

## **APPENDIX G**

### Documentation of Public Concerns

## **APPENDIX G1**

### **First Round Stakeholder Engagement (July 2017)**

[Stakeholder B]

Mr. TONG Chi Keung, Donald, JP  
Director of Environmental Protection  
16/F, East Wing, Central Government Offices,  
2 Tim Mei Avenue, Tamar, Hong Kong

(Email: ciaocomment@epd.gov.hk)

27th July, 2017.

By email only

Dear Sir,

**Mai Po Nature Reserve Infrastructure Upgrade Project (ESB-301/2017)**

1. We refer to the captioned.

2. We had met the project proponent (WWF-Hong Kong) to express our views on 25th and 26th July, 2017. In this letter, we wish to clearly state our concerns so that the authorities become aware of all the potential environmental issues related to the planned development in the area and the deficiencies in the captioned Project Profile (PP).

**Demolition and re-construction of the Peter Scott Field Studies Centre**

3. Firstly, we kindly urge your goodself, the project proponent and all relevant parties to note the statement below:

Environmental Impact Assessment Ordinance (EIAO) (Cap. 499, Part II, Section 4 (4)):

*The Secretary may after consulting the Director specify in writing as a designated project, contiguous projects which, if taken individually, do not meet the specified levels in Schedule 2 or 3 to qualify as a designated project, and which are proposed by the same person or associated persons, if he is satisfied that the purpose behind the separation of the projects is to avoid the purposes of this Ordinance. The Director must give the person or associated persons who propose or are carrying out the contiguous projects a copy of the specification of the projects as a designated project.*

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4. The demolition and re-construction (D&R) of the Peter Scott Field Studies Centre (PSFSC) will happen near the Mai Po Nature Reserve (MPNR), and the existing PSFSC building is located only 120 m east of the project site. The works will occur during the anticipated construction period of the MPNR infrastructure upgrade project as stated in the PP, and, of course, it is a project by the WWF-HK as well. Generally speaking, it is hard to imagine that this item is not a part of the entire upgrading project to be carried out by the WWF-HK as it is also to improve the facilities for people visiting Mai Po (e.g., visitors, bird watchers, WWF-HK staff), and is indeed proposed and carried out by the same proponent (i.e., WWF-HK) in the same period of time (as stated in the PP).

5. In order avoid the impression that WWF-HK, one of the leading environmental NGOs in Hong Kong, is trying to avoid the purposes of the ELAO (i.e., by the separation of the projects) (see paragraph 3 above), we strongly recommend that the scope of the PP **be expanded** to encompass all the components of the planned development in the area by WWF-Hong Kong, i.e., it should include the six components of the MPNR infrastructure upgrade project (Section 1.4.7 of the PP) **as well as** the D&R of the PSFSC (Section 2.3.1 of the PP). Impacts associated with the D&R of the PSFSC should be fully and thoroughly identified, assessed and mitigated (if necessary), and this cannot be done by listing it only as a concurrent project (or 'other project' as stated in the PP) and be considered only in the 'cumulative impact assessment' section. Simply speaking, the D&R of the PSFSC is part of the upgrading work as both are aimed to provide better facilities for visitors, WWF-HK staff and bird watchers, and will happen in the same locality (i.e., the Mai Po area) and in the same period of time. Thus it should be included as a component and be properly and thoroughly assessed. It should be as simple as that.

**Some obvious impacts caused by the proposed works are not thoroughly elaborated in the PP**

6. As stated in the PP, reinforced concrete will be used and there would also be a lot of road widening works. We urge the proponent should state clearly whether there would be cement-mixing works occurring on-site during the construction phase. We are highly concerned about the potential water quality impacts associated with this construction activity. We consider that appropriate and manageable mitigation measures should be proposed, and, properly implemented if this is to be the case. Since the D&R of the PSFSC should be included, we also urge the proponent to describe in detail how the demolition waste would be appropriately handled.

7. We also strongly request that the proponent further elaborate upon the impacts of noise

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generation and mitigation measures to address the detrimental noise impacts in this ecologically sensitive area. We would like to mention that noise impacts would also be generated during the operational phase as there would be more 'tower hide', and also, an additional footpath going into the *Gei Wai*. This does not seem to have been thoroughly addressed in the PP.

