

**EIA report on
“Drainage Improvement Works Near Four Villages in Yuen Long – Sung
Shan New Village, Tai Wo, Lin Fa Tei and Ha Che”**

**Relevant Extract of the draft minutes of
the Environmental Impact Assessment Subcommittee meeting
held on 19 April 2021**

Question-and-Answer Session (Open Session)

Action

Freshwater Crab Translocation Plan

1. A Member enquired about the details of the translocation plan and the evaluation of the translocation for the freshwater crabs. Mr Poon Sui-shun advised that the project proponent would engage qualified ecologist(s) to devise a comprehensive translocation plan for the freshwater crabs. Ms Wong Wing-ye added that site surveys would be carried out to confirm the locations of the freshwater crabs within the project sites before construction and identify suitable receptor sites for them. Ms Wong advised that simultaneous arrangements would be made to capture and release the freshwater crabs to the receptor sites by qualified experts. Post-translocation monitoring would also be carried out to evaluate the success of the translocation. Dr Wong Yim-wah supplemented that the freshwater crabs might be captured manually or by tools such as traps or cages. In response to the Chairperson and a Member's question on the selection of receptor sites, Dr Wong Yim-wah advised that the receptor sites might be located at the upstream of the proposed channels to avoid disturbances and potential impacts arising from the construction. The Freshwater Crab Translocation Plan would provide details of the identification / selection of receptor sites and methodology of the translocation.

2. A Member suggested that baseline ecological survey with unit-catch-per-effort should be conducted at the proposed receptor sites before the translocation to obtain the information of the freshwater crabs which survive at the receptor sites after the translocation. Dr Wong Yim-wah explained that the frequency and scope of the ecological survey would be adjusted with a view to capturing the crabs within the project sites as well as evaluating the result after the translocation. He added that literature review would be conducted to identify suitable habitats of the freshwater crabs.

3. A Member considered that local ecologists or experts on freshwater crabs might not be available and was concerned about the personnel appointed to carry out

or oversee the translocation. Mr Poon Sui-shun advised that the project proponent would liaise with local tertiary institutions in identifying suitable experts. He also welcomed any nominations from Members on local experts with relevant experiences or background. Dr Wong Yim-wah supplemented that DSD would consult AFCD on the appointment of experts with relevant experiences.

4. A Member shared his experiences relating to translocation exercises and stressed that translocation of freshwater crabs should be carried out by qualified experts with relevant qualifications and experiences as endorsed by AFCD. Another Member agreed with the Member and suggested the project proponent could engage expert from overseas if it was unable to identify suitable local experts. Mr Poon Sui-shun thanked the Member's suggestion and advised that the requirement on the relevant qualifications or experiences of the personnel appointed to conduct the translocation exercise could be specified in the tender document.

5. In response to two Members' enquiry regarding past experiences on translocation of freshwater crabs, Mr Poon Sui-shun shared his experiences relating to fish translocation in rivers and the fish species were found along the rivers after the completion of projects.

6. The Chairperson considered that the project proponent should devise a contingency plan in case of failure of the translocation. Apart from translocation, a Member enquired if there were other alternatives such as re-introduction or returning the freshwater crabs to the original watercourses after the completion of construction works. Mr Poon Sui-shun advised that as it would take at least two years to complete the construction works, temporary accommodation might not be favourable to the freshwater crabs. On the contrary, identification of suitable receptor sites and conduction of regular monitoring and review should be more appropriate.

Habitat Creation and Management Plan

7. In addition to the adoption of stone facing on the channel walls, a Member suggested that drilling holes on the channel walls which provide habitats for small wildlife might be considered. Mr Poon Sui-shun welcomed this suggestion and advised that the final design of the channel walls would be subjected to consultation with relevant departments and experts.

8. To restore and maintain the biodiversity and ecological functions of the watercourses, a Member suggested that the design of the channels should make use of different bedding/vertical-surfacing materials to provide diversified micro-habitats.

