Annex C

Summary of issues discussed by the Environmental Impact Assessment Subcommittee at the meeting on 17 October 2016

The Environmental Impact Assessment Subcommittee (EIASC) discussed the following two EIA reports at the meeting on 17 October 2016

(i) EIA report on "Kai Tak Multi-purpose Sports Complex"; and

(ii) EIA report on "Sha Tin Cavern Sewage Treatment Works".

The major issues discussed are summarized in the following paragraphs -

(i) EIA report on "Kai Tak Multi-purpose Sports Complex"

Air quality impact

2. A Member raised the need to minimise air quality impact arising from the project. He considered that the project might be a future icon of the city, and therefore it was important to meet with the high expectations of the public in improving air quality and enhancing human health under active sporting conditions.

3. A Member acknowledged that the project itself was not an air pollution source, but it could be classified as an air sensitive receiver. As such, he suggested that the Project Proponent should explore the use of de-NOx paints to reduce emission of NOx as well as the active planting of trees with screening effect which would benefit users of the sports facilities.

The promotion of electric vehicles

4. Apart from promoting electric vehicles for private use, a Member stated that electric coaches and buses should also be promoted as means of public transport. As such, the Project Proponent should be more active in promoting the use of electric coaches and buses in order to ensure a better air quality.

5. The Project Proponent explained that the architectural design of the project had been made to match with the surrounding landscape and with an aim to maximizing air flow. In addition to encouraging the use of public mass transport, they were exploring the construction of a bicycle path to encourage the use of bicycles as an eco-friendly transport.

Noise Impact

6. A Member suggested the avoidance of using percussive piling which would generate noise pollution impacts to the residential areas nearby the project site.

Air ventilation assessment

7. A Member stressed the importance of improving air quality. He suggested that the Project Proponent should conduct the Microclimate Studies. In addition, he expressed his concern on the northern wind in winter that might reduce the usability of the MPSC given the extensive open space at the waterfront promenade and the south-north view corridor.

8. The Project Proponent explained that a number of AVA studies were conducted for the planning of Kai Tak Development Area (KTDA). These AVA studies and the Schedule 3 of the EIA study for the whole of the "Kai Tak Development" (KTD) concluded that the project site was suitable for the proposed development. The land use of the proposed development was approved and it was noted that the project site was a major wind corridor path. District level AVA had been conducted and there were calm wind conditions. The study found that there would not be any strong northerly wind to the project site in particular when the proposed residential buildings in the vicinity of the North Apron that would be completed in 2022 to 2023.

Tree planting and landscape

9. A Member said that the Project Proponent should clarify which standard of soil specifications they would adopt. This would have implications on the species used for planting and its effect on filtering dust which would be conducive to users' health condition, and soil carbon sequestration.

10. Some members considered that further information should be provided especially on the objectives of tree planting, and clarification on whether it was for the purpose of landscaping, carbon sequestration, dust removal, reduction of air pollution or as noise barriers.

11. Regarding the soil specification, the Project Proponent said the specification had taken into account the need to use lightweight soil to reduce loading on the structural deck. Connectivity was considered as an important aspect for ecology, therefore open spaces were designed in the landscape master plan in a way such that green spaces were connected with no isolated planters, thereby forming a good ecological corridor.

12. A Member considered that the depth of podium soil was irrelevant when deciding whether shrub or trees should be planted. He suggested that soil boring and soil deck were relevant factors instead.

Construction and demolition (C&D) materials

13. The Project Proponent said that references were made to the geotechnical investigation reports conducted for KTD, and no mud was encountered within the project area.

Pre-cast concrete construction method

14. A Member questioned the reason for adopting conventional concrete structures as stated in the EIA report for the construction of Public Sports Ground and Indoor Sports Centre Building, instead of using pre-casting elements to minimize the negative impact on the environment.

Promotion of sustainability

15. A Member suggested incorporating elements of sustainability in the project, such as renewable energy with the installation of solar panels on the roof.

16. The Project Proponent assured that their objective was to go in line with the Paris Climate Agreement. He said that there was a separate

consultant team under HAB responsible for conducting studies on issues of sustainability, renewable energy, embedded energy and reduction of carbon footprint.

Integrated Pest Management (IPM)

17. A Member considered that the project would promote the public understanding of species such as butterflies, birds, plants and biodiversity. As such, the species that would be planted for greening was important for the conservation of wildlife.

