Form No. S16-I
表格第 S16-I 號

APPLICATION FOR PERMISSION
UNDER SECTION 16 OF
THE TOWN PLANNING ORDINANCE
(CAP. 131)

根據《城市規劃條例》(第131章)
第16條遞交的許可申請

Applicable to proposals not involving or not only involving:
適用於建議不涉及或不祇涉及:

(i) Construction of "New Territories Exempted House(s)";
興建「新界豁免管制屋宇」;

(ii) Temporary use/development of land and/or building not exceeding 3 years in rural areas or Regulated Areas; and
位於鄉郊地區或受規管地區土地上及/或建築物內進行為期不超過三年的臨時用途/發展;及

(iii) Renewal of permission for temporary use or development in rural areas or Regulated Areas
位於鄉郊地區或受規管地區的臨時用途或發展的許可續期

Applicant who would like to publish the notice of application in local newspapers to meet one of the Town Planning Board's requirements of taking reasonable steps to obtain consent of or give notification to the current land owner, please refer to the following link regarding publishing the notice in the designated newspapers:
https://www.tpb.gov.hk/en/plan_application/apply.html

申請人如欲在本地報章刊登申請通知，以採取城市規劃委員會就取得現行土地擁有人的同意或通知現行土地擁有人所指定的其中一項合理步驟，請瀏覽以下網址有關在指定的報章刊登通知：
https://www.tpb.gov.hk/tc/plan_application/apply.html

General Note and Annotation for the Form
填寫表格的一般指引及註解

\# "Current land owner" means any person whose name is registered in the Land Registry as that of an owner of the land to which the application relates, as at 6 weeks before the application is made
「現行土地擁有人」指在提出申請前六星期，其姓名或名稱已在土地註冊處註冊為該申請所關乎的土地的擁有人的人

& Please attach documentary proof 請夾附證明文件

^ Please insert number where appropriate 請在適當地方註明編號

Please fill "NA" for inapplicable item 請在不適用的項目填寫「不適用」

Please use separate sheets if the space provided is insufficient 如所提供的空間不足，請另頁說明

Please insert a「✔」at the appropriate box 請在適當的方格內上加上「✔」號

2600376 1/2 by hand

For Official Use Only 請勿填寫此欄	Application No. 申請編號	A/YL-MP/407
	Date Received 收到日期	2026 -03- 03

1. The completed form and supporting documents (if any) should be sent to the Secretary, Town Planning Board (the Board), 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong.
申請人須把填妥的申請表格及其他支持申請的文件（倘有），送交香港北角渣華道 333 號北角政府合署 15 樓城市規劃委員會(下稱「委員會」)秘書收。

2. Please read the "Guidance Notes" carefully before you fill in this form. The document can be downloaded from the Board's website at http://www.tpb.gov.hk/. It can also be obtained from the Secretariat of the Board at 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong (Tel: 2231 4810 or 2231 4835), and the Planning Enquiry Counters of the Planning Department (Hotline: 2231 5000) (17/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong and 14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin, New Territories).
請先細閱《申請須知》的資料單張，然後填寫此表格。該份文件可從委員會的網頁下載（網址：http://www.tpb.gov.hk/），亦可向委員會秘書處（香港北角渣華道 333 號北角政府合署 15 樓 – 電話：2231 4810 或 2231 4835)及規劃署的規劃資料查詢處(熱線：2231 5000) (香港北角渣華道 333 號北角政府合署 17 樓及新界沙田上禾輋路 1 號沙田政府合署 14 樓)索取。

3. This form can be downloaded from the Board's website, and obtained from the Secretariat of the Board and the Planning Enquiry Counters of the Planning Department. The form should be typed or completed in block letters. The processing of the application may be refused if the required information or the required copies are incomplete.
此表格可從委員會的網頁下載，亦可向委員會秘書處及規劃署的規劃資料查詢處索取。申請人須以打印方式或以正楷填寫表格。如果申請人所提交的資料或文件副本不齊全，委員會可拒絕處理有關申請。

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1. Name of Applicant 申請人姓名/名稱

(☐Mr. 先生 /☐Mrs. 夫人 /☐Miss 小姐 /☐Ms. 女士 /☑Company 公司 /☐Organisation 機構)

Monotonic Limited

2. Name of Authorised Agent (if applicable) 獲授權代理人姓名/名稱（如適用）

(☐Mr. 先生 /☐Mrs. 夫人 /☐Miss 小姐 /☐Ms. 女士 /☑Company 公司 /☐Organisation 機構)

Conrad Tang & Associates Limited

3. Application Site 申請地點

(a) Full address / location / demarcation district and lot number (if applicable) 詳細地址／地點／丈量約份及地段號碼（如適用）	Lot No. 3018 S.A in D.D. 104, Mai Po, Yuen Long
(b) Site area and/or gross floor area involved 涉及的地盤面積及／或總樓面面積	☑Site area 地盤面積 3,220 sq.m 平方米 ☑About 約 ☑Gross floor area 總樓面面積 0.56 sq.m 平方米 ☐About 約
(c) Area of Government land included (if any) 所包括的政府土地面積（倘有）	..... sq.m 平方米 ☐About 約

(d)	Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Mai Po and Fairview Park OZP No. S/YL-MP/8
(e)	Land use zone(s) involved 涉及的土地用途地帶	"Conservation Area" ("CA") (98%) "Residential (Group C)" ("R(C)") (2%)
(f)	Current use(s) 現時用途	Fish Pond (If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)

4. "Current Land Owner" of Application Site 申請地點的「現行土地擁有人」

The applicant 申請人 –

☑ is the sole "current land owner"#& (please proceed to Part 6 and attach documentary proof of ownership).
是唯一的「現行土地擁有人」#& (請繼續填寫第 6 部分，並夾附業權證明文件)。

☐ is one of the "current land owners"#& (please attach documentary proof of ownership).
是其中一名「現行土地擁有人」#& (請夾附業權證明文件)。

☐ is not a "current land owner"#.
並不是「現行土地擁有人」#。

☐ The application site is entirely on Government land (please proceed to Part 6).
申請地點完全位於政府土地上（請繼續填寫第 6 部分）。

5. Statement on Owner's Consent/Notification 就土地擁有人的同意/通知土地擁有人的陳述

(a) According to the record(s) of the Land Registry as at ..... (DD/MM/YYYY), this application involves a total of ..... "current land owner(s)"#.
根據土地註冊處截至 ..... 年 ..... 月 ..... 日的記錄，這宗申請共牽涉 ..... 名「現行土地擁有人」#。

(b) The applicant 申請人 –

☐ has obtained consent(s) of ..... "current land owner(s)"#.
已取得 ..... 名「現行土地擁有人」#的同意。

Details of consent of "current land owner(s)"# obtained 取得「現行土地擁有人」#同意的詳情		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where consent(s) has/have been obtained 根據土地註冊處記錄已獲得同意的地段號碼／處所地址	Date of consent obtained (DD/MM/YYYY) 取得同意的日期 (日/月/年)

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

☐ has notified ..... "current land owner(s)"#
已通知 ..... 名「現行土地擁有人」#。

Details of the "current land owner(s)"# notified 已獲通知「現行土地擁有人」#的詳細資料		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where notification(s) has/have been given 根據土地註冊處記錄已發出通知的地段號碼／處所地址	Date of notification given (DD/MM/YYYY) 通知日期(日/月/年)

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

☐ has taken reasonable steps to obtain consent of or give notification to owner(s):
已採取合理步驟以取得土地擁有人的同意或向該人發給通知。詳情如下：

Reasonable Steps to Obtain Consent of Owner(s) 取得土地擁有人的同意所採取的合理步驟

☐ sent request for consent to the "current land owner(s)" on _____ (DD/MM/YYYY)#&
於_____(日/月/年)向每一名「現行土地擁有人」#郵遞要求同意書&

Reasonable Steps to Give Notification to Owner(s) 向土地擁有人發出通知所採取的合理步驟

☐ published notices in local newspapers on _____ (DD/MM/YYYY)&
於_____(日/月/年)在指定報章就申請刊登一次通知&

☐ posted notice in a prominent position on or near application site/premises on _____ (DD/MM/YYYY)&
於_____(日/月/年)在申請地點／申請處所或附近的顯明位置貼出關於該申請的通知&

☐ sent notice to relevant owners' corporation(s)/owners' committee(s)/mutual aid committee(s)/management office(s) or rural committee on _____ (DD/MM/YYYY)&
於_____(日/月/年)把通知寄往相關的業主立案法團/業主委員會/互助委員會或管理處，或有關的鄉事委員會&

Others 其他

☐ others (please specify)
其他（請指明）

_____

_____

_____

_____

Note: May insert more than one「✔」.
Information should be provided on the basis of each and every lot (if applicable) and premises (if any) in respect of the application.
註: 可在多於一個方格內加上「✔」號
申請人須就申請涉及的每一地段（倘適用）及處所（倘有）分別提供資料

6. Type(s) of Application 申請類別

☐ Type (i) 第(i)類 Change of use within existing building or part thereof 更改現有建築物或其部分內的用途

☐ Type (ii) 第(ii)類 Diversion of stream / excavation of land / filling of land / filling of pond as required under Notes of Statutory Plan(s) 根據法定圖則《註釋》內所要求的河道改道／挖土／填土／填塘工程

☑ Type (iii) 第(iii)類 Public utility installation / Utility installation for private project 公用事業設施裝置/私人發展計劃的公用設施裝置

☐ Type (iv) 第(iv)類 Minor relaxation of stated development restriction(s) as provided under Notes of Statutory Plan(s) 略為放寬於法定圖則《註釋》內列明的發展限制

☐ Type (v) 第(v)類 Use / development other than (i) to (iii) above 上述的(i)至(iii)項以外的用途／發展

Note 1: May insert more than one「✓」.
註 1： 可在多於一個方格內加上「✓」號
Note 2: For Development involving columbarium use, please complete the table in the Appendix.
註 2： 如發展涉及靈灰安置所用途，請填妥於附件的表格。

(i) For Type (i) application 供第(i)類申請

(a) Total floor area involved 涉及的總樓面面積	sq.m 平方米		
(b) Proposed use(s)/development 擬議用途/發展	(If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)		
(c) Number of storeys involved 涉及層數		Number of units involved 涉及單位數目	
(d) Proposed floor area 擬議樓面面積	Domestic part 住用部分 ..... sq.m 平方米 ☐About 約		
	Non-domestic part 非住用部分..... sq.m 平方米 ☐About 約		
	Total 總計 ..... sq.m 平方米 ☐About 約		

(e) Proposed uses of different floors (if applicable) 不同樓層的擬議用途(如適用)
(Please use separate sheets if the space provided is insufficient)
(如所提供的空間不足，請另頁說明)

Floor(s) 樓層	Current use(s) 現時用途	Proposed use(s) 擬議用途

(ii) For Type (ii) application 供第(ii)類申請

(a) Operation involved 涉及工程	☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積 ..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 ..... m 米 ☐About 約 (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用圖則顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍)
(b) Intended use/development 有意進行的用途／發展	

(iii) For Type (iii) application 供第(iii)類申請

(a) Nature and scale 性質及規模

☑ Public utility installation 公用事業設施裝置

☐ Utility installation for private project 私人發展計劃的公用設施裝置

Please specify the type and number of utility to be provided as well as the dimensions of each building/structure, where appropriate
請註明有關裝置的性質及數量，包括每座建築物/構築物(倘有)的長度、高度和闊度

Name/type of installation 裝置名稱／種類	Number of provision 數量	Dimension of each installation /building/structure (m) (LxWxH) 每個裝置／建築物／構築物的尺寸 (米) (長 x 闊 x 高)
Solar Photovoltaic System	152 solar panels	2.094m x 1.038m x 0.5m
		(See Plan 2 and Drawings 1 and 2)
Meter Room	1	0.7m x 0.8m x 2.05m

(Please illustrate on plan the layout of the installation 請用圖則顯示裝置的布局)

(iv) For Type (iv) application 供第(iv)類申請

(a) Please specify the proposed minor relaxation of stated development restriction(s) and **also fill in the proposed use/development and development particulars in part (v) below** –
請列明擬議略為放寬的發展限制**並填妥於第(v)部分的擬議用途/發展及發展細節** –

☐ Plot ratio restriction 地積比率限制	From 由 ..... to 至 .....
☐ Gross floor area restriction 總樓面面積限制	From 由 .....sq. m 平方米 to 至 .....sq. m 平方米
☐ Site coverage restriction 上蓋面積限制	From 由 .....% to 至 ..... %
☐ Building height restriction 建築物高度限制	From 由 .....m 米 to 至 ..... m 米 From 由 ..... mPD 米 (主水平基準上) to 至 .....mPD 米 (主水平基準上) From 由 ..... storeys 層 to 至 ..... storeys 層
☐ Non-building area restriction 非建築用地限制	From 由 .....m to 至 ..... m
☐ Others (please specify) 其他（請註明）	....

(v) For Type (v) application 供第(v)類申請

(a) Proposed use(s)/development 擬議用途/發展	(Please illustrate the details of the proposal on a layout plan 請用平面圖說明建議詳情)

(b) Development Schedule 發展細節表

Proposed gross floor area (GFA) 擬議總樓面面積	..... sq.m 平方米	☐About 約
Proposed plot ratio 擬議地積比率	.....	☐About 約
Proposed site coverage 擬議上蓋面積	..... %	☐About 約
Proposed no. of blocks 擬議座數	.....	
Proposed no. of storeys of each block 每座建築物的擬議層數	..... storeys 層 ☐ include 包括.....storeys of basements 層地庫 ☐ exclude 不包括.....storeys of basements 層地庫	
Proposed building height of each block 每座建築物的擬議高度	..... mPD 米(主水平基準上) ..... m 米	☐About 約 ☐About 約

☐ Domestic part 住用部分

GFA 總樓面面積 ..... sq. m 平方米 ☐About 約
number of Units 單位數目 .....
average unit size 單位平均面積 .....sq. m 平方米 ☐About 約
estimated number of residents 估計住客數目 .....

☐ Non-domestic part 非住用部分

GFA 總樓面面積

☐ eating place 食肆 ..... sq. m 平方米 ☐About 約
☐ hotel 酒店 ..... sq. m 平方米 ☐About 約
(please specify the number of rooms 請註明房間數目) .....
☐ office 辦公室 ..... sq. m 平方米 ☐About 約
☐ shop and services 商店及服務行業 ..... sq. m 平方米 ☐About 約

☐ Government, institution or community facilities 政府、機構或社區設施 (please specify the use(s) and concerned land area(s)/GFA(s) 請註明用途及有關的地面面積／總樓面面積)
.....
.....
.....

☐ other(s) 其他 (please specify the use(s) and concerned land area(s)/GFA(s) 請註明用途及有關的地面面積／總樓面面積)
.....
.....
.....

☐ Open space 休憩用地 (please specify land area(s) 請註明地面面積)

☐ private open space 私人休憩用地 ..... sq. m 平方米 ☐ Not less than 不少於
☐ public open space 公眾休憩用地 ..... sq. m 平方米 ☐ Not less than 不少於

(c) Use(s) of different floors (if applicable) 各樓層的用途 (如適用)

[Block number] [座數]	[Floor(s)] [層數]	[Proposed use(s)] [擬議用途]
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

(d) Proposed use(s) of uncovered area (if any) 露天地方（倘有）的擬議用途
.....
.....
.....
.....
.....

7. Anticipated Completion Time of the Development Proposal 擬議發展計劃的預計完成時間

Anticipated completion time (in month and year) of the development proposal (by phase (if any)) (e.g. June 2023)
擬議發展計劃預期完成的年份及月份 (分期 (倘有)) (例：2023 年 6 月)
(Separate anticipated completion times (in month and year) should be provided for the proposed public open space and Government, institution or community facilities (if any))
(申請人須就擬議的公眾休憩用地及政府、機構或社區設施 (倘有) 提供個別擬議完成的年份及月份)

Phase 1 - Sept. 2026
Phase 2 - Dec. 2026

8. Vehicular Access Arrangement of the Development Proposal 擬議發展計劃的行車通道安排

Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是 No 否	☐ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用)) ..... ☐ There is a proposed access. (please illustrate on plan and specify the width) 有一條擬議車路。（請在圖則顯示，並註明車路的闊度） ☑
Any provision of parking space for the proposed use(s)? 是否有為擬議用途提供停車位？	Yes 是 No 否	☐ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) Private Car Parking Spaces 私家車車位 _____ Motorcycle Parking Spaces 電單車車位 _____ Light Goods Vehicle Parking Spaces 輕型貨車泊車位 _____ Medium Goods Vehicle Parking Spaces 中型貨車泊車位 _____ Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 _____ Others (Please Specify) 其他 (請列明) _____ _____ _____ _____ _____ ☑
Any provision of loading/unloading space for the proposed use(s)? 是否有為擬議用途提供上落客貨車位？	Yes 是 No 否	☐ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) Taxi Spaces 的士車位 _____ Coach Spaces 旅遊巴車位 _____ Light Goods Vehicle Spaces 輕型貨車車位 _____ Medium Goods Vehicle Spaces 中型貨車車位 _____ Heavy Goods Vehicle Spaces 重型貨車車位 _____ Others (Please Specify) 其他 (請列明) _____ _____ _____ _____ _____ ☑

9. Impacts of Development Proposal 擬議發展計劃的影響

If necessary, please use separate sheets to indicate the proposed measures to minimise possible adverse impacts or give justifications/reasons for not providing such measures.
如需要的話，請另頁註明可盡量減少可能出現不良影響的措施，否則請提供理據/理由。

Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動?	Yes 是	☐ Please provide details 請提供詳情 ....
	No 否	☑
Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程? (Note: where Type (ii) application is the subject of application, please skip this section. 註：如申請涉及第(ii)類申請，請跳至下一條問題。)	Yes 是	☐ (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍) ☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 .....m 米 ☐About 約
	No 否	☑

Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響？			
	On environment 對環境	Yes 會 ☐	No 不會 ☑
	On traffic 對交通	Yes 會 ☐	No 不會 ☑
	On water supply 對供水	Yes 會 ☐	No 不會 ☑
	On drainage 對排水	Yes 會 ☐	No 不會 ☑
	On slopes 對斜坡	Yes 會 ☐	No 不會 ☑
	Affected by slopes 受斜坡影響	Yes 會 ☐	No 不會 ☑
	Landscape Impact 構成景觀影響	Yes 會 ☐	No 不會 ☑
	Tree Felling 砍伐樹木	Yes 會 ☐	No 不會 ☑
	Visual Impact 構成視覺影響	Yes 會 ☐	No 不會 ☑
	Others (Please Specify) 其他 (請列明)	Yes 會 ☐	No 不會 ☐
	_____		
	_____		

Please state measure(s) to minimise the impact(s). For tree felling, please state the number, diameter at breast height and species of the affected trees (if possible)
請註明盡量減少影響的措施。如涉及砍伐樹木，請說明受影響樹木的數目、及胸高度的樹幹直徑及品種(倘可)

.....
.....
.....
.....
.....

10. Justifications 理由

The applicant is invited to provide justifications in support of the application. Use separate sheets if necessary.
現請申請人提供申請理由及支持其申請的資料。如有需要，請另頁說明。

See Detailed Justifications

11. Declaration 聲明

I hereby declare that the particulars given in this application are correct and true to the best of my knowledge and belief.
本人謹此聲明，本人就這宗申請提交的資料，據本人所知及所信，均屬真實無誤。

I hereby grant a permission to the Board to copy all the materials submitted in this application and/or to upload such materials to the Board's website for browsing and downloading by the public free-of-charge at the Board's discretion. 本人現准許委員會酌情將本人就此申請所提交的所有資料複製及/或上載至委員會網站，供公眾免費瀏覽或下載。

Signature 簽署 ..... ☐ Applicant 申請人 / ☑ Authorised Agent 獲授權代理人

YUNG Pak Yeung — Name in Block Letters 姓名（請以正楷填寫）

Town Planner — Position (if applicable) 職位 （如適用）

Professional Qualification(s) 專業資格
☐ Member 會員 / ☐ Fellow of 資深會員
☐ HKIP 香港規劃師學會 / ☐ HKIA 香港建築師學會 /
☐ HKIS 香港測量師學會 / ☐ HKIE 香港工程師學會 /
☐ HKILA 香港園境師學會/ ☐ HKIUD 香港城市設計學會
☐ RPP 註冊專業規劃師
Others 其他 .....

CONRAD TANG & ASSOCIATES LIMITED

on behalf of 代表 Conrad Tang & Associates Limited

☑ Company 公司 / ☐ Organisation Name and Chop (if applicable) 機構名稱及蓋章（如適用）

Date 日期 3/2/2026 (DD/MM/YYYY 日/月/年)

Remark 備註

The materials submitted in this application and the Board's decision on the application would be disclosed to the public. Such materials would also be uploaded to the Board's website for browsing and free downloading by the public where the Board considers appropriate.
委員會會向公眾披露申請人所遞交的申請資料和委員會對申請所作的決定。在委員會認為合適的情況下，有關申請資料亦會上載至委員會網頁供公眾免費瀏覽及下載。

Warning 警告

Any person who knowingly or wilfully makes any statement or furnish any information in connection with this application, which is false in any material particular, shall be liable to an offence under the Crimes Ordinance.
任何人在明知或故意的情況下，就這宗申請提出在任何要項上是虛假的陳述或資料，即屬違反《刑事罪行條例》。

Statement on Personal Data 個人資料的聲明

1. The personal data submitted to the Board in this application will be used by the Secretary of the Board and Government departments for the following purposes:
委員會就這宗申請所收到的個人資料會交給委員會秘書及政府部門，以根據《城市規劃條例》及相關的城市規劃委員會規劃指引的規定作以下用途：
   (a) the processing of this application which includes making available the name of the applicant for public inspection when making available this application for public inspection; and
處理這宗申請，包括公布這宗申請供公眾查閱，同時公布申請人的姓名供公眾查閱；以及
   (b) facilitating communication between the applicant and the Secretary of the Board/Government departments.
方便申請人與委員會秘書及政府部門之間進行聯絡。

2. The personal data provided by the applicant in this application may also be disclosed to other persons for the purposes mentioned in paragraph 1 above.
申請人就這宗申請提供的個人資料，或亦會向其他人士披露，以作上述第 1 段提及的用途。

3. An applicant has a right of access and correction with respect to his/her personal data as provided under the Personal Data (Privacy) Ordinance (Cap. 486). Request for personal data access and correction should be addressed to the Secretary of the Board at 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong.
根據《個人資料(私隱)條例》(第 486 章)的規定，申請人有權查閱及更正其個人資料。如欲查閱及更正個人資料，應向委員會秘書提出有關要求，其地址為香港北角渣華道 333 號北角政府合署 15 樓。

For Developments involving Columbarium Use, please also complete the following:
如發展涉及靈灰安置所用途，請另外填妥以下資料：

Ash interment capacity 骨灰安放容量@

Maximum number of sets of ashes that may be interred in the niches
在龕位內最多可安放骨灰的數量 _____

Maximum number of sets of ashes that may be interred other than in niches
在非龕位的範圍內最多可安放骨灰的數量 _____

Total number of niches 龕位總數 _____

Total number of single niches
單人龕位總數 _____

Number of single niches (sold and occupied)
單人龕位數目 (已售並佔用) _____

Number of single niches (sold but unoccupied)
單人龕位數目 (已售但未佔用) _____

Number of single niches (residual for sale)
單人龕位數目 (待售) _____

Total number of double niches
雙人龕位總數 _____

Number of double niches (sold and fully occupied)
雙人龕位數目 (已售並全部佔用) _____

Number of double niches (sold and partially occupied)
雙人龕位數目 (已售並部分佔用) _____

Number of double niches (sold but unoccupied)
雙人龕位數目 (已售但未佔用) _____

Number of double niches (residual for sale)
雙人龕位數目 (待售) _____

Total no. of niches other than single or double niches (please specify type)
除單人及雙人龕位外的其他龕位總數 (請列明類別)

_____

Number of niches (sold and fully occupied)
龕位數目 (已售並全部佔用) _____

Number of niches (sold and partially occupied)
龕位數目 (已售並部分佔用) _____

Number of niches (sold but unoccupied)
龕位數目 (已售但未佔用) _____

Number of niches (residual for sale)
龕位數目 (待售) _____

Proposed operating hours 擬議營運時間 _____

_____

@ Ash interment capacity in relation to a columbarium means –
就靈灰安置所而言，骨灰安放容量指：
- the maximum number of containers of ashes that may be interred in each niche in the columbarium;
每個龕位內可安放的骨灰容器的最高數目；
- the maximum number of sets of ashes that may be interred other than in niches in any area in the columbarium; and
在該靈灰安置所並非龕位的範圍內，總共最多可安放多少份骨灰；以及
- the total number of sets of ashes that may be interred in the columbarium.
在該骨灰安置所內，總共最多可安放多少份骨灰。

Gist of Application 申請摘要

(Please provide details in both English and Chinese as far as possible. This part will be circulated to relevant consultees, uploaded to the Town Planning Board's Website for browsing and free downloading by the public and available at the Planning Enquiry Counters of the Planning Department for general information.)
(請盡量以英文及中文填寫。此部分將會發送予相關諮詢人士、上載至城市規劃委員會網頁供公眾免費瀏覽及下載及於規劃署規劃資料查詢處供一般參閱。)

Application No. 申請編號	(For Official Use Only) (請勿填寫此欄)
Location/address 位置／地址	Lot No. 3018 S.A in D.D. 104, Mai Po, Yuen Long
Site area 地盤面積	3,220 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 sq. m 平方米 ☐ About 約)
Plan 圖則	Approved Mai Po and Fairview Park OZP No. S/YL-MP/8
Zoning 地帶	"Conservation Area" (98%) "Residential (Group C)" (2%)
Applied use/ development 申請用途/發展	'Public Utility Installation' (Solar Photovoltaic System)

(i)	Gross floor area and/or plot ratio 總樓面面積及／或地積比率		sq.m 平方米		Plot Ratio 地積比率
		Domestic 住用	☐ About 約 ☐ Not more than 不多於		☐About 約 ☐Not more than 不多於
		Non-domestic 非住用	☑ About 約 ☐ Not more than 不多於 0.56		☑About 約 ☐Not more than 不多於 0.0002
(ii)	No. of blocks 幢數	Domestic 住用			
		Non-domestic 非住用	1		
		Composite 綜合用途			

(iii)	Building height/No. of storeys 建築物高度／層數	Domestic 住用	m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Non-domestic 非住用	2.05 m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			1 Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Composite 綜合用途	m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
(iv)	Site coverage 上蓋面積	20.84 %	☑ About 約
(v)	No. of units 單位數目	/	
(vi)	Open space 休憩用地	Private 私人	sq.m 平方米 ☐ Not less than 不少於
		Public 公眾	sq.m 平方米 ☐ Not less than 不少於

(vii) No. of parking spaces and loading / unloading spaces 停車位及上落客貨車位數目	Total no. of vehicle parking spaces 停車位總數 Private Car Parking Spaces 私家車車位 Motorcycle Parking Spaces 電單車車位 Light Goods Vehicle Parking Spaces 輕型貨車泊車位 Medium Goods Vehicle Parking Spaces 中型貨車泊車位 Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 Others (Please Specify) 其他 (請列明) _____ _____	/
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數 Taxi Spaces 的士車位 Coach Spaces 旅遊巴車位 Light Goods Vehicle Spaces 輕型貨車車位 Medium Goods Vehicle Spaces 中型貨車位 Heavy Goods Vehicle Spaces 重型貨車車位 Others (Please Specify) 其他 (請列明) _____ _____	/

Submitted Plans, Drawings and Documents 提交的圖則、繪圖及文件

	Chinese 中文	English 英文
Plans and Drawings 圖則及繪圖		
Master layout plan(s)/Layout plan(s) 總綱發展藍圖／布局設計圖	☐	☑
Block plan(s) 樓宇位置圖	☐	☐
Floor plan(s) 樓宇平面圖	☐	☐
Sectional plan(s) 截視圖	☐	☐
Elevation(s) 立視圖	☐	☐
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片	☐	☐
Master landscape plan(s)/Landscape plan(s) 園境設計總圖／園境設計圖	☐	☐
Others (please specify) 其他（請註明）	☐	☑
Location Plan, Aerial Photos, Site Photos and Dimension Plans of Installation		
Reports 報告書		
Planning Statement/Justifications 規劃綱領/理據	☐	☑
Environmental assessment (noise, air and/or water pollutions) 環境評估（噪音、空氣及／或水的污染）	☐	☐
Traffic impact assessment (on vehicles) 就車輛的交通影響評估	☐	☐
Traffic impact assessment (on pedestrians) 就行人的交通影響評估	☐	☐
Visual impact assessment 視覺影響評估	☐	☐
Landscape impact assessment 景觀影響評估	☐	☐
Tree Survey 樹木調查	☐	☐
Geotechnical impact assessment 土力影響評估	☐	☐
Drainage impact assessment 排水影響評估	☐	☐
Sewerage impact assessment 排污影響評估	☐	☐
Risk Assessment 風險評估	☐	☐
Others (please specify) 其他（請註明）	☐	☑
Ecological Impact Assessment Report		

Note: May insert more than one「✔」. 註：可在多於一個方格內加上「✔」號

Note: The information in the Gist of Application above is provided by the applicant for easy reference of the general public. Under no circumstances will the Town Planning Board accept any liabilities for the use of the information nor any inaccuracies or discrepancies of the information provided. In case of doubt, reference should always be made to the submission of the applicant.

