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ACE Paper 19/2008

For advice

**Report on the 103rd
Environmental Impact Assessment Subcommittee Meeting**

INTRODUCTION

On 19 May 2008, the Environmental Impact Assessment (EIA) Subcommittee considered the EIA report on “Proposed Comprehensive Development at Wo Shang Wai, Yuen Long” (ACE-EIA Paper 3/2008 refers) submitted by the Profit Point Enterprises Limited.

ADVICE SOUGHT

2. Members are requested to advise whether the EIA report should be endorsed.

VIEWS OF THE SUBCOMMITTEE

Need for the Project

3. The purpose of the project is to provide a residential development with the provision of a Wetland Restoration Area (WRA) to buffer away from the Wetland Conservation Area to the north of the site.

Description of the project

4. The project area covers approximately 21 ha. Its location is shown in

the attached **Figure 1**. As revealed in the Study of the Ecological Value of Fishponds in 1997, the project area was filled by 1991. Since then, the north-eastern side of the site has been used as open storage while the remaining area has remained vacant. The existing site consists of open storage for containers and lorry parking, bare ground, grassland, seasonal and fresh water marsh and drainage ditches, and is abutted by Palm Springs, Royal Palms and Wo Shang Wai Village.

5. The project comprises the following key features –

- a) a low-rise residential development containing about 350 units of 2 to 4-storey houses;
- b) a WRA of about 4.74 ha to the north of the project area; and
- c) associated works such as roads and drains within the project area.

6. The project is classified as a designated project under Item P1, Schedule 2 of the EIA Ordinance (EIAO), i.e. *“A residential or recreational development, other than New Territories exempted houses within Deep Bay Buffer Zone 1 or 2”*.

7. The EIA study has considered alternative development arrangements by taking into account the bird flight path data gathered from the ecological survey and the consideration of the effects of various building heights and layout arrangements on bird flight paths. Disturbance to the proposed wetland was minimised through screening and buffering, and consideration of the permitted plot ratio in respect of the surrounding developments and skyline. Visual intrusion of the buildings in respect of the neighbouring developments was also considered. The preferred option of development is illustrated in **Figure 2**.

Members' views

8. Members noted that the public inspection period of the EIA report was from 14 April to 13 May 2008. Comments received by the Environmental Protection Department (EPD) were circulated to Members for reference before the meeting.

9. Members agreed that the discussion should focus on the options of

development layout plan, landscape and visual impacts, construction phase impacts, water quality impacts and wetland restoration plan.

Options of development layout plan

10. On the options of development layout plan, the project proponent team explained that the project started with over 30 development concepts by taking into consideration key defining features, including ecological, planning, landscape and site constraints of the site. The “bubble diagram” in Figure 2.2 of the EIA report set out the development principles and framework of relationship of key components within the site. Development layout plans considered included “rectangular”, “linear”, “horseshoes” and “finger” layouts. The initial “finger” concept involved streams of water from the wetland penetrating into the residential development. Having consulted the expertise and green groups, it was found that there were operational difficulties, such as mosquito breeding in stagnant water and requirement of frequent mechanical pumping. The areas between the “fingers” of residential development were changed to landscape planting. While the landscape planting was not part of the WRA, it could serve additional ecological functions of attracting butterflies, dragonflies and other ecological resources. The preferred option aimed to provide a balanced development by maximizing the utilization of ecological resources and complying with the planning intent and framework.

11. Some Members considered that a square rather than an elongated configuration of the WRA would better serve the purpose of enhancing the ecological value and wetland species. The project proponent team explained that the proposed design of the WRA in linear shape was to meet the requirement of the Study Brief for providing a buffer between residential development and the Wetland Conservation Area. Moreover, the WRA was not in isolation and it was a part of the wetland system in the whole area. The design of the WRA would fully achieve the requirement.

Landscape and visual impacts

12. On the design and layout of buildings within the residential area, the project proponent team advised that a number of factors were taken into consideration in the design, including ecological resources in the area, height and form of buildings in the planning context, harmony with the wetland area, aspiration of people in the vicinity as well as the planning requirement that new buildings should be located farthest away from Deep Bay. The maximum building height

permitted under the approved outline zoning plan was 6 storeys including car park. Feedback in the public consultation process showed that nearby residents and green groups were not in favour of 6-storey buildings. The building height was trimmed to 2.5 to 4 storeys which was more compatible with the development in the area.

