

Appendix 4

Ecological Impact Assessment

Proposed Amendments to an Approved Scheme (Application No. A/YL-MP/344) for Comprehensive Residential Development to Include a Wetland Restoration Area at Lots 50 S.A and 77 in D.D. 101, Wo Shang Wai, Mai Po, Yuen Long

Ecological Impact Assessment

Profit Point Enterprises Limited

Revision: 0

23-June-2025

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1 INTRODUCTION

1.1 Background

- 1.1.1 The purpose of this s.16 application is to propose amendments to the previously approved scheme under application No. A/YL-MP/344, which was approved for a comprehensive residential development, including a Wetland Restoration Area (WRA), with filling and excavation of land. The application site falls within an area zoned "Other Specified Uses" annotated "Comprehensive Development to include Wetland Restoration Area" ("OU(CDWRA)") on the approved Mai Po and Fairview Park Outline Zoning Plan No. S/YL-MP/8 (the "OZP") ("Application Site"). The proposed amendment relates to the approved layout of the residential portion, with no change to the plot ratio and gross floor area. Majority of the basement car parking spaces are relocated to ground level for cost-effectiveness and ease of implementation. No change is proposed to the already completed WRA. This EcoIA is prepared in support of the subject s.16 application.

1.2 Key Relevant Amendment under Current Application

- 1.2.1 No changes are proposed at the implemented WRA and at the interface (boundary) between the residential portion and the WRA.
- 1.2.2 Proposed changes in layout of the internal road, landscaping and number of houses (not abutting the WRA) are not anticipated to have any impact on the WRA and the wetlands in the Wetland Conservation Area (WCA), and these are not discussed.
- 1.2.3 Key amendments which might have potential implication to the findings of the approved Ecological Impact Assessment (EcoIA) mainly involve those proposed at the houses immediately facing the WRA and the stepped design. These comprise:
- Detached/semi-detached houses abutting the WRA increase from 2-storey (+16.80mPD) to 3-storey (+21mPD)
 - Relocate basement car parking to ground level

2 Literature Review

2.1 Approved Environmental Impact Assessment Report (AEIAR-120/2008)

- 2.1.1 The WRA was proposed in AEIAR-120/2008 as mitigation to compensate for the loss of wetland habitats in accordance with “No-net-loss in Wetland” principle under Town Planning Board Guideline 12C (TPB PG-No. 12C). Implementation of the WRA followed the approved Wetland Restoration and Creation Scheme (WRCS). The wetland area was consolidated into a single unit and located immediately adjacent to the Wetland Conservation Area (WCA), which reduced fragmentation of wetland habitat and maximised ecological connectivity with existing wetland habitats in the WCA. The WRA also serves to buffer the WCA from potential impacts created by the residential component of the Project. **Table 1** below summarizes the Total Number of Species and Number of Species of Conservation Importance recorded during the EIA study within the Project Area (including the areas of proposed residential portion and the WRA).

Table 1 Total Number of Species and Number of Species of Conservation Importance recorded within the Project Area

No. of Species / Fauna Group	Mammals	Birds*	Amphibians	Reptiles	Butterflies	Odonates
Number of Species of Conservation Importance	2 [^]	14 (19)	0	0	1	1
Total Number of Species recorded	5	49	5	1 [#]	21	18

* Number in parentheses indicates the number of wetland-dependent or wetland-associated species

Considered to be escaped individual

[^] Not considered as species of conservation importance in AEIAR-120/2008

Mammals

- 2.1.2 A total of five mammal species were recorded within the Project Area. One bat species, Japanese Pipistrelle, which is considered to be Very Common (AFCD 2020) in Hong Kong, was recorded during night-time surveys. All bat species are protected in Hong Kong under Cap. 170; however, no bat roosts were present within the Project Area. Four small mammal species were recorded by trapping; Musk Shrew, House Mouse, Ryukyu Mouse and Brown Rat. These are common and widespread in Hong Kong, especially in anthropogenic habitats except for Ryukyu Mouse, which is assessed as Rare (AFCD 2020) due to restricted distribution in Hong Kong but has been recorded nearby from Mai Po Nature Reserve. None of them were considered as species of conservation importance in AEIAR-120/2008, based on the low occurrence and low number of individuals recorded.

Birds

- 2.1.3 A total of 49 bird species were recorded within the Project Area. Of these, 14 species are of conservation importance: Black-crowned Night Heron (0.2 mean per survey; 4 = maximum number recorded), Chinese Pond Heron (1.3; 4), Eastern Cattle Egret (1.3; 14), Grey Heron (0.1; 2), Great Egret (Y = species recorded outside the transect surveys), Little Egret (5.5; 48), Great Cormorant (0.5; 5), Black Kite (1.2; 5), Little Ringed Plover (0.1; 1), Oriental Pratincole (Y), Pacific Swift (Y), Zitting Cisticola (0.1; 1), Red-billed Starling (0.9; 15) and White-shouldered Starling (0.1; 2). Black-crowned Night Heron, Chinese Pond Heron, Eastern Cattle Egret, Great Egret and Little Egret are common in Hong Kong, with winter, migrant and breeding populations (HKBWS 2021). Grey Heron is common mainly in the Deep Bay area, with highest numbers in winter. Great Cormorant is an abundant winter visitor, mainly in the Deep Bay area. Black Kite is common and widespread in Hong Kong, with increased numbers in winter. Little Ringed Plover is common and present all year in lowland areas near water. Oriental Pratincole is a passage migrant, common in spring and uncommon in autumn, to lowland areas of New Territories. Pacific Swift is uncommon spring passage migrant and summer visitor. Zitting Cisticola is common passage migrant and winter visitor to grassy and reed/marsh areas. Red-billed Starling is an abundant winter visitor to open-country areas, mainly in the northwest New Territories. White-shouldered

Starling is a locally common passage migrant and breeding species, and uncommon winter visitor to open-country and village edge habitats mainly in the northwest New Territories.

Herpetofauna

- 2.1.4 Five amphibian species were recorded within the Project Area; Asian Common Toad, Ornate Pigmy Frog, Paddy Frog, Günther’s Frog and Brown Tree Frog. All are common and widespread in Hong Kong. None are species of conservation importance.
- 2.1.5 One reptile was recorded within the Project Area, Chinese Striped Terrapin which is not considered to be native to Hong Kong and was therefore considered to be an escape.

Butterflies

- 2.1.6 A total of 21 butterfly species were recorded within the Project Area. All are Common in Hong Kong (AFCD 2020), except Common Jay, Yellow Orange Tip and Danaid Egg-fly which are Uncommon. Only Danaid Egg-fly is of Local Concern (Fellowes et al. 2002).

Odonates

- 2.1.7 A total of 18 odonate species were recorded within the Project Area. All are common and widespread species in Hong Kong (AFCD 2020). Only Scarlet Basker is of Local Concern (Fellowes et al. 2002).

2.2 Latest 12-months EM&A Reports (December 2023 – November 2024) – Ecology

- 2.2.1 Mott MacDonald Hong Kong Ltd. (“MMHK”) has been commissioned to conduct Environmental Monitoring and Audit (EM&A) for both pre-construction and construction phases of the Proposed Comprehensive Development. A summary of EM&A requirements for ecology is presented in **Table 2** below.

Table 2 Total Number of Species and Number of Species of Conservation Importance recorded within the Project Area

Parameters	Locations	Frequencies
Birds	Within the Project Area and Assessment Area of 500m	Weekly
Dragonflies & Butterflies	Within the Project Area and Assessment Area of 500m	Once per month (Mar, Sep-Nov); Twice per month (Apr-Aug)
Herpetofauna	Within the Project Area and Assessment Area of 500m	Daytime: Once per month (Apr-Nov); Night-time: Once per month (Mar-Aug)
Water quality of WRA	WRA	In situ: Monthly Laboratory Testing: Every six months (end of wet season and end of dry season)
Site Inspection	Within the Project Area and Assessment Area of 500m	Weekly

- 2.2.2 The EM&A monitoring findings indicated that the WRA, has induced ecological gain within the Project Area). The total number of mammals, birds, amphibians, reptiles, butterflies and odonates species and those of conservation importance recorded within Assessment Area (excluding Application Site) and WRA, for the 12 months between December 2023 to November 2024 are summarised in Table 3 and Table 4 respectively below. Comparing Table 4 with Table 1, all fauna group have been recorded increase in total number of species and species of conservation importance, utilising the WRA; except mammal, which is less detectable due to the low occurrence and the trapping conducted in EIA study is not required for the EM&A monitoring. Comparing Table 4 with Table 3, higher number of species in herpetofauna, butterflies and odonates have been recorded within the WRA managed for wildlife, than the fishpond areas.

Table 3 Total Number of Species and Number of Species of Conservation Importance recorded within Assessment Area (excluding WRA) between December 2023 – November 2024

Fauna Group	Species of Conservation Importance	Total no. of species recorded
Mammals	1	1
Birds*	31 (40)	80
Amphibians	0	3
Reptiles	0	2
Butterflies	1	14
Odonates	0	18

* Number in parentheses indicates the number of species of conservation importance and/or wetland-dependent.

Table 4 Total Number of Species and Number of Species of Conservation Importance recorded within WRA between December 2023 – November 2024

Fauna Group	Species of Conservation Importance	Total no. of species recorded
Mammals	3	4
Birds*	28 (36)	75
Amphibians	1	7
Reptiles	3	6
Butterflies	3	26
Odonates	1	31

* Number in parentheses indicates the number of species of conservation importance and/or wetland-dependent.

Mammals

2.2.3 Only one mammal species was recorded within Assessment Area (excluding WRA), Japanese Pipistrelle, which is protected under Cap.170 in Hong Kong.

2.2.4 A total of four mammal species were recorded within the WRA, including Short-nosed Fruit Bat, Japanese Pipistrelle, Eurasian Wild Pig and Leopard Cat (scats). All bat species in Hong Kong are protected under Cap.170. Scats of Leopard Cat were recorded in Dec-Jan 2023 and Nov 2024.