註： 上述申請摘要的資料是由申請人提供以方便市民大眾參考。對於所載資料在使用上的問題及文義上的歧異，城市規劃委員會概不負責。若有任何疑問，應查閱申請人提交的文件。

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Detailed Justifications for Proposed Public Utility Installation
(Solar Photovoltaic System) on Lot 3018 S.A in D.D. 104, Mai Po, Yuen Long

The Application Site and Zoning

1. The Application Site (the Site) mainly includes two ponds located between Palm Springs and Royal Palms. It falls within an area mainly zoned "Conservation Area" ("CA") (about 98%) with a minor portion (about 2%) zoned "Residential (Group C)" ("R(C)") on the Mai Po and Fairview Park Outline Zoning Plan (OZP) No. S/YL-MP/8. The proposed solar photovoltaic (PV) system is regarded as a 'public utility installation'. According to the Notes of the "CA" and "R(C)" zones, 'Public Utility Installation' is under Column 2 use which requires planning permission from the Town Planning Board (the Board).

Wetland Regulations and The Site

2. The Site is located within the Wetland Buffer Area (WBA). The ponds form part of the wetland ecosystem in the Deep Bay Area. The site is over 100 metres from the Wetland Conservation Area (WCA). Regulatory context is established under the Town Planning Ordinance (Cap. 131) and the specific planning guidelines for wetland protection, particularly TPB Guideline No. 12C on Wetland Buffer Areas.

3. Before development, the Site with two ponds was idle and inactive, colonized by weeds plants (**Plans 3e and 4a**). In late 2021, the embankments were reinforced and the two ponds were filled with water to a depth of about 2m. It mainly includes two ponds, each to be installed with a floating PV system, which has started electricity generation (**Plans 2, 3g, 4b and 4c**). Besides, a small pond with ancillary filter ponds is proposed at the northwestern portion of the Site. No vehicular access is available. Footway access is via the footpath of Palm Springs Boulevard, then walk down a few steps to a small and flimsy footpath, passing through Lots 3024 and 3023, to reach the western part of the Site (**Plan 2**).

4. The proposed PV system had once been operated in mid-2023 but was subsequently discontinued due to PlanD's enforcement action under case no. CEP/E/YL-MP/252. The Site is currently vacant[1] (**Plan 4g**).

[1] The floating platforms remain on site are directly related and ancillary to the permitted 'Agriculture Use (Fish Pond Culture only)' because they facilitate operator's access for management of the fish ponds.

Ownership and Compliance

5. The subject lot is held under Block Government Lease (BGL) of DD104 and is described as an agricultural lot demised for padi use in the BGL. The applicant is the current landowner. Ownership proof obtained from the Land Registry has been submitted.

The Proposal

6. The applicant, owner of the Site, seeks planning permission to use the Site for proposed public utility installation (solar photovoltaic system). The major development parameters of the current application are as follows:

Applied Use	Public Utility Installation (solar photovoltaic system)
Site Area	About 3,220.0m^2
Floor Area	Meter Room– 0.56 m^2
Total GFA	0.56 m^2
No., Size and Height of Installation/Structure	3 - Phase 1 – 36.59m x 6.87m including 56 solar panels (size 2.094m x 1.038m) with tilt angle of 1º facing south (total generation capacity 20.00 kw **(Drawing 1)** - Phase 2 – 41.37m x 10.13m including 96 solar panels (size 2.094m x 1.038m) with tilt angle of 1º facing south (total generation capacity 30.00 kw) **(Drawing 2)** - Meter Room – 2.05m, 1 storey
No. of Parking Space	---

7. The PV systems at the Site would comprise a total of 152 PV panels (**Plans 4b and 4c**), with an installed generation capacity of 50 kilowatts. The PV panels are non-glare plates installed on two floating platforms fabricated with hazardous free materials, adopting a floating installation approach to minimize intrusive construction works, avoid pond dredging or filling, preserve existing water capacity and pond function, and maintain compatibility with the underlying aquaculture use. The design further incorporates non-reflective panel surfaces to reduce visual impacts, a floating platform system that avoids permanent modification of the water body, and footpath access only via Palm Springs Boulevard without any vehicular access.

Site History and Current Conditions

8. The subject lot is held under Block Government Lease (BGL) of DD104 and is described as an agricultural lot demised as "padi" use in the BGL. In the 1960s, the Site was a paddy field (**Plan 3a**). Fishpond aquaculture in Hong Kong flourished in the mid-1980s and experienced a gradual decline since then. The applicant purchased the Site in 1988 and the two fishponds were left idle and became inactive with no aquaculture activity. In 1990, the two ponds still contained plenty of water (**Plan 3b**).

9. However, from 2000 onwards, fish pond aquaculture in Hong Kong experienced a gradual decline, and the Site's ponds were left idle and became inactive with no aquaculture activity, leading to progressive reduction in water depth, overgrowth of invasive weedy plants including *Bidens alba* and *Brachiaria mutica* from 2000 (**Plans 3c and 3d**), absence of pond drainage and maintenance practices, and consequent degradation of pond ecology and water quality conditions.

10. By 2014–2015, before commencement of the current proposal, the Site had become largely colonized by weedy plants (**Plan 4a**), with environmental surveys revealing algae growth at the western side of the pond in 2015 (**Plan 3e**) together with lacking of management in the ponds and overgrowth of weedy plants indicating a degrading habitat, due to blockage of sunlight reaching the water as well as decomposition of dead plants which consumes oxygen in the waters, all of which indicating ecological imbalance caused by excessive organic material from decomposing dead plants and leaves, reduced water quality and loss of dissolved oxygen due to decomposition and sunlight blockage, and progressive desiccation of the water body. In 2021, the ponds were nearly dried out. The bottom soil was exposed and displayed a reddish-brown color, indicating an oxidized state characteristic of dried pond sediments (**Plan 3f**). Without intervention, the ponds would undergo natural succession toward a terrestrial system and be permanently lost.

11. In 2021, the ponds were nearly dried out. The bottom soil was exposed and revealed a reddish-brown color, which gave the indication that it was in an oxidized state (**Plan 3f**). To facilitate the proposed use of the solar photovoltaic system, management on these ponds has been conducted since 2023. The overgrown weeds in the ponds were removed. Both ponds were refilled with water with regular maintenance water-depth monitoring and stocked with fish.

12. The ponds at the Site are undergoing the medium stage of pond succession - a natural ecological process in which abandoned fishponds gradually transition from aquatic to terrestrial habitats through vegetation colonization and water loss. In the long term, without active management, these water bodies would eventually dry out completely and be converted to terrestrial habitats, resulting in permanent loss of wetland function and loss of habitat for wetland-dependent species.

13. This succession process is precisely what the planning intention of the Conservation Area (CA) zone seeks to prevent. According to paragraph 9.10.2 of the Explanatory Statement of the OZP, existing fishpond culture should be maintained and its continuous operation is encouraged.

14. To facilitate the proposed use of the solar photovoltaic system and to reverse pond degradation, management of these ponds has been conducted since 2023, including removal of overgrown weeds, refilling of both ponds with water to a depth of approximately 2 m to restore aquatic habitat, establishment of regular maintenance and water-depth monitoring, stocking of the ponds with fish to restore aquaculture function. In late 2021, the embankments were reinforced to support subsequent infrastructure works (**Plans 3g, 4b and 4c**).

15. The Site currently comprises two main water bodies—two larger ponds with proposed floating PV systems under the current application and one small fish pond with associated filter ponds for pond management—and has no vehicular access, with footway access only via the footpath of Palm Springs Boulevard, then down a few steps to a small pathway passing through Lots 3024 and 3023 to reach the western part of the Site (**Plan 2**).

<u>No Adverse Impacts to the Application Site and Surroundings</u>

Visual Landscape

16. The Application involves the installation of 2 floating solar photovoltaic system. The installation works do not require any dredging/pond filling, this floating approach shall minimize the impacts and disturbances to the existing visual landscape, as the existing water capacity within the ponds will be maintained.

Vegetation and Tree Protection

17. No vegetation or tree felling will be carried out at the Application Site during the installation phase. The existing terrestrial vegetation and tree coverage surrounding the ponds will be preserved. As such, adverse visual and landscape impacts to the surrounding areas are not anticipated.

Operational Phase Maintenance and Management

18. Regular inspections will identify and manually remove invasive plant species to protect native vegetation, monthly grass cutting and maintenance will be conducted to prevent overgrowth around the solar photovoltaic system and ensure its optimal operation while avoiding impact to the visual landscape, maintenance work for pond bunds will be undertaken approximately every three years, the visual and landscape amenity of the Site will be enhanced through adequate landscape proposals, and the floating PV systems will be shielded from the low-density residential development of Palm Springs by buffer planting to ensure no adverse visual impact is generated.

Accessibility and Traffic Impact

19. The Site is accessible via footpaths only. No vehicular access is available and no parking space would be provided. The Site can only be accessed on foot via Palm Springs Boulevard and the connecting pathways through adjacent lots. Therefore, adverse traffic impact is not anticipated. The proposed development will not generate vehicle movements or traffic demand.

Ecology and Environment

20. Information on the ecological baseline conditions of the Application Site was collected through a comprehensive 12-month literature review and field surveys from February 2024 to January 2025, covering both dry and wet seasons. This information was integrated into the Ecological Impact Assessment (EcoIA) to support the technical aspect of the Application.

21. The proposed works within the Site do not involve significant intrusive construction works such as dredging or pond filling; the floating platform installation approach minimizes disturbance to underlying pond sediments and water quality, benthic habitats and aquatic fauna, and bankside vegetation and riparian habitat, with only a small portion of the pond's surface occupied by the floating platform facilities. The proposed works, combined with pond restoration from the dried condition, provide positive potential impacts to wildlife by restoring open water habitat for

waterbirds, restoring foraging habitat for migratory bird species, and supporting invertebrate and fish populations, with ecological impacts during the operational phase being minor and no specific ecological mitigation measures considered necessary.

22. The pond restoration from the dried-out condition provides positive environmental benefits including restoration of water quality through management and monitoring, prevention of pond succession toward terrestrial habitat, and maintenance of wetland ecosystem function. Tracking back to 2014–2015, the Site was largely abandoned and covered with weedy herbaceous plants; however, management has been conducted since 2023 to facilitate the proposed solar photovoltaic system, including removal of overgrown weeds and refilling of both ponds with water accompanied by regular maintenance, water-depth monitoring, and fish stocking. Through effective management and monitoring of water quality, the environment is enhanced to maintain water quality and provide potential habitats for wildlife, with the detailed management Protocol specified in **Appendix J** of the EcoIA.

Justifications and Conclusions

23. The justifications are summarized as follows:

a) According to Hong Kong's Climate Action Plan 2050 promulgated in October 2021, the Government will strive to increase the share of Renewable Energy (RE) in the fuel mix for electricity generation to 10% by 2035, and further increase it to 15% through facilitating local RE projects, regional co-operation and joint ventures, etc. The proposed development is in line with the Government's objective.

b) Application for taking part in CLP's RE Feed-in-Tariff Scheme has been approved by CLP **(Appendix Ia)**, which fosters the community initiative to promote RE in Hong Kong. The proposed PV system at the Site, with an installed generation capacity of 50 kilowatts, is anticipated to generate 50,000 kilowatt-hours of electricity annually, equivalent to reducing 34 tonnes of carbon dioxide, or the carbon removal by over 1,400 trees. It can be regarded as a sustainable development in line with public interest.

c) The design, installation, operation and maintenance of the installation would be in compliance with the requirements set out under the Technical Guidelines on Grid Connection of RE Power Systems and the Guidance Notes for Solar Photovoltaic System Installation, both issued by EMSD. The PV system has been accepted and registered with EMSD (see receipts in **Appendices Ib and Ic**).

d) An Ecological Impact Assessment (EcoIA) has been conducted, which reveals that no significant ecological impact would result from the proposed development, demonstrating that no species of high conservation importance would experience adverse impacts, the pond restoration provides net positive ecological benefits, the floating installation design minimizes disturbance to underlying habitats, and proposed management measures detailed in Appendix J ensure ongoing environmental quality.

e) The planning intention of "CA" zone is to conserve the ecological value of wetland and fishponds which form an integral part of the wetland ecosystem in the Deep Bay Area. **The proposed development, when combined with proper pond management and monitoring, would restore the water body from its current degraded, nearly-dried state, halt the natural succession process that would otherwise result in permanent loss of the pond as a wetland habitat, reduce algae growth in the ponds through improved water management, reduce carbon emissions through renewable energy generation, and rejuvenate the ponds which would otherwise be permanently lost to terrestrial succession.** Hence, the proposed development would facilitate the conservation of the ecological integrity of the wetland ecosystem, directly supporting the planning intention of the CA zone as stated in paragraph 9.10.2 of the Explanatory Statement of the OZP, which encourages the maintenance and continuous operation of existing fishpond culture.

f) The planning application would satisfy the requirements listed in TPB PG-No. 12C i.e. no-net-loss in the wetland area or function at any scale. The ponds within the Application Site were under poor condition prior to formulation of the present proposal, the restoration of water and fish species improve the habitat quality of the ponds which provide potential foraging habitat for birds and wildlife. The net effect is a gain in wetland area and ecological function compared to the pre-restoration degraded state.

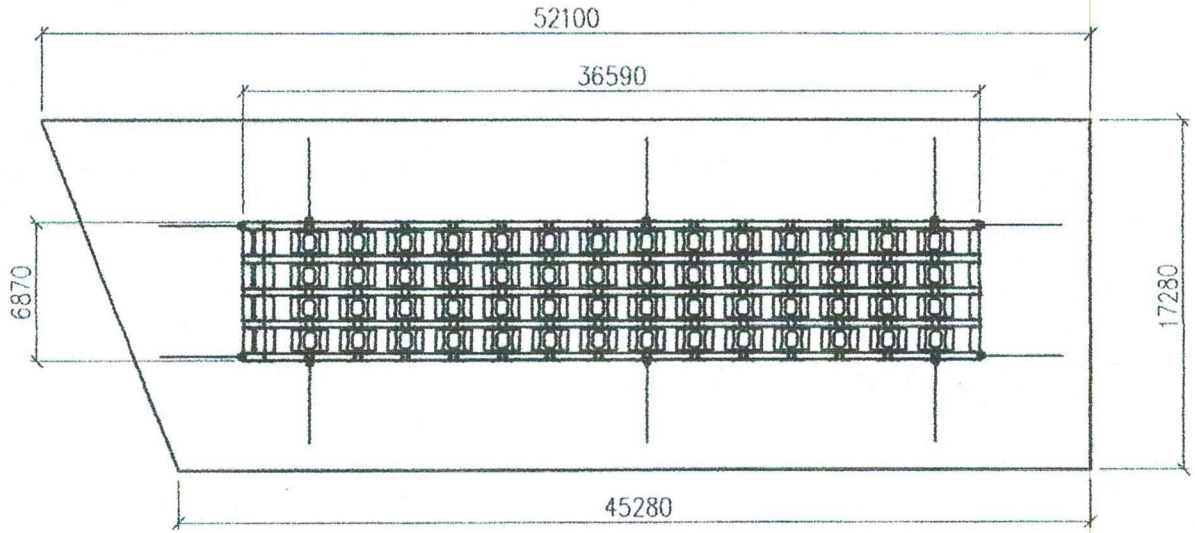
g) In recent years, the Government has developed floating PV systems at various water bodies such as Shek Pik Reservoir, Plover Cove Reservoir, Tai Lam Chung Reservoir, San Tin Polder and Ha Mei San Tsuen Polder. In particular, the San Tin Polder also located within the Wetland Buffer Area (WBA) helps demonstrate that PV system within WBA should be acceptable (**Plans 4e and 4f**). These government projects provide clear precedent for the proposed development within a similar planning context.

h) The proposed development is not incompatible with the surrounding environment, which comprises adjacent fishponds (some active, some abandoned), marsh and wetland habitats, low-density residential development of Palm Springs, and agricultural land uses; the floating PV system, with its minimal disturbance design and enhanced landscape management, sits comfortably within this mixed landscape context.

24. To conclude, the proposed PV system is not incompatible with adjoining land uses, being designed to coexist with aquaculture use and residential development, with no adverse ecological, traffic, environmental, visual and landscape impacts are envisaged. The proposal aligns with Government policy objectives by directly supporting Hong Kong's Climate Action Plan 2050 and renewable energy targets, facilitates pond restoration and wetland conservation by reversing natural succession that would otherwise result in permanent loss of this wetland habitat, complies with all relevant planning guidelines including TPB Guideline No. 12C (no-net-loss in wetland) and Technical Guidelines for RE installation (EMSD), and has precedent in similar developments such as the San Tin Polder and other government floating PV systems in WBA demonstrating acceptability.

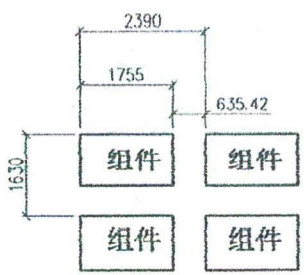
25. In view of the above, it is respectfully submitted that the proposed solar photovoltaic system would constitute a sustainable development that promotes renewable energy in Hong Kong in line with Government objectives, facilitates restoration of a degraded pond environment, conserves the ecological integrity of the wetland ecosystem, maintains compatibility with surrounding land uses, and generates positive environmental and carbon reduction benefits. Favorable consideration is respectfully requested for this application.

RevNo	Revision note	Date	Signature	Checked



Phase 1 Installation - Dimension Plan

PV PANEL TYPE	380W MONOCRYSTALLINE PANEL
NO. OF PANELS	56
PANEL DIMENSIONS	2094*1038MM
TILT ANGLE	1°
FACING DIRECTION	SOUTH



组件间距示意图

设计售高：	单位：mm
组件规格：	隐基380W
组件数量：	56块
直流侧容量：	21280W
项目编号	

Notes

NET NorthMan Energy Technology 诺斯曼能源科技(北京)有限公司 [redacted]

项目名称				
工程名称				
图 名	56块组件排布			
设计	校对	审核	日期	2021.11

Drawing 1

可再生能源發電系統操作程序

Yuen Neng Technology (HK) Limited

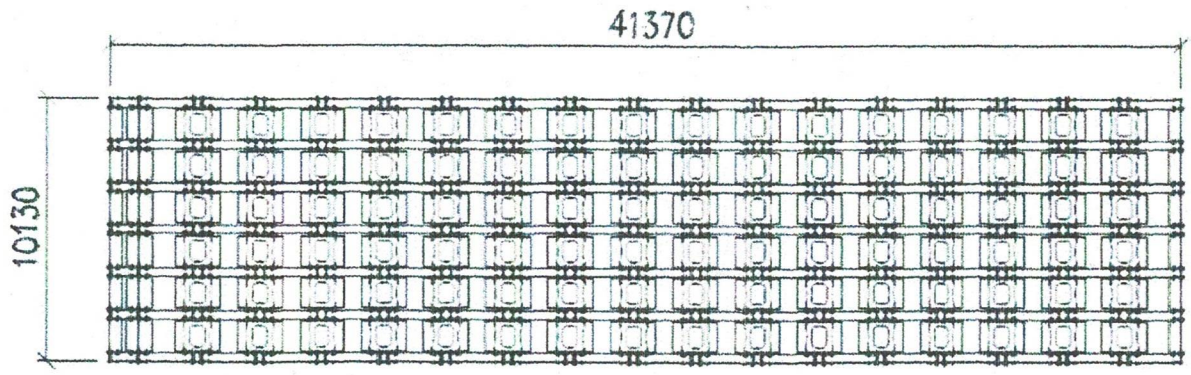
地址: **DD 104 LOT 3018 SA, WO SHANG WAI, SAN TIN YUEN LONG, NEW TERRITORIES, NT**

太陽能板平面及路線圖

可再生能源系統兩局圖

編號:92000034887

PV PANEL TYPE	400W MONOCRYSTALLINE PANEL
NO. OF PANELS	96
PANEL DIMENSIONS	2094*1038MM
TILT ANGLE	1°
FACING DIRECTION	SOUTH



Phase 2 Installation - Dimension Plan

Drawing 2

Planning Application For

Proposed Public Utility Installation (Solar Photovoltaic System) in "Conservation Area" and "Residential (Group C)" Zone, Lot 3018 S.A in D.D. 104, Mai Po, Yuen Long

Ecological Impact Assessment Report

December 2025

Ecosystems Limited

生態系統顧問有限公司

Contents

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1. INTRODUCTION

1.1 Background

1.1.1 This Ecological Impact Assessment ("EcoIA") is prepared to apply the planning permission to use the Site for proposed public utility installations (solar photovoltaic system).

1.1.2 The Application Site falls into an area designated as "Conservation Area" ("CA") according to the approved OZP No. S/YL-MP/8. According to the Notes of the OZP for the "CA" zone, 'public utility installation' is under Column 2 use which requires planning permission from the Town Planning Board.

1.1.3 This report provided the ecological baseline results recorded from February 2024 to January 2025 and potential ecological impact assessment on the proposed Master Layout Plan. The Application Site falls within the Wetland Buffer Area and Conservation Area, other recognized sites of conservation importance in the proximity of the 500m Study Area around the Application Site include the Wetland Conservation Area and the other designated Conservation Areas. The potential ecological impacts on the recognized and the wetland habitats adjacent to the Application Site are evaluated, and the corresponding mitigation measures are recommended.

1.2 Application Site and Study Area

1.2.1 The Application Site mainly includes two ponds surrounded by residential area i.e. Palm Springs and Royal Palms. It falls within an area mainly zoned "Conservation Area" ("CA") (about 98%) with a minor portion (about 2%) zoned "residential (Group C)"("R(C)") on the Mai Po and Fairview Park Outline Zoning Plan (OZP) NO. S/YL-MP/8. The Study Area for this Ecological Impact Assessment covers the area within 500m from the Application Site boundary and the areas likely to be affected by the proposed development (**Figure 1**).

1.2.2 The history and condition of the Application Site indicate that the ponds have been idle and inactive, with no aquaculture activity since 1990. From the year 2000 onwards, the water level in both ponds gradually decreased, leading to overgrowth of weedy plants such as *Bidens alba* and *Brachiaria mutica*. As the ponds were not actively managed as fishponds, resulting in a lack of pond drain down practices which attract waterbirds to forage. The lack of management in the ponds with overgrowth of weedy plants indicates a degrading habitat, due to the blockage of sunlight reaching the water as well as decomposition of dead plants which consumes oxygen in the waters. Hence, the water quality was deteriorated and no longer favourable for aquatic life. In addition, the overgrown ponds could not provide an open water habitat for waterbirds that recorded in the vicinity (e.g. ardeids, waders etc.). In 2021, the ponds were nearly dried out.

1.2.3 To facilitate the proposed use of the solar photovoltaic system, management on these ponds has been conducted since 2023, as the presence of dense plants would interfere with installation and impair the operation of the solar photovoltaic system, the weedy

plants were hence removed, and the ponds were filled with waters which aimed to lift up the proposed solar panels, and to limit the growth of terrestrial weedy plants. The ponds were hence restored from degrading/dried out to managed ponds to facilitate the proposed application.

2. APPROACH AND METHODOLOGY

2.1 Legislation, Standards and Guidelines

2.1.1 The HKSAR ordinances and regulations that are relevant to ecology 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 (Cap. 170);
- Environmental Impact Assessment Ordinance (Cap. 499) and the associated Technical Memorandum on Environmental Impact Assessment Process; and
- The Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) and its subsidiary legislation.

2.1.2 The present EcoIA also made reference to the following guidelines and standards as well as international conventions:

- Hong Kong Planning Standards and Guidelines (HKPSG) Chapter 10, "Conservation";
- 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; and
- EIAO Guidance Note No. 10/2023 – Methodologies for Terrestrial and Freshwater Ecological Baseline Surveys.

2.1.3 The ecological baseline evaluation refers to the following Mainland legislations:

- List of State Protected Wild Animals, promulgated by the State Council 國家重點保護野生動物名錄;
- List of State Protected Wild Plants, promulgated by the State Council 國家重點保護野生植物名錄;

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) Red List of Threatened Species.** IUCN established the IUCN Red List of Threatened Species™, which has since evolved into the world's most comprehensive data source on the global extinction risk of species. The IUCN Red List is considered the authoritative publication to classify species into nine groups, but only CR, EN and VU are considered as Threatened Category:
  - Extinct (EX) - No individuals remaining;
  - Extinct in the Wild (EW) - Known only to survive in captivity, or as a naturalized population outside its historic range;
  - Critically Endangered (CR) - Extremely high risk of extinction in the wild;
  - Endangered (EN) - Very high risk of extinction in the wild;
  - Vulnerable (VU) - High risk of extinction in the wild;
  - Near Threatened (NT) - Likely to become endangered in the near future;
  - Least Concern (LC) - Lowest risk. Does not qualify for a higher risk category.
  - Data Deficient (DD) - Knowledge of the species is inadequate to enable assessment its risk of extinction; and
  - Not Evaluated (NE) - Species not yet evaluated against the criteria.

2.2 Criteria of Evaluating Species of Conservation importance

2.2.1 Species listed under local legislation and international conventions for conservation of flora and fauna will be given special attention. In accordance with Table 3, Annex 8 of the EIAO-TM, the ecological value of species should be assessed in terms of protection status, species distribution, and rarity. For fauna species, criteria relating to these three aspects were considered, such as being protected under Cap. 170 (except birds and the species listed under the ordinance are exotic or regarded as common / widely distributed), Cap. 586, and/or regional/global legislations/conventions (i.e. the protection status), whether they are endemic species (i.e. species distribution and being considered rare or restricted and highlighted in publications such as Fellowes *et al.* (2002)) (i.e. rarity). References were also made to those protected by law in China. Flora species are considered of conservation importance when it is protected/listed under the regional/global legislations/conventions (e.g. listed under Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586); Forestry Regulations (Cap. 96A); Category I or II protected species in mainland China; listed by IUCN (2024) or CITES), and concerned due to species distribution and rarity (e.g. considered rare by Agriculture, Fisheries and Conservation Department (AFCD) (2003, 2007); Xing *et al.* (2000); Wu and Lee (2000); or Siu (2000). 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 short, flora or fauna species protected by the following conventions and/or endemic to Hong Kong were considered to be species of conservation importance:

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

2.2.2 The species identified as having conservation importance will be further categorised in accordance with their relevance to potential impacts, which will be assessed in accordance with the EIAO-TM criteria.

2.3 Key ecological issues

2.3.1 Key ecological issues identified include the following:

- Conservation area (CA)
- Wetland Conservation Area (WCA)
- Wetland Buffer Area (WBA)

2.4 Review of Existing Information

2.4.1 Literature review was conducted to characterize the existing conditions within the Study Area and to identify important habitats and species of conservation importance

in the area. The literature included Government and private sector reports, independent and Government published literature, academic studies, vegetation maps and land use maps.

2.4.2 Reviewed information included, but not be limited to the following:

- AFCD publications and website
- Annual reports and other publications of The Hong Kong Bird Watching Society
- Hong Kong Biodiversity – Newsletter of the Department of Agriculture, Fisheries and Conservation
- Methodologies for monitoring fireflies in Hong Kong (Yiu Vor 2020)
- Porcupine! – Newsletter of Division of Ecology & Biodiversity of University of Hong Kong
- The Terrestrial Biodiversity Survey conducted by HKU
- Relevant EIA reports including AEIAR-120/2008 - Proposed Comprehensive Development at Wo Shang Wai, Yuen Long; AEIAR-189/2015 - Comprehensive Development and Wetland Protection near Yau Mei San Tsuen.; and AEIAR-261/2024 - San Tin / Lok Ma Chau Development Node.

2.5 Ecological Survey Methodology

2.5.1 The baseline ecological survey programme covered a 12-month duration from February 2024 to January 2025 including dry and wet seasons. The ecological surveys covered but were not limited to flora, fauna and any other habitats/species of conservation importance. The ecological surveys have covered different habitats according to the results after ground-truthing. Detailed methodology is stated below.

Habitat and Vegetation

2.5.2 Habitats within the Study Area were mapped based on the latest government aerial photos and database combined with field ground-truthing. Representative areas of each habitat type were surveyed on foot. Plant species of each habitat type encountered and their relative abundance were recorded with special attention to species of conservation importance. Vegetation survey was conducted by direct observation. A plant list was produced, and the dominant plant species were reported as such information is a useful indication of habitat quality. Identification of flora species and status in Hong Kong made reference to Xing *et al.* (2000), Hu *et al.* (2003), Lai *et al.* (2008), Hong Kong Herbarium (2022), and Hong Kong Herbarium and South China Botanical Gardens (2007; 2008; 2009; 2011).

Terrestrial Mammal

2.5.3 Mammal surveys (including day and night-time surveys) were carried out in representative habitats within the Study Area along the transects (Figure 2). In accordance with EIAO Guidance Note No. 10/2023, as mammals in Hong Kong which are of conservation importance are mostly secretive and nocturnal, all sightings, tracks, and signs of mammals (including droppings) were actively searched within the representative habitats of the Study Area. Night surveys were conducted to survey nocturnal mammal species (e.g., bats). As it is a common practice to conserve bat

roost as direct impact on bat roost would affect the species population, attention was paid to bat roost location. Active search was carried out in the potential roosting locations (e.g. cave, mine, tunnel, abandoned buildings, palm trees etc.). Ultrasonic bat detector was used for locating and identifying bats after sunset. Camera traps were installed to survey the cryptic mammals at representative locations within the Application Site. Nomenclature for mammals follows that available from the Hong Kong Biodiversity Information Hub.

Avifauna

2.5.4 The avifauna of representative habitats within the Study Area were surveyed in the active period of bird activities (i.e. early morning and dusk) using transect count method (Figure 2). The presence and abundance of avifauna species at various habitats observed or heard from survey transects were recorded. Behaviours relating to roosting (including night roosting sites, if any), breeding (e.g., nest building) and feeding observed during the surveys were recorded. Night surveys were also conducted to record nocturnal avifauna (e.g., owls). The location(s) of any encountered avifauna species of conservation importance were recorded, along with any notable behaviours. Ornithological nomenclature in this study follows the latest Hong Kong Bird Watching Society List of Hong Kong Birds.

