Confirmed Minutes of the 158th Meeting
of the Environmental Impact Assessment Subcommittee
on 18 March 2024 at 2:30 p.m.

Present:
Prof Kenneth LEUNG, JP (Chairman)
Ms Ada FUNG, BBS
Ms Linda HO
Dr Theresa KWONG
Prof Alexis LAU, JP
Mr Simon NG
Mr Daryl NG, SBS, JP
Mr Albert SU, MH, JP
Dr WONG Kwok-yan, MH
Dr Raymond YAU

Absent with Apologies:
Mr Alex KWAN (Deputy Chairman)
Prof Dan TSANG
Ms Karen CHEK (Secretary)

In Attendance:
Non-Environmental Impact Assessment Subcommittee (EIASC) Members
Prof WONG Kam-bo
Dr William YU

Environment and Ecology Bureau (EEB)

Mr Alan LO	Deputy Secretary for Env. & Ecology (Env.) 2
Miss Sally SHEK	Executive Officer (CBD) 1, EEB
Miss Avynn WONG	Executive Officer (CBD) 2, EEB

Environmental Protection *Department (EPD)*

Dr Samuel CHUI, JP	Director of Environmental Protection (DEP)
Mr FONG Kin-wa, JP	Deputy Director of Environmental Protection (1)
Mr Terence TSANG	Assistant Director (Environmental Assessment)
Mr TO King-ho	Senior Project Officer (Territory South)
Miss Queenie NG	Principal Environmental Protection Officer (Territory South)
Ms Hyde MAK	Senior Environmental Protection Officer (Territory North) 3
Ms Jolitta CHAN	Environmental Protection Officer (Territory North) 34

Agriculture, Fisheries *and Conservation Department (AFCD)*

Mr Simon CHAN	Assistant Director (Conservation)

Mr Boris KWAN	Senior Nature Conservation Officer (North)
Ms Virginia LEE	Senior Fisheries Officer (Technical Services)
Ms Chelly WONG	Nature Conservation Officer (Kam Tin)
Dr William SIU	Fisheries Officer (Technical Services) 5

In Attendance for Item 2:

Project Proponent Team

*Development Bureau (*DEVB*)*

Ms Pecvin YONG	Deputy Director, Northern Metropolis Co-ordination Office
Mr Eric CHUNG	Assistant Secretary (Northern Metropolis) 1

Civil Engineering *and Development Department (CEDD)*

Mr Tony CHEUNG	Project Manager (North)
Mr Gavin WONG	Chief Engineer / North 4
Ms Kaberlina HO	Senior Engineer / 7 (North)

Planning Department (PlanD)

Ms Irene LAI	Chief Town Planner / Studies and Research 1
Mr Timothy LUI	Senior Town Planner / Studies and Research 2

Project Consultant

AECOM Asia Company Limited (AECOM)

Mr Freeman CHEUNG	Senior Vice President, Environment, Hong Kong
Dr David GALLACHER	Executive Director
Ms Anna CHUNG	Executive Director
Mr Stephen SUEN	Director, Landscape Architecture
Mr Andrew IP	Associate

****

Action

The Chairman welcomed all to the meeting and informed Members that apologies of absence had been received from Mr Alex Kwan and Prof Dan Tsang. The Chairman informed that two non-EIASC Members, Prof Wong Kam-bo and Dr William Yu, joined the meeting. In accordance with the Modus Operandi (MO) of the EIASC, ACE Members who were not EIASC Members might attend EIASC meetings and participate in the discussion of the meetings but they should not vote when votes were taken.

Item 1 : Matters arising (Closed-door session)

2. The draft minutes of the last meeting held on 13 February 2023 were confirmed by circulation on 20 March 2023 without any proposed amendments.

3. There were no matters arising from the minutes of the last meeting.

Action

Item 2 : Discussion on the EIA report on "San Tin / Lok Ma Chau Development Node" *(ACE-EIA Paper 1/2024)*

4. The Chairman advised Members that the meeting would discuss the EIA report on "San Tin / Lok Ma Chau Development Node (ST/LMC DN)". During the 30-day public inspection period of the EIA report from 2 February to 2 March 2024, EPD had received a total of 50 public comments. Based on EPD's analysis, the comments were mainly related to ecological issues and the major areas of concerns included the need of the project, misalignment with established policies and guidelines, adequacy and accuracy of the ecological survey, adequacy of the ecological impact assessment, failure to secure egretry, failure to secure birds' flight corridor and fragmentation of Deep Bay Wetland Ecosystem, failure to protect Eurasian Otter and insufficient information on wetland compensation. All public comments, together with a summary and gist of the major issues / concerns, were circulated to Members on 7 March 2024.

5. In addition to the above public comments, the Chairman informed Members that one written submission from Kadoorie Farm and Botanical Garden (KFBG) and another one from seven green groups were circulated to Members for reference on 15 March 2024.

6. The Chairman said that, to facilitate Members' understanding of the project, the project proponent had arranged for the ACE a visit to the site in late February / early March 2024 where 16 Members joined in person while 4 joined the briefing session via Zoom.

7. The Chairman declared that he was engaged in the eco-shoreline studies of CEDD and was the Chairman of the Lantau Conservation Fund Advisory Committee. A Member declared that he was a Board Member of the Hong Kong Science and Technology Parks Corporation which might be involved in the development of the San Tin Technopole (STT). The meeting agreed that the above Members could stay to participate in the discussion.

8. Members noted that the discussion would be divided into the Presentation and Question-and-Answer Session which would be open to the public and the Internal Discussion Session which would remain closed.

9. The Chairman reminded Members to keep confidentiality of the discussion on the EIA report.

(The project proponent team joined the meeting at this juncture.)

Action

Presentation Session (Open session)

10. Mr Tony Cheung gave an opening remark while Ms Pecvin Yong, Ms Irene Lai and Mr Gavin Wong briefed Members on the project background, key EIA findings and major public concerns with the aid of a PowerPoint presentation.

Question-and-Answer Session (Open session)

11. While in support of the development of STT in general, Members were concerned about the conservation of the environment and ecology in the development process.

Project Details

12. A Member suggested that CEDD should incorporate the design of a lagoon city to reflect San Tin's historical background which could also serve as a thematic highlight of the development. Two other Members opined that CEDD should draw references from other Mainland cities such as Hang Zhou, Qianhai and Hengqin which were exemplary in maintaining a balance between development and conservation while having their unique characteristics to attract tourists. One of the above Members added that the Government should solicit the support of the public by sharing the positive experiences of other places.

13. A Member considered that the natural habitats and stream near Shun Sum Yuen Sunflower Farm (SSY) should be conserved. Mr Gavin Wong advised that the agricultural land near SSY was assessed to be of low to moderate ecological value since it was fragmented and surrounded by brownfield sites. Ms Pecvin Yong supplemented that the area around SSY was originally retained for agricultural use on the Initial Land Use Plan for STT back in 2021. However, there were views received at that time that retaining a large piece of agricultural land at the town core might not be compatible with the overall land use planning of STT. The agricultural land was now proposed for development of a cultural and recreational complex and open space. Meanwhile, quality agricultural land would be separately considered for designation as Agricultural Priority Areas under EEB/AFCD's study.

14. Noting that one end of the proposed green walkway would stretch into the Innovation and Technology (I&T) sites, a Member questioned if the design and operation of the whole green walkway would be consistent with the overall development plan. Ms Irene Lai responded that a comprehensive open space network and pedestrian/cycling network had been planned to connect different land parcels including nearby villages, I&T sites, etc. within STT.

15. A Member suggested that the Government should illustrate its determination in environmental conservation through naming the STT as Eco-Technopole or Zero-Carbon Technopole. While the Government would spare no efforts in conserving the environment and achieving carbon neutrality in the project, Ms Pecvin Yong

indicated that the naming should better reflect the positioning of the project area as a hub for I&T development.

Climate Resilience

16. On behalf of a Member, the Chairman asked for details of the blue-green infrastructure for the prevention of stormwater pollution. While the detailed design of blue-green infrastructure would be devised in the design stage, Mr Freeman Cheung remarked that stormwater control measures including drainage system with pollutant removal devices would be put in place to minimise non-point source pollution from road surfaces and developed areas.

17. Two Members were concerned if there were measures to enhance the resilience against extreme weather events such as flooding and rising sea level. Another Member viewed that the sponge city design should be adopted with a view to enhancing land permeability. Mr Tony Cheung explained that CEDD would follow the prevailing Stormwater Drainage Manual issued by the Drainage Services Department in the design of drainage facilities. To mitigate flooding risk, flood retention facilities such as flood retention lakes and underground storage tanks would be provided. The use of permeable pavements would also be incorporated as far as possible. Another Member considered that CEDD should provide tailor-made drainage facilities according to the characteristics of the project site, such as the topography, existing drainage conditions of nearby villages and the low-rise development to be established, rather than simply following established guidelines.

Wildlife Corridors

18. While two Members held the view that in respect of the wildlife corridors in the northern portion of STT, the cross-sectional dimension of the underpass and the width of the aboveground section should be as wide as possible, another Member said that otters preferred smaller and narrower underpass channels with adequate cover for hiding from predators. Another Member asked if there were academic studies or references to support the proposed size and design for the underground wildlife corridors. She wondered whether there would be problems if the underpass was large enough for people to pass through. Another Member said that CEDD should seek advice from relevant experts on the appropriate size of the underpass. The Chairman remarked that KFBG had given detailed recommendations with reference to the experience of other places such as the Ireland.

19. Taking into account the comments of green groups, Mr Tony Cheung advised that CEDD would increase the cross-sectional area of the underpass to not less than $6m^2$ (say 2m high and 3m wide, subject to detailed design) and explore the provision of light well for the underpass in the detailed design. He pointed out that the openness ratio of the proposed underpass wildlife corridor would already be a few times larger than the existing one and the construction of a 10m wide tunnel as proposed by the green groups would be extremely costly.

20. Two Members considered that the flap valves at drainage outfalls discharging to the Shenzhen River and the inflatable dam at San Tin Main Eastern Drainage Channel should also be modified to facilitate the movement of the Eurasian Otter between the Lok Ma Chau meander, Shenzhen River and STT. Mr Tony Cheung explained that the flap valves and inflatable dam served to prevent flooding and as a water quality control measure for stopping Shenzhen River water from entering the meander and the San Tin Eastern Main Drainage Channel. CEDD would explore measures to facilitate the movement of the Eurasian Otters across the locations of the existing inflatable dam and the flap valves subject to further deliberation on border security and potential impact on water quality.

