor**. No mitigation for the habitat loss is required. Tree loss within the Application Site will be compensated with no less than 1:1 ratio.

Indirect Impact – Disturbance generated during construction phase

6.3.5 Potential indirect impacts for the surroundings during construction phase include construction traffic and construction activities that generate noise, dust, vibration and human disturbance during construction. Sensitive ecological receiver near the Application Site includes the birds in agricultural lands and ponds. Disturbance may discourage terrestrial fauna from using the surrounding habitats as breeding and roosting sites. Terrestrial fauna may be forced to use potential alternative locations in the vicinity. However, the surrounding habitats of the Application Site are already surrounded by developed area, wildlife in the vicinity have been habituated to disturbance. In addition, as no piling works will be involved, the potential impact of construction disturbance would be limited. Due to the temporary and localized nature of the impacts, potential impacts to flora and fauna are ranked as **minor**, if other good site practices are adopted.

Indirect Impact – Light Glare

- 6.3.6 If the construction site has strong lightings or flood light, there might be light glare impacts to nocturnal wildlife including firefly in the vicinity during any nighttime construction. However, there will not be nighttime construction works for the Project, and there will be no foreseeable security light source during the construction phase. The impacts due to increased night-time light during construction is therefore **insignificant**.

Indirect Impact – Water Quality and Site Run-off

- 6.3.7 Due to the removal of vegetation cover in wasteland and wetland grassland within the Application Site, the watercourse in close proximity might potentially be impacted by surface runoff, especially during rainstorm. Sediments produced from the eroded site surfaces might further pollute the periphery habitats. Furthermore, wash water from dust suppression sprays; and chemicals spillage such as fuel, oil, solvents and lubricants from maintenance of construction machinery and equipment might also pollute the surrounding habitats.
- 6.3.8 Elevated suspended solid levels caused by site runoff could increase the suspended solids load in the water bodies, and could decrease dissolved oxygen levels. A lower oxygen level would affect stationary species, whilst mobile species would tend to temporarily avoid the area. The result could be a temporary reduction in aquatic life abundance and/or change in distribution.
- 6.3.9 The watercourse section which locates just outside the Application Site will be potentially impacted by the surface runoff during construction phase. The ecological value of the watercourse is ranked as low to medium but it is considered an agricultural ditch for irrigation purpose. The recorded fauna abundance and diversity is low. It is expected the impact from surface runoff would be transient. Hence the potential impact due to surface runoff is considered **minor to moderate**. To avoid and minimize potential contamination of water, the construction runoff should be controlled by implementation of mitigation measures such as good site practice.

Indirect Impact – Recognized Sites of Conservation Importance and Important Habitats

- 6.3.10 Recognized sites of conservation importance within the Study Area and in the vicinity include Man Kam To Road Egretty and Ho Sheung Heung Egretty located more than 500m from the Application Site, and the flightlines of the breeding ardeids from these two egrettries will not be affected. Hence, potential ecological impacts to these recognized sites are not expected. While the important habitats i.e. ponds and agricultural lands that support a variety of birds are already surrounded by developed area, wildlife in the vicinity have been habituated to disturbance, potential impacts to these habitats are considered **minor** due to the nature and scale of the proposed development.

Indirect Impact – Species of Conservation Importance

- 6.3.11 Species of conservation importance found within the Application Site from both the survey of present study or reviewed literature included Greater Coucal, Grass Demon and Swallowtail. These species of conservation importance however were of very low abundance. These species are also highly mobile and there are more

suitable habitats for the recorded species of conservation importance in the vicinity (such as woodland, agricultural land, grassland/shrubland). No breeding activity was discovered during the survey period neither. Thus, the ecological impacts are considered **minor**, taken consideration of the habitat size and quality (i.e. low ecological value in the Application Site) as well as disturbance. While potential indirect impacts to the species of conservation importance recorded from the survey of present study as well as from AFCD, KFBG or other reviewed literature are also considered **minor**, as no piling works will be involved.

- 6.3.12 Eurasian Otter is a semi-aquatic mammal which forages in water and nests on land. It also inhabits terrestrial areas adjacent to water bodies, such as rivers, lakes, ponds, streams and coastal areas. As the Application Site comprised of wasteland and wet grassland which are not typical habitats for Eurasian Otter, and there were no records and signs of Eurasian Otter within the survey period, potential impacts to this species are not likely.

6.4 Operational Phase

Direct Impact – Operational Phase Permanent Habitat loss

- 6.4.1 The direct impacts during operational phase would be the areas permanently occupied by the project elements during construction, and in this case would be the area occupied by the proposed development (i.e. the same as the permanent habitat loss during the construction phase). No additional habitat loss will occur during operational phase.

Indirect Impact – Human Disturbance

- 6.4.2 Human activities within the Application Site might potentially affect the utilization of surrounding habitats by fauna during operation phase. The Application Site will be operated as temporary warehouse for storage. Only permitted staff and operator will be present within the Application Site, significant disturbance due to human activities during operation phase is not anticipated.
- 6.4.3 Habitats adjacent to the Project Site included watercourse, agricultural land, pond, wet grassland, orchard and developed area. Compared to habitats further away (e.g., woodland and majority of ponds and agricultural lands), these habitats are more likely to be disturbed by the operation of the warehouse. Due to the temporary nature and scale of the proposed development, the potential impact to these habitats and associated fauna due to human activities is ranked as **minor**.

Indirect Impact – Water Quality

- 6.4.4 There could be potential indirect impacts to the water quality of the surrounding watercourse from surface run-off and pollution events from the development. This nonpoint pollution may have various impacts to the local freshwater environment. Magnitude of impacts would be dependent upon the pollution type and quantity of pollutant. Increased stormwater runoff may also lead to increased siltation if there are areas with bare soils. The stormwater from the Application Site would be collected by the drainage facilities. Since the watercourse outside the Application Site has low abundance and diversity of freshwater species, and there will be 3m buffer between the Application Site and the watercourse, the indirect impact caused by stormwater would be **minor**.

Indirect Impacts – Light Glare

- 6.4.5 The behaviours of nocturnal wildlife including firefly might be affected by the lightings of the proposed warehouse, i.e. nocturnal animals either avoid or are attracted to lighted areas. However, the surroundings of the Application Site in particular the northern and southern sides are developed area, villages and warehouses are already present in nearby localities, and fauna inhabiting in nearby habitats have probably habituated to lighting. Therefore, potential impacts to fauna from this source are ranked as **minor**. However, as a precautionary measure, implementation of good site practices would still be recommended to minimise the impacts of the artificial lighting/glare as much as possible such as limiting the angle of the security lighting.

Indirect Impacts – Bird Collision

- 6.4.6 Bird collision risk would be more prominent when the building consists of extensive reflective glass façade such that the birds flying nearby are confused by the reflected image inside the glass which is normally the image of the sky and/or nearby environment. Considering that the proposed development of warehouse would not have extensive glass façade, and lack of identified flight lines across the Application Site, the potential bird collision impact is considered **insignificant**.

Potential Impact on Recognized Sites of Conservation Importance, Important Habitat, and Species of Conservation Importance

- 6.4.7 During the operational phase, the utilization of the proposed warehouse would be limited as the visitors would be controlled. Human disturbances, noises from the proposed operations will be localized. The potential impacts to Man Kam To Road Egret and Ho Sheung Heung Egret would be **insignificant**.
- 6.4.8 As important habitats, the key agricultural lands and ponds that support bird communities are in close proximity of the Application Site. However, limited human disturbance from the operation of the proposed development is expected. Since the habitats within the Study Area are already surrounded by developed area, wildlife in the vicinity have been habituated to disturbance, potential impacts to these habitats as well as the species of conservation importance recorded from the survey of present study, AFCD, KFBG or other reviewed literature are considered **minor**.

7 IMPACT AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES

7.1 General

- 7.1.1 According to the principles in the EIAO-TM Annex 16 and EIAO Guidance Note 3/2010, ecological impacts on important habitats and the associated wildlife caused by the proposed development should be avoided, minimized and mitigated where practicable.
- 7.1.2 The potential impacts arising from the construction and operation of the proposed development have been assessed. The following mitigation measures are recommended.

7.2 Impact Avoidance

- 7.2.1 The proposed development has avoided sensitive habitats such as agricultural lands and ponds with diverse bird species, marsh, and woodland. Only habitats of low ecological value, including wasteland and wet grassland will be affected. Besides, there will be 3m separation between the Application Site and the nearby watercourse to avoid the watercourse being affected by the construction works.
- 7.2.2 The Application Site will be accessed mainly by existing road network during both construction and operation phases. There will be no impact due to temporary or permanent loss of habitats from construction of access.

7.3 Impact Minimization

Site Hoarding and Good Site Practices

- 7.3.1 Site hoarding would be erected along the construction site boundary. Together with good site practice would be implemented for dust, noise, water quality and site surface run-off to adopted by the Project, which will be adequate to any potential indirect impacts to the surrounding environment during both construction and operation phase. The minimization measures as follows:
- Implementation of mitigation measures specified in ProPECC PN 1/94 to control site runoff and drainage at all work sites during construction;
 - Implementation of noise control measures at all construction sites to reduce impacts of construction noise to wildlife habitats adjacent works area;
 - Installation of site hoarding as temporary noise barrier where construction works will be undertaken;
 - The use of movable noise barrier;
 - The use of temporary noise screening structures or purpose-built temporary noise barriers;
 - Implementation of dust control measures at all construction sites to minimise dust nuisance to adjacent wildlife habitats during construction activities;
 - Construction debris and spoil should be covered up and/or properly disposed of as soon as possible to avoid being washed into nearby waterbodies by rain;
 - Construction effluent, site run-off and sewage should be properly collected and/or treated, Wastewater from a construction site should be managed with the following approach in descending order;
 - All dusty materials shall be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet;
 - Proper locations for discharge outlets of wastewater treatment facilities well away from the natural watercourse should be identified;
 - Prohibition and prevention of open fires within the work site boundary during construction;
 - Regular checking should be undertaken to ensure that the work site boundaries are not exceeded and avoid damage to the vegetation in surrounding areas; and
 - Supervisory staff should be assigned to station on site to closely supervise and monitor the works.

