Annex B

EIA report on
"Pilot Project for Public-Private Partnership Conservation Scheme at Sha Lo Tung Valley, Tai Po"

A summary of issues discussed by the EIA Subcommittee at the meeting on 18 April 2011

The Environmental Impact Assessment (EIA) Subcommittee discussed the EIA report on "Pilot Project for Public-Private Partnership Conservation Scheme at Sha Lo Tung Valley, Tai Po" at its meeting on 18 April 2011. The issues discussed are summarized below.

Background of the project

2. On the background of the Public-Private Partnership (PPP) Pilot Scheme, Environmental Protection Department (EPD) advised that the Government conducted a comprehensive review of the nature conservation policy and introduced the New Nature Conservation Policy (NNCP) in November 2004 in order to identify practicable ways to better achieve the nature conservation objectives, and in particular, to enhance conservation of ecologically important sites which were in private ownership. Under the PPP Pilot Scheme, development of an agreed scale would be allowed at the ecologically less sensitive portion of any of the 12 priority sites identified, provided that the project proponent undertook to conserve and manage the rest of the site that was ecologically more sensitive on a long-term basis. In respect of long-term financial resources, the project proponent had undertaken in the report to inject a lump sum into the Government Statutory Fund which would generate recurrently sufficient financial resources for the long-term maintenance costs, including engagement of green groups. Nonetheless, the overall management responsibility would still lie on the project proponent. From the perspective of the EIA mechanism, the focus was to assess the environmental acceptability of the project. Subsequent to the EIA process, the project proponent had to take forward the project under other statutory processes, such as amendments of outline zoning plan and land grant.

3. Agriculture, Fisheries and Conservation Department (AFCD) further advised that extensive consultation had been conducted before launching the NNCP in 2004. The proposed project in Sha Lo Tung (SLT) was one of the applications received under the PPP Pilot Scheme. The long-term sustainability of the project in achieving the objective of regulating, protecting and managing natural resources that were important

for the conservation of biodiversity was a key concern of the Administration. Some key principles on the financial arrangements and management framework had been included in the EIA report. The detailed arrangements had yet to be worked out. One of the key considerations was the estimated recurrent costs for the implementation of the Conservation Management Plan of the proposed Ecological Reserve (ER).

Project design

4. On the possibility of locating the Multi-cultural Educational Retreat (MCER) cum Columbarium Complex at the foot of the hill to minimize the scale of road works and tree cutting, the project proponent explained that the objective of upgrading SLT Road was to bring the existing SLT Road up to the minimum road safety standard for public access to the ER. Regardless of the location of the Complex, SLT Road would need to be upgraded for public access to the ER. The road improvement works could not be scaled down as the current proposal could only meet the minimum standard in complying road safety standards for a single-track access road with emergency access. Moreover, the chance of landslides along the substandard SLT Road would be significantly reduced with the upgrading works.

5. On the possibility of locating the car park at the southern part of the development site to avoid road works at the northern part, the project proponent explained that the purpose of putting the car park and Nature Interpretation Centre (NIC) near the ER was to achieve synergy whereby the public could park to readily access the ER conveniently. Most importantly, there was technical difficulty in identifying a large flat area at southern part of the development site for the parking area and turnaround. There was also the matter of providing a turning area for emergency vehicles at the top of the road. The existing SLT Road ended further north and the length had been reduced after the upgrading works. Given the requirements associated with the upgrading of SLT Road, the proposed location was the best option for a car park and turnaround which was a low lying area in relation to the nearby catchment areas and would avoid runoff from the upgraded road entering the hinterland and natural stream system.

6. On road access to areas outside the development site, the project proponent confirmed that all visitors had to park their cars in the car park within the development site and there would not be any road access into the ER. Moreover, there would not be any encroachment of the development onto the country park.

7. Regarding the dining hall in the development site, the project proponent confirmed that the dining hall would be used by internal staff only and there would not be any restaurant for visitors in the development site.

8. Regarding quarters in the development site, the project proponent explained that the quarters would accommodate the Master of the MCER, pupils and resident staff in the site and would not be used for resort purposes. The quarters were two-storeyed independent structures hidden behind the knoll following the natural typography to reduce visual impacts. As regards the guided tours, only day visits to the NIC and ER would be organized. No visitors or staff of the Conservation Agent would stay in the quarters.

9. On the height of the structures in the development site, the project proponent explained that the floor-to-floor height of the NIC, Columbarium and MCER was approximately 4.5 m, 3.4 m and 7 to 8 m respectively. The maximum building height of the NIC, Columbarium and MCER was 203 mPD, 209.9 mPD and 203 mPD respectively. The buildings were contoured largely around the terrain profile and the height was kept below the knoll ridge of 209 mPD to reduce visual impacts.

