

**EIA report on
“Improvement of Yuen Long Town Nullah (Town Centre Section)”**

**Relevant Extract of the draft minutes of
the Environmental Impact Assessment Subcommittee meeting
held on 15 June 2020**

Present:

Professor TAM Fung-ye, Nora, BBS, JP (Chairperson)

Ir MA Lee-tak, SBS (Deputy Chairman)

Ir Cary CHAN, JP

Ir Samantha KONG

Ms Julia LAU

Dr Michael LAU

Dr Winnie LAW

Professor Albert LEE

Professor Kenneth LEUNG, JP

Ir Professor Irene LO, JP

Dr SUNG Yik-hei

Mr Simon WONG, JP

Professor WONG Sze-chun, BBS, JP

Ms Becky LAM (Secretary)

Absent with Apologies:

Miss LAM Chung-yan

Ms Christina TANG

In Attendance:

Mr Owin FUNG	Deputy Director of Environmental Protection (3), Environmental Protection Department (EPD)
Mr Terence TSANG	Assistant Director (Environmental Assessment), EPD
Mr Stanley LAU	Principal Environmental Protection Officer (Strategic Assessment) (Acting), EPD
Mr Vincent LAU	Senior Environmental Protection Officer (Strategic Assessment) 3 (Acting), EPD
Mr Simon CHAN	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Ms Aidia CHAN	Senior Nature Conservation Officer (North) (Acting), AFCD
Dr Azaria WONG	Nature Conservation Officer (Yuen Long), AFCD
Miss Dora CHU	Executive Officer (CBD) 1, EPD
Miss Carman LEUNG	Executive Officer (CBD) 2, EPD

In Attendance for Item 3:

Project Proponent Team

Drainage Services Department

Mr Jimmy POON, Chief Engineer/Project Management

Mr Kenley KWOK, Senior Engineer/Project Management 2

Mr Calvin POON, Engineer/Project Management 10

Black & Veatch Hong Kong Limited

Mr Andy KWOK, Project Director

Ms Sylvia CHAN, Project Manager

Mr Manuel CHUA, Principal Environmental Scientist

Ecosystems Limited

Mr Vincent LAI, Ecological Specialist

Action

Item 3 : Discussion on EIA report on “Improvement of Yuen Long Town Nullah (Town Centre Section)”

(ACE-EIA Paper 2/2020)

Question-and-Answer Session (Open Session)

Ecological enhancement and beautification works

10. A Member enquired about the planning of beautification works that would be undertaken along the Yuen Long Town Nullah (YLTN). Drawing reference from his previous visits to several major nullahs in Korea, he considered that green and ecological-friendly elements should be integrated into the beautification works so as to create a more livable environment to the residents nearby.

11. Mr Jimmy Poon advised that in the implementation of large-scale drainage improvement projects, apart from enhancement of flood protection standard, DSD would embrace blue-green concept and promote water-friendly culture in the design in order to enhance biodiversity and minimise adverse impacts brought by climate change. He informed Members that the proposed beautification works of YLTN was under planning and a public consultation would be launched later this year to gauge the views of the relevant stakeholders including the local community and members of Yuen Long District Council (YLDC). Taking into account the public views, the beautification works would be taken forward under a separated EIA study namely “Yuen Long Barrage Scheme – Investigation, Design and Construction” (the Barrage Scheme).

12. Considering that the beautification works would be taken forward in a separated EIA study, a Member considered that the project proponent should make use of the opportunity to include ecological enhancement measures in the beautification of YLTN with a view to enhancing its ecological values. The Member, with the agreement of the Chairperson, was of the opinion that there might be a need to identify freshwater sources, such as treated effluent from Yuen Long Effluent Polishing Plant (YLEPP), to maintain the water flow especially during dry seasons. He suggested the project proponent make reference to the relevant project experience in Taiwan and Korea.