- 7.3.2 In, addition, construction works will be programmed to minimize soil filling works in rainy season (generally from April to September). If filling works could not be avoided in these months or at any time of year when rainstorms are likely, temporarily exposed soil surfaces will be covered (e.g. by tarpaulin), to prevent storm runoff from washing across exposed soil surfaces.
- 7.3.3 The above measures will all contribute to the minimization of potential construction disturbance to the surrounding habitats and associated fauna. With the implementation of these measures and the screening effects of the hoarding, noise and disturbance impact as well as the water quality impact would be mitigated to an acceptable level and no residual impact is anticipated.

Good Practice of Night-time Light

- 7.3.4 Although mitigation measures would not be required for the potential nighttime light impact, it is recommended to avoid orientating any external flood light towards outside the Application Site during both construction and operational phases to minimize any potential disturbance.

8 RESIDUAL IMPACTS

- 8.1.1 The residual environmental impacts refer to the net environmental impacts after the implementation of mitigation measures. The residual impact will be the loss of wasteland (1.4ha) and wet grassland (0.2ha) of low ecological value. The loss of these habitats is considered **minor**, and no corresponding mitigation is required. Potential indirect impacts during both construction and operation phases will be mitigated by the recommended measures. With the implementation of the recommended mitigation measures, it is anticipated that all potential ecological impacts will be reduced to an acceptable level. As a result, no adverse residual impact is anticipated during both construction and operational phases.

9 CUMULATIVE IMPACT

- 9.1.1 No cumulative impacts as no construction project within the vicinity of the proposed construction.

10 CONCLUSION

- 10.1.1 Information on the ecological baseline conditions of the Application Site was collected through literature review and surveys, and they were integrated into the present EcolA to support the application.
- 10.1.2 Within the Application Site, about 1.4ha of wasteland and about 0.2ha of wet grassland will be lost directly. Due to the low ecological value of the habitats, the potential impact due to loss of those habitats within the Application Site is considered minor.
- 10.1.3 This application would satisfy the requirements listed in Town Planning Board Guidelines No. 12C (TPB PG-No. 12C).

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Figure 1 The Locations of Application Site, Study Area, and Egreties

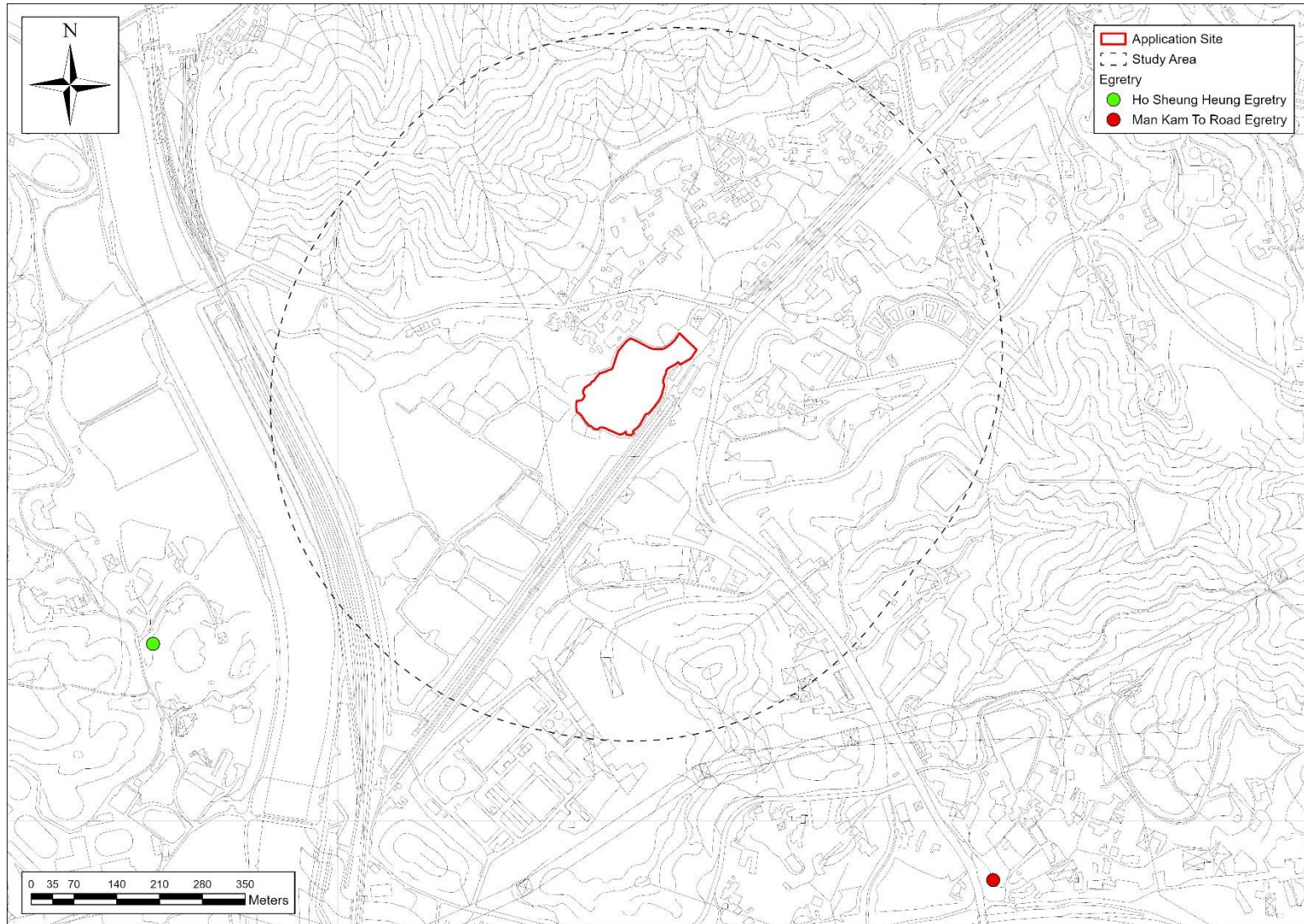


Figure 2 Location of Ecological Survey Transects, Aquatic Sampling Points, Camera Traps

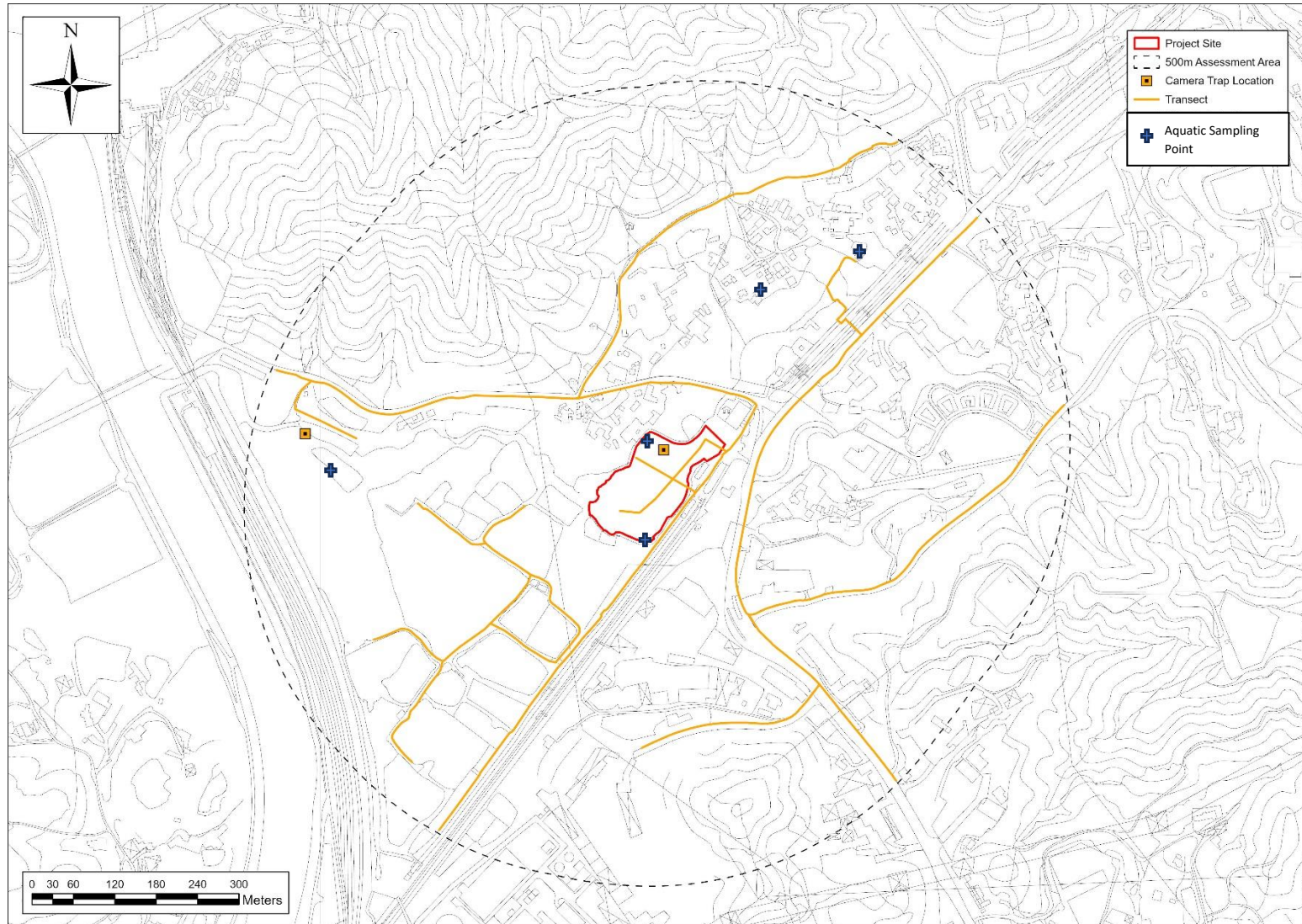


Figure 3 Species of Conservation Importance within the Study Area from Reviewed Literature