Traffic impact assessment

10. On the validity of making reference to an old columbarium (Tsing Chung Sin Yuen) for projecting vehicle trips to a newly developed Columbarium, the project proponent explained that the data collected from Tsing Chung Sin Yuen which was located near Tsing Chung Koon was used as a reference for normal days only. Under the Traffic Impact Assessment, two scenarios had been considered, i.e. traffic flow on normal days and that on festival days. As for festival days, extensive surveys were conducted to capture the total number of visitors to three columbaria, namely Yuen Yuen Institute, Tsing Chung Sin Yuen and Junk Bay Chinese Permanent Cemetery. The survey data was used to estimate the number of festival days that special traffic arrangement would be required. The findings showed that taking into account the carrying capacity of 7,400 visitors per day for the upgraded SLT Road, special traffic arrangement would be required for 14 days (i.e. Ching Ming Festival, two weekends before and two weekends after the Ching Ming Festival as well as Chung Yeung Festival, one weekend before and one weekend after the Chung Yeung Festival). It should be noted that the carrying capacity would only make use of about 66% of the full capacity of SLT Road.

11. On the basis for calculating 7,400 visitors per day on festival days, the project proponent explained that survey results revealed that each niche would have around three visitors on average during the Ching Ming Festival period. With the selling of 20,000 niches under Class A (i.e. buyers might visit the Columbarium at any time), the estimated number of visitors during festival days was about 60,000. While the peak visitor number on the Ching Ming day was about 11,000, only 7,400 visitors per day could visit the Columbarium with prior booking arrangement and the rest of the visitors could enjoy their visits on the weekends immediately before or after Ching Ming day.

Separately, the survey revealed that special traffic arrangements would be required on 9 festival days during Ching Ming and 5 festival days during Chung Yeung. Administrative arrangement would be made to contain the maximum number of visitors to 7,400 per day. The remaining Class B visitors who could not be catered for during the festival periods could visit on non-festival days during the year.

12. On measures to manage about 7,400 visitors per day during festival days, the project proponent explained that the maximum number of visitors allowed at any one time within the Columbarium was 2,500 persons over a two-hour period. Based on the prediction that each visitor would stay in the Columbarium for one to two hours, only up to 2,000 visitors would be staying in the Columbarium at any one time. Moreover, access to the Columbarium would be limited to shuttle bus service through a prior booking system. Walk-in visitors would not be allowed and parking problem was not anticipated. The restrictions would be set out clearly on the sale agreements of the niches.

13. On measures to control the traffic during festival days, the project proponent explained that they had meetings with the Transport Department and Hong Kong Police Force and committed that sufficient management staff would be deployed and stand-by vehicles would be stationed to ensure smooth traffic flow and handle emergency incidents. An extensive traffic survey would be conducted during each festive period for the purpose of obtaining a more accurate forecast in the next festive period.

14. Regarding the cumulative impacts arising from the traffic flow to Fung Yuen nearby, the project proponent explained that the traffic impact assessment conducted for 2016 had taken into account the traffic flow to Fung Yuen.

15. On transportation arrangement during non-festival days, the project proponent explained that visitors could drive their own cars to the Columbarium but advance booking of the private car parks would be required. Alternatively, limited number of shuttle bus service (6 vehicle trips per hour) would be provided from designated pick-up points.

16. On the control of visitors who might hike to the ER during festival days, the project proponent explained that the prior-booking arrangement of shuttle bus could serve to control the number of visitors going to the Columbarium. If visitors wanted to go to the ER, they were required to walk up there from the entrance of SLT Road as shuttle bus service to the ER would not be provided. The NIC would be closed during festival days. About 30 conservation ambassadors would be deployed to advise visitors on the rules in the ER.

17. On safety concern of having about 66 vehicle trips per hour on a single track access road during festival days, the project proponent explained that a single-track access road, according to Transport Planning and Design Manual, could accommodate two-way flows of 100 vehicles per hour. The proposed arrangement on festival days would only make use of 66% of the full capacity of SLT Road. As for hikers, the road improvement works would provide a verge of 1.5 m wide which would be fenced off with safety fence. In addition, about 50 staff would be deployed along the road to ensure public safety and monitor the overall traffic arrangements.

Air quality impacts

18. On the concerns over the impacts of vehicular emissions on hikers in view of the high frequency of shuttle bus during festival days, the project proponent explained that the air quality assessment was conducted in accordance with the requirements under the Technical Memorandum on EIA Process (TM). The hikers were not air sensitive receivers under the TM. Impacts on them would be minimal in view of the transient and infrequent nature. To reduce air emission impacts, good practices such as switching off idling engines would be adopted. The estimated 66 vehicle trips per hour would only apply to 14 festival days per year. To meet the transportation demand from visitors to the Columbarium during the festive periods, sufficient number of shuttle bus trips had to be provided.