Birds

2.2.5 A total of 80 bird species were recorded within Assessment Area (excluding WRA). Of these, 31 species are of conservation importance. Species of conservation importance recorded are listed in **Table 5** below.

2.2.6 A total of 75 bird species were recorded within the WRA. Of these, 28 species are of conservation importance. Species of conservation importance recorded are listed in **Table 5** below.

2.2.7 Comprehensive species lists are presented in **Appendix A**.

Table 5 List of bird species of conservation importance recorded between December 2023 – November 2024

Species	Conservation & Protection Status ¹	Assessment Area (excluding WRA)	WRA
Northern Shoveler	RC	✓	
Tufted Duck	LC	✓	
Greater Coucal	CSMPS(II)	✓	✓
Little Grebe	LC	✓	✓
Black-winged Stilt	RC	✓	✓
Little Ringed Plover	(LC)	✓	
Greater Painted-snipe	LC		✓
Pintail/Swinhoe's Snipe	LC for Swinhoe's Snipe		✓
Marsh Sandpiper	RC	✓	
Wood Sandpiper	LC	✓	✓

Species	Conservation & Protection Status ¹	Assessment Area (excluding WRA)	WRA
Spotted Redshank	RC	✓	
Common Greenshank	RC		✓
Great Cormorant	PRC	✓	✓
Yellow Bittern	(LC)	✓	✓
Black-crowned Night Heron	(LC)	✓	✓
Chinese Pond Heron	PRC (RC)	✓	✓
Eastern Cattle Egret	(LC)	✓	✓
Grey Heron	PRC	✓	✓
Purple Heron	RC		✓
Great Egret	PRC (RC)	✓	✓
Intermediate Egret	RC	✓	✓
Little Egret	PRC (RC)	✓	✓
Black-winged Kite	LC; CSMPS(II); CITES(II); Cap.586	✓	✓
Crested Goshawk	CITES(II); CSMPS(II); Cap.586	✓	✓
Besra	CSMPS(II); CITES(II); Cap.586	✓	✓
Eastern Marsh Harrier	LC; CSMPS(II); CITES(II); Cap.586		✓
Black Kite	(RC); CSMPS(II); CITES(II); Cap.586	✓	✓
Eastern Buzzard	CSMPS(II); CITES(II); Cap.586	✓	✓
White-throated Kingfisher	(LC); CSMPS(II)	✓	✓
Pied Kingfisher	(LC)	✓	✓
Common Kestrel	CSMPS(II); CITES(II); Cap.586		✓
Peregrine Falcon	(LC); CSMPS(II); CITES(I); Cap.586	✓	
Long-tailed Shrike	LC	✓	
Collared Crow	LC; IUCN(VU)	✓	✓
Red-billed Starling	GC	✓	
White-cheeked Starling	PRC	✓	
White-shouldered Starling	(LC)	✓	
Siberian Rubythroat	CSMPS(II)		✓

Note:

- Wetland-dependent species in bold.
- Conservation status refers to Fellowes *et al.* (2002), IUCN (2020), RLCV (2016), CITES (2020), CSMPS (CSIS, 2019), Cap. 170 and Cap. 586
 - Conservation status by Fellowes *et al.* (2002): LC = Local Concern; PRC = Potential Regional Concern; RC = Regional Concern; PGC = Potential Global Concern; GC = Global Concern. Letters in parentheses indicate assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
 - Conservation status by IUCN (2020): VU = Vulnerable; EN = Endangered
 - Conservation status by Red List of China's Vertebrates (Jiang *et al.* 2016): NT = Near Threatened; EN = Endangered
 - Protection status by CITES (2020): I = Listed in CITES Appendix I; II = Listed in CITES Appendix II
 - Protection status by CSMPS (CSIS, 2019): II = Class II Protected Species in China
 - All wild birds in Hong Kong are protected under Cap. 170 Wild Animals Protection Ordinance
 - Cap. 586 = Protection of Endangered Species of Animals and Plants Ordinance

Herpetofauna

- 2.2.8 A total of 3 amphibian species and 2 reptile species were recorded within the Assessment Area (excluding WRA). None of these are species of conservation importance.
- 2.2.9 A total of 7 amphibian species and 6 reptile species were recorded within the WRA. Of these, 1 amphibian species and 3 reptile species are of conservation importance. Chinese Bullfrog is of Potential Regional Concern (Fellowes *et al.* 2002). Four-clawed Gecko is considered of Vulnerable (Jiang *et al.* 2016). Common Rat Snake and Many-banded Krait are considered of Endangered and Vulnerable (Jiang *et al.* 2016) respectively.
- 2.2.10 Comprehensive species lists are presented in **Appendix A**.

Butterflies

- 2.2.11 A total of 18 butterfly species were recorded within the Assessment Area (excluding WRA). None of these are species of conservation importance.
- 2.2.12 A total of 31 butterfly species were recorded within the WRA. Of these, 2 species are of conservation importance. Common Awl is of Local Concern (Fellowes *et al.* 2002) and Rare in Hong Kong (Pun 2024). Paintbrush Swift is considered as Rare in Hong Kong (Pun 2024).
- 2.2.13 Comprehensive species lists are presented in **Appendix A**.

Odonates

- 2.2.14 A total of 14 odonate species were recorded within the Assessment Area (excluding WRA). One species of conservation importance was recorded, Coastal Glider, which is of Local Concern (Fellowes *et al.* 2002).
- 2.2.15 A total of 26 odonate species were recorded within the WRA. Three species of conservation importance were recorded, Blue Sprite, Ruby Darter and Scarlet Basker, which are of Local Concern (Fellowes *et al.* 2002).
- 2.2.16 Comprehensive species lists are presented in **Appendix A**.

3 Survey Findings

3.1.1 To provide an update regarding the distribution of ardeid flightlines over the Assessment Area, wet season flightline surveys were conducted monthly between April 2024 and October 2024, dry season flightline surveys were conducted monthly between November 2024 and March 2025. The surveys started half an hour before sunrise to cover the period of maximum activity and lasted for 120 minutes. During the surveys, the species, number of individuals, direction of flightline, relative height above ground (this was measured relative to a 10m tall noise barrier on site, with height recorded in 10m increments such that 1x = 10m, 2x = 20m etc.) and time of observation were recorded.

Wet Season Flightline Survey

3.1.2 Across the seven surveys in the wet season, a total of 1041 individuals of six species (Chinese Pond Heron, Eastern Cattle Egret, Grey Heron, Great Egret, Little Egret and Great Cormorant) were recorded within a total of 14 survey hours. These were subsequently ascribed to individual flightlines over or near the Application Site. The flight paths that were used by very small proportion of the birds were not considered to be significant and were excluded from further analysis.

3.1.3 9 flightlines were identified from the analysis (see **Figure 1**). Only one flightline (Flightline No. 5) was defined as major flightline (defined here as being used by over 15% of total individuals). The other 8 flightlines were defined as minor flightlines. Flightline No.5, located to the west of the Application Site, had the highest usage with 400 individual birds (38.42% of total individuals).

Table 6 Summary of wet season flightline data showing number of birds using individual flightlines

Flightline No.	Total no. of Birds	Mean no. of birds per survey hour	%	Mean no. of birds by species per survey hour #					
				CPH	CE	GH	GE	LE	GC
1	155	11.07	14.89	2.36	0.29	0.07	2.71	5.64	
2	123	8.79	11.82	2.50	0.21	0.07	0.14	5.50	0.36
3	105	7.50	10.09	0.64	0.29	0.07	0.57	2.21	3.71
4	63	4.50	6.05	0.29			0.07	0.57	3.57
5*	400	28.57	38.42			0.07	3.36	0.07	25.07
6	65	4.64	6.24	0.36			1.93	1.86	0.50
7	34	2.43	3.27	0.07		0.07	0.64	1.36	0.29
8	19	1.36	1.83	0.57			0.71	0.07	
9	77	5.5	7.40	0.79		0.07	0.14	0.93	3.57
Grand Total	1041	74.36	100%	7.57	0.79	0.43	10.29	18.21	37.07

Notes:

(1) * Indicates the major flightlines.

(2) # CPH = Chinese Pond Heron; CE = Eastern Cattle Egret; GH = Grey Heron; GE = Great Egret; LE = Little Egret; GC = Great Cormorant.

Table 7 Summary of wet season flightline data showing number and percentage of birds using individual flightlines in each height category

Flightline No.	Relative Height						Grand Total	Overall % (Flightline usage)
	0 – 1X	≥1-2X	≥2-3X	≥3-4X	≥4-5X	≥5-6X		
	Approximate Height							
	0-10m	≥10-20m	≥20-30m	≥30-40m	≥40-50m	≥50-60m		
1		71	65	13	6		155	14.89%
2		65	34	17	7		123	11.82%
3		16	36	47	3	3	105	10.09%
4		1	3	54	5		63	6.05%
5*		14	295	91			400	38.42%
6		30	32	3			65	6.24%
7		14	12	5	1	2	34	3.27%
8		7	2	10			19	1.83%

Flightline No.	Relative Height						Grand Total	Overall % (Flightline usage)
	0 – 1X	≥1-2X	≥2-3X	≥3-4X	≥4-5X	≥5-6X		
	Approximate Height							
	0-10m	≥10-20m	≥20-30m	≥30-40m	≥40-50m	≥50-60m		
9		7	68	1	1		77	7.40%
Grand Total		225	547	241	10	23	1041	100.00%
Overall % (Height)	0.00%	21.61%	52.55%	23.15%	2.21%	0.48%	100.00%	N/A

Notes:

- (1) * indicates the major flightlines.
- (2) Relative Height 1X = 10m temporary noise barrier along the perimeter of Application Site.