21. A Member viewed that it would be desirable to further widen the 300m wide bird flight corridor. Mr Tony Cheung explained that the 300m wide bird flight corridor was assessed to have covered the majority of the existing surveyed and recorded flight paths of birds. In view of the topographic constraint of the site, the width of the proposed flight corridor was considered appropriate. The Chairman enquired and Ms Anna Chung clarified that the environmental monitoring and audit (EM&A) programme would cover both the 300m wide and 70m wide flight paths in the monitoring survey.

22. A Member asked about the details of the stepped building height for the bird flight corridor. The Member and two other Members were concerned that the high-rise buildings and their proposed building façade treatment (e.g. glass finishes), even on the edge of the corridor, would pose collision hazards to birds. One of the above Members suggested that the relevant government departments should include in the land lease requirements on the maximum height as well as bird-friendly design for the buildings located in the bird flight corridor. Mr Tony Cheung responded that the 300m wide bird flight corridor comprised the non-building area (NBA) and several low-rise buildings for Government and most of the buildings immediate next to the flight corridor would be around 35m above the Hong Kong Principal Datum. CEDD would strive to minimise potential threats to birds and liaise with the relevant authorities to include greening and bird-friendly building design requirements in the land leases as appropriate. Ms Irene Lai supplemented that the adoption of bird-friendly building design (e.g. avoiding transparent or reflective façade) would be stipulated in the departmental Outline Development Plan for future reference.

Ecological Assessment

23. The Chairman enquired about the misidentified birds in the EIA report which had caused concerns from green groups about the credibility of the EIA. Mr Tony Cheung clarified that bird species were identified on-site by qualified ecologists. The photos involving editorial error were for illustration purpose only and were unrelated to the survey record. He assured Members that all bird species of conservation importance were properly recorded and the ecological assessment was accurate and reliable.

24. Apart from the existing four avifauna species, two Members opined that more species should be used as indicators in the calculation of the change in functional value in the impacted and compensation areas. The two members also doubted whether the abandoned fish ponds had indeed no ecological value and suggested that CEDD should take into account statistics of a longer period for a more accurate and comprehensive picture. Mr Tony Cheung explained that four indicator species were used for calculating the compensation requirement since they were the key species which were highly sensitive to disturbance. Nevertheless, he said that a wide range of wetland associated species would be monitored throughout the course of works with monitoring details to be devised under the Habitat Creation and Management Plan (HCMP).

25. A Member sought details of the trash-fish stocking arrangement as well as the availability of trash-fishes. Mr Tony Cheung advised that while trash-fish stocking was not proposed as a long-term mitigation measure, the preliminary plan was to stock the ponds with trash-fishes once a week in alternate ponds before the onset of pond filling works. He said that CEDD had been liaising with local aquaculturists on their provision of trash-fishes.

26. A Member enquired about the coordination and synergy between the STT project and the Sam Po Shue Wetland Conservation Park (SPS WCP) project to ensure the maintenance of ecological functions during the interim period. Mr Tony Cheung explained that CEDD and AFCD would establish a working group to plan and coordinate the works of the two projects. He said that the Government would closely monitor the ecological status during the construction phase with a view to enhancing the ecological functions as far as possible.

27. A Member was concerned about whether the ardeids would return to the Mai Po Village Egretry and Mai Po Lung Village Egretry after the completion of the construction works. She suggested that CEDD should minimise the disturbances associated with the construction works to egretries and other birds as far as possible. Mr Tony Cheung replied that the Government would strive to enhance the overall ecological functions of the wetlands through active conservation management. There would also be control of construction activities in the vicinity of the egretries during breeding seasons.

HCMP

28. The Chairman pointed out that a HCMP should be provided for the project. Mr Tony Cheung explained that CEDD would devise the HCMP when more details were available from the investigation study for SPS WCP after the completion of the Strategic Feasibility Study on the Development of the WCPs System. In addition to the four indicator waterbird species, a wide range of wildlife species covering Eurasian Otter, ducks and other species of conservation interests would be included as Potential Target Species to be monitored in the HCMP. He added that the

wetland management detail of the SPS WCP would also be detailed in the HCMP. Taking into account the comments of the green groups, CEDD would advance the submission of the HCMP from three months to nine months before the commencement of pond filling works. He added that CEDD would continue to maintain close communication with green groups to gauge their views on details of the HCMP to be devised.

29. The Chairman requested and Mr Tony Cheung agreed that CEDD should provide a preliminary draft HCMP to the ACE before the next scheduled meeting on 22 April 2024. CEDD

30. The Chairman opined that an environmental committee should be established to advise the working group established by CEDD and AFCD on the implementation and monitoring of the proposed ecological mitigation/enhancement measures of the project. A Member added that green groups should be invited to join the committee. Mr Tony Cheung welcomed comments and suggestions from green groups and agreed that interested green groups would be invited to join the environmental committee.

31. A Member suggested that there should be a clear timeline for better illustration and monitoring of the fulfilment of environmental requirements. Mr Tony Cheung advised that the EM&A programme would set out the requirements for the project to ensure compliance during the construction and operation phases. He remarked that CEDD would strictly comply with the various environmental requirements set out in the EM&A Manual. The Member added that apart from complying with the environmental requirements, the planning of the STT should also be people-oriented to minimise disturbances to people. Mr Cheung thanked the Member for his comments and remarked that the Government would strive to enhance the overall environmental benefits of the project.

Landscape and Visual Impact

32. To alleviate public concerns on the substantial number of trees to be affected by the project, a Member proposed that CEDD should convey to the public the tree felling and compensation plan. The Chairman also enquired about the maintenance period for the transplanted or compensated trees under the project. Mr Tony Cheung replied that on-site compensation would be provided at a ratio of no less than 1:1 and the Government would be responsible for the maintenance of the trees on an ongoing basis. In case any transplanted or newly planted trees failed to survive, the Government would replace them with new ones. Another Member suggested to increase the tree compensatory ratio to larger than 1:1. The Chairman asked and Mr Stephen Suen replied that the ratio of compensatory seedlings to heavy standard trees would be determined in the detailed design stage.

33. A Member opined that CEDD should commit to increase the greening ratio by maximising green roof coverage, multi-level greening and vertical greening with

a view to connecting wildlife corridors on a third dimension. Ms Irene Lai remarked that feasibility of providing green roof would be subject to future building design which needed to comply with structural and safety requirements (e.g. provision of refuge roof) under the Buildings Ordinance, and the Government was encouraging the provision of more greenery areas under the building regime through gross floor area concessions under the Sustainable Building Design Guidelines. With reference to the Chairman's suggestion, Ms Lai confirmed that the Town Planning Board would revise the definition of 'Open Space' use to embrace urban farm coordinated and implemented by the Government. Subject to EEB/AFCD's consideration, urban farm could be incorporated in the planned 'Open Space' in STT.

Other Potential Environmental Impacts

34. The Chairman shared with the meeting a Member's views on the proposed traditional decontamination approaches in the EIA report, i.e. portland cement-based solidification or stablisation would result in substantial environmental burdens and carbon emissions. CEDD was suggested to deploy low-carbon, environment-friendly and sustainable decontamination approach in consultation with relevant local or overseas technical experts. Mr Freeman Cheung remarked that CEDD would explore the possibility to deploy other sustainable approaches in the next stage. In reply to another Member's query, Mr Tony Cheung advised that CEDD could only gain access to the potentially contaminated sites in private lands for conducting ground investigation works upon the completion of the land resumption process. He said that a detailed contamination assessment report would be submitted to EPD for approval afterwards.

35. To address a Member's enquiry, Ms Anna Chung indicated that the pig farm just outside the project area would not cause adverse odour impact since there would be no air sensitive receivers such as residential or recreational areas in the proximity. Also, there were mitigation measures proposed in the EIA Report to address the potential odour impact arising from operation of the retained pig farm, such as controlling fresh air intake at 20mAG or above. With reference to the Blueprint for the Sustainable Development of Agriculture and Fisheries, Mr Gavin Wong remarked that the Government would encourage all local livestock farms to switch completely to modernised operation in multi-storey buildings in the long run.

36. The Chairman suggested that CEDD should minimise the impact of light pollution on wildlife animals such as through including relevant requirements in the land grant documents. Mr Tony Cheung thanked the Chairman for his suggestion which would be taken into consideration.

Waste Management

37. A Member enquired about the amount of inert construction and demolition (C&D) materials that could be reused on-site and the associated on-site storage

arrangement. Mr Tony Cheung indicated that most of the C&D materials could be reused onsite. The Member and another Member suggested that CEDD should consider appropriate measures to minimise and handle the municipal solid waste to be generated during the construction and operation phases. One of the above Members furthered that any floating refuse could be hazardous to the fisheries and birds. Mr Cheung indicated that floating refuse would unlikely affect the fish ponds since their water supply was mainly through water pumped from the nearby river channels.

38. Supporting a Member's views in his written submission, another Member said that CEDD should reuse or recycle all of the non-inert biomass waste, i.e. trees felled, as the disposal would contribute to substantial carbon footprints. Mr Tony Cheung responded that yard wastes such as trees felled would be reused and recycled as far as possible.

Sustainable Development

39. A Member suggested with the support of the Chairman that electric instead of diesel-powered engines and equipment should be deployed as far as practicable so as to minimise adverse environmental impact such as carbon emissions and air pollution. Subject to the latest technological development, Mr Tony Cheung replied that electric machineries would be adopted on the construction site as far as possible. Another Member proposed that CEDD should incorporate more modern technology such as automatic refuse collection system in the project. Mr Cheung agreed to explore the possibility to incorporate new technology in the design stage.

40. The Chairman and a Member suggested that CEDD should strive to achieve carbon neutrality in both the construction and operation phases through minimising energy consumption, adopting the latest technology in "Photovoltaic, Energy Storage, Direct Current and Flexibility" and enhancing the use of renewable energy in the project. Mr Tony Cheung said that CEDD attached great importance to the achievement of carbon neutrality in the project and would design the infrastructure that would allow use of electric or hydrogen vehicles in the project site.

41. There being no further questions from Members, the Chairman thanked the project proponent team for their detailed presentation and clarification.

(A Member left the meeting during the Question-and-Answer Session.)

(The project proponent team left the meeting at this juncture.)