Mr Poon Sui-shun informed that the channel bedding would be composed of the original natural substrate and a mix of particles of different grain size to create pools, riffles and water turbulence, and hence would create diversified micro-habitats. Dr Wong Yim-wah added that the detailed design of the green channels and the mitigation measures would be set out in the Habitat Creation and Management Plan (HCMP).

9. In response to a Member's question on measures to avoid damages to the channel bedding after heavy rainfalls/extreme weather, Mr Poon Sui-shun advised that rocks would be placed on the channels to prevent the natural substrate from being washed away under adverse weather conditions.

10. Two Members were concerned about the potential disturbance/disruption to the ecosystems of the green channels due to adverse weather conditions. Mr Poon Sui-shun responded that the detailed design of the green channels and the maintenance plan would be set out in the HCMP to ensure the created habitats could withstand adverse weather conditions.

11. A Member suggested the project proponent conducting ecological surveys of the watercourses before and after construction to evaluate the effectiveness of the proposed mitigation measures in restoring or enhancing ecological functions. Mr Poon Sui-shun said that there would be a baseline ecological survey as well as monitoring before and after construction. Dr Wong Yim-wah supplemented that baseline survey had been conducted to record the current conditions of the project sites. Monitoring during and after the construction would also be carried out to examine the species assemblage for reviewing the ecological functions.

12. A Member suggested the project proponent monitoring the results of the mitigation measures after completion of the project for future references. He also suggested placing ropes along the channel walls as escape ramps. Another Member pointed out that dragonfly was an important taxonomy of the freshwater ecology and shared with the meeting some recommendations such as creation of different micro-habitats for dragonflies, e.g. slow-flowing and fast flowing currents for different gomphids, provision of emerged plants, etc. He suggested the project proponent devise plans to provide habitats suitable for dragonflies. Mr Poon Sui-shun said that the project proponent would consider their recommendations in the HCMP.

13. With reference to a public comment, the Chairperson said that the use of wire mesh along the proposed railings might trap or injure the wild animals and suggested the use of wildlife-friendly barrier such as wooden plate. Mr Poon Sui-shun replied that the use of wildlife-friendly barrier would be considered in the HCMP.

14. In response to a Member's question on conducting seven-month ecological field survey instead of 12-month, Ms Wong Wing-ye advised that the seven-month survey, covering both dry and wet seasons, were conducted in accordance with the requirement set out in the EIA Study Brief. Dr Wong Yim-wah supplemented that it was set out in the Technical Memorandum on EIA Process (TM) issued under Environmental Impact Assessment Ordinance (EIAO) that the duration of ecological field survey would depend on different wildlife groups to be surveyed in the project sites.

Plantations and Landscape

15. In response to a Member's enquiry regarding the maintenance of the plantations along the channel banks, Mr Poon Sui-shun advised that there would be compensatory planting for any trees felled due to the project, with not less than 1:1 ratio. He said that DSD should be responsible for the routine management and maintenance of the plantations along the channels after the completion of the project.

16. Highlighting the commercial value of *Aquilaria sinensis*, a Member questioned whether there were any measures to protect the *Aquilaria sinensis* found near the project site. Mr Poon Sui-shun advised that one seedling of *Aquilaria sinensis* was found near the project site of Sung Shan New Village and it would be retained and protected during the project.

17. Drawing reference from "Sponge City" concept adopted in other countries, a Member suggested creating wetland or wildlife corridor along the channel banks if possible, which would serve as buffer zone and filter the water before entering the green channels. Mr Poon Sui-shun advised that tree and shrubs could be planted along the channel banks for providing shelters and filtering water from overland flow. He said that the species to be planted would be considered in the design stage of the project.

Ecologically Important Stream

18. A Member suggested conducting ecological survey or monitoring at the Cheung Po Ecologically Important Stream (EIS) before, during and after construction to ensure that the EIS would not be adversely affected. Mr Poon Sui-shun advised that monitoring check points would be set up at the downstream of the Cheung Po EIS to monitor any environmental impacts on the EIS. Dr Wong Yim-wah supplemented that given the EIS was 50 metres away from project site, he considered that the

mitigation measures and good site practices should be sufficient to avoid adverse impact on the EIS.