Herpetofauna

2.5.5 Herpetofauna surveys (including day and night survey) were carried out and covered representative habitats within the Study Area along the transect (Figure 2). Particular attention was given to streams/watercourses or other water bodies. Herpetofauna surveys were conducted through direct observation and active searching in all potential hiding places such as among leaf litter, inside holes, under stones and logs within the Study Area. During the surveys, all reptiles and amphibians sighted and heard were recorded. Nocturnal auditory detection of species-specific calls was used to survey frogs and toads during night surveys. The nomenclature follows that available from the Hong Kong Biodiversity Information Hub.

Butterfly and Odonate

2.5.6 Butterfly and Odonate surveys were conducted by transect survey (Figure 2) during daytime and under fine weather when most butterflies and dragonflies are active. All encountered dragonflies and butterflies were recorded by species by direct observation with binoculars and their abundance will be recorded. The nomenclature follows that available from the Hong Kong Biodiversity Information Hub.

Firefly

2.5.7 Firefly surveys were conducted between April 2024 to June 2024 and October 2024 to December 2024. The survey was conducted by transect survey (Figure 2). The firefly survey was conducted at dusk, day-time and night-time. During the survey, any firefly observed was identified to the species level, where possible. The abundance and distribution of fireflies were recorded.

Freshwater fish and invertebrates

2.5.8 Surveys of freshwater communities were undertaken at streams/watercourses and other water bodies (either natural or man-made) within the Study Area by direct observation during day-time and night-time. All freshwater fauna found were

identified to the lowest practicable taxonomic level and their abundance was recorded. The nomenclature for fish follows that available from the Hong Kong Biodiversity Information Hub.

2.6 Ecological Survey Programme

2.6.1 The survey programme is presented in **Table 2.1**.

Table 2.1 Ecological Survey Programme

Year	2024											2025
Month	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Season	Dry		Wet							Dry		
Habitat and Vegetation	D		D							D		
Mammal Survey	D, Du&N	D, Du&N	D, Du&N	D, Du&	D, Du&	D, Du&	D, Du&	D, Du&	D, Du&	D, Du&	D, Du&	D, Du&
Bird Survey	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N	EM, Du&N
Butterfly	-	D	D	D	D	D	D	D	D	D	-	-
Odonate	-	-	D	D	D	D	D	D	D	-	-	-
Reptiles	-	-	D&N	D&N	D&N	D&N	D&N	D&N	D&N	-	-	-
Amphibians	-	D&N	D&N	D&N	D&N	D&N	D&N	D&N	D&N	-	-	-
Firefly	-	-	D, Du &N	D, Du &N	D, Du &N	-	-	-	D, Du &N	D, Du &N	D, Du &N	-
Freshwater fish and invertebrates	-	D&N	D&N	D&N	D&N	D&N	D&N	D&N	D&N	D&N	-	-

Notes:
1. Abbreviations: EM = Early Morning-survey; D = Day-time survey; Du = Dusk-time survey; N= Night-time survey.
2. Fauna observed (i.e., daytime and/or night-time) beyond their active period in other surveys will also be recorded.

3. RESULTS OF LITERATURE REVIEW

3.1 Recognized Sites of Conservation Importance

3.1.1 Although the Application Site is surrounded by residential area, there are several recognized sites of conservation importance within or in the vicinity of the Application Site Boundary and Study Area. The locations of the recognized sites of conservation importance are shown in **Figure 1**.

Conservation Area (CA)

3.1.2 The Application Site falls within an area mainly zoned "Conservation Area" ("CA") according to the Outline Zoning Plan (OZP) No. S/YL-MP/8 (Figure 1), the CA zone

comprises ponds between Palm Springs and Ryal Palms which is to conserve the ecological value of wetland and fish ponds which form an integral part of the wetland ecosystem in the Deep Bay Area.

Wetland Conservation Area (WCA)

3.1.3 The WCA The Wetland Conservation Area (WCA) was designated by Town Planning Board (TPB) to conserve the ecological value of the fish ponds in the Deep Bay wetland ecosystem (TPB Guideline No. 12B). The WCA comprises existing active and abandoned fish ponds within the Deep Bay wetland system continuous with the Mai Po Inner Deep Bay Ramsar Site, while the aim is to conserve the ecological value and functions of the fish ponds as an integral part of the system. Except for permitted essential conservation or infrastructural works, no development involving pond-filling or other works detrimental to the ecological function of the wetland are allowed within the WCA. All essential works conducted within the WCA should comply with the "No-Net-Loss in Wetland" principle. The Application Site is over 100m from the WCA.

Wetland Buffer Area (WBA)

3.1.4 The WBA is a buffer zone of approximately 500 m width along the landward boundary of the Wetland Conservation Area (WCA). The planning intention is to protect the ecological integrity of wetland habitats within the WCA (TPB Guideline No. 12C). Any works within the WBA causing negative impacts on the ecological value of the WCA should be avoided unless appropriate mitigation measures are implemented. However, residential or recreational development may be allowed with appropriate conditions where undesirable open storage area is removed, and wetlands are restored. Again, such development should satisfy the "No-Net-Loss in Wetland" principle. The Application Site is within the WBA.

3.2 Species of Conservation Importance

3.2.1 In this study, only those species of conservation importance, which have been previously documented in the vicinity of the present Study Area (specifically within a 500-meter radius) are subject to review due to their potential susceptibility to the impacts of the proposed works. Two Environmental Impact Assessment (EIA) reports are particularly pertinent to the current project: 1) AEIAR-120/2008, which pertains to the Proposed Comprehensive Development at Wo Shang Wai, Yuen Long, and 2) AEIAR-189/2015, which addresses Comprehensive Development and Wetland Protection in the vicinity of Yau Mei San Tsuen. The study periods of both EIAs were 12 months.

Flora

3.2.2 Pursuant to AEIAR-189/2015, a total of 49 plant species were identified, and according to AEIAR-120/2008, 66 plant species were recorded. None of these species are classified as conservation importance; all are deemed common and prevalent across the region. Referring to AEIAR-261/2024, only a portion of the Assessment Area overlaps with this application including the habitats of the develop area,

modified watercourse and plantation, no flora species of conservation are recorded within the Study Area.

Fauna

3.2.3 AEIAR-120/2008 indicates that among the 5 mammal species observed, Ryukyu Mouse *Mus caroli* and Japanese Pipistrelle *Pipistrellus abramus* are considered as conservation importance. The study identified 73 avifaunal species, with 27 of them being of conservation importance. Additionally, 3 reptilian and 5 amphibian species were recorded but none are considered as species of conservation importance. A total of 21 butterfly species recorded, only the Danaid Egg-fly *Hypolimnas misippus* is considered as species of conservation importance. 19 odonate species were observed, with the Scarlet Basker *Urothemis signata* being the sole species of conservation importance.

3.2.4 AEIAR-189/2015 reports that two bat species, the Short-nosed Fruit Bat *Cynopterus sphinx* and the Japanese Pipistrelle *Pipistrellus abramus*, roost at Palm Springs. The study recorded 95 avifaunal species, of which 35 are recognized for their conservation importance. Among the six reptilian species observed, only the Many-banded Krait *Bungarus multicinctus multicinctus* is classified as species of conservation importance. The study also recorded nine amphibian species, but none of them are considered as species of conservation importance. Furthermore, 38 butterfly species were noted, with two species including the Plain Hedge Blue *Celastrina lavendularis* and the Danaid Egg-fly *Hypolimnas misippus*, identified as species of conservation importance. 25 odonate species were recorded, including two of conservation importance i.e. the Coastal Glider *Macrodiplax cora* and the Scarlet Basker *Urothemis signata*.

3.2.5 Referring to AEIAR-261/2024, only a portion of the Assessment Area overlaps with this application including the habitats of the develop area, modified watercourse and plantation. No fauna species of conservation importance recorded in AEIAR-261/2024 falls into the Study Area of this application.

3.2.6 All species of conservation importance identified in previous EIAs are concisely summarized and enumerated in **Table 3.1**.

Table 3.1 List of fauna species of conservation importance recorded within and in the vicinity of the present Study Area from reviewed literature

Common Names	Rarity and Distribution in Hong Kong [1]	Conservation status [2,3,4,5,6,7]	Location	Source
Mammal				
Ryukyu Mouse *Mus caroli*	Rare. Found only in Mai Po and Hong Kong Wetland Park.	AFCD Assessment: Rare	Within the Study Area in previous study	MOTT CONNELL LTD (2008).
Short-nosed Fruit Bat *Cynopterus sphinx*	Very common. Very widely distributed in urban and countryside areas throughout Hong Kong.	Cap. 170	Roosting at Palm Springs	ENVIRON HONG KONG LTD (2015)

Common Names	Rarity and Distribution in Hong Kong [1]	Conservation status [2,3,4,5,6,7]	Location	Source
Japanese Pipistrelle *Pipistrellus abramus*	Very common. Widely distributed throughout Hong Kong.	Cap. 170	Roosting at Palm Springs	ENVIRON HONG KONG LTD (2015)
Bird (Remark: all wild bird species are protected under Cap. 170 Wild Animals Protection Ordinance in Hong Kong 2)				
Eurasian Wigeon *Mareca penelope*	Winter visitor. Found in Deep Bay area, Tai Lam Chung.	Fellowes *et al.* (2002): RC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008).
Northern Shoveler *Spatula clypeata*	Abundant winter visitor. Found in Deep Bay area.	Fellowes *et al.* (2002): RC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Northern Pintail *Anas acuta*	Abundant winter visitor. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin.	Fellowes *et al.* (2002): RC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008)
Eurasian Teal *Anas crecca*	Common winter visitor. Found in Deep Bay area, Shuen Wan, Tai Lam Chung Reservoir, Victoria Harbour, urban parks.	Fellowes *et al.* (2002): RC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Little Grebe *Tachybaptus ruficollis*	Common resident. Found in Deep Bay area.	Fellowes *et al.* (2002): LC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Black-faced Spoonbill *Platalea minor*	Common winter visitor. Found in Deep Bay area.	IUCN Red List: EN; Fellowes et al. (2002): PGC; List of Wild Animals under State Priority Conservation: Class I; Red List of China's Vertebrates: EN	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008)
Yellow Bittern *Ixobrychus sinensis*	Uncommon summer visitor and common passage migrant. Found in Deep Bay area, Chek Keng, Tai Long Wan.	Fellowes *et al.* (2002): (LC)	Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Cinnamon Bittern *Ixobrychus cinnamomeus*	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	Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Black-crowned Night Heron *Nycticorax nycticorax*	Common resident and migrant. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): LC	Agricultural land and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Striated Heron *Butorides striata*	Common summer visitor. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): LC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Chinese Pond Heron *Ardeola bacchus*	Common resident. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): PRC	Agricultural land and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)

Common Names	Rarity and Distribution in Hong Kong [1]	Conservation status [2,3,4,5,6,7]	Location	Source
Eastern Cattle Egret *Bubulcus coromandus*	Resident and common passage migrant. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): LC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008)
Grey Heron *Ardea cinerea*	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.	Fellowes *et al.* (2002): PRC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Purple Heron *Ardea purpurea*	Uncommon passage migrant. Found in Deep Bay area.	Fellowes *et al.* (2002): RC	Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Great Egret *Ardea alba*	Common resident, migrant and winter visitor. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): PRC	Agricultural land and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Intermediate Egret *Ardea intermedia*	Resident and passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape D'Aguilar.	Fellowes *et al.* (2002): RC	Agricultural land and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Little Egret *Egretta garzetta*	Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong.	Fellowes *et al.* (2002): PRC	Agricultural land and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Great Cormorant *Phalacrocorax carbo*	Common winter visitor. Widely distributed in coastal areas throughout Hong Kong.	Fellowes *et al.* (2002): PRC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Western Osprey *Pandion haliaetus*	Common winter visitor. Widely distributed in coastal areas throughout Hong Kong	Fellowes *et al.* (2002): RC; Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008).
Black Kite *Milvus migrans*	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	Developed Area, Pond and Modified Watercourse within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
White-bellied Sea Eagle *Haliaeetus leucogaster*	Locally common resident. Widely distributed in coastal areas throughout Hong Kong.	Fellowes *et al.* (2002): (RC); Cap. 586; List of Wild Animals under State Priority Conservation: Class I; CITES: Appendix II	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008)
Eastern Buzzard *Buteo japonicus*	Common winter visitor. Widely distributed in Hong Kong.	Cap. 586; List of Wild Animals under State Priority Conservation: Class II; CITES: Appendix II	Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)

Common Names	Rarity and Distribution in Hong Kong [1]	Conservation status [2,3,4,5,6,7]	Location	Source
Black-winged Stilt *Himantopus himantopus*	Common migrant and wintor visitor. Found in Deep Bay area, Long Valley, Kam Tin.	Fellowes *et al.* (2002): RC	Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Little Ringed Plover *Charadrius dubius*	Resident, common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.	Fellowes *et al.* (2002): (LC)	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Greater Painted-snipe *Rostratula benghalensis*	Locally common resident. Found in Ha Tsuen, Lok Ma Chau, Kam Tin, Long Valley, Hong Kong Wetland Park.	Fellowes *et al.* (2002): LC	Agricultural land and Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Swinhoe's Snipe *Gallinago megala*	Uncommon passage migrant. Found in Long Valley.	Fellowes *et al.* (2002): LC	Agricultural land within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Common Greenshank *Tringa nebularia*	Abundant passage migrant and winter visitor. Found in Deep Bay area.	Fellowes *et al.* (2002): RC	Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Wood Sandpiper *Tringa glareola*	Common migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.	Fellowes *et al.* (2002): LC	Agricultural land within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Oriental Pratincole *Glareola maldivarum*	Passage migrant. Found in Mai Po, Tsim Bei Tsui.	Fellowes *et al.* (2002): LC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008)
Black-headed Gull *Chroicocephalus ridibundus*	Abundant winter visitor. Found in Deep Bay area and costal waters.	Fellowes *et al.* (2002): PRC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008)
Pacific Swift *Apus pacificus*	Uncommon spring migrant and summer visitor. Mainly found in Deep Bay area and islands.	Fellowes *et al.* (2002): (LC)	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008)
White-throated Kingfisher *Halcyon smyrnensis*	Common resident. Widely distributed in coastal areas throughout Hong Kong	Fellowes *et al.* (2002): (LC); List of Wild Animals under State Priority Conservation: Class II	Agricultural land and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Pied Kingfisher *Ceryle rudis*	Common resident. Widely distributed in lakes and ponds throughout Hong Kong.	Fellowes *et al.* (2002): (LC)	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Collared Crow *Corvus torquatus*	Locally common resident. Found in Inner Deep Bay area, Nam Chung, Kei Ling Ha, Tai Mei Tuk, Pok Fu Lam, Chek lap Kok, Shuen Wan, Lam Tsuen.	IUCN Red List: VU; Fellowes *et al.* (2002): LC	Developed Area and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)

Common Names	Rarity and Distribution in Hong Kong [1]	Conservation status [2,3,4,5,6,7]	Location	Source
Chinese Penduline Tit *Remiz consobrinus*	Common autumn migrant and winter visitor. Found in Deep Bay area, Tai O , Mui Wo, Long Valley, Luk Keng, Chek Lap Kok.	Fellowes *et al.* (2002): RC	Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Pallas's Grasshopper Warbler *Helopsaltes certhiola*	Common autumn passage migrant. Found in wetland areas throughout Hong Kong.	Fellowes *et al.* (2002): LC	Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Zitting Cisticola *Cisticola juncidis*	Common passage migrant and winter visitor. Widely distributed in grassland throughout Hong Kong.	Fellowes *et al.* (2002): LC	Agricultural land within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Red-billed Starling *Spodiopsar sericeus*	Abundant winter visitor. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): GC	Agricultural land and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
White-cheeked Starling *Spodiopsar cineraceus*	Locally common winter visitor. Found in Deep Bay area, Kam Tin, Long Valley.	Fellowes *et al.* (2002): PRC	Within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Daurian Starling *Agropsar sturninus*	Uncommon autumn passage migrant. Found in Mai Po, Long Valley, Kam Tin, Lam Tsuen, Tolo Harbour area, Kowloon Park, Mui Wo, Ho Chung.	Fellowes *et al.* (2002): LC	Agricultural land and Pond within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
White-shouldered Starling *Sturnia sinensis*	Locally common passage migrant and uncommon winter visitor. Found in Kam Tin, Deep Bay area, Po Toi Island, Long Valley, Victoria Park, Ho Chung, Ma Tso Lung, Mui Wo, Lam Tsuen Valley.	Fellowes *et al.* (2002): (LC)	Agricultural land and Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Bluethroat *Luscinia svecica*	Locally common winter visitor. Widely distributed in wet agricultural areas throughout Hong Kong.	Fellowes *et al.* (2002): LC; List of Wild Animals under State Priority Conservation: Class II	Agricultural land within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Red-throated Pipit *Anthus cervinus*	Common passage migrant and winter visitor. Widely distributed in dry agricutural areas throughout Hong Kong.	Fellowes *et al.* (2002): LC	Agricultural land within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Butterfly				
Plain Hedge Blue *Celastrina lavendularis*	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	Agricultural land within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Danaid Egg-fly *Hypolimnas misippus*	Uncommon. Ngau Ngak Shan, Lung Kwu Tan, Hong Kong Wetland Park, Mount Parker, Cloudy Hill, Lin Ma Hang	Fellowes *et al.* (2002): LC	Agricultural land, Pond and Modified Watercourse within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)
Odonate				

Common Names	Rarity and Distribution in Hong Kong [1]	Conservation status [2,3,4,5,6,7]	Location	Source
Coastal Glider *Macrodiplax cora*	Common. Frequents marshes and ponds with dense vegetation, especially adjacent to coastal areas.	Fellowes *et al.* (2002): LC	Agricultural land within the Study Area in previous study	ENVIRON HONG KONG LTD (2015)
Scarlet Basker *Urothemis signata*	Common. Common in areas with abandoned fish ponds throughout Hong Kong.	Fellowes *et al.* (2002): LC	Pond within the Study Area in previous study	MOTT CONNELL LTD (2008) ENVIRON HONG KONG LTD (2015)

Notes

1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub
2. Cap. 170 Wild Animals Protection Ordinance
3. Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance.
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. IUCN Red List of Threatened Species(2024). The International Union for Conservation of Nature's Red List of Threatened Species (IUCN) Red List Version 2024.
6. 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.
7. List of State Protected Wild Animals, promulgated by the State Council

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

4. RESULTS OF ECOLOGICAL SURVEY

4.1 Habitat

4.1.1 There were six habitats identified within the Study Area, namely agricultural land, developed area, overgrown pond, plantation, pond and modified watercourse (**Figure 3**). Pond and developed area were the habitats found within the Application Site. A habitat map based on recent aerial photographs and detailed ground-truthing is given in **Figure 3**. Representative photos of the habitats are shown in **Figure 4**. The area of each habitat was calculated, and these are presented in **Table 4.1**.

Table 4.1 Habitat Size within the Study Area

Habitat	Area Size (ha)		
	Application Site	Study Area	Total Study Area
Agricultural Land	-	11.02 ha	11.02 ha
Developed Area (Other Urban Area)	0.11	65.78 ha	65.89 ha
Modified Watercourse	-	0.16 ha	0.16 ha
Overgrown Pond (Artificial Pond)	-	3.02 ha	3.02 ha
Plantation (Green Urban Area)	-	3.57 ha	3.57 ha
Pond (Artificial Pond)	0.21 ha	9.32ha	9.52 ha
Total	0.32 ha	92.86 ha	93.18 ha

4.1.2 **Agricultural land** – Agricultural lands within the Study Area have scattered distribution mainly at the southern and eastern parts of the Study Area. Most of the agricultural lands were abandoned, which farming practice has been terminated and leaving a bare ground with wet in nature. Thus, hydrophilic species, such as *Brachiaria mutica*, *Colocasia esculenta* and *Cyclosorus interruptus*, were commonly found. Weedy climbers *Ipomoea cairica* and *Mikania micrantha* were also prominent. While the remaining agricultural land was under active farming practice that fruit trees, such as *Dimocarpus longan* and *Musa x paradisiaca* were the major vegetation found there.

4.1.3 **Developed Area (Other Urban Area)** – Developed Area within the Application Site was the pond bund nearby the two ponds within the Application Site. Some fruit trees such as *Litchi chinensis, Musa* x *paradisiaca* and *Artocarpus heterophyllus* could be found at the western part of the developed area within Application Site, while the eastern part was colonized by weedy species, such as *Echinochloa colona*, *Mikania micrantha* and *Ipomoea cairica*. Developed area within the Study Area consisted of villages, residential areas, roads, and other anthropogenic structures in general. The residential area, the Palm Springs, contribute most of the developed area and located at the center of the Study Area. 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*, *Livistona chinensis*, *Melaleuca cajuputi subsp. Cumingiana* and *Calliandra haematocephala*.

4.1.4 **Modified watercourse** – A section of modified watercourse was identified at the eastern part of the Study Area. The modified watercourse associated with developed area inside the Study Area. The beds and banks of the watercourse were modified and generally composed of boulders and stones. Associating with the village and urbanized areas, this section of watercourse was prone to human disturbance, and exotic species, such as *Ipomoea cairica* and *Ludwigia erecta*, were commonly found.

4.1.5 **Overgrown pond (Artificial Pond)** – This habitat had been active fishpond in the past according to aerial photos. However, it is currently abandoned with overgrown vegetation and lentic waterbodies with surface water extensively covered with both weedy and aquatic species, such as *Phragmites australis*, *Mikania micrantha* and *Ipomoea cairica*, and obviously without fish farming practice. They mainly scattered at the western and central part of the Study Area.

4.1.6 **Plantation (Green Urban Area)** – Plantation within the Study Area was mainly in form of roadside and hillside plantation. Trees found in this habitat were mainly landscape/plantation species such as *Eucalyptus citriodora*, *Acacia confusa* and *Ficus microcarpa* and pioneer tree species such as *Macaranga tanarius var. tomentosa*. Whilst the understorey was rather bare or with simple structure and was covered weedy species in the like of *Arachis duranensis, Bidens alba* and *Lindernia antipoda*.

4.1.7 **Pond (Artificial Pond)** – In order to facilitate the proposed solar photovoltaic system, ponds within the Application Site were transformed from overgrown ponds to ponds with management. Only a few aquatic species, such as *Lemna minor, Eichhornia crassipes*, were found with low abundance inside the waterbodies. Some hydrophilic and/or weedy species were also found along the pond bund but submerged or on top of the water surface, such as *Commelina diffusa, Echinochloa colona* and *Mikania micrantha*. While ponds within the Study Area but outside Application Site were scattered among the developed area inside the Study Area. The ponds were actively managed by fish farmer, thus, only a few aquatic species, such as *Typha angustifolia* and *Phragmites australis*, and weedy species, such as *Mikania micrantha* and *Ipomoea cairica*, were recorded at the pond and pond bunds respectively.

4.2 Vegetation

4.2.1 A total of 152 plant species were recorded within the Study Area, among which 70 and 82 are known to be native and exotic to Hong Kong respectively (**Appendix A).** *Ceratopteris thalictroides* are the only 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 3**.

4.2.2 During the initial dry season vegetation survey, one individual of *Ceratopteris thalictroides* was identified in the pond within the Application Site. However, during the subsequent wet and dry season, this individual could no longer be recorded within the Application Site. *Ceratopteris thalictroides* is a rare fern found in wetlands and is listed as vulnerable in China by the book Rare and Precious Plants of Hong Kong. Furthermore, wild individuals of *Ceratopteris thalictroides* are scheduled under State protection (category II).

4.2.3 *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.

4.2.4 *Citrus reticulata* is 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.

4.2.5 *Dimocarpus longan* and *Lichi chinensis* 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.

4.2.6 *Dalbergia* spp. are listed under Appendix II of CITES and protected under Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance in Hong Kong as species in this genus is facing threat due to the overexploitation for its valuable wood (known as rosewood). In the current study, *Dalbergia benthamii* was recorded. As the recorded Dalbergia are climber which is not relevant to the timber exploitation. In addition, the species are considered 'common' in Hong Kong by Corlett *et al.* (2000). Thus, they are not considered as species of conservation importance in the current Study.

4.2.7 *Cyperus odoratus*, *Typha angustifolia* and *Coccinia grandis* are regarded as rare by Corlett *et al.* (2000), yet they are exotic or cultivated. They are not considered as species of conservation importance.

4.3 Fauna

Mammal

4.3.1 A total of 3 mammal species (except bats) were recorded within the Study Area (as detailed in **Appendix B**). None of the recorded species are of conservation importance, all recorded mammal species are common and widespread in Hong Kong.

Mammal - Bat species

4.3.2 Echolocation calls recorded by bat detector (Wildlife Acoustics – Echo Meter Touch 2 PRO) were analyzed. 3 bat species were identified within the Study Area in total (**Appendix C**). Bat species recorded within the Study Area include Chinese Noctule *Nyctalus plancyi*, Japanese Pipistrelle *Pipistrellus abramus* and Least Pipistrelle *Pipistrellus tenuis*. Only 1 very common and widely distributed bat species i.e. Japanese Pipistrelle *Pipistrellus abramus* was identified within the Application Site. All bat species are protected under Cap. 170. Chinese Noctule *Nyctalus plancyi* is listed as Potential Regional Concern (PRC) by Fellowes *et al.* 2002. No bat roost was recorded within the Application Site as well as the Study Area during the survey period.

Avifauna

4.3.3 A total of 52 bird species were recorded within the Study Area (as detailed in **Appendix D**). Among these, 16 species were species of conservation importance

(summarized in **Table 4.8**). Most of the bird species of conservation importance were observed in the Agricultural Land and Pond outside the Application Site. Due to the small area size and surrounding nature (surrounded by residential area) of the Application Site, very low diversity and abundance of waterbirds were recorded, and no dabbling waterbirds (e.g. ducks and grebe) were recorded. Striated Heron *Butorides striata* and Chinese Pond Heron *Ardeola bacchus* were recorded on Pond bund within Application Site, they are species of conservation importance recorded specifically within the Application Site, but the abundance was very low. Additionally, the majority of the recorded bird species are common and widely distributed throughout Hong Kong. Owing to the maneuverability and large home range of birds as well as the abundance of those of conservation importance, these species are not spatially pinpointed on map. List of bird species of conservation importance recorded within the Assessment Area is presented in **Table 4.8** and **Appendix D**.

Odonates and Butterflies

4.3.4 29 butterfly species were recorded within the Study Area, only Danaid Eggfly *Hypolimnas misippus* are of conservation importance (**Appendix E** and **Table 4.8**). The recorded butterfly species are common and widespread in Hong Kong. Most of the butterfly species were recorded in Agricultural Land habitats within the Study Area.

4.3.5 17 odonate species were recorded within the Assessment, none of which are of conservation importance (**Appendix F**). The recorded odonate species are common and widespread in Hong Kong. Most of the odonate species were recorded in Pond within the Study Area.

Herpetofauna

4.3.6 4 species of reptile were recorded within the Study Area, none of which are of conservation importance (**Appendix G**). The recorded reptile species are common and widespread in Hong Kong. Most of the reptile species were recorded in the Developed Area within the Study Area.

4.3.7 6 species of amphibian were recorded within the Study Area, none of which are of conservation importance (**Appendix H**). The recorded amphibian species are common and widespread in Hong Kong. Most of the amphibian species were recorded in the Developed Area and Pond within the Study Area.

Aquatic Fauna

4.3.8 4 aquatic fauna species were recorded within the Study Area, none of which are of conservation importance (**Appendix I**).

Firefly

4.3.9 None of the firefly species was recorded.

4.4 Evaluation of Habitats and Species of Conservation Importance

4.4.1 The ecological value of the habitats within the Study Area as well as the Application Site was evaluated in accordance with the criteria stipulated in Annex 8 of TM-EIAO. Although the locations of those species of conservation importance recorded in the reviewed literature were not specified in the respective literature, those species were also considered when evaluating the ecological value of the habitats (**Table 4.2** to **4.8**). While the bat species recorded in the present study are highly mobile without showing prominent habitat utilization, and therefore bat species recorded are not specially assigned to specific habitats due to the detection range of the bat detector. All bat species identified by recordings from acoustic bat detector were evaluated in **Table 4.10**.

4.4.2 In accordance with Table 3, Annex 8 of the TM-EIAO, the ecological value of species recorded within the Study Area was assessed in terms of protection status (e.g. fauna protected under WAPO (except birds), and flora and fauna protected under regional/global legislation/conventions), species distribution (e.g. endemic), and rarity (e.g. rare or restricted). Flora and fauna species of conservation importance recorded within the 500m Study Area were evaluated according to the TM-EIAO in **Table 4.9** and **Table 4.10**.

Table 4.2 Evaluation of the Application Site

Criterion	**Description**	
	Developed Area (Other Urban Area)	**Pond (Artificial Pond)**
Naturalness	Man-made	Man-made
Size (ha)	0.11 ha within Application Site	0.21 ha within Application Site
Diversity	Low plant species diversity. Very low faunal diversity within Application Site	Low plant species diversity. Low faunal diversity within Application Site
Rarity	No species of conservation importance was recorded during the ecological survey	1 flora species of conservation importance: *Ceratopteris thalictroides* was recorded during the initial dry season vegetation survey. However, during the subsequent wet and dry seasons, this individual could no longer be recorded within Application Site. 2 bird species of conservation importance: Striated Heron and Chinese Pond Heron
Re-creatability	Readily re-created	Readily re-created
Fragmentation	None observed	Ponds within Application Site are isolated by the development area of Palm Springs.