3.1.4 Major flightline comprised birds travelled across wetland habitats adjacent to but outside the Application Site. Flightline No.3 was the only minor flightline across the residential portion of the Application Site (see **Figure 1**). Only approximately 1 bird individuals were recorded utilizing the Flightline No. 3 at height of 20m or below. The number of potentially impacted individuals are anticipated to be insignificant as the surveys have been conducted during the peak activity of the day.

Dry Season Flightline Survey

3.1.5 Across the three surveys in the dry season, a total of 1359 individuals of six species (Black-faced Spoonbill, Chinese Pond Heron, Grey Heron, Great Egret, Little Egret and Great Cormorant) were recorded within a total of 6 survey hours. These were subsequently ascribed to individual flightlines over or near the Application Site. The flight paths that were used by very small proportion of the birds were not considered to be significant and were excluded from further analysis.

3.1.6 7 flightlines were identified from the analysis (see **Figure 2**). Two flightlines (Flightline No. 1 and 4) were defined as major flightlines (defined here as being used by over 15% of total individuals). The other 5 flightlines were defined as minor flightlines. Flightline No.4 located to the north of the Application Site, had the highest usage with 728 individual birds (53.69% of total individuals).

Table 8 Summary of dry season flightline data showing number of birds using individual flightlines

Flightline No.	Total no. of Birds	Mean no. of birds per survey hour	%	Mean no. of birds by species per survey hour #					
				BFS	CPH	GH	GE	LE	GC
1*	219	36.50	16.15	0.50		0.33	3.00	0.33	32.33
2	111	18.50	8.19					0.33	18.17
3	56	9.33	4.13					0.50	8.83
4*	728	121.33	53.69	0.50		0.33	10.33	12.67	97.50
5	21	3.50	1.55				0.17	2.17	1.17
6	85	14.17	6.27				1.17	0.33	12.67
7	136	22.67	10.03	2.67	0.50	0.33	0.67	2.50	16.00
Grand Total	1359	96.86	100%	3.67	0.50	1.00	15.33	18.83	186.67

Notes:

- (1) * Indicates the major flightlines.
- (2) # BFS = Black-faced Spoonbill; CPH = Chinese Pond Heron; GH = Grey Heron; GE = Great Egret; LE = Little Egret; GC = Great Cormorant.

Table 9 Summary of dry season flightline data showing number and percentage of birds using individual flightlines in each height category

Flightline No.	Relative Height						Grand Total	Overall % (Flightline usage)
	0 – 1X	≥1-2X	≥2-3X	≥3-4X	≥4-5X	≥5-6X		
	Approximate Height							
	0- 10m	≥10- 20m	≥20- 30m	≥30- 40m	≥40- 50m	≥50- 60m		
1*		73	141	5			219	16.15

Flightline No.	Relative Height						Grand Total	Overall % (Flightline usage)
	0 – 1X	≥1-2X	≥2-3X	≥3-4X	≥4-5X	≥5-6X		
	Approximate Height							
	0-10m	≥10-20m	≥20-30m	≥30-40m	≥40-50m	≥50-60m		
2			1	84	26		111	8.19
3		14	5	37			56	4.13
4*		177	534	17			728	53.69
5		9	12				21	1.55
6		56	23	6			85	6.27
7		83	53				136	10.03
Grand Total		412	769	149	26		1356	100.00
Overall % (Height)	0.00%	30.38%	56.71%	10.99%	1.92%	0.00%	100.00%	N/A

Notes:

(1) * indicates the major flightline.

(2) Relative Height 1X = 10m temporary noise barrier along the perimeter of Application Site.

3.1.7

Major flightlines comprised birds travelled across wetland habitats adjacent to but outside the Application Site. Flightline No. 2 was the only minor flightline across the residential portion of the Application Site (see **Figure 2**). None of the individuals utilizing the Flightline No. 2 was recorded at height of 20m or below. The number of potentially impacted individuals are anticipated to be insignificant as the surveys have been conducted during the peak activity of the day.

4 POTENTIAL ECOLOGICAL IMPACTS

- 4.1.1 The proposed changes to the project involve only the residential portion of the Project Area. However, since the WRA is designed as a mitigation measure for three target bird species, increased disturbance to the WRA which renders the site less suitable for these species could have a significant adverse impact to the WRA. Therefore, any proposed changes at the interface or to predicted disturbance levels with the WRA are evaluated.

4.2 Potential Direct Impact to the WRA

- 4.2.1 Since there are no changes proposed to the WRA or at the boundary between the residential area and WRA, no additional direct impact to the ecological function and area of the WRA is anticipated.

4.3 Potential Direct Impact to Fauna Species of Conservation Importance

- 4.3.1 Since no changes are proposed to the WRA, no additional impact is anticipated to the fauna species of conservation importance within the WRA.
- 4.3.2 The WRA has also been implemented as buffer area between the residential development and the WCA; no additional direct impact is anticipated to the fauna species of conservation importance in the WCA.

4.4 Potential Indirect Impact to the WRA

- 4.4.1 An increase in building height may result in higher visibility of human activities at the boundary and within the WRA. According to the approved EcolA, all of the three target bird species are considered to be species which are prone to human disturbance. Potential indirect impact to the WRA might result from human activities at the residential area of the site are primarily noise and visual disturbance.
- 4.4.2 As stated in the submission of planning application No. A/YL-MP/344 (approved in February 2024), according to the approved Wetland Restoration and Creation Scheme (WRCS), a 2m high solid wall with buffer tree/shrub planting on the WRA-side, will delineate the WRA and the residential area. Same as the approved S16 scheme, the buffer planting between the residential portion and the WRA, will be 2.5m within the WRA and 2.5m within the residential portion. This will provide screening effect, avoiding disturbance to the WRA, as well as the WCA fishponds to the north.
- 4.4.3 The total number of residential units abutting the WRA remains unchanged as 37 in the revised MLP. Increased from 2-storey houses in the approved S16 scheme (A/YL-MP/344), to 3-storey detached/semi-detached houses are proposed in this location. All measures to screen the WRA from the residential proportion of the project included in the approved EIA are retained. Orientation of these 3-storeys abutting the WRA, is designed such that all will face towards the residential area, eliminating the need for public access next to the WRA. As human activity will be greatest at the front of the buildings, the potential sources of impacts to waterbirds (including noise and night-time lighting) will be concentrated away from the WRA and impacts to waterbirds will be minimised.
- 4.4.4 With the implementation of proposed mitigation measures above, no significant adverse ecological impacts are anticipated due to the proposed amendments.

4.5 Potential Indirect Impact to Fauna Species of Conservation Importance

- 4.5.1 Since no changes are proposed to the WRA, no additional disturbance impact is anticipated to the fauna species of conservation importance in the WCA.

- 4.5.2 A 3m site hoarding will be placed between the WRA and the construction works for residential areas so that a visual barrier is maintained between the construction work and wetland habitats. Other methods to reduce sources of disturbance will be employed, including good site practice within the construction site, selection of quiet equipment to minimise noise disturbance, minimisation of night-time lighting and location of lighting away from the wetlands, and prevention of feral dogs from accessing the construction site. Implementation of the ecological mitigation measures stated, will continue to be checked as part of the EM&A procedures during the construction period. No additional disturbance impact is anticipated to the fauna species of conservation importance in the WRA.

4.6 Potential Impact to Bird Flightline

- 4.6.1 During the wet season flightline surveys (**Table 6, Table 7 & Figure 1**), approximately 8 bird individuals per survey hour were recorded flying above the Application Site (flightline no. 3). The number of bird individuals utilising this flightline is very minor when compared to the Deep Bay population. Approximately one 1 bird individual per survey hour was recorded flying across the Application Site at 20m or below.
- 4.6.2 During the dry season flightline surveys (**Table 8, Table 9 & Figure 2**), approximately 18 bird individuals (mainly Great Cormorant) per survey hour were recorded flying above the Application Site (flightline no.2). None of the individuals utilizing the Flightline No. 2 was recorded at height of 20m or below. Impedance of flightlines is therefore not expected.
- 4.6.3 Therefore, potential impacts to flightlines as a whole are not considered to be significant.

4.7 Potential Bird Collision Impact with Buildings

- 4.7.1 With reference to the revised MLP, the increase in building height from 2-storey to 3-storey, is similar to the existing residential areas, i.e. Royal Springs and Palm Springs.
- 4.7.2 The mitigation measures to avoid bird collisions (i.e. visually unobtrusive and non-reflective building materials etc.) in the approved EcolA apply here. Therefore, the potential impact of bird collision with any buildings is not anticipated.

4.8 Potential Impact to the WCA and SPS WCP

- 4.8.1 No change is proposed to the design or operation of the WRA with reference to the Wetland Restoration Plan (WPR) in the approved EIA. Access will only be required to facilitate monitoring and management. Monitoring activities will be undertaken at an appropriate time of the day to minimize the disturbance to bird activity. Routine management works (e.g. grass-cutting) will be conducted on a monthly basis to avoid the need for large scale and/or intensive vegetation management. The WRA will be secured to prevent unauthorised human access and exclude dogs from the site as far as possible. The WRA will continue to function as a buffer between the residential development and the fishponds in the WCA.
- 4.8.2 The mitigation measures to avoid night-time lighting and glare in the approved EcolA apply here. Hence, no additional impact is predicted to the wetland habitats in the WCA.
- 4.8.3 The proposed SPS WCP within the 500m AA, have already been assessed, as these wetland habitats are all in the WCA. The first phase of SPS WCP is suggested to start with fishponds in the northern part, which is close to Lok Ma Chau, approximately 2km from this Project Site. The Government expects to commence the construction works of the first phase in 2026/2027 the earliest for completion in 2031. The current scheme in the subject planning application is expected to be completed by 2028. Cumulative impacts from construction works of SPS WCP and construction of this Project, are therefore not anticipated. During operation, the disturbance impact is anticipated to be minimal while the wildlife utilisation is expected to increase with enhancement in habitat quality.

