Annex C

Summary of issues discussed by the Environmental Impact Assessment Subcommittee at the meeting on 21 November 2016

The Environmental Impact Assessment Subcommittee (EIASC) discussed the following two EIA reports at the meeting on 21 November 2016

(i) EIA report on "Expansion of Sha Tau Kok Sewage Treatment Works"; and

(ii) EIA report on "Port Shelter Sewerage Stage 3 - Sewerage Works at Po Toi O ".

The major issues discussed are summarized in the following paragraphs -

(i) EIA report on "Expansion of Sha Tau Kok Sewage Treatment Works"

Handling of construction and demolition (C&D) materials

2. The project proponent advised that approximately 11,000 m^3 of the inert C&D materials would be re-used in-situ and 43,000 m^3 would be sent to public fill reception facilities for beneficial reuses. The non-inert C&D materials and marine sediment would be disposed of at landfills and marine dumping ground respectively. A Member considered that the disposal route would be long and suggested that the waste materials be re-used in-situ or for concurrent projects as far as possible.

Impact on fisheries resources

3. The project proponent explained that the proposed submarine outfall had taken into account the concerns expressed by the fishing industry during the consultation sessions such that the diffuser would be situated 1.7 km away from the coast and further away from the fish culture zones.

4. A Member observed that the diffuser was proposed to be constructed at the waters with higher-valued fishing production as recorded in the Port Survey conducted by the Agriculture, Fisheries and Conservation Department

(AFCD) in 2006. The project proponent advised that the value of the fishing production should be discounted given that an outright trawling ban was placed into effect in 2012. She added that the proposed location of the diffuser had taken into account different fishing operations, including capture and culture fisheries.

5. The project proponent explained that the water quality modelling results indicated that positioning the diffuser closer to Starling Inlet would have a greater impact on the fisheries resources, including that in the Sha Tau Kok Fish Culture Zone, as well as the ecological environment which housed water sensitive receivers including mangroves and *Limulidae*. The project proponent supplemented that the submarine outfall had a curved design to avoid entrenching into the boundary of the Mainland. He further mentioned that there might be issues related to the technical feasibility in extending the submarine outfall beyond the proposed 1.7 km.

6. The project proponent explained that HDD was a widely used technique and had been adopted in various projects of the Water Supplies Department (WSD) and DSD. He explained that HDD involved drilling a pilot hole with a small diameter along the alignment of the outfall. The drill was equipped with sensors and technology similar to the global positioning system (GPS) to detect its position and alignment, which could allow adjustments and limiting the extent of discrepancies to within 0.5 metres.

Odour and noise impacts

7. The project proponent advised that while the existing STKSTW had an open-air design, the major process equipment of the expanded STKSTW would be confined inside the structures to minimize odour nuisance and noise impact to the sensitive receivers in the vicinity, and it would be equipped with a deodorization system. In addition, low-noise demolition methodology and equipment would deployed.

Adoption of BEAM Plus

8. The project proponent said that DSD endeavoured to adopt the principles of BEAM Plus at the Gold rating in the design and construction of the project. Environmental enhancements had been incorporated in the design

of the new treatment facilities, including the use of renewable energy and recycled water etc.

Landscape and visual impacts

9. The project proponent said that the existing STKSTW consisted only of tanks of 1 to 2 metres tall, whereas the height of the structures in the expanded STKSTW would range from 10 to 19 metres. Tree planting would be carried out at the area facing Starling Inlet to provide a screening effect and vertical greening would also be adopted on all four sides of STKSTW to soften the façades. He advised that the planting strip would be around 20 metres wide. The project proponent said that the fence would only be 1 to 2 metres tall, and the view from Starling Inlet would mainly consist of trees in front of the STKSTW.

Effluent water quality improvements and reuse of treated effluent

10. The project proponent advised that the major improvement would be a reduction in the concentration of nitrogen compounds in the effluent, while the level of biochemical oxygen demand (BOD) and suspended solids would remain unchanged.

11. A Member suggested that treated effluent could also be considered for use outside the project site, such as for irrigation at green belts areas and open spaces. The project proponent explained that extending the use of treated effluent outside the STKSTW would involve designing and constructing a water supply system and additional pipelines. Nonetheless, he agreed to explore the feasibility of the suggestion.

12. The project proponent said that the baseline nutrient level had been compared with the projected nutrient level in year 2030 under the water quality impact assessment. It was expected that the concentrations of nitrogen and phosphorus in the treated effluent would decrease.

Recommendations

13. Members supported the imposition of a condition to require the project proponent to use low-noise technology and equipment in the demolition

of the existing STKSTW and the Shau Tau Kok Sewage Pumping Station (STKSPS) to reduce the impact on nearby noise sensitive receivers.