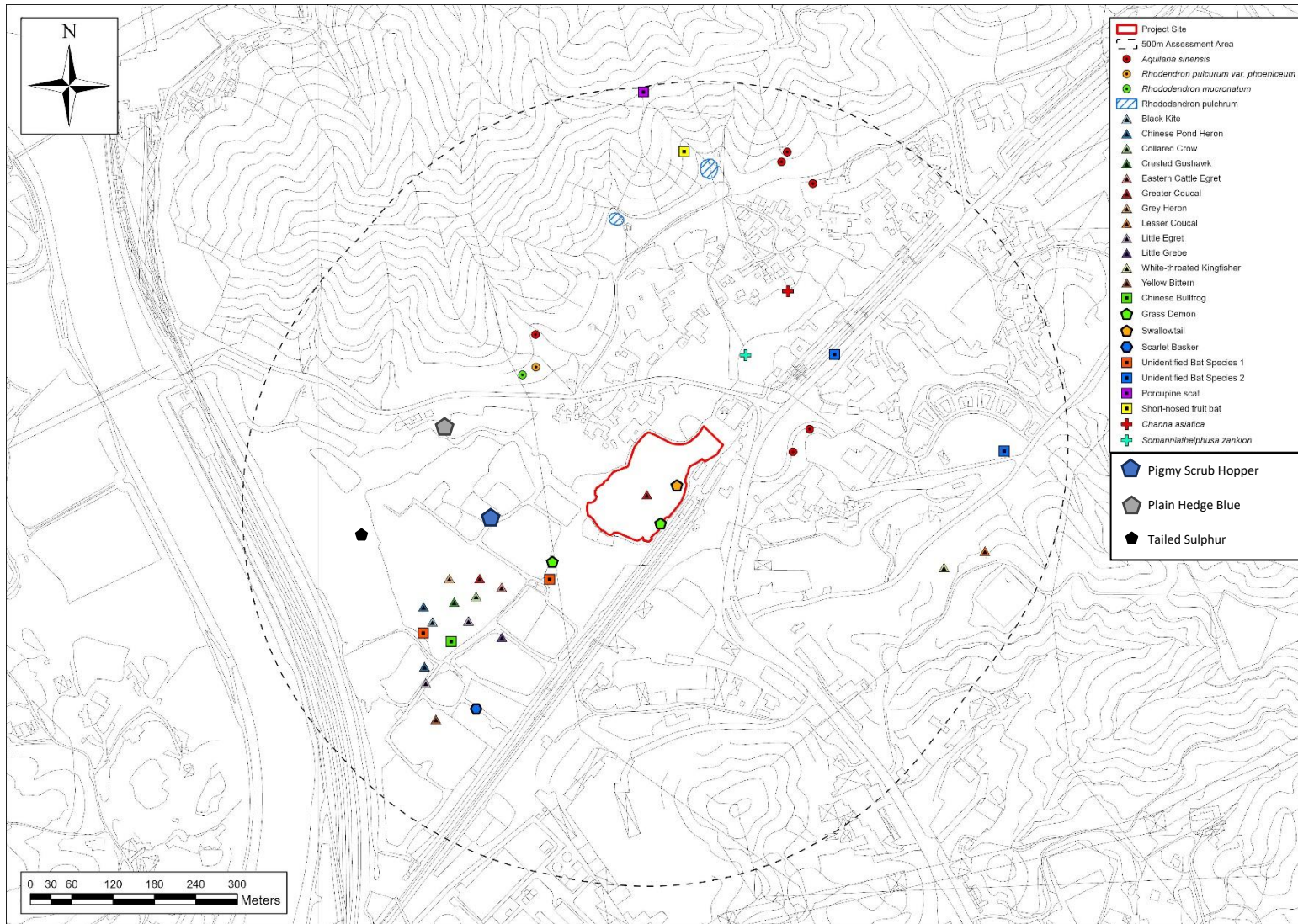


Figure 4 Habitat Map of the Application Site and the Study Area

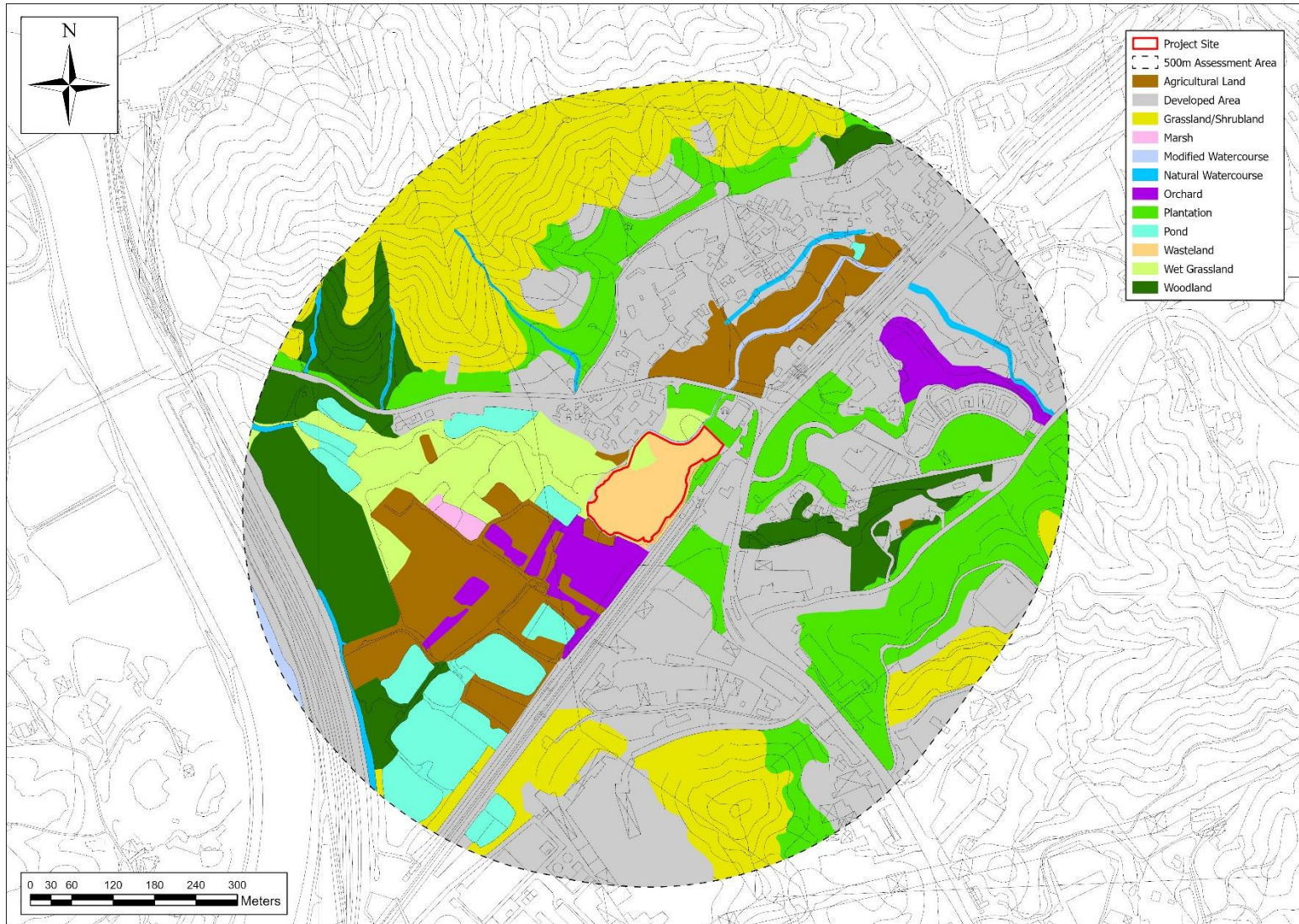


Figure 5 **Habitat Photos**





Orchard



Plantation



Pond



Wet grassland



Woodland



Wasteland

Figure 6 Locations of Species of Conservation Importance

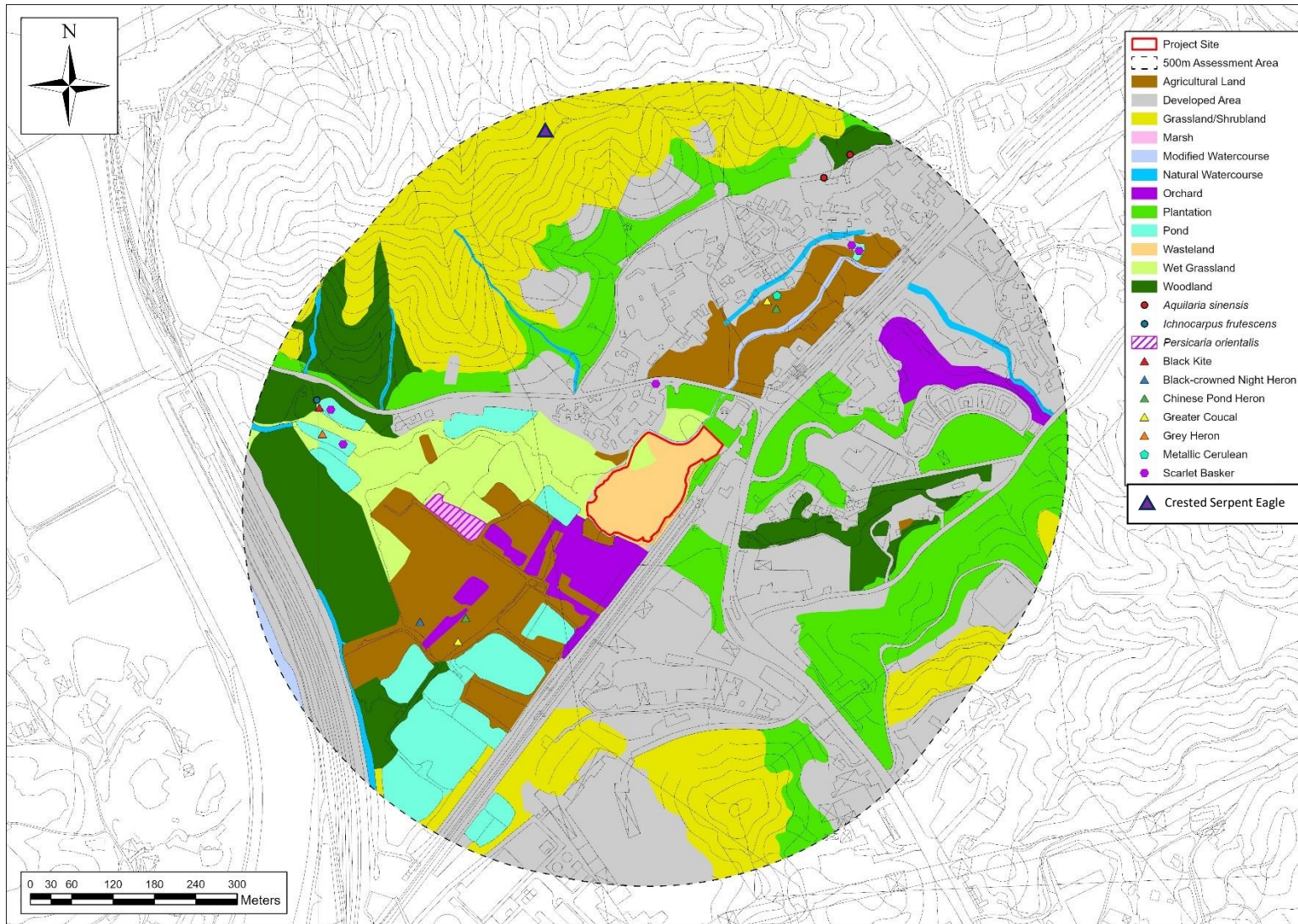


Figure 7 Photos of Plant Species of Conservation Importance



Aquilaria sinensis



Ichnocarpus frutescens



Persicaria orientalis

Appendix A Flora Species Recorded within the Study Area

| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2 3 4 5 6 7} | Relative Abundance within Study Area | | | | | | | | | | | | | |
|---|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Acacia confusa</i> | 台灣相思 | Tree | Exotic | - | | | | | o | | | | | | | c | | | |
| <i>Adenosma glutinosum</i> | 毛麝香 | Herb | Native | Very common | | | | | | o | | | | | | | | | |
| <i>Aeschynomene americana</i> | 美洲合萌 | Herb | Exotic | - | | s | | s | | | | | | | | | | s | |
| <i>Agave americana</i> | 龍舌蘭 | Herb | Exotic | - | | | | | s | | | | | | | s | | | |
| <i>Ageratum conyzoides</i> | 藿香薊 | Herb | Exotic | Common | | s | | o | o | | | | | | s | | s | | |
| <i>Aglaonema modestum</i> | 廣東萬年青 | Herb | Exotic | - | | | | | | | | o | | | | | | | |
| <i>Alangium chinense</i> | 八角楓 | Tree | Native | Common | | | | | | | | | | | s | | | | s |
| <i>Aleurites moluccana</i> | 石栗 | Tree | Exotic | - | | | | | | | | | | | s | | | | |
| <i>Alocasia macrorrhizos</i> | 海芋 | Herb | Native | Very common | | | o | o | | | | | c | o | | | | c | o |
| <i>Alternanthera philoxeroides</i> | 空心莧 | Herb | Exotic | Common | | o | | | | | | | | | | o | o | | |
| <i>Alysicarpus ovalifolius</i> | 圓葉鏈莢豆 | Herb | Exotic | - | | | | | s | | | | | | | | | | |
| <i>Alysicarpus vaginalis</i> | 鏈莢豆 | Herb | Native | Very common | | o | | | | | | | | | | | | | |
| <i>Amaranthus viridis</i> | 綠莧 | Herb | Native | Very common | | | | o | s | | | | | | | | | | |
| <i>Ampelopsis heterophylla var. kulingensis</i> | 牯嶺蛇葡萄 | Climber | Native | Common | | | | s | | | | | | | | | | | |

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown)
with Ancillary Facilities for a Period of 3 Years and Associated Filling
of Land in "Agriculture" Zone

October 2024

| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2,3,4,5,6,7} | Relative Abundance within Study Area | | | | | | | | | | | | | |
|-------------------------------|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Anredera cordifolia</i> | 落葵薯 | Climber | Exotic | Restricted | | | | o | | | | | | | | | | | |
| <i>Apluda mutica</i> | 水蔗草 | Herb | Native | Very common | | o | | | | | | | | | | | | o | |
| <i>Aporosa dioica</i> | 銀柴 | Tree | Native | Very common | | | | | | | | | | | s | | | | c |
| <i>Aquilaria sinensis</i> | 土沉香 | Tree | Native | Common | Cap. 586 Rare and Precious Plants of Hong Kong: NT in China 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: VU CITES Appendix II | | | | | s | | | | | | | | | s |
| <i>Araucaria heterophylla</i> | 異葉南洋杉 | Tree | Exotic | - | IUCN Red List: VU | | | | | s | | | | | | | | | |

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| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2,3,4,5,6,7} | Relative Abundance within Study Area | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|--|--|---|---|---|---|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL | | | | | | |
| <i>Asystasia micrantha</i> | 小花十萬錯 | Herb | Exotic | - | | | | | s | | | | | | o | c | | | | | | | | o | |
| <i>Baeckea frutescens</i> | 崗松 | Shrub | Native | Very common | | | | | | c | | | | | | | | | | | | | | | |
| <i>Bauhinia sp.</i> | 羊蹄甲屬 | - | - | - | | | | | | | | | | | s | | | | | | | | | | o |
| <i>Bidens alba</i> | 白花鬼針草 | Herb | Exotic | Very common | | c | | c | s | s | o | s | | | o | o | | | | | | s | | | |
| <i>Bischofia javanica</i> | 秋楓 | Tree | Native | Common | | | | | | | | | | | | | | | | | | | | | o |
| <i>Blechnum orientale</i> | 烏毛蕨 | Herb | Native | Very common | | | | | | s | | | | | | | | | | | | | | | |
| <i>Bombax ceiba</i> | 木棉 | Tree | Exotic | - | | o | | | | | | | | | | | | | | | | | | | |
| <i>Brachiaria mutica</i> | 巴拉草 | Herb | Exotic | Common | | | c | o | | | c | o | | | | | | | | | | | c | | |
| <i>Breynia fruticosa</i> | 黑面神 | Shrub | Native | Very common | | | | | | s | | | | | | | | | | | | | | | |