5

CONCLUSION

- 5.1.1 Since the proposed amendments relate only to the layout of residential development and design of house units, no major ecological impact is expected to the implemented WRA and wetland habitats in the WCA. The changes in the proposed scheme are only on the residential portion. Those 2-storey houses abutting the WRA in the approved S16 scheme (A/YL-MP/344), are proposed to increase to 3-storey detached/semi-detached houses. The basement car parking in the approved S16 scheme, is proposed to be relocated at ground level. The buffer planting between the implemented WRA and the residential area will be completed prior to the operational phase of the Project.
- 5.1.2 No additional impact is anticipated due to the relocation of basement car parking space to ground level.
- 5.1.3 No major flightlines in latest surveys is over the residential portion of the proposed development. Only one minor flightline is recorded over the residential portion. No impedance of flightline is expected. No additional flightline impact is predicted as the increase in building height is minimal.

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Appendix

Appendix A

Fauna Species recorded in EM&A reports between December 2023 – November 2024

All survey findings summarised in Appendix A are retrieved from EM&A reports by Mott MacDonald Hong Kong Ltd.

Table A1 Mammal Species Recorded within Survey Area (excluding WRA)

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Japanese Pipistrelle	<i>Pipistrellus abraums</i>	Cap. 170	Widely distributed throughout Hong Kong.
No. of species of conservation importance			1
Total no. of species recorded			1

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China’s Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - Cap. 170 = Wild Animals Protection Ordinance.
- Distribution and rarity follow the data of HKBIH (AFCD, 2024).

Table A2 Mammal Species Recorded within WRA

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Short-nosed Fruit Bat	<i>Cynopterus sphinx</i>	RLCV (NT); Cap. 170	Very widely distributed in urban and countryside areas throughout Hong Kong.
Japanese Pipistrelle	<i>Pipistrellus abraums</i>	Cap. 170	Widely distributed throughout Hong Kong.
Leopard Cat	<i>Prionailurus bengalensis</i>	RLCV (VU); CSMPS (I); CITES (II); Cap. 170; Cap. 586	Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.
Eurasian Wild Pig	<i>Sus scrofa</i>	-	Very widely distributed in countryside areas throughout Hong Kong.
No. of species of conservation importance			3
Total no. of species recorded			4

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China’s Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - Conservation status by Red List of China’s Vertebrates (RLCV) (Jiang *et al.*, 2016): NT = Near-threatened; VU = Vulnerable.
 - Protection status by CITES (2024): II = Listed in Appendix II of CITES.
 - Protection status by CSMPS (CSIS, 2019): I = Class I Protected Species in China.
 - Cap. 170 = Wild Animals Protection Ordinance.
 - Cap. 586 = Protection of Endangered Species of Animals and Plants Ordinance.
- Distribution and rarity follow the data of HKBIH (AFCD, 2024).

Table A3 Bird Species Recorded within Survey Area (excluding WRA)

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Northern Shoveler	<i>Spatula clypeata</i>	RC	Abundant winter visitor to the intertidal areas of Deep Bay typically present October to April.
Tufted Duck	<i>Aythya fuligula</i>	LC	Abundant winter visitor.
House Swift	<i>Apus nipalensis</i>	-	Locally abundant resident and passage migrant, mainly in spring. Much lower numbers now occur on migration compared with the 1980s and 1990s.
Greater Coucal	<i>Centropus sinensis</i>	CSMPS(II)	Widespread and common resident typically present in mangroves and shrub dominated closed and open-canopy habitats, usually in lowland areas.
Asian Koel	<i>Eudynamys scolopaceus</i>	-	Very common resident, with increased numbers in autumn suggesting the presence of passage migrants.
Large Hawk-cuckoo	<i>Hierococcyx sparverioides</i>	-	Common summer visitor.
Indian Cuckoo	<i>Cuculus Micropterus</i>	-	Breeding summer visitor, which is locally common but less widespread than in the past.
Eurasian Collared Dove	<i>Streptopelia decaocto</i>	-	A locally common breeding resident in the northwest New Territories with scattered records elsewhere. First recorded in 1999 and placed on Category IIB in 2007, it is slowly increasing in numbers and range.
Red Turtle Dove	<i>Streptopelia tranquebarica</i>	-	A common passage migrant, especially in autumn, and scarce winter visitor, mainly to the Deep Bay area, with occasional summer records. Numbers appear to have increased in recent years and summer records have become more frequent, but there is no evidence that breeding has occurred.
Spotted Dove	<i>Spilopelia chinensis</i>	-	Common and conspicuous resident in all anthropogenic habitats.
Eastern Water Rail	<i>Rallus indicus</i>	-	Scarce winter visitor to freshwater or brackish marsh.
Common Moorhen	<i>Gallinula chloropus</i>	-	Scarce to uncommon winter visitor, scarce at other times, in vegetated wetland habitats of the northern New Territories, though appears to be in decline due to urbanisation and more intensive management of commercial fishponds.
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	-	Common resident in a variety of freshwater and brackish wetland habitats, though numbers are declining probably due to urbanisation of the New Territories.
Little Grebe	<i>Tachybaptus ruficollis</i>	LC	Common in open freshwater wetlands in the northwest New Territories, though declining in marginal areas probably due to increased human disturbance and draining of wetlands.
Black-winged Stilt	<i>Himantopus Himantopus</i>	RC	Common to abundant in freshwater marsh, brackish Gei Wai and commercial fishponds. Has increased greatly since winter 2005/06 and small numbers now breed in most years.
Little Ringed Plover	<i>Charadrius dubius</i>	(LC)	Present all year. Primarily an autumn passage migrant and winter visitor to fresh and brackish water wetlands but breeds in small numbers in ephemeral freshwater wetland habitat.
Common Snipe	<i>Gallinago gallinago</i>	-	Common passage migrant and winter visitor to vegetated freshwater wetlands, most numerous in autumn.
Common Sandpiper	<i>Actitis hypoleucos</i>	-	Scarce passage migrant, slightly more numerous in spring, and rare summer visitor; much declined. Occurs in vegetated freshwater wetlands.
Green Sandpiper	<i>Tringa ochropus</i>	-	Uncommon passage migrant and winter visitor, rare in summer; occurs in a wide variety of freshwater wetlands.
Marsh Sandpiper	<i>Tringa stagnatilis</i>	RC	Scarce passage migrant, slightly more numerous in spring, and rare summer visitor; much declined. Occurs in vegetated freshwater wetlands.
Wood Sandpiper	<i>Tringa glareola</i>	LC	Common migrant and winter visitor to freshwater wetlands, with some evidence of a decline in numbers.
Spotted Redshank	<i>Tringa erythropus</i>	RC	Scarce passage migrant, slightly more numerous in spring, and rare summer visitor; much declined. Occurs in vegetated freshwater wetlands.

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Whiskered Tern	<i>Chlidonias hybrida</i>	-	Common passage migrant, scarce in winter; occurs mainly in fishpond and freshwater wetland areas, but also in inshore and occasionally, offshore waters.
White-winged Tern	<i>Chlidonias leucopterus</i>	-	Passage migrant, common in spring and scarce in autumn; mostly seen over fishponds or freshwater marsh in the Deep Bay area but also occasionally in coastal waters. Numbers have possibly declined since the 1990s.
Great Cormorant	<i>Phalacrocorax carbo</i>	PRC	Abundant winter visitor to Deep Bay area and both inshore and offshore waters.
Yellow Bittern	<i>Ixobrychus sinensis</i>	(LC)	Common summer visitor and passage migrant to wetland areas primarily in the Deep Bay area, scarce in winter. Numbers of breeding birds and passage migrants have substantially decreased.
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	(LC)	Abundant passage migrant and winter visitor and uncommon breeding species. Occurs in variety of wetland habitats throughout Hong Kong.
Chinese Pond Heron	<i>Ardeola bacchus</i>	PRC (RC)	Common at a variety of freshwater and brackish wetlands across Hong Kong throughout the year; both migratory and resident populations occur.
Eastern Cattle Egret	<i>Bubulcus ibis</i>	(LC)	Present all year in vegetated fresh and brackish water wetland areas; highest numbers in the wet season, after breeding and during autumn migration.
Grey Heron	<i>Ardea cinerea</i>	PRC	Abundant winter visitor; scarce in summer. Has bred. Frequents wetlands throughout Hong Kong but concentrated in Deep Bay area.
Great Egret	<i>Ardea alba</i>	PRC (RC)	Present all year in larger and more open brackish and freshwater wetlands. Most numerous in late autumn and least in April. Migrants pass through mainly in autumn, and a large breeding population has established in Deep Bay in recent years.
Intermediate Egret	<i>Ardea intermedia</i>	RC	Common on passage but scarce at other times of year mainly in freshwater wetland areas. Appears to have increased in numbers over past 60 years.
Little Egret	<i>Egretta garzetta</i>	PRC (RC)	Present all year in a wide variety of fresh and non-freshwater wetland habitats. An influx of birds occurs in the winter months.
Black-winged Kite	<i>Elanus caeruleus</i>	LC; CSMPS(II); CITES(II); Cap.586	Common passage migrant in autumn, scarce at other times; occurs in open country habitats mainly in the northwest New Territories.
Crester Goshawk	<i>Accipiter trivirgatus</i>	CITES(II); CSMPS(II); Cap.586	Common resident in forest areas, but also hunts in open country.
Besra	<i>Accipiter virgatus</i>	CSMPS(II); CITES(II); Cap.586	Present all year. Numbers highest in autumn when passage migrants occur in diverse wooded areas and lowest in summer when it breeds in closed-canopy shrubland.
Black Kite	<i>Milvus migrans</i>	(RC); CSMPS(II); CITES(II); Cap.586	Present all year throughout Hong Kong, numbers lowest in summer and highest during autumn migration.
Eastern Buzzard	<i>Buteo japonicus</i>	CSMPS(II); CITES(II); Cap.586	Common autumn passage migrant and winter visitor, scarce in spring. Occurs in widespread areas of Hong Kong in most non-urban habitats.
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	(LC); CSMPS(II)	Present all year with numbers highest in the second half. Much declined, particularly in the breeding season. Occurs mainly in Deep Bay wetlands in the winter, but in mixed shrubland and farmland habitats in the breeding season.
Common Kingfisher	<i>Alcedo atthis</i>	-	Common in autumn and winter, scarce in spring and summer; frequents a wide variety of lowland, largely freshwater wetlands, though also forages at the coast. The migrant population is probably much declined.
Pied Kingfisher	<i>Ceryle rudis</i>	(LC)	Locally uncommon resident, mainly in freshwater and brackish wetland. In decline.