Criterion	Description	
	Developed Area (Other Urban Area)	**Pond (Artificial Pond)**
Ecological linkage	No significant linkages with other habitats of ecological importance	The ecological linkage of the habitats is established with the vicinity habitats pond and overgrown pond. However, this linkage is severed from the wetland near the Deep Bay area due to the development of Palm Springs.
Potential value	Very low potential value, given the intensive and incessant anthropogenic disturbance	Value would be improved if managed for wildlife.
Nursery/ breeding ground	No significant nursery or breeding ground known or observed during the ecological surveys.	Provide suitable nursery/breeding habitats for bird, herpetofauna and Odonate species, but no significant recorded during ecological survey.
Age	Ecologically non-applicable	Unknown. Aerial photo revealed that in the last decade the ponds within the Study Area maintained with water coverage.
Abundance/ richness of wildlife	Low abundance and diversity of wildlife relatively to area size	Low abundance and diversity of wildlife
Overall ecological value	Very low	Low

Table 4.3 Evaluation of Agricultural Land within Study Area

Criterion	Description
	Agricultural Land
Naturalness	Man-made
Size (ha)	11.02 ha in total
Diversity	Low to medium plant species diversity Low fauna diversity.
Rarity	No flora species of conservation importance was recorded during the ecological survey 5 bird of conservation importance: Intermediate Egret, Little Egret, Common Greenshank, Greater Coucal and Collared Crow
Re-creatability	Readily re-created
Fragmentation	No significant fragmentation
Ecological linkage	Linkages with other high-value habitats in Deep Bay area for those remaining active and within / closer to WCA, but not significant for those dry/overgrown, or outside WCA and isolated by developed area.
Potential value	Value would be improved if farming is resumed or managed for wildlife.
Nursery/ breeding ground	Provide suitable nursery/breeding habitats for bird and herpetofauna species.
Age	Unknown
Abundance/ richness of wildlife	Low to medium
Overall ecological value	Low to medium

Table 4.4 Evaluation of Developed Area (Other Urban Area) within Study Area

Criterion	Description
	Developed Area (Other Urban Area)
Naturalness	Entirely man-made
Size (ha)	65.89 ha in total
Diversity	Low to medium flora diversity. Low fauna diversity.
Rarity	No species of conservation importance was recorded during the ecological survey
Re-creatability	Readily re-created
Fragmentation	None observed
Ecological linkage	No significant linkages with other habitats of ecological importance
Potential value	Very low potential value, given the intensive and incessant anthropogenic disturbance
Nursery/ breeding ground	No significant nursery or breeding ground known or observed during the ecological surveys.
Age	Ecologically non-applicable
Abundance/ richness of wildlife	Low abundance and diversity of wildlife relatively to area size
Overall ecological value	Very low

Table 4.5 Evaluation of Modified Watercourse within Study Area

Criterion	Description
	Modified Watercourse
Naturalness	Originated from modified streams or man-made channels serving the watercourse during channelize
Size (ha)	0.16 ha in total
Diversity	Low flora diversity. Low fauna diversity.
Rarity	No flora species of conservation importance was recorded during the ecological survey 1 bird of conservation importance: Little Egret
Re-creatability	Readily re-created
Fragmentation	Highly fragmented by developed area
Ecological linkage	No significant linkages with habitats of ecological significance
Potential value	Limited potential due to the disturbance of roadside.
Nursery/ breeding ground	No significant nursery or breeding ground was discovered during survey period.
Age	Unknown. Likely to have been modified following infrastructure/channelization works
Abundance/ richness of wildlife	Very low abundance and diversity of wildlife
Overall ecological value	Very low

Table 4.6 Evaluation of Overgrown Pond (Artificial Pond) within Study Area

Criterion	Description
	Overgrown Pond (Artificial Pond)
Naturalness	Mostly man-made origin.
Size (ha)	3.02 ha in total
Diversity	Low plant species diversity.

Criterion	Description
	Overgrown Pond (Artificial Pond)
	Low fauna diversity
Rarity	No flora species of conservation importance was recorded during the ecological survey 4 bird species of conservation importance: Black-crowned Night Heron, Chinese Pond Heron, Little Egret and Greater Coucal 1 butterfly species of conservation importance: Danaid Eggfly
Re-creatability	Readily re-created
Fragmentation	No significant fragmentation
Ecological linkage	Linkages with other high-value habitats in Deep Bay area for those remaining active and within / closer to WCA, but not significant for those dry/overgrown, or outside WCA and isolated by developed area.
Potential value	Value would be improved if farming is resumed or managed for wildlife.
Nursery/ breeding ground	No significant record but may provide suitable nursery/breeding habitats for bird, herpetofauna and Odonate species.
Age	Unknown. Aerial photo revealed that in the last decade the ponds within the Study Area maintained with water coverage.
Abundance/ richness of wildlife	Low
Overall ecological value	Low

Table 4.7 Evaluation of Plantation (Green Urban Area) within Study Area

Criterion	Description
	Plantation (Green Urban Area)
Naturalness	Planted for amenity and visual purposes, most were in proximity of Developed Area. Dominated by exotic species.
Size (ha)	3.57 ha in total
Diversity	Low to medium flora diversity. Low fauna diversity.
Rarity	No species of conservation importance was recorded during the ecological survey
Re-creatability	Readily re-created
Fragmentation	Roadside plantations are highly fragmented by developed area
Ecological linkage	No significant linkages with habitats of ecological significance
Potential value	Limited potential due to disturbance and high proportion of exotic species.
Nursery/ breeding ground	No significant nursery or breeding ground known
Age	At least 30 years, likely to have been planted following infrastructure works
Abundance/ richness of wildlife	Low abundance and diversity of species, comprise mainly widespread and disturbance tolerant species
Overall ecological value	Low

Table 4.8 Evaluation of Pond (Artificial Pond) within Study Area

Criterion	Description
	Pond (Artificial Pond)
Naturalness	Man-made

Criterion	Description
	Pond (Artificial Pond)
Size (ha)	9.52 ha in total
Diversity	Low plant species diversity Low to medium fauna diversity.
Rarity	No flora species of conservation importance was recorded during the ecological survey 14 bird species of conservation importance: Little Grebe, Black-crowned Night Heron, Chinese Pond Heron, Grey Heron, Intermediate Egret, Great Egret, Little Egret, Black-winged Stilt, Little Ringed Plover, Greater Painted-snipe, Spotted Redshank, Wood Sandpiper, Greater Coucal and Collared Crow
Re-creatability	Readily re-created
Fragmentation	No significant fragmentation within Study Area.
Ecological linkage	Linkages with other high-value habitats in Deep Bay area for those remaining active and within / closer to WCA, but not significant for those dry/overgrown, or outside WCA and isolated by developed area.
Potential value	Value would be improved if managed for wildlife.
Nursery/ breeding ground	Provide suitable nursery/breeding habitats for bird, herpetofauna and Odonate species.
Age	Unknown. Aerial photo revealed that in the last decade the ponds within the Study Area maintained with water coverage.
Abundance/ richness of wildlife	Low to medium
Overall ecological value	Low to medium

Table 4.9 Evaluation of Flora Species of Conservation Importance

Species Names [1,2]	Rarity and Distribution in Hong Kong [2]	Conservation status [2,3,4]	Location
Flora			
Ceratopteris thalictroides	Rare Wetlands	Rare and Precious Plants of Hong Kong (Vulnerable in China); Wild plant under State protection (category II)	Pond within Application Site *(Only found in dry season vegetation survey)

Notes:
1. Agriculture, Fisheries and Conservation Department (2022). Hong Kong Herbarium.
2. Corlett *et al*. (2000). Hong Kong vascular plants: distribution and status.
3. Hu *et al.* (2003). Rare and Precious Plants of Hong Kong.
4. State Forestry Administration & Ministry of Agriculture. (2021). List of Wild Plants under State Protection.

Table 4.10 Evaluation of Fauna Species of Conservation Importance

Species Names [1]	Rarity and Distribution in Hong Kong [1]	Conservation status [3,4,5,6,7,8]	Location
Mammal (Remark: all wild bat species are protected under Cap. 170 Wild Animals Protection Ordinance in Hong Kong) [2]			
Chinese Noctule *Nyctalus plancyi*	Common. Fairly widely distributed in countryside areas throughout Hong Kong.	Fellowes *et al*. (2002): PRC	Recorded within Study Area but outside Application Site by Bat Detector
Avifauna (Remark: all wild bird species are protected under Cap. 170 Wild Animals Protection Ordinance in Hong Kong) [2]			

Little Grebe *Tachybaptus ruficollis*	Common resident. Found in Deep Bay area.	Fellowes *et al.* (2002): LC	Pond outside Application Site but within Study Area
Black-crowned Night Heron *Nycticorax nycticorax*	Common resident and migrant. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): LC	Overgrown Pond and Pond outside Application Site but within Study Area
Striated Heron *Butorides striata*	Common summer visitor. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): LC	Pond within Application Site
Chinese Pond Heron *Ardeola bacchus*	Common resident. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): PRC	Pond within Application Site; Overgrown Pond and Pond within Study Area
Grey Heron *Ardea cinerea*	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.	Fellowes *et al.* (2002): PRC	Pond outside Application Site but within Study Area
Great Egret *Ardea alba*	Common resident, migrant and winter visitor. Widely distributed in Hong Kong.	Fellowes *et al.* (2002): PRC	Pond outside Application Site but within Study Area
Intermediate Egret *Ardea intermedia*	Resident and passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape D'Aguilar.	Fellowes *et al.* (2002): RC	Agricultural Land and Pond outside Application Site but within Study Area
Little Egret *Egretta garzetta*	Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong.	Fellowes *et al.* (2002): PRC	Agricultural Land, Overgrown Pond, Pond and Modified Watercourse outside Application Site but within Study Area
Black-winged Stilt *Himantopus himantopus*	Common migrant and wintor visitor. Found in Deep Bay area, Long Valley, Kam Tin.	Fellowes *et al.* (2002): RC	Pond outside Application Site but within Study Area
Little Ringed Plover *Charadrius dubius*	Resident, common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.	Fellowes *et al.* (2002): (LC)	Pond outside Application Site but within Study Area
Greater Painted-snipe *Rostratula benghalensis*	Locally common resident. Found in Ha Tsuen, Lok Ma Chau, Kam Tin, Long Valley, Hong Kong Wetland Park.	China Red Data Book Status: VU; Fellowes *et al.* (2002): LC	Pond outside Application Site but within Study Area
Spotted Redshank *Tringa erythropus*	Common spring passage migrant. Found in Deep Bay area.	Fellowes *et al.* (2002): RC	Pond outside Application Site but within Study Area
Common Greenshank *Tringa nebularia*	Abundant passage migrant and winter visitor. Found in Deep Bay area.	Fellowes *et al.* (2002): RC	Agricultural Land outside Application Site but within Study Area
Wood Sandpiper *Tringa glareola*	Common migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.	Fellowes *et al.* (2002): LC	Pond outside Application Site but within Study Area
Greater Coucal *Centropus sinensis*	Common resident. Widely distributed in Hong Kong.	China Red Data Book Status: VU; List of Wild Animals under State Priority Conservation: Class II	Agricultural Land, Overgrown Pond and Pond outside Application Site but within Study Area
Collared Crow *Corvus torquatus*	Locally common resident. Found in Inner Deep Bay area, Nam Chung, Kei Ling Ha, Tai Mei Tuk, Pok Fu Lam, Chek lap Kok, Shuen Wan, Lam Tsuen.	IUCN Red List: VU; Fellowes *et al.* (2002): LC	Agricultural Land and Pond outside Application Site but within Study Area
Butterfly			
Danaid Eggfly *Hypolimnas misippus*	Uncommon. Ngau Ngak Shan, Lung Kwu Tan, Hong Kong Wetland Park, Mount Parker, Cloudy Hill, Lin Ma Hang	Fellowes *et al.* (2002): LC	Overgrown Pond outside Application Site but within Study Area

Notes

1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub AFCD. Hong Kong Biodiversity Database.
2. Cap. 170 Wild Animals Protection Ordinance.
3. Convention on International Trade in Endangered Species of Wild Flora and Fauna. Appendices I, II and III.
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. International Union of Conservation for Nature. (2024). The IUCN Red List of Threatened Species. Version 2024.
6. Shek (2006). A Field Guide to the Terrestrial Mammals of Hong Kong
7. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2023). List of Wild Animals under State Priority Conservation
8. Yue and Chen (1998). China Red Data Book of Endangered Animals: Pisces.

Abbreviations:

- Conservation Status in Fellowes *et al.* (2002): LC = local concern, PRC = potential regional concern, RC = regional concern, GC = global 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 (Fellowes *et al.* 2002).

5. IMPACT IDENTIFICATION AND PREDICTION

5.1.1 The project elements of the present application include the following:

- Installation of floating solar photovoltaic system of about 0.067ha on top of the water bodies (31% of Pond surface within the Application Site), With the deduction of the gaps among solar panels, the actual area of pond surface occupied by the SPV system would be about 0.055 ha (about 26.4% of the pond surface).
- Installation of solar photovoltaic system on floating platforms which were already fixed on pond bund
- Connection of cables to the existing meter room (Total Gross Floor Area = 0.56m^2), wall-hanged meters and transformers on the pond bund

5.1.2 The potential impact associated with the proposed development includes:

- Occupation of water surface
- Disturbance impacts surrounding habitats and fauna during construction; and
- Disturbance impacts surrounding fauna, habitats and recognized sites of conservation importance during operation.

5.2 Construction Phase

Direct Impact

Habitat Loss

5.2.1 As mentioned in Section 1.2, the two ponds within the Application Site were degrading and nearly dried out with mainly weedy aquatic plants. The weedy plants were removed with floating platforms installed, and the ponds were then filled with waters to facilitate the proposed use of the solar photovoltaic system. Hence, a net wetland area (i.e. the ponds) of 0.21ha within the Application was restored.

5.2.2 In this application, among the 0.21ha of restored ponds, only 0.067 ha (representing 31% of pond surface within Application Site) of the pond's surface will be spared for the solar photovoltaic system. With the deduction of the gaps among solar panels, the actual area of pond surface occupied by the SPV system would be about 0.055 ha (about 26.4% of the pond surface). No water column or pond bed will be lost. The solar photovoltaic system will be mounted on floating platforms which have already been fixed on the pond bund; therefore, no dredging/pond filling will be required. As pond draining is not required for the proposed installation work, no temporary loss of the pond will occur. Unlike ground-mounted panels, this floating approach can minimize the disturbances to the existing habitat or ecosystem structure, as the existing water capacity within the ponds will be maintained. As the ponds within the Application Site were overgrown with weedy plants, which were not favorable to waterbirds such as ardeids and waders recorded in the vicinity of the Application Site. With the provision of weedy plant clearance and refilling with waters, positive impacts from the proposed works to wildlife are expected. Besides, as there is net increase of wetland habitat, no mitigation measures or compensation are considered necessary.

5.2.3 While the cable connection works will be conducted in the existing wall-hanged meter and transformers that are mounted on the concrete wall within the developed area of the Application Site. Due to the ecological value of the developed area is ranked as very low, the potential impacts to this habitat are considered **Insignificant**.

5.2.4 No mitigation measures or compensation are considered necessary for the proposed works. However, with the restoration of the ponds from degrading/dried ponds within the Application Site, a management protocol is formulated (**Appendix J**). The management protocol aims to maintain the site conditions and ensure the effective operation of the solar photovoltaic system as well as providing direction on pond management. For example, the management protocol recommends fish stocking in the ponds, which provide foraging and feeding opportunities for waterbirds.

Indirect Impact

Water Quality

5.2.5 The water quality of the ponds within the Application Site will be prone to disturbance by the works inside the ponds and surface runoff from land during construction phase. However, the ecological value of the ponds within the Application Site was ranked as **Low**. Due to the nature and scale of the works inside the Application Site, it is expected the impact from surface runoff would be transient, hence the potential impact due to surface runoff to the ponds are considered as **Minor**. To avoid contamination of water in the Application Site, the construction runoff and the water quality should be controlled by good site practice.

Construction Disturbance (Noise, Light, Dust and Other Human Activities)

5.2.6 The construction phase may indirectly influence habitats and associated fauna due to increased human disturbance. The noise and dust emanating from construction activities within the project boundary could temporarily curtail the wildlife's use of adjacent habitats. This is particularly applicable to birds and mammals, given their sensitivity to noise and light.

5.2.7 Most of the proposed structures are pre-casted with simple installation methods, and no night work is expected. The immediate surroundings of the Application Site comprise developed areas and overgrown pond. These habitats are deemed to possess **Low** ecological value. The potential impact on these habitats, including their associated wildlife and species of conservation importance, due to construction disturbances is considered **Negligible**. Even though there are ponds with **low to medium** ecological value located outside the Application Site, due to the scale and works nature of the proposed solar photovoltaic system, the potential impacts on the ponds are considered **Insignificant**. Indirect impacts arising from noise, dust, and other human activities can be further mitigated through the implementation of good site practices and other mitigation measures as proposed in **Section 6**.

5.3 Operational Phase

Direct Impact

Habitat Loss

5.3.1 During the operation phase, direct impacts within the Application Site would be the same as the construction phase. There will be no habitat loss during the operational phase. To maintain the site conditions and ensure the effective operation of the solar photovoltaic system and pond management, a management protocol is specified in **Appendix J**.

Impacts on wildlife

5.3.2 Open water habitats (ponds in this case) generally provide foraging/ feeding grounds for water-dependent bird species. However, very limited water-dependent bird species were recorded in pond habitat within the Application Site during the survey period. No anatids species (dabbling and diving ducks) or other waterbird species utilized the water surface within the Application Site. Apart from the Application Site, only three individuals of Garganey *Spatula querquedula* and one individual of Little Grebe *Tachybaptus ruficollis* were recorded within pond habitat outside Application Site but within Study Area. Though the Application Site is located within "CA" zone and Wetland Buffer Area, due to the scale and works nature of the proposed solar photovoltaic system as well as the diversity and abundance of wildlife in the vicinity, the potential impacts on the wildlife are considered **Insignificant**.

5.3.3 Furthermore, with reference to the San Tin Flood Protection Scheme from the Drainage Services Department, floating photovoltaic systems may provide resting places for birds (DSD, 2022). Given that the ponds within the Application Site were poorly managed with limited water capacity prior to the application, the restored ponds and the reintroduction of fish in the ponds could provide potential foraging and resting habitat for wildlife.

Indirect Impact

Impact due to Human Disturbance

5.3.4 Potential indirect impacts during the operational phase may include disturbances to wildlife and their habitats in the surrounding area due to increased human activity associated with the maintenance and management of the proposed facilities. However, the ponds within the Application Site are mainly operated for floating photovoltaic systems, maintenance works and human activities are expected to be limited compared with the typical operation of fish farms or fish ponds. Given that the maintenance of these facilities is expected to be occasional and transient, the indirect impacts on wildlife are deemed to be **Insignificant**. A management protocol with the aims to further minimize the potential impacts to wildlife is specified in **Appendix J**.

Operational Potential Impacts on Recognized Site of Conservation Importance and Species of Conservation Importance

5.3.5 Most of the Application Site is situated within the Conservation Area ("CA"), and the entire of the Application Site is located within WBA, while a substantial portion of the Study Area is encompassed by the Conservation Area ("CA"), Wetland Conservation Area (WCA), and Wetland Buffer Area (WBA). It is expected that the proposed works are small in scale and are not expected to compromise the Conservation Area ("CA"), Wetland Conservation Area (WCA), and Wetland Buffer Area (WBA). Given that the operational maintenance is expected to be occasional and small in scale and hence the ecological impact on the recognized sites of conservation importance during both the construction and operational phases is deemed to be **Insignificant**.

5.3.6 One individual of the *Ceratopteris thalictroides* was recorded within the pond area of the Application Site during the dry season vegetation survey, but no further observation was made during the subsequent survey. Hence, no direct impact on this species is anticipated. Nevertheless, as the primary installation tasks for the proposed application are planned to be executed within the pond surface, this floral species of conservation importance is not expected to be directly affected. Retainment of any *Ceratopteris thalictroides* individual observed is recommended during the construction and operational phase.

5.3.7 Only sparse records of Striated Heron *Butorides striata* and Chinese Pond Heron *Ardeola bacchus* were observed on Pond bund within the Application Site. However, due to the high mobility of the species and suitable habitats in the region, potential impacts to this two birds of conservation importance are considered **Minor**.

5.3.8 Besides the species of conservation importance recorded in the reviewed literature, one bat species, sixteen avifauna species and one butterfly species of conservation importance were identified within the Study Area. Among these, only the Chinese Pond Heron and Striated Heron are of conservation importance and were observed within the Application Site. The other species of conservation importance within the Study Area from the present study or reviewed literature might also pass over the Application Site, given the high mobility of birds and bats as well as other species of conservation importance recorded in the reviewed literature. On the other hand, they can readily relocate to similar or identical habitats nearby, and none of them demonstrated habitat fidelity. In addition, no bird and bat roots were recorded during the survey period, while the bat roosts recorded from the reviewed literature were at Palm Springs. Therefore, no direct impact is expected to be imposed on them, and the potential impacts during both the construction and operational phases are considered to be **Minor**.

6. MITIGATION OF ECOLOGICAL IMPACTS

6.1 General

6.1.1 Mitigation measures will follow the hierarchy detailed in Annex 16 of EIAO-TM, following the order of priority: avoidance, minimization and compensation. Wherever possible, on-site mitigation measures are preferred over off-site mitigations.

6.2 Avoidance

6.2.1 Floral species of conservation importance, if found, should be protected and retained in-situ as far as practicable. The location / design of the proposed installation works has been considered to avoid direct impact / removal of floral species of conservation importance. No removal of species of conservation importance and no tree felling are required under the latest design for this Project.

6.2.2 This application does not propose any night-time construction works, thereby avoiding noise and lighting disturbances to the fauna species recorded in the Conservation Area ("CA") and Wetland Buffer Area (WBA).

6.3 Minimization

6.3.1 The scale and footprint of the proposed implementation of the solar photovoltaic system have been minimized to reduce the associated impacts.

6.3.2 Major lighting sources should be directed inwards and downwards to reduce light disturbance. The intensity of the lighting, if required, should be controlled to the lowest possible level. Unnecessary lighting should be turned off outside working hours of the construction sites and only minimal lighting for safety and security purposes should be provided during the operation phase.

6.3.3 Bird-friendly measures should be taken when conducting the maintenance of solar photovoltaic system. For example, nests of wild birds should not be removed during maintenance and advice from the AFCD should be sought, if necessary. A management protocol with the aims to further minimize the potential impacts to wildlife is specified in **Appendix J**. This can be implemented during the regular site inspection / maintenance by the Contractor / the Engineer.

6.3.4 Mitigation measures for air, noise and water quality impacts shall be implemented properly to reduce the associated indirect ecological impacts.

6.3.5 Good site practice listed as follows should be implemented to minimize potential impacts due to noise, dust and runoff to the surrounding environment.

- Regular checking should be undertaken to ensure that the work site boundaries are not exceeded and that no damage occurs to surrounding areas;
- Implementation of dust control measures at all construction sites to minimize dust nuisance to adjacent wildlife habitats during construction activities;
- Implementation of noise control measures at all construction sites to reduce impacts of construction noise to wildlife habitats adjacent works areas;
- Implementation of mitigation measures specified in ProPECC PN 2/23 to control site runoff and drainage at all work sites during construction;
- 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.

- Dusty materials remaining after a stockpile is removed should be wetted with water; and
- All dusty materials shall be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet.

6.4 Residual Impact

6.4.1 With the implementation of the mitigation measures recommended, no adverse residual impact would be expected from construction and operation of the solar photovoltaic system.

6.5 Cumulative Impact

6.5.1 Cumulative impacts may occur when there are concurrent projects implemented in the vicinity of the present Project, either during construction phase or operational phase. The commonest potential cumulative impacts from concurrent projects mainly include habitat loss, disturbance during construction phase and disturbance during operation phase:

- AEIAR-120/2008 - Proposed Comprehensive Development at Wo Shang Wai
- AEIAR-261/2024 - San Tin / Lok Ma Chau Development Node

6.5.2 Regarding pond's surface occupied, as the present project footprint is located on a site dominated by **Low** value habitats which support **Very Low** diversity and abundance of wildlife, the loss of such habitat for the duration of the proposed development is not expected to attribute to the cumulative loss of ecological resources in the area.

6.6 Monitoring and Aduit Requirement

6.6.1 Weekly site audit will be conducted by the Engineer for checking the implementation of the proposed good site practice during construction phase. No specific ecological monitoring is required.

6.6.2 Pond habitat provides an important foraging ground for waterbird species in Hong Kong. However, without proper management, water depth may gradually decrease and lead to overgrowth by aquatic plant weeds. To facilitate the proposed solar photovoltaic system and to restore the existing pond habitat within the Application Site, pond management is therefore necessary to maintain the habitat condition and quality in order to support wildlife nearby. A Management Protocol has been prepared under **Appendix J** to specify the maintenance works during operational phase in order to propose detailed measures to further minimize the potential impacts to wildlife within the Application Site.

7. CONCLUSIONS

7.1.1 Information on the ecological baseline conditions of the Application Site was collected through literature review and surveys, and they were integrated into this EcoIA to support the technical aspect of the Application.

7.1.2 The Application Site mainly comprised of two ponds, but the two ponds were degrading and nearly dried out with mainly weedy aquatic plants before formulation of the present proposal. The ponds were hence restored from degrading/dried out to managed ponds to facilitate the proposed application. A net wetland area (i.e. the ponds) of 0.21ha within the Application Site was restored. Only 0.067 ha (representing 31% of pond surface within Application Site) of the pond's surface will be spared for the solar photovoltaic system. With the deduction of the gaps among solar panels, the actual area of pond surface occupied by the SPV system would be about 0.055 ha (about 26.4% of the pond surface). No water column or pond bed will be lost.

7.1.3 As a net increase of wetland area was induced from the proposed works, no mitigation measures or compensation are considered necessary for the proposed works. However, with the restoration of the ponds from degrading/dried ponds within the Application Site, a management protocol is formulated, which aims to maintain the site conditions and ensure the effective operation of the solar photovoltaic system as well as providing direction on pond management.

7.1.4 The planning application would satisfy the requirements listed in TPB PG-No. 12C i.e. no-net-loss in wetland area or function at any scale. The ponds within the Application Site were under poor condition prior to formulation of the present proposal, the restoration of the ponds improves the habitat quality which provide potential foraging habitat for birds and wildlife. This EcolA and management protocol (**Appendix J**) demonstrate that the proposed development would not have significant disturbance impacts to the surroundings habitats and any recognized site of conservation importance.

