

**Confirmed Minutes of the 133<sup>rd</sup> Meeting of  
the Environmental Impact Assessment Subcommittee  
on 12 September 2016 at 2:00 pm**

**Present:**

Prof Nora TAM, BBS, JP (Chairperson)  
Dr HUNG Wing-tat, MH (Deputy Chairman)  
Ir Cary CHAN  
Prof CHAU Kwai-cheong, BBS, JP  
Dr Billy HAU  
Dr Michael LAU  
Prof Albert LEE  
Ir MA Lee-tak, SBS  
Prof John NG  
Dr Eric TSANG  
Mr Luther WONG, JP  
Ms Becky LAM (Secretary)

**Absent with Apologies:**

Miss Yolanda NG, MH

**In Attendance:**

Mrs Alice CHEUNG, JP	Deputy Director of Environmental Protection (3), Environmental Protection Department (EPD)
Mr K F TANG	Assistant Director (Environmental Assessment), EPD
Mr WONG Chuen-fai	Principal Environmental Protection Officer (Strategic Assessment), EPD
Mr Simon CHAN	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Miss Dora CHU	Executive Officer (CBD) 1, EPD
Mr Alan CHUNG	Executive Manager (CBD), EPD
Miss Apple LEUNG	Executive Officer (CBD) 2, EPD

**In Attendance for Item 2:**

Mr Steve LI	Senior Environmental Protection Officer (Strategic Assessment)6, EPD
Ms Holy TO	Assistant Environmental Protection Officer (Strategic Assessment)63, EPD
Mr CHEUNG Kwok-wai	Senior Nature Conservation Officer (North), AFCD
Mr LIU Ka-yip, Eric	Nature Conservation Officer (North), AFCD

Project proponent Team  
*Civil Engineering and*

Mr Simon TAM, Chief Engineer/New Territories

*Development Department*

(East) 3

Mr Andrew CHEUNG, Senior Engineer/11

Mr Vincent LI, Engineer/23

*Mott MacDonald Hong Kong Limited*

Mr Eric CHING, Divisional Director

Mr Sai CHING, Project Director

Ms May TSE, Project Manager

Mr Leo LO, Deputy Project Manager

Mr Steven TANG, Principal Environmental Consultant

Mr Gary CHOW, Principal Environmental Consultant

Ms Dulcie CHAN, Senior Environmental Consultant

*Scenic Landscape Studio Limited*

Mr Christopher FOOT, Director

**In Attendance for Item 3:**

Mr Edward LAM

Senior Environmental Protection Officer (Strategic Assessment)3, EPD

Mr HO Man-wu

Environmental Protection Officer (Strategic Assessment)31, EPD

**Project proponent**

*Highways Department*

Mr Ian WAN, Senior Engineer 3/ Tuen Mun Road

Mr Leo CHAN, Engineer 7/ Tuen Mun Road

*Ove Arup & Partners Hong Kong Ltd*

Mr LEUNG Koon-yu, Project Manager

Ms Erica HUI, Project Coordinator

Mr Franki CHIU, Director

Mr Arthur CHIU, Environmental Consultant

Mr Edward LEUNG, Landscape Architect

Mr Ray TANG, Associate

Mr NGAI Tik-ki, Traffic Engineer

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**Action**

The Chairperson welcomed Members to the meeting and informed that apologies of absence had been received from Miss Yolanda Ng.

**Item 1 : Matters arising from the minutes of the 132<sup>nd</sup> meeting**

2. The Chairperson informed that the Environmental Impact Assessment Subcommittee (EIASC) last met in May 2016 to discuss the EIA report on “Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery”.

Information on the approval of the concerned EIA report and the relevant Environmental Permit was circulated to ACE Members on 12 August 2016.

3. There was no matter arising from the minutes of the last meeting.

**Item 2 : EIA Report on “Police Facilities in Kong Nga Po”**  
**(ACE-EIA Paper 3/2016)**

**Internal Discussion Session**

4. The Chairperson advised that the meeting would discuss the EIA report on “Police Facilities in Kong Nga Po” which covered designated projects under “Schedule 2” of the EIA Ordinance. The public inspection period of the report was from 4 August to 2 September 2016 and a total of 3 public comments were received. The public comments received by EPD and the gist of major issues/concerns had been circulated to Members before the meeting.

5. The Chairperson invited declaration of interest from Members. A Member, being a member of the World Wide Fund (WWF) advised that WWF had submitted comments to EPD on the EIA report. The meeting agreed that the Member could stay on and continue participating in the discussion.

6. The Chairperson informed that the discussion would be divided into the Presentation and Question-and-Answer Session which would be opened to the public while the Internal Discussion Session would remain closed.

7. The Chairperson reminded Members to keep confidentiality of the discussion on the EIA report.

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

**Presentation Session (Open Session)**

8. Mr Simon Tam gave an overview of the background and scope of the project. Mr Eric Ching briefed Members on the project layout, need for the project, as well as the environmental aspects of the site formation and building works proposed at Kong Nga Po and the associated road improvement works to the existing Kong Nga Po Road. He further provided responses on the key comments received from the public.

*[A Member joined the meeting at this juncture.]*

## **Question-and-Answer Session (Open Session)**

### ***Noise impact***

9. Considering that the location of the project site could affect the propagation of noise, a Member enquired whether the firing ranges were located at the highest altitude. He also sought for information on the locations for erecting the 5 metres high 4-side walls and whether sound absorption materials would be deployed. Mr Eric Ching advised that the firing ranges were not located at the highest altitude. The side walls were proposed to be installed at the re-provisioned Ma Tso Lung firing range and one of its functions was to serve as a noise mitigation measure. As the use of sound absorption materials might give rise to maintenance issues, the deployment of the materials would be explored during the detailed design stage. He explained that the required noise standards could be met even without the use of sound absorption materials.