19. Some Members expressed reservation for not including hikers as air sensitive receivers in the air quality assessment, while recognizing that the air quality impact assessment was conducted in accordance with the TM.

20. Some Members suggested using electric vehicles for shuttle bus service to minimize air quality impacts. The project proponent explained that there would be two 24-seat electric vehicles providing shuttle service on non-festival days. During festival days, buses had to be hired from coach suppliers in view of the high demand and it would be difficult to control the type of vehicles. They would try to use electric vehicles as far as practicable.

21. On measures to prevent burning of effigies and paper offerings, the project proponent explained that prohibition of burning of effigies, paper offerings, candles and incense would be set out clearly in the sales and purchase agreement for buying the niches. Staff would be stationed to enforce the rules and in-house management measures such as signage would be put in place to remind visitors.

Noise impacts

22. Regarding the noise impacts from frequent traffic along SLT Road on hikers during festival days, the project proponent explained that noise impact assessment on existing noise sensitive receivers, including village houses at Tin Sam, Fung Yuen, Mak Uk, Fung Yuen Lo Tsuen and Ha Hang Government Staff Quarters, was conducted. The predicted noise levels complied with the standards. In accordance with the TM, hikers were not noise sensitive receivers.

Ecological impacts

23. On measures to prevent potential hill fire caused by grave sweepers in the ER, the project proponent explained that agreement had been reached with descendents of the graves and about 80% of the graves had been relocated to designated burial grounds outside the Valley. There were only four graves remaining within the ER. The situation would be much improved upon completion of the project. Overgrown weeds around the graves would be removed. There would be staff patrolling the site and a fire suppression team would be set up to minimize the occurrence of hill fire.

24. On details of the fire suppression programme, the project proponent explained that an aggressive fire suppression programme would be implemented. Apart from the requirement of no burning of effigies, paper offerings and candles in the development site, the programme included creation of firebreaks around the ER by planting fire resistant vegetation, intensive patrolling by trained personnel and volunteers during festival days, provision of water for sweepers to the four grave sites as well as close liaison with relevant government departments and non-governmental organizations for law enforcement and public education. The project proponent undertook to work with AFCD and Fire Services Department in drawing up a more detailed fire prevention and suppression plan.

25. On the loss of vegetation along SLT Road, the project proponent explained that the impacts of the road upgrading works on vegetation were evaluated based on habitat loss. Along SLT Road, there would be a permanent loss of approximately 0.2 ha of secondary woodland, 0.65 ha of grassland scrubland mosaic and 0.43 ha of plantation. As a mitigation measure, a 2 ha of on-site compensatory planting would be provided. Plant species of conservation interest would be transplanted to appropriate receptor sites.

26. On the number of trees affected, the project proponent explained that 301 (out of 673 trees surveyed) were required to be felled for SLT Road Improvement, 368 would be retained and 4 Incense Trees would be transplanted. A total of 20 Incense Trees

were identified and 16 would be retained. The compensation ratio of the trees within the development site and along the SLT Road would be 5:1 and 3:1 respectively.

27. On the possibility of planting trees along SLT Road for providing better shade for hikers, the project proponent explained that as the main focus of the improvement works was to minimize the width of the road for minimal disturbance, there would be little room for additional planting. To enhance greenery along the road, vegetation would be planted on the slope terrain. Along the verge for hikers, there was in parts existing secondary woodland which was retained to provide shade. Feasibility for more tree planting would be seriously considered having regard to the road alignment.

Water quality impacts

28. On the drainage system to minimize potential runoff and sewage overflow to ecologically sensitive areas, the project proponent explained that a package of measures was proposed to be implemented during construction in the design of the drainage system. Earthworks would be restricted to dry seasons. A temporary peripheral drainage system surrounding the works areas would be built to direct surface run-off from the construction site. Continuous site hoarding and chain-link fence would be erected along the temporary drainage system enclosing the entire project site. Upon completion of SLT Road upgrading works, all construction run-off would be collected by the temporary drainage system with sufficient number of sand traps and discharge into the newly constructed stormwater drainage system along the improved SLT Road to the existing Tai Po drainage system. There would also be a hinterland drainage system to stop hinterland runoff.

29. On the return period in the design of the drainage system, the project proponent explained that the design of the temporary drainage system was based on 1 in 20 years return period which exceeded the normal requirement of 1 in 10 years return period. The design of the permanent drainage system was based on a range of scenarios with a spectrum of return periods from 1 in 2 years to 1 in 200 years as there were different characteristics of natural run-off for the existing and development conditions under different return periods. The aim was to minimise the change in total run-off volume and to ensure the peak run-off intensity entering the natural streams due to the presence of the development and the upgraded SLT Road was not increased whilst maintaining existing water quality.