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Figure 1 Recognized Sites of Conservation Importance in vicinity to the Study Area

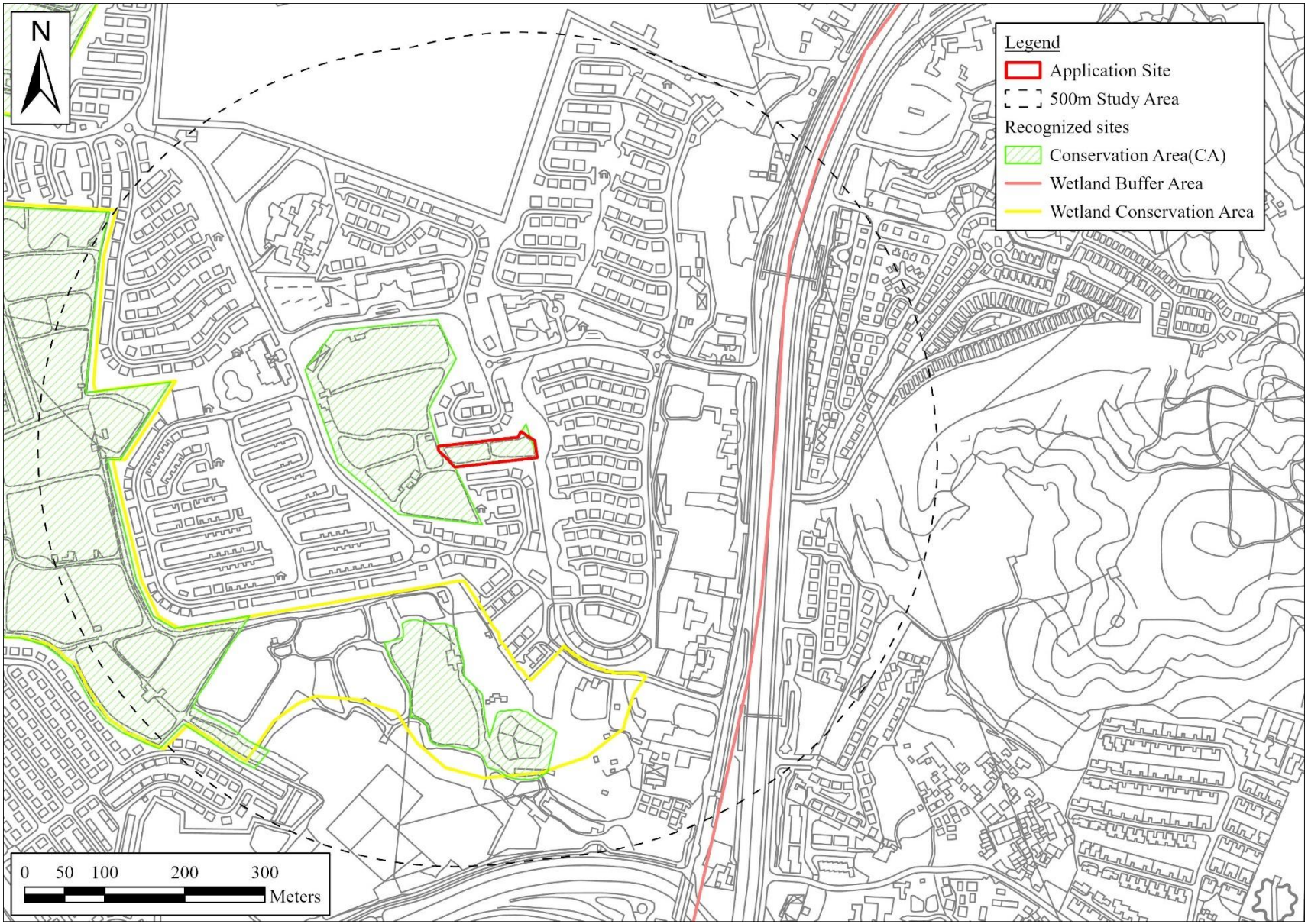

N
Legend
Application Site
500m Study Area
Recognized sites
Conservation Area(CA)
Wetland Buffer Area
Wetland Conservation Area
0 50 100 200 300
Meters

Figure 2 Survey Transects

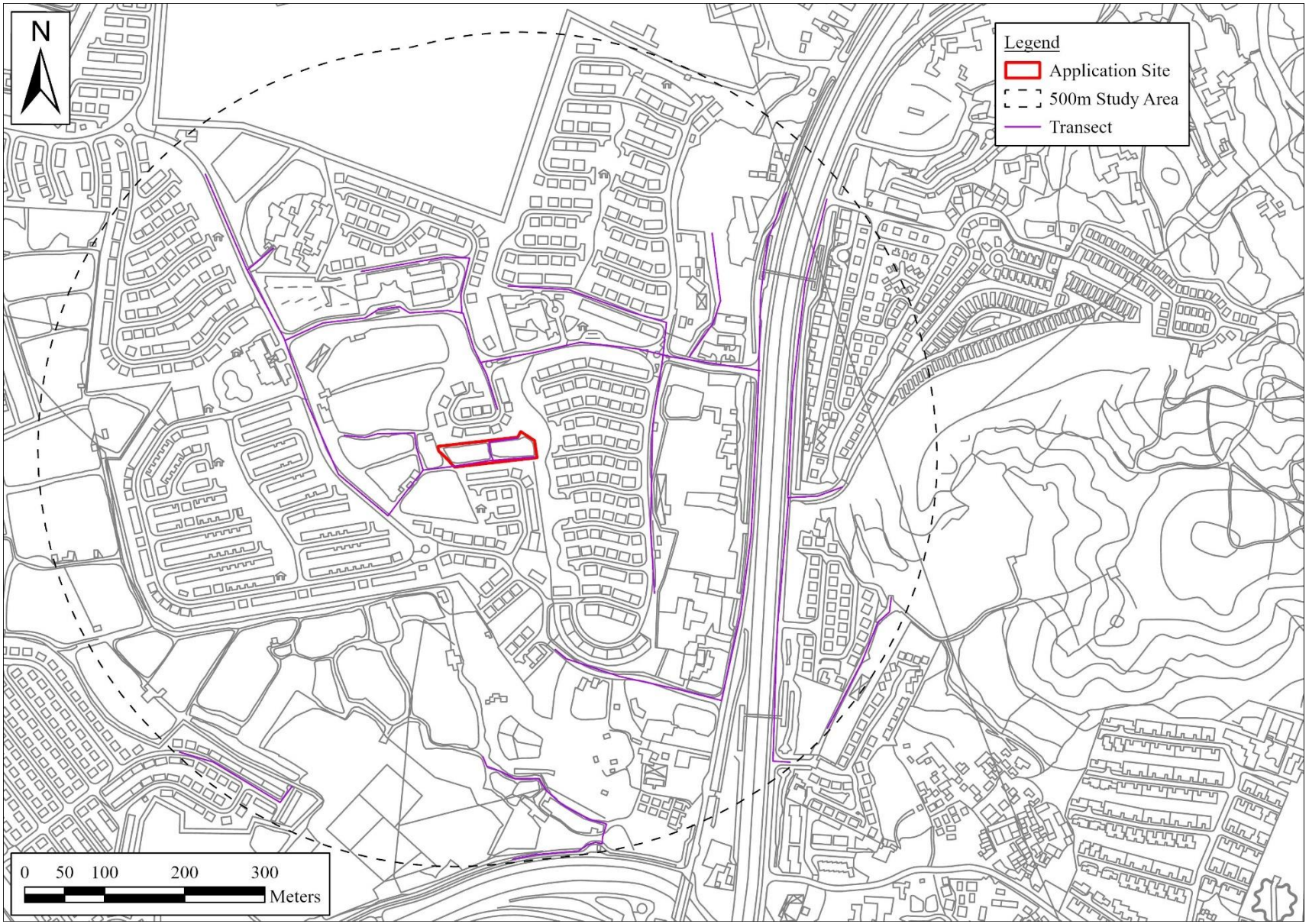

N
Legend
Application Site
500m Study Area
Transect
0 50 100 200 300
Meters

Figure 3 Habitats and Locations of Species of Conservation Importance within Study Area

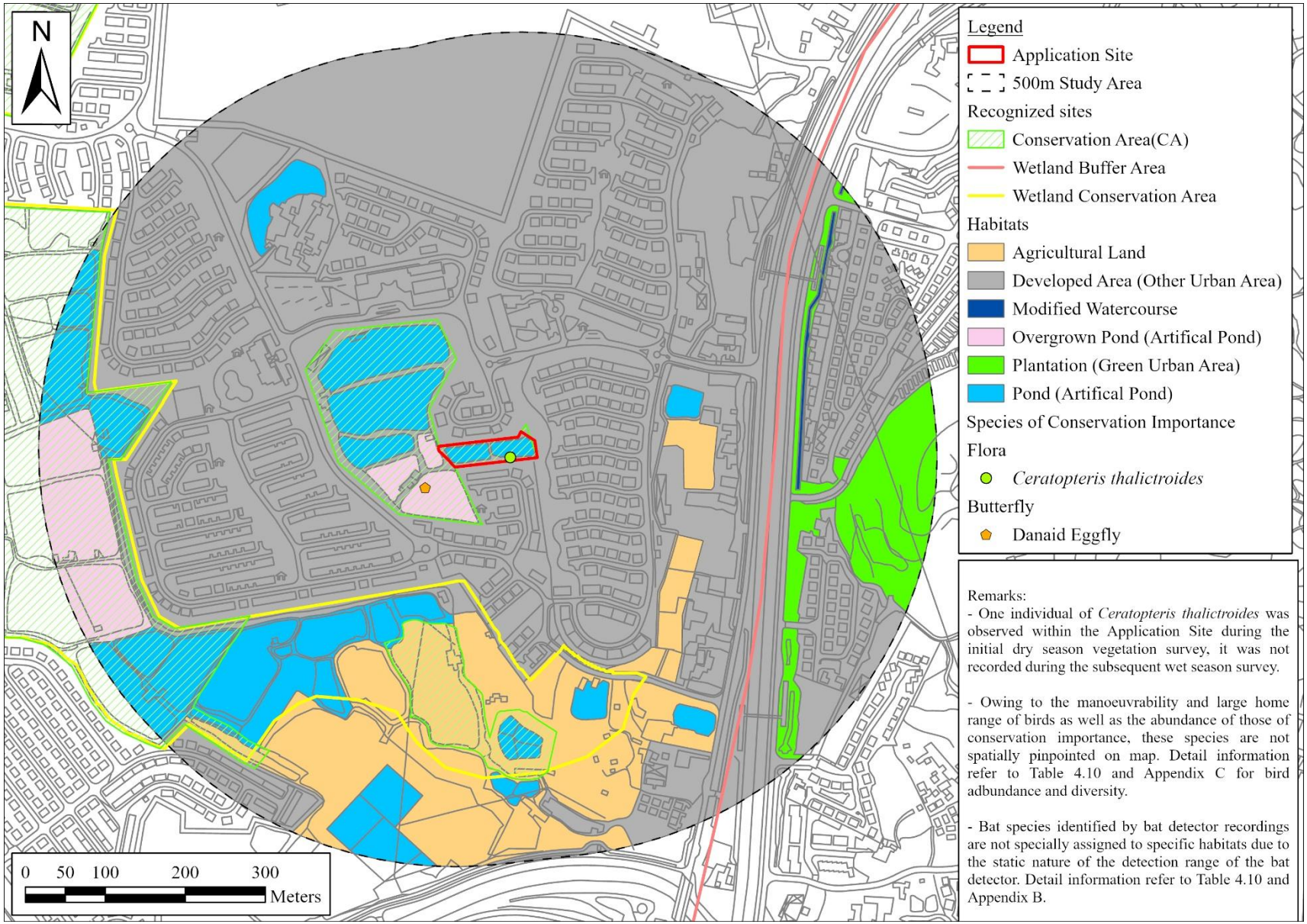

N
Legend
Application Site
500m Study Area
Recognized sites
Conservation Area(CA)
Wetland Buffer Area
Wetland Conservation Area
Habitats
Agricultural Land
Developed Area (Other Urban Area)
Modified Watercourse
Overgrown Pond (Artifical Pond)
Plantation (Green Urban Area)
Pond (Artifical Pond)
Species of Conservation Importance
Flora
Ceratopteris thalictroides
Butterfly
Danaid Eggfly
0 50 100 200 300
Meters
Remarks:
- One individual of Ceratopteris thalictroides was observed within the Application Site during the initial dry season vegetation survey, it was not recorded during the subsequent wet season survey.
- Owing to the manoeuvrability and large home range of birds as well as the abundance of those of conservation importance, these species are not spatially pinpointed on map. Detail information refer to Table 4.10 and Appendix C for bird adbundance and diversity.
- Bat species identified by bat detector recordings are not specially assigned to specific habitats due to the static nature of the detection range of the bat detector. Detail information refer to Table 4.10 and Appendix B.

Figure 4 Representative Photos of Habitats within Study Area

Figure 4 Representative Photos of Habitats within Study Area

			
Application Site Developed Area (Other Urban Area)	Application Site Pond (Artificial Pond)	Study Area Agricultural Land	Study Area Developed Area (Other Urban Area)
			
Study Area Modified Watercourse	Study Area Overgrown Pond (Artificial Pond)	Study Area Plantation (Green Urban Area)	Study Area Pond (Artificial Pond)

Figure 5a Representative Photos of Flora Species of Conservation Importance within Study Area

Figure 5a Representative Photos of Flora Species of Conservation Importance within Study Area

Ceratopteris thalictroides

Figure 5b Representative Photos of Fauna Species of Conservation Importance within Study Area

Figure 5b Representative Photos of Fauna Species of Conservation Importance within Study Area

		
Collared Crow	Black-winged Stilt	Black Kite

Appendix A to G

Appendix A Plant Species Recorded within the Study Area

Scientific name	Chinese name	Growth form	Origin	Rarity in Hong Kong	Protection/Conservation status	Application Site		Study Area					
						Da	Po	AL	DA	MoWa	OP	PL	Po
Abutilon indicum	磨盤草	Herb	Native	Restricted				s					
Acacia auriculiformis	耳果相思	Tree	Exotic	-				s				s	
Acacia confusa	台灣相思	Tree	Exotic	-								o	
Acanthus ilicifolius	老鼠簕	Shrub	Native	Common							s		
Acanthus ilicifolius var. xiamenensis	廈門老鼠簕	Shrub	Native	-							o		
Acrostichum aureum	鹵蕨	Herb	Native	Restricted							s		
Allium fistulosum	蔥	Herb	Exotic	-									
Alocasia macrorrhizos	海芋	Herb	Native	Very common				o		s	s	s	
Alternanthera philoxeroides	空心莧	Herb	Exotic	Common						s			
Alternanthera sessilis	蝦鉗菜	Herb	native	Common				s					
Amaranthus viridis	綠莧	Herb	native	Very common									
Aporusa dioica	銀柴	Tree	Native	Very common				s				s	
Arachis duranensis	蔓花生	Herb	Exotic	-					s			s	

Araucaria heterophylla	異葉南洋杉	Tree	Exotic	-	IUCN Red List (Vulnerable)				s				
Archontophoenix alexandrae	假檳榔	Tree	Exotic	-					s				
Artemisia indica	五月艾	Herb	Native	-				s					
Artocarpus heterophyllus	菠蘿蜜	Tree	Exotic	-		s							
Asparagus cochinchinensis	天門冬	Herb	Native	Common					s				
Averrhoa carambola	楊桃	Tree	Exotic	-				s					
Bauhinia x blakeana	洋紫荊	Tree	Native	-					s				
Bidens alba	白花鬼針草	Herb	Exotic	Very common		o	s	o		o	o	s	
Bischofia javanica	秋楓	Tree	Native	Common				s	s			s	
Bombax ceiba	木棉	Tree	Exotic	-								s	
Bougainvillea glabra	光葉子花	Shrub	Exotic	-				s	s		s		
Brachiaria mutica	巴拉草	Herb	Exotic	Common				o			o		s
Bridelia tomentosa	土蜜樹	Shrub	Native	Very common					s			s	
Broussonetia papyrifera	構樹	Tree	Native	Very common				o					
Calliandra haematocephala	朱纓花	Shrub	Exotic	-					s				

Callipteris esculenta	菜蕨	Herb	Native	Common				o				s	s
Callistemon viminalis	串錢柳	Tree	Exotic	-								s	
Cardamine flexuosa	彎曲碎米薺	Herb	Native	Common			s						
Carica papaya	番木瓜	Tree	Exotic	-		s		s			s		
Caryota mitis	短穗魚尾葵	Tree	Exotic	-				s	s				
Celtis sinensis	朴樹	Tree	Native	Common				s	s			s	
Centella asiatica	積雪草	Herb	Native	Very common					**s**				
Ceratopteris thalictroides	**水蕨**	**Herb**	**Native**	**Rare**	**Rare and Precious Plants of Hong Kong (Vulnerable in China) Wild plant under State protection (category II)**		**s**						
Cinnamomum burmannii	陰香	Tree	Native	-		s			s			s	
Cinnamomum camphora	樟	Tree	Native	Common				s					

Citrus reticulata	柑橘	Tree	Exotic	-	Wild plant under State protection (category II)			s					
Clausena lansium	黃皮	Tree	Exotic	-				s					
Coccinia grandis	紅瓜	Climber	Native	Very rare		s							
Codiaeum variegatum	變葉木	Shrub	Exotic	-					s			s	
Colocasia esculenta	芋	Herb	Exotic	-				o					
Commelina diffusa	節節草	Herb	Native	Common		s	c			s	o		
Cordia dichotoma	破布木	Tree	Native	Restricted								s	
Cordyline fruticosa	朱蕉	Shrub	Exotic	-					s				
Cyclosorus interruptus	間斷毛蕨	Herb	Native	Common				o			o		s
Cyclosorus parasiticus	華南毛蕨	Herb	Native	Very common				s				s	
Cynodon dactylon	狗牙根	Herb	native	Very common				s					
Cyperus difformis	異型莎草	Herb	native	Very common						s			
Cyperus imbricatus	疊穗莎草	Herb	Native	Common				s					
Cyperus involucratus	風車草	Herb	Exotic	Restricted						s		s	
Cyperus odoratus	斷節莎	Herb	Exotic	Rare				s					

Dalbergia millettii	香港黃檀	Climber	Native	Common	Cap. 586 CITES Appendix II							s	
Delonix regia	鳳凰木	Tree	Exotic	-					s				
Desmos chinensis	假鷹爪	Shrub	Native	Common								s	
Dimocarpus longan	龍眼	Tree	Exotic	Restricted	China Plant Red Data Book (Vulnerable) Wild plant under State protection (category II) Threatened Species List of China's Higher Plants (Vulnerable)			o	s		s		
Duranta erecta	假連翹	Climber	Exotic	-					s			s	
Echinochloa colona	光頭稗	Herb	native	Very common		c	o	s					
Eclipta prostrata	鱧腸	Herb	Native	-				s					
Eichhornia crassipes	鳳眼藍	Herb	Exotic	Common			s						
Eriobotrya japonica	枇杷	Tree	Exotic	-									
Erythrina spp.	刺桐屬	Tree	Exotic	-		s							
Eucalyptus citriodora	檸檬桉	Tree	Exotic	-								c	

Ficus elastica	印度榕	Tree	Exotic	-					s				
Ficus hispida	對葉榕	Shrub	Native	Very common				s	s	s		s	
Ficus microcarpa	榕樹	Tree	Native	Common					c			o	
Ficus variegata var. chlorocarpa	青果榕	Tree	Native	Common				s				s	
Flueggea virosa	白飯樹	Shrub	Native	Common				s		s		s	
Garcinia subelliptica	菲島福木	Tree	Exotic	-								s	
Hibiscus rosa-sinensis	朱槿	Shrub	Exotic	-					s			s	
Hylocereus undatus	量天尺	Herb	Exotic	-									
Ipomoea aquatica	蕹菜	Herb	Exotic	Very common		s	s	s					
Ipomoea batatas	番薯	Herb	Exotic	-				s					
Ipomoea cairica	五爪金龍	Climber	Exotic	Very common		o	s	o		o	o	s	o
Ipomoea triloba	三裂葉薯 , 三裂葉牽牛	Herb	Native	-									
Ixora coccinea	細葉龍船花	Shrub	Exotic	-					s				
Lactuca sativa	萵苣	Herb	Exotic	-									
Lactuca sativa var. longifolia	油麥菜	Herb	Exotic	-				s					

Lantana camara	馬纓丹	Shrub	Exotic	Very common					s				
Lemna minor	浮萍	Herb	Native	Common			s						
Leucaena leucocephala	銀合歡	Tree	Exotic	Common				s	o		s	s	
Ligustrum sinense	山指甲	Tree	Native	Common					s			s	
Lindernia antipoda	泥花草	Herb	Native	Common								s	
Lindernia rotundifolia	圓葉母草	Herb	Exotic	-				s					
Litchi chinensis	荔枝	Tree	Exotic	Restricted	China Plant Red Data Book (Vulnerable) Threatened Species List of China's Higher Plants (Endangered)	s		o					
Livistona chinensis	蒲葵	Tree	Exotic	-					c				
Loropetalum chinense f. rubrum	紅花檵木	Shrub	Exotic	-								s	
Ludwigia erecta	美洲水丁香	Herb	Exotic	-						o			
Ludwigia hyssopifolia	草龍	Herb	Native	-				s					

Lycopersicon esculentum	番茄	Herb	Exotic	-				o					
Lygodium japonicum	海金沙	Herb	Native	Very common				s	s			s	
Macaranga tanarius var. tomentosa	血桐	Tree	Native	Common				s			s	s	
Macroptilium lathyroides	大翼豆	Herb	Exotic	Common		s							
Mangifera indica	芒果	Tree	Exotic	-				s					
Manihot esculenta	木薯	Shrub	Exotic	-				s					
Melaleuca cajuputi subsp. cumingiana	白千層	Tree	Exotic	-					o			s	
Melia azedarach	苦楝	Tree	Exotic	Common					s	s			
Merremia hederacea	魚黃草	Climber	Native	Restricted		s	s	s					
Microcos nervosa	破布葉	Shrub	Native	Common				s				s	
Microlepia hancei	華南鱗蓋蕨	Herb	Native	Restricted				s					
Microstegium ciliatum	剛莠竹	Herb	Native	Very common				s					
Mikania micrantha	薇甘菊	Herb	Exotic	Very common		o	c	o		s	o		o
Miscanthus floridulus	五節芒	Herb	Native	Common		s		s					s

Morus alba	桑	Tree	Native	Common				s					
Murraya paniculata	九里香	Tree	Exotic	-					s			s	
Musa x paradisiaca	大蕉	Herb	Exotic	-		s		o			s		
Mussaenda pubescens	玉葉金花	Climber	Native	Very common		s							
Myosoton aquaticum	鵝腸菜	Herb	Native	Common				s					
Oplismenus compositus	竹葉草	Herb	Native	Very common				s				s	
Oxalis debilis subsp. corymbosa	紅花酢漿草	Herb	Exotic	Common		s							
Paederia scandens	雞矢藤	Climber	Native	Very common									
Panicum maximum	大黍	Herb	Exotic	Common		s	s	s		s			
Passiflora foetida	龍珠果	Climber	Exotic	Very common		s		s				s	
Persicaria barbata	毛蓼	Herb	Native	Common				s					
Persicaria chinensis	火炭母	Herb	Native	Common				s			s		
Persicaria pubescens	伏毛蓼	Herb	Native	Common			s						
Phoenix roebelenii	江邊刺葵	Tree	Exotic	-					s				
Phragmites australis	蘆葦	Herb	Native	Very common				s			c		s
Phyllanthus reticulatus	小果葉下珠	Shrub	Native	Common		s							

Phyllanthus tenellus	纖梗葉下珠	Herb	Exotic	-						s			
Physalis angulata	苦蘵	Herb	Native	Restricted				s			s		
Pilea microphylla	小葉冷水花	Herb	Exotic	Very common				s					
Platycladus orientalis	側柏	Tree	Exotic	-					s				
Pluchea sagittalis	翼莖闊苞菊	Herb	Exotic	-		s		s					
Pouzolzia zeylanica	霧水葛	Herb	Native	Common		s							
Praxelis clematidea	假臭草	Herb	Exotic	Very common				s					
Psidium guajava	番石榴	Tree	Exotic	Common				s					
Pteris vittata	蜈蚣蕨	Herb	Native	Very common		s		s					
Pueraria lobata var. montana	葛麻姆	Climber	Native	Common					s				
Ranunculus sceleratus	石龍芮	Herb	Native	Restricted				s					
Roystonea regia	大王椰子	Tree	Exotic	-					o				
Ruellia coerulea	蘭花草	Herb	Exotic	-								s	
Rumex trisetifer	長刺酸模	Herb	Native	Common				s					
Saccharum officinarum	甘蔗	Herb	Exotic	-									
Sansevieria trifasciata	虎尾蘭	Herb	Exotic	-				s					

Schefflera arboricola	鵝掌藤	Climber	Exotic	-					s			s	
Senna siamea	鐵刀木	Tree	Exotic	-					s				
Sesbania cannabina	田菁	Herb	Exotic	Common				s					
Solanum americanum	少花龍葵	Herb	Exotic	-				s					
Solanum torvum	水茄	Shrub	Exotic	Common		s				s			
Sonneratia caseolaris	海桑	Tree	Exotic	-							o		
Stephania longa	糞箕篤	Climber	Native	Common		s						s	
Syzygium jambos	蒲桃	Tree	Exotic	Common				s			s		
Syzygium levinei	山蒲桃	Tree	Native	Common				s					
Tinospora sinensis	中華青牛膽	Climber	Native	Common									
Trema tomentosa	山黃麻	Shrub	Native	Common								s	
Tridax procumbens	羽芒菊	Herb	Exotic	Very common					s				
Typha angustifolia	水燭	Herb	Exotic	Rare							o		s
Wedelia trilobata	三裂葉蟛蜞菊	Herb	Exotic	Common						o			
Youngia japonica	黃鶴菜	Herb	Native	Very common					s				
Zanthoxylum piperitum	胡椒木	Shrub	Exotic	-					s				
Total number of flora species recorded within the Study Area					152	26	13	72	40	16	22	43	8

Notes:

1. Corlett *et al*. (2000). Hong Kong vascular plants: distribution and status.
2. International Union of Conservation for Nature (2024). The IUCN Red List of Threatened Species. Version 2024.
3. Convention on International Trade in Endangered Species of Wild Flora and Fauna (2023 Nov). Appendices I, II and III.
4. Qin *et al*. (2017). Threatened Species List of China's Higher Plants.
5. Fu & Chin (1992). China Plant Red Data Book – Rare and Endangered Plants.
6. Wu et al. (1988). Illustration of Rare & endangered plant in Guangdong Province.
7. Hu *et al*. (2003). Rare and Precious Plants of Hong Kong.
8. Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance.
9. State Forestry Administration & Ministry of Agriculture. (2021). List of Wild Plants under State Protection.
10. AFCD (2022) Hong Kong Herbarium.
11. **Species in bold are considered of conservation importance.**

- *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.
- *Citrus reticulata* is 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.
- *Dimocarpus longan* and *Lichi chinensis* 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.
- Dalbergia spp. are listed under Appendix II of CITES and protected under Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance in Hong Kong as species in this genus is facing threat due to the overexploitation for its valuable wood (known as rosewood). In the current study, *Dalbergia benthamii* was recorded. As the recorded Dalbergia are climber which is not relevant to the timber exploitation. In addition, the species are considered 'common' in Hong Kong by Corlett *et al.* (2000). Thus, they are not considered as species of conservation importance in the current Study.
- *Cyperus odoratus*, *Typha angustifolia* and *Coccinia grandis* are regarded as rare by Corlett (2000), yet they are exotic or cultivated. They are not considered as species of conservation.

Abbreviations:

- Habitat: AL = Agricultural Land; DA = Developed Area; MoWa = Modified Watercourse; OP = Overgrown Pond; Pl = Plantation; Po = Pond
- Relative abundance: C = Common; O = Occasional; S = Scarce

Appendix B Abundance of Mammal Species Recorded within the Study Area

Common Names	Scientific Names	Rarity and Distribution in Hong Kong[1]	Conservation status	Application Site		Study Area					
				Da	Po	AL	DA	MoWa	OP	Pl	Po
Domestic Dog	*Canis lupus familiaris*	Common. Widely distributed in urban and countryside areas throughout Hong Kong.	-				3				
Domestic Cat	*Felis catus*	Uncommon. Widely distributed in urban and countryside areas throughout Hong Kong.	-	2		1	5				1
Musk Shrew	*Suncus murinus*	Common. Fairly widely distributed in countryside areas throughout Hong Kong.	-	1							
Total number of species recorded within each habitat				**2**	**0**	**1**	**2**	**0**	**0**	**0**	**0**
Total number of species recorded within the location				**2**		**3**					

Notes:
1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub
2. The number of the abundance represents the total number of individuals recorded in surveys.