| <i>Bridelia tomentosa</i> | 土蜜樹 | Shrub | Native | Very common | | | | s | | | | | | | | | s | | | | | | | | o |
| <i>Broussonetia papyrifera</i> | 構樹 | Tree | Native | Very common | | | s | | s | | | | | | o | | | | | | | | | | o |
| <i>Cajanus scarabaeoides</i> | 蔓草蟲豆 | Climber | Native | Common | | | | | | s | | | | | | | | | | | | | | | |
| <i>Callipteris esculenta</i> | 菜蕨 | Herb | Native | Common | | | c | s | | | | c | | | s | | | | | | | | c | | |
| <i>Carica papaya</i> | 番木瓜 | Tree | Exotic | - | | | | o | s | | | | | | | | s | | | | | | | | |
| <i>Catharanthus roseus</i> | 長春花 | Shrub | Exotic | Common | | | | | s | | | | | | | | s | | | | | | | | |
| <i>Celtis sinensis</i> | 朴樹 | Tree | Native | Common | | | | s | | | | | | | | | s | | | | | | | | c |

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October 2024

| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2,3,4,5,6,7} | Relative Abundance within Study Area | | | | | | | | | | | | | | |
|--|--------------|-------------|--------|---|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|---|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL | |
| <i>Centella asiatica</i> | 積雪草 | Herb | Native | Very common | | | | | s | | | s | | | | | | | | |
| <i>Cinnamomum camphora</i> | 樟 | Tree | Native | Common | | | | | s | | | | | | | | | | | c |
| <i>Citrus limonia</i> | 黎檬 | Tree | Exotic | - | | | | o | | | | | | | | | | | | |
| <i>Citrus reticulata</i> | 柑橘 | Tree | Exotic | - | List of Wild Plants under State Priority Conservation: Class 2 | | | | | | | | | o | | | | | | |
| <i>Claoxylon indicum</i> | 白桐樹 | Tree | Native | Common | | | | | | | | | | s | | | | | | |
| <i>Clausena lansium</i> | 黃皮 | Tree | Exotic | - | | | | s | | | | | | | | | | | | o |
| <i>Cleome rutidosperma</i> | 皺子白花菜 | Herb | Exotic | Restricted | | | | s | s | | | | | | | | | | | |
| <i>Clerodendrum japonicum</i> | 楨桐 | Shrub | Exotic | - | | | | | | | | | | s | | | | | | |
| <i>Cocculus orbiculatus</i> | 木防己 | Climber | Native | Common | | | | s | | | | | | | | | | | | |
| <i>Codiaeum variegatum</i> | 變葉木 | Shrub | Exotic | - | | | | | s | | | | | | | | | | | |
| <i>Colocasia esculenta</i> | 芋 | Herb | Native | - | | | o | | | | | | s | | | | | | | c |
| <i>Commelina diffusa</i> | 節節草 | Herb | Native | Common | | | | | | | o | o | | | | o | | | | o |
| <i>Conyza bonariensis</i> | 香絲草 | Herb | Exotic | Very common | | | | s | s | | | | | | | | | | | |
| <i>Corchorus aestuans</i> | 甜麻 | Herb | Native | Common | | | | s | | | | | | | | | | | | |
| <i>Cratoxylum cochinchinense</i> | 黃牛木 | Tree | Native | Very common | | | | | | s | | | | | s | | | | | |
| <i>Crotalaria pallida var. obovata</i> | 豬屎豆 | Herb | Exotic | Common | | | | | | | | | | | | | | | | s |
| <i>Croton crassifolius</i> | 雞骨香 | Shrub | Native | Very common | | | | | | s | | | | | | | | | | |

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown)
with Ancillary Facilities for a Period of 3 Years and Associated Filling
of Land in "Agriculture" Zone

October 2024

| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2,3,4,5,6,7} | Relative Abundance within Study Area | | | | | | | | | | | | | |
|--|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Cuscuta chinensis</i> | 菟絲子 | Herb | Native | Common | | | s | | | | | | | | | | | s | |
| <i>Cyclosorus interruptus</i> | 間斷毛蕨 | Herb | Native | Common | | | o | s | | | | | | | | | s | | s |
| <i>Cyclosorus parasiticus</i> | 華南毛蕨 | Herb | Native | Very common | | | | s | s | | | s | o | | | | | | o |
| <i>Cymbopogon hamatulus</i> | 扭鞘香茅 | Herb | Native | Very common | | | | | | o | | | | | | | | | |
| <i>Cyperus difformis</i> | 異型莎草 | Herb | Native | Very common | | s | | | | | | | | | | | | | s |
| <i>Cyperus involucratus</i> | 風車草 | Herb | Exotic | Restricted | | | o | | | | | s | | | | | | | s |
| <i>Cyperus iria</i> | 碎米莎草 | Herb | Native | Common | | | | s | | | | | | | | | | | s |
| <i>Cyperus odoratus</i> | 斷節莎 | Herb | Exotic | Rare | | | | s | | | s | | | | | | s | | s |
| <i>Cyperus surinamensis</i> | 蘇里南莎草 | #REF! | Exotic | - | | s | | | s | | | | | | | | | | |
| <i>Desmodium heterocarpon var. strigosum</i> | 糙毛假地豆 | Shrub | Native | - | | | | | | s | | | | | | | | | s |
| <i>Dicranopteris pedata</i> | 芒萁 | Herb | Native | Very common | | | | | | c | | | | | | | | | |
| <i>Dimocarpus longan</i> | 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 | | | | o |