#### Necessity for the new 'Circular Route Footpath'

8. We are not convinced about the necessity for the "Circular Route Footpath" (CRF). There are already existing footpaths in the area of interest. We consider that the proponent should focus on the upgrading of the existing path(s) instead of planning to provide additional infrastructure, i.e., the new CRF. We hope the proponent and the authorities can understand that this new route would cause habitat fragmentation and it would also induce human disturbance further into the *Gei Wai* area (which is previously less disturbed) – this is obviously not desirable. We also cannot understand how the view from the existing route would be significantly different to that from the proposed CRF.

9. If it is considered necessary to build this CRF, we hope the proponent can provide full justifications for the construction of this new feature and should propose an environmentally-friendly design (e.g., an elevated or floating wooden board-walk similar to those already in existence in the MPNR) along an alignment which would not cause significant ecological impacts (e.g., fragmentation, direct or indirect habitat loss). Mitigation measures should be clearly stipulated to adequately address fragmentation, noise disturbance, direct and indirect habitat loss and the physically intrusive presence of more visitors into a nature reserve.

#### Inadequate, misleading and insufficient information in the PP

10. We are shocked to read that the PP mentions that there would be no marine ecological impacts (i.e., not anticipated). According to the AFCD website, *Gei Wai* within the Mai Po Ramsar Site is described as "tidal shrimp pond"<sup>1</sup>. Indeed, the MPNR mainly consists of extensive tidal brackish-water *Gei Wai* with mangrove, reedbed and mudflat habitats. It is bound, on the seaward side, by extensive fringes of mangroves and expansive intertidal mudflats. The MPNR is, thus, mainly a marine ecosystem (e.g., tidal mudflats with mangrove forest). All potential impacts appearing in the *Gei Wai* or on the bund would potentially affect the mudflat and mangroves as well as associated fauna (e.g., marine/ estuarine fishes).

<sup>1</sup>[https://www.afcd.gov.hk/english/conservation/con\\_wet/con\\_wet\\_look/con\\_wet\\_look\\_gen/con\\_wet\\_look\\_gen.html](https://www.afcd.gov.hk/english/conservation/con_wet/con_wet_look/con_wet_look_gen/con_wet_look_gen.html)

Potential pollutants introduced into the *Gei Wai* would also be transported into Deep Bay through the water exchange process (i.e., through the sluice gate of the *Gei Wai*). We consider that the project proponent, the authorities and the consultants for this project should be well aware and understand the above potential environmental impacts. We are of the view that there is no basis to say that marine ecological impacts are not anticipated before a proper environmental assessment has even been conducted for the study area.

11. The *Gei Wai* areas are indeed an intertidal feature even though these are man-made coastal aquaculture systems and are, of course, important breeding and nursery grounds for many marine fisheries resources (e.g., *Gei Wai* shrimps). These marine resources may form an important component of the harvests of fishermen operating in the area. We strongly urge that it should be a requirement that the fisheries impacts (on capture fisheries) of this project should be included. Furthermore, the potential impacts upon the surrounding fish ponds (on pond culture fisheries) and also the oyster culture area in Deep Bay (e.g., through water quality degradation) should also be addressed.

12. Currently, the PP mainly mentions the impacts (and mitigation measures) on birds. However, the MPNR is not only important to birds but to a wide range of species. For instance, it is important to the Eurasian Otter which has been assessed to be a locally Critically Endangered species as well as being a globally Near Threatened<sup>2</sup> animal. It is also a nursery ground for Japanese Eel and this species is now been considered to be globally Endangered<sup>3</sup>. It is important to many marine benthic species (e.g., many uncommon and rare fishes) which are important food resources for innumerable migratory bird species. Indeed, the WWF-HK is well aware of this and on the WWF-HK website<sup>4</sup>, the followings are mentioned:

#### *The Natural Wonders of Mai Po*<sup>4</sup>

- Over 400 species of birds: Among which, 49 are of global conservation concern, including the iconic Black-faced Spoonbill, Saunders's Gull and Nordmann's Greenshank
- Over 100 butterfly species and 250 moth species: Two of the moth species – *Thalassodes maipoensis* – is new to science
- Over 50 of dragonfly and damselfly species: One being