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Peregrine Falcon	<i>Falco peregrinus</i>	(LC); CSMPS(II); CITES(I); Cap.586	Present all year, with the resident subspecies peregrinator breeding and birds from northerly breeding populations present in winter.
Long-tailed Shrike	<i>Lanius schach</i>	LC	Formerly a widespread and fairly common breeding species with occasional winter records. Last proven to breed in 2003 and now a scarce passage migrant and rare winter visitor.
Black-naped Oriole	<i>Oriolus chinensis</i>	-	Occurs year-round in open broadleaf woodland or forest-edge areas, most abundant during autumn passage.
Hair-crested Drongo	<i>Dicrurus hottentottus</i>	-	Common summer visitor, larger numbers on passage especially autumn, and regular in winter in low numbers. Occurs in open country areas with scattered trees or artificial perches.
Black Drongo	<i>Dicrurus macrocercus</i>	-	Common breeding resident in open-canopy shrubland and open-country with sufficient perches and nest sites.
Azure-winged Magpie	<i>Cyanopica cyanus</i>	-	Locally common breeding resident in the Deep Bay area centred around Mai Po.
Collared Crow	<i>Corvus torquatus</i>	LC; IUCN(VU)	Locally common resident.
Large-billed Crow	<i>Corvus macrorhynchos</i>	-	Largely resident, occurs throughout Hong Kong.
Japanese Tit	<i>Parus minor</i>	-	Abundant resident in diverse wooded and lightly-wooded habitats.
Chinese Bulbul	<i>Pycnonotus sinensis</i>	-	Abundant resident in nearly all habitats; HK's most widespread bird. Also occurs as a passage migrant and winter visitor.
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	-	Abundant or common resident in nearly all habitats; Hong Kong's second most widespread bird.
Barn Swallow	<i>Hirundo rustica</i>	-	Widespread and common.
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	-	Uncommon to common winter visitor and passage migrant to wooded areas.
Dusky Warbler	<i>Phylloscopus fusccatus</i>	-	Common passage migrant and winter visitor to open country areas with shrubs.
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	-	Common resident in grassland, reed marsh and rank or herbaceous vegetation, and thus highest densities occur in the northwest New Territories.
Plain Prinia	<i>Prinia inornate</i>	-	Locally common resident in grassy habitat mainly in the northwest New Territories.
Common Tailorbird	<i>Orthotomus sutorius</i>	-	Common widespread resident in diverse habitats of forest, shrubby grassland and landscaped urban areas.
Swinhoe's White-eye	<i>Zosterops simplex</i>	-	Widespread abundant resident.
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	-	A common resident of anthropogenic and disturbed habitats throughout Hong Kong.
Crested Myna	<i>Acridotheres cristatellus</i>	-	Abundant and widespread resident in diverse lowland habitats.
Common Myna	<i>Acridotheres tristis</i>	-	Locally common resident population considered to derive from ex-captive birds.
Red-billed Starling	<i>Spodiopsar sericeus</i>	GC	Abundant winter visitor to open country areas though the range appears to be reducing. A few breeding records in village houses and an urban park.
White-cheeked Starling	<i>Spodiopsar cineraceus</i>	PRC	Locally common but declining winter visitor, with recent breeding records.
Black-collared Starling	<i>Gracupica nigricollis</i>	-	Common, widespread resident of lowland open-country , village and urban habitats.
White-shouldered Starling	<i>Sturnia sinensis</i>	(LC)	Locally common passage migrant and breeding species and an uncommon winter visitor to open country habitat mainly in the northwest New Territories.
Chinese Blackbird	<i>Turdus mandarinus</i>	-	Common migrant and winter visitor, scarce but increasing breeding species in northwest New Territories.
Grey-backed Thrush	<i>Turdus hortulorum</i>	-	Common winter visitor and uncommon passage migrant to diverse wooded areas.
Oriental Magpie Robin	<i>Copsychus saularis</i>	-	Abundant, widespread resident over a wide range of habitats.
Red-throated Flycatcher	<i>Ficedula albicilla</i>	-	Common passage migrant and winter visitor to open country or lightly-wooded habitats.

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Daurian Redstart	<i>Phoenicurus aureoreus</i>	-	Common winter visitor to lightly wooded areas.
Amur Stonechat	<i>Saxicola stejnegeri</i>	-	Common passage migrant and winter visitor to open country areas.
Eurasian Tree Sparrow	<i>Passer montanus</i>	-	An abundant resident, commensal with humans and found in all lowland anthropogenic habitats, especially in active farmland, around fishponds and in city parks.
Scaly-breasted Munia	<i>Lonchura punctulate</i>	-	Locally common resident in open country grassland, farmland, wetland and waste ground. Largely restricted to the lowland northern New Territories.
White-rumped Munia	<i>Lonchura striata</i>	-	Common in lightly wooded urban fringe and village edge habitats, largely resident but aggregations occur in seeding grassland and rice fields.
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	-	Common passage migrant and winter visitor.
White Wagtail	<i>Motacilla alba</i>	-	Common passage migrant and winter visitor
Olive-backed Pipit	<i>Anthus hodgsoni</i>	-	Common winter visitor and passage migrant to wooded, semi-wooded and open-country habitats with wooded areas nearby.
Little Bunting	<i>Emberiza pusilla</i>	-	Uncommon from November to April with weak passage in autumn and spring.
Black-faced Bunting	<i>Emberiza spodocephala</i>	-	Common passage migrant and winter visitor to a diverse range of vegetated often damp open-country areas. Generally, the commonest and most widespread bunting in Hong Kong. Numbers have declined however, especially in spring.
No. of species of conservation importance			31
No. of species of conservation importance and/or wetland-dependent			40
Total no. of species recorded			80

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - Conservation status by Fellowes *et al.* (2002): GC = Global Concern; LC = Local Concern; PRC = Potential Regional Concern; RC = Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
 - Conservation status by IUCN (2024): VU = Vulnerable.
 - Protection status by CITES (2024): I = Listed in Appendix I of CITES; II = Listed in Appendix II of CITES.
 - Protection status by CSMPS (CSIS, 2019): II = Class II Protected Species in China.
 - Cap. 586 = Protection of Endangered Species of Animals and Plants Ordinance.
- Status in Hong Kong follows the data of the latest version of The Avifauna of Hong Kong (HKBWS, 2024).
- Species considered as of wetland-dependent in this study are indicated in bold type.

Table A4 Bird Species Recorded within WRA

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Savanna Nightjar	<i>Caprimulgus affinis</i>	-	Locally common resident in grassland and open country, with some seasonal movements.
Greater Coucal	<i>Centropus sinensis</i>	CSMPS(II)	Widespread and common resident typically present in mangroves and shrub dominated closed and open-canopy habitats, usually in lowland areas.
Asian Koel	<i>Eudynamis scolopaceus</i>	-	Very common resident, with increased numbers in autumn suggesting the presence of passage migrants.
Plaintive Cuckoo	<i>Cacomantis merulinus</i>	-	Locally fairly common summer visitor, scarce passage migrant and winter visitor, with some individuals likely to be resident. Occurs in lowland rural areas of mixed habitats, often in agricultural areas.
Large Hawk-cuckoo	<i>Hierococcyx sparveroides</i>	-	Common summer visitor
Indian Cuckoo	<i>Cuculus Micropterus</i>	-	Breeding summer visitor, which is locally common but less widespread than in the past.
Eurasian Collared Dove	<i>Streptopelia decaocto</i>	-	A locally common breeding resident in the northwest New Territories with scattered records elsewhere. First recorded in 1999 and placed on Category IIB in 2007, it is slowly increasing in numbers and range.
Red Turtle Dove	<i>Streptopelia tranquebarica</i>	-	A common passage migrant, especially in autumn, and scarce winter visitor, mainly to the Deep Bay area, with occasional summer records. Numbers appear to have increased in recent years and summer records have become more frequent, but there is no evidence that breeding has occurred.
Spotted Dove	<i>Spilopelia chinensis</i>	-	Common and conspicuous resident in all anthropogenic habitats.
Common Moorhen	<i>Gallinula chloropus</i>	-	Scarce to uncommon winter visitor, scarce at other times, in vegetated wetland habitats of the northern New Territories, though appears to be in decline due to urbanisation and more intensive management of commercial fishponds.
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	-	Common resident in a variety of freshwater and brackish wetland habitats, though numbers are declining probably due to urbanisation of the New Territories.
Little Grebe	<i>Tachybaptus ruficollis</i>	LC	Common in open freshwater wetlands in the northwest New Territories, though declining in marginal areas probably due to increased human disturbance and draining of wetlands.
Black-winged Stilt	<i>Himantopus Himantopus</i>	RC	Common to abundant in freshwater marsh, brackish Gei Wai and commercial fishponds. Has increased greatly since winter 2005/06 and small numbers now breed in most years.
Greater Painted-snipe	<i>Rostratula benghalensis</i>	LC	Present all year in areas of freshwater marsh and wet agriculture; numbers in winter are higher due to presence of migrants from the north.
Pintail/Swinhoe's Snipe	<i>Gallinago stenura megala</i>	LC for Swinhoe's Snipe	-
Common Snipe	<i>Gallinago gallinago</i>	-	Common passage migrant and winter visitor to vegetated freshwater wetlands, most numerous in autumn.