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October 2024

| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2,3,4,5,6,7} | Relative Abundance within Study Area | | | | | | | | | | | | | |
|--------------------------------|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Dioscorea bulbifera</i> | 黃獨 | Climber | Native | Common | | | | | | | | | s | | | | | | |
| <i>Diploclisia glaucescens</i> | 蒼白秤鈞風 | Climber | Native | Common | | | | | | | | | | | | | | | s |
| <i>Dracaena fragrans</i> | 巴西鐵樹 | Shrub | Exotic | - | | | | | s | | | | | | s | | | | |
| <i>Drymaria cordata</i> | 荷蓮豆 | Herb | Native | Common | | | | | | | | | o | | | | | | |
| <i>Duhaldea cappa</i> | 羊耳菊 | Herb | Native | Common | | | | | | s | | | | | | | | | |
| <i>Duranta erecta</i> | 假連翹 | Climber | Exotic | - | | | | | | | | | | s | | | | | |
| <i>Echinochloa colona</i> | 光頭稗 | Herb | Native | Very common | | | | c | s | | | | | | | | | s | |
| <i>Eichhornia crassipes</i> | 鳳眼藍 | Herb | Exotic | Common | | | | | | | | | | | | | c | | |
| <i>Elephantopus tomentosus</i> | 白花地膽草 | Herb | Native | Common | | | | | | | | | | | s | | | | |
| <i>Eleusine indica</i> | 牛筋草 | Herb | Native | Very common | | | | o | | | | | | | | | | | |
| <i>Embelia laeta</i> | 酸藤子 | Climber | Native | Very common | | | | | | | | | | | | | | | s |
| <i>Emilia sonchifolia</i> | 一點紅 | Herb | Native | Very common | | | | | s | | | | | | s | | | | |
| <i>Eragrostis tenella</i> | 鯽魚草 | Herb | Native | Very common | | | | | | | | | | | o | | s | | |
| <i>Eremochloa ciliaris</i> | 蜈蚣草 | Herb | Native | Very common | | | | | | s | | | | | | | | | |
| <i>Eriobotrya japonica</i> | 枇杷 | Tree | Exotic | - | | | | s | | | | | | o | | | | | |
| <i>Euphorbia hirta</i> | 飛揚草 | Herb | Exotic | Very common | | | | | s | | | | | | | | | | |

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown)
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of Land in "Agriculture" Zone

October 2024

| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2,3,4,5,6,7} | Relative Abundance within Study Area | | | | | | | | | | | | | |
|---|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Euphorbia hypericifolia</i> | 通奶草 | Herb | Native | Common | | s | | | | | | | | | | | s | | |
| <i>Eurya chinensis</i> | 米碎花 | Shrub | Native | Very common | | | | | | | | | | | | | | | s |
| <i>Fallopia multiflora</i> | 何首烏 | Herb | Native | Restricted | | | | | | | | | | s | | | | | |
| <i>Ficus benjamina</i> | 垂葉榕 | Tree | Exotic | - | | | | | | | | | | | s | | | | |
| <i>Ficus elastica</i> | 印度榕 | Tree | Exotic | - | | | | | | | | | | | s | | | | |
| <i>Ficus hirta</i> | 粗葉榕 | Shrub | Native | Common | | | | | | | | | | | s | | | | s |
| <i>Ficus hispida</i> | 對葉榕 | Shrub | Native | Very common | | s | | | o | | | | | o | o | | s | s | o |
| <i>Ficus microcarpa</i> | 榕樹 | Tree | Native | Common | | | | | c | | | | | | c | | | | o |
| <i>Ficus pandurata</i> | 琴葉榕 | Shrub | Native | Restricted | | | | | | | | | | | | | | | s |
| <i>Ficus religiosa</i> | 菩提樹 | Tree | Exotic | Restricted | | | | | | | | | | | s | | | | |
| <i>Ficus variegata var. chlorocarpa</i> | 青果榕 | Tree | Native | Common | | | | | s | | | | | | | | | | |
| <i>Fimbristylis dichotoma</i> | 兩歧飄拂草 | Herb | Native | Very common | | s | | | | s | | | | | | | | s | |
| <i>Fimbristylis littoralis</i> | 水風草 | Herb | Native | Very common | | | | o | | | | | | | | | | | |
| <i>Flueggea virosa</i> | 白飯樹 | Shrub | Native | Common | | | | | s | | | | | | | | | | |
| <i>Gymnanthemum amygdalinum</i> | 南非葉 | Shrub | Exotic | - | | | | | | | | | | | s | | | | |
| <i>Hedyotis corymbosa</i> | 傘房花耳草 | Herb | Native | - | | | | | s | | | | | | | | | | |
| <i>Helicteres angustifolia</i> | 山芝麻 | Shrub | Native | Very common | | | | | | o | | | | | | | | | |
| <i>Heterosmilax gaudichaudiana</i> | 合絲肖菝葜 | Climber | Native | Common | | | | | | | | | | | | | | | s |
| <i>Hibiscus mutabilis</i> | 木芙蓉 | Shrub | Exotic | - | | s | | | | | | | | | | | | | |

Ecosystems Ltd.

| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2,3,4,5,6,7} | Relative Abundance within Study Area | | | | | | | | | | | | | |
|--------------------------------------|--------------|----------------|---------------|---|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----------|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Hibiscus rosa-sinensis</i> | 朱槿 | Shrub | Exotic | - | | | | | | | | | | | s | | | | |
| <i>Hydrocotyle verticillata</i> | 銅錢草 | Herb | Exotic | - | | | | | | | | | | | | s | | | |
| <i>Hylocereus undatus</i> | 量天尺 | Herb | Exotic | - | | | | | s | | | | | | | | | | |
| <i>Ichnocarpus frutescens</i> | 腰骨藤 | Climber | Native | Very rare | | | | | | | | | | | | | | | s |
| <i>Ipomoea aquatica</i> | 蕹菜 | Herb | Exotic | Very common | | s | | | | | | | | | | | | | o |
| <i>Ipomoea cairica</i> | 五爪金龍 | Climber | Exotic | Very common | | | s | | | | s | | | | | | | | c o |
| <i>Ipomoea triloba</i> | 三裂葉薯 | Herb | Native | - | | c | | c | | | | | | | | | s | | s |
| <i>Ischaemum barbatum</i> | 粗毛鴨嘴草 | Herb | Native | Very common | | | | | | o | | | | | | | | | |
| <i>Keteleeria fortunei</i> | 油杉 | Tree | Native | very rare | Cap. 96A Rare and Precious Plants of Hong Kong: VU in China 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 | | | | | | | | | | | | | | s |

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown)
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October 2024

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|-------------------------------|--------------|-------------|--------|---|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Michelia figo</i> | 含笑 | Shrub | Exotic | Very rare | Cap. 96A | | | | s | | | | | | s | | | | |
| <i>Microcos nervosa</i> | 破布葉 | Shrub | Native | Common | | | | | | | | | | | s | | | | |
| <i>Microstegium ciliatum</i> | 剛莠竹 | Herb | Native | Very common | | | | | s | | | | | s | | | | | |
| <i>Mikania micrantha</i> | 薇甘菊 | Herb | Exotic | Very common | | o | c | o | s | | s | o | | o | o | o | o | c | o |
| <i>Mimosa diplotricha</i> | 巴西含羞草 | Herb | Exotic | Rare | | s | | | | | | | | | | | | | |
| <i>Mimosa pudica</i> | 含羞草 | Herb | Exotic | Very common | | c | | | s | | | | | | s | | o | | |
| <i>Miscanthus floridulus</i> | 五節芒 | Herb | Native | Common | | o | s | o | s | s | | | | | | | o | | |
| <i>Morus alba</i> | 桑 | Tree | Native | Common | | | | | s | | | | | o | | | | | |
| <i>Murraya paniculata</i> | 九里香 | Tree | Exotic | - | | | | | s | | | | | o | | | | | |
| <i>Musa x paradisiaca</i> | 大蕉 | Herb | Exotic | - | | | | o | s | | | | | c | | | | | |
| <i>Myriophyllum aquaticum</i> | 粉綠狐尾藻 | Herb | Exotic | - | | | | | | | | | | | | s | | | |
| <i>Nelumbo nucifera</i> | 蓮 | Herb | Exotic | - | List of Wild Plants under State Priority Conservation: Class 2 | | | | | | | | | | | o | | s | |
| <i>Nephrolepis auriculata</i> | 腎蕨 | Herb | Native | Common | | | | | | | | | | | s | | | | |
| <i>Neyraudia reynaudiana</i> | 類蘆 | Herb | Native | Very common | | | | | | o | | | | | | | | | |
| <i>Ocimum basilicum</i> | 羅勒 | Herb | Native | Very rare | | | | | s | | | | | | | | | | |
| <i>Oxalis corniculata</i> | 酢漿草 | Herb | Native | Very common | | | | | | | | | | | s | | | | |