*[A Member joined the meeting at this juncture.]*

10. In view that the construction of side-walls surrounding the re-provisioned Ma Tso Lung firing range would require substantial concrete work, a Member enquired the possibility of making better use of the topography to achieve noise insulation and whether surplus inert construction and demolition (C&D) materials could be used for building structures such as earth bunds in place of the side walls. Mr Eric Ching explained that using inert C&D materials to build structures such as earth bunds was feasible but would result in a larger footprint. He said that as the firing ranges were not located at the highest altitude, the topography could help mitigate the noise impact by a certain extent. Mr Simon Tam supplemented that apart from providing noise insulation, the side walls were erected to create a bullet-resistant barrier for the safe proceedings of other training activities that would take place outside the firing ranges. While structures such as earth bunds might also serve the purpose, he explained that the use of such structures would occupy more space and in turn lead to a larger footprint.

### ***Compensation of grasslands***

11. A Member opined that although grassland was a widespread habitat in Hong Kong, a larger area of grassland should be compensated within the study area if resources were available. Mr Eric Ching said that the project site was mainly located at disturbed ground. The approximate 11 hectares of grasslands which would be lost were largely patchy and of a low ecological value. The Member suggested the project proponent to compute the area of loss in terms of the density, and to compensate for the loss accordingly. Mr Ching replied that it would be undesirable to increase the re-establishment area as it would result in the expansion of the project site. He clarified that grassland was a common

habitat in the area, and if proponents of other projects plan to use the grasslands in the vicinity, they would be required to conduct environmental assessment in accordance with the prevailing mechanism. He further confirmed, on the Member's enquiry, that all new trees on compensation planting would be planted within the project site.

***The need for road widening***

12. A Member expressed doubt towards the need to upgrade the existing Kong Nga Po Road to 7.3 metres wide a carriageway with a 2 metres wide footpath and 1 metre wide verge, which was expected to generate quite some tree felling and a large amount of excavation materials. Having considered that the existing Kong Nga Po Road had sharp road bends with radius of curvature down to about 10 metres and some steep gradient reaching over 10%, Mr Eric Ching explained that there was a genuine need to upgrade the road for providing a safer route for those two-way heavy vehicles including container trucks and large vehicles used for police off site-road driving training. He mentioned that the upgrading of Kong Nga Po Road accounted for the loss of about 1,400 trees. While around 18,000 m<sup>3</sup> excavation materials would be generated, 19,000 m<sup>3</sup> of fill materials would be required for the road improvement works, hence the cut and fill volumes would be largely balanced. In order to minimize ecological disturbances including tree felling, Mr Ching advised that the standard 1.5 metres verge between the carriageway and footpath on one side would not be adopted, and the standard 2 metres verge along the southern side of the road, where there was no footpath, would be reduced to only 1 metre.

13. In reply to a Member's enquiry on the classification of Kong Nga Po Road under the Transport Planning and Design Manual (TPDM), Mr Leo Lo advised that the upgrading of Kong Nga Po Road had made reference to "Rural Road A" under TPDM in consultation with the Transport Department (TD). Mr Sai Ching explained that apart from providing access to the police facilities, the road also served local villagers and would be used for police driving-related training. He further advised that with container yards in the vicinity, the road was frequented by container trucks. As such, it was necessary to widen the road to 7.3 metres with a view to enhancing the safety of road users.

14. A Member pointed out that even Man Kam To Road, to which Kong Nga Po Road was connected to, did not have the full length widened to 7.3 metres. With a view to reducing tree felling and the generation of excavation materials, he suggested the project proponent to reconsider reducing the extent of road widening by using passing bays or adopting appropriate traffic control measures, especially at sections where extensive cut / fill slope works were required. Mr Sai Ching explained that in order to enhance the safety of road users, it was proposed to reduce the steep gradient of the road to 8% at the maximum, which would inevitably require the removal of affected trees. The

Member considered that narrower roads could be deliberately constructed to encourage drivers to travel at a lower speed and in turn enhance road safety.

### ***Inert C&D materials***

15. A Member requested the project proponent to review the design of the retaining walls during the detailed design stage, with the aim of reducing the extent of excavation and amount of inert C&D materials generated from site formation. Mr Eric Ching advised that 600,000 m<sup>3</sup> and 219,000 m<sup>3</sup> inert C&D materials were estimated to be generated and re-used in situ respectively for the entire project. The project proponent would actively explore potential projects to use the surplus inert C&D materials, and any remaining materials would be disposed of at fill banks for re-use by other projects in Hong Kong.

### ***Landscape and visual impacts***

16. A Member enquired whether green roofs would be introduced to the firing ranges. As regards the use of green paving which was recommended in the EIA report, he considered that hard / concrete paving should be avoided as far as possible and permeable paving should be a better option. Mr Eric Ching clarified that green roof design would be adopted for buildings at the southern portion of the project site as far as possible.