13. Some Members considered that increasing the height of the buildings to 6 storeys could reduce the footprint and would enlarge the wetland area as similar to the proposed high-rise buildings at Fung Lok Wai in Yuen Long which would not impose adverse impacts on the natural environment. The project proponent team explained that the configuration of the two developments was very different. The Fung Lok Wai development was at the hillside while the Wo Shang Wai development was in the middle of a flat plain. Increasing the height of the residential development at Wo Shang Wai to 6 storeys would have ecological and other impacts. For example, the flight path of birds would be affected and the visual and noise impacts to neighbouring developments would be increased. Moreover, the number of units in total would be increased with the reduction of floor area of each unit and thus the population accommodated in the site would be increased.

14. On the distribution of buildings with different heights in the preferred option, the project proponent team explained that the buildings included 2.5, 3 and 4 storeys and the distribution of these buildings had taken into account visual impacts on neighbouring developments and feedbacks collected in the public consultation process. The height and density of the buildings decreased gradually towards the WRA to minimize disturbance to the area near the WRA. The 4-storey buildings mainly clustered in the centre of the core development area and on the boundaries of the eastern and south-western sides of the site. A line of 2.5/3-storey buildings were put at the southern site boundary to screen the visual impacts of the 4-storey buildings in the core area on the adjacent development in Wo Shang Wai village on the southern side. The 4-storey buildings at the boundaries near the Royal Palms at the eastern side and near Palm Springs at the south-western side were compatible with the layout and orientation of the houses with their side walls facing the development site.

15. Some Members noted some concerns about the proposed mitigation measures of tree planting along the boundary of the development site. The project proponent team explained that the landscape plan of the site was designed in the context of adjacent residential developments and existing landscape features. The buildings along the boundary were set back as far as possible to allow a landscape buffer for a mix of shrubs and trees to provide screening effect. Moreover, the

buildings were villas in the form of detached houses which would not form a continuous building wall.

16. On the management plan of trees, the project proponent team advised that appropriate species of trees and shrubs would be selected carefully in the design stage and a maintenance regime would be put in place during the planting stage. In the long-term, there would be a landscape management plan for the management and maintenance of trees and shrubs to ensure their sustained functions of screening and landscaping.

Construction phase impacts

17. On the impacts of the construction on the wetland, the project proponent team advised that the experience learnt from the construction of the Lok Ma Chau Spur Line was very useful and would be employed to the current project. To minimize disturbance to the wetland, the construction of the WRA would be scheduled at the commencement of the construction period not only to reduce the duration of disturbance impacts but also to minimise the duration of temporary habitat loss within the project site. A temporary impermeable barrier would be put between the wetland and the construction site to minimize visual intrusion to wildlife. Birds were more sensitive to observing sudden physical activities and less sensitive to regular noise impacts. Moreover, human activities would be kept out of the wetland area by ensuring good site practice of the construction team.

18. Some Members noted some concerns about the relatively long construction period and possible disturbance so caused. The project proponent team explained that the construction period of about five years was required in view of the relatively large works site and the need to divide the work fronts into smaller areas to minimize the extent of disturbance at any one time. A series of mitigation measures would be adopted to minimize possible disturbance, including suitable programming of works and selection of quiet powered mechanical equipment. To minimize residual impacts of dust, noise and physical viewing of the construction site, mitigation measures, such as temporary noise barriers and site hoardings, would be put in place. To meet the special ecological and landscape requirements of the construction works, a barrier of various heights to a maximum of 10 m made up of translucent and non-reflective materials would be used. Moreover, majority of the residents in the neighbouring developments would not have direct line of sight to the construction site.

19. On the possibility of reducing the construction period and suggestion of using methods such as pre-casting of construction materials to shorten the construction time and minimize nuisance on site, the project proponent team assured Members that every effort would be made, where feasible, to shorten the construction period and minimize nuisance. It was also in their interest to explore means to cut short the construction programme from a financial perspective. As the construction works would be conducted in phases and the part which would cause high level of disturbance would mainly be the construction works in the core area. Even if the overall period of construction would be reduced, the duration of construction works in the core area could not be reduced. Moreover, reducing the overall construction period would mean a more intense construction programme. By having works in different parts of the site overlapping each other, the level of disturbance at one time would be increased and more sensitive receivers would be affected.

20. On the suggestion of completing the construction works of the core area in the early stage so that the hoardings would be moved further away from the nearby residents, the project proponent team advised that the detailed works schedule would be optimized and refined in the detailed design stage taking into account impacts on sensitive receivers and ecological requirements.

21. On the suggestion of providing a landscaping buffer fronting the hoardings such as a row of bamboos, the project proponent team advised that this would not comply with the requirement of having the whole construction site being fenced-off as stipulated by the Buildings Authority.