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|-------------------------------------|--------------|-------------|---------------|---|---|--------------------------------------|----|--------------------------|----|----|----------|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Paederia scandens</i> | 雞矢藤 | Climber | Native | Very common | | o | | | s | | | | | | s | | o | | o |
| <i>Palhinhaea cernua</i> | 鋪地蜈蚣 | Herb | Native | Very common | | | | | | s | | | | | | | | | |
| <i>Panicum maximum</i> | 大黍 | Herb | Exotic | Common | | o | | o | s | o | s | | | | o | o | | | o |
| <i>Paspalum conjugatum</i> | 兩耳草 | Herb | Native | Common | | | | | s | | o | | | | | | | | |
| <i>Paspalum urvillei</i> | 絲毛雀稗 | Herb | Exotic | Common | | o | | | | | | | | | | | o | | |
| <i>Passiflora foetida</i> | 龍珠果 | Climber | Exotic | Very common | | s | | o | | | | | | | s | | s | | |
| <i>Persea americana</i> | 鱸梨 | Tree | Exotic | - | | | | | s | | | | | s | | | | | |
| <i>Persicaria barbata</i> | 毛蓼 | Herb | Native | Common | | | s | | | | | s | | | | | | s | |
| <i>Persicaria chinensis</i> | 火炭母 | Herb | Native | Very Common | | | | | s | | | | | s | | | | | |
| <i>Persicaria glabra</i> | 光蓼 | Herb | Exotic | Restricted | | | s | | | | | | | | | | | | |
| <i>Persicaria lapathifolia</i> | 大馬蓼 | Herb | Native | Common | | | | | | | | | | | | s | | s | |
| <i>Persicaria orientalis</i> | 紅蓼 | Herb | Native | Very rare | | | | | | | c | | | | | | | | |
| <i>Phyllanthus debilis</i> | 銳尖葉下珠 | Shrub | - | - | | | | | s | | | | | | | | | | |
| <i>Phyllanthus reticulatus</i> | 小果葉下珠 | Shrub | Native | Common | | | | | s | | | | | | s | | | | s |
| <i>Pilea microphylla</i> | 小葉冷水花 | Herb | Exotic | Very common | | | | | o | | | | | | | | | | |
| <i>Pinus elliotii</i> | 濕地松 | Tree | Exotic | - | | | | | | | | | | s | | | | | |
| <i>Platyclusus orientalis</i> | 側柏 | Tree | Exotic | - | | | | | s | | | | | | | | | | |

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|--------------------------------|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Pluchea sagittalis</i> | 翼莖闊苞菊 | Herb | Exotic | - | | s | | | | | | | | | | | | | |
| <i>Plumeria rubra</i> | 雞蛋花 | Tree | Exotic | - | | | | | | | | | | s | | | | | s |
| <i>Podocarpus macrophyllus</i> | 羅漢松 | Tree | Native | Restricted | List of Wild Plants under State Priority Conservation: Class 2 Threatened Species List of China's Higher Plants: VU | | | | s | | | | | | | | | | |
| <i>Praxelis clematidea</i> | 假臭草 | Herb | Exotic | Very common | | | | | s | | | | | | | | | | o |
| <i>Psidium guajava</i> | 番石榴 | Tree | Exotic | Common | | | | s | | | | | | c | | | | | |
| <i>Psychotria asiatica</i> | 九節 | Tree | Native | Very common | | | | | | | | | | | | | | | c |
| <i>Pteris semipinnata</i> | 半邊旗 | Herb | Native | Very common | | | | | s | | | | s | | | | | | o |
| <i>Pteris vittata</i> | 蜈蚣蕨 | Herb | Native | Very common | | | | | | s | | | | | | | | | |
| <i>Pycreus polystachyos</i> | 多枝扁莎 | Herb | Native | Very common | | s | | | | | | | | | | | | s | |
| <i>Rhaphiolepis indica</i> | 石斑木 | Shrub | Native | Very common | | | | | | | | | | | | | | | s |
| <i>Rhododendron pulchrum</i> | 錦繡杜鵑 | Shrub | Exotic | - | | | | | | | | | | s | | | | | |
| <i>Rhodomyrtus tomentosa</i> | 桃金娘 | Shrub | Native | Very common | | | | | | o | | | | | | | | | |

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|-----------------------------------|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Rhus hypoleuca</i> | 白背鹽膚木 | Shrub | Native | Common | | | | | | o | | | | | s | | | | |
| <i>Ruellia coerulea</i> | 蘭花草 | Herb | Exotic | - | | | | | | | | | | s | | | | | |
| <i>Sacciolepis indica</i> | 囊穎草 | Herb | Native | Very common | | s | | | | | | | | | | | | | |
| <i>Sageretia thea</i> | 雀梅藤 | Shrub | Native | Very common | | | | | | | | | | | | | | | s |
| <i>Sapium sebiferum</i> | 烏桕 | Tree | Native | Common | | | o | | | | | | | | | | | | |
| <i>Schefflera arboricola</i> | 鵝掌藤 | Climber | Exotic | - | | | | | s | | | | | | | | | | |
| <i>Senna siamea</i> | 鐵刀木 | Tree | Exotic | - | | | | | | | | | | | s | | | | |
| <i>Sesbania cannabina</i> | 田菁 | Herb | Exotic | Common | | c | | o | | | | | | | | | c | | |
| <i>Sida rhombifolia</i> | 白背黃花稔 | Shrub | Native | Common | | | | | s | | | | | | | | | | |
| <i>Solanum torvum</i> | 水茄 | Shrub | Exotic | Common | | s | | | | | | | | o | | | | | |
| <i>Spermacoce remota</i> | 光葉豐花草 | Herb | Exotic | - | | s | | | | s | | | | | | | | s | |
| <i>Stachytarpheta cayennensis</i> | 藍蝶猿尾木 | Herb | Exotic | - | | | | | | s | | | | | | | | | |
| <i>Stephania longa</i> | 糞箕篤 | Climber | Native | Common | | | | | | s | | | | | | | | | s |
| <i>Sterculia lanceolata</i> | 假蘋婆 | Tree | Native | Very common | | | | | | | | | s | | | | | | s |
| <i>Sterculia nobilis</i> | 蘋婆 | Tree | Exotic | - | | | | | | | | | | s | | | | | |
| <i>Synedrella nodiflora</i> | 金腰箭 | Herb | Exotic | Very common | | | | | | s | | | | | s | | | | |
| <i>Syngonium podophyllum</i> | 合果芋 | Herb | Exotic | - | | | | | | s | | | | | s | | | | s |

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown)
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| Scientific name | Chinese name | Growth form | Origin | Rarity and distribution in Hong Kong ¹ | Protection and conservation status ^{2,3,4,5,6,7} | Relative Abundance within Study Area | | | | | | | | | | | | | |
|--|--------------|-------------|--------|---|---|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| <i>Tabebuia</i> sp. | 風鈴木屬 | Tree | Exotic | - | | | | | c | | | | | | | | | s | |
| <i>Thysanolaena latifolia</i> | 粽葉蘆 | Herb | Native | Common | | s | | s | | | | | | | | o | | s | |
| <i>Tinospora sinensis</i> | 中華青牛膽 | Climber | Native | Common | | | | s | | | | s | s | | | | | | |
| <i>Trema tomentosa</i> | 山黃麻 | Shrub | Native | Common | | | | | s | | | | | s | | | | | |
| <i>Typha angustifolia</i> | 水燭 | Herb | Exotic | Rare | | | | | | | | | | | s | | | | |
| <i>Typhonium blumei</i> | 犁頭尖 | Herb | Native | Restricted | | | | | s | | | | | s | | | | | |
| <i>Urena lobata</i> | 肖梵天花 | Herb | Native | Common | | s | | | | | | | | | | | s | o | |
| <i>Wedelia trilobata</i> | 三裂葉蟛蜞菊 | Herb | Exotic | Common | | o | | | | | | o | | o | s | | | c | |
| <i>Wikstroemia indica</i> | 了哥王 | Shrub | Native | Common | | | | | | o | | | | | | | | | |
| Total number of flora species recorded within the Study Area | | | | | 206 | 35 | 15 | 44 | 67 | 30 | 9 | 18 | 9 | 34 | 54 | 15 | 18 | 34 | 49 |

Notes:

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 (2024). 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. (2024). The IUCN Red List of Threatened Species. Version 2024-1.
 7. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2021). 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.
 11. Species in bold are considered of conservation importance.
- * *Araucaria heterophylla*, *Casuarina equisetifolia*, *Citrus reticulata*, *Dimocarpus longan*, *Euphorbia hirta*, *Euphorbia hypericifolia*, *Hylocereus undatus*, *Lagerstroemia speciosa*, *Litchi chinensis*, *Livistona chinensis*, *Michelia x alba*, *Nelumbo nucifera*, *Opuntia stricta* var. *dillenii*, *Pterocarpus indicus*, *Rhodoleia championii* and *Tabebuia chrysantha* are all exotic to Hong Kong and not considered of conservation importance.

Abbreviations:

Ecosystems Ltd.

- Habitat: AGR = Agricultural Land; DA = Developed Area; GS = Grassland/Shrubland; MA = Marsh; MW = Modified Watercourse; NW = Natural Watercourse; O = Orchard; PL = Plantation; PO = Pond; WA = Wasteland; WG = Wet Grassland; WL = Woodland
- Protection and conservation status: CR = Critically endangered; EN = Endangered; VU = Vulnerable
- Abundance: c=Common; o=Occasional and s=Scarce

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Appendix B Avifauna Species Recorded within the Study Area