Internal Discussion Session (Closed-door Session)

42. The Chairman advised Members that the EIASC could make one of the following recommendations to the ACE on the EIA report –

(i) endorse the EIA report without condition; or
(ii) endorse the EIA report with condition(s) and/or recommendation(s); or
(iii) reject the EIA report and inform the project proponent of the right to go to the full Council.

If the EIASC cannot reach a consensus during the meeting, it may –

(a) ask for a 2nd submission to the EIASC; or
(b) defer the decision to the full Council and highlight issues or reasons for not reaching a consensus for the full Council's deliberation.

43. The Chairman proposed and Members agreed to endorse the EIA report with conditions and recommendations.

Waste Management

44. The Chairman suggested imposing a condition on the requirement of a management plan to recycle and reuse the biowaste generated from the trees felled in the project. Dr Samuel Chui remarked that a condition in this regard might not be appropriate as it was not a normal practice or requirement stipulated in the existing Technical Memorandum (TM). As felling of trees is not uncommon for all construction works, Dr Chui suggested that it should be handled separately at the EIASC so that a general guideline can be developed for future projects. The Chairman agreed to put it as a recommendation instead. A Member added that the project proponent should be recommended to adopt automatic refuse collection system as far as practicable.

Land Contamination

45. The Chairman suggested a condition to be imposed for the project proponent to adopt more environmentally-friendly methods for decontamination. Dr Samuel Chui shared that there was requirement under the new TM, i.e. to handle land contamination impact by means of the "Source-Pathway-Receptor" approach. In general, pathway control such as capping may be more cost effective and environmentally-friendly for non-volatile substances, such methods might not apply to some materials such as oil substances. To address a Member's concern about the possible toxic substances such as calcium oxide in the excavated sediments, Dr Chui said that there were existing procedures and guidelines to govern the proper handling of various types of land contamination.

HCMP and Environmental Committee

46. The Chairman suggested that the project proponent should submit the HCMP and a list of the Members of the Environmental Committee to DEP for approval nine months before the ponds filling works. Mr Terence Tsang suggested

and the Chairman agreed that the project proponent should report to the ACE on the HCMP.

Wildlife Corridors

47. The Chairman suggested that a condition should be imposed to require the project proponent to provide in the northern portion of the project site an underpass wildlife corridor no smaller than the cross-sectional dimension of $6m^2$ (say 2m high and 3m wide, subject to detailed design) with the availability of running water. Pointing out that there was no natural water source nearby, Mr Simon Chan expressed that it would be difficult to provide pumping system for running water at the site. Instead, the provision of water features might be possible. The Chairman was worried that stagnant water features might attract mosquito breeding in the underpass and counter-proposed the use of photovoltaics panels to provide running water in the underpass. Mr Chan was of the view that running water was not necessary for otters and water features would suffice.

48. A Member added that bushes or floral features similar to otter's natural habitats should be provided. The Chairman furthered that the project proponent should strive to widen the gaps in the grille of the underwater channel connecting the Shenzhen River to facilitate the passage of the otters, if possible. Dr Samuel Chui said that from overseas experience, the provision of ladders might also be possible to facilitate the otters' movement.

49. The Chairman suggested and echoed by a Member that the design of the wildlife corridors of the project site should be submitted to AFCD and EPD for approval.

Carbon Neutrality

50. The Chairman suggested that the project proponent should be recommended to deploy low-carbon and new energy construction equipment and facilitate the use of electric and hydrogen vehicles in the operation phase with a view to achieving carbon neutrality. A Member added that the use of microgrid should be explored. Another Member furthered that the project proponent should adopt passive design in buildings to minimise operational carbon.

Other Impacts

51. The Chairman opined with the support of the meeting that additional conditions or recommendations on air, noise and sewage impacts of the project were not necessary.

Action

Conditions and Recommendations

52. In the light of the discussions made, the Chairman summarised the following conditions and recommendations to be proposed –

(a) Conditions

The Project Proponent should -

(i) submit a detailed HCMP as recommended in the EIA Report to the DEP for approval no less than nine months before commencement of pond filling works of the Project. The Project Proponent should consult ACE in finalising the HCMP prior to submission. The HCMP should provide details on ecological impacts, specifications for the target habitats and species, mitigation and compensation measures including provision of birds' flight paths, wildlife corridors for non-flying mammals, wetlands compensation, protection of existing egretries, design and implementation methods, management strategy, monitoring requirements (e.g. location, frequency and parameters) and reporting requirements, Action / Limit Levels and Event / Action Plan, as well as overall implementation programme , with a view to ensuring no net loss in ecological function and capacity of the wetlands concerned under the Project;

(ii) submit a Detailed Design Plan for Establishment of Wildlife Corridors (DDP) for non-flying mammals and related measures to the DEP for approval before commencement of construction of relevant parts of the Project affecting the existing wildlife corridor(s). Aboveground wildlife corridors with water features and dimension of no less than 10m wide, and underpass wildlife corridors with cross-sectional area of no less than $6m^2$ (2m high and 3m wide, subject to detailed design) with water features and natural lighting should be provided. To facilitate free movement of Eurasian Otters across Lok Ma Chau, Sam Po Shue and the Inner Deep Bay area, the DDP should devise measures such as widening of the gaps in the grille of the underwater channel connecting the Shenzhen River, modifying the inflatable dam at San Tin Main Eastern Drainage Channel and provision of passage (e.g. ladder) through the flap valve and inflatable dam;

(iii) in consultation with AFCD, submit an Implementation Plan for Wetland Enhancement Measures at Mai Po (IPM) as set out in the approved EIA Report to the DEP for approval before commencement of construction of the Project;

(iv) in consultation with AFCD, submit an Interim Wetland Enhancement Plan (IWEP) to the DEP for approval before commencement of pond filling works of the Project. The IWEP should provide the implementation details of the interim wetland enhancement measures for the identified

ponds, including active management such as trash fish stocking, as set out in the approved EIA Report;

(v) set up an Environmental Committee before commencement of construction of the Project to advise on the preparation of the IWEP, IPM, DDP and HCMP, and monitor the effectiveness of implementation of the proposed ecological mitigation / enhancement measures of the Project according to the EIA Report and the approved IWEP, IPM, DDP and HCMP. The Environmental Committee should have a wide representation such as representatives of relevant government departments as well as green groups and academics;

(vi) report regularly to the ACE after commencement of construction of the Project on the progress of implementation of the approved IWEP, IPM, HCMP and DDP, the environmental monitoring results and effectiveness of ecological mitigation / enhancement measures; and

(vii) confirm the land contamination potential within the Project area and if remediation was necessary, submit a Remediation Action Plan (RAP) to DEP for approval. The latest international practice and proven environmentally friendly methods / technologies should be considered in the RAP for devising the remediation strategies that best suit the site conditions and remediation requirements. The Project Proponent should conduct the remediation in accordance with the approved RAP.

(b) Recommendations

The Project Proponent was recommended to –

(i) adopt bird-friendly design for buildings within the Project area, such as the use of non-transparent or non-glaring materials at building facades, to minimise the impacts on avifauna;

(ii) adopt sponge city measures with a modern stormwater management approach to minimise flooding risk of the Project area during heavy rain storms and extreme weather conditions;

(iii) explore the feasibility of implementation of automatic refuse collection systems;

(iv) explore the feasibility of biomass management by reusing and upcycling of the felled trees from the Project area;

(v) explore ways to achieve carbon neutrality in the Project during both construction and operation phases, such as the use of low-carbon

construction materials / equipment, green fuel (e.g. hydrogen), electric vehicles, and the adoption of microgrid;

(vi) explore the feasibility to adopt green design in the Project area by incorporating green roof / wall and passive design in buildings, and designating areas for establishment of urban farms;

(vii) devise specific and effective measures, such as directing outdoor lightings and arranging outdoor light-emitting diode (LED) advertisements away from sensitive receivers, and prohibiting the use of flood lights, to minimise impacts on wildlife due to light pollution during construction and operation phases of the Project; and

(viii) encourage plantation of food crops which might attract insects and birds to enrich the urban biodiversity in the open space zoning within the Project area.

Supplementary Information to be provided

53. In addition to the preliminary draft HCMP on the management and monitoring requirements, the Chairman further suggested with Members' agreement that the project proponent should submit additional calculations of functional value in the impacted area covering other sensitive species such as non-fish eating birds and ducks of conservation importance as well as further analysis to account for the peak density of "0" birds per hectare in abandoned ponds for Members' reference. CEDD

*(Post-meeting notes: Supplementary information on the above was circulated to Members for reference on 10 April 2024. A copy was attached at **Appendix**.)*

54. There being no other comments from Members, the meeting agreed that the EIA report could be endorsed by the ACE with seven conditions and eight recommendations. The project proponent team would be invited to attend the subsequent ACE meeting to present and explain the project details to the full Council.

(Post-meeting notes: The draft conditions and recommendations was circulated to Members for comment on 16 April 2024.)

Item 3 : Any other business (Closed-door session)

(i) Report on Members' comments on project profiles

55. The Chairman informed Members that the EIA Study Briefs of the following projects were circulated to the ACE since the last EIASC meeting held on 13 February 2023:

Action

	Project Title	Public inspection period of the Project Profile	No. of comment from ACE on the Project Profile
(i)	Tsing Yi - Lantau Link	11 to 24 May 2023	NIL
(ii)	Development of Tseung Kwan O Area 137 and Associated Reclamation Sites	12 to 25 May 2023	1
(iii)	Ma Liu Shui Reclamation	4 to 17 July 2023	1
(iv)	Provision of Crematorium at Wo Hop Shek Cemetery	20 July to 2 August 2023	NIL
(v)	Development at Ngau Tam Mei Area	10 to 23 November 2023	NIL

(ii) Selection of EIA reports

56. According to the MO of the EIASC, only projects selected by half or more of the EIASC Members would be arranged for discussion at the meeting. To facilitate Members' consideration and selection, Mr Terence Tsang reported that EPD was going to provide a checklist highlighting the key concerns of each EIA project. He said that EPD would consult Members in this regard at the next meeting. EPD

57. There was no other business for discussion at the meeting.

Item 4 : Date of next meeting (Closed-door session)

58. The Chairman advised that the EIASC meeting in April 2024 would be cancelled. Members would be advised on the date of the next meeting and the agenda in due course.