22. On possible runoff of wastewater from the construction site to the WRA, the project proponent team advised that the wastewater would be collected in chemical toilets and other mitigation measures such as boundary bunds would be put in place to prevent runoff from the site. On wastewater reuse during the construction phase, the team advised that wastewater would be reused as far as possible, such as for dust suppression during dry seasons. This was in line with the principle of sustainable development adopted by the project in both construction and operation phases.

23. On the disposal of sediment soil excavated from the WRA and concern about illegal dumping, the project proponent team explained that whether the sediment soil could be reused on site or disposed off-site would depend on the nature and quality of the sediment soil. The sediment soil would be used for site

levelling as far as possible. In case off-site disposal was unavoidable, all stipulated requirements would be strictly followed and monitored to ensure no illegal dumping. A trip-ticket system would also be adopted to manage the construction and demolition waste.

Water quality impacts

24. On the control of storm water discharge during rainy seasons, the project proponent team advised that a drainage management plan would be put in place under the Environmental Management and Audit (EM&A) programme to prevent potential impacts of storm water runoff and possible flooding. Measures would include the use of boundary bunds, site levelling and profiling.

25. Some Members noted some concerns about the surface runoff from the car wash service centre in the site. The project proponent team explained that the designation of a specific car washing area for residents would restrict the locations of car washing and related activities such as repairing and maintenance of engines. This was considered the best way to control surface runoff and possible penetration of polluted water from various parts of the residential development. Moreover, the soft landscaping in areas between the “fingers” of residential development would also serve as a detention point for absorbing surface runoff due to severe storms.

26. On the planned public sewerage system, the project proponent team advised that the anticipated completion time of the public sewerage system along the Castle Peak Road which would cover the project site was late 2012, according to the advice of the Drainage Services Department. It would tie in with the anticipated completion of the project in 2013.

Wetland restoration plan

27. On the area of loss of wetland habitats, AFCD advised that the 4.69 ha of wetland habitats affected (0.69 ha of seasonal marsh and 4 ha of freshwater marsh/reed bed) was based on ecological studies conducted by the project proponent in both wet and dry seasons taking into account indicative elements of a wetland such as hydrology, soil and vegetation type in the area. The EIA recommended a 4.74 ha WRA to compensate for the loss of wetland habitats due to the proposed development.

28. On the application of the planning guidelines of the Deep Bay area, AFCD advised that according to the “Town Planning Board Guidelines for Application for Development within Deep Bay Area under Section 16 of the Town Planning Ordinance” TPB PG-No. 12B promulgated in 1999, the landuse planning control in Deep Bay area was carried out through designation of Wetland Conservation Area and Wetland Buffer Area. The Wetland Conservation Area consisted of existing continuous and adjoining fishponds and was more important in terms of ecological value and where the planning principles of “no-net-loss in wetland” should be applied. The Wetland Buffer Area included some degraded wetlands. By allowing a limited scale of residential or recreational development in the Wetland Buffer Area, the private sector was encouraged to restore the degraded/lost wetlands in the target areas identified as Other Specified Uses (Comprehensive Development and Wetland Restoration Area) zone. Wo Shang Wai was one of the target areas and the proposed development was within the Wetland Buffer Area. The planning principle of “no-net-loss in wetland” was not required to be applied. The project proponent tried to adopt this principle on a voluntary basis.

29. Some Members were concerned about the potential conflict between the co-existence of a WRA and residential development, such as the use of insecticides due to mosquito breeding in the WRA. The project proponent team explained that the breeding of mosquitoes usually took place in shallow stagnant water and would not go along with fish. The wetland was designed to support fish and thus there should not be much problem about mosquitoes. Moreover, suitable plant species would be selected to ensure minimal disturbance to residents in terms of the types of insects supported. Boundary walls would be installed in the sensitive area to prevent trespass and intrusion of wildlife. The ecological objectives of the WRA would not be compromised due to the presence of residential development.

30. On the viability and sustainability of the proposed management plan for the WRA, the project proponent team explained that under the wetland restoration plan, the management proposals included the options of placing the WRA in the ownership of an independent Trust; having the project proponent to retain that part of the project area demarcated as WRA in accordance with all the approval requirements; and having the land retained as “common area” by future owners of the residential development which would have collective responsibility to manage and maintain the WRA in accordance with the various statutory approvals and as required by the Deed of Mutual Covenant. The implementation of the wetland restoration plan would be monitored and reviewed to ensure sustainability.