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Common Sandpiper	<i>Actitis hypoleucos</i>	-	Scarce passage migrant, slightly more numerous in spring, and rare summer visitor; much declined. Occurs in vegetated freshwater wetlands.
Green Sandpiper	<i>Tringa ochropus</i>	-	Uncommon passage migrant and winter visitor, rare in summer; occurs in a wide variety of freshwater wetlands.
Wood Sandpiper	<i>Tringa glareola</i>	LC	Common migrant and winter visitor to freshwater wetlands, with some evidence of a decline in numbers.
Common Greenshank	<i>Tringa nebularia</i>	RC	Abundant passage migrant and common winter visitor to Deep Bay area, with scattered records elsewhere.
Whiskered Tern	<i>Chlidonias hybrida</i>	-	Common passage migrant, scarce in winter; occurs mainly in fishpond and freshwater wetland areas, but also in inshore and occasionally, offshore waters.
Great Cormorant	<i>Phalacrocorax carbo</i>	PRC	Abundant winter visitor to Deep Bay area and both inshore and offshore waters.
Yellow Bittern	<i>Ixobrychus sinensis</i>	(LC)	Common summer visitor and passage migrant to wetland areas primarily in the Deep Bay area, scarce in winter. Numbers of breeding birds and passage migrants have substantially decreased.
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	(LC)	Abundant passage migrant and winter visitor and uncommon breeding species. Occurs in variety of wetland habitats throughout Hong Kong.
Chinese Pond Heron	<i>Ardeola bacchus</i>	PRC (RC)	Common at a variety of freshwater and brackish wetlands across Hong Kong throughout the year; both migratory and resident populations occur.
Eastern Cattle Egret	<i>Bubulcus ibis</i>	(LC)	Present all year in vegetated fresh and brackish water wetland areas; highest numbers in the wet season, after breeding and during autumn migration.
Grey Heron	<i>Ardea cinerea</i>	PRC	Abundant winter visitor; scarce in summer. Has bred. Frequents wetlands throughout HK but concentrated in Deep Bay area.
Purple Heron	<i>Ardea purpurea</i>	RC	Present all year in vegetated wetlands almost exclusively in the Deep Bay area. Most numerous during autumn passage. Peak counts have decreased since the early 1980s.
Great Egret	<i>Ardea alba</i>	PRC (RC)	Present all year in larger and more open brackish and freshwater wetlands. Most numerous in late autumn and least in April. Migrants pass through mainly in autumn, and a large breeding population has established in Deep Bay in recent years.
Intermediate Egret	<i>Ardea intermedia</i>	RC	Common on passage but scarce at other times of year mainly in freshwater wetland areas. Appears to have increased in numbers over past 60 years.
Little Egret	<i>Egretta garzetta</i>	PRC (RC)	Present all year in a wide variety of fresh and non-freshwater wetland habitats. An influx of birds occurs in the winter months.
Black-winged Kite	<i>Elanus caeruleus</i>	LC; CSMPS(II); CITES(II); Cap.586	Common passage migrant in autumn, scarce at other times; occurs in open country habitats mainly in the northwest New Territories.
Crester Goshawk	<i>Accipiter trivirgatus</i>	CITES(II); CSMPS(II); Cap.586	Common resident in forest areas, but also hunts in open country.
Besra	<i>Accipiter virgatus</i>	CSMPS(II); CITES(II); Cap.586	Present all year. Numbers highest in autumn when passage migrants occur in diverse wooded areas and lowest in summer when it breeds in closed-canopy shrubland.

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Eastern Marsh Harrier	<i>Circus spilonotus</i>	LC; CSMPS(II); CITES(II); Cap.586	Common winter visitor and passage migrant, most numerous in autumn. Mainly occurs in Deep Bay area wetlands.
Black Kite	<i>Milvus migrans</i>	(RC); CSMPS(II); CITES(II); Cap.586	Present all year throughout Hong Kong, numbers lowest in summer and highest during autumn migration.
Eastern Buzzard	<i>Buteo japonicus</i>	CSMPS(II); CITES(II); Cap.586	Common autumn passage migrant and winter visitor, scarce in spring. Occurs in widespread areas of Hong Kong in most non-urban habitats.
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	(LC); CSMPS(II)	Present all year with numbers highest in the second half. Much declined, particularly in the breeding season. Occurs mainly in Deep Bay wetlands in the winter, but in mixed shrubland and farmland habitats in the breeding season.
Common Kingfisher	<i>Alcedo atthis</i>	-	Common in autumn and winter, scarce in spring and summer; frequents a wide variety of lowland, largely freshwater wetlands, though also forages at the coast. The migrant population is probably much declined.
Pied Kingfisher	<i>Ceryle rudis</i>	(LC)	Locally uncommon resident, mainly in freshwater and brackish wetland. In decline.
Common Kestrel	<i>Falco tinnunculus</i>	CSMPS(II); CITES(II); Cap.586	Common passage migrant in autumn, uncommon winter visitor, scarce passage migrant in spring and very rare in summer; occurs in open country areas.
Long-tailed Shrike	<i>Lanius schach</i>	-	Occurs year-round in open broadleaf woodland or forest-edge areas, most abundant during autumn passage.
Hair-crested Drongo	<i>Dicrurus hottentottus</i>	-	Common summer visitor, larger numbers on passage especially autumn, and regular in winter in low numbers. Occurs in open country areas with scattered trees or artificial perches.
Black Drongo	<i>Dicrurus macrocercus</i>	-	Common breeding resident in open-canopy shrubland and open-country with sufficient perches and nest sites.
Red-billed Blue Magpie	<i>Urocissa erythroryncha</i>	-	Common resident, particularly in shrubland, forest edge, large parks and the urban fringe.
Collared Crow	<i>Corvus torquatus</i>	LC; IUCN(VU)	Locally common resident.
Large-billed Crow	<i>Corvus macrorhynchos</i>	-	Largely resident, occurs throughout Hong Kong.
Japanese Tit	<i>Parus minor</i>	-	Abundant resident in diverse wooded and lightly-wooded habitats.
Chinese Bulbul	<i>Pycnonotus sinensis</i>	-	Abundant resident in nearly all habitats; Hong Kong's most widespread bird. Also occurs as a passage migrant and winter visitor.
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	-	Abundant or common resident in nearly all habitats; Hong Kong's second most widespread bird.
Barn Swallow	<i>Hirundo rustica</i>	-	Widespread and common.
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	-	Common and widespread winter visitor and passage migrant.
Dusky Warbler	<i>Phylloscopus fuscatus</i>	-	Common passage migrant and winter visitor to open country areas with shrubs.

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Oriental Reed Warbler	<i>Acrocephalus orientalis</i>	-	Passage migrant, common in autumn, uncommon in spring, and scarce to rare in winter and summer. Mainly occurs in reed marsh and tall grass associated with wetlands.
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	-	Common resident in grassland, reed marsh and rank or herbaceous vegetation, and thus highest densities occur in the northwest New Territories.
Plain Prinia	<i>Prinia inornate</i>	-	Locally common resident in grassy habitat mainly in the northwest New Territories.
Common Tailorbird	<i>Orthotomus sutorius</i>	-	Common widespread resident in diverse habitats of forest, shrubby grassland and landscaped urban areas.
Swinhoe's White-eye	<i>Zosterops simplex</i>	-	Widespread abundant resident.
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	-	A common resident of anthropogenic and disturbed habitats throughout Hong Kong.
Crested Myna	<i>Acridotheres cristatellus</i>	-	Abundant and widespread resident in diverse lowland habitats.
Common Myna	<i>Acridotheres tristis</i>	-	Locally common resident population considered to derive from ex-captive birds.
Black-collared Starling	<i>Gracupica nigricollis</i>	-	Common, widespread resident of lowland open-country , village and urban habitats.
Chinese Blackbird	<i>Turdus mandarinus</i>	-	Common migrant and winter visitor, scarce but increasing breeding species in northwest New Territories.
Grey-backed Thrush	<i>Turdus hortulorum</i>	-	Common winter visitor and uncommon passage migrant to diverse wooded areas.
Oriental Magpie Robin	<i>Copsychus saularis</i>	-	Abundant, widespread resident over a wide range of habitats.
Siberian Rubythroat	<i>Calliope calliope</i>	CSMPS(II)	Common winter visitor and passage migrant to open- and closed-canopy shrubland, reed marsh, mangrove edge and open country areas with shrubs.
Red-throated Flycatcher	<i>Ficedula albicilla</i>	-	Common passage migrant and winter visitor to open country or lightly-wooded habitats.
Daurian Redstart	<i>Phoenicurus aureus</i>	-	Common winter visitor to lightly wooded areas.
Amur Stonechat	<i>Saxicola stejnegeri</i>	-	Common passage migrant and winter visitor to open country areas.
Fork-tailed Sunbird	<i>Aethopyga christinae</i>	-	Abundant resident species in diverse wooded habitats.
Scaly-breasted Munia	<i>Lonchura punctulate</i>	-	Locally common resident in open country grassland, farmland, wetland and waste ground. Largely restricted to the lowland northern New Territories.
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	-	Common passage migrant and winter visitor.
White Wagtail	<i>Motacilla alba</i>	-	Common passage migrant and winter visitor

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Olive-backed Pipit	<i>Anthus hodgsoni</i>	-	Common winter visitor and passage migrant to wooded, semi-wooded and open-country habitats with wooded areas nearby.
Little Bunting	<i>Emberiza pusilla</i>	-	Uncommon from November to April with weak passage in autumn and spring.
No. of species of conservation importance			28
No. of species of conservation importance and/or wetland-dependent			36
Total no. of species recorded			75

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - Conservation status by Fellowes *et al.* (2002): LC = Local Concern; PRC = Potential Regional Concern; RC = Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
 - Conservation status by IUCN (2024): VU = Vulnerable.
 - Protection status by CITES (2024): II = Listed in Appendix II of CITES.
 - Protection status by CSMPS (CSIS, 2019): II = Class II Protected Species in China.
 - Cap. 586 = Protection of Endangered Species of Animals and Plants Ordinance.
- Status in Hong Kong follows the data of the latest version of The Avifauna of Hong Kong (HKBWS, 2024).
- Species considered as of wetland-dependent in this study are indicated in bold type.