17. A Member asked the project proponent to consider determining a percentage of paving to be permeable for retaining water at the project site without affecting underground water supply. Another Member followed that grass paving could be used for the firing ranges, which could facilitate better drainage and enhance the aesthetics. Mr Sai Ching said that while the actual design would be reviewed during the detailed design stage, it was planned for the firing ranges to use lawn or permeable paving such as grass-crete or grass-grid as far as possible. Considering that the actual design of the project would only be confirmed during the detailed design stage, the Member considered that the project proponent should assure to Members and the public that they would maximize the use of green measures such as green paving. While concrete paving would have to be used in certain areas for driving training, Mr Simon Tam assured Members that there were prevailing policies for green design which stipulated for permeable paving to be used as far as possible.

18. In response to a Member's enquiry concerning the exterior design of the perimeter wall, Mr Simon Tam and Mr Eric Ching agreed that a soft design would be adopted. With reference to the preliminary design, vertical greening by using climber plants would also be considered.

***Protection of species with conservation interests***

19. A Member observed that the study area of the project overlapped with that of the “Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery”, where the bird species namely, Golden-headed Cisticola was found. He enquired whether there were focused efforts in detecting the presence of Golden-headed Cisticola within the study area given that there were seemingly suitable breeding grounds for the species at Chow Tin Tsuen and Cheung Po Tau. He considered that as the bird species were usually sensitive to gunshot noises, mitigation measures should be proposed if the Golden-headed Cisticola were found within the project site. He pointed out that the survey transects only followed existing roads with low coverage of uphill areas at Chow Tin Tsuen and Cheung Po Tau. Considering *Keteleeria fortunei* was a rare floral species of conservation interest, the Member asked whether the project proponent would preserve *Keteleeria fortunei* found on both sides of Kong Nga Po Road in-situ by reducing the extent of the road improvement works. He was also concerned that the 2.5 metres high perimeter wall might obstruct the wildlife corridor between habitats at the Northern and Southern areas of the project site.

20. Mr Eric Ching explained that prior to the commencement of site clearance, a detailed vegetation survey would be conducted for identifying the location and number of *Keteleeria fortunei*. A transplantation proposal would be prepared for those *Keteleeria fortunei* individuals that could not be preserved in-situ. Regarding the potential noise impact on birds, he said that there was an existing San Uk Ling Firing Range in the vicinity of the project site. Mr Gary Chow supplemented that the project team had specifically looked for the breeding grounds of Golden-headed Cisticola within the project site by the detection of bird calls during the breeding season, but no such breeding grounds were found. A Member doubted whether the bird calls could be detected from a long distance given that the survey transects did not cover uphill areas at Chow Tin Tsuen and Cheung Po Tau. Mr Chow explained that the roads were actually footpaths that were the only access to the rugged and vegetated areas.

21. Mr Gary Chow claimed that an unobstructed wildlife corridor did not exist even before the construction of the police facilities. While understanding that there were currently disturbances to the wildlife corridor, a Member pointed out that the proposed perimeter wall would obstruct wildlife from travelling between the Northern and Southern areas of the project site. Mr Eric Ching explained that there was a need for the perimeter wall on security, safety and noise impact considerations. However, he pointed out that the large availability of grassland and shrubland habitats within 500 metres from the boundary of the project site could serve as a link between different habitats, and there would be periphery tree planting at the project site to serve as a buffer. As requested by the Member, Mr Ching agreed to explore the feasibility of retaining an ecological

corridor of several metres wide alongside the perimeter wall during the detailed design stage.

22. A Member enquired whether the extent of the perimeter wall could be reduced. This could bring about multiple benefits including the reduction of cut and fill slope works, minimization of impact on fauna species of conservation interests, and provision of a wildlife corridor. In consideration of the substantial costs and unknown effectiveness of transplanting *Keteleeria fortunei*, he was of the view that the extent of road widening could be reduced by using passing bays so as to enable in-situ preservation of the species. The Member considered that it was inappropriate to claim that the butterfly species like Small Three-ring was widespread in Hong Kong. He observed that the species were found in not more than 10 locations in Hong Kong and that the field surveys conducted by the project proponent between March and August 2015 did not sufficiently cover the dry/winter season, and this might be the reason why Golden-headed Cisticola could not be found within the project site as they were more widespread during winter.

23. Subject to operational needs, Mr Eric Ching said that the extent of the perimeter wall could be reviewed during the detailed design stage. Regarding the field survey period, Mr Ching said that only March was covered in the dry season as the wet season was considered to be more important to the concerned habitat. Mr Gary Chow pointed out that during winter, Golden-headed Cisticola would be widespread to the extent that they could be found not only in grasslands. In order to assess the impact of the project on this species, it would be more important to ascertain if there were breeding grounds within the project site. A Member opined that even if the wet season was more important to the habitat, the dry season should not be overlooked given the strong seasonality of some bird species. Mr Ching said that literature review had been conducted which took into account study reports and EIA reports of other relevant projects. In particular, the ecological surveys conducted under the EIA study of the project namely “Organic Waste Treatment Facilities Phase 2” (OWTFP2) that covered the dry season had been taken into account in this project.

24. For periphery tree planting, a Member sought clarification on whether the trees would be planted within or outside the perimeter wall, and suggested that species that were more effective in mitigating noise could be planted. He further asked whether there were sufficient space to carry out compensatory planting of 5,869 trees within the project site. While noise would be mitigated by the perimeter wall, Mr Eric Ching agreed that trees planted at the periphery could also help mitigate noise. With reference to the preliminary layout plan, he confirmed that there would be sufficient space to accommodate the trees to be compensated within the project site.



***Sewerage and Sewage Treatment Implications***

25. In reply to a Member's question concerning on-site residence and the sewage implications, Mr Simon Tam confirmed that there would not be residential quarters in the project site, and sewage flows from the project site would be conveyed to Shek Wu Hui Sewage Treatment Works (SWHSTW) for treatment.