Cultural Heritage

19. In response to a Member's enquiry about the locations for monitoring the three graded historic buildings near the project sites, Mr Poon Sui-shun advised that they would explore and identify appropriate locations near the historic buildings for monitoring. He added that mechanical equipment with minimum vibration would be deployed and monitoring on the vibration, settlement and tilting would be carried out to avoid potential damages to the cultural heritage.

Public education

20. To enhance public education on biodiversity and nature conservation, two Members suggested incorporating educational messages relating to ecological findings and mitigation measures as well as improvement to drainage system on the display boards on-site and /or in the vicinity of the site boundaries. Another Member was concerned about the safety issues of attracting visitors to the channels and suggested with the support of a Member to publish the information on relevant websites.

21. While explaining that the proposed channels were remote and not designed for educational purposes, Mr Poon Sui-shun welcomed the suggestions and advised that educational elements of the channels would be displayed through other channels such as the designated website of DSD.

Use of Electric-Powered Equipment

22. A Member suggested the project proponent to deploy electric-powered equipment to mitigate potential negative air and noise impact arising from the construction projects as well as contribute to carbon neutrality. Mr Poon Sui-shun confirmed that appropriate equipment including electric-powered equipment would be deployed to minimise potential air and noise impact of the project.

Drainage Capacity

23. A Member enquired about the discharge capacity of the channels after the drainage improvement works and was concerned about the adverse weather conditions affected by the global climate changes. Mr Poon Sui-shun replied that the channels

would be able to meet current flood protection standard after the improvement works, and the impact of global climate changes was taken into consideration in designing the project.

Existing Infrastructure

24. With reference to a public comment, the Chairperson pointed out that the project proponent should be careful to consider the re-provision of any existing infrastructure affected by the proposed works on a like-for-like basis. Mr Poon Sui-shun confirmed that the re-provision of infrastructure would be arranged in the same location on a like-for-like basis and thus there would not be material change in the use of the existing infrastructure after the completion of the project.

Conclusion

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

(The presentation team left the meeting at this juncture.)

Internal Discussion Session (Closed-door session)

26. The Chairperson advised that the EIA Subcommittee should make recommendations to ACE on the EIA report with the following consideration:

- (i) endorse the EIA report without condition; or
- (ii) endorse the EIA report with conditions and / or recommendations; or
- (iii) defer the decision to the full Council for further consideration, where issues or reasons for not reaching a consensus or issues to be further considered by the full Council would need to be highlighted; or
- (iv) reject the EIA report and inform the project proponent of the right to go to the full Council.

27. The Chairperson proposed and Members agreed to endorse the EIA report with conditions and recommendations.

Freshwater Crab Translocation Plan

28. A Member proposed, with the support of another Member, the project proponent should be required to appoint ecologist(s) with relevant qualifications and

experiences to carry out the proposed translocation of freshwater crabs in consultation with AFCD. The Chairman suggested and Members agreed to impose a condition to require the project proponent to devise a freshwater crab translocation plan for the affected endemic freshwater crabs, which should include details of the pre-construction survey at the project sites and the receptor site(s), translocation methodology, identification of location(s) and suitability of the receptor site(s), appointment of local or overseas ecologist(s) with relevant qualifications and experiences to carry out the translocation, post-translocation monitoring programme as well as a contingency plan in case of failure of the translocation. The project proponent should consult the Director of Agriculture, Fisheries and Conservation (DAFC) on the plan prior to submission to the DEP for approval before commencement of construction of the project.

29. Mr Terence Tsang agreed with the proposed condition, but would defer to AFCD's consideration of the appropriate qualifications and experiences of the personnel appointed to carry out the translocation.

HCMP

30. A Member suggested that the project proponent should be required to devise a comprehensive HCMP with a view to enhancing the ecosystems of the watercourses. The Chairman proposed and Members supported that a condition should be imposed to require the project proponent to devise a HCMP by qualified ecologist(s), which should include detailed design on the channel, including but not limited to the use of different bedding/vertical-surfacing materials to create diversified micro-habitats, a monitoring programme as well as a contingency plan, with a view to restoring and maintaining the biodiversity and ecological functions of the watercourses, and to ensure the created habitats could withstand adverse weather conditions. The project proponent should consult the DAFC on the HCMP prior to submission to the DEP for approval before commencement of construction of the project.