59. There being no other business, the meeting ended at 6:25 pm.

EIA Subcommittee Secretariat
April 2024

TABLE OF CONTENTS

List of Figure

1. PROJECT BACKGROUND

1.1 Project Background and Summary of Ecological Impacts and Mitigation Requirements

1.1.1 San Tin/Lok Ma Chau Development Node (hereafter referred to as the Project) has taken forward the San Tin Technopole initiative and conducted the statutory Environmental Impact Assessment (EIA).

1.1.2 As detailed in Section 10.11 of the EIA Report, about 89 ha of the largely contiguous area of ponds in the northern portion, which support particularly high density and abundance of avifauna species, would be permanently lost under the development. Outside the Project boundary, a further 32.39 ha and 30.25 ha of pond habitats along the Exclusion Zone (EZ) and the Reduced Density Zone (RDZ) respectively would be indirectly impacted by the development. To compensate for the direct loss of the contiguous pond habitat and indirect disturbance impact to the associated wildlife especially the disturbance sensitive avifauna species in the northern portion, enhanced wetlands in the form of ecologically enhanced fishponds (EEF) at the proposed Sam Po Shue Wetland Conservation Park (SPS WCP) described in **Section 1.2** shall be established. Enhancing the ecological function and capacity of these ponds would compensate for the loss or reduction of functional value (i.e., the abundance of wildlife species that the ponds are able to support) resulting from the Project. These EEF would comprise existing pond habitats, and ponds converted from existing brownfield or wasteland areas. The ponds shall be enhanced with various features to increase abundance of wildlife they are able to support, thereby compensating for the loss of the functional value by accommodating a higher abundance of wildlife.

1.1.3 Aside from the contiguous pond habitat as described in **Section 1.1.2**, other wetland habitats (including scattered ponds in the southern portion, mitigation wetland, marsh/reed, watercourse, seasonally wet grassland, and wet agricultural land) were recorded within the Project site that would be subject to direct loss (including permanent loss upon site formation, and temporary loss that would be reinstated/revitalised). Some of these wetland habitats were also recorded along the EZ and RDZ under the Project which would be subject to indirect impact from the Project. Ecological values of these wetland habitats range from “low” to “moderate”. Under the current wetland compensation strategy, “enhanced freshwater wetland (EFW) habitats” shall be established to compensate for impacts on these other wetland habitats.

1.2 Sam Po Shue Wetland Conservation Park

1.2.1 As areas within the Project site will be mostly taken up for development, it would be infeasible to include compensation areas on-site (within Project site) due to the large area requirement for habitat compensation. Compensation areas are recommended to be as close to the Project Site as possible, at strategic areas to enhance connectivity and environmental capacity of the proposed compensation areas.

1.2.2 The Government will develop the SPS WCP with a proposed area of approximately 338 ha, serving dual purposes. First, it allows the Government to enhance the overall ecological value, biodiversity and connectivity in the Deep Bay area through proactive conservation and management. Secondly, it will enhance the ecological function and capacity of 288 ha of wetlands with active conservation management and enhance the fisheries resources of 40 ha of fishponds with modernised aquaculture, to compensate for the loss in wetland habitats and fisheries resources arising from the development of San Tin Technopole and to achieve no-net-loss in ecological function and capacity of the wetlands concerned. The approximate location for wetland and fisheries enhancement within the SPS WCP is shown in **Figure 1.1**. Subject to the design of SPS WCP, the enhancement location will be supplemented in the later version of this Habitat Creation and Management Plan (HCMP).

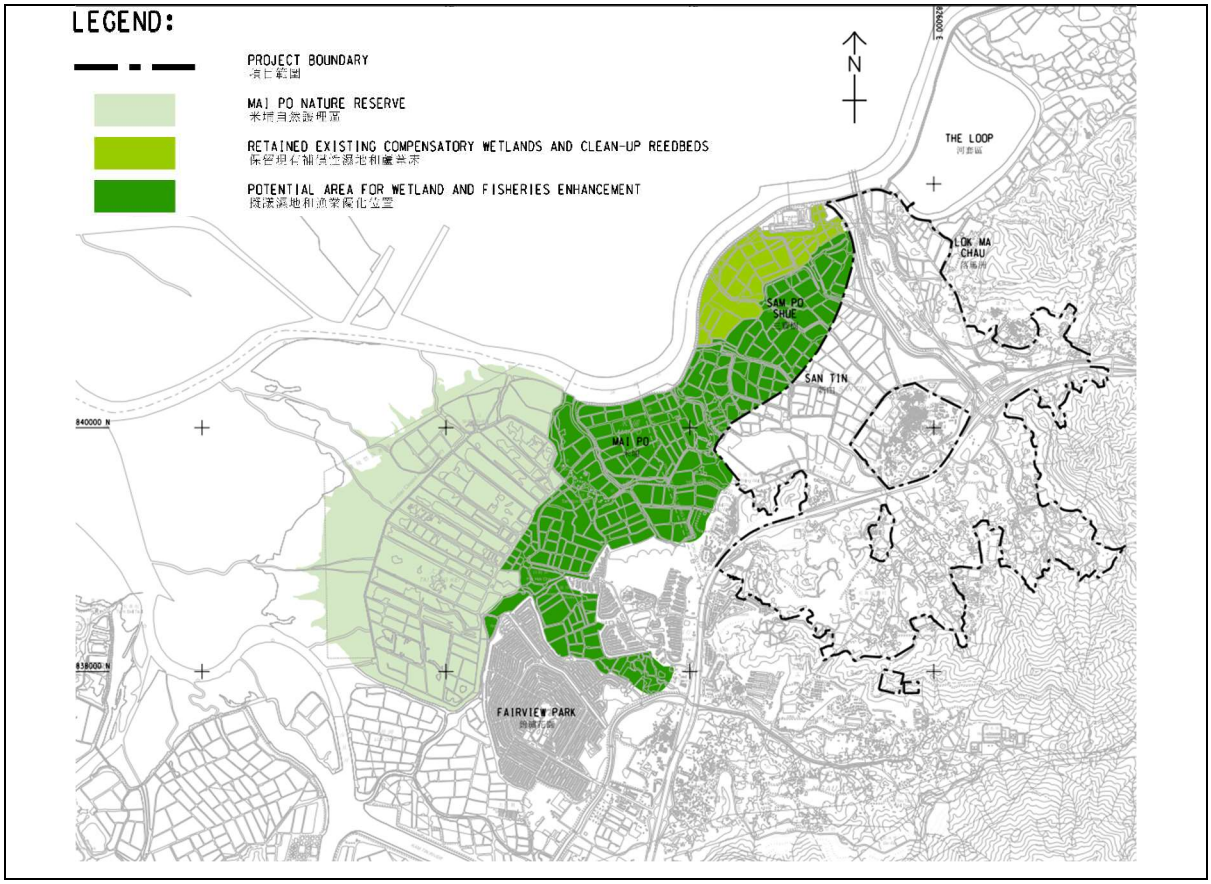


Figure 1.1 Approximate Location for Wetland and Fisheries Enhancement within the SPS WCP

1.3 Site Location

1.3.1 The area to be delineated as the SPS WCP is bounded by Shenzhen River and the Lok Ma Chau (LMC) Spur Line Ecological Enhancement Area (LMC EEA) to the north, Mai Po Nature Reserve to the west and various urban developments to the southwest.

1.3.2 The San Tin Technopole will be located to the east and southeast of the SPS WCP. An "eco-interface" of approximately 35 m wide is proposed along the northwest boundary of the San Tin Technopole, between the Project area and the wider pond habitats in Sam Po Shue. The "eco-interface" would be established in the form of a landscape buffer via landscape planting, comprising native tree species, shrub mix and riparian vegetation, and incorporating a gentle slope interface, with an aim to minimise disturbance from Project area by providing a buffer between the development and the adjacent wetland habitats and associated fauna.

1.3.3 The eastern boundary of the SPS WCP would run adjacent to the San Tin Eastern Main Drainage Channel (STEMDC), which would be revitalised under the Project. Another "eco-interface" with a width of about 20m is also proposed along the east of STEMDC, creating a buffer between the "OU(I&T)" land use and the revitalised STEMDC.

1.4 General Site Description

1.4.1 The area to be delineated as the SPS WCP is currently dominated by fishponds. Within this larger area, there are patches of inactive and abandoned ponds, particularly in the southwest of SPS WCP between Fairview Park and Palm Springs. Other land uses in the delineated area include patches of filled ponds/brownfield type development, rivers/nullahs (including the San Tin Western Main Drainage Channel (STWMDC)) and village-type developments.

1.5 Habitat Evaluation

1.5.1 In addition to that covered in the EIA Report, the habitat evaluations will be reviewed and supplemented in later version of the HCMP based on the latest available information.

1.6 Species of Conservation Importance

1.6.1 In addition to that covered in the EIA Report, the species of conservation importance will be reviewed and supplemented in later version of the HCMP based on the latest available information.

1.7 Wetland Enhancement Measures

1.7.1 The EIA Report has recommended implementation of wetland enhancement measures with a view to enhancing the overall ecological value of wetland habitats in the Deep Bay area, as detailed in Section 10.11.3.39 to 10.11.3.47 of the EIA Report, prior to the commencement of pond filling works under the Project.

1.7.2 The proposed wetland enhancement measures include wetland enhancement measures at Mai Po (desilting of tidal channel and clearance of exotic mangrove (*Sonneratia* spp.)), and interim wetland enhancement measures for identified ponds in the Inner Deep Bay area (restoration of abandoned ponds and arrangement of active management including fish stocking for suitable ponds).

1.7.3 In respect of the wetland enhancement measures at Mai Po (desilting of tidal channel and clearance of exotic mangrove (*Sonneratia* spp.)), a work plan, setting out the details, timeframe and requirement/frequency of repetition for the enhancement works, will be prepared in consultation with AFCD and submitted to EPD for approval at least 3 months before the commencement of the proposed wetland enhancement works.

1.7.4 In respect of the interim wetland enhancement measures (restoration of abandoned ponds and arrangement of active management including fish stocking for suitable ponds), an Interim Wetland Enhancement Plan, setting out the implementation details will be prepared in consultation with AFCD and submitted to EPD for approval at least 3 months before the commencement of the interim wetland enhancement works.