Abbreviations:
- Habitat: AL = Agricultural Land; DA = Developed Area; MoWa = Modified Watercourse; OP = Overgrown Pond; Pl = Plantation; Po = Pond

Appendix C Bat Species Recorded within the Assessment Area using Ultrasonic Bat Detector

Common Names[1,4]	Scientific Names[1,4]	Rarity and Distribution in Hong Kong[1,4]	Conservation status[2,3,4]	Recorded within Application Site	Recorded within Study Area but outside Application Site
Chinese Noctule	***Nyctalus plancyi***	**Common. Fairly widely distributed in countryside areas throughout Hong Kong.**	**Fellowes *et al.* (2002): PRC; Cap. 170**		✓
Japanese Pipistrelle	*Pipistrellus abramus*	Widely distributed throughout Hong Kong.	(Cap. 170)	✓	✓
Least Pipistrelle	*Pipistrellus tenuis*	Recent records were found in Nam Chung, Sheung Woo Hang, Shek Pik, Shing Mun and Plover Cove Country Park.	(Cap. 170)		✓
			Total number of species recorded within the location	1	3

Notes:

1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub
2. Cap. 170 Wild Animals Protection Ordinance.
3. 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.
4. Shek (2006). A Field Guide to the Terrestrial Mammals of Hong Kong
5. **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes *et al.* (2002): PRC = Potential Regional Concern

Appendix D Abundance of Bird Species Recorded within the Study Area

Common Names [1]	Scientific Names[1]	Rarity and Distribution in Hong Kong[1]	Conservation status[2,3,4,5]	Application Site		Study Area					
				DA	Po	AL	DA	MoWa	OP	Pl	Po
Garganey	*Spatula querquedula*	Common passage migrant. Found in Deep Bay area, Long Valley, Kam Tin.	-								3
Little Grebe	***Tachybaptus ruficollis***	**Common resident. Found in Deep Bay area.**	**Fellowes *et al.* (2002): LC**								**1**
Black-crowned Night Heron	***Nycticorax nycticorax***	**Common resident and migrant. Widely distributed in Hong Kong.**	**Fellowes *et al.* (2002): LC**						**1**		**3**
Striated Heron	***Butorides striata***	**Common summer visitor. Widely distributed in Hong Kong.**	**Fellowes *et al.* (2002): LC**		**1**						
Chinese Pond Heron	***Ardeola bacchus***	**Common resident. Widely distributed in Hong Kong.**	**Fellowes *et al.* (2002): PRC**		**2**				**1**		**1**
Grey Heron	***Ardea cinerea***	**Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.**	**Fellowes *et al.* (2002): PRC**								**2**
Great Egret	***Ardea alba***	**Common resident, migrant and winter visitor. Widely distributed in Hong Kong.**	**Fellowes *et al.* (2002): PRC**								**2**
Intermediate Egret	***Ardea intermedia***	**Resident and passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape D'Aguilar.**	**Fellowes *et al.* (2002): RC**			**1**					**2**
Little Egret	***Egretta garzetta***	**Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong.**	**Fellowes *et al.* (2002): PRC**			**2**		**1**	**1**		**2**
White-breasted Waterhen	*Amaurornis phoenicurus*	Common resident. Widely distributed in wetland throughout Hong Kong.	-		3	2	1		2		6
Black-winged Stilt	***Himantopus himantopus***	**Common migrant and wintor visitor. Found in Deep Bay area, Long Valley, Kam Tin.**	**Fellowes *et al.* (2002): RC**								**12**
Little Ringed Plover	***Charadrius dubius***	**Resident, common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.**	**Fellowes *et al.* (2002): (LC)**								**8**
Greater Painted-snipe	***Rostratula benghalensis***	**Locally common resident. Found in Ha Tsuen, Lok Ma Chau, Kam Tin, Long Valley, Hong Kong Wetland Park.**	**China Red Data Book Status: VU; Fellowes *et al.* (2002): LC**								**3**
Spotted Redshank	***Tringa erythropus***	**Common spring passage migrant. Found in Deep Bay area.**	**Fellowes *et al.* (2002): RC**								**1**
Common Greenshank	***Tringa nebularia***	**Abundant passage migrant and winter visitor. Found in Deep Bay area.**	**Fellowes *et al.* (2002): RC**			**1**					

Common Names [1]	Scientific Names[1]	Rarity and Distribution in Hong Kong[1]	Conservation status[2,3,4,5]	Application Site		Study Area					
				DA	Po	AL	DA	MoWa	OP	Pl	Po
Green Sandpiper	*Tringa ochropus*	Common migrant and winter visitor. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Shek Kong, Ho Chung.	-			2					4
Wood Sandpiper	***Tringa glareola***	**Common migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.**	**Fellowes *et al.* (2002): LC**								**3**
Rock Dove	*Columba livia*	Locally common resident. Widely distributed in urban area throughout Hong Kong.	-				4				
Spotted Dove	*Spilopelia chinensis*	Abundant resident. Widely distributed in Hong Kong.	-	3		15	32		2	5	
Greater Coucal	***Centropus sinensis***	**Common resident. Widely distributed in Hong Kong.**	**China Red Data Book Status: VU; List of Wild Animals under State Priority Conservation: Class II**			**1**			**2**		**1**
Asian Koel	*Eudynamys scolopaceus*	Common resident. Widely distributed in Hong Kong.	-			4	17		2	15	9
Large Hawk-Cuckoo	*Hierococcyx sparverioides*	Locally common spring and summer visitor. Widely distributed in woodland throughout in Hong Kong.	-			1					
House Swift	*Apus nipalensis*	Abundant spring migrant and common resident. Widely distributed in Hong Kong.	-								2
Common Kingfisher	*Alcedo atthis*	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.	-								5
Scarlet Minivet	*Pericrocotus speciosus*	Common resident. Found in Tai Po Kau, the Peak, Lam Tsuen, Cape D'Aguilar Road, Peel Rise, Shing Mun.	-							2	
Long-tailed Shrike	*Lanius schach*	Common resident. Widely distributed in open areas throughout Hong Kong.	-						1		1
Black Drongo	*Dicrurus macrocercus*	Common summer visitor. Widely distributed in open area throughout Hong Kong.	-								2
Hair-crested Drongo	*Dicrurus hottentottus*	Common migrant and winter visitor, and locally common resident. Widely distributed in wooded area throughout Hong Kong.	-							2	

Common Names [1]	Scientific Names[1]	Rarity and Distribution in Hong Kong[1]	Conservation status[2,3,4,5]	Application Site		Study Area					
				DA	Po	AL	DA	MoWa	OP	Pl	Po
Azure-winged Magpie	*Cyanopica cyanus*	Locally common breeding resident. Found in Mai Po.	-				18		1		
Collared Crow	***Corvus torquatus***	**Locally common resident. Found in Inner Deep Bay area, Nam Chung, Kei Ling Ha, Tai Mei Tuk, Pok Fu Lam, Chek lap Kok, Shuen Wan, Lam Tsuen.**	**IUCN Red List: VU; Fellowes *et al.* (2002): LC**			**2**					**1**
Cinereous Tit	*Parus cinereus*	Common resident. Widely distributed in Hong Kong.	-				3				5
Red-whiskered Bulbul	*Pycnonotus jocosus*	Abundant resident. Widely distributed in Hong Kong.	-	2			39			16	20
Chinese Bulbul	*Pycnonotus sinensis*	Abundant resident. Widely distributed in Hong Kong.	-				21	2		4	8
Barn Swallow	*Hirundo rustica*	Abundant passage migrant and summer visitor. Widely distributed in Hong Kong.	-				17		14		37
Dusky Warbler	*Phylloscopus fuscatus*	Abundant winter visitor and migrant. Widely distributed in shrubland and waterside vegetation throughout Hong Kong.	-						3		4
Yellow-browed Warbler	*Phylloscopus inornatus*	Abundant winter visitor and migrant. Widely distributed in woodland throughout Hong Kong.	-			2	2			6	
Yellow-bellied Prinia	*Prinia flaviventris*	Common resident. Widely distributed in Hong Kong.	-			3			5		
Plain Prinia	*Prinia inornata*	Locally common resident. Widely distributed in grassland throughout Hong Kong.	-						1		
Common Tailorbird	*Orthotomus sutorius*	Common resident. Widely distributed in Hong Kong.	-		1		2				
Masked Laughingthrush	*Pterorhinus perspicillatus*	Abundant resident. Widely distributed in shrubland throughout Hong Kong.	-			5	20			6	6
Swinhoe's White-eye	*Zosterops simplex*	Abundant resident. Widely distributed in Hong Kong.	-				10			4	
Crested Myna	*Acridotheres cristatellus*	Abundant resident. Widely distributed in Hong Kong.	-				3		7		3
Common Myna	*Acridotheres tristis*	Locally common resident. Found in Mai Po, Sheung Uk Tsuen, Sheung Shui, Kam Tin, Shek Kong, Ping Shan, Mong Tseng.	-				11				

Common Names [1]	Scientific Names[1]	Rarity and Distribution in Hong Kong[1]	Conservation status[2,3,4,5]	Application Site		Study Area					
				DA	Po	AL	DA	MoWa	OP	Pl	Po
Black-collared Starling	*Gracupica nigricollis*	Common resident. Widely distributed in Hong Kong.	-	2	2		23		8	10	11
Chinese Blackbird	*Turdus mandarinus*	Common winter visitor and migrant. Widely distributed in Hong Kong.	-				4			2	1
Oriental Magpie-Robin	*Copsychus saularis*	Abundant resident. Widely distributed in Hong Kong.	-				7				5
Asian Brown Flycatcher	*Muscicapa dauurica*	Common passage migrant and winter visitor. Widely distributed in Hong Kong.	-							1	
Amur Stonechat	*Saxicola stejnegeri*	Common passage migrant and winter visitor. Widely distributed in open cultivated fields throughout Hong Kong.	-								4
Eurasian Tree Sparrow	*Passer montanus*	Abundant resident. Widely distributed in Hong Kong.	-	5		14	72		7	14	10
Scaly-breasted Munia	*Lonchura punctulata*	Abundant resident. Widely distributed in Hong Kong.	-	10	17						19
Eastern Yellow Wagtail	*Motacilla tschutschensis*	Common passage migrant and winter visitor. Widely distributed in agricultural fields and marsh edges throughout Hong Kong.	-								1
White Wagtail	*Motacilla alba*	Resident, common passage migrant and winter visitor. Widely distributed in Hong Kong.	-			4	2	2	3		4
Olive-backed Pipit	*Anthus godlewskii*	Common passage migrant and winter visitor. Widely distributed in Hong Kong.	-			1				5	2
Total number of species recorded within each habitat				5	6	16	20	3	17	14	38
Total number of species recorded within the location				9			52				

Notes:
1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub
2. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - 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. International Union of Conservation for Nature. (2024). The IUCN Red List of Threatened Species. Version 2024.
4. National Forestry and Grassland Administration and the Ministry of Agricultural and Rural Affairs. (2023). List of Wild Animals under State Priority Conservation
5. Yue and Chen (1998). China Red Data Book of Endangered Animals: Pisces.
6. The number of the abundance represents the total number of individuals recorded in surveys
7. **Species in bold are considered of conservation importance.**

Abbreviations:

- Habitat: AL = Agricultural Land; DA = Developed Area; MoWa = Modified Watercourse; OP = Overgrown Pond; Pl = Plantation; Po = Pond
- Conservation Status in Fellowes *et al.* (2002): LC = local concern, PRC = potential regional concern, RC = regional concern, GC = global 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 (Fellowes *et al.* 2002).

Appendix E Abundance of Butterfly Species Recorded within the Study Area

Common Names[1]	Scientific Names[1]	Rarity and Distribution in Hong Kong[1]	Conservation status[2]	Application Site		Assessment Area					
				Da	Po	AL	Da	MoWa	OP	Pl	Po
Formosan Swift	*Borbo cinnara*	Common. Widely distributed throughout Hong Kong.	-			1				1	
Indian Palm Bob	*Suastus gremius*	Uncommon.Widely distributed throughout Hong Kong.	-						1		
Common Hedge Blue	*Acytolepis puspa*	Common. Widely distributed throughout Hong Kong	-			3			1		5
Plains Cupid	*Chilades pandava*	Uncommon. Widely distributed throughout Hong Kong	-				2				
Dark Cerulean	*Jamides bochus*	Common. Widely distributed throughout Hong Kong.	-			3					
Long-tailed Blue	*Lampides boeticus*	Common. Widely distributed throughout Hong Kong.	-			2					3
Transparent 6-line Blue	*Nacaduba kurava*	Common. Widely distributed throughout Hong Kong	-			2					4
Pale Grass Blue	*Pseudozizeeria maha*	Very common. Widely distributed throughout Hong Kong	-	3			3				5
Plum Judy	*Abisara echerius*	Very common. Widely distributed throughout Hong Kong	-							3	2
Punchinello	*Zemeros flegyas*	Common. Widely distributed throughout Hong Kong	-							3	
Blue-spotted Crow	*Euploea midamus*	Very common. Widely distributed throughout Hong Kong	-			2	3				
Blue Tiger	*Tirumala limniace*	Common. Widely distributed throughout Hong Kong	-			1					
Red Ring Skirt	*Hestina assimilis*	Common. Widely distributed throughout Hong Kong.	-			4				3	
Great Eggfly	*Hypolimnas bolina*	Common. Widely distributed throughout Hong Kong	-			1					2
Danaid Eggfly	***Hypolimnas misippus***	**Uncommon. Ngau Ngak Shan, Lung Kwu Tan, Hong Kong Wetland Park, Mount Parker, Cloudy Hill, Lin Ma Hang**	**Fellowes *et al.* (2002): LC**						**1**		
Common Archduke	*Lexias pardalis*	Suspected species. Widely distributed throughout Hong Kong.	-							2	
Common Sailer	*Neptis hylas*	Very common. Widely distributed throughout Hong Kong	-			3	3			2	
Shan Nawab	*Polyura nepenthes*	Uncommon. Cloudy Hill, Shing Mun, Tai Po Kau, Victoria Peak, Lai Chi Wo, Pak Sha O	-				1				
Large Faun	*Faunis eumeus*	Common. Widely distributed throughout Hong Kong.	-				3			1	
Common Palmfly	*Elymnias hypermnestra*	Common. Widely distributed throughout Hong Kong.	-						4		
Dark-brand Bush Brown	*Mycalesis mineus*	Very common. Widely distributed throughout Hong Kong	-						3	2	2
Tailed Jay	*Graphium agamemnon*	Common. Widely distributed throughout Hong Kong	-						2		
Great Mormon	*Papilio memnon*	Very common. Widely distributed throughout Hong Kong	-			3	2			4	

Common Names[1]	Scientific Names[1]	Rarity and Distribution in Hong Kong[1]	Conservation status[2]	Application Site		Assessment Area					
				Da	Po	AL	Da	MoWa	OP	Pl	Po
Common Mormon	*Papilio polytes*	Very common. Widely distributed throughout Hong Kong	-	4		1	2		2	5	2
Spangle	*Papilio protenor*	Very common. Widely distributed throughout Hong Kong	-				4		1		1
Lemon Emigrant	*Catopsilia pomona*	Common. Widely distributed throughout Hong Kong	-			2	3		3		4
Red-base Jezebel	*Delias pasithoe*	Very common. Widely distributed throughout Hong Kong	-				5				
Common Grass Yellow	*Eurema hecabe*	Very common. Widely distributed throughout Hong Kong	-			4			2	3	1
Indian Cabbage White	*Pieris canidia*	Very common. Widely distributed throughout Hong Kong	-	1		14	17		2		16
Total number of species recorded within each habitat				3	0	15	12	0	11	11	0
Total number of species recorded within the location				3		29					

Notes:
1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub
2. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - 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. The number of the abundance represents the total number of individuals recorded in surveys
4. **Species in bold are considered of conservation importance.**

Abbreviations:
- Habitat: AL = Agricultural Land; DA = Developed Area; MoWa = Modified Watercourse; OP = Overgrown Pond; Pl = Plantation; Po = Pond
- Conservation Status in Fellowes *et al.* (2002): LC = local 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 (Fellowes *et al.* 2002).

Appendix F Abundance of Odonate Species Recorded within the Study Area

Common Names[1]	Scientific Names[1]	Rarity and Distribution in Hong Kong[1]	Conservation status	**Application Site**		Assessment Area					
				Da	Po	AL	DA	MoWa	OP	Pl	Po
Common Evening Hawker	*Anaciaeschna jaspidea*	Common. Semi-crepuscular and gregarious; found around marshes and wet lowland agricultural areas. Population scattered in Hong Kong, but more commonly seen in the north New Territories.	-								4
Pale-spotted Emperor	*Anax guttatus*	Common. Widely distributed in ponds and sluggish streams throughout Hong Kong.	-								2
Lesser Emperor	*Anax parthenope*	Common. Often found in lowland ponds and sluggish rivers. Widely distributed throughout Hong Kong.	-								3
Orange-tailed Sprite	*Ceriagrion auranticum*	Abundant. Widely distributed in weedy ponds, marshes, abandoned fields or grasslands adjacent to waters.	-		7		2	3	3		12
Common Bluetail	*Ischnura senegalensis*	Abundant. Widely distributed in all wetland habitats except fast flowing rivers throughout Hong Kong.	-		28						18
Common Flangetail	*Ictinogomphus pertinax*	Common. Widely distributed in ponds and still water throughout Hong Kong.	-								2
Asian Pintail	*Acisoma panorpoides*	Common. Widely distributed in marshes and weedy ponds throughout Hong Kong.	-								5
Blue Dasher	*Brachydiplax chalybea*	Common. Widely distributed in marshes and weedy ponds throughout Hong Kong.	-		3						4
Asian Amberwing	*Brachythemis contaminata*	Abundant. Widely distributed in weedy ponds and sluggish streams.	-		6	3					26
Crimson Darter	*Crocothemis servilia*	Abundant. Widely distributed in cultivated areas, ponds and marshes throughout the New Territories.	-								3
Pied Percher	*Neurothemis tullia*	Common. Favours marshes and abandoned rice paddies. Widely distributed throughout Hong Kong.	-								2
Green Skimmer	*Orthetrum sabina sabina*	Abundant. Widely distributed in all wetland habitats throughout Hong Kong.	-			3			2		11

Common Names[1]	Scientific Names[1]	Rarity and Distribution in Hong Kong[1]	Conservation status	**Application Site**		Assessment Area					
				Da	Po	AL	DA	MoWa	OP	Pl	Po
Wandering Glider	*Pantala flavescens*	Abundant. Widely distributed all over Hong Kong.	-		28			6	10		34
Pied Skimmer	*Pseudothemis zonata*	Common. Widely distributed in woodlands adjacent to reservoirs, sluggish streams, ponds, tanks and marshes throughout Hong Kong.	-		5						8
Variegated Flutterer	*Rhyothemis variegata arria*	Common. Widely distributed in marshes, ponds and tanks throughout Hong Kong.	-		1	17		5	10		32
Crimson Dropwing	*Trithemis aurora*	Abundant. Found in marshes, ponds, streams, andor even ornamental ponds in urban areas. Widely distributed throughout Hong Kong.	-		3						3
Regal Pond Cruiser	*Epophthalmia elegans*	Common. Always patrols along the edge of large ponds with a regular path. Widely distributed in reservoirs and large ponds throughout Hong Kong.	-								1
Total number of species recorded within each habitat				0	8	3	1		4	0	3
Total number of species recorded within the location				8			17				

Notes:
1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub
2. The number of the abundance represents the total number of individuals recorded in surveys.

Abbreviations:
- Habitat: AL = Agricultural Land; DA = Developed Area; MoWa = Modified Watercourse; OP = Overgrown Pond; Pl = Plantation; Po = Pond

Appendix G Abundance of Reptile Species Recorded within the Study Area

Common Names	Scientific Names	Rarity and Distribution in Hong Kong	Conservation status	Application Site	Study Area					
				Po	AL	DA	MoWa	OP	Pl	Po
Changeable Lizard	*Calotes versicolor*	Widely distributed throughout Hong Kong.	-			1				1
Chinese Gecko	*Gekko chinensis*	Widely distributed throughout Hong Kong.	-	2		5				2
Bowring's Gecko	*Hemidactylus bowringii*	Distributed throughout Hong Kong.	-			2			2	2
Long-tailed Skink	*Eutropis longicaudata*	Widely distributed throughout Hong Kong.	-			1			1	1
Total number of species recorded within each habitat				1	0	4		0	2	0
Total number of species recorded within the location				1		4				

Notes:
1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub
2. The number of the abundance represents the total number of individuals recorded in surveys.

Abbreviations:
- Habitat: AL = Agricultural Land; DA = Developed Area; MoWa = Modified Watercourse; OP = Overgrown Pond; Pl = Plantation; Po = Pond

Appendix H Abundance of Amphibian Species Recorded within the Study Area

Common Names	Scientific Names	Rarity and Distribution in Hong Kong[1]	Conservation status	Application Site	Study Area					
				Po	AL	DA	MoWa	OP	Pl	Po
Asian Common Toad	*Duttaphrynus melanostictus*	Widely distributed in Hong Kong.	-	14	1	3			1	17
Asiatic Painted Frog	*Kaloula pulchra*	Widely distributed in Hong Kong.	-	3		11				
Ornate Pigmy Frog	*Microhyla fissipes*	Widely distributed in Hong Kong.	-	2	5			2		
Paddy Frog	*Fejervarya limnocharis*	Widely distributed in Hong Kong.	-					5		20
Gunther's Frog	*Sylvirana guentheri*	Widely distributed throughout Hong Kong.	-	13			1	10		12
Greenhouse Frog	*Eleutherodactylus planirostris*	Widely distributed throughout Hong Kong.	-	2	3	8		2	2	3
Total number of species recorded within each habitat				5	2	3		4	1	0
Total number of species recorded within the location				5		6				

Notes:
12. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub
13. The number of the abundance represents the total number of individuals recorded in surveys.

Abbreviations:
- Habitat: AL = Agricultural Land; DA = Developed Area; MoWa = Modified Watercourse; OP = Overgrown Pond; Pl = Plantation; Po = Pond

Appendix I Relative Abundance of Aquatic Species Recorded within the Study Area

Common Name	Scientific Name	Rarity and Distribution in Hong Kong / Conservation status [1]	Application Site	Study Area	
			Po	Po	MoWa
Fish					
Common carp	*Cyprinus carpio*	Not common in streams but occurs in many reservoirs and cultivated in fishponds as food fish.	+	+	
Mosquito fish	*Gambusia affinis*	Introduced as a mosquito-control agent, widespread in local freshwater bodies	+	+++	+++
Mozambique tilapia	*Oreochromis mossambicus*	Common	+	++	
Mud carp	*Cirrhinus molitorella*	Not common in streams but occurs in large numbers in many reservoirs and cultivated in fishponds as food fish.	+	+++	
Dwarf snakehead	*Channa gachua*	Probably an introduced species. Records from a few streams in North District.			++
Snakehead murrel	*Channa striata*	Uncommon in the wild and is an introduced species. Records from a few streams in North District and on Lantau Island.			++
		Total number of species recorded within each habitat	**4**	**4**	**3**
		Total number of fish species recorded	**4**	**6**	
Invertebrates					
Apple snail	*Pomacea canaliculata*	-	+	+++	
		Total number of species recorded within each habitat	**1**	**1**	**0**
		Total number of invertebrate species recorded	**1**	**1**	

Note:
1. Agriculture, Fisheries and Conservation Department (2024). Species Database of the Hong Kong Biodiversity Information Hub

Keys:
Relative abundance: + = Rare, ++ = Occasional, +++ = Common

Abbreviations:
- Habitat: Po: Pond; MoWa = Modified Watercourse

Appendix J
Management Protocol of the Solor Photovoltaic System during Operational Phase

1. BACKGROUND

1.1 Site History

1.1.1 The Application Site was originally two abandoned fish ponds in 1980s. However, the water depth of the ponds has become shallower and overgrown with weeds without proper management since 2000. Due to the accumulation of organic matter from dead leaves or grass clippings, overgrowing of algae was observed. Without proper management, the ponds nearly dried out in 2021.

1.1.2 To facilitate the proposed use of the solar photovoltaic system, management on these ponds has been conducted since 2023. The overgrown weeds in the ponds were removed. Both ponds were refilled with water with regular maintenance water-depth monitoring and stocked with fish.

1.2 Proposed Works

1.2.1 The solar photovoltaic (PV) system at the Application Site comprises a total of 152 PV panels, with an installed generation capacity of 50 kilowatts. The PV panels are non-glare plates installed on two floating platforms fabricated with hazardous free materials.

1.2.2 The installation of floating solar panel of about 0.067ha on top of the water bodies (with the reduction of the space among solar panels, it will be about 0.055ha), which only contributes about 31% (26.4%) of pond habitat within the Application Site.

1.3 Objective of the Management Protocol

1.3.1 The Application Site is located within the Conservation Area under the Mai Po and Fairview Park Outline Zoning Plan (OZP) No. S/YL-MP/8, and Wetland Buffer Area designated by Town Planning Board, which aims to conserve the ecological value of the fishponds in the Deep Bay Area. The potential ecological impacts during the construction phase and operational phase have been assessed in the EcoIA. With the implementation of the mitigation measures recommended, no adverse residual impact would be expected. Given that the Application Site is located within the Conservation Area and Wetland Buffer Area, a management protocol is therefore prepared, to specify the maintenance and monitoring works during operational phase in order to propose detailed measures to further minimize the potential impacts and maintain the habitat quality within the Application Site at the same time.

1.3.2 The Applicant will engage a contractor/landscape contractor as well as a qualified ecologist with 7 years relevant experience to conduct the following maintenance / management works and monitoring works.

2. MAINTENANCE WORKS DURING OPERATIONAL PHASE

2.1 The Solar photovoltaic (PV) System

2.1.1 Regular inspection and clearance of the floating PV system are essential for ensuring optimal performance. Monthly checks will be conducted to identify any signs of damaged dirt accumulation or shading issues of the solar panels and associated components that could affect performance. The solar panels will be cleaned as needed to remove dust, debris, and bird droppings, which can significantly reduce efficiency. All bird traces or droppings will be paid particular attention to the panels. This is particularly important as the floating solar system unintentionally provides a resting place for birds, which may lead to increased droppings on the panels.

2.1.2 Cleaning will be performed using a soft brush and water jet to avoid damaging the panels while ensuring that the surfaces remain clear for optimal sunlight exposure.

2.2 Invasive Plant

2.2.1 Regular inspections will be conducted to identify and assess any invasive plant species that may threaten native vegetation and disrupt the pond's ecosystem or the operation of the solar photovoltaic system. If any invasive species are detected, they will be promptly removed manually.

2.2.2 Additionally, monthly grass cutting and maintenance will be performed to prevent overgrowth of vegetation around the solar photovoltaic system and its components, ensuring optimal operation.

2.3 Pond Management

General

2.3.1 To protect excessive organic matters and pathogens, garbage would be disposed properly. Maintenance work for pond bed and bunds would be undertaken approximately every three years. As the ponds were restored to facilitate installation of the proposed solar photovoltaic system, management of the ponds as well as the water quality and water depth is therefore required. In accordance with the planning intention of the "Conservation Area" zone, which is to conserve the ecological value of the wetland and fish ponds, small number of fish will be stocked to echo the planning intention. However, the proposed management works is considered minimal when compared to the operation of commercial fish ponds.

Water quality

2.3.2 As small numbers of fish will be stocked, and in order to minimize the nuisance to nearby residential area (e.g. odor), regular inspections and measurements of water quality will be conducted monthly. The levels of dissolved oxygen and pH will be closely monitored to prevent deterioration of water quality and to promptly address any identified issues.

2.3.3 According to Environmental Management of Pond Fish Culture published by AFCD, the pH value of water in fishpond should be between 6 and 8.5. Hence, it is suggested adding lime into the ponds if the pH value of pond water and soil consistently below pH 6 for a period of time (AFCD, 2009).

2.3.4 Algal growth may affect aquatic life and affect water quality, which might produce odor during decomposition that cause nuisance to nearby residential area. Manual removal of the algae should be considered subject to the site condition and water level of the water body. Deployment of herbaceous fish species such as Grass Carp and Bighead to control algae might be required.

Water level

2.3.5 Regular monitoring of water level in the fishponds within the application site will be conducted. Should there be significant fluctuations in water levels, appropriate remedial measures will be implemented.

2.3.6 Soil in the area is considered drained marine clays which are sufficiently impermeable to maintain the ponds. The water depth will be monitored to determine if water leakage occurred. Clay liner will be required if water leakage is discovered.

Fish/fry restocking

2.3.7 Regular restocking is essential for maintaining a stable fish population, compensating for natural mortality rates caused by predation, disease, or environmental factors. Fish also play a crucial role in controlling algae growth by grazing on algae and other aquatic plants, thereby helping to maintain water quality. Additionally, the fish stock may provide potential foraging and feeding opportunities for wildlife.

2.3.8 According to the Environmental Management of Pond Fish Culture by AFCD, recommended fish species for sustaining a healthy pond environment include Bighead Carp, Silver Carp, edible goldfish, and Common Carp. *Herbaceous* species will be selected, hence no feeding of fish will be required. These species will be stocked in the pond annually. However, the numbers for fish stocking would be much fewer than the density for the commercial fish ponds.

3. MEASURES TO FURTHER MINIMIZE THE POTENTIAL IMPACTS TO WILDLIFE

3.1 Selection of Materials

3.1.1 As the Application Site is located within a Conservation Area and Wetland Buffer Area, waterbirds might be present in the vicinity, although the ecological value of the Application Site is ranked as low. As a precautionary measure, non-reflective surfaces will be adopted for the panels to minimize the potential impacts of reflection on birds.

3.2 Measures to Minimize Human Disturbance

3.2.1 The floating solar system might unintentionally provide a resting place for birds, maintenance and management work should only be conducted when the resting birds are left.

3.2.2 Besides, attention will also be paid on if any birds make use of the Application Site as breeding habitat. If signs of breeding behavior are noted during inspection, maintenance and management works near the breeding location should be halted, advice from qualified ecologists or AFCD should be sought.

3.3 Measures to Minimize Noise Disturbance

3.3.1 Should mechanical equipment to be used for the maintenance and management works, the Quality Powered Mechanical Equipment (QPME) approved by EPD should be adopted, to minimize the noise disturbance to the wildlife within the Application Site as well as the surrounding sensitive habitats.

4. ECOLOGICAL MONITORING DRUING OPERATIONAL PAHSE

4.1 Objective

4.1.1 To verify wildlife utilization of the restored ponds after installation and to evaluate that the claims of ecological enhancement (e.g., habitat restoration and wildlife attraction) are upheld during the operational phase. The monitoring duration will be 2 years after the installation is completed. The main aspects of ecological monitoring include fauna surveys (including waterbird /water-dependent bird, dragonfly, and amphibian surveys), fish population monitoring, and habitat quality assessments.

4.2 Monitoring Programme

4.2.1 The bird communities in the Application Site will be monitored. A transect count / point count survey will be conducted to determine the presence and abundance of all bird species encountered. The survey will be conducted once a month. Utilization of the Site as breeding habitat by birds will also be studied. During the surveys, observed birds will be classified according to their behavior i.e. feeding, roosting, breeding etc.

4.2.2 The herpetofauna survey will be conducted during the wet season (i.e. between April and October) by using transect count method. The presence and abundance of species encountered visually or aurally on the transect will be recorded.

4.2.3 Presence and abundance of adult dragonfly target species will be estimated using transect count method. Surveys will be conducted monthly between April and October, when the key species are more active (Tam *et al.* 2011).

4.2.4 If any other species of conservation importance including but not limited to mammal or butterfly are encountered, they will be recorded and reported in the quarterly monitoring reports.

4.2.5 Monitoring of fish number and species will be conducted bi-monthly with using bank-side count and/or hand net to actively search for fish. Fish species and crustaceans found in the surveyed ponds will be recorded and identified to the lowest possible taxon, and their relative abundance will be reported. The range of the majority size will be recorded as <10cm and >10cm. Additionally, the special behaviour of fish will be recorded, if any.