<sup>2</sup> <http://www.iucnredlist.org/details/12419/0>

<sup>3</sup> <http://www.iucnredlist.org/details/166184/0>

<sup>4</sup> [http://www.wwf.org.hk/en/whatwedo/water\\_wetlands/mai\\_po\\_nature\\_reserve/](http://www.wwf.org.hk/en/whatwedo/water_wetlands/mai_po_nature_reserve/)

- globally-threatened is the Four-spot Midget*
- *Over 40 crabs species: The list includes *Parasesarma maipoensis* which is first found at Mai Po*
  - *Over 10 shrimp species*
  - *Over 80 aquatic invertebrates excluding insects;*
  - *Over 250 plants species*
  - *Over 20 mammal species: The list includes Eurasian Otter, a species of special conservation concern;*
  - *Over 20 reptile species*
  - *8 amphibians species*

13. Indeed, a 'historic project' called 'Discovering biodiversity in Hong Kong wetlands' was launched by the WWF-HK in 2015<sup>5</sup> and the MPNR was the main survey area. We simply cannot fathom, given this background, why there is so little (and inadequate) ecological information provided in the present PP.

14. We recommend that the forthcoming EIA study not just have a narrow focus on birds but comprehensively address the impacts upon wildlife species and especially those with a vulnerable conservation status (e.g., rare fishes and those mentioned in the aforementioned WWF-HK website). At a minimum, the EIA study should include fish survey, benthic fauna survey, intertidal survey (e.g., for sesamnine crab), otter survey, odonate survey (e.g., within and around reedbed and mangrove to be affected by the CRF) and other necessary ecological surveys. Instead of being just limited to birds, a rigorous impact assessment on a wide range of wildlife groups (both fauna and flora) should be included in the future EIA for this area.

15. Given that the MPNR is also within a Restricted Area under the Wild Animals Protection Ordinance (Cap. 170) where a special permit is required to access the area, therefore, we are concerned about the human impacts caused by the potential increase in numbers of visitors to this Nature Reserve. We request that, in the EIA, the proponent should clearly state the future projections for increase in the numbers of visitors to the Nature Reserve; how many more visitors are planned to be accommodated by the new/ upgraded facilities and how the impacts associated with such an increase in **visitor numbers, school groups and tour groups** would

<sup>5</sup>[http://www.wwf.org.hk/en/whatwedo/water\\_wetlands/mai\\_po\\_nature\\_reserve/discovering\\_biodiversity\\_in\\_hong\\_kong\\_wetlands/717860/Press-Release-WWFs-Discovering-Biodiversity-in-Hong-Kong-Wetlands-project-raises-the-number-of-species-in-Mai-Po-to-2050](http://www.wwf.org.hk/en/whatwedo/water_wetlands/mai_po_nature_reserve/discovering_biodiversity_in_hong_kong_wetlands/717860/Press-Release-WWFs-Discovering-Biodiversity-in-Hong-Kong-Wetlands-project-raises-the-number-of-species-in-Mai-Po-to-2050)

be appropriately addressed, e.g., sewage and waste management issues, wildlife disturbance and encroachment into natural habitats, noise disturbance to breeding and migratory bird life.

#### Concluding Remarks

16. We appreciate the effort of the project proponent in promoting conservation and nature education in Hong Kong through the MPNR. However, as this development is planned for an area which is within the internationally recognized RAMSAR site, the ecologically sensitive Wetland Conservation Area and the wider Deep Bay wetland ecosystem, we consider that the PP and the subsequent EIA study should be conducted in a comprehensive manner which should adhere to international best practices and standards in order to provide a role model for other similar developments within ecologically sensitive regions of Hong Kong.

17. We strongly recommend that the project proponent critically review the scope of the PP and re-submit a revised PP for all components of the planned development as a whole and contiguous project. We would like your goodself (and the project proponent) to read a PP (DIR-139/2006)<sup>6</sup>, which was also prepared under the auspices of WWF-HK for the upgrading of facilities at Mai Po. By comparing these two documents