(ACE Paper 15/2004)
For advice

Report on the 85th Environmental Impact Assessment Subcommittee Meeting

Introduction

At its meeting held on 17 May 2004, the Environmental Impact Assessment (EIA) Subcommittee considered the EIA report on the Yuen Long and Kam Tin Sewerage and Sewage Disposal Stage 2 project and received a briefing on the Concept of Continuous Public Involvement in Hong Kong's EIA process.

Advice Sought

2. Members are requested to advise whether the EIA report should be endorsed or not and note Members' views on the briefing.

Views of the EIA Subcommittee

EIA Report on Yuen Long and Kam Tin Sewerage and Sewage Disposal Stage 2
(ACE-EIA Paper 4/2004)

Need for the project

3. The Yuen Long and Kam Tin Sewerage and Sewage Disposal Stage 2 project and two other sewerage projects are recommended under the "Review of Yuen Long and Kam Tin Sewerage and Sewage Treatment Requirements" completed in 1999. The objective of the project is to extend the sewerage system so as to cope with the existing and planned developments in Northwest New Territories. Upon completion of the project, the village sewage/new development flows within the planned catchment will be collected and given secondary treatment at the Yuen Long Sewage Treatment Works. The effluent will then undergo centralized disinfection at San Wai Sewage Treatment Works and will be diverted to the outfall at Urmston Road.

Description of the project

4. The project includes the provision of the following key items of work-

(a) a pumping system to convey treated effluent from Yuen Long Sewage Treatment Works to San Wai Sewage Treatment Works;
(b) a trunk sewerage system consisting of gravity sewers, rising mains and pumping stations to collect and convey sewage generated from San Tin areas to Yuen Long Sewage Treatment Works via a downstream trunk sewerage system;
(c) a trunk sewerage system consisting of gravity sewers, rising mains and pumping stations to collect and convey sewage generated from Lau Fau Shan areas to San Wai Sewage Treatment Works; and
(d) a trunk sewerage system consisting of gravity sewers, rising mains and pumping stations to collect and convey sewage generated from Yuen Long South areas to San Wai Sewage Treatment Works via a trunk sewerage system and the existing Ha Tsuen Pumping Station.

5. The project will involve the construction of 15 sewage pumping stations and a sewerage system of trunk sewers of about 28 km in length. The majority of the sewers will be laid underneath existing or future roads. The project will involve three designated projects. Construction works will tentatively commence in mid 2006 and will be completed in early 2011.

Declaration of interest

6. Before commencement of discussion at the meeting, the Chairman declared interest that his company was a waste water treatment contractor but it would not be involved in the project. The Subcommittee agreed that the Chairman should continue to chair the meeting having regard to the following-

(a) that the EIA report was already in the public domain;
(b) that his presence would neither prejudice the decision of the Subcommittee nor give him advantage in any way; and
(c) that the minutes of the meeting would be uploaded onto the Internet for public information.

Members' views

7. Members' discussion at the Subcommittee meeting focused mainly on whether alternative alignments had been considered for the trunk sewers and the effluent pumping stations; whether the site at Shan Pui Ponds would be suitable for compensatory planting since tall trees along the ponds would have the disadvantage of screening off the ponds, preventing water birds from using the ponds and resulting in the need for trimming the trees as in the case of Mai Po; whether the affected fishponds would be reinstated; limiting noisy construction works near the Mai Po Loong Egretry and the Mai Po Village Egretry; the impact of workshops and container yards on the project; the possibility of reducing the footprint of the trunk sewerage system; measures to be taken to reduce the impacts of the exposed soil and prevent site run-off; impact of the project on the water quality of Deep Bay and water bodies in Northwest New Territories; the possibility of greater use of the trenchless construction method; re-use of excavated materials; the green roof concept and the re-use of the treated effluent. As a separate topic outside the scope of the project, a Member also raised the issue of setting up demonstration schemes on renewable energy and total water management.

