Annex B

EIA report on "Comprehensive Development and Wetland Protection near Yau Mei San Tsuen"

Summary of issues discussed by the Environmental Impact Assessment Subcommittee at the meeting on 18 May 2015

The Environmental Impact Assessment Subcommittee (EIASC) discussed the EIA report on "Comprehensive Development and Wetland Protection near Yau Mei San Tsuen" at the meeting on 18 May 2015. The issues discussed were summarized below.

Wetland Reservation Area (WRA)

2. Having regard that the project site was zoned "Other Specified Uses (Comprehensive Development and Wetland Protection Area)" with the existing continuous and contiguous ponds within the zone to be protected and conserved, Members first enlisted confirmation from the project proponent that they would carry out the conservation work before commencement of the development. The project proponent reiterated that the environmental benefits to be achieved from the project would include the design and active management of the proposed WRA in the site, which in turn would contribute to enhancing the wildlife value and microhabitat diversity of the Deep Bay wetland system. The adjacent landscape would also be enhanced through the proposed WRA, planting of new trees throughout the site, and screen buffer planting around the residential development.

3. Suggestions were made by Members to widen the ecological corridor, e.g. setting back the residential development in the northeastern part of the site, with a view to improving the ecological connection between Ngau Tam Mei Drainage Channel and the Deep Bay wetland system. The proposed ecological corridor was to maintain the connectivity between ponds in the WRA and enhance the microhabitat diversity of the Deep Bay wetland system. The project proponent replied that the direct habitat linkage within the site was 9-19 m wide which was considered adequate for effective fauna and hydrological connections, with the ponds outside and adjacent to the site also forming part of the bird flight paths. They assured that the development would not result in any narrowing of the corridor nor pond loss in the site. In fact, the whole area would be kept intact as they were within the Deep Bay's Wetland Buffer Area and Wetland Conservation Area. Any development would be subject to town planning control processes before any works could commence. Having said that, they were

open to the widening suggestion and would take into account Members' comments as well as feedback from the public when working on the detailed design of the project.

4. Members were concerned that the proposed WRA might fail to meet the flight patterns and habitat uses of water birds, and that the target bird species to be attracted to the area might be disturbed by human activities. They pointed out that marshland all along had not been the most important habitat in the wetland mosaic of the Deep Bay area, and the Hong Kong Bird Watching Society in managing the neighbouring wetlands would arrange seasonal draining of the ponds to attract such smaller bird species like Egrets and Chinese Pond Herons. Given the overall wetland habitats in the Deep Bay area, Members considered it more appropriate to designate pond use in place of marshland in the WRA.

5. The project proponent said that they had conducted detailed study and designed the habitats specifically targeted for smaller wetland bird species such as the two smaller ardeids, Little Egrets and Chinese Pond Herons, as well as Greater Painted-snipe and Red-throated Pipit which were known to have a relatively high tolerance to human disturbance. The larger bird species like Black-faced Spoonbills and Grey Herons were not targeted as there were no suitable habitats for them in the site. Regarding the balance between ponds and marshland, the project proponent pointed out that since the project involved a relatively small wetland area of 3.8 ha, the contribution of providing a habitat for large water birds using ponds would not be significant as compared with that for species like Greater Painted-snipe which foraged on marshland. They explained that draining down ponds to attract large water birds worked fine for the larger areas like Fung Lok Wai, Lok Ma Chau and Mai Po Nature Reserve. However, the attraction period would only be 1-2 weeks in a year for a relatively small wetland site. They shared their experience in the Wo Shang Wai project that drained ponds served mainly as the feeding ground for water birds whereas man-made wetlands were used for roosting and breeding purposes. The Wo Shang Wai site was noted to have attracted some species not common in the Ramsar site.

6. The project proponent also advised that it was not practical to work for regular drain-down of only a few ponds in the site. Seasonal draining and planting would take time and there would be a high risk of not meeting the habitat requirements for other target species. Basic habitat management would include periodic trimming of vegetation in the marshland and removal of invasive species, keeping the ponds wet throughout the year and careful planting of reed beds. They would continue to invite green groups to give advice on measures to enhance the target species through their Continuous Public Involvement initiatives. Further, regular Environmental Monitoring and Audit (EM&A) reports would be submitted to the Environmental

Protection Department (EPD) and the Agriculture, Fisheries and Conservation Department (AFCD) similar to the arrangement of the Wo Shang Wai project.

7. As regards the calculation of wetland gain/loss in the EIA report, Members acknowledged that while the agricultural land on the project site had been abandoned for years and their ecological value depreciated due to lack of management, they had reservation on the conclusion that the land thus had become unimportant functionally and their conservation value dismissed. They said that survey finding showed that 15 bird species of conservation interest had been identified in the agricultural land and this habitat was assessed of low-to-moderate ecological significance. However, only two species found in this habitat, i.e. Greater Painted-snipe and Red-throat Pipit had been picked as target species of the WRA which would provide mitigation for these species of conservation interest due to loss of agricultural land for the residential development. In this context, the project proponent should consider a comprehensive mitigation plan for the loss of agricultural land even though the land was assessed to be of relatively low-to-moderate ecological significance.