2. OBJECTIVES OF THE HABITAT CREATION AND MANAGEMENT PLAN

2.1 Objectives of the Habitat Creation and Management Plan

2.1.1 This HCMP aims to provide specifications on the management and monitoring requirements for the enhanced wetland habitats within the SPS WCP and to define the long-term management and monitoring requirements for these habitats in respect of wetland compensation for the Project, in order to achieve no-net-loss in ecological function and capacity of the wetlands (including fishponds) concerned under the Project. The recommendations and specifications given in this document will be incorporated as appropriate into the scope of works for forthcoming contracts for implementation of the SPS WCP. The wetland enhancement measures which fall outside SPS WCP are not under the scope of this HCMP.

2.1.2 The implementation details of the enhanced wetland, the associated management and monitoring requirements (e.g. monitoring location, frequency and parameters) shall be provided in the later version of the HCMP. The ecological monitoring shall include monitoring of the abundance of the target indicator waterbird species (i.e., Black-faced Spoonbill, Great Cormorant, Great Egret, Grey Heron) at representative locations within the enhancement area, as well as other target species, habitat conditions and relevant environmental data (**Section 3** refers). The ecological monitoring shall be conducted before construction phase to reconfirm the baseline conditions in impacted and enhancement areas; and regularly during and upon the establishment of the enhanced wetland habitats within the SPS WCP.

3. TARGET HABITATS / SPECIES

3.1 Mitigation Strategy under the EIA Report

3.1.1 The Government will enhance the ecological function and capacity of 288 ha of wetlands by establishing the SPS WCP with active conservation management to compensate for the loss in wetland habitats arising from the development of San Tin Technopole and to achieve no-net-loss in ecological function and capacity of the wetlands (including fishponds) concerned.

3.1.2 Among the 288 ha, there will be 253 ha of ecologically enhanced fishponds (EEF) compensating for pond habitat loss, and 35 ha of enhanced freshwater wetland (EFW) habitat

compensating for other freshwater wetland habitat loss. The layout of the habitats, management zoning, and supporting infrastructure will be supplemented in the later version of the HCMP.

3.2 Key Target Species

3.2.1 To estimate the compensation requirement for pond habitats, four larger wetland avifauna species (Black-faced Spoonbill (*Platalea minor*), Great Cormorant (*Phalacrocorax carbo*), Great Egret (*Ardea alba*), Grey Heron (*Ardea cinerea*)) were used as indicators in the EIA Report, as they are relatively disturbance sensitive and are considered as key species using the pond habitats (e.g., KCRC, 2002). It is assumed that if mitigation targets can be achieved for these larger and disturbance sensitive species, similar or higher levels of enhancement can be achieved for other less sensitive wildlife species.

3.2.2 In addition to the four indicator species, other target species for habitat enhancement within the SPS WCP shall also include other fish-eating/non-fish-eating avifauna and non-avifaunal species of conservation interest, which are relatively common in and/or restricted to the affected wetland habitats, impacted by the Project.

3.2.3 Target species for habitat enhancement shall include the four indicator species and other ardeids, ducks and grebes (e.g. Eurasian Teal and Little Grebe), shorebirds and gulls (e.g. Little Ringed Plover and Black-headed Gull), freshwater wetland and other wetland-associated avifauna (e.g. Black-winged Stilt and Red-billed Starling), raptors (e.g. Greater Spotted Eagle), Eurasian Otter and other non-avifaunal species of conservation importance such as herpetofauna (e.g. Chinese Bullfrog) and odonate (e.g. Scarlet Basker). The list of target species and the associated mitigation performance target will be supplemented in the later version of the HCMP.

3.3 Habitat Requirements for Target Species

3.3.1 An outline of habitat enhancement features for target species is given below:

- ***Piscivorous Avifauna (including Indicator Species and other Ardeids):*** EEF would provide larger pond sizes, shallower pond margins and generally lower levels of disturbance that would benefit larger piscivorous avifauna (e.g., Ardeids, Black-faced Spoonbill and Great Cormorant).
- ***Ducks and Grebes:*** Areas of open water with shallow margins and deeper central areas (up to 1.5m) would be maintained in part of the EFW habitats area, providing suitable foraging habitat for wading birds, as well as attracting ducks (e.g., Eurasian Teal), grebes and other open water species (e.g., Little Grebe). The functional value of EEF for duck species would also increase due to larger pond sizes, shallower pond margins and more emergent/riparian vegetation, extended pond drain-downs and greater area of ponds drain-down at any one time, and generally lower levels of disturbance.
- ***Shorebirds and Gulls:*** The functional value of EEF for shorebirds (e.g., Little Ringed Plover, Red-necked Stint) and gulls (e.g., Black-headed Gull) would increase due to larger pond sizes, shallower pond margins, extended pond drain-downs and greater area of ponds drain-down at any one time, and generally lower levels of disturbance.
- ***Freshwater Wetland Avifauna:*** Shallow (100-300mm deep), permanently inundated areas within the EFW habitats would provide suitable habitat for Black-winged Stilt, rails, bitterns and wetland associated passerines. The EFW habitats would also include seasonal wetlands that become drier, open vegetated habitats in the dry season, providing suitable habitat for species such as Red-throated Pipit. The functional value of EEF for avifaunal species commonly associated with freshwater wetlands would also increase due to larger pond sizes, shallower pond margins and more emergent/riparian vegetation, and generally lower levels of disturbance.
- ***Other Wetland-associated Avifauna Species:*** The functional value of EEF for other wetland-associated avifauna species (e.g., Collared Crow, Red-billed Starling) would increase due to larger pond sizes, shallower pond margins and more emergent/riparian vegetation, extended pond drain-downs and greater area of ponds drawn-down at any one time, removal of bird-scaring devices, and generally lower levels of disturbance. These species would also be expected to make use of the 35ha of EFW habitats to be established in the proposed SPS WCP.

- ***Raptors.*** Greater Spotted Eagle and Imperial Eagle are both scarce winter visitors to Hong Kong. They would primarily benefit from habitat measures that would attract prey species (e.g., ducks), as well as generally lower levels of disturbance.
- ***Eurasian Otters:*** Although no Eurasian Otters were recorded from the Assessment Area during ecological surveys conducted for this Project, a recent publication (McMillan *et al*., 2023) recorded spraints (otter scats) within the Assessment Area in 2018 and 2019, suggesting that the wetland habitats support a small population of Eurasian Otters. The functional value of EEF would increase for otters due to shallower pond margins, extended pond drain-downs and greater area of ponds drawn-down at any one time, and generally lower levels of disturbance. Otters would also utilise EFW habitats, including open waters, permanent and temporary wetlands and drainage channels. In particular patches of dense emergent vegetation and well vegetated channels would provide potential refuge areas for these species. Otters would also benefit from the better control of feral dogs in the enhancement area, with such dogs known to cause mortality of otters in the Deep Bay area (e.g., KFBG, 2018). Specific enhancement measures for otters (e.g., provision of artificial holts and floating platforms) can also be considered as part of the detailed planning of the proposed SPS WCP.
- ***Other Non-Avifaunal Species of Conservation Interest:*** Similar to Eurasian Otter, other terrestrial fauna would benefit from lower levels of disturbance and improved habitat quality. In particular, dragonflies (e.g., Scarlet Basker) and amphibians (e.g., Chinese Bullfrog) would benefit from improved water quality (resulting from better water quality monitoring and feeding regime that could minimise biodegradation of excess feed in EEF), shallower margins and increased riparian/emergent vegetation. These species would also be expected to make use of EFW.

3.4 Habitat Condition Targets

Ecologically Enhanced Fishponds (EEF)

3.4.1 To compensate for the direct loss of the contiguous pond habitat and indirect disturbance impact to the associated wildlife especially the disturbance sensitive bird species in the northern portion of San Tin Technopole, 253ha of enhanced wetland in the form of EEF shall be established. Enhancing the ecological function and capacity of these ponds would compensate for the loss or reduction of functional value (i.e., the abundance of wildlife species that the ponds are able to support) resulting from the Project. These EEF would comprise existing pond habitats, and ponds converted from existing brownfield or wasteland areas. The ponds shall be enhanced with various features to increase abundance of wildlife they are able to support, thereby compensating for the loss of the functional value by accommodating a higher abundance of wildlife.

3.4.2 Enhancement measures for EEF will include:

- Creating larger ponds with enhanced connectivity through consolidation;
- Physical modification of pond habitats to increase environmental carrying capacity;
- Managing and sequencing pond drain down across multiple ponds in the dry season to maximize feeding opportunities for avifauna and other wildlife;
- Removal of existing bird scaring devices at actively managed ponds; and
- Stocking ponds with suitable prey items (i.e., trash-fish) for target wildlife species (may be considered as an enhancement measure to achieve higher enhancement value).

Figure 3.1 Recommended Measures for Ecologically Enhanced Fishponds

3.4.3 The details of the enhancement measures in EEF would be subject to detailed design of the SPS WCP.

Enhanced Freshwater Wetlands (EFW)

3.4.4 To compensate for direct and indirect impacts to other freshwater wetland habitats, about 35 ha of EFW habitats shall be provided within the proposed SPS WCP. The EFW habitats would comprise a mix of open water, marshes/reedbeds, seasonal wetlands and drainage channels.

3.4.5 The indirect impact arisen from the development of San Tin Technopole will result in lower densities of disturbance sensitive of wildlife, in particular avifauna species, in the Exclusion Zones (EZ) and Reduced Density Zones (RDZ) along the Project. As the species recorded in marsh/reed habitats tend to be less disturbance-sensitive than species utilizing more open wetland habitats, the proposed EFW habitats would be built along these EZ and RDZ, where the remaining areas of the proposed SPS WCP (outside the EZ and RDZ) can be maximised for EEF.

3.4.6 The EFW habitat will include:

- Shallow (100-300mm deep), permanently inundated areas (including areas with dense vegetation) that would provide habitat for rails, bitterns and wetland associated passerines, as well as dragonflies and herpetofauna. The dense vegetation will also provide additional screening and buffer for more open wetland habitats to the north.
- Areas of open water with shallow margins and deeper central areas (up to 1.5m) would be maintained to provide suitable foraging habitat for wading birds, as well as attract ducks, grebes and other open water species.
- Existing channels can be enhanced as well as additional channels and ditches provided to compensate for impacts to watercourses.
- Some areas could be maintained as seasonal wetlands, which would be inundated only during the wet season.

3.4.7 Native wetland plants species (such as *Phragmites* spp. and *Fimbristylis* spp.) could be used in vegetated areas of the enhanced freshwater wetland habitats.