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ²³⁴⁵⁶⁷ | Relative Abundance within Study Area | | | | | | | | | | | | | |
|---------------------------|--------------------------------|--|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| Chinese Francolin | <i>Francolinus pintadeanus</i> | Common resident. Widely distributed in grassland throughout Hong Kong. | - | | | | | 1 | | | | | | | | | |
| Black-crowned Night Heron | <i>Nycticorax nycticorax</i> | Common resident and migrant. Widely distributed in Hong Kong. | Fellowes et al. (2002): LC | | | 1 | | | | | | | | | | | |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | Common resident. Widely distributed in Hong Kong. | Fellowes et al. (2002): PRC | | | 5 | | | | | | | | | | | |
| Grey Heron | <i>Ardea cinerea</i> | Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar. | Fellowes et al. (2002): PRC | | | | | | | | | | 2 | | | | |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | Common resident. Widely distributed in shrublands on hillsides throughout Hong Kong. | China Red Data Book Status: VU; Fellowes et al. (2002): (LC); Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II | | | | | 1 | | | | | | | | | |
| Black Kite | <i>Milvus migrans</i> | 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 | | | | | 2 | | | | | | | | | |
| White-breasted Waterhen | <i>Amauromis phoenicurus</i> | Common resident. Widely distributed in wetland throughout Hong Kong. | - | | | 1 | | | | | | | | | | | |
| Spotted Dove | <i>Spilopelia chinensis</i> | Abundant resident. Widely distributed in Hong Kong. | - | 2 | | 6 | 2 | | | | | | | | | | |
| Greater Coucal | <i>Centropus sinensis</i> | Common resident. Widely distributed in Hong Kong. | China Red Data Book Status: VU; List of Wild Animals under State Priority Conservation: Class II | | | 1 | | | | | | | | | | | |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ²³⁴⁵⁶⁷ | Relative Abundance within Study Area | | | | | | | | | | | | | |
|------------------------|-------------------------------|---|---------------------------------------|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| Asian Koel | <i>Eudynamys scolopacea</i> | Common resident. Widely distributed in Hong Kong. | - | | | 1 | | | | | | | | | | | |
| House Swift | <i>Apus nipalensis</i> | Abundant spring migrant and common resident. Widely distributed in Hong Kong. | - | | | 6 | | | | | | | | | 4 | | |
| Long-tailed Shrike | <i>Lanius schach</i> | Common resident. Widely distributed in open areas throughout Hong Kong. | - | 1 | | | | | | | | | | | | | |
| Black Drongo | <i>Dicrurus macrocercus</i> | Common summer visitor. Widely distributed in open area throughout Hong Kong. | - | 4 | | | | | | | | | | | | | |
| Hair-crested Drongo | <i>Dicrurus hottentottus</i> | Common migrant and winter visitor, and locally common resident. Widely distributed in wooded area throughout Hong Kong. | - | | | | | | | | | 1 | | 8 | | | |
| Red-billed Blue Magpie | <i>Urocissa erythroryncha</i> | Common resident. Widely distributed in woodland edges through Hong Kong | - | | | | 2 | | | | | | 2 | | | | |
| Large-billed Crow | <i>Corvus macrorhynchos</i> | Common resident. Widely distributed in Hong Kong | - | | | | 1 | | | | | | | | | 2 | |
| Cinereous Tit | <i>Parus cinereus</i> | Common resident. Widely distributed in Hong Kong. | - | | | | | | | | | | 2 | | | | 4 |
| Red-whiskered Bulbul | <i>Pycnonotus jocosus</i> | Abundant resident. Widely distributed in Hong Kong. | - | 50 | | 5 | 4 | | | | | | 4 | | | | 2 |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | Abundant resident. Widely distributed in Hong Kong. | - | | | 4 | | | | | | | | | | | |

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| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ²³⁴⁵⁶⁷ | Relative Abundance within Study Area | | | | | | | | | | | | | |
|-----------------------------|-----------------------------------|---|---------------------------------------|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| Yellow-bellied Prinia | <i>Prinia flaviventris</i> | Common resident. Widely distributed in Hong Kong. | - | 4 | | 2 | | | | | | | | | | | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | Common resident. Widely distributed in Hong Kong. | - | | | | | | | | | | | | | | 1 |
| Masked Laughingthrush | <i>Pterorhinus perspicillatus</i> | Abundant resident. Widely distributed in shrubland throughout Hong Kong. | - | | | 4 | | | | | | | | | | | |
| Swinhoe's White-eye | <i>Zosterops simplex</i> | Abundant resident. Widely distributed in Hong Kong. | - | | | | | | | | | | | | | | 6 |
| Black-collared Starling | <i>Gracupica nigricollis</i> | Common resident. Widely distributed in Hong Kong. | - | 2 | | 2 | | | | | | | | 2 | 80 | | |
| Oriental Magpie-Robin | <i>Copsychus saularis</i> | Abundant resident. Widely distributed in Hong Kong. | - | | | 2 | 2 | | | | | | | | | | |
| Amur Stonechat | <i>Saxicola stejnegeri</i> | Common passage migrant and winter visitor. Widely distributed in open cultivated fields throughout Hong Kong. | - | 2 | | | | | | | | | | | | | |
| Scarlet-backed Flowerpecker | <i>Dicaeum cruentatum</i> | Common resident. Widely distributed in wooded area throughout Hong Kong. | - | | | | 2 | | | | | | | | | | |
| Eurasian Tree Sparrow | <i>Passer montanus</i> | Abundant resident. Widely distributed in Hong Kong. | - | | | | 30 | | | | | | | | | | |
| Scaly-breasted Munia | <i>Lonchura punctulata</i> | Abundant resident. Widely distributed in Hong Kong. | - | | | 6 | | | | | | | 3 | | | | |
| White Wagtail | <i>Motacilla alba</i> | Resident, common passage migrant and winter visitor. Widely distributed in Hong Kong. | - | | | | 2 | | | | | | | | | | |

Remark: all wild avifauna species are protected under Cap. 170 Wild Animals Protection Ordinance in Hong Kong².

Notes:

1. AFCD (2023). AFCD Biodiversity Information Hub.
2. Cap. 170 Wild Animals Protection Ordinance.
3. Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance.
4. Convention on International Trade in Endangered Species of Wild Flora and Fauna. Appendices I, II and III.
5. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
 - For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
6. List of Wild Animals under State Priority Conservation (2021).
7. Zheng & Wang (1998). China Red Data Book of Endangered Animals: Aves.
8. Species in bold are considered of conservation importance.

Abbreviations:

- Conservation Status in Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern
- Habitat: AGR = Agricultural Land; DA = Developed Area; GS = Grassland/Shrubland; MA = Marsh; MW = Modified Watercourse; NW = Natural Watercourse; O = Orchard; PL = Plantation; PO = Pond; WA = Wasteland; WG = Wet Grassland; WL = Woodland

Appendix C Butterfly Species Recorded within the Study Area

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7} | Relative Abundance within Study Area | | | | | | | | | | | | | | |
|--------------------------|------------------------------|--|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|---|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL | |
| Formosan Swift | <i>Borbo cinnara</i> | Common. Widely distributed throughout Hong Kong. | - | 1 | | | | | | | | | | | | | | |
| Metallic Cerulean | <i>Jamides alecto</i> | Very rare. Victoria Peak, Fung Yuen, Chuen Lung, Mui Wo | - | | | 8 | | | | | | | | | | | | |
| Tailless Line Blue | <i>Prosotas dubiosa</i> | Vagrant. North Lantau Island | - | 4 | | | | | | | | | | | | | | |
| Plum Judy | <i>Abisara echerius</i> | Very common. Widely distributed throughout Hong Kong | - | 2 | | | | | | | | | | | | | | |
| Common Indian Crow | <i>Euploea core</i> | Common. Widely distributed throughout Hong Kong | - | | | | 2 | | | | | | | | | | | |
| Staff Sergeant | <i>Athyma selenophora</i> | Common. Widely distributed throughout Hong Kong | - | | | | | | | | | | | | | | | 1 |
| White-edged Blue Baron | <i>Euthalia phemius</i> | Common. Widely distributed throughout Hong Kong. | - | 1 | | | | | | | | | | | | | | |
| Red Ring Skirt | <i>Hestina assimilis</i> | Common. Widely distributed throughout Hong Kong. | - | | | | | | | | | | | | | | | 1 |
| Great Eggfly | <i>Hypolimnas bolina</i> | Common. Widely distributed throughout Hong Kong | - | | | | 1 | 1 | | | | | | | | | | |
| Common Sailer | <i>Neptis hylas</i> | Very common. Widely distributed throughout Hong Kong | - | | | | 1 | | | | | | 1 | | | | | |
| Dark-brand Bush Brown | <i>Mycalesis mineus</i> | Very common. Widely distributed throughout Hong Kong | - | | | | | | | | | | | | 2 | | | |
| Red Helen | <i>Papilio helenus</i> | Very common. Widely distributed throughout Hong Kong | - | | | | | | | | | | 2 | | | | | |
| Great Mormon | <i>Papilio memnon</i> | Very common. Widely distributed throughout Hong Kong | - | | | | 1 | | | | | | | | | | | |

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| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7} | Relative Abundance within Study Area | | | | | | | | | | | | | | |
|-------------------------|---------------------------|--|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|---|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL | |
| Common Mormon | <i>Papilio polytes</i> | Very common. Widely distributed throughout Hong Kong | - | | | 1 | 2 | | | | | | | 1 | | | 2 | |
| Spangle | <i>Papilio protenor</i> | Very common. Widely distributed throughout Hong Kong | - | | | | 1 | | | | | | | | | | | 1 |
| Lemon Emigrant | <i>Catopsilia pomona</i> | Common. Widely distributed throughout Hong Kong | - | | | | | | | | | | 4 | | | | | |
| Three-spot Grass Yellow | <i>Eurema blanda</i> | Common. Widely distributed throughout Hong Kong | - | | | | | | | | | | | | | 4 | | |
| Common Grass Yellow | <i>Eurema hecabe</i> | Very common. Widely distributed throughout Hong Kong | - | | | | | | | | | | 4 | 3 | 4 | | | |
| Great Orange Tip | <i>Hebomoia glaucippe</i> | Common. Widely distributed throughout Hong Kong | - | | | | | 1 | | | | | | | | | | |
| Yellow Orange Tip | <i>Ixias pyrene</i> | Uncommon. Widely distributed throughout Hong Kong | - | | | | | | | | | | | 1 | | | | |
| Indian Cabbage White | <i>Pieris canidia</i> | Very common. Widely distributed throughout Hong Kong | - | | | 2 | | | | | | | | | | | | |

Notes:

1. AFCD (2023). AFCD Biodiversity Information Hub.
2. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
 - For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
3. Species in bold are considered of conservation importance.