Alternative alignment for the trunk sewers

8. On Members' concern on whether alternative alignments for the trunk sewers had been considered, the project proponent team indicated that they had considered two alignment options for the Yuen Long effluent pipeline, i.e. the alignment proposed in the 1999 "Review of Yuen Long and Kam Tin Sewerage and Sewage Treatment Requirements" and the currently selected alignment. The present alignment was selected on the basis of the ecological impacts, the requirements for land/building resumption, engineering requirements and landscape characters.

Alternative sites for the Yuen Long Effluent Pumping Station

9. The project proponent team pointed out they had considered three alternative sites for the Yuen Long Effluent Pumping Station, i.e. option 1 (the current option), option 2 which was a public car park within the Yuen Long Industrial Estate and option 3 which was south of the Yuen Long Sewage Treatment Works. Both option 2 and option 3 had serious engineering constraint that would affect the efficient operation of the Yuen Long Sewage Treatment Works. In addition, the Industrial Estate Corporation opposed to locating the pumping station in the Yuen Long Industrial Estate (option 2 and option3). On the other hand, option 1 was on government land. It had less engineering constraint and would involve less building cost as well as recurrent

cost. Option 1 was hence selected after considering engineering, land and environmental factors.

Compensatory planting

10. On Member's query on the suitability of the site at Shan Pui Ponds for compensatory planting, the project proponent team pointed out that it was the only available site which was adjacent to the original planting area and was suitable for the compensatory planting. The free movement of birds would unlikely be affected due to the small area of the compensatory planting. In addition, planting trees at Shan Pui Ponds would also serve to screen off the disturbances caused by activities arising from the pier there. As regards the proposed tree species, the project proponent team explained that compensatory planting was mainly provided on a like-for-like basis. After discussion, the project proponent team agreed to consider Members' views, including the suggestion related to the use of shrubs and suitable wetland associated plant species.

Reinstatement of the affected fishponds

11. On Members' concern about the reinstatement of the affected fishponds, the project proponent team clarified that for Grade A fishponds next to the Yuen Long Sewage Treatment Works, the rising mains would be constructed along the bunds of the fishponds only without affecting the fishponds. Hence, only the bunds would need to be reinstated upon completion of the project. However, the Grade C fishpond at San Wai which was 0.05 ha in area needed not be reinstated.

Noisy construction works near the Mai Po Loong and Mai Po Village Egretries

12. On Members' concern about construction activities near the Mai Po Loong Egretry and the Mai Po Village Egretry, the project proponent team agreed that except essential and occasional works, noisy construction activities during the winter seasons would avoid the sensitive hours after 4pm in the afternoon so as not to disturb the night roosting of the birds.

Workshops and container yards along the alignments

13. On Members' concerns that the underground soil of the workshops and container yards along the alignment might be contaminated, the project proponent team indicated that they were aware of those establishments but it was considered that the

chance of any potential contamination migrating to the project sites would be minimal. The project proponent would conduct soil test before commencement of the construction stage to ensure that there would be no impact and that any soil contamination found would be dealt with properly.

Footprint of the trunk sewerage systems

14. On the possibility of reducing the footprint of the sewerage system, the project proponent team explained that the scale of the trunk sewerage system would depend on the loading of the sewage to be collected within the planned catchment areas. The project proponent would closely monitor changes in the population estimates in the Northeast New Territories and would make corresponding adjustments during the detailed design stage. The estimated population of the planned catchment areas of the project in San Tin, Kam Tin, Yuen Long Industrial Estate and the northern part of Yuen Long Town Centre was about 270,000.

Impact of exposed soil and site run-off

15. On the impact of exposed soil during rainy seasons, the project proponent team pointed out that they would control the scale of exposed soil by opening trench at not more than 50 metres' length at any one time. Appropriate measures, for example, the provision of cut-off drains at suitable places to prevent overflowing of mud water in exposed soil areas, would be included in the Environmental Monitoring and Auditing Manuals. Contractors would be required to follow through those measures to prevent site run-offs during rainy seasons.