26. Replying to a Member's question on whether there would be rainwater harvesting for irrigation or other purposes, Mr Eric Ching advised that the feasibility of rainwater harvesting would be explored during the detailed design stage later.

27. A Member expressed appreciation for the project proponent's effort in minimising the footprint of the project. However, he was concerned that the construction of the perimeter wall would affect surface water runoff to the nearby agricultural lands. He further enquired whether there would be water harvesting mechanisms for the re-use of stormwater. Mr Eric Ching replied that as the project site was located at a relatively high altitude, the perimeter wall would have minimal effect on the surface runoff. He also confirmed that there were very few agricultural lands within 500 metres from the boundary of the project site. Ms May Tse explained that while surface runoff would enter the Nam Hang Channel under normal circumstances, in the event of heavy rainstorms, the underground stormwater storage tank could help serve as a buffer to reduce peak flow created by greater surface runoffs from paved surfaces. Mr Sai Ching agreed that the feasibility of rainwater harvesting could be further explored during the detailed design stage.

28. Given that the underground stormwater storage tank served to mitigate flood risks, a Member pointed out that water stored in the tank should be discharged instead of stored for irrigation or other uses. Ms May Tse explained that with the underground stormwater storage tank, there should be sufficient flood protection for the project site, and the stored water in the tank would be discharged promptly say within 1 to 2 hours after the storm to prepare for the next storm. Further adjustments to the design of the tank could be considered during the detailed design stage.

29. A Member opined that as the project site was located at a higher altitude, water catchments along Kong Nga Po Road should only be provided in areas with greater flood risks, so that the water supply to nearby woodlands would not be adversely affected.

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

project.

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

### **Internal Discussion Session**

31. The Chairperson advised that the EIA Subcommittee could make recommendations to ACE on the EIA report with the following approach:

- (i) endorse the EIA report without condition; or
- (ii) endorse the EIA report with conditions and details of the proposed conditions; or
- (iii) defer the decision to the full Council for further consideration – highlight issues or reasons for not reaching a consensus or issues to be further considered by the full Council; or
- (iv) reject the EIA report and inform the project proponent of the right to go to the full Council.

### ***To minimize ecological disturbances caused by the road improvement works***

32. A Member suggested that the project proponent should further review the need to widen Kong Nga Po Road as it only served the local community. He mentioned that as Kong Nga Po Road was only a local road, it would not be necessary for its gradient to be reduced to 4% which would require extensive cut slope work. Mr Wong Chuen-fai clarified that the gradient of Kong Nga Po Road would be reduced to 8% maximum instead.

33. With a view to preserving species of conservation interest including *Keteleeria fortunei* and *Brainea insignis*, a Member further suggested and Members agreed to include a condition to require the project proponent to avoid widening Kong Nga Po Road at areas where tree species of conservation interests were found. The use of passing bays or other traffic control measures at suitable locations should be explored where appropriate. The revised layout plan of Kong Nga Po Road should be submitted to the Director of Environmental Protection (DEP) for approval before commencement of the construction works. Mr K F Tang said that while the Agriculture, Fisheries and Conservation Department (AFCD) would advise on the species to be preserved, the Environmental Protection Department (EPD) would review whether the revised layout plan had maximized preservation of the concerned species.

### ***To review the design of the retaining wall***

34. The Chairperson proposed and Members agreed to include a recommendation to request the project proponent to review the design of the

retaining walls so as to reduce the extent of excavation and amount of inert C&D materials generated from site formation. A Member commented that the use of L-shape walls should be avoided as it would generate a large amount of C&D materials. Another Member remarked that the surplus inert C&D materials of the project amounted to 381,000 m<sup>3</sup> should be reduced as far as possible.

35. A Member further suggested that the project proponent should review the design and extent of the perimeter wall. The Chairperson proposed to request the project proponent to adopt a softer and greener design for the perimeter wall, and to consider the deployment of sound absorbing materials in the design.

36. A Member opined that it should not be difficult to deploy sound absorbing materials in the construction of the facilities.

***To enhance the ecological connectivity between the Northern and Southern areas***

37. A Member considered that there was a need to include a wildlife corridor outside the perimeter wall. Mr Simon Chan explained that the decision on whether a wildlife corridor was needed should be based on the findings of the EIA study. While EIA study did not reveal the lack of ecological connectivity between the Northern and Southern areas of the Project site, Mr Chan said that a green design of the perimeter wall might have served the ecological purpose of a wildlife corridor.

38. Mr Cheung Kwok-wai replied in the affirmative that the project proponent had satisfied the requirements set out in the EIA Study Brief regarding the coverage of the ecological field surveys. He explained that as the project site was not an ecologically sensitive/important area, the project proponent was required to carry out the necessary field surveys of not less than 4 months but there were no requirements on the season for the surveys.

39. A Member said that it was possible for the project team to have overlooked the need for a wildlife corridor, hence the lack of assessment and coverage of this issue in the EIA report. While he agreed that the green landscape area at the periphery could serve as a wildlife corridor, he suggested engaging ecologists to look into the species to be planted with a view to preclude any barriers for organisms to travel between the Northern and Southern areas of the project site.

40. The Chairperson proposed and Members agreed to include a recommendation to request the project proponent to enhance the ecological connectivity between the Northern and Southern areas of the Project site by adopting a softer and greener design for the perimeter wall.