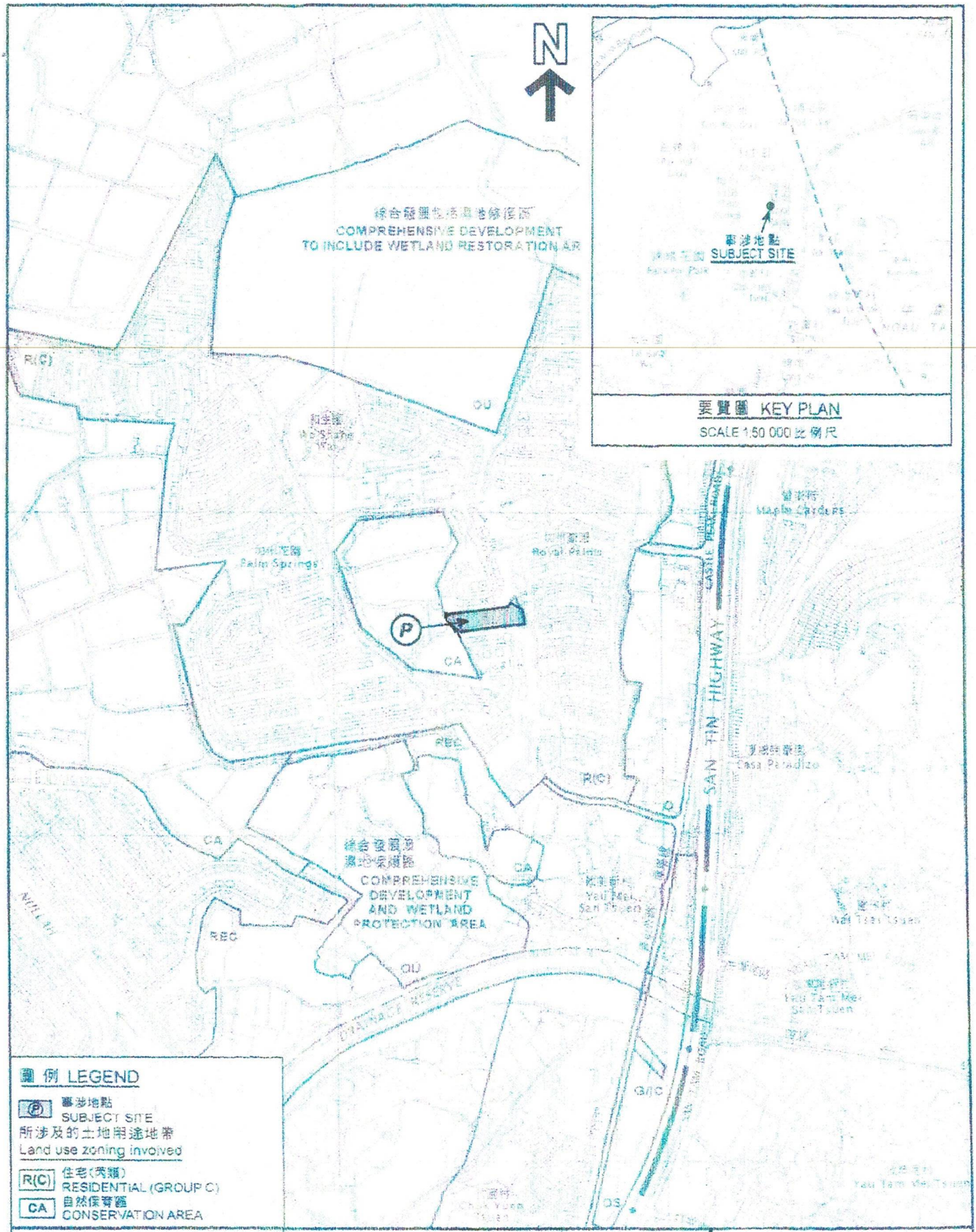
4.2.6 Regular inspections and measurements of water quality will be conducted monthly during the management work. The levels of dissolved oxygen and pH will be closely monitored to prevent deterioration of water quality and to promptly address any identified issues.

4.2.7 The monitoring data will be compared with the ecological baseline in the EcoIA or the Environmental Management of Pond Fish Culture published by AFCD, should any abnormal results are found during the monitoring period, investigation will be conducted including but not limited to reviewing the adaptive management regime.

4.3 Reporting

4.3.1 A Quarterly Monitoring and Management Report will be prepared for the Application Site. This Report includes a summary of species richness and abundance trends of the

Application Site, habitat quality metrics and the management activities undertaken during the reporting quarter.



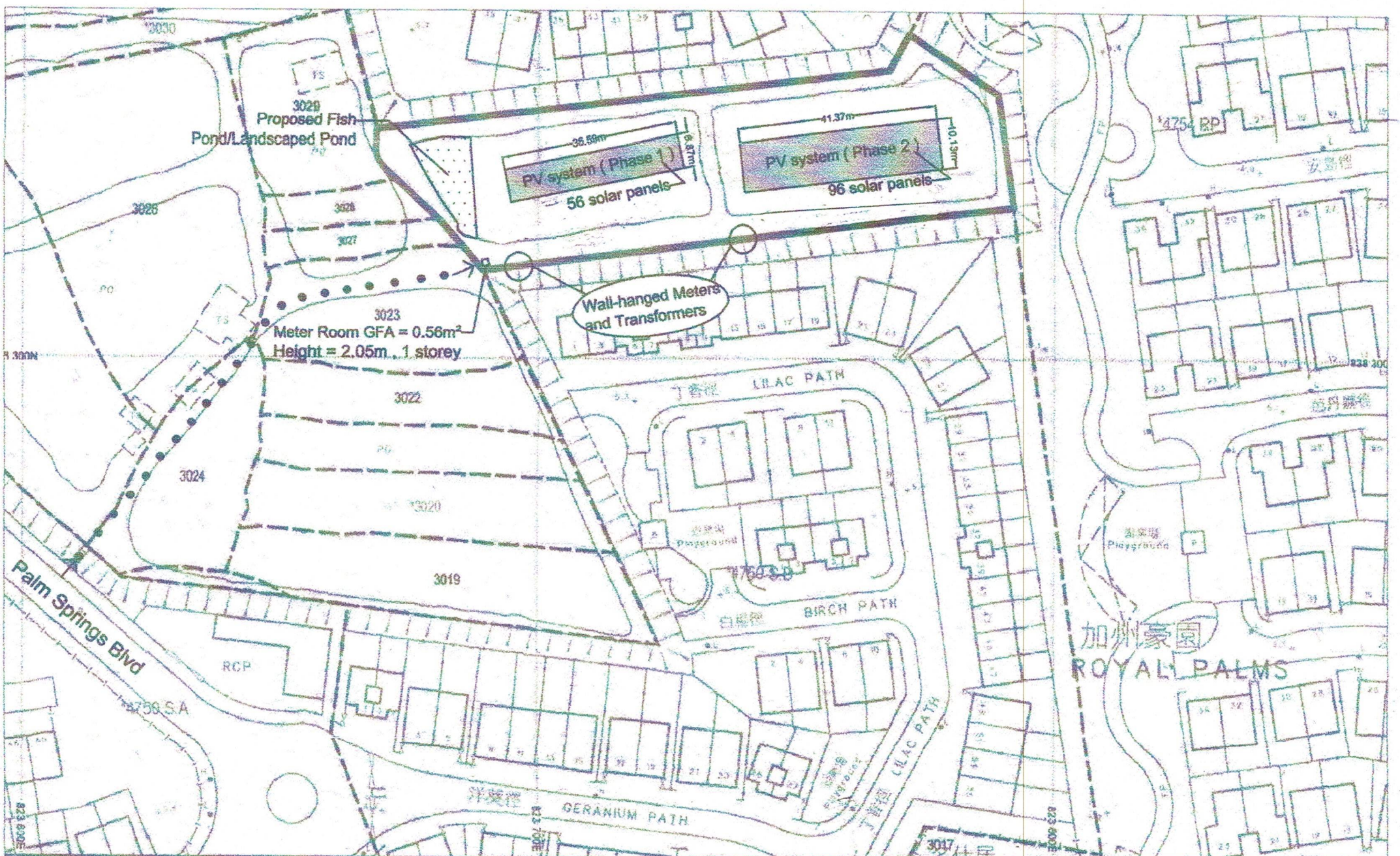
Location Plan

EXTRACT PLAN
BASED ON OUTLINE ZONING PLAN
No. S/YL-MP/6

SCALE 1:7 500

米 METRES 100 0 100 200 300 米 METRES

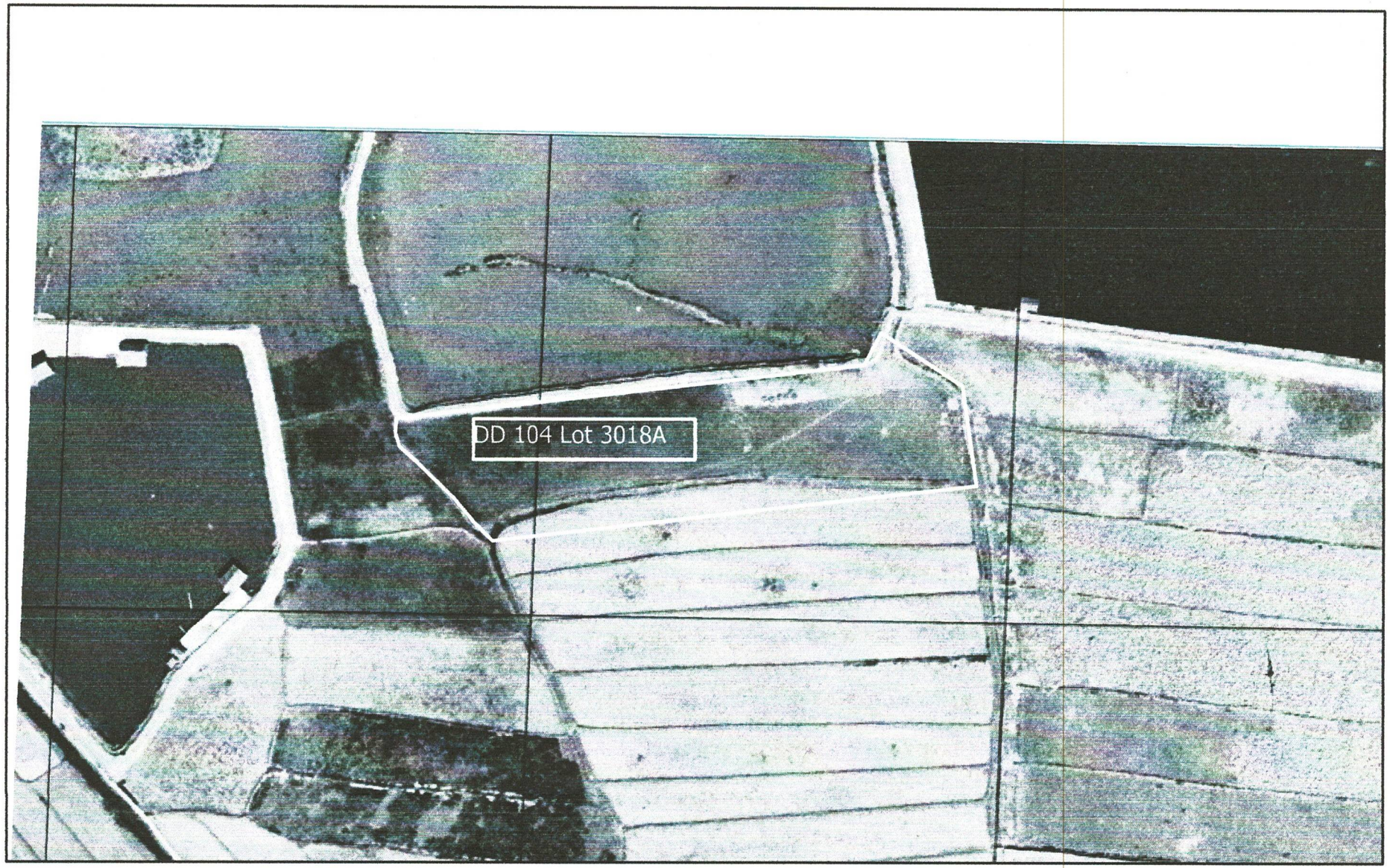
Plan 1



Legend

- Application Site
- Photovoltaic System
- Foot Access to Site
- Proposed Fish Pond / Landscaped Pond

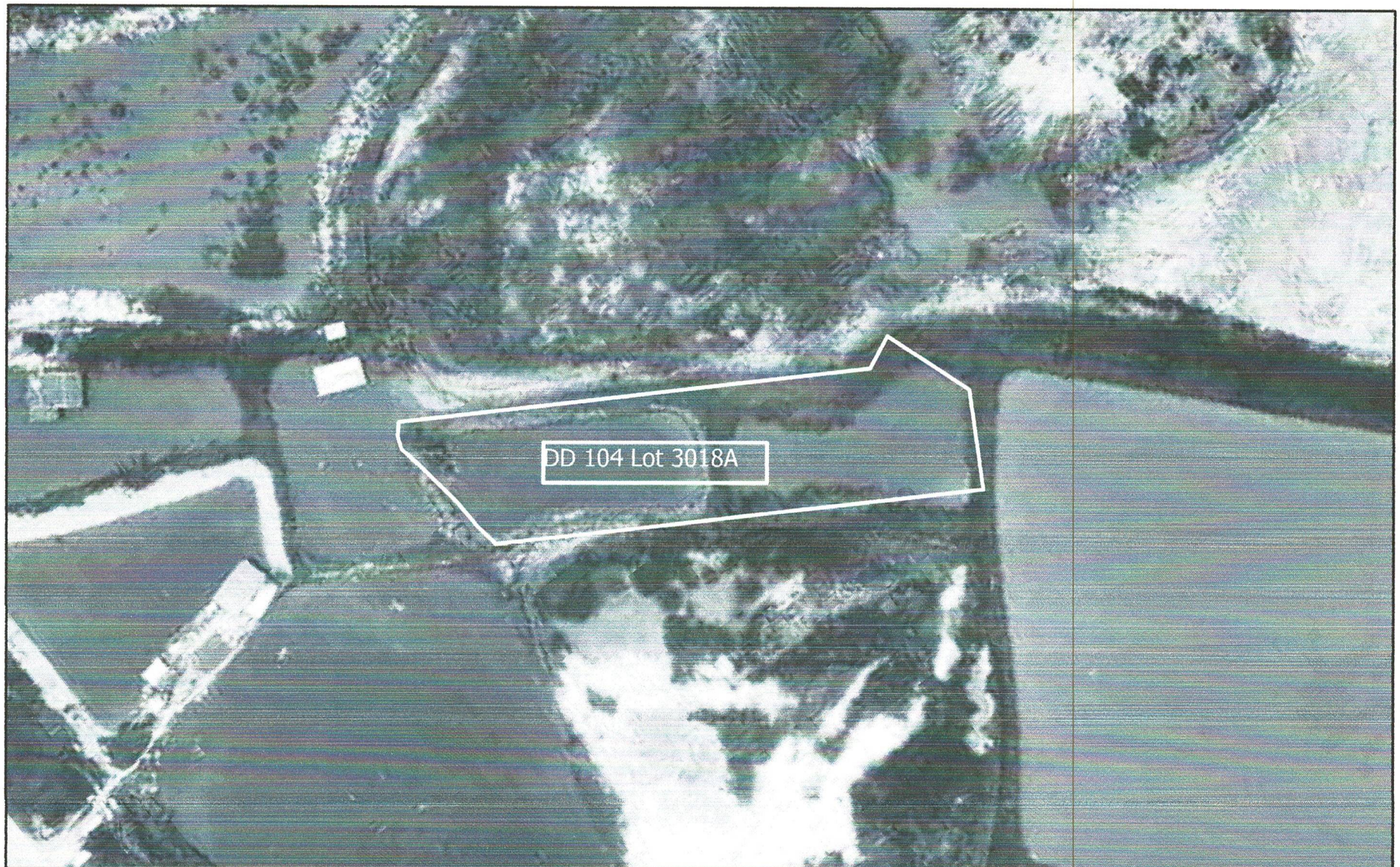
Plan 2



Aerial Photo from Lands Department, 1963, Lot 3018 S.A in D.D.104, Palm Springs

Scale 1:1200

Plan 3a



Aerial Photo from Lands Department, July 1990, A21602, Lot 3018 S.A in D.D.104, Palm Springs

Scale 1:1200

Plan 3b

Aerial Photo from Lands Department, Aug 2000, CN27718, Lot 3018 S.A in D.D.104, Palm Springs

Scale 1:1200

Plan 3c

Google Earth Image, 2010 Apr, Lot 3018 S.A in D.D.104, Palm Springs

Plan 3d

Google Earth Image, 2015 Jan, Lot 3018 S.A in D.D.104, Palm Springs

Plan 3e

Google Earth Image, 2021 Feb, Lot 3018 S.A in D.D.104, Palm Springs

Plan 3f

Scale 1:500

Aerial Photo from CTA, 2023, Lot 3018 S.A in D.D.104, Palm Springs

Plan 3g

Site Photo 1

Site Photo 2

Site before Development

Plan 4a

Site Photo 3

Phase 1 PV Installation

Plan 4b

Site Photo 4

Phase 2 PV Installation

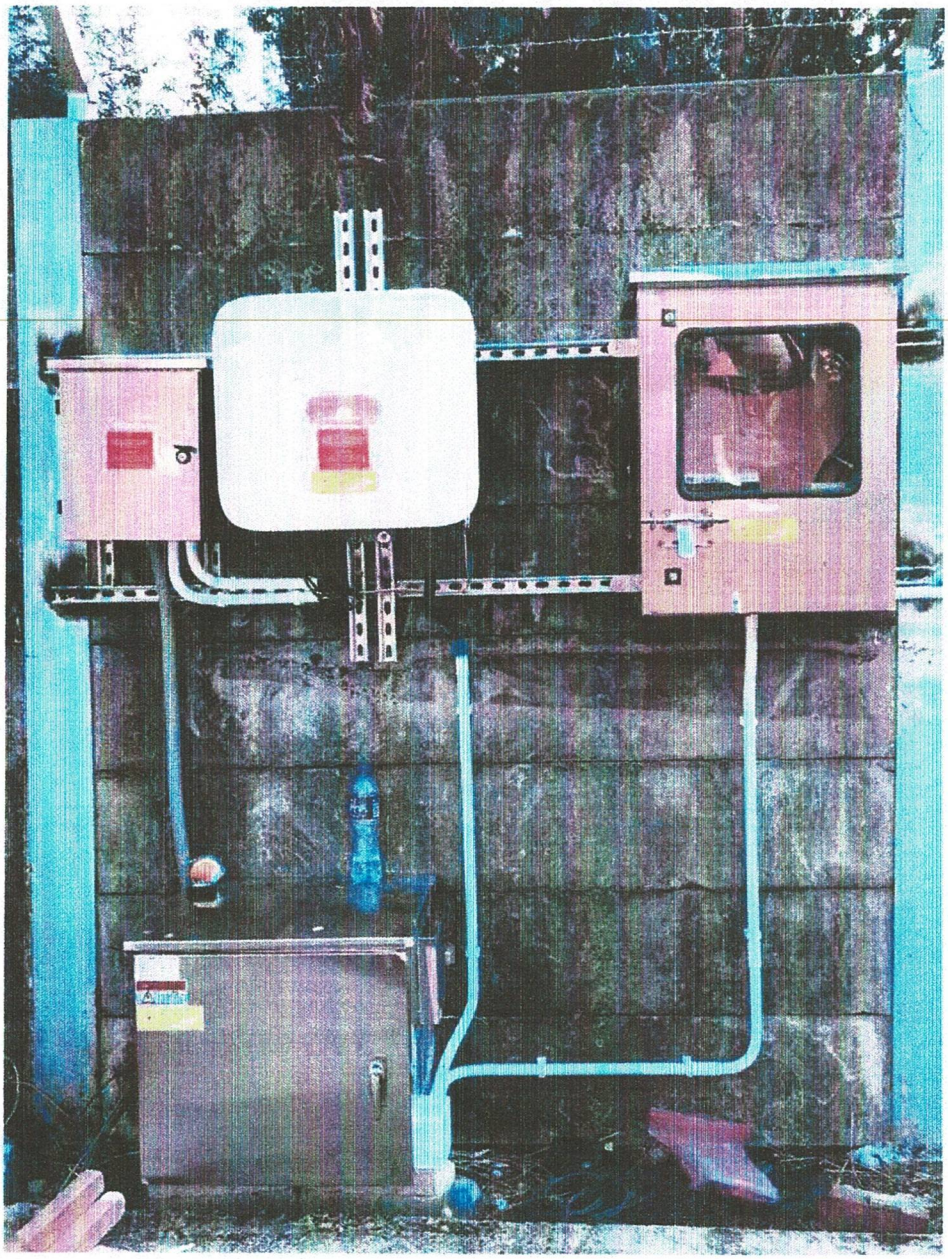
Plan 4c

可再生能源發電系統操作程序

Yuen Neng Technology (HK) Limited

地址: **DD 104 LOT 3018 SA, WO SHANG WAI, SAN TIN YUEN LONG, NEW TERRITORIES**

固定在牆面上



Site Photo 5

Wall - hanged Meters and Transformers

Plan 4d

Photo 6

Floating PV System at San Tin Polder

Plan 4e

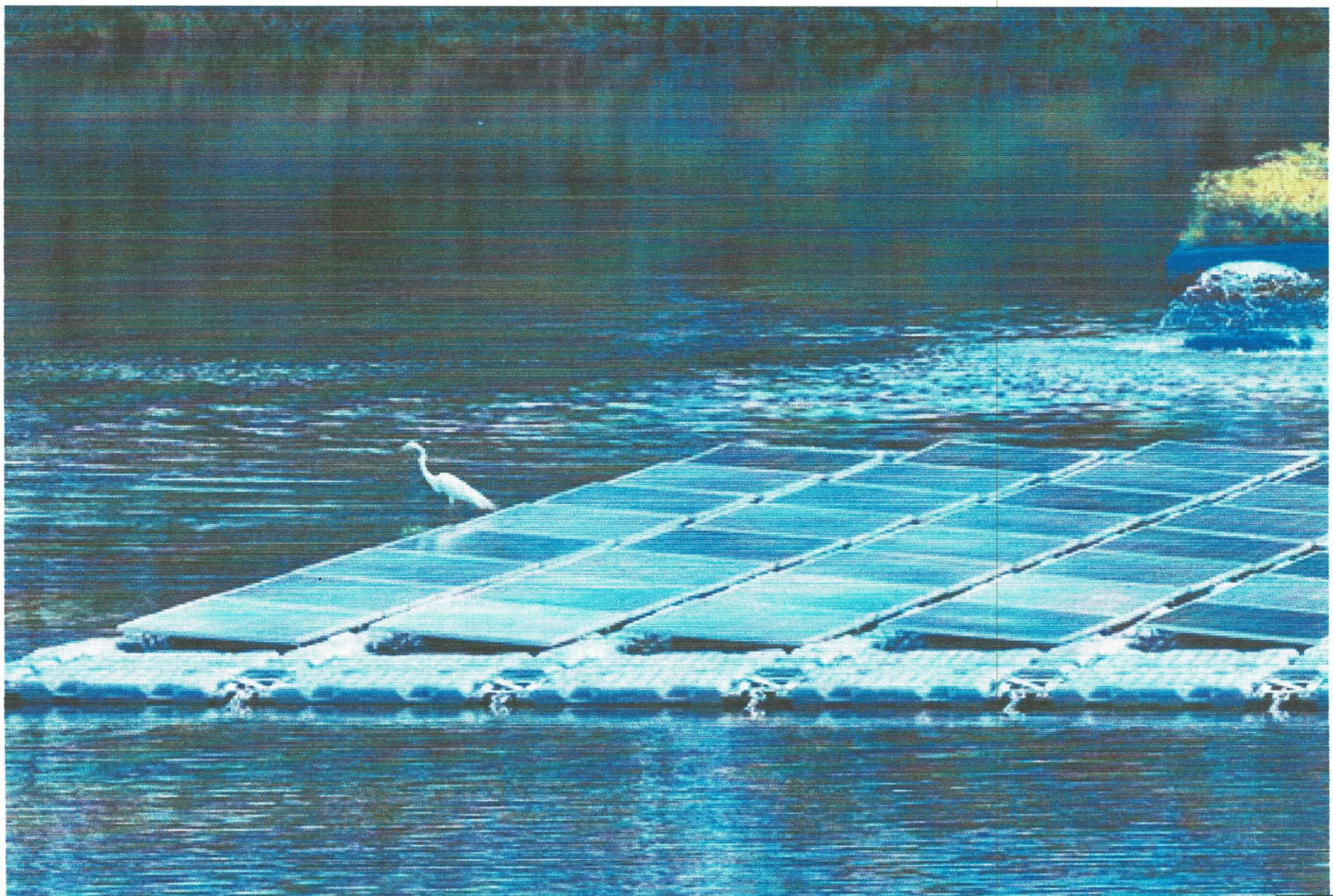


Photo 7

Bird rests on Floating PV System at San Tin Polder

Plan 4f

Appendix Ia

中華電力有限公司
CLP Power Hong Kong Limited

企業客戶服務部
Corporate Customer Experience (CCE)

香港九龍深水埗福華街 215 號七樓
7/F Shamshuipo Centre, 215 Fuk Wa Street
Kowloon, Hong Kong

網址 Website www.clp.com.hk

06 April 2022

[redacted]

Attention: CHU YAU CHAI

CLP Electricity Account Number : 82850130520

Application No. : 92000027052
Please quote our application number whenever you correspond with us about this application

Dear CHU YAU CHAI,

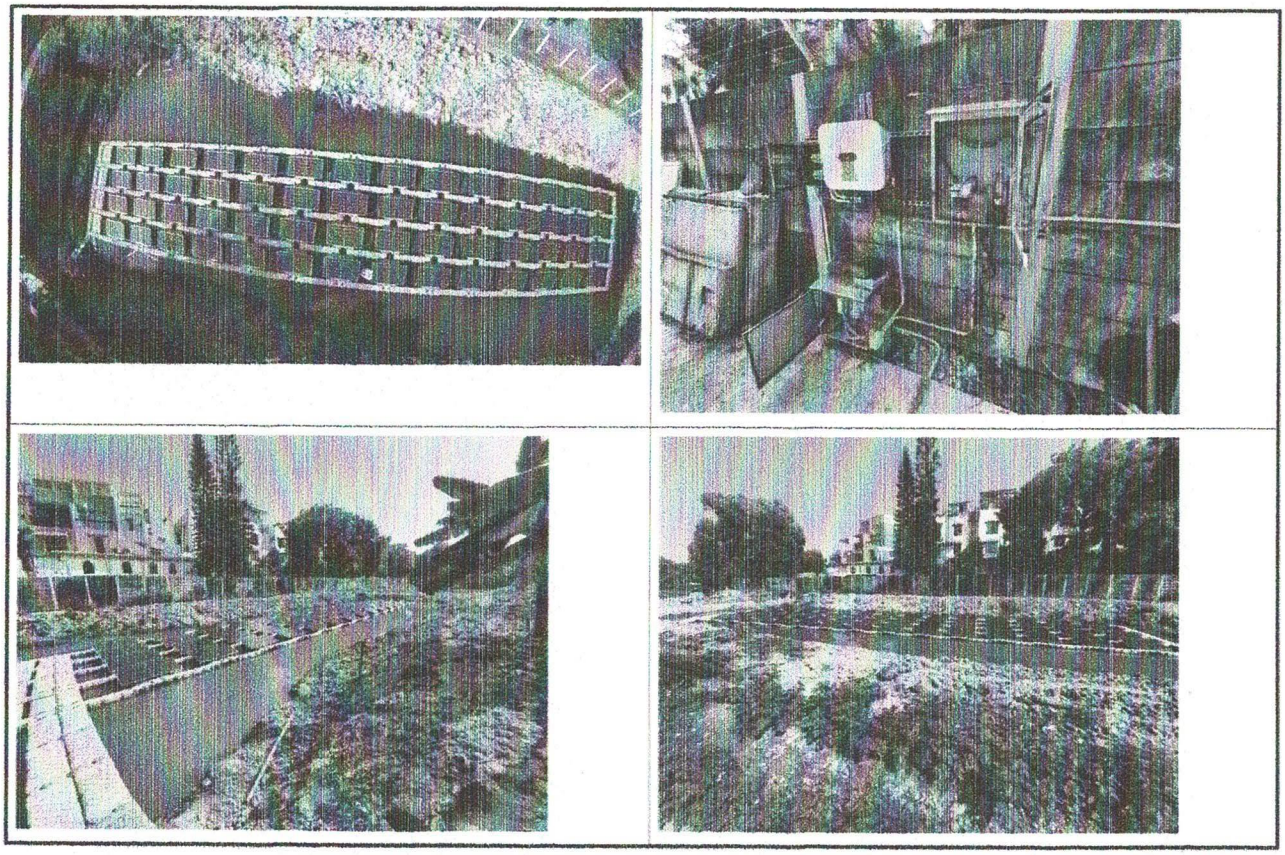
CLP Renewable Energy Feed-in Tariff (FiT) Scheme – Completion Letter
Renewable Energy RE System with a Total Generation Capacity of 20.00 kW at DD 104 LOT 3018 SA, WO SHANG WAI, SAN TIN YUEN LONG with Customer Main Switch Rating ≤ 100 A

Thank you once again for your support for the CLP Renewable Energy Feed-in Tariff (FiT) Scheme. We are pleased to inform you that the RE system at the above address shown in Figure 1 below will be connected to the CLP grid with effect from the commencement date as follows.

The following table indicates the FiT rate applicable from the commencement date throughout the useful life of the renewable energy system up to 31 December 2033, subject to the FiT Scheme Terms and Conditions.

RE system at the above address under your FiT Agreement	Generation capacity (kW)	FiT rate ($/kWh)	Commencement date
New solar system at DD 104 LOT 3018 SA,WO SHANG WAI, SAN TIN YUEN LONG, NEW TERRITORIES	20.00 (Three-phase)	4.00	06 April 2022

Figure 1 - As-built site photos of RE system structure/equipment taken on 06 April 2022



Please be reminded that the design, installation, operation and maintenance of the RE system should comply with all applicable laws, regulations, guidelines, and safety and technical requirements. This includes compliance with the requirements set out under the Technical Guidelines on Grid Connection of Renewable Energy Power Systems and the Guidance Notes for Solar Photovoltaic (PV) System Installation, both issued by the Electrical and Mechanical Services Department ("EMSD").

You should not make any changes to the RE system, including changes to its capacity, without prior written approval from CLP. If you wish to increase the capacity of the RE system, you can do so by submitting a new application.

We would also like to remind you that, according to the FiT Scheme Terms and Conditions, all the electricity generated by the RE system under the Scheme will be sold to CLP and Scheme participants are restricted in claiming emissions reduction benefits that may arise from the RE system. Scheme participants who wish to claim emissions reduction benefits may consider purchasing CLP Renewable Energy Certificates. Please contact your Account Manager for details.