Table A5 Amphibian Species Recorded within Survey Area (excluding WRA)

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Asian Common Toad	<i>Duttaphrynus melanostictus</i>	-	Widely distributed in Hong Kong.
Asiatic Painted Frog	<i>Kaloula pulchra</i>	-	Widely distributed in Hong Kong.
Brown Tree Frog	<i>Polypedates megacephalus</i>	-	Widely distributed throughout Hong Kong.
No. of species of conservation importance			0
Total no. of species recorded			3

Notes:

1. Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
2. Status in Hong Kong follows the data of HKBIH (AFCD, 2024).

Table A6 Amphibian Species Recorded within WRA

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Asian Common Toad	<i>Duttaphrynus melanostictus</i>	-	Widely distributed in Hong Kong.
Asiatic Painted Frog	<i>Kaloula pulchra</i>	-	Widely distributed in Hong Kong.
Ornate Pigmy Frog	<i>Microhyla fissipes</i>	-	Widely distributed in Hong Kong.
Paddy Frog	<i>Fejervarya multistriata</i>	-	Widely distributed throughout Hong Kong.
Chinese Bullfrog	<i>Hoplobatrachus chinensis</i>	PRC; RLCV (EN); CSMPS (II)	Widely distributed in Hong Kong.
Günther's Frog	<i>Sylvirana guentheri</i>	-	Widely distributed throughout Hong Kong.
Brown Tree Frog	<i>Polypedates megacephalus</i>	-	Widely distributed throughout Hong Kong.
No. of species of conservation importance			1
Total no. of species recorded			7

Notes:

1. Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - a. Conservation status by Fellowes *et al.* (2002): PRC = Potential Regional Concern.
 - b. Conservation status by Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016): EN = Endangered; NT = Near-threatened.
 - c. Protection status by CSMPS (CSIS, 2019): II = Class II Protected Species in China.
2. Status in Hong Kong follows the data of HKBIH (AFCD, 2024).

Table A7 Reptile Species Recorded within Survey Area (excluding WRA)

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Bowring's Gecko	<i>Hemidactylus bowringii</i>	-	Distributed throughout Hong Kong.
Checkered Keelback	<i>Fowlea flavipunctata</i>	-	Widely distributed in streams in the New Territories and Lantau Island.
No. of species of conservation importance			0
Total no. of species recorded			2

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
- Status in Hong Kong follows the data of HKBIH (AFCD, 2024).

Table A8 Reptile Species Recorded within WRA

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Long-tailed Skink	<i>Eutropis longicaudata</i>	-	Widely distributed throughout Hong Kong.
Four-clawed Gecko	<i>Gehyra mutilata</i>	RLCV (VU)	Widely distributed throughout Hong Kong.
Bowring's Gecko	<i>Hemidactylus bowringii</i>	-	Distributed throughout Hong Kong.
Common Rat Snake	<i>Ptyas mucosus</i>	PRC; RLCV (EN); CITES (II); Cap. 586	Widely distributed throughout Hong Kong.
Many-banded Krait	<i>Bungarus multicinctus</i>	PRC; RLCV (VU); IUCN (VU)	Common and widely distributed in Hong Kong.
Checkered Keelback	<i>Fowlea flavipunctata</i>	-	Widely distributed in streams in the New Territories and Lantau Island.
No. of species of conservation importance			3
Total no. of species recorded			6

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - Conservation status by Fellowes *et al.* (2002): PRC = Potential Regional Concern.
 - Conservation status by IUCN (2024): VU = Vulnerable.
 - Conservation status by Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016): EN = Endangered; VU = Vulnerable.
 - Protection status by CITES (2024): II = Listed in Appendix II of CITES.
 - Cap. 586 = Protection of Endangered Species of Animals and Plants Ordinance.
- Status in Hong Kong follows the data of HKBIH (AFCD, 2024).

Table A9 Odonate Species Recorded within Survey Area (excluding WRA)

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Wandering Midget	<i>Agriocnemis pygmaea</i>	-	Widely distributed in marshes, abandoned paddy fields and weedy pond margins throughout Hong Kong.
Orange-tailed Sprite	<i>Ceriagrion auranticum</i>	-	Widely distributed in weedy ponds, marshes, abandoned fields or grasslands adjacent to waters.
Common Bluetail	<i>Ischnura senegalensis</i>	-	Widely distributed in all wetland habitats except fast flowing rivers throughout Hong Kong.
Common Flangetail	<i>Ictinogomphus pertinax</i>	-	Widely distributed in ponds and still water throughout Hong Kong.
Asian Pintail	<i>Acisoma panorpoides</i>	-	Widely distributed in marshes and weedy ponds throughout Hong Kong.
Asian Amberwing	<i>Brachythemis contaminata</i>	-	Widely distributed in weedy ponds and sluggish streams.
Crimson Darter	<i>Crocothemis servilia</i>	-	Widely distributed in cultivated areas, ponds and marshes throughout the New Territories.
Coastal Glider	<i>Macrodiplax cora</i>	LC	Frequents marshes and ponds with dense vegetation, especially adjacent to coastal areas.
Russet Percher	<i>Neurothemis fulvia</i>	-	Found in marshes, cultivated areas, streams, tanks and irrigation feeders, sometimes even found in nearly dried out marshy areas. Widely distributed throughout Hong Kong.
Pied Percher	<i>Neurothemis tullia</i>	-	Favours marshes and abandoned rice paddies. Widely distributed throughout Hong Kong.
Green Skimmer	<i>Orthetrum sabina</i>	-	Widely distributed in all wetland habitats throughout Hong Kong.
Wandering Glider	<i>Pantala flavescens</i>	-	Widely distributed all over Hong Kong.
Pied Skimmer	<i>Pseudothemis zonata</i>	-	Widely distributed in woodlands adjacent to reservoirs, sluggish streams, ponds, tanks and marshes throughout Hong Kong.
Variegated Flutterer	<i>Rhyothemis variegata</i>	-	Widely distributed in marshes, ponds and tanks throughout Hong Kong.
No. of species of conservation importance			1
Total no. of species recorded			14

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - Conservation status by Fellowes *et al.* (2002): LC = Local Concern.
- Status in Hong Kong follows the data of HKBIH (AFCD, 2024).

Table A10 Odonate Species Recorded within WRA

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Orange-tailed Midget	<i>Agriocnemis femina</i>	-	Widely distributed in disused paddy fields, marshes, ditches and weedy ponds margins.
Wandering Midget	<i>Agriocnemis pygmaea</i>	-	Widely distributed in marshes, abandoned paddy fields and weedy pond margins throughout Hong Kong.
Orange-tailed Sprite	<i>Ceriagrion auranticum</i>	-	Widely distributed in weedy ponds, marshes, abandoned fields or grasslands adjacent to waters.
Common Bluetail	<i>Ischnura senegalensis</i>	-	Widely distributed in all wetland habitats except fast flowing rivers throughout Hong Kong.
Blue Sprite	<i>Pseudagrion microcephalum</i>	LC	Found in lowland streams and ponds; often perches on aquatic plants just above the water surface. Population scattered all over Hong Kong and established in Hong Kong Wetland Park.
Orange-faced Sprite	<i>Pseudagrion rubriceps</i>	-	Widely distributed in ponds and weedy margins of slow flowing streams.
Yellow Featherlegs	<i>Copera marginipes</i>	-	Widely distributed in lowland streams, ditches, and weedy margins of pond throughout Hong Kong.
Pale-spotted Emperor	<i>Anax guttatus</i>	-	Widely distributed in ponds and sluggish streams throughout Hong Kong.

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Common Flangetail	<i>Ictinogomphus pertinax</i>	-	Widely distributed in ponds and still water throughout Hong Kong.
Asian Pintail	<i>Acisoma panorpoides</i>	-	Widely distributed in marshes and weedy ponds throughout Hong Kong.
Blue Dasher	<i>Brachydiplax chalybea</i>	-	Widely distributed in marshes and weedy ponds throughout Hong Kong
Asian Amberwing	<i>Brachythemis contaminata</i>	-	Widely distributed in weedy ponds and sluggish streams.
Crimson Darter	<i>Crocothemis servilia</i>	-	Widely distributed in cultivated areas, ponds and marshes throughout the New Territories.
Blue Percher	<i>Diplacodes trivialis</i>	-	Widespread, especially in late summer, when it can be found almost everywhere in Hong Kong.
Forest Chaser	<i>Lyriothemis elegantissima</i>	-	Frequents marshes beside woodlands. Widespread throughout Hong Kong.
Russet Percher	<i>Neurothemis fulvia</i>	-	Found in marshes, cultivated areas, streams, tanks and irrigation feeders, sometimes even found in nearly dried out marshy areas. Widely distributed throughout Hong Kong.
Pied Percher	<i>Neurothemis tullia</i>	-	Favours marshes and abandoned rice paddies. Widely distributed throughout Hong Kong.
Red-faced Skimmer	<i>Orthetrum chrysis</i>	-	Widely distributed in pools and marshy areas adjacent to flowing streams throughout Hong Kong.
Green Skimmer	<i>Orthetrum sabina</i>	-	Widely distributed in all wetland habitats throughout Hong Kong.
Wandering Glider	<i>Pantala flavescens</i>	-	Widely distributed all over Hong Kong.
Pied Skimmer	<i>Pseudothemis zonata</i>	-	Widely distributed in woodlands adjacent to reservoirs, sluggish streams, ponds, tanks and marshes throughout Hong Kong.
Ruby Darter	<i>Rhodothemis rufa</i>	LC	Widely distributed in ponds and marshes with dense floating plants.
Variegated Flutterer	<i>Rhyothemis variegata</i>	-	Widely distributed in marshes, ponds and tanks throughout Hong Kong.
Evening Skimmer	<i>Tholymis tillarga</i>	-	Widely distributed in marshes, weedy ponds and tanks throughout Hong Kong.
Saddlebag Glider	<i>Tramea virginia</i>	-	Widely distributed in trees adjacent to ponds and lakes throughout Hong Kong.
Scarlet Basker	<i>Urothemis signata</i>	LC	Common in areas with abandoned fishponds throughout Hong Kong.
No. of species of conservation importance			3
Total no. of species recorded			26

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - Conservation status by Fellowes *et al.* (2002): LC = Local Concern.
- Status in Hong Kong follows the data of HKBIH (AFCD, 2024).