***To minimize impact on species of conservation interests***

41. Mr Cheung Kwok-wai advised that compensation measures were usually not required for the loss of grassland habitat which was generally of a low ecological value. As butterfly species of conservation interest like Small Three-ring was found within the project site, the 1.02 hectare of new grassland area was proposed as a precautionary measure to provide larval food plant to Small Three-ring rather than to compensate for the loss of the grasslands. In view of the largely available fire-maintained grasslands in the vicinity, he considered that there would not be a great impact on the species. According to Mr Cheung, the project proponent might consider planting appropriate plant species, which were the larval food plants of butterfly species of conservation interest in the new grassland area. The Chairman proposed and Members agreed to include this as one of the conditions.

***To minimize surface runoff***

42. A Member suggested the project proponent to adopt green measures, including the use of environmentally-friendly and permeable paving as far as possible. With a view to reducing surface runoff, another Member suggested a percentage of paving to be permeable and the degree of permeability of the paving should be determined before the detailed design stage.

43. In view of the difficulty to decide on a definite percentage at this stage, Mr K F Tang suggested the project proponent to use permeable paving in the project site as far as practicable. If there was a need for using impermeable paving for any areas within the project site, the project proponent should justify the need to the satisfaction of the DEP. The Chairman proposed and Members agreed to include this as one of the conditions to the project proponent.

44. In response to a Member's suggestion to request the project proponent to use grass paving for the firing ranges, the Chairperson considered that flexibility should be allowed for the project proponent given that a variety of permeable paving could be used. Mr K F Tang said EPD would request the project proponent to confirm whether or not the firing ranges could be turfed to provide permeable surfaces before the next ACE meeting.

*[Post meeting note: CEDD confirmed with EPD on 23 September 2016 that with due considerations to the current ground paving of the two existing firing ranges at Lo Wu and Ma Tso Lung, it was planned for the two proposed firing ranges at Kong Nga Po to use lawn or permeable paving such as grass-crete or grass-grid as far as possible, except at some localized areas such as firing lanes, barricade locations, access paths, etc.]*

***To conduct baseline survey on Golden-headed Cisticola***

45. Regarding a Member's comment on the coverage of the survey transects, the Chairperson invited AFCD to provide advice on whether the methodology of the surveys were able to meet the requirements of the EIA Study Brief. Mr Cheung Kwok-wai confirmed that the project proponent was able to meet the basic requirements set out in the EIA Study Brief and the Technical Memorandum. He said that while the assessment area included a distance of 500 metres from the boundary of the project site, the focus of the surveys should be placed mainly on the project site and the relationship between the project site and the surrounding areas. While the concerned uphill areas at Chow Tin Tsuen and Cheung Po Tau were outside the purview of the project, he said that Members could consider requiring the project proponent to conduct a baseline survey on Golden-headed Cisticola before the commencement of site clearance.

46. The Chairperson suggested and Members supported to include a condition to the project proponent to conduct a baseline survey for Golden-headed Cisticola covering the entire ecological assessment area, i.e. a distance of 500 metres from the boundary of the Project site, before the commencement of site clearance.

47. With no further comments from Members, the Chairperson concluded that Members had the general consensus to endorse the subject EIA report with 4 conditions and 3 recommendations for the captioned EIA report.

*[Post meeting notes: The list of proposed conditions and recommendations were circulated to Members for comments on 19 September 2016.]*

48. The meeting agreed that the project proponent team would not be required to attend the full Council meeting scheduled on 3 October for the report.

**Item 3 : EIA report on “Elevated Pedestrian Corridor in Yuen Long Town Connecting with Long Ping Station”**  
***(ACE-EIA Paper 4/2016)***

**Presentation Session (Open Session)**

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

49. The Chairperson advised that the meeting would discuss the EIA report on “Elevated Pedestrian Corridor in Yuen Long Town Connecting with Long Ping Station”.

50. The Chairperson invited Mr Ian Wan to give a short introduction of the EIA project followed by the consultants giving a powerpoint presentation.

51. Mr Ian Wan gave an overview of the background and need of the Project. He briefed Members that the proposed elevated pedestrian corridor was a government initiative to relieve the pedestrian congestion situation at ground level as well as minimize vehicle-pedestrian conflicts in the Yuen Long Town. The Highways Department (HyD) conducted public engagement exercises in 2009 and 2013 for the pedestrian environment improvement scheme in Yuen Long Town. The proposed scheme of the elevated pedestrian corridor was developed based on majority views of the public. The Yuen Long District Council and some Members of the Legislative Council had expressed support for the Project and requested its early implementation.

52. Mr Franki Chiu briefed on the project constraints, design concept and alignment options, and the construction method of the Project. In addition, he reported on the summary of EIA findings in respect of construction dust, construction noise, water quality, ecology, landscape and visual, waste management, land contamination and cultural heritage aspects.

53. Mr Franki Chiu also provided responses to the public comments received on this Project during the public inspection period from 5 August 2016 to 3 September 2016.

### **Question-and-Answer Session (Open Session)**

#### ***Feasibility of future extensions of the elevated pedestrian corridor***

54. A Member enquired on the estimated cost and the anticipated pedestrian flow for the proposed elevated pedestrian corridor. He observed that the proposed construction of the footbridge was to link the north and the south and questioned if future extensions of the footbridge in connection to the east and west such as the Castle Peak Road and Sports Road would be feasible.

55. Mr Ian Wan stated that the estimated cost of the elevated pedestrian corridor was under review. He stated that a traffic impact assessment (TIA) had been conducted for the Project and the results revealed that the estimated peak hour pedestrian flow on the proposed elevated pedestrian corridor would exceed 10,000 pedestrians per hour.