8. The project proponent explained that in designating the wetland area, they had to take into account the ecological function which the land had performed as well as its current physical status. The key was the fauna and flora found in the agricultural land, and they would mitigate habitat loss for those species of conservation interest in the WRA. On this basis, species which occurred in the site more frequently or were more habitat-selective would be accorded higher priority in the impact evaluation and mitigation proposals. Marshland habitat was planned as it was the preferred habitat of the target species.

9. Regarding habitat development in the project site, Members suggested wet cultivated fields with reference to the Long Valley experience where valuable feeding grounds had been provided for a range of wetland birds to mitigate the loss of agricultural land. Suggestion was also made on draining the ponds to attract more water bird species as they were inter-connected to the adjacent ponds and the greater Deep Bay wetland system. The project proponent said that they had an open mind and would take into account Members' suggestion when working on the detailed design.

10. In response to Members' concern on the future funding and management of the proposed WRA, the project proponent confirmed that they would be responsible for the planning, design, construction, operation, management and monitoring of the WRA proposal meeting the requirements as specified in the approved EIA. A draft management plan would be submitted to AFCD for approval. Comments from ACE would be incorporated. As regards the funding issue, they would follow the Wo Shang

Wai model, namely (i) construct the WRA as part of the development; (ii) take sole responsibility for managing the WRA until a successor could be found to the satisfaction of EPD in consultation with ACE; (iii) appoint a conservation agent to manage the area subject to the approval of the Government; and (iv) provide a lump sum contribution to a statutory trust fund like the Environment Conservation Fund independent of the EIAO requirements.

11. In response to Members' concern, the project proponent confirmed that the construction phase barriers were intended to block off mammals and reptiles wandering into the construction site leading to possible injury or otherwise. However, the operational phase fences would ensure sufficient gaps underneath the structures for wildlife movements. Also, existing fruit bearing trees would be preserved as far as practicable. Personal entry to the WRA would also be controlled and monitored. They would also work to identify and remove exotic invasive species.

Water quality and sewerage impact

12. Members asked about the peripheral drainage channel for surface runoff during the construction phase and the standard requirements on the quality of the water to be discharged into Ngau Tam Mei Drainage Channel, as well as any contingency plan in case of failure of the drainage system. As regards sewage treatment, Members enquired about the safety margin for the design capacity of the interim sewage treatment plant and the water quality impact in case of delay in the public sewage reception facility. Suggestions were also made to put in place an event and action plan with action and limit levels for water quality monitoring, to maintain the temporary sewage treatment plan beyond operation of the public sewage facility, as well as to consider recycling treated effluent for both portable and non-portable uses.

13. The project proponent advised that a peak factor of 7 was adopted for the sewerage design to cater for variations in flow, and there would be regular monitoring on the treated water before discharge. A balancing tank with a capacity for holding sewage for three days was also planned as a buffer to cater for unexpected increase in flow. They would review the redundancy provision and adopt a slightly higher percentage than the normal 10% subject to detailed design. Independent professionals (Environmental Team and Independent Checker) would also be engaged to review the mitigation measures in compliance with the Water Pollution Control Ordinance requirements and the Environmental Permit (EP) conditions. They also said that the interim sewage treatment plant had been so designed with standards meeting that for permanent treatment. They would engage residents after population in-take on the recycling strategy and their financial support for the purpose.

Landscape and visual and noise impacts

14. Members' questions were focused on the design and functional use of staggering the temporary noise barriers, provision of screen buffer planting, as well as whether a Registered Landscape Architect would be appointed to monitor and audit the landscape and visual design during the construction and operation stages and how the landscaping design would respond to the ecological and biodiversity need of the area.

15. The project proponent in reply said that for safety consideration, lightweight noise barriers with steel frame on concrete block and green plastic panels would be used on-site. Most of these barriers would be transported from other sites for re-use. They would be installed along the site boundary during construction as a noise mitigation measure. The barriers were about 3-6 m high with a staggered alignment subject to the distance between the construction site and the noise sensitive receivers in the neighbourhood principally targeted at Fairview Park. Quiet type powered mechanical equipment such as flight auger would be used in place of percussive piling. Moveable noise barriers would also be erected during construction and included in the EM&A to help alleviate the impact to noise sensitive receivers. The project proponent also took note the suggestion that these barriers could be used to encircle the powered mechanical equipment to contain construction noise so generated. While the barriers were already made of lightweight materials with chromatic treatment to soften the visual impact and avoid bird strike, they would work to enhance the design to further reduce the visual impact.

16. As regards landscape and visual impact, the project proponent advised that there would be landscape and buffer planting for the overall design in the site. While existing fruit bearing trees would be preserved as far as practicable, new planting would be specifically selected to respond to context and the existing and proposed landscape regimes within and adjacent to the site. A Registered Land Architect would be appointed to conduct on-site supervision during construction and to subsequently audit works after the completion of the project. The landscape plans would be provided to the relevant authorities for approval in due course.