Transportation and air quality

18. A Member suggested limiting the number of parking spaces to encourage the use of public transport and pre-booking of parking service should be provided. As a result, chances of traffic congestion, noise impact and air quality impact could be minimized.

Minimization of carbon footprint and carbon consumption

19. A Member suggested that there should be strategic planning with regard to the life cycle carbon footprint to minimize embodied carbon in relation to the structural and architectural design of the project and the use of materials. He suggested that the Project Proponent should use the district cooling system (DCS) and devise strategies for recovering and reusing waste heat, reducing peak energy or heat use and carbon consumption.

Grass planting

20. The Project Proponent explained that there would be lawn in the public open space. As to which species would be planted for the pitch, they had yet to come to the conclusion. However, she confirmed that natural grass would be planted and trial tests would be conducted to investigate which species would be most suitable for planting for both Public Sports Ground and Main Stadium.

21. A Member questioned if shadow analysis had been conducted for the proposed construction of retractable roof of the Main Stadium. In addition, he

further questioned if natural turf grown off-site would be imported and laid out when large scale sports events were held, and how this would be operated, specifically in relation to the space needed for growing the turf off-site and its environmental impact.

Landscape and visual impact

22. A Member emphasised the importance of promoting a better overall visual impact of the project in order to enhance its iconic feature and meet public expectation.

Recommendations

23. Members considered that information on the objectives, whether it was for amenity planting, as an enhancement measure to urban ecology/biodiversity, or to maintain ecological connectivity; and methodology of compensatory tree planting should be provided.

24. In addition, information relating to the grass planting in the public open space, the Main Stadium and the Public Sports Ground, including the proposed species that would be planted and the soil specifications to be adopted should be provided with justifications.

25. With a view to minimizing environmental impact, Members requested the Project Proponent to confirm whether pesticides would be used and/or whether Integrated Pest Management would be adopted. Furthermore, the Project Proponent should clarify the source of soil used and the potential impact on soil moving operations involved in the project.

26. Members agreed that information on the air pollution implications to the venue users and the surrounding sensitive receivers should be provided based on the findings of the air ventilation assessment (AVA) carried out for the interior and exterior of the Main Stadium, Sports Complex and open space of the project site. Besides, measures to improve air quality and to actively pursue the best practicable means should be explored.

27. Members suggested that the Project Proponent should provide information on measures to minimize carbon footprint, in particular, to clarify

if there would be any strategies/measures for generating renewable energy, recovering and reusing waste heat, reducing peak energy or heat use, decarbonization etc.

28. As for the enhancement of visual impact, Members agreed that information on any proposed measures to minimize visual impact and enhance visual quality of the project should be provided given its high visual sensitivity as well as to enhance its iconic feature in the district.

29. Members agreed that geotechnical investigation reports should be provided to ascertain whether there was marine mud at the subsurface, and information on any proposed measures to minimize the amount of construction and demolition materials generated. Moreover, the use of Building Information Modeling (BIM) in the design and construction stages should be explored.

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(ii) EIA report on "Sha Tin Cavern Sewage Treatment Works"

Design of the ventilation buildings

30. A Member considered that the proposed buildings in the project would be visually obtrusive against the natural backdrop. He suggested the Project Proponent to further review the design of the buildings such that they could harmonize with the surrounding natural environment. A Member followed that vertical greening could be considered as one of the methods to mitigate the visual impact.

Preservation of natural species

31. A Member was concerned about affecting of the flight path of *ardeids* from the Penfold Park Egretry to their foraging habitats at the Shing Mun River during the decommissioning and demolition of the Sha Tin Sewage Treatment Works (STSTW). He suggested the Project Proponent to consider avoiding demolition works during the *ardeid* breeding season, thereby minimizing the potential impact on the Penfold Park Egretry and the *ardeids* flying over the STSTW.

Future usage of the released land

32. Regarding the use of the vacated land, the Project Proponent advised that it was yet to be determined. He further explained that the project would be beneficial to relocate STSTW as the existing facilities which had been in operation for over 30 years would require upgrading works in near future.

New technology for the new facility

33. The Project Proponent clarified that whilst a conventional activated sludge treatment technology was employed in the existing STSTW, advance sewage treatment processes such as moving bed biofilm reactors (MBBR) and aerobic granular sludge (AGS) technology were under assessment and will be proactively considered for this cavern sewage treatment works.