3.4.8 Public access to enhanced habitats in the SPS WCP shall be controlled to reduce disturbance from human activities.

3.4.9 Aside from fishponds, Eurasian Otters would potentially utilise various freshwater wetland habitats created within the SPS WCP including open waters, permanent and temporary wetlands and drainage channels. In particular, patches of dense emergent vegetation and well vegetated channels would provide potential refuge areas for these species. Specific enhancement measures for otters (e.g., provision of artificial holts and floating platforms) can also be considered as part of the detailed planning of the SPS WCP.

3.4.10 The details of the enhancement measures in EFW would be subject to detailed design of the SPS WCP.

3.4.11 The specific habitat targets and the associated mitigation performance target will be supplemented in the later version of the HCMP.

Wildlife Corridors for non-flying mammals including Eurasian Otters

3.4.12 Wildlife corridors have been proposed in both the northern and southern portions of the Project area as detailed in Section 10.11.11 and Figures 10.10A to 10.10C of the EIA report to facilitate movement of non-flying mammals such as Eurasian Otters.

3.4.13 For the northern portion, the wildlife corridors will be provided in the form of underpasses (across Ha Wan Tsuen East Road and San Sham Road) and aboveground corridors within the AFCD Fisheries Research Centre adjacent to the Lok Ma Chau Meander, as well as adjacent to the STEMDC to facilitate free movement of Eurasian Otters across Lok Ma Chau, Sam Po Shue and the Inner Deep Bay area. The actual configuration (i.e. detailed alignment), design (e.g. water features and planting) and physical parameters (e.g. width) of the wildlife corridors will be subject to detailed design.

3.4.14 A detailed Design Plan for Establishment of Wildlife Corridor and related measures will be prepared in consultation with AFCD and submitted to EPD for approval before commencement of construction of the Project.

Bird Flight Corridor

3.4.15 A 300m-wide bird flight corridor between the Lok Ma Chau Meander and Sam Po Shue in east-west direction will be preserved (covering majority of the existing surveyed and recorded flight paths) by designation of non-building areas (NBA) at I&T sites and imposing building height control of +15 mPD for Government facilities. The building height adjacent to the 300m-wide bird flight corridor would also be restricted to +35 mPD to further minimise disturbance impact and encourage flight usage (Sections 2.9 and 10.11.6, Figures 10.6C and 10.6D of the EIA report refer).

3.4.16 The width of the proposed flight corridor has made reference to the flight corridor at further eastern direction, the surrounding topography and building structures (e.g. the Lok Ma Chau Spurline viaduct). As a reference, the flight corridor at south of the Loop (the combined width of the Ecological Area within the Loop, LMC Meander, and the adjacent fishponds) is about 300 m wide.

3.4.17 A 70m-wide NBA along the flight path connecting the Mai Po Lung Village (MPLV) Egretry to the wetland habitats on the north as well as a 35m-wide NBA as “eco-interface” along the northwest of the Project boundary will be provided to preserve flight paths recorded at the MPLV Egretry and Mai Po Village (MPV) Egretry respectively. A landscaped area with planting of trees and native/suitable vegetation will be provided along the NBA to minimise disturbance from the development.

3.4.18 Bird-friendly design (e.g. use of low reflective materials and appropriate architectural features) will be adopted for buildings adjacent to the 300m-wide bird flight corridor, the 70 m-wide flight path and the MPLV Egretry to minimise bird collision.

Egretries and Night Roosts

3.4.19 An “Open Space” zoning is proposed in the Revised Recommended Outline Development Plan to retain and protect the core area of the MPLV Egretry; and the development will not encroach onto the MPV Egretry which is located to the west of the Project. Enhancement measures such as preservation of trees currently within the core area of the MPLV Egretry,

provision of water bodies for wetland creation and planting of mature trees (with native species that are currently used as egretry substratum) adjacent to the water bodies will be incorporated in the detailed design of the "Open Space" to enhance usage and connectivity of the MPLV Egretry.

3.4.20 During the construction stage, stringent seasonal control of construction activities during breeding period within 100 m buffer area of the egretries will be implemented to minimise construction disturbance on the MPLV and MPV Egretries.

3.4.21 To minimise impact due to direct loss of two overwintering night roosts (Ha Wan Tsuen Night Roost and San Tin Open Storage Area Night Roost), roosting areas comprising mature individuals of native tree species that are currently used as a roosting substratum would be re-provisioned at suitable locations for both night roosts before their removal, and during the construction stage, the construction activities and tree felling for both roosting sites would only be allowed in wet season (April - September).

4. DESIGN AND IMPLEMENTATION TO ENHANCE ECOLOGICAL FUNCTIONS

4.1 Design Consideration

4.1.1 The HCMP will address various constraints posed by the location, existing environment and future management requirements of the proposed enhanced wetlands. The outline of design consideration is given below and the details will be supplemented in the later version of the HCMP.

- **Engineering** – the key engineering consideration for habitat creation would be enabling the close control of water levels across different wetland habitat types.
- **Hydrology/Drainage** – it is expected that water at wetlands in the SPS WCP will largely be supplied by rainfall. Given the seasonality of rainfall in Hong Kong, consideration of water supply in the dry season, as well as flood resilience in the wet season will be evaluated in the HCMP The HCMP shall also need to consider drainage inflows to the SPS WCP from the south, in particular in relation to the STWMDC, as well as outflows to Shenzhen River/Shan Pui River to the North/West.
- **Soils** – While soils in the SPS WCP are generally impermeable clays suitable for wetland creation, the requirement for any additional soil lining should be reviewed and recommended in the HCMP. In addition, the influence of soils on wetland water pH shall need to be addressed.
- **Vegetation** – Emergent vegetation would be allowed to be established within the pond areas of EEF, while different microhabitats (such as reedbed, permanent marsh, seasonal marsh and open water) would be established within the EFW habitats and planted with appropriate species. These microhabitats will be further reviewed and recommended in the later version of the HCMP.
- **Access** – The SPS WCP area is current accessible largely by dirt roads constructed directly on pond bunds. The preliminary access planning and control for the SPC WCP during construction and operational phase should be recommended in the later version of the HCMP.
- **Utilities –** Much of the SPS WCP area currently has no infrastructure for potable water, electricity, wastewater, or telecommunication. The requirements for utilities in different parts of the SPS WCP to support habitat creation and management will be reviewed in the later version of the HCMP.

4.2 Implementation Methods

4.2.1 The Government aims to start the development of SPS WCP in around 2026/2027 for completion by 2039 or earlier to tie in with the full operation of San Tin Technopole.

4.2.2 The implementation methods will be formulated in the later version of the HCMP for the proposed enhanced wetlands based on the design considerations outlined in **Section 4.1.1** and the specific enhancement measures set out in **Section 3.4**, subject to the design of the SPS WCP.

5. ACTIVE MANAGEMENT STRATEGY

5.1 Inter-departmental Working Group on Wetland Enhancement

5.1.1 A working group will be formed between CEDD (as San Tin Technopole's works agent) and AFCD (as SPS WCP's sponsoring department) to monitor the effectiveness of the enhancement measures and coordinate the progress of pond filling under the Project and SPS WCP implementation amongst others.

5.1.2 The working group shall consult and regularly report to the EPD on the environmental monitoring results and the implementation of mitigation measures set out in the later version of the HCMP. Relevant stakeholders such as the Advisory Council on the Environment will be involved as appropriate. Further enhancement measures shall be implemented under the coordination of the working group, where necessary, such as when the proposed ecological function enhancement measures bring lower abundance and/or density of target species than the mitigation performance targets proposed in **Section 3** of the HCMP. The intended follow-up actions associated with the ecological monitoring shall be provided in detail in the later version of the HCMP (see **Section 7** below).

5.2 Environmental Committee

5.2.1 An Environmental Committee will also be established to advise the working group on the implementation and monitoring of the proposed ecological mitigation/enhancement measures of the Project, including wetland enhancement and monitoring works at the SPS WCP, according to the EIA Report and the approved HCMP. The Committee shall have wide representation, including representatives of government departments as well as green groups and academics.

5.3 Management Actions

5.3.1 The primary management actions related to habitat compensation in the SPS WCP will relate to water management, trash-fish stocking (if adopted), vegetation control and general maintenance activities. Detailed management actions will be formulated in the later version of the HCMP.

6. MONITORING AND REPORTING REQUIREMENTS

6.1 Introduction

6.1.1 The primary focus of the monitoring works is to ensure habitats receive sufficient mitigation for impacts resulting from the Project. The later version of the HCMP shall provide details of the ecological monitoring arrangements.

6.2 Monitoring Parameters

6.2.1 Monitoring shall focus on the target species outlined in **Section 3**. The monitoring approach would depend on the numbers of species present in the EEF/EFW. Species occurring in significant numbers shall be monitored, whereas presence/absence data shall be collected for species with scarce abundance (**Table 6.1** refers). Monitoring parameters will be further reviewed and detailed in the later version of the HCMP.

6.3 Baseline Monitoring

6.3.1 As suggested in **Section 2.1.2** above, 12-month target species surveys covering representative locations within the entire impacted and enhancement area shall be undertaken prior to commencement of pond filling under the Project to collect up-to-date baseline data that can be used as a reference for subsequent monitoring works.

6.3.2 Additional review of data across the entire Inner Deep Bay area will be conducted when necessary to understand broader changes in target species abundance that may result from external factors (i.e., changes to the habitats of migratory species outside Hong Kong).

6.4 Monitoring Programme

6.4.1 **Table 6.1** provides an outline monitoring programme for enhanced habitats (both EEF and EFW habitats) within the SPS WCP. The monitoring programme will be further reviewed and detailed in the later version of the HCMP.

Table 6.1 Outline Monitoring Programme

Parameter	Frequency	Methodology
Target Species	To be confirmed	Line-transect (avifauna, herpetofauna, odonate/insects) Visual inspection/deployment of camera traps (otters)
General avifauna abundance and distribution		Line-transect
Herpetofauna, mammals and odonate / insects		Line-transect
Freshwater invertebrate communities		Kick-sampling
Fish communities		Netting/direct observation
Habitats and Vegetation		Line-transect
Water quality and water levels		Laboratory analysis/water level gauge
Performance of specific habitat enhancement features (e.g., floating platforms, nestboxes).		Visual inspection/deployment of camera traps

6.5 Reporting

6.5.1 Regular reports will be prepared, detailing the results of monitoring data, management activities as well as any measures implemented in response to action or limit levels being triggered during the reporting period.