13. Mr Jimmy Poon assured Members that ecological enhancement measures would be included as part of the beautification and revitalisation work in the future EIA study with the aim of enhancing the biodiversity of YLTN and promoting water-friendly culture. Mr Andy Kwok supplemented that apart from beautification, measures to ensure water sources, improve water quality and enhance flood prevention would be explored. He explained that the need to transfer water from Hangang to the Cheonggyecheon River in Seoul to maintain the water flow was due to inadequate clean water source, whereas a dry weather flow (DWF) of about 13,000 cubic metres (m³) per day from Kung Um Road Nullah would be maintained in YLTN, which had better water quality than the treated effluent from YLEPP. DSD would continue to explore alternative clean water sources for ecological enhancement in YLTN under the future Barrage Scheme.

14. Addressing the Chairperson's enquiry on the reason for not considering the conveyance of treated effluent from YLEPP to YLTN under this project, Mr Andy Kwok explained that the conveyance of treated effluent from YLEPP to YLTN would be one of the options to be explored for maintaining the water flow. Having pointed out that conveying treated effluent from YLEPP to YLTN would have additional cost, energy and environmental implications, Mr Kwok advised that a detailed feasibility study would be undertaken to assess the pros and cons of possible options under the future Barrage Scheme.

15. In reply to a Member's question on the projected timeline for the design of beautification works for YLTN, Mr Jimmy Poon advised that public consultation for the Barrage Scheme would be conducted in the latter half of 2020, and it was anticipated that a preliminary design would be drawn up after the public consultation exercise.

16. Considering that the ecological enhancement and beautification works would be included in a separate EIA study, the Chairperson reminded Members that the discussion in this meeting should focus on the EIA report under deliberation. She and a Member enquired whether any advance work could be undertaken under this project to achieve synergy and optimise the revitalisation works to be conducted under the Barrage Scheme.

17. Mr Jimmy Poon replied that a holistic approach had been adopted to plan the ecological enhancement, beautification and flood control of YLTN through the

two interrelated projects i.e. this project and the Barrage Scheme. With the improvement of water quality through the construction of the dry weather flow interception system (DWFIS), this proposed project would provide the prerequisites for the beautification works and ecological enhancement of YLTN to be carried out under the Barrage Scheme. He agreed with a Member that maintenance of water flow was an important issue that should be explored under the Barrage Scheme.

18. In reply to a Member's question on the types of living aquatic species found in the YLTN, Mr Vincent Lai advised that only fish species belonging to the genus *Tilapia* were found in YLTN. He explained that the lack of biodiversity might be due to the structure of the channel bed and bank of YLTN that was lined entirely with concrete with minimal sediment deposition.

19. Addressing a Member's concern that the structure of the concrete-lined banks and bed might limit the biodiversity and ecological function of YLTN, Mr Andy Kwok said that DSD would review the resurfacing of the banks and bed into a landscaped area with a view to achieving beautification and biodiversity enhancement in the YLTN area. However, such a measure might have negative implications on the drainage and flood control capacity of YLTN. A detailed review would be conducted under the Barrage Scheme.

Noise impacts

20. Noting that the predicted noise levels at the representative noise sensitive receivers (NSRs) under the proposed DWF pumping station was in compliance with the noise criteria under the Environmental Impact Assessment Ordinance (EIAO), a Member raised her concerns on the potential noise impacts arising from the proposed DWF pumping station which would operate round the clock.

21. Mr Jimmy Poon explained that the intercepted DWF would flow into the proposed DWF pumping station which operated 24 hours a day and be stored in the wet well inside the pumping station. When a certain volume of DWF was reached, the pumps would start operation and noise might be generated. With the implementation of mitigation measures, including fully enclosing all equipment inside the plant rooms and locating the louvres away from NSRs, the operational noise impacts were anticipated to be minimal. Mr Manuel Chua supplemented that the predicted fixed plant noise level at the nearest residential building to the proposed DWF pumping station would be around 45 dB(A), which was below the noise limit of 48 dB(A).

22. With reference to a public comment, the Chairperson quoted that the maximum predicted cumulative corrected noise level at the CCC Chun Kwong Primary School (NSR14) was 68 dB(A) during the examination period, which exceeded the noise criteria of 65 dB(A).