31. On the implementation of the WRA and long-term sustainability of the WRA, EPD advised that the project was a designated project under the EIAO and the detailed requirements of the WRA would be stipulated in the Environmental Permit. The Director of Environmental Protection would check if the permit conditions were fully complied with during both the construction and operation phase. The EPD would consult the relevant authorities on different aspects, such as the Agriculture, Fisheries and Conservation Department (AFCD) on the ecological aspect of the WRA.

32. On the responsible party for the proper management of the WRA upon completion, EPD advised that as stated in para. 5.1.1 of Volume 3 of the EIA report regarding management strategy, the project proponent would be responsible for the creation, enhancement and management of the rehabilitated wetland area during the construction phase and should provide an undertaking to take sole responsibility for management until a successor could be found to the satisfaction of the EPD or its agent.

33. The project proponent team confirmed that being the proponent of the project, they would take the responsibility and obligation to comply with the conditions stipulated in the Environmental Permit. As regards the management of the WRA, different options had been included in the EIA report and there were merits and unique features for each option. They would welcome advice from the Council and the Administration.

34. Some Members expressed concern about the option of setting up an independent Trust as the project proponent would shift the ultimate responsibility of managing and maintaining the WRA to a third party after setting up the endowment fund. There would be a risk of not having sufficient financial resources in the long run and thus the ecological objectives and sustainability of the WRA would be jeopardized.

35. EPD advised that it would be difficult at this stage to assess the effectiveness of each option for the future management of the WRA as it would involve complicated legal issues and uncertainties. It would be more prudent at this stage for the project proponent to undertake the sole responsibility for management of the WRA until a successor could be found to the satisfaction of the EPD.

36. On the estimated annual running cost for the WRA, the project proponent team advised that the estimated running cost for the WRA was

\$0.5 million per year at current price level, including financial resources for daily hands-on management, professional monitoring and on-going maintenance programme. Under the on-going maintenance programme, there would be requirements for vegetation succession and clearance of build-up sediments and these works would constitute about 20% of the budget.

37. On the mechanism to monitor and review the wetland restoration plan in the light of changes over time, the project proponent team advised that they were fully committed to the principle of transparency and agreed that a review mechanism would be necessary to cope with changes to achieve the overall ecological objectives of the WRA as well as the Deep Bay area as a whole. Consideration had been given to the establishment of an environmental committee similar to the case of the Lok Ma Chau Spur Line. Nonetheless, having regard to the relatively smaller scale of the project, time and resources constraints of the concerned groups and green groups as well as the plan of several similar projects in the Deep Bay area in the pipeline, it would be more practicable to make available regular reports on the progress of the wetland restoration plan and implementation process. During the consultation stage, the concerned groups and green groups had expressed that they could provide inputs and feedback through a designated website where the reports were made available.

38. On the monitoring under the EM&A programme, EPD advised that the regular reporting of EM&A results, including those on ecological aspects, to EPD was on a monthly basis during the construction phase and on a bi-annual basis during the operation phase.