If you have any questions, please do not hesitate to contact your Account Manager, Lam, Hon Sing on [redacted].

Yours sincerely,
CLP Power Hong Kong Limited
Note: This is a computer printout letter that requires no signature.

Appendix 1b

機電工程署 註冊 / 繳款辦事處
Electrical and Mechanical Services Department Registration / Collection Office
收據 RECEIPT

03-EMCA031

收據號碼 Receipt number : 77-0003-22-03-000200
發出日期時間 Issue date and time : 14-Jan-2022 12:25

茲收到 Received from

收費代號 Fee Code	詳細資料 Particulars	應付金額 Amount payable (HK$)
4170	ELD - GF1 Generating Facilities [redacted] Registration of Generating Facilities Owner - CHU YAU CHAI Power Supply Company FiT Scheme Application No.: 92000027052	[redacted]
		總計 Total [redacted]
	支票 Cheque (012-100074)	已收金額 Amount received (HK$) [redacted]
		總計 Total [redacted]
	備註(如有) Remarks (if any)	

此收據必須有部門印章及收款人簽署方為有效。
Receipt is valid only with the department's chop and signature by collector of revenue.
支票繳款須待支票兌現後方為有效。 Payment is valid only after the cheque is cleared.
退款必須提交收據正本。 Refund must be supported by original receipt.

部門印章及收款人簽署
Department's Chop and Signature by Collector of Revenue

Name 姓名 : Ms Ann LAM

Post 職位 : CVREV

0000040873

TRY 44e

Appendix Ic

機電工程署 註冊 / 繳款辦事處
Electrical and Mechanical Services Department Registration / Collection Office
收據 RECEIPT

03-EMCA031

收據號碼 Receipt number : 77-0003-23-03-004990
發出日期時間 Issue date and time : 06-Jul-2023 10:29

茲收到 Received from

收費代號 Fee Code	詳細資料 Particulars	應付金額 Amount payable (HK$)
4170	ELD - GF1 Generating Facilities [redacted]	
	Registration of Generating Facilities Owner - MONOTONIC LIMITED [redacted]	
	Power Supply Company FiT Scheme Application No. 92000034887	
	總計 Total	[redacted]
	已收金額 Amount received (HK$)	
	支票 Cheque (012-100134)	[redacted]
	總計 Total	[redacted]
	備註(如有) Remarks (if any)	

此收據必須有部門印章及收款人簽署方為有效。
Receipt is valid only with the department's chop and signature by collector of revenue.
支票繳款須待支票兌現後方為有效。 Payment is valid only after the cheque is cleared.
退款必須提交收據正本。 Refund must be supported by original receipt.

部門印章及收款人簽署
Department's Chop and Signature by Collector of Revenue

0000067500

Name 姓名 :

TRY 44e

Post 職位 : Assistant Clerk
CAREY

R to C Table

	Departmental Comments	Applicant's Response
1. Comments of Director of Agriculture, Fisheries and Conservation (DAFC)		
(a)	*From nature conservation perspective* The monitoring duration will be only two years after the installation is completed while the applied use is on a permanent basis. Given that the examples of solar photovoltaic system installation on fishponds are limited, it would be prudent to conduct ecological monitoring at the Site during the entire operation. Should any abnormal results be found during the monitoring period, investigation could be conducted and the management regime could be reviewed.	Ecological monitoring will be implemented throughout the entire operational phase of the proposed use, instead of the first two years after installation. The Management Protocol in Appendix J (Section 4.1) has been revised such that the monitoring requirements and programme will be reviewed at intervals of not more than two years, taking into account the monitoring results and any abnormal findings, in order to confirm whether and how the monitoring should be continued.
(b)	*From fisheries perspective* There are two existing ponds within the application site that have potential for aquaculture. According to the submissions, the ponds have recently been reinstated and restocked with fish to restore the aquaculture function. However, the proposed floating PV systems appear to encroach upon a substantial portion of the pond surfaces. The applicant should clarify (a) whether the installation of floating PV systems would adversely affect aquaculture operations, and (b) provide justification for placing the PV systems on fishpond areas rather than alternative locations.	(a) According to Section 5.2.2 of the EcoIA, the actual area of pond surface occupied by the SPV system would only be about 26.4%. No water column or pond bed will be lost. Furthermore, the applicant would like to clarify that the restocking of the ponds is primarily for habitat management and ecological enhancement purposes, rather than for resuming commercial aquaculture operations. A small number of mainly herbivorous fish species (such as Bighead Carp, Silver Carp, edible goldfish and Common Carp) are proposed to be stocked at densities much lower than those of commercial fish ponds, in order to control aquatic weed and algal growth, maintain water quality and provide additional foraging opportunities for waterbirds and other wildlife. No commercial fish harvesting operation is proposed within the Site[1]. As such, the floating PV system will not adversely affect any commercial aquaculture operation, since the ponds are not intended to operate as production fish farms.

[1] Fishes were harvested for self-consumption during the former operation period and early 2026 **(Photo A)**. Hence, the installation of floating PV system would not adversely aquaculture operations.

		(b) As stated in the justifications, the Government has also developed floating PV systems at various water bodies. It should be noted that floating platforms were already in existence to facilitate management/ monitoring of the ponds and installation of solar panels with simple assembling works. The applicant has no other land suitable for such installation. Placing the PV systems at alternative location within the Site would involve clearance of vegetation, site formation and building works on the pond bunds which would generate potential ecological impacts within the "CA" and is considered undesirable.
2. Comments of Director of Environmental Protection (DEP)		
(a)	Please clarify whether the construction and installation works would involve any earthworks, dredging works and other building works in the "CA" zone. The applicant is advised that any such works in the Conservation Area may constitute a Designated Project under item Q.1, Schedule 2 to the Environmental Impact Assessment Ordinance, and, if affirmative, an environmental permit is required for its construction and operation.	Noted. Most of the proposed structures are pre-casted, and no earthworks, dredging works and other building works are expected. Installation would only involve simple assembling works on the floating platforms within a few working days. Environmental permit would not be required.
3. Comments from District Planning Office/Fanling, Sheung Shui and Yuen Long East, Planning Department		
(a)	The Site falls within an area zoned "CA" on the draft Mai Po and Fairview Park OZP No. S/YL-MP/9. The planning intention of "CA" zone is to conserve the ecological value of wetland and fish ponds which form an integral part of the wetland ecosystem in the Deep Bay Area. The "no-net-loss in wetland" principle is adopted for any change in use within this zone. The primary intention is to discourage new development unless it is required to support the conservation of	Noted.

	the ecological integrity of the wetland ecosystem or the development is an essential infrastructure project with overriding public interest. The Site also falls within the Wetland Buffer Area (WBA) of the Deep Bay Area under Town Planning Guidelines No. 12C on 'Development within the Deep Bay Area under Section 16 of the Town Planning Ordinance' (TPB PG-No. 12C).	
(b)	According to the 'Assessment Criteria for Considering Applications for Solar Photovoltaic System (SPV system) made under Section 16 of the Town Planning Ordinance (Revised on 7 October 2022)', criteria (k) stated that any planning application for SPV system within the "CA" zone, amongst others, is normally not supported to avoid any possible irreversible damages caused to the ecology or environment of the area within the zone due to the sensitive nature of the conservation zone.	A EcoIA with 12-month ecological field survey was conducted, which concluded that the proposed works have no irreversible impact to the ecology. Instead, the original degraded wetland has been restored through the proposed works, with certain ecological functions provided through the management protocol (see Appendix J of the EcoIA). Besides, criteria (c) of the "Assessment Criteria for Considering Applications for SPV system" specifies that, for optimisation of use of land, favourable consideration may be given if viability of co-existence of the proposed SPV system and uses that are in line with the long-term planning intention of the land use zoning of the application site could be satisfactorily demonstrated. In thus regard, it should be noted that the fish ponds within the Application Site will be optimized to provide SPV system without compromising the ecological functions of fishponds. Through the above-mentioned management protocol with ecological monitoring (agreed by AFCD) to be implemented throughout the entire operational phase of the proposed use, the long-term planning intention of the land use zoning of the application site could be promised.

(c)	With a site area of about 3,220m^2, the proposed development involves 152 solar panels and an one-storey meter room. While noting from the detailed justifications that the once idled ponds have already been restored to facilitate the installation of the solar panels at the Site which was halted due to relevant enforcement actions in 2023, please elaborate how the proposed development could support the conservation of the ecological integrity of the wetland system especially when the proposed development is not considered an essential infrastructure project with overriding public interest, taking into account our comments regarding the planning intention of the "CA" zone and the relevant assessment guidelines under points (b) and (c) above.	The history and condition of the Site indicate that the ponds have been idle and inactive, with no aquaculture activity since 1990. From the year 2000 onwards, the water level in both ponds gradually decreased, leading to overgrowth of weedy plants such as *Bidens alba* and *Brachiaria mutica*. As the ponds were not actively managed as traditional fishponds, resulting in a lack of pond drain down practices which attract waterbirds to forage. The lack of management in the ponds with overgrowth of weedy plants indicates a degrading habitat, due to the blockage of sunlight reaching the water as well as decomposition of dead plants which consumes oxygen in the waters. Hence, the water quality was deteriorated and no longer favourable for aquatic life. In addition, the overgrown ponds could not provide an open water habitat for waterbirds that recorded in the vicinity (e.g. ardeids, waders etc.). In 2021, the ponds were degraded and nearly dried out. As the presence of dense plants would interfere with installation and impair the operation of the SPV system, the weedy plants were hence removed, and the ponds were filled with waters which aimed to lift up the proposed solar panels, and to limit the growth of terrestrial weedy plants. The ponds were filled with water to facilitate the proposed use of the SPV system, management on these ponds has been conducted since 2023. Hence, a net wetland area (i.e. the ponds) of 0.21ha within the Application Site was restored to facilitate the proposed application. No-net-loss in wetland principle is adopted. Furthermore, the proposed development is in line with the Government's policy of setting net-zero electricity generation as one of the major decarbonisation strategies and increasing zero-carbon electricity supply through RE development as far as possible, which should be of public interest. Approval of the application could put idle land to good use while achieving the carbon neutrality target.

(d)	There are public concerns on the potential impacts on the surroundings especially from nearby residential developments. Please provide justifications to substantiate that the proposed development would not induce adverse impact on the surrounding neighourbourhood.	Noted. Please see responses to public comments below.
(e)	It is noted from the detailed justifications under the applicant' submission that the Site is currently vacant and presumably the electricity generation at the Site has not been commenced yet. Please advise if the completion letter from CLP with commencement date in 2022 and the receipt from Electricial and Mechanical Services Department Registration / Collection Office as enclosed in the submission is still applicable to the current application. If not, please supplement with the latest letter from CLP instead.	The completion letter from CLP with commencement date in 2022 and the receipt from Electricial and Mechanical Services Department Registration / Collection Office as enclosed in the submission are still applicable to the current application. As advised by the supplier, re-submission to CLP and EMSD is not necessary provided that the development parameters and details of the SPV system remain unchanged.
4. Comments from Transport Department		
	From the information provided, it is noted that there will be no vehicular access connecting to the application site. Grateful if the applicant could clarify how the applicant could: i) transport the panels to the application site (the Site) and ii) carry out relevant installation works.	(i) The removed solar panels are temporarily placed in the neighbouring lots (about 100m apart **(Plan 2a)**) and would be transported manually via footway to the Site (see **Photo B**). (ii) The solar panels would be fixed to the existing supporting frames on the floating platforms **(Plan 4g)**. Installation would only involve simple assembling works using portable light equipment such as cordless screwdriver and would be completed within a few working days.

Response to Public Comments	
(a)	*Concerns on ecological impact* –It is specified in the EcoIA that most of the Application Site is situated within the "CA", and the entire of the Application Site is located within WBA, while a substantial portion of the 500m Study Area is encompassed by the "CA", WCA, and WBA. It is expected that the proposed works are small in scale and are not expected to compromise the "CA", WCA and WBA. Given that the operational maintenance is expected to be occasional and small in scale and hence the ecological impact on the recognized sites of conservation importance during both the construction and operational phases is deemed to be Insignificant. Besides, the potential ecological impacts during the construction phase and operational phase have been assessed in the EcoIA. A net wetland area (i.e. the ponds) of 0.21ha within the Application Site was restored to facilitate the proposed application. No-net-loss in wetland principle is adopted. With the implementation of the mitigation measures recommended, no adverse residual impact would be expected. Given that the Application Site is located within the "CA" and Wetland Buffer Area, a management protocol is therefore prepared, to specify the maintenance and monitoring works during operational phase in order to propose detailed measures to further minimize the potential impacts and maintain the habitat quality within the Application Site at the same time.
(b)	*Concerns on environmental nuisance* – As mentioned in the responses to DEP above, most of the proposed structures are pre-casted, and no earthworks, dredging works and other building works are expected. As the Site is not provided with vehicular access, mechanical equipment would not be used and no adverse traffic impact would be generated. Installation would only involve simple assembling works on the floating platforms within a few working days. No adverse environmental impact is envisaged. Furthermore, during the construction and operation of the PVC system between mid-2023 and March 2024, no environmental complaint was received.
(c)	*Concerns on impact of reflection and glare* – The PV panels are non-glare plates and their design further incorporates non-reflective panel surfaces to reduce visual impacts. Besides, buffer planting would be provided to ensure no adverse visual impact is generated
(d)	*Concerns on safety of electrical products* – The design, installation, operation and maintenance of the installation would be in compliance with the requirements set out under the Technical Guidelines on Grid Connection of RE Power Systems and the Guidance Notes for Solar Photovoltaic System Installation, both issued by EMSD. The PV system has been accepted and registered with EMSD. No safety problem is envisaged.
(e)	*Concerns on property/rental value* – While this may not be the concern of the Town Planning Board, the proposed development, combined with pond restoration from the dried condition, provides positive potential impacts to wildlife by restoring open water habitat for waterbirds, restoring foraging habitat for migratory bird species, and supporting invertebrate and fish populations. It would enhance rather than undermine the property value of the neighbouring residential developments.

4. ECOLOGICAL MONITORING DRUING OPERATIONAL PAHSE

4.1 Objective

4.1.1 To verify wildlife utilization of the restored ponds after installation and to evaluate that the claims of ecological enhancement (e.g., habitat restoration and wildlife attraction) are upheld during the operational phase. Ecological monitoring will be carried out during the entire operational phase of the Project. The monitoring requirements and programme will be reviewed every two years to determine whether and how the monitoring should be continued, taking into account the monitoring results. The main aspects of ecological monitoring include fauna surveys (including waterbird /water-dependent bird, dragonfly, and amphibian surveys), fish population monitoring, and habitat quality assessments.

4.2 Monitoring Programme

4.2.1 The bird communities in the Application Site will be monitored. A transect count / point count survey will be conducted to determine the presence and abundance of all bird species encountered. The survey will be conducted once a month. Utilization of the Site as breeding habitat by birds will also be studied. During the surveys, observed birds will be classified according to their behavior i.e. feeding, roosting, breeding etc.

4.2.2 The herpetofauna survey will be conducted during the wet season (i.e. between April and October) by using transect count method. The presence and abundance of species encountered visually or aurally on the transect will be recorded.

4.2.3 Presence and abundance of adult dragonfly target species will be estimated using transect count method. Surveys will be conducted monthly between April and October, when the key species are more active (Tam *et al.* 2011).

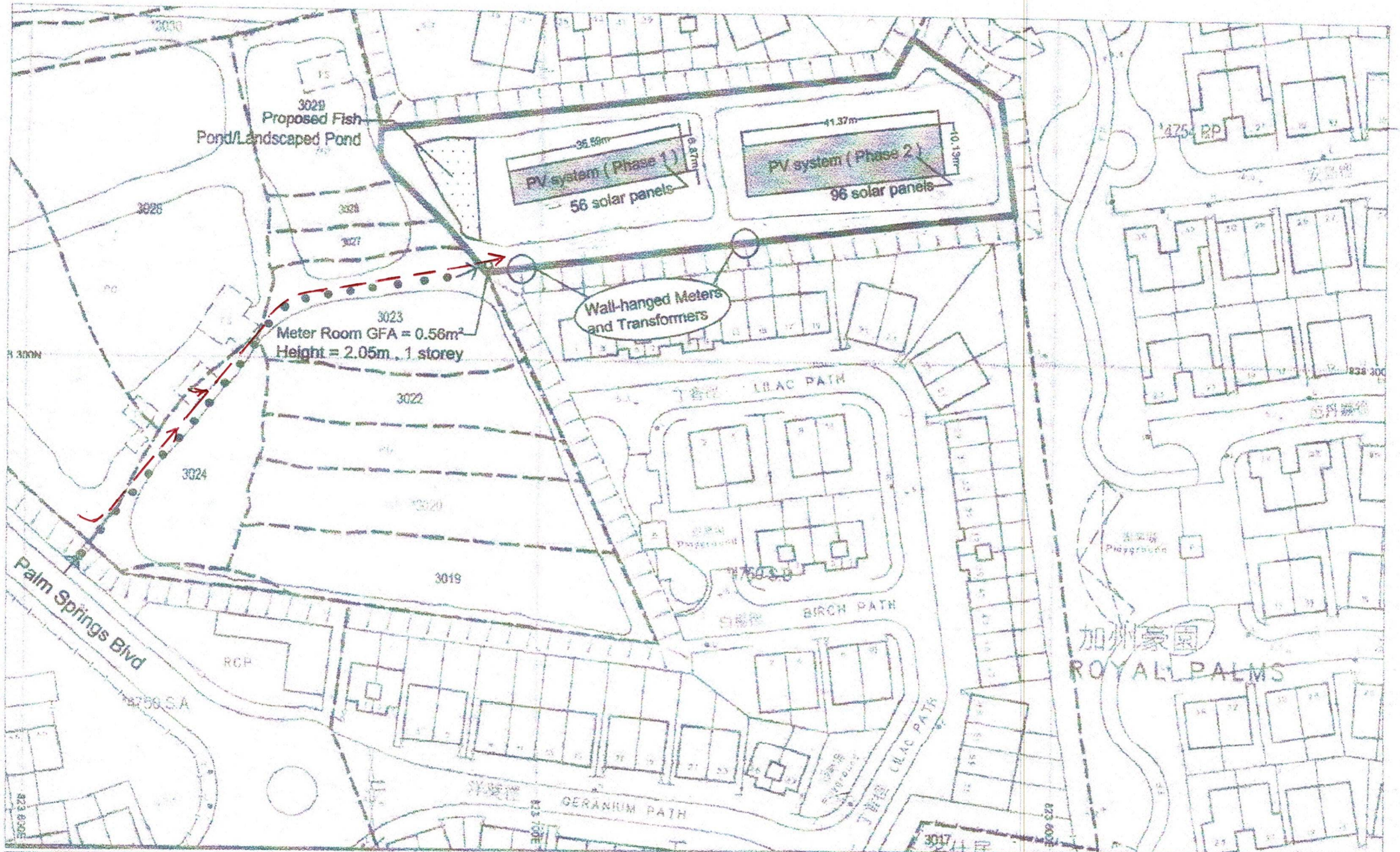
4.2.4 If any other species of conservation importance including but not limited to mammal or butterfly are encountered, they will be recorded and reported in the quarterly monitoring reports.

4.2.5 Monitoring of fish number and species will be conducted bi-monthly with using bank-side count and/or hand net to actively search for fish. Fish species and crustaceans found in the surveyed ponds will be recorded and identified to the lowest possible taxon, and their relative abundance will be reported. The range of the majority size will be recorded as <10cm and >10cm. Additionally, the special behaviour of fish will be recorded, if any.

4.2.6 Regular inspections and measurements of water quality will be conducted monthly during the management work. The levels of dissolved oxygen and pH will be closely monitored to prevent deterioration of water quality and to promptly address any identified issues.

4.2.7 The monitoring data will be compared with the ecological baseline in the EcoIA or the Environmental Management of Pond Fish Culture published by AFCD, should any abnormal results are found during the monitoring period, investigation will be conducted including but not limited to reviewing the adaptive management regime.

4.3 Reporting


3029
Proposed Fish Pond/Landscaped Pond
PV system (Phase 1)
56 solar panels
35.59m
6.47m
PV system (Phase 2)
96 solar panels
41.37m
10.13m
Wall-hanged Meters and Transformers
3023
Meter Room GFA = 0.56m²
Height = 2.05m , 1 storey
3028
3027
3026
3022
3024
3019
3017
LILAC PATH
BIRCH PATH
GERANIUM PATH
Palm Springs Blvd
RCP
ROYAL PALMS
加洲家園
Legend
Application Site
Photovoltaic System
Foot Access to Site
Proposed Fish Pond / Landscaped Pond
Transport Route of Solar Panels

Plan 2a

Site Photo 8

Solar Panels Removed

Plan 4g

Photo A

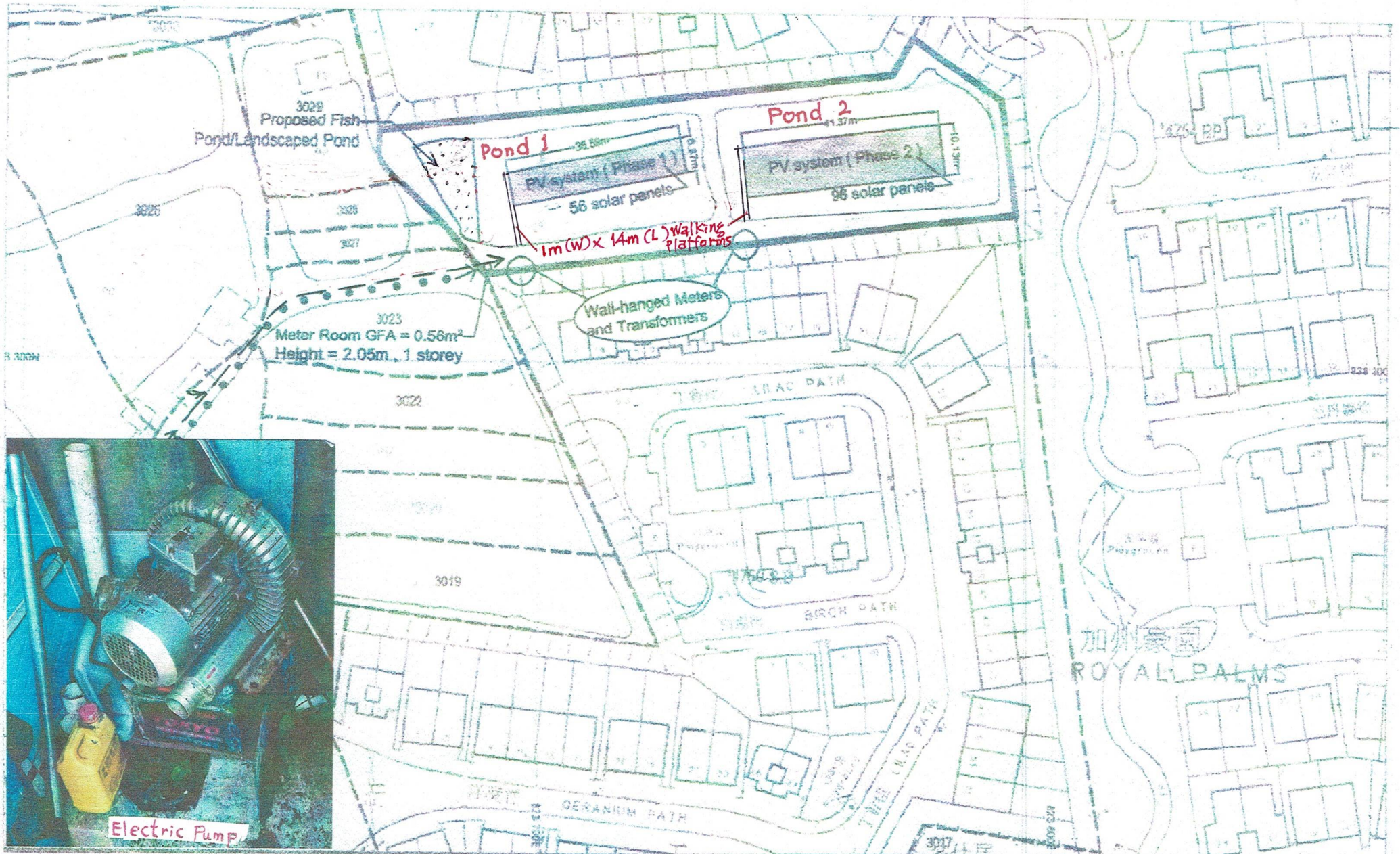
Photo B

R to C Table

	Departmental Comments	Applicant's Response
1. Comments of Director of Environmental Protection (DEP)		
(a)	Please clarify the details of the simple assembling and construction works, and any installation works involved (even the proposed structures are pre-casted) to confirm the response in the FI that no earthworks, dredging works and other building works would be carried out in the "CA" zone during construction and operation phases.	The solar panels would be re-fixed to the existing supporting frames on the floating platforms **(Plan 4g)**. Installation would only involve 1) simple assembling works using portable light equipment such as cordless screwdriver and 2) manually re-connect the electric cables of the solar panels to the existing PVC cable ducts **(Photo C)**. No earthworks, dredging works and other building works would be carried out within the "CA" zone during construction and operation phases.
2. Comments from District Planning Office/Fanling, Sheung Shui and Yuen Long East, PlanD		
(a)	A SPV system includes SPV panels, inverter(s), energy meters, distribution board(s), cables and other components as necessary to form a complete grid connected SPV installation. Please clarify how the SPV panels on the floating panels are connected to the meter(s) on the pond bund (e.g. if there are any cables passing through the ponds to connect the meter(s) on the pond bund).	There are existing PVC cable ducts on the floating platforms with cable connection to the meter box **(Photo C)**. All cables run on the top of the floating platforms, including two walking platforms each measured about 1m (W) x 14m (L), **(Plans 2b & 3g)**, with nil impact on the pond water below. Also see response to DEP above.
(b)	Please further elaborate on the proposed fish pond with ancillary filter pond at the site, including its proposed location, size and functions in terms of pond management. It seems that such pond is inconsistent with the description as shown on the proposed layout plan (i.e. fish/landscape pond).	Regarding the fish/landscaped pond (about 130m^2), it is currently used for fish culture. However, the applicant has planned to provide some landscaping there. For example, flood tolerated species such as lotus would be cultivated at the pond fringe to enhance the landscape setting of the Site. The attempt to rear Misgurnus (泥鰍) within the pond, together with the lotus and lotus roots, may foster a farming system akin to Aquaponics (魚菜共生) and year round harvest may be possible. The fish/landscaped pond has included filter facilities for water filtering purpose. They help maintain a better water quality for fish culture and their location can be seen from the aerial photo on **Plan 3g**.

(c)	According to the Ecological Impact Assessment (EcoIA), the floating platforms will be fabricated with hazardous-free materials whereas in the statement of justifications, it is mentioned that the floating platforms have already been fixed on the pond bund. Please clarify.	Noted. We clarify that the sentence in EcoIA should read "the floating platforms have been fabricated with hazardous-free materials—".
(d)	Please clarify whether the ponds are connected to any watercourses/pipes for filling/draining of waters. If not, please advise how water would be filled at the pond, and how would water be drained away.	Please note that the ponds are not connected to any watercourses or pipes, with natural rainfall forms the main source of water. As shown on **Plan 2b**, water is pumped by electric pump (see photo in inset) in or out interchangeably between Pond 1 and Pond 2. Alternatively, water can temporarily drain in from or out to the pond at Lot No. 3026 (with agreement from the occupier) if situation warrants.
(e)	General public (especially residents nearby) may have concerns on whether there are any measures against potential health issue arising from the ponds, e.g. how the issues of mosquito can be effectively controlled at the site. Besides, please advise whether any liaision has been/will be carried out with the surrounding areas.	Regarding the potential health issues, the proposed management measures (i.e. regular grass cutting to prevent overgrown of vegetation, disposal of garbage properly, good control of water quality, small amount of fish/fry restocking) specified in Appendix J of the EcoIA can effectively control mosquitos and maintain a good hygiene when compared to an abandoned pond without management. Besides, according to the baseline data of the EcoIA, insect-eating fish such as mosquito fish and tilapia were recorded within the ponds of the Application Site. Hence, mosquito larvae can also be controlled through this mean. With the proposed management/mitigation measures mentioned above, we do not foresee that the proposed SPV system would generate any health nuisance. Hence, no liaison has been carried out at the present stage. Nevertheless, a notice showing the name and telephone number of the responsible person could be posted near the entrance of the Site to facilitate contact to address any possible health issues arising from the development.

(f)	Please clarify: i) thickness of the floating frames;	The thickness of the floating platforms is 0.2m.
	ii) water surface area of each of the pond;	Surface water area of ponds are: Pond 1 – 861m^2 Pond 2 - 1,109m^2 Fish/Landscaped Pond – 130m^2 Total: 2,100m^2
	iii)fish pond operation (e.g. whether there will be any regular drying and ploughing / harvesting etc.)	Since the ponds are not connected to any watercourses, no alluvial materials have been brought in and the level of the pond bases remains steady. Based on the operational experience of the past few years, no drying, ploughing or dredging processes are necessary. In case ploughing or desilting are required in the long run, they are regarded as operation incidental and ancillary to the 'Fish Pond Culture' and are always permitted. Harvesting is normally carried out bi-annually by netting method (see **Photo A**).



Legend

- Application Site
- Photovoltaic System
- Foot Access to Site
- Proposed Fish Pond / Landscaped Pond
- → Transport Route of Solar Panels

Plan 2b

Photo C