6.6 Staffing

6.6.1 Monitoring surveys should be conducted by qualified ecologists with at least 5 years relevant experience.

7. ACTION / LIMIT LEVELS AND EVENT / ACTION PLAN

7.1.1 The results of the ecological monitoring shall be compared with the baseline data (**Section 6.3** refers) and the following action level and limit level indicated in

7.1.2 **Table** 7.1 on each reporting occasion as mentioned in **Section 6.5** above. Action and limit levels will be finalised in the later version of the HCMP with reference to the baseline ecological conditions. The triggering of action and limit levels will take into account the change in abundance of target species, including their natural fluctuation, and the triggering criteria will be formulated in later version of the HCMP.

Table 7.1 Event and Action Plan for Target Species

Event	Action
Action Level	• Check monitoring data; • Repeat data analysis to confirm findings; • Audit of habitat enhancement measures to ensure they are being implemented according to HCMP specifications; • Review relevant available local (e.g., AFCD/Hong Kong Bird Watching Society (HKBWS) Waterbird Counts) and overseas/Mainland data to understand if exceedance is due to natural variation or project related; • Identify potential source(s) of on-site/off-site impacts; • Prepare contingency plan for additional enhancement; • Notify EPD and AFCD for persistent exceedance of Action Level.
Limit Level	• Review the need to implement additional short-term (i.e., trash-fish stocking, pond drain-down regime) and/or long-term enhancement measures; • Implement contingency plan for additional enhancement as appropriate;

Event	Action
	• Actions to be undertaken in the event of exceedance of Action Level set out above; • Notify EPD and AFCD for exceedance of Limit Level.

8. OVERALL IMPLEMENTATION PROGRAMME

8.1 Interface Between San Tin Technopole and Sam Po Shue Wetland Conservation Park

8.1.1 The Government aims to start the development of SPS WCP in around 2026/2027 for completion by 2039 or earlier to tie in with the full operation of San Tin Technopole. A strategic feasibility study of the entire Wetland Conservation Parks System, which covers the proposed SPS WCP, is currently in progress under AFCD/CON/01/22 (Strategic Feasibility Study on the Development of Wetland Conservation Parks System under the Northern Metropolis Development Strategy). Upon completion of the aforesaid study, the Government will proceed with the investigation and design stages of the proposed SPS WCP.

8.1.2 As mentioned in **Section 3.4.2** above, a series of ecological enhancement measures for wetlands at the proposed SPS WCP will be implemented, such as increase in pond area and enhanced connectivity, managing and sequencing pond drain-down, controlling access to reduce disturbance from human activities and feral dogs, providing artificial holts and floating platforms as specific enhancement measures for Eurasian Otters, and stocking ponds with suitable prey items (i.e. trash-fish) for target wildlife species where necessary.

8.1.3 The tentative development programme of San Tin Technopole and the proposed SPS WCP is shown in **Figure 8.1**.

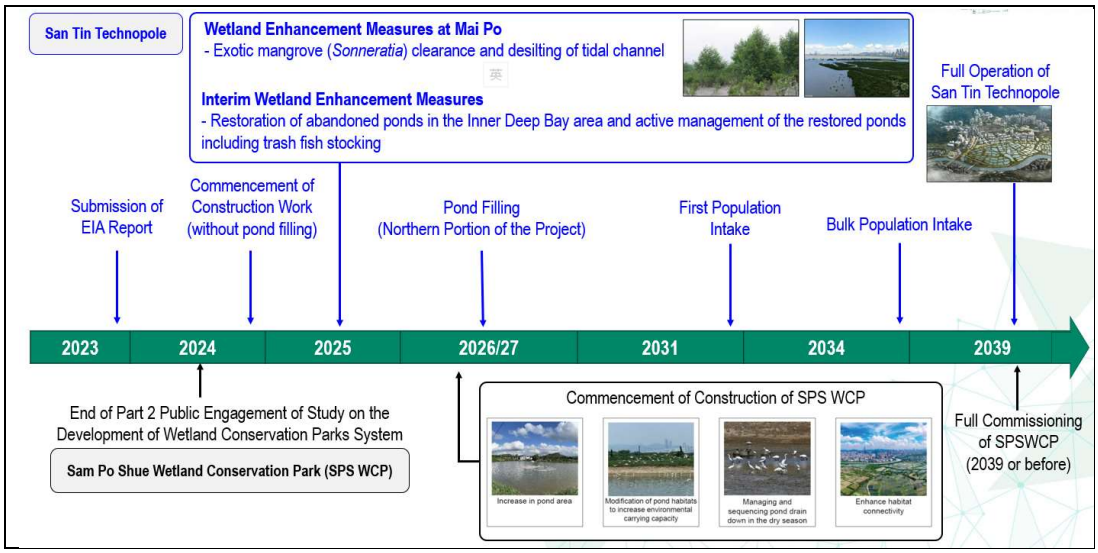


Figure 8.1 Tentative Development Programme of San Tin Technopole and Sam Po Shue Wetland Conservation Park

8.2 Financial Arrangement

8.2.1 Funding for the wetland enhancement works will be provided by the Government. It is planned that funding applications for pond filling works of San Tin Technopole and the development of the SPS WCP will be bundled together.

8.3 Overall Management

8.3.1 As detailed in **Sections 5.1** and **5.2**, an inter-departmental working group will be formed between CEDD (as San Tin Technopole's works agent) and AFCD (as SPS WCP's sponsoring department) to monitor the effectiveness of the enhancement measures and coordinate the progress of pond filling under the Project and SPS WCP implementation amongst others. An Environmental Committee will also be established to advise the working group on the implementation and monitoring of the proposed ecological

mitigation/enhancement measures, including wetland enhancement measures and monitoring works at the SPS WCP, according to the EIA Report and HCMP approved by EPD.

8.3.2 CEDD will be responsible for the implementation and management of SPS WCP until the completion of works and establishment of the enhanced wetland habitats within SPS WCP. Future operation and maintenance of the established enhanced wetland habitats that are handed over to AFCD will be undertaken by AFCD.

-END-

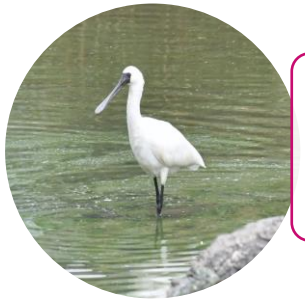
Supplementary Information (ii)

Additional calculations of functional value covering other species of conservation importance

Selection of Other Species for Additional Calculations

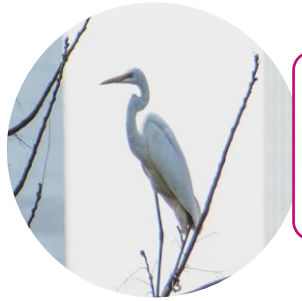
Indicator Species with High Sensitivity to Disturbances adopted in the EIA Report

Black-faced Spoonbill
黑臉琵鷺



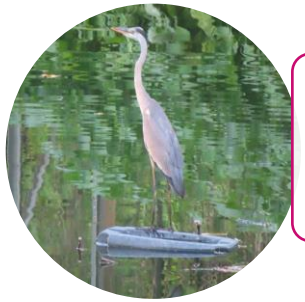
High

Great Egret
大白鷺



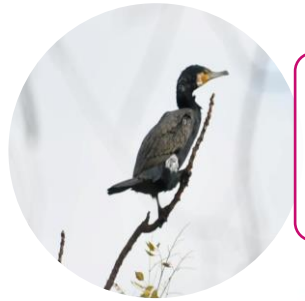
High

Grey Heron
蒼鷺



High

Great Cormorant
普通鸕鷀



High

- If mitigation targets can be achieved for these **larger disturbance sensitive indicator species**, **similar or higher levels of enhancement for other less sensitive wildlife species can be achieved.**

Other Species of Conservation Importance for Additional Calculations

- Additional calculations for the following species, including species **regularly occurring at / using fishpond habitats** [1] and other **non-fish-eating avifauna species** [2] :

Little Egret [1]
小白鷺

Chinese Pond Heron [1]
池鷺

Cattle Egret [2]
牛背鷺

Eurasian Teal [1] [2]
綠翅鴨

Note:
[1] Regularly occurring species in Lok Ma Chau / San Tin area, according to survey data and analysis undertaken in the LMC Spurline EIA
[2] Non-fish-eating avifauna species refers to species that does not primarily feed on fish

Changes in Functional Value within Impacted Area

Changes in Bird Density within Impacted Areas to be Compensated by SPS WCP

Waterbird Species	Direct Impact (ha)*	Indirect Impact (ha)*	Impacted Area (ha) to be Compensated by SPS WCP	Peak Bird Density# (birds/ha)		Loss in Functional Value in Impacted Area ^
				Existing	After Project Development	
小白鷺 Little Egret	89.0	45.0 [1]	**134.0**	0.853	0.157	**-93.2**
池鷺 Chinese Pond Heron	89.0	25.8 [2]	**114.8**	0.571	0.035	**-61.6**
牛背鷺 Cattle Egret	89.0	11.5 [3]	**100.5**	0.290	0.006	**-28.6**
綠翅鴨 Eurasian Teal	89.0	37.1 [4]	**126.1**	0.230	0.013	**-27.3**

*Direct Impact: Total loss in functional value; Indirect Impact: 100% (in EZ) and 50% (in RDZ) loss in functional value

Monthly waterbird count data from Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme submitted by HKBWS to AFCD were reviewed to determine the bird densities of impacted/compensation area. The type of ponds made reference to AFCD data. For areas without data from AFCD, EIA ecological survey data was used.

^ Any discrepancies between total and sums of individual numbers listed therein are due to rounding.