Landscape Plan

31. A Member suggested that the project proponent should be required to adopt appropriate measures to facilitate the habitation of small wildlife along the channels and provide escape ramps to them. Another Member agreed and added that the project proponent should be required to incorporate landscape planting along the channel edges. Another Member supplemented that proper maintenance should be in place to upkeep the landscape planting. Mr Terence Tsang proposed that the planting requirement could be incorporated into the proposed condition in the HCMP

in consideration of the close relationship between the HCMP and the landscape planting.

32. Highlighting the significance and complexity of a landscape plan, the Chairman suggested with the support of Members that a separate condition be imposed to require the project proponent to devise a Landscape Plan which should incorporate the design of green channel and wildlife corridor with landscape planting along the channel edges with a view to enhancing habitat connectivity and revitalising the channels with visual and landscape benefits for public enjoyment. The project proponent should consult the relevant government departments on the Landscape Plan prior to submission to the DEP for approval before commencement of construction of the project.

Public Education

33. A Member suggested incorporating educational messages on the display boards of the site boundaries to promote the ecological enhancements of the project. Another Member supplemented that exhibition boards could be displayed at strategic locations with more pedestrians. A Member added that the project proponent could display the information on exhibition boards in village office nearby. Another Member shared that it would facilitate the public, in particular the academic sector, to learn more about ecology and conservation if project proponent could share the information on the environmental outcomes after the completion of EIA project. Mr Terence Tsang said that the Member's views echoed another Member's suggestion in the briefing on the Review of the EIA Guidance Notes on Ecological Impact Assessment held in December 2020. Mr Tsang shared that EPD planned to gather and publish relevant information on the environmental outcomes after the completion of EIA projects on the relevant websites.

34. The Chairman suggested with the support of Members to recommend the project proponent to publish the ecological enhancements and mitigation measures of the project on the relevant websites and on exhibition boards on-site and/or in the vicinity where possible such as village office with a view to enhancing environmental education.

Cheung Po EIS

35. A Member suggested and another Member agreed that regular inspection of the Cheung Po EIS during the construction should be conducted. Mr Terence Tsang responded that adverse impact on the EIS was unlikely having regard to the scale of

the project, the distance of the EIS from the project site as well as the precautionary measures in place. As routine environmental monitoring and audit would be carried out by the project proponent, he suggested recommending the project proponent to conduct inspection of the EIS after adverse weather conditions. The Member proposed and the meeting agreed to recommend the project proponent to monitor the water quality and environmental condition of the Cheung Po EIS to ensure that they would not be affected by the channel after adverse weather conditions.

Construction Equipment

36. A Member suggested the project proponent deploying electric-powered equipment or machinery as far as practicable to mitigate potential air and noise impact. Another Member concurred with the Member and added that the project proponent should be encouraged to use electric-powered equipment to tie in with the target of achieving carbon neutrality by 2050. The Chairman suggested and Members agreed to recommend the project proponent to deploy construction equipment with advanced technology such as electric-powered equipment as far as practicable with a view to minimising potential air and noise impact, preserving and protecting the graded historic buildings in the proximity of the work sites as well as contributing to the achievement of carbon neutrality.

Cultural Heritage

37. A Member considered that the mitigation measures for the cultural heritage near the construction site should be included in the project. She therefore suggested with the support of the meeting to recommend the project proponent take precautionary measures to avoid any potential damages to the graded historic buildings during the construction of the project.

38. There being no other comments from Members, the meeting agreed that the EIA report could be endorsed with three conditions and three recommendations. The project proponent team would not be required to attend the full Council meeting scheduled for 10 May 2021.

(Post-meeting notes: The list of proposed conditions and recommendations was circulated to Members for comments on 22 April 2021.)

**EIA Subcommittee Secretariat
May 2021**