23. Mr Manuel Chua explained that cumulative noise impacts from the project on Elevated Pedestrian Corridor in Yuen Long Town Connecting with Long Ping Station conducted by Highways Department had been taken into account in the assessment of noise impacts to the NSRs in this EIA study. The noise level at NSR14 during normal school days did not exceed the stipulated noise criteria. He advised that mitigation measures, including special construction arrangement during examination period would be made in order to avoid any potential noise exceedance.

Ecological impacts

24. A Member referred to several public comments highlighting the insufficient duration of the ecological survey conducted under the studies and enquired if the project proponent would conduct additional surveys.

25. Mr Vincent Lai explained that given the nature and relatively small scale of the project, flexibility had been allowed in the EIA study brief such that literature review could be first conducted to determine the scope and duration of the ecological field survey for filling data gaps. There were sufficient baseline studies conducted in the past covering the project area and Shan Pui River, including those conducted under other EIA projects, such as the construction of cycle tracks at Nam Sang Wai and footbridge along YLTN. Surveys had been carried out to verify the information collected from relevant studies. As such, Mr Lai considered that the data collected from the four-month ecological survey as well as the literature reviews were sufficient to substantiate the ecological impact assessment of this EIA project.

26. With reference to the public comments, the Chairperson was concerned that the reduction in freshwater input and associated increase in salinity might disrupt the existing species structure and upset the ecological balance in the downstream areas such as Shan Pui River and Deep Bay.

27. Mr Andy Kwok explained that under dry weather conditions, the interception of a maximum of 18,000 m³ per day of DWF in YLTN would only lead to an estimated 3 to 4% reduction in the total volume of water to the upstream section of Shan Pui River near the confluence with Kam Tin River. Due to the interception, the discharge to Shan Pui River, being treated at YLEPP, would be of a better quality without a change in the water flow volume. Mr Vincent Lai supplemented that the concerned river section was joined to Deep Bay and was subject to predominant tidal influence, thus any aquatic lives were expected to enter and exit the river section into Deep Bay along with the tides. There was no benthic organism of ecological importance recorded in the project area. Hence, the small reduction in freshwater input due to DWF interception was not expected to have any unacceptable impacts on the ecology. Mr Manuel Chua added that with reference to the water quality monitoring data from EPD, the salinity levels of Deep Bay varied between 0.2 and 29.5 practical salinity units (psu). A change in salinity level due to 3 to 4% reduction in the total volume of water would be considered as

insignificant.

Water quality impacts

28. A Member enquired whether the DWFIS would operate during the wet seasons. He quoted a public comment which recommended re-connecting the upstream water flow from the Tai Shu Ha Road to the downstream of San Hui Nullah that had been intercepted by the Yuen Long Bypass Floodway, as an alternative to improve the water quality and minimise odour impact of YLTN with increased water flow.

29. Mr Jimmy Poon explained that DWFIS would operate as long as there was polluted DWF entering YLTN. As the concentration of pollutants in the DWF would be diluted in the event of rainstorm, the pump would cease to operate when a certain water flow limit was reached to avoid overloading the YLEPP. While about 1,000 m³ per day of DWF from the San Hui Nullah would be intercepted, DWF of about 13,000 m³ per day from Kung Um Road Nullah with better water quality would not be intercepted at the upstream so as to maintain water flow in YLTN.

30. In response to a Member's enquiry on measures to prevent construction site runoff from directly discharging into the river in the event of rainstorm, Mr Kenley Kwok explained that in addition to scheduling excavation works in the dry seasons, additional measures including surrounding the excavation area with sandbag barriers would be arranged with a view to preventing site runoff from flowing into the downstream area in the event of rainstorm.

Alleviation of odour nuisance

31. With reference to a public comment, a Member suggested that olfactometric analysis should be adopted in order to measure the odour level for the YLTN area. He opined that a two-pronged approach, i.e. to construct a DWFIS and control pollution at source, should be adopted to alleviate pollution problems in the project area.

32. Mr Jimmy Poon advised that odour monitoring would be conducted by experts during site inspection and the use of olfactometric analysis would be considered where necessary. He said that DSD conducted regular inspection on pipes and suspected cases of expedient connections would be referred to relevant government authorities for follow-up investigation and action. He mentioned that there were eight cases of expedient connections in Yuen Long Town between 2015 and 2019 and the problems had already been rectified. DSD would continue to keep up the efforts in deterring expedient connections in YLTN area.