30. Regarding the standby pump, the project proponent explained that construction run-off collected would be discharged to temporary storage tanks in which a submersible pump would operate to continuously pump the surface run-off to the

proposed sand trap. A spare submersible pump with additional 10% standby pumping capacity would be put in place in the storage tank for contingency purpose for pumping the water from the site to the pipes along SLT Road.

31. Regarding the run-off generated by vehicles along SLT Road, the project proponent explained that all vehicle run-off would be intercepted and pumped back to the existing storm water system.

32. On the design capacity of the wastewater treatment facilities, the project proponent explained that wastewater would be discharged through twin sewerage rising mains directly connected to Tai Po Sewage Treatment Works. In case of malfunctioning of the pumping system, the proposed storage tank with a minimum capacity of 180 m^3 would provide a buffer of three days withholding time to cater for abrupt increase in generated sewage during festival days.

Development pressure in SLT Valley

33. On the possibility of having indigenous villagers claiming their rights to apply for building new small houses in ER, the project proponent explained that 96% of private land in SLT Valley was owned by the project proponent. Mutual agreements had been reached between the project proponent and villagers to divert 160 house demand outside SLT Valley. Within the "Village" zone (V zone), there were only four building lots of about 400 square feet each not owned by the project proponent. Application to the Town Planning Board would be required for any alteration, demolition or redevelopment of buildings existed before 1997 within the V zone. As such, the chance of building redevelopments within SLT Valley would be very slim.

Financial arrangement for conservation management

34. On the upfront capital to be injected by the project proponent for conservation of the ER, the project proponent explained that upon obtaining approvals of all concession development and agreement on the premium payable, a "start-up capital" of $50 million would be provided by the proponent to cover the set up cost for ER, NIC and infrastructure improvements. A "long-term capital" of about $120 million would be injected to the Government Statutory Fund for long-term conservation management and operational costs. The amount of funding was proposed based on an estimation of the operational cost of the ER and the normal rate of return. The fund should generate sufficient annual income for drawdown to cover recurrent expenditure on conservation operations of the ER.

35. On whether the NIC and MCER were revenue-generating, the project

proponent explained that the NIC was part of the ER and thus was not revenue-generating. The MCER was a non-profit making integrated facility of the Columbarium Complex which would not be developed into a resort-type facility. It would be a religious institution for providing in-residence, moral and spiritual training to dedicated pupils. The educational component of the MCER would complement the spiritual side by encouraging the public to revisit Confucius principles on nature, relationships and ancestral worship. No niches or nameplates for worshipping would be placed inside the MCER and hence the primary source of revenue was from the Columbarium.

Conservation agent

36. On the role and manpower resources of Green Power as a Conservation Agent for the project, the project proponent explained that Green Power was a partner in providing advice on the conservation aspect of the project. In terms of manpower, Green Power had a team led by a Scientific Director to work on nature conservation. The need for additional manpower would depend on the staffing requirements under the Conservation Management Plan. As the Conservation Agent, Green Power would implement the Conservation Management Plan in order to ensure the conservation of biodiversity and promote environmental education. Irregularities would be reported to relevant government authorities.

37. On the funding arrangement for carrying out the Conservation Management Plan, the project proponent explained that as proposed in the EIA report, the Conservation Agent would apply for funding from the Government Statutory Fund to implement the Conservation Management Plan. The Government Statutory Fund would assess justifications on the amount of funds applied and monitor the capital flow under the budget.

Heritage conservation

38. On the possibility of adding heritage conservation elements into the project, the project proponent explained that the project mainly focused on nature conservation as a Pilot Scheme under the PPP. Some Members considered that preserving the Fung Shui wood could serve only part of the heritage conservation and suggested preserving the graded historical buildings of the Hakka culture in the site, such as in the form of museums or exhibition halls, with a view to achieving environmental and cultural preservation of the ethnic group in totality. This would serve educational purpose and set a good example to other projects. The project proponent undertook to consider the suggestion on the condition that the structure of the graded buildings would not be changed. For example, the guided tour of the ER could include the element of ethnic

culture. In fact, similar ideas had been proposed and discussed with the AFCD earlier.

Environmental monitoring and auditing

39. On additional monitoring mechanism in view of the special nature of the PPP project, AFCD advised that on top of the usual environmental monitoring and auditing system set out in the EIA report, there would be a control mechanism by the Government Statutory Fund and government departments. The Conservation Agent had to apply for funds from the Government Statutory Fund for a term of several years and submit regular reports to the Statutory Fund as well as EPD and AFCD. AFCD staff would also conduct regular visits to monitor the site. Some Members suggested the Government Statutory Fund setting up a monitoring group to ensure the objectives of conserving and protecting the natural habitats of the site could be achieved.

Conclusion

40. After discussion, the Subcommittee agreed to recommend to the full Council that the EIA report could be endorsed with some proposed conditions. It also made some recommendations. The Subcommittee agreed that there was no need to invite the project proponent to attend the full Council meeting.