56. Mr Ray Tang explained that pedestrian flow surveys were conducted within the study area of the Project. The concurrent development project sites in the vicinity of the Project area, in consultation with the Planning Department, had been taken into account in the pedestrian traffic modelling for forecast of pedestrian flow. As for future extension in east-west direction, he indicated that the proposed footbridge deck structure of Verendeel truss could allow flexibility for future connection, where necessary. Mr Tang added that provision would be

made at the southern end of the proposed elevated pedestrian corridor for future extension, where necessary.

57. A Member acknowledged the environmental benefits the Project could bring and he expressed his support for the Project. However, he suggested that the scale of the Project should be enlarged, because without extensions at other ends of the footbridge, pedestrians may be tempted to continue commuting by at-grade footways. As such, he remarked on the importance to allow for future extensions of the proposed elevated corridor to other buildings under the Project.

58. Mr Leung Koon-yu explained that they had explored the possibility of future extensions of the elevated pedestrian corridor. There would be provision at the southern end of the structure to cater for future extension. Yet, the extension of the elevated pedestrian corridor to the Yuen Long South was not justified in short term from traffic point of view. Mr Leung added that Verendeel truss would be adopted for the structure. This would give flexibility for future lateral extensions if necessary.

### ***Landscape and visual impacts***

59. While a Member supported the proposal that beautification works were to be done to enhance the visual impact of the pedestrian interchanges, he asked if it would be possible to incorporate artistic shapes into the design of the planters at pedestrian interchanges instead of a box structure. In response, Mr Ian Wan stated that the design of planters at the pedestrian interchanges would be reviewed in the detailed design stage.

60. A Member was concerned about whether the proposed design of the covered footbridge of 6 metres width had sufficient capacity to accommodate the high volume of pedestrian flow, in particular, he considered that the greening design at the pedestrian interchanges and landscape works on the footpaths along both sides of Yuen Long Town Nullah would reduce the width of the proposed footpaths.

61. Mr Ray Tang stated that the proposed elevated pedestrian corridor with a clear width of 6 metres would be adequate to relieve the pedestrian congestion problem according to the TIA findings. Mr Tang clarified that the areas with most significant pedestrian movements were along Yuen Long On Ning Road, Castle Peak Road – Yuen Long, Kau Yuk Road and their associated pedestrian crossing facilities at street levels, instead of the footpaths alongside the nullah. The existing footpaths on these roads would be widened to cater for the high pedestrian flow. Mr Tang added that each proposed pedestrian interchange would be equipped with pedestrian facilities e.g. staircase, escalator, lift and ramp. After accommodating the pedestrian facilities at the pedestrian interchanges, planters would be provided in the remaining areas in order to

enhance the visual effect of the area.

62. Mr Leung Koon-yu clarified that the proposed construction of pedestrian interchanges would in fact widen the existing footpaths along Yuen Long On Ning Road, Castle Peak Road – Yuen Long, Kau Yuk Road by 3 to 4 metres. Mr Leung added that the width of footpaths along both sides of the nullah would remain unchanged after completion of the Project.

63. A Member enquired whether there would be any modification to at-grade traffic facilities on Yuen Long On Ning Road, Castle Peak Road – Yuen Long, Kau Yuk Road after commissioning of the proposed elevated pedestrian corridor.

64. In reply to a Member's enquiry on traffic control, Mr Ray Tang explained that the Transport Department (TD) had been consulted on the findings of the TIA and he anticipated that the Project would alleviate the pedestrian congestion by diverting pedestrian flow from at-grade footpaths to the proposed elevated pedestrian corridor. While the existing pedestrian crossing facilities at street level would remain in service upon the commissioning of the proposed elevated pedestrian corridor, TD could be consulted to review the necessity of improvement works for the signalized pedestrian crossing facilities such as shortening the green time for pedestrians in order to strike a balance between road-based traffic and pedestrian movements, and to resolve issues on vehicle-pedestrian conflicts.

### ***Hydraulic impacts on the nullah***

65. Making reference to South Korea, a Member suggested that the project proponent should consider carrying out beautification works of the nullah without affecting its hydraulic performance.

66. Mr Ian Wan advised that there was an interfacing project on the beautification works at the Yuen Long Town Nullah being undertaken by the Drainage Services Department (DSD). Despite the fact that both projects were undertaken separately and with different time frames, the project proponent team had been closely coordinating with DSD since the planning stage of the Project with a view to optimizing the landscape features at the pedestrian interchanges and along both sides of the nullah as well as integrating the design to match with the proposed nullah beautification works, such as colour blending with the design concept of the nullah beautification and the surrounding landscape. Despite that the proposed elevated pedestrian corridor would not bring about significant hydraulic impact on the nullah, flood walls would be installed along both sides of the nullah to mitigate the flood risk to an acceptable level.



***Noise impacts***

67. A Member was concerned about the noise impacts and potential water quality impacts associated with the piling works. In addition to noise impacts produced by construction works, the Member questioned if the project proponent would consider limiting the operating hours of the elevated pedestrian corridor for the purpose of reducing noise nuisance after midnight.

68. A Member further suggested that the project proponent should explore ways to restrict the operating hours of the elevated footbridge with the aim to minimize noise impact on the neighbourhood. He said that walking on an elevated footbridge would generate noise nuisance, especially during midnight. Therefore, the project proponent should explore the possibility of limiting the operating hours as a noise control initiative, making reference to the Central-Mid-Levels Escalator and Walkway System.