33. In reply to a Member's question regarding the pollution at source, Mr Andy Kwok explained that a survey conducted in the upstream area revealed that there were some expedient connections along the YLTN. It was estimated that about 60 numbers of stormwater outfalls would be intercepted to the DWFIS under

the project. As regards the Member's enquiry on the pollution loading reduction due to the project, Mr Kwok explained that the pollution loads to Shan Pui River would be reduced by 742 kg/day for suspended solids (SS), 1,906 kg/day for biochemical oxygen demand (BOD₅), 197 kg/day for total nitrogen, 22 kg/day for total phosphorus due to operation of the Project. The daily counts for *E. coli* would also be reduced.

34. Considering that a dissolved oxygen (DO) concentration of over 4 mg/L would have to be maintained in order to prevent odour nuisance, a Member sought information about the existing DO concentration and the estimated concentration subsequent to interception. With reference to water sampling data conducted under the EIA and EPD's river water quality monitoring data, Mr Manuel Chua advised that the present DO concentration was between 2.8 mg/L and 4.3 mg/L. As for the estimated DO concentration after interception, Mr Andy Kwok explained that polluted DWFs with a DO concentration below 4 mg/L from San Hui Nullah, East Nullah and the Town Centre Section would be intercepted and conveyed to the YLEPP for treatment, whereas the upstream DWF with better water quality and a DO concentration above 4 mg/L would be maintained along the nullah.

35. In response to Mr Jimmy Poon's explanation that the DWFIS served to intercept polluted dry weather flows being discharged to YLTN, a Member considered that it was essential to control the polluted flow entering the YLTN by identifying and controlling pollution at source in order to tackle the odour nuisance. Mr Jimmy Poon agreed and reiterated that suspected expedient connections found in regular inspections of public drainages would be referred to relevant government authorities, including EPD and the Buildings Department, for follow-up investigation and action. DSD would continue to enhance public awareness on the consequences of illegal discharges of wastewater into stormwater drains and watercourses through publicity and education. However, he considered that it might be difficult to eliminate all pollution sources entirely, especially for nonpoint sources such as uncontrolled discharge of polluted flow from vehicle washing and street cleansing. Hence, a DWFIS was proposed as an indirect means to control the polluted DWF entering YLTN and minimise odour problems.

Management of C&D materials

36. A Member enquired about the estimated volume and types of construction and demolition (C&D) materials to be generated from the construction of the project and the associated handling method. Mr Manuel Chua replied that around 15,200 m³ of C&D materials would be generated during construction of the project. It was estimated that 29% of the materials would be re-used in-situ and around 700 m³ of C&D waste would be disposed of at public landfill. Specifications would be made in the bidder contract to ensure that the contractor would strictly adhere to the waste management requirements and further explore the possibility for recycling or reuse of the C&D materials as far as practicable.

Conclusion

37. Mr Jimmy Poon thanked Members for their comments and suggestions on the proposed project. He reassured Members that there would be a holistic approach to improve the environmental conditions in the YLTN area. While the EIA report under deliberation might focus on improving the water quality and alleviating the odour nuisance along the YLTN area, the landscaping and beautification works, ecological enhancement and flood control would be taken forward in a separate project.

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

[The project proponent team left the meeting at this juncture.]

Internal Discussion Session (Closed-door session)

39. 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.

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

Adoption of a holistic approach

41. Addressing a Member's concern on the interaction of the project under deliberation and the future Barrage Scheme, Mr Terence Tsang advised Members that this project would not pre-empt the future design and the beautification works and environmental enhancement measures of the Barrage Scheme. He explained that this project was mainly to construct a DWFIS to alleviate current odour nuisance and improve water quality. He considered it feasible to first improve the water quality prior to exploring alternative revitalisation options and conducting public consultation with relevant stakeholders with a view to coming up with the best option.