Table A11 Butterfly Species Recorded within Survey Area (excluding WRA)

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Common Straight Swift	<i>Parnara guttata</i>	-	Common
Pale Grass Blue	<i>Zizeeria maha</i>	-	Very Common
Common Hedge Blue	<i>Acytolepis puspa</i>	-	Common
Common Evening Brown	<i>Melanitis leda</i>	-	Uncommon
Dark-brand Bush Brown	<i>Mycalesis mineus</i>	-	Very Common
Common Palmfly	<i>Elymnias hypermnestra</i>	-	Common
Blue-spotted Crow	<i>Euploea midamus</i>	-	Very Common
Rustic	<i>Cupha erymanthis</i>	-	Very Common
Great Egg-fly	<i>Hypolimnias bolina</i>	-	Very Common
Common Sailer	<i>Neptis hylas</i>	-	Very Common
Common Mormon	<i>Papilio polytes</i>	-	Very Common
Spangle	<i>Papilio protenor</i>	-	Very Common
Lime Butterfly	<i>Papilio demoleus</i>	-	Uncommon
Tailed Jay	<i>Graphium agamemnon</i>	-	Common
Lemon Emigrant	<i>Catopsilia pomona</i>	-	Very Common
Common Grass Yellow	<i>Eurema hecabe</i>	-	Very Common
Red-base Jezebel	<i>Delias pasithoe</i>	-	Very Common
No. of species of conservation importance		0	
Total no. of species recorded		18	

Notes:

1. Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
2. Status in Hong Kong follows Pun (2024).

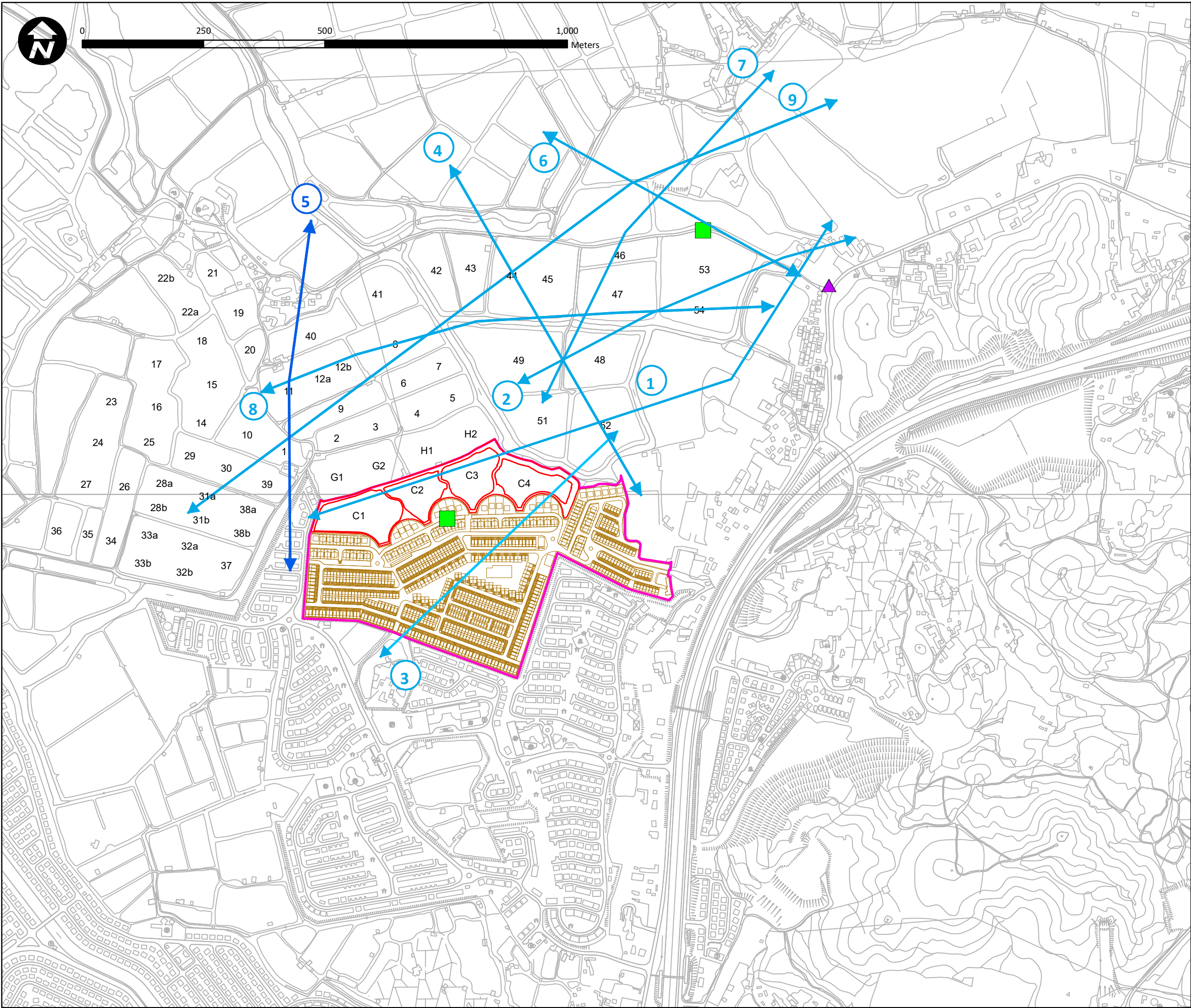
Table A12 Butterfly Species Recorded within WRA

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Common Awl	<i>Hasora badra</i>	LC	Rare
Chinese Dart	<i>Potanthus confucius</i>	-	Common
Common Straight Swift	<i>Parnara guttata</i>	-	Common
Rare Swift	<i>Parnara ganga</i>	-	Uncommon
Paintbrush Swift	<i>Baoris farri</i>	-	Rare
Silver Streak Blue	<i>Iraota timoleon</i>	-	Uncommon
Tailless Line Blue	<i>Prosotas dubiosa</i>	-	Uncommon
Pale Grass Blue	<i>Zizeeria maha</i>	-	Very Common

Common Name	Scientific Name	Conservation & Protection Status ¹	Status in Hong Kong ²
Lesser Grass Blue	<i>Zizina otis</i>	-	Common
Common Hedge Blue	<i>Acytolepis puspa</i>	-	Common
Common Evening Brown	<i>Melanitis leda</i>	-	Uncommon
Dark Evening Brown	<i>Melanitis phedima</i>	-	Common
Dark-brand Bush Brown	<i>Mycalesis mineus</i>	-	Very Common
Common Palmfly	<i>Elymnias hypermnestra</i>	-	Common
Plain Tiger	<i>Danaus chrysippus</i>	-	Uncommon
Blue-spotted Crow	<i>Euploea midamus</i>	-	Very Common
Great Egg-fly	<i>Hypolimnas bolina</i>	-	Very Common
Common Mapwing	<i>Cyrestis thyodamas</i>	-	Common
Angled Castor	<i>Ariadne ariadne</i>	-	Common
Common Archduke	<i>Lexias pardalis</i>	-	Uncommon
Common Sailer	<i>Neptis hylas</i>	-	Very Common
Common Mormon	<i>Papilio polytes</i>	-	Very Common
Paris Peacock	<i>Papilio paris</i>	-	Very Common
Common Bluebottle	<i>Graphium sarpedon</i>	-	Very Common
Tailed Jay	<i>Graphium agamemnon</i>	-	Common
Lemon Emigrant	<i>Catopsilia pomona</i>	-	Very Common
Common Grass Yellow	<i>Eurema hecabe</i>	-	Very Common
Three-spot Grass Yellow	<i>Eurema blanda</i>	-	Common
Red-base Jezebel	<i>Delias pasithoe</i>	-	Very Common
No. of species of conservation importance		2	
Total no. of species recorded		31	

Notes:

- Conservation and protection status refers to Fellowes *et al.* (2002), IUCN (2024), Red List of China's Vertebrates (RLCV) (Jiang *et al.*, 2016), CSIS (2019), CITES (2024), Cap. 170 and Cap. 586.
 - Conservation status by Fellowes *et al.* (2002): LC = Local Concern.
- Status in Hong Kong follows Pun (2024).



- Project Area
- Wetland Restoration Area
- MLP
- Egret Location
- Observation Point
- Major Flightline
- Minor Flightline

Notes.
Pond number follows the figure in EM&A Reports.
C1 to C4 represents Cell 1 to Cell 4 of WRA



Project Title:
Proposed Amendments to an Approved Scheme
(Application No. A/YL-MP/344)
for Comprehensive Residential Development to Include
a Wetland Restoration Area at Lots 50 S.A and 77
in D.D. 101, Wo Shang Wai, Mai Po, Yuen Long

Figure Title:
Flightline in Wet Season (2024)

Drawn by:	NT	Scale:	1:7,400 on A3
Checked By:	MM	Date:	18 Jun 2025
Approved by:	PJL		
Figure Number:	Figure 1		Revision: 0



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landscape

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Figure Title:

Flightline in Dry Season (2024)

Drawn by: NT	Scale: 1:7,400 on A3
Checked By: MM	Date: 18 Jun 2025
Approved by: PJL	
Figure Number: Figure 2	Revision: 0