Traffic and air quality impacts

17. Members asked about the source of traffic generation rate for the assessment and commented that the traffic generation estimate was on the low side. They were also concerned about the traffic capacity of Yau Pok Road as reflected in the public comment. The project proponent advised that the trip generation rate was calculated

based on the Trip Rate Table and previous traffic data record DR431 issued by the Transport Department. The mean level of the trip rate was adopted for the estimation and the assessment result was deemed appropriate. It was a standard practice for consultants to present the estimation on the peak hour traffic flow in terms of the traffic impact and generation in the morning or evening peak to the Transport Department for reference. They stressed that the rate was an average pattern, and the peak hour traffic did not imply that all houses would generate vehicles during the peak hour.

18. In respect of vehicular access to the project site, the project proponent advised that it would be via the bridge across Ngau Tam Mei Channel to Kam Pok Road and not Yau Pok Road. Based on the traffic assessment of the project, the traffic flow generated by the project during the construction and operation phase as well as that from the approved development works nearby could be absorbed by Kam Pok Road. They would conduct Swept Path Analysis by computer modelling including assessment on emergency vehicle access between Kam Pok Road and Yau Pok Road and present their findings to the Transport Department for consideration.

19. In reply to Members' concern over air quality impact, the project proponent confirmed that there would be no adverse impact anticipated during the construction phase. They assured that adequate mitigation measures had been planned regarding the construction dust impact on the immediate residential developments surrounding the project site such as Fairview Park and existing village houses near Yau Mei San Tsuen.

20. In response to Members' suggestion on the inclusion of sustainable green building design such as use of solar panels as a source of renewable energy and waste reduction measures in the development, the project proponent welcomed the idea and would introduce the "green community" concept in the project in consultation with relevant stakeholders.

Recommendation to ACE

21. Having regard to the findings and recommendations of the EIA report and the information provided by the project proponent, Members agreed to recommend to ACE that the EIA report could be endorsed with the following proposed conditions and recommendations –

Conditions of endorsement

Wetland Restoration Area (WRA)

(a) The Project Proponent should be fully responsible for the design, construction, and long term management and monitoring of the WRA.

(b) The Project Proponent should review the development layout and widen the ecological corridor with a view to maintaining adequate ecological connection between Ngau Tam Mei Drainage Channel and the Deep Bay wetland system.

(c) The Project Proponent should, without compromising the ecological function of the WRA, preserve the existing fruit bearing trees within the WRA site as far as practicable.

(d) The Project Proponent should, in consultation with the Agriculture, Fisheries and Conservation Department (AFCD), update the Wetland Restoration Plan setting out the details of (a) to (c) above, and (f), (i) and (l) below for submission to the Environmental Protection Department (EPD) for approval before commencement of construction works.

Boundary Barriers, Fencing and Planting

(e) The Project Proponent should make use of trees principally of native species for screen and buffer planting for the operation phase of the project.

(f) The Project Proponent should design the boundary barriers and fencing with the aim to avoid hindrance to wildlife movement between the WRA and the Deep Bay wetland system, for both the construction and operation phase of the project.

(g) The Project Proponent should make best use of moveable noise barriers close to the noise sources of construction activities with a view to minimizing the extent and hence the visual impacts of boundary noise barriers during construction of the project.

(h) The Project Proponent should prepare a Landscape and Visual implementation plan setting out the details of (e) to (g) to EPD for approval before commencement of construction works.

Environmental Monitoring and Audit (EM&A) Programme

(i) The Project Proponent should carry out baseline ecological monitoring for target species and other wetland-dependent fauna within the Project Area and Assessment Area as defined in the EIA report, during the 12 months prior to commencement of construction works. The Project Proponent should carry out ecological monitoring in accordance with the Wetland Restoration Plan throughout the construction and operation phase of the project. The monitoring results should be reported in the Baseline Monitoring Report and the regular EM&A reports for submission to EPD and will be made available to ACE and its

members for information.

(j) The Project Proponent should prepare and implement an Emergency Response Plan (ERP) to control water pollution due to site runoff during inclement weather. The plan shall include but not be limited to measures of the Best Management Practices as identified in the EIA report and an event and action plan with action and limit levels for water quality monitoring. The ERP shall be submitted in an updated EM&A manual to EPD for approval prior to commencement of construction works.

Recommendations

(k) The Project Proponent should consider recycling the treated effluent from the sewage treatment plant for non-portable uses on a long term basis, as well as the possibility of extending the interim sewage treatment facility employing Membrane Bioreactor and Reverse Osmosis technologies into a permanent arrangement on top of the discharge into the public sewage system.

(l) The Project Proponent should consider the feasibility of incorporating wet cultivated fields and/or expanding the area of ponds in the WRA design and the best management practices for enhancing the ecological function of the WRA during operation such as draining down the ponds at suitable time intervals. Invasive alien species should be regularly identified and removed from the WRA.

(m) The Project Proponent should consider incorporating renewable energy installations and waste reduction measures for the project.

22. The meeting agreed that the project proponent team would not be required to attend the full Council meeting on the report.

EIA Subcommittee Secretariat
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