34. As regards sludge treatment, he explained that the dewatering option without digestion was chosen as digestion within caverns might generate dangerous gases inside caverns, which would not be acceptable from fire safety perspectives.

Compensatory planting

35. The Project Proponent explained that, under a broad brush tree survey, approximately 828 trees would be affected by the project. Mature trees would also be lost at road verges due to the construction of temporary site accesses. She explained that approximately 10,000 tree whips would be planted there and on the fill slopes, whereas heavy standard trees would be planted at areas with thicker soil layers. She stated that, based on the available ground investigation results, the rockhead level at Nui Po Shan was generally high with thin soil covering and the terrain was hilly, and hence only small trees would be proposed for planting.

36. Members reminded that the Project Proponent should commit to increasing the ecological value of the proposed compensated or reinstated vegetation so as to compensate for the net permanent loss of vegetation. The Project Proponent explained that the estimated loss of vegetation of about 25,000 m^2 included plantation shrublands and woodlands area, and the

woodlands were composed of a diversity of native and exotic species such as *Acacia confusa*. Reinstatement or enhancement in the form of native tree and shrub planting with high quality would be provided, wherever practicable.

The need for public engagement

37. The Project Proponent agreed with a Member that the odour impact during operation of the project and safety issue in relation to the blasting works during construction of the project were the major concerns of the public. A Member suggested that the Project Proponent should consider setting up a platform to exchange views with the local community like the Community Liaison Groups (CLGs) during construction and operation of the facility.

Considerations on carbon footprint and energy consumption

38. The Project Proponent explained that while carbon audit would be conducted for the project, the carbon emissions could only be estimated and assessed when the detailed designs were further progressed. It would be the endeavour of the Project Proponent to explore alternative methods and technologies with a view to minimizing the carbon footprint. As regards energy consumption, he said that alternative sewage treatment processes were under assessment and subject to the detailed design, it was possible to achieve improved energy efficiency for sewage treatment. However, as the facilities would be relocated into caverns, it was expected that energy consumption due to ventilation and lighting needs would increase.

Monitoring of bulk emulsion explosives

39. The Project Proponent explained that Mines Division recommended a minimum 2 kg MIC to avoid overloading the blast holes due to the lack of accurate equipment for measuring the quantity of explosives. However, such a limitation was no longer existed with the advancement of technology, and the equipment had to be calibrated and licensed by the Mines Division before use. He confirmed that they had sought advice on the blasting methodology from the Mines Division.

Potential for promotion and educational purposes

40. A Member said that there was potential for the relocated STSTW to become a tourist attraction considering that it was a large-scaled sewage treatment works located in a cavern. He suggested that the Project Proponent should explore the feasibility of setting up an exhibition centre on site for promotion and educational purposes if the risks of radon exposure could be controlled. The Project Proponent said that the level of radon which was released from granite could be effectively diluted and dispersed into the atmosphere via the ventilation systems. The concentration of radon would be monitored regularly, following the existing practice for Stanley Sewage Treatment Works, after the facilities were commissioned for use.

Recommendations

41. Members suggested the Project Proponent to adopt the best practicable means to minimize the vibrations generated by the blasting works on and below ground level so as to minimize disturbances to wildlife and historical buildings nearby.

42. A Member suggested the Project Proponent to adopt the most efficient design and equipment to enhance energy efficiency. A Member suggested the Project Proponent to reduce carbon footprint and energy consumption as far as possible. Another Member suggested that the design of the facilities should enable the recovery of resources, including but not limited to water, energy and phosphorus.

43. Members supported to recommend the Project Proponent to explore the feasibility of setting up an exhibition centre on site for promotion and educational purposes.

44. Members agreed to recommend the Project Proponent to continuously engage stakeholders prior to the setting up of CLGs before construction of the project.

45. Members suggested the Project Proponent to conduct a baseline survey for egretry before the demolition of the STSTW. A report on the survey results and appropriate measures to minimize the impacts on egretry

should be provided to ACE for comments before submitting to AFCD for approval before the start of the demolition works.

46. Given that the trees affected by the project were insufficiently compensated, Members agreed that the Project Proponent should devise and submit the tree preservation and woodland compensation plans to AFCD for approval with the aim of enhancing the quality of vegetation and woodlands.

47. Members suggested the Project Proponent to review the architectural design of the ventilation building with a view to harmonizing with the surrounding natural environment. The final design of the building should be submitted to the Director of Environmental Protection for approval before commencement of the construction works of the building.

Conclusions

48. 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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