Abbreviations:

- Conservation Status in Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern
- Habitat: AGR = Agricultural Land; DA = Developed Area; GS = Grassland/Shrubland; MA = Marsh; MW = Modified Watercourse; NW = Natural Watercourse; O = Orchard; PL = Plantation; PO = Pond; WA = Wasteland; WG = Wet Grassland; WL = Woodland

Appendix D Odonate Species Recorded within the Study Area

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7} | Relative Abundance within Study Area | | | | | | | | | | | | | | |
|-----------------------|-----------------------------------|--|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|--|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL | |
| Pale-spotted Emperor | <i>Anax guttatus</i> | Common. Widely distributed in ponds and sluggish streams throughout Hong Kong. | - | | | | | | | | | | | | 1 | | | |
| Orange-tailed Sprite | <i>Ceragrion auranticum</i> | Abundant. Widely distributed in weedy ponds, marshes, abandoned fields or grasslands adjacent to waters. | - | 2 | | | | | | | | | | | | | | |
| Blue Dasher | <i>Brachydiplax chalybea</i> | Common. Widely distributed in marshes and weedy ponds throughout Hong Kong. | - | | | | | | | | | | | | 6 | | | |
| Forest Chaser | <i>Lyriothemis elegantissima</i> | Common. Frequents marshes beside woodlands. Widespread throughout Hong Kong. | - | | | 1 | | | | | | | | | | | | |
| Russet Percher | <i>Neurothemis fulvia</i> | 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 | |
| Green Skimmer | <i>Orthemis sabina sabina</i> | Abundant. Widely distributed in all wetland habitats throughout Hong Kong. | - | | | | 2 | | | | | | | | 2 | | | |
| Wandering Glider | <i>Pantala flavescens</i> | Abundant. Widely distributed all over Hong Kong. | - | 40 | | 5 | | | | | | | | | 10 | | | |
| Variegated Flutterer | <i>Rhyothemis variegata arria</i> | Common. Widely distributed in marshes, ponds and tanks throughout Hong Kong. | - | | | | 4 | | | | | | | | | | | |
| Crimson Dropwing | <i>Trithemis aurora</i> | Abundant. Found in marshes, ponds, streams, and/or even ornamental ponds in urban areas. Widely distributed throughout Hong Kong. | - | | | 1 | | | | | | | | | | | | |
| Scarlet Basker | <i>Urothemis signata</i> | Common. Common in areas with abandoned fish ponds throughout Hong Kong. | Fellowes et al. (2002): LC | | | | | | | | | | | | 3 | | | |
| Dingy Duskdarter | <i>Zyxomma petiolatum</i> | Common. Widely distributed in thick undergrowth, tree foliage and shady spots near water courses throughout Hong Kong. | - | | | | | | | | | | | | 1 | | | |
| Regal Pond Cruiser | <i>Epophthalmia elegans</i> | Common. Always patrols along the edge of large ponds with a regular path. | - | | | | | | | | | | | | 1 | | | |

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7} | Relative Abundance within Study Area | | | | | | | | | | | | | |
|--------------------|--------------------------|---|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL |
| | | Widely distributed in reservoirs and large ponds throughout Hong Kong. | | | | | | | | | | | | | | | |
| Yellow Featherlegs | <i>Copera marginipes</i> | Abundant. Widely distributed in lowland streams, ditches, and weedy margins of pond throughout Hong Kong. | - | | | | | | | | | | | | | | 12 |

Notes:

1. AFCD (2023). AFCD Biodiversity Information Hub.
2. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
 - For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
3. Reels (2019). An annotated check list of Hong Kong dragonflies and assessment of their local conservation significance.
4. Tam *et al.* (2011). The Dragonflies of Hong Kong.
5. **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern
- Habitat: AGR = Agricultural Land; DA = Developed Area; GS = Grassland/Shrubland; MA = Marsh; MW = Modified Watercourse; NW = Natural Watercourse; O = Orchard; PL = Plantation; PO = Pond; WA = Wasteland; WG = Wet Grassland; WL = Woodland

Appendix E Firefly Species Recorded within the Study Area

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong | Conservation status | Relative Abundance within Study Area | | | | | | | | | | | | | | |
|-----------------------|--------------------------|--------------------------------------|---------------------|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|--|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL | |
| Rimmed Window Firefly | <i>Pyrocoelia analis</i> | Widespread. | - | | | | | | | | | | | | 3 | | | |

Abbreviations:

- Habitat: AGR = Agricultural Land; DA = Developed Area; GS = Grassland/Shrubland; MA = Marsh; MW = Modified Watercourse; NW = Natural Watercourse; O = Orchard; PL = Plantation; PO = Pond; WA = Wasteland; WG = Wet Grassland; WL = Woodland

Appendix F Herpetofauna Species Recorded within the Study Area

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7} | Relative Abundance within Study Area | | | | | | | | | | | | |
|----------------------|---------------------------------|---|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG |
| Amphibian | | | | | | | | | | | | | | | | |
| Bowring's Gecko | <i>Hemidactylus bowringii</i> | Distributed throughout Hong Kong. | - | | | | + | | | | | | | | | |
| Chinese Gecko | <i>Gekko chinensis</i> | Widely distributed throughout Hong Kong. | - | | | | + | | | | | | | | | |
| Reptile | | | | | | | | | | | | | | | | |
| Asiatic Painted Frog | <i>Kaloula pulchra</i> | Widely distributed in Hong Kong. | - | | | | | | | | | | | | | + |
| Butler's Pigmy Frog | <i>Microhyla butleri</i> | Widely distributed in Hong Kong. | - | | | | | | | | | | | | | |
| Ornate Pigmy Frog | <i>Microhyla fissipes</i> | Widely distributed in Hong Kong. | - | | | | | | | | | | | | | |
| Marbled Pigmy Frog | <i>Microhyla pulchra</i> | Widely distributed in Hong Kong. | - | | | | | | | | | | | | | + |
| Paddy Frog | <i>Fejervarya limnocharis</i> | Widely distributed in Hong Kong. | - | | | | | | | | | | | | | |
| Brown Tree Frog | <i>Polypedates megacephalus</i> | Widely distributed throughout Hong Kong. | - | | | | | | | | | | | | | + |

Notes:

- AFCD (2023). AFCD Biodiversity Information Hub.
- Cap. 170 Wild Animals Protection Ordinance.
- Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
 - For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
- International Union of Conservation for Nature (2023). The IUCN Red List of Threatened Species. Version 2022-2.
- Jiang, Z. G., Jiang, J. P., Wang, Y. Z., Zhang, E., Zhang, Y. Y., Li, L. L., ... & Dong, L. (2016). Red list of China's vertebrates.
- List of Wild Animals under State Priority Conservation (2021).
- Zhao & Wang (1998). China Red Data Book of Endangered Animals: Amphibia and Reptilia.

Abbreviations:

- Conservation Status in Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern
- Conservation Status: CR = Critically Endangered; EN = Endangered; VU = Vulnerable
- Habitat: AGR = Agricultural Land; DA = Developed Area; GS = Grassland/Shrubland; MA = Marsh; MW = Modified Watercourse; NW = Natural Watercourse; O = Orchard; PL = Plantation; PO = Pond; WA = Wasteland; WG = Wet Grassland; WL = Woodland

Appendix G2 Bat Species Recorded within the Study Area by Acoustic Bat Detector

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ²³⁴⁵⁶⁷ |
|--------------------------|------------------------------|---|--|
| Greater Bent-winged Bat | <i>Miniopterus magnater</i> | Data deficient. | Fellowes et al. (2002): PRC; Cap. 170 |
| Himalayan Leaf-nosed Bat | <i>Hipposideros armiger</i> | Very common. Widely distributed in countryside areas throughout Hong Kong. | Fellowes et al. (2002): (LC); Cap. 170 |
| Least Pipistrelle | <i>Pipistrellus tenuis</i> | 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 |
| Chinese Noctule | <i>Nyctalus plancyi</i> | Common. Fairly widely distributed in countryside areas throughout Hong Kong. | Fellowes et al. (2002): PRC; Cap. 170 |
| Lesser Yellow Bat | <i>Scotophilus kuhlii</i> | Uncommon. Fairly widely distributed in countryside areas throughout Hong Kong. | Fellowes et al. (2002): (LC); Cap. 170 |
| Chinese Pipistrelle | <i>Hypsugo pulveratus</i> | 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 |
| Japanese Pipistrelle | <i>Pipistrellus abramus</i> | Very common. Widely distributed throughout Hong Kong. | Cap. 170 |
| Lesser Bamboo Bat | <i>Tylonycteris pachypus</i> | Very common. Fairly widely distributed in countryside areas throughout Hong Kong. | China Red Data Book Status: Rare; Fellowes et al. (2002): (LC); Cap. 170 |

Remark: all wild bat species are protected under Cap. 170 Wild Animals Protection Ordinance in Hong Kong².

Notes:

1. AFCD (2023). AFCD Biodiversity Information Hub.
2. Cap. 170 Wild Animals Protection Ordinance.
3. Wang (1999). China Red Data Book of Endangered Animals: Mammalia.
4. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong

- For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
- 5. Species in bold are considered of conservation importance.
- 6. As bats are highly mobile, and no specific habitat utilization of the recorded bats was observed, locations of bats were recorded by within the Application Site or outside the Application Site.

Abbreviations:

- Conservation Status in Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern

Appendix H Freshwater Species Recorded within the Study Area

| Common Names | Scientific Names | Rarity and Distribution in Hong Kong ¹ | Conservation status ^{2 3 4 5 6 7} | Relative Abundance within Study Area | | | | | | | | | | | | | | | |
|-----------------|--------------------------|--|--|--------------------------------------|----|--------------------------|----|----|----|----|----|----|----|----|----|----|----|--|---|
| | | | | Within Application Site | | Outside Application Site | | | | | | | | | | | | | |
| | | | | WA | WG | AGR | DA | GS | MA | MW | NW | OR | PL | PO | WA | WG | WL | | |
| Mosquito fish | <i>Gambusia affinis</i> | Introduced as a mosquito-control agent, widespread in local freshwater bodies. | - | | + | | | | | | | + | + | | | | | | + |
| Dwarf snakehead | <i>Channa gachua</i> | Probably an introduced species. Records from a few streams in North District. | | | | | | | | | | + | + | | | | | | |
| Typical Tilapia | <i>Tilapia</i> sp. | - | - | | | | | | | | | + | + | | | | | | + |
| Apple snail | <i>Ampullariidae</i> sp. | | | | + | + | | | | + | + | + | | | | | | | + |

Notes:

- AFCD (2023). AFCD Biodiversity Information Hub.
- Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
 - For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
- International Union of Conservation for Nature (2023). The IUCN Red List of Threatened Species. Version 2022-2.
- Reels (2019). An annotated check list of Hong Kong dragonflies and assessment of their local conservation significance.
- Stanton & Leven. (2016). Distribution, habitat utilisation and conservation status of the freshwater crab, *Somanniathelphusa zanklon* Ng & Dudgeon, 1992 (Crustacea: Brachyura: Gecarcinucidae) endemic to Hong Kong.
- Tam *et al.* (2011). The Dragonflies of Hong Kong.
- Species in bold are considered of conservation importance.

Abbreviations:

- Relative abundance: + = scarce, ++ = occasional, +++ = abundant
- Conservation Status in Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PGC = Potential Global Concern; PRC = Potential Regional Concern; RC = Regional Concern
- Conservation Status: EN = Endangered; VU = Vulnerable