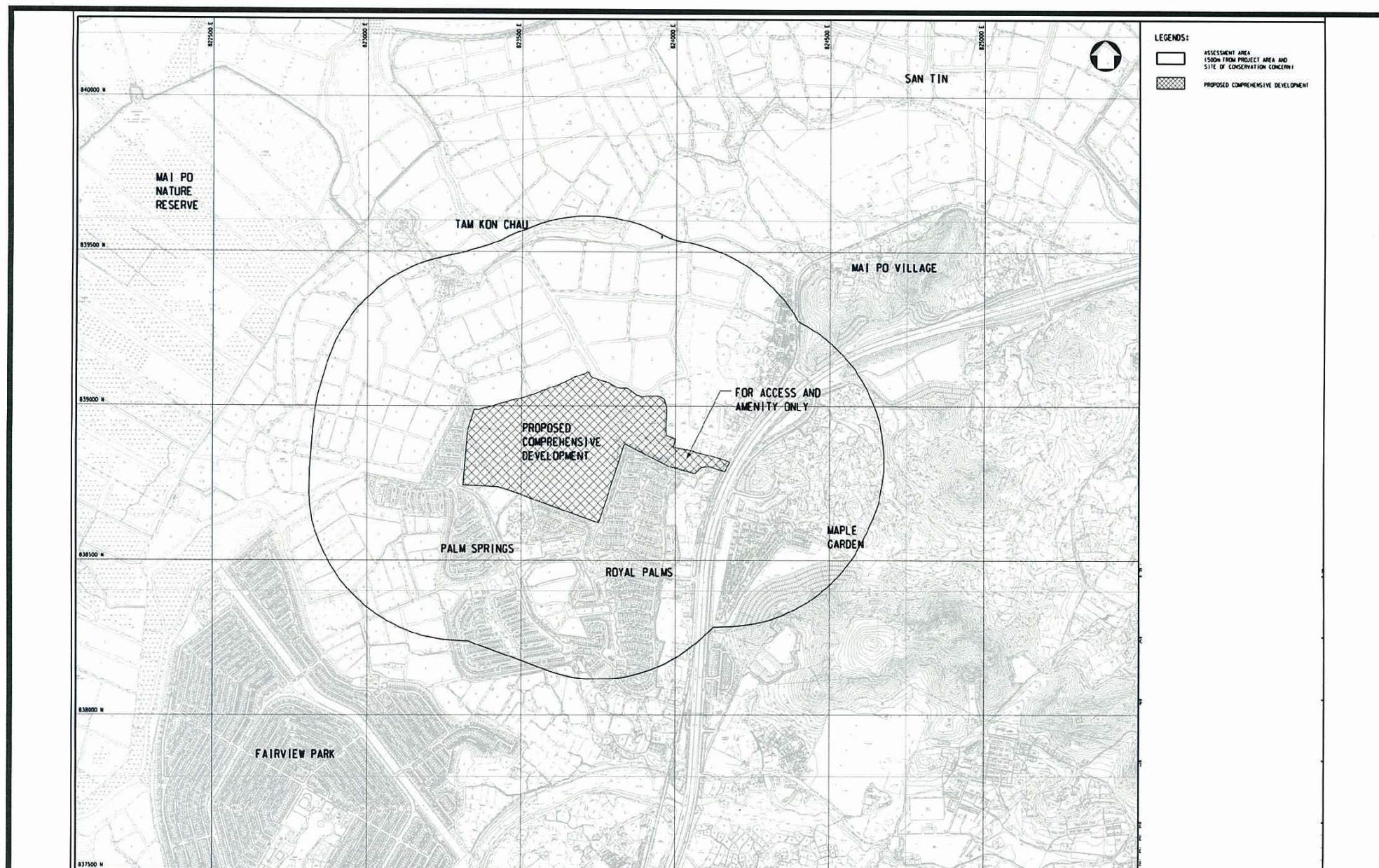
39. Members noted the comments expressed by a Council member before the Subcommittee meeting about the cumulative impact of development projects around the Deep Bay area. The Member considered that there was a pressing need for the Government to develop a conservation plan for the Deep Bay area. There were concerns from the public that the increasing number of development projects around Deep Bay might pose cumulative impact on the wetland and the associated fauna particularly waterbirds in the region. A "master plan" for conserving fish ponds and other habitats would help to protect the overall biodiversity and reduce the cumulative impact of development projects around Deep Bay. Based on the principles of "no-net-loss" and wise use of wetland, such a plan could be developed with inputs from a variety of stakeholders (e.g. environmental non-government organisations, public, private companies, local communities, etc).

RECOMMENDATION OF THE SUBCOMMITTEE

40. Having regard to the findings and recommendations of the EIA report and information provided by the project proponent, Members agreed to recommend to the full Council that the EIA report could be endorsed with the following proposed conditions –

- a) the project proponent should be responsible for the construction of the WRA as part of the development and should provide an undertaking to take sole responsibility for management until a successor could be found to the satisfaction of the EPD, in consultation with the Advisory Council on the Environment (ACE);
- b) the project proponent should submit reports of the EM&A results on ecological aspects during the construction phase to the EIA Subcommittee of the ACE on a bi-annual basis and those reports during the operation phase on an annual basis;
- c) the project proponent should put in place a five-yearly review programme for the wetland restoration plan and implementation programme, and the review reports should be submitted to the ACE, the EPD and AFCD; and
- d) the project proponent should adopt a trip-ticket system for managing the construction and demolition waste.

41. Separately, the Subcommittee considered that the issue on the need for the Government to develop a conservation plan for the Deep Bay area in view of the cumulative impacts of development projects around the Deep Bay area was outside the scope of the current EIA report and should be considered by the full Council as a general issue.



Project Title - Proposed Comprehensive Development at Wo Shang Wai, Yuen Long

Figure 1 - Project Location (Reproduced from Figure 1.1 of the EIA Report)





Project Title - Proposed Comprehensive Development at Wo Shang Wai, Yuen Long

Figure 2 - Preferred Option (Reproduced from Figure 2.10 of the EIA Report)