69. The Member also suggested exploring the possibility of adopting active soundscape measures which was commonly used in other countries to minimize noise impact on nearby residents.

70. Mr Ian Wan said that the practicability of adopting active soundscape measures would be explored in the detailed design stage. Given that there were quite substantial residential developments nearby, the views of the public should be fully considered. The project proponent team would liaise with local community groups for feedback on this suggestion.

71. A Member was of the view that the mitigated construction noise levels at selected representative Noise Sensitive Receivers (NSRs) were excessive despite the fact that they did not exceed the noise standard of 75 dB(A) as stipulated by the Technical Memorandum under the EIA Ordinance.

72. Mr Franki Chiu explained that the construction works would generally be carried out from 0700 to 1900 on days not being a general holiday. The use of Powered Mechanical Equipment (PME) for construction works during restricted hours, i.e. between the hours of 1900 and 0700 the next day, or at any time on a general holiday, would require the contractor to apply for a Construction Noise Permit (CNP). The EIA had recommended different mitigation measures in order to minimize the noise impact on nearby residents during construction phase. Mr Chiu reported that for the residential NSRs, no noise exceedance was predicted during the construction phase. During majority of the construction phase, these NSRs would experience Sound Pressure Level (SPL) not more than 70dB(A).

***Ground Investigation Report***

73. A Member further enquired why only one borehole log was presented in

the EIA report, and questioned if there would be any contingency plans if cavities were found in some rock layers. Mr Franki Chiu clarified that a total of 26 boreholes had been conducted under the Project. However, land-based sediment was only found in one borehole. As only this borehole was environmentally related in consideration of sediment disposal, the borehole log of this environmental borehole alone was included in the EIA.

74. Mr Leung Koon-yu further explained that results of ground investigation (GI) recently conducted revealed that rock head levels in some locations within the Project area were more than 100 metres below ground level. He explained that friction pre-bored H piles would be proposed. While the cavities were anticipated at approximately 60 metres below ground level, the proposed pile length would be approximately 40 metres, should be sufficient to support the light-weight structure and the risk of encountering cavities could be minimized.

#### ***Roofing of the elevated pedestrian corridor***

75. A Member asked if the project proponent would consider making a better use of the roofing of the footbridge by greening or the use of photovoltaic (PV) panels. Mr Leung Koon-yu explained that green roof with PV panels were not proposed because this would contradict the objective of weight reduction of the structure at the scheduled area where complex geological conditions were anticipated. Besides, there would also be issues on the maintenance and management of the green roof to be addressed.

76. A Member suggested the project proponent to consider the incorporation of integrated photovoltaic (IPV), other means of renewable energy and/or other green measures into the design of the elevated pedestrian corridor with the aim to achieve carbon neutral within the operation phase of the corridor.

77. A Member asked about the percentage of low-emissivity glass (low-e glass) used in the proposed construction of the roofing. Mr Leung Koon-yu replied that it was less than 30% and such percentage was considered appropriate according to past experience. He further explained that the area of low-e glass on roof had to be carefully designed taking into consideration sufficient intake of natural light and avoidance of excessive heat gain. Otherwise, this could be prone to complaints from the public.

#### ***Visual impacts***

78. A Member supported the design of the Project which adopted an elevated steel truss structure for the purpose of reducing the weight and to avoid blocking the view. He suggested that the use of low-e glass should be avoided as it would generate too much heat. In addition, he questioned how the design of the

proposed elevated footbridge as a structure situated in the middle of the nullah could avoid visibility blocking and even enhancing the visual effect.

79. Mr Edward Leung said that the visual enhancement mainly focused on areas where the visual sensitive receivers (VSRs) were located at public thoroughfare. Whereas for VSRs located at residential areas or road-crossing intersections, it was stated in the EIA report that the effect would not be profound.

80. The Chairperson questioned the justification for the selection of alignment Option 3 amongst all alignment options as this would cause largest visual obstruction to leisure space users and travellers on footpaths along the nullah, despite the fact that Option 3 would pose lower visual impact on the VSRs.

### ***Selection of Preferred Alignment Option***

81. Mr Leung Koon-yu explained that for Option 3, the column structures within the nullah could be better streamlined as compared with column structures located adjacent to the nullah wall as suggested by a Member, and thus could minimize the hydraulic impact. In addition, the footbridge aligning along east or west side of the nullah would be much closer to either side of the sensitive receivers located at residential buildings, which was not preferable.

82. Mr Leung Koon-yu further explained that other options which adopted fewer substructures within the nullah had been considered and this could minimize the hydraulic impact on the nullah. However, adopting the long span option meant a larger scale of supporting system at pedestrian interchanges would be required and massive structure such as tall steel arch towers had to be constructed. This would result in more significant visual impact on the sensitive receivers next to the pedestrian interchanges and existing carriageways. Therefore, long span options were not adopted.

### ***Flood risk***

83. A Member enquired on the flood risk the construction of the Project would have. To mitigate the Project's impact on drainage performance, Mr Leung Koon-yu explained that even without the Project, there had already been flood risk in Yuen Long Town Nullah and a study conducted by DSD had suggested the installation of flood walls along the nullah as a flood protection measure. Given the programme matching, flood walls were proposed to be installed under this Project in one-go. Apart from installation of flood walls, the existing columns supporting the carriageways would also be modified and streamlined so that the head loss of flood water within the nullah could be significantly reduced. Though the columns of the proposed elevated pedestrian corridor to be constructed within the nullah would unavoidably reduce the

capacity of the existing nullah, the above-mentioned measures were considered effective to mitigate the flood risk to an acceptable level. Furthermore, construction works within the nullah would be carried out during dry seasons as far as practicable with a view to minimizing the hydraulic impact.