14. A Member suggested that the project proponent should be required to update the landscape and planting plan for submission to the Director of Environmental Protection (DEP) for approval before commencement of the construction works.

15. The project proponent would be recommended to devise remedial measures to address the fishing grounds and subtidal soft bottom habitats lost to the construction of the diffuser.

16. Members agreed to request the project proponent to liaise with relevant departments to examine the feasibility of increasing the re-use of treated effluent by extending its use outside the project site.

17. Members opined that the C&D materials generated should be reused in-situ or in concurrent projects as far as possible, and used for landscaping purposes, such as building screen walls and earth bunds etc.

18. While there was no data regarding the baseline odour condition, Members agreed that the project proponent should try to minimize the odour impact such that the existing odour condition would not be worsened.

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(ii) EIA report on "Port Shelter Sewerage Stage 3 - Sewerage Works at Po Toi O"

Landscape and visual impacts

19. The project proponent said that non-reflective finishes for the building including textured render and recessive colours, i.e. earthy tones that blend in with the natural tones of the surrounding landscape would be adopted. The major portion of the building would be screened by the perimeter fence covered by climbers. The project proponent added that vertical greening would be carried out on the building.

20. The project proponent advised that for vertical greening, climbers would be planted with irrigation at the base of the slope.

21. For the climbers to provide a good screening effort for the retaining wall, a Member suggested that the project proponent should consider planting climbers from the top rather than from the bottom of the retaining wall.

22. A Member was concerned about the use of rock anchors or a bored pile retaining wall that would disturb the harmony between the structure and the surrounding environment. He stressed the importance of reserving sufficient space for carrying out planting and greening measures.

Fisheries impact

23. The project proponent explained that while AFCD periodically conducted Port Surveys to collect comprehensive information of fisheries production and fishing operation of the local fishing fleets in Hong Kong waters, a more updated Port Survey was not available yet. As the project area was small and the fisheries impact was expected to be insignificant, conducting a fisheries survey for the project was not required under the study brief. The project proponent remarked that only 5 m^2 of benthic habitat would be permanently lost for the installation of the diffuser.

24. The project proponent said that intertidal and subtidal transect surveys were conducted in accordance with the guidelines stipulated under the Environmental Impact Assessment Ordinance (EIAO). Recording the fish counts in marine water by direct sighting from Po Toi O Bay was one of the methods adopted to obtain additional data. The project proponent said that there were no fish sightings when conducting the coral surveys by diving.

25. The project proponent explained that dive surveys had covered deeper water areas and no corals were found near to the proposed location for constructing the diffuser. The project proponent supplemented that the diffuser location had been reviewed several times to avoid the coral communities, and the current proposed location was preferred as it could allow better effluent dispersion and there were no corals in the vicinity. The project proponent further clarified that the fisheries impact assessment was conducted mainly based on the AFCD Port Survey 2006. Obtaining fish counts by direct

sighting was a method adopted for acquiring data for ecological impact assessment.

Issues relating to environmental sustainability

26. The project proponent advised that according to the internal guidelines of DSD, principles of BEAM Plus (New Building) at the "Gold" or above ratings would be adopted for the design of all facilities.

Recommendations

27. Due to the lack of information on the fisheries impact, Members supported that a condition should be included to require the project proponent to conduct a baseline fisheries survey to reaffirm that there would be no unacceptable impact on fisheries resources in the vicinity of the planned location of the outfall diffuser before the construction of the submarine outfall.

28. A Member was concerned about the visual impacts of the project especially when viewing from Po Toi O. He stressed that it was important to devise a suitable design such that the retaining wall could harmonize with the surrounding natural environment, and suggested that the project proponent could make reference to the Hong Kong Planning Standards and Guidelines (HKPSG). He further suggested that the project proponent should come up with measures to ensure the sustainable growth of climbing plants in respect of the species, planting area, soil depth and irrigation method.

29. The project proponent should ascertain the structure of the retaining wall and to devise the planting and greening measures accordingly. A detailed plan should be submitted to the DEP for approval before commencement of the planting and greening works.

30. With the understanding that all Government buildings were required to achieve "Gold" or above ratings under BEAM Plus, a Member suggested the use of BEAM Plus Bespoke could be considered, which allowed projects of special building types to apply for BEAM Plus assessment and achieve ratings under the respective assessment tools. This could help provide applicable assessment tools for all DSD sewage treatment plants and allow them to achieve "Gold" or above rating in future.

31. Members agreed that that the project proponent would be recommended by achieving "Gold or above" rating under BEAM Plus (New Buildings) in the project design to ensure the sustainability of the development.

Conclusions

32. The EIA Subcommittee deliberated the captioned EIA reports and recommended the full Council to endorse the EIA reports with conditions and recommendations.

EIA Subcommittee Secretariat
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