Impact on the water quality in Deep Bay and Northwest New Territories

16. On Members' concern about the water quality in Deep Bay, the project proponent team pointed out that at present, sewage would undergo secondary treatment in Yuen Long Sewage Treatment Works and the treated effluent would be discharged to Shan Pui River leading to Deep Bay. Upon completion of the project, water quality at Deep Bay would be improved because sewage would first be given secondary treatment at Yuen Long Sewage Treatment Works to be followed by disinfection at San Wai Sewage Treatment Works. The treated effluent would then be discharged to the Urmston Road Outfall. As for the Northwest Water Control Zone, the project proponent team explained that the water quality in that area would also be greatly improved upon the completion of the project for the upgrading and expansion of the San Wai Sewage Treatment Works. Members in fact endorsed the EIA report of that

project in 2003.

Greater use of the trenchless construction method

17. On the use of the open trench and trenchless construction methods, the project proponent team pointed out that the trenchless method would be adopted for sections of the trunk sewers crossing main streams. The open trench method would mainly be adopted for other sections of the trunk sewers to be constructed along roads. However, whether the trenchless method would be adopted for more trunk sewers would depend on the need, the soil conditions, and whether there were congested underground utility lines or not. Noting that the trenchless method would be more environmentally friendly, the project proponent agreed to consider during the detailed design stage greater use of the trenchless method.

Excavated materials

18. On the re-use of the excavated materials, the project proponent team pointed out that the total volume of excavated soil would amount to 518,870 m^3 but 79% of them would be re-used for the project. The options of final destination of the remaining volume of 108,960m^3 (approx.) of excavated soil were identified in the EIA report. Any changes in the destinations would be addressed through the Construction and Demolition Material Management Plan to be submitted to the Civil Engineering Department.

Green roof concept

19. A Member commended the project proponent for adopting the green roof concept for the Yuen Long Effluent Pumping Station. The project proponent team explained that since the Yuen Long Effluent Pumping Station was within the Conservation Area, they would want to reduce its visual impact as far as possible.

Re-use of the treated effluent

20. On the possibility of the reuse of the treated effluent, the project proponent team pointed out that a pilot scheme on the re-use of the treated effluent would be carried out in the Ngong Ping Sewage Treatment Works project. The Administration would wait for the outcome of the pilot scheme before deciding whether and how similar schemes would be implemented for other projects.

Renewable energy and total water management

21. As a separate topic outside the scope of the project, a Member suggested that the Administration, in implementing new projects, should consider setting up demonstration schemes on renewable energy and total water management.

Conclusion

22. Members considered that the project would improve the water quality in Deep Bay and Northwest New Territories. Having regard to the findings and recommendations of the EIA report, they agreed to recommend the report to the Council for endorsement without condition.

The concept of Continuous Public Involvement in Hong Kong's EIA process and the use of 3-dimensional tools

23. The Subcommittee received a briefing delivered by the Environmental Protection Department on the Concept of Continuous Public Involvement in Hong Kong's EIA process and the use of 3-dimensional tools. It was noted that in future, the project proponent of major projects would be encouraged to use 3-dimensional tools to illustrate EIA findings, in addition to the submission of EIA reports in paper.

Members' views

24. A Member pointed out that under the EIA Ordinance, there were two stages whereby the public could formally be involved in the EIA process. He wondered whether public involvement could be strengthened formally in the context of the EIA Ordinance. The EPD representative explained that the EIA Ordinance only prescribed the minimum requirements. In fact the most recent circular issued by the Environment, Transport and Works Bureau on EIA process encouraged project proponents to go beyond the two formal stages of involvement and engage the public in the EIA process as early and as much as possible, including the EM&A stage.

25. As regards the concern of a Member that the use of 3-dimensional tools might dilute certain adverse impact of a project, the EPD representative pointed out that the 3-dimensional tools would not just provide animation effects. The project proponent would be required to ensure that the images provided would reflect the genuine positions of the areas and/or the issues in question.

Conclusion

26. Members commended EPD's efforts in exploring and adopting innovative ideas to enhance public involvement in the EIA process and improve public access to information on the environmental performance of major projects. Members also considered that the use of 3-dimensional tools would facilitate the general public to better understand the findings of EIA reports and related issues.

EIA Subcommittee Secretariat
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