***Synergy between government departments***

84. In reply to a Member's question concerning synergy between DSD and HyD, Mr Ian Wan said that HyD had been closely coordinated with DSD since the planning stage of the Project with a view to integrating the proposed elevated pedestrian corridor with the proposed nullah beautification works. For example, the project team had optimized the layout of the pedestrian facilities at the pedestrian interchanges in order to minimize their footprints and hence the extent of the nullah to be decked. The greening opportunity at the pedestrian interchanges and along both sides of the nullah had also been optimized in order to blend with the design concept of the proposed nullah beautification works. Besides, a total of four viewing platforms would be constructed at the main spans of the elevated pedestrian corridor to allow pedestrians to enjoy the views alongside the nullah.

***Design concept of the Project***

85. A Member questioned the reason for not using steel in the construction of the whole footbridge which would reduce the weight of the footbridge. Mr Leung Koon-yu clarified that the proposed footbridge was a composite structure of steel and concrete, with a view to maximizing the use of steel in the proposed construction as much as practicable.

86. A Member suggested that the project proponent might make reference to creative designs abroad instead of adopting the old-fashioned design of a Verendeel truss. He asked if it would be feasible to review the architectural design of the proposed elevated pedestrian corridor so that it would become a piece of artwork in the Yuen Long District.

87. A Member stressed the importance for this elevated corridor to be a feature in the Yuen Long District. He questioned if it would be feasible to widen the footbridge or include some observation towers to facilitate pedestrians to enjoy the view, in addition to constructing observation decks at the junctions.

88. Mr Leung Koon-yu explained that various factors had been taken into account when designing the elevated pedestrian corridor such as the hydraulic impact, the span length, existence of cavities beneath the ground surface and loading of the structure. In view of the above considerations, the current design proposal was considered the most optimal among other design options.

89. Mr Leung Koon-yu further explained the rationale behind the design of the two viewing platforms constructed on each side of the elevated pedestrian corridor. These viewing platforms were similar to balconies and were designed with a view to allowing pedestrians to enjoy the street view and the nullah to be beautified in the future.

***Water quality and odour***

90. A Member enquired on improvements works of the nullah and measures to enhance the water quality. He questioned if the Project would improve the water quality and odour issues in the Town Centre Section of the nullah.

91. Mr Leung Koon-yu explained that the issues in respect of the improvement of water quality and odour of the nullah were under the jurisdiction of the DSD's nullah improvement project, which were outside the scope of this Project.

92. The Chairperson thanked the project proponent and the consultants for their presentation.

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

**Internal Discussion Session**

93. The Chairperson advised that the EIA Subcommittee could make recommendations to ACE on the EIA report with the following approach:

- (i) endorse the EIA report without condition; or
- (ii) endorse the EIA report with conditions and details of the proposed conditions; or
- (iii) defer the decision to the full Council for further consideration – highlight issues or reasons for not reaching a consensus or issues to be further considered by the full Council; or
- (iv) reject the EIA report and inform the project proponent if the right to go to the full Council.

***To review the architectural design of the corridor***

94. A Member stated that visual impact should be one of the main issues of the Project. Although the project proponent had made use of steel and truss structure for the purpose of reducing the weight of the proposed footbridge, it was feasible to review the design to enable it to become a featured art piece in Yuen Long District. He proposed to impose a condition on the project proponent to review the design of the footbridge to enhance the urban landscape aesthetically.

95. A Member suggested that, in connection with the design of the bridge, a recommendation would be more appropriate on this matter since the constraints and limitations of the project remained unknown to Members. He believed that the project proponent had considered all other options such as the design of a cable-stayed bridge.

96. The Chairperson said that assessing whether the design of the footbridge was artistic or aesthetic would be a subjective test. She concluded that the recommendation would be to review the architectural design of the proposed elevated pedestrian corridor with a view to enhancing the city landscape aesthetically and exploring the possibilities for it to be a potential landmark design in the district.

***To achieve a carbon neutral design***

97. A Member proposed and Members agreed that there should be a recommendation for the project proponent to consider the use of integrated photovoltaic (IPV) panels and other green measures in the construction of the elevated pedestrian corridor with an aim to adopting a carbon neutral design.

***To minimize noise impacts***

98. A Member proposed and Members supported the imposition of a recommendation on the project proponent to explore the use of active soundscape measures in order to minimize noise impacts associated with the construction and operational phases of the project.

99. With no further comments from Members, the Chairperson concluded that Members had the general consensus to endorse the subject EIA report with 3 recommendations for the captioned EIA report.

*[Post meeting note: The list of proposed conditions and recommendations were circulated to Members for comments on 19 September 2016.]*

100. The meeting agreed that the project proponent team would not be required to attend the full Council meeting scheduled on 3 October for the report.

**Item 4 : Any other business**

101. The Chairperson reminded Members that a site visit to the Hung Shui Kiu New Development Area was arranged on 6 October 2016. So far, 14 members including 5 non-EIASC members had indicated their interest to join the visit.

**Item 5 : Date of next meeting**

102. The Chairperson advised Members that the next Subcommittee meeting was scheduled on 17 October 2016 to discuss two EIA reports, namely “Sha Tin Cavern Sewage Treatment Works” and “Kai Tak Multi-purpose Sports Complex”.

**EIA Subcommittee Secretariat  
September 2016**