42. A Member considered that synergy should be achieved between the two projects. He opined with the support of two other Members that a holistic approach should be adopted in the planning of beautification works and ecological

enhancement measures, as well as promoting a water-friendly culture in the YLTN area. The Member pointed out that water quality improvement would not be achieved within a short span of time, and thus that the proposed beautification works and ecological enhancement measures should be carefully reviewed in due course.

43. A Member remarked that engineering flexibility studies should also be undertaken for the beautification works and ecological enhancement under the future Barrage Scheme.

44. Apart from conveying treated effluent from YLEPP to YLTN, a Member suggested that the project proponent should explore alternatives for sourcing freshwater from natural watercourses in the catchment area of Yuen Long Plain. He also suggested, with the support of another Member, that the “Sponge City” concept should be adopted to provide alternative and additional freshwater sources and further improve the water quality of YLTN.

45. A Member showed support for the project and noted that the proposed project would provide good potential for the installation of photovoltaic modules for the generation of renewable energy as well as provision of shading.

46. Summarising the suggestions raised by Members, the Chairperson suggested and Members agreed to recommend the project proponent to adopt a holistic approach and achieve synergy in the planning of beautification works and ecological enhancement measures, as well as developing a water-friendly culture in the YLTN area. The adoption of the “Sponge City” concept and identification of alternative and additional freshwater sources to maintain the water flow especially during dry seasons should be explored. Furthermore, consideration should be given to enhancing environmental sustainability and incorporating green elements in the beautification of YLTN.

Water quality impacts

47. A Member expressed support for the project. He suggested that the project proponent should be required to step up control measures to prevent any adverse impacts of rainfalls on the downstream water quality and sensitive receivers during the construction of the project.

48. Having considered the views of Mr Terence Tsang, the Chairperson proposed and Members supported imposing a condition to require the project proponent to submit a Water Quality Monitoring Plan (the Plan) as part of the updated Environmental Monitoring and Audit Manual, to detect potential adverse water quality impacts at the Project and downstream area directly affected by the Project, and the additional measures to be taken in the event of heavy rainfall during dry seasons to ensure the water quality would not be adversely affected. The Plan should be submitted to DEP for approval before commencement of construction of the Project.

49. The Chairperson also suggested, with the support of Members that the project proponent, should be recommended to identify and control water pollution at source as far as possible to control the polluted flow entering YLTN.

Ecological impact assessment

50. A Member was concerned that some species of conservation interest might be overlooked during the relatively short survey period between August and November 2019 and he learnt from EPD that a review of the ecological impact assessment guidelines and practices was underway. Besides, he also appealed to other Members to keep a close eye on new project profiles and provide comments to EPD for consideration when preparing the study briefs.

51. A Member concurred that the duration of the survey period was not sufficient to cover the active season of odonates which usually appeared in spring seasons.

52. Ms Aidia Chan explained that the project proponent / consultant should evaluate information collected from literature review, identify any information gap related to the assessment of potential of ecological impact, and conduct ecological field surveys and investigations that were needed for the impact assessment. The four-month ecological survey was considered acceptable to AFCD because there were data available from literature review, in particular the EIA report of YLEPP which covered the confluence of Shan Pui River; the project site was located in a developed area and the habitat type within the study area was not diverse. Furthermore, the laying of rising main along the Wang Lok Street (which fell within the Wetland Buffer Area) would be carried out outside the dry season to avoid disturbance to over-wintering waterbirds. Also, the survey period covered the active season of the Mai Po Bent-winged Firefly, which was a species of firefly endemic to Hong Kong.

53. The meeting agreed that no condition or recommendation would be proposed in the aspect of ecological impact assessment.

Management of C&D materials

54. With reference to the comments raised by a Member, the Chairperson suggested and Members agreed that the project proponent should be recommended to minimise the generation of and reuse surplus inert C&D materials in-situ as far as practicable.

55. There being no other comments from Members, the meeting agreed that the EIA report could be endorsed with one condition and three recommendations. The project proponent team would not be required to attend the full Council meeting scheduled for 6 July 2020.

[Post meeting note: The list of proposed conditions and recommendations was circulated to Members for comments on 22 June 2020.]

**EIA Subcommittee Secretariat
July 2020**