Note:

Indirect impact zones for the species were determined based on field survey data and analysis undertaken for the approved EIA reports (e.g. LMC Spurline, LMC Loop and FLW Development)

[1] Indirect impact zones for low-rise development: 0-20m (EZ) and 20-100m (RDZ) ; mid-to high-rise development (tall buildings/other elevated structures >+35mPD): 0-100m (EZ) and 100-400m (RDZ)

[2] Indirect impact zones for low-rise development: 0-20m (EZ) and 20-30m (RDZ) ; mid-to high-rise development (tall buildings/other elevated structures >+35mPD): 0-100m (EZ) and 100-300m (RDZ)

[3] Indirect impact zones for low-rise development: 0-20m (EZ) and 20-30m (RDZ) ; mid-to high-rise development (tall buildings/other elevated structures >+35mPD): 0-50m (EZ) and 50-100m (RDZ)

[4] Indirect impact zones for low-rise development: 0-50m (EZ) and 50-100m (RDZ) ; mid-to high-rise development (tall buildings/other elevated structures >+35mPD): 0-100m (EZ) and 100-300m (RDZ)

Sample Calculations on Change in Functional Value

Existing functional value in SPS WCP

Land Status [1]	Peak Density (birds/ha) [2]	Area (ha)	Peak Abundance*	Functional Value*
Active/inactive/wired pond (to be converted to Ecologically Enhanced Fishpond) [3]	1.788	195.6	349.7	351.6
Abandoned / filled ponds (to be converted to Ecologically Enhanced Fishpond)	0.036	53.0	1.9	
Existing brownfield / filled ponds in RDZ (to be converted to Ecologically Enhanced Fishpond) [4]	0	5.1	0	

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.
[1] The type of ponds made reference to AFCD data.
[2] Peak monthly bird count data during dry season over 2021-22 from HKBWS, or EIA Survey Data for ponds with no data available from HKBWS.
[3] The bird scaring devices at wired ponds have no impact on the usage of this less disturbance sensitive species, therefore wired ponds are grouped as the same category of active/inactive ponds.
[4] Existing brownfield / filled ponds in RDZ of the Project (50% reduction in bird density) to be converted to Ecologically Enhanced Fishponds.

Little Egret
小白鷺

Functional value in SPS WCP after Enhancement

Pond Status	Peak Density (birds/ha)*	Area (ha)	Projected Peak Abundance*	Total Functional Value*
Ecologically Enhanced Fishponds [1]	2.593	248.6	644.6	649.2
Ecologically Enhanced Fishponds in RDZ [2]	0.894	5.1	4.6	

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.
[1] Restoring all ponds to active pond (i.e. density = 1.788); with 45% enhancement by conversion into ecologically enhanced fishpond (1.788 x 1.45 = 2.593).
[2] Existing brownfield / filled ponds in RDZ to be converted to Ecologically Enhanced Fishponds. (density of active fishpond is adopted, i.e. 1.788); with 50% reduction in bird density for active pond within RDZ (1.788 x 0.5= 0.894).

Loss in Functional Value in Impacted Area

- 93.2

Gain in functional value

+297.6

Positive Overall Changes in Functional Value

+ 204.4

Sample Calculations on Change in Functional Value

Existing functional value in SPS WCP

Land Status [1]	Peak Density (birds/ha) [2]	Area (ha)	Peak Abundance*	Functional Value*
Active/inactive/wired pond (to be converted to Ecologically Enhanced Fishpond) [3]	0.742	195.6	145.1	158.4
Abandoned / filled ponds (to be converted to Ecologically Enhanced Fishpond)	0.250	53.0	13.3	
Existing brownfield / filled ponds in RDZ (to be converted to Ecologically Enhanced Fishpond) [4]	0	5.1	0	

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.

[1] The type of ponds made reference to AFCD data.

[2] Peak monthly bird count data during dry season over 2021-22 from HKBWS, or EIA Survey Data for ponds with no data available from HKBWS.

[3] The bird scaring devices at wired ponds have no impact on the usage of this less disturbance sensitive species, therefore wired ponds are grouped as the same category of active/inactive ponds.

[4] Existing brownfield / filled ponds in RDZ of the Project (50% reduction in bird density) to be converted to Ecologically Enhanced Fishponds.

Chinese Pond Heron
池鷺

Functional value in SPS WCP after Enhancement

Pond Status	Peak Density (birds/ha)*	Area (ha)	Projected Peak Abundance*	Total Functional Value*
Ecologically Enhanced Fishponds [1]	1.076	248.6	267.5	269.4
Ecologically Enhanced Fishponds in RDZ [2]	0.371	5.1	1.9	

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.

[1] Restoring all ponds to active pond (i.e. density = 0.742); with 45% enhancement by conversion into ecologically enhanced fishpond (0.742 x 1.45 = 1.076).

[2] Existing brownfield / filled ponds in RDZ to be converted to Ecologically Enhanced Fishponds.(density of active fishpond is adopted, i.e. 0.742); with 50% reduction in bird density for active pond within RDZ (0.742 x 0.5= 0.371)

Loss in Functional Value in Impacted Area

- 61.6

Gain in functional value

+111.0

Positive Overall Changes in Functional Value

+ 49.4

Sample Calculations on Change in Functional Value

Existing functional value in SPS WCP

Land Status [1]	Peak Density (birds/ha) [2]	Area (ha)	Peak Abundance*	Functional Value*
Active/inactive pond (to be converted to Ecologically Enhanced Fishpond)	0.146	148.6	21.7	21.7
Abandoned / filled / wired ponds (to be converted to Ecologically Enhanced Fishpond)	0	100.0	0	
Existing brownfield / filled ponds in RDZ (to be converted to Ecologically Enhanced Fishpond) [3]	0	5.1	0	

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.
[1] The type of ponds made reference to AFCD data.
[2] Peak monthly bird count data during dry season over 2021-22 from HKBWS, or EIA Survey Data for ponds with no data available from HKBWS.
[3] Existing brownfield / filled ponds in RDZ of the Project (50% reduction in bird density) to be converted to Ecologically Enhanced Fishponds.

Functional value in SPS WCP after Enhancement

Pond Status	Peak Density (birds/ha)*	Area (ha)	Projected Peak Abundance*	Total Functional Value*
Ecologically Enhanced Fishponds [1]	0.212	248.6	52.7	53.1
Ecologically Enhanced Fishponds in RDZ [2]	0.073	5.1	0.4	

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.
[1] Restoring all ponds to active pond (i.e. density = 0.146); with 45% enhancement by conversion into ecologically enhanced fishpond (0.146 x 1.45 = 0.212).
[2] Existing brownfield / filled ponds in RDZ to be converted to Ecologically Enhanced Fishponds.(density of active fishpond is adopted, i.e. 0.146); with 50% reduction in bird density for active pond within RDZ (0.146 x 0.5= 0.073)

Cattle Egret
牛背鷺

Loss in Functional Value in Impacted Area
-28.6

Gain in functional value
+ 31.3

Positive Overall Changes
in Functional Value
+ 2.7

Non-fish-eating avifauna species will also be benefited by the 35ha Enhanced Freshwater Wetland Habitats

Sample Calculations on Change in Functional Value

Existing functional value in SPS WCP

Land Status [1]	Peak Density (birds/ha) [2]	Area (ha)	Peak Abundance*	Functional Value*
Active/inactive pond (to be converted to Ecologically Enhanced Fishpond)	0.362	148.6	53.7	53.7
Abandoned / filled / wired ponds (to be converted to Ecologically Enhanced Fishpond)	0	100.0	0	
Existing brownfield / filled ponds in RDZ (to be converted to Ecologically Enhanced Fishpond) [3]	0	5.1	0	

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.
[1] The type of ponds made reference to AFCD data.
[2] Peak monthly bird count data during dry season over 2021-22 from HKBWS, or EIA Survey Data for ponds with no data available from HKBWS.
[3] Existing brownfield / filled ponds in RDZ of the Project (50% reduction in bird density) to be converted to Ecologically Enhanced Fishponds.

Functional value in SPS WCP after Enhancement

Pond Status	Peak Density (birds/ha)*	Area (ha)	Projected Peak Abundance*	Total Functional Value*
Ecologically Enhanced Fishponds [1]	0.524	248.6	130.3	131.2
Ecologically Enhanced Fishponds in RDZ [2]	0.181	5.1	0.9	

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.
[1] Restoring all ponds to active pond (i.e. density = 0.362); with 45% enhancement by conversion into ecologically enhanced fishpond (0.362 x 1.45 = 0.524).
[2] Existing brownfield / filled ponds in RDZ to be converted to Ecologically Enhanced Fishponds.(density of active fishpond is adopted, i.e. 0.362); with 50% reduction in bird density for active pond within RDZ (0.362 x 0.5= 0.181)

Eurasian Teal
綠翅鴨

Loss in Functional Value in Impacted Area

-27.3

Gain in functional value

+77.5

Positive Overall Changes in Functional Value

+50.2

Non-fish-eating avifauna species will also be benefited by the 35ha Enhanced Freshwater Wetland Habitats

Supplementary Information (iii)

Sensitivity Analysis for Peak Density of Black-faced Spoonbill

Sensitivity Analysis for Black-faced Spoonbill

Black-faced Spoonbill
黑臉琵鷺

- No Black-faced Spoonbill recorded in **abandoned ponds** with reference to monthly waterbird count data during dry season 2021-2022 (submitted by HKBWS to AFCD, under Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme)
- Based on review of 5-year bird count data (2017/18 – 2021/22), peak count of only **2 Black-faced Spoonbill** had been recorded in the abandoned ponds

Sensitivity Analysis to include 2 Black-faced Spoonbill in abandoned ponds :

Existing functional value in SPS WCP

Land Status [1]	Area (ha)		Peak Density (birds/ha)	Functional Value*
Active/inactive pond (to be converted to EEF)	148.6	x	0.423 [2]	64.9
Abandoned / filled / wired ponds (to be converted to EEF)	100.0	x	**0.020 #**	
Existing brownfield / filled ponds in RDZ (to be converted to EEF) [3]	5.1	x	0	

	Loss in Functional Value in Impacted Area	Enhancement Area in the SPS WCP			Overall Changes in Functional Value
		Existing Functional Value	Functional Value after Enhancement	Gain in Functional Value After Enhancement	
Assessment in EIA Report	↓ 14.5	62.9	153.6	↑ 90.7	+ 76.2
Sensitivity Analysis		**64.9**		↑ **88.7**	+ **74.2**

已荒置魚塘
Abandoned Pond

\# Peak density of Black-faced Spoonbill recorded in the ponds classified as abandoned ponds by AFCD (2021) in the past 5 years (2017/18 – 2021/22) adopted for sensitivity analysis.

* Any discrepancies between total and sums of individual numbers listed therein are due to rounding.

[1] The type of ponds made reference to AFCD data.

[2] Peak monthly bird count data during dry season over 2021-22 from HKBWS, or EIA Survey Data for ponds with no data available from HKBWS.

[3] Existing brownfield / filled ponds in RDZ of the Project (50% reduction in bird density) to be converted to Ecologically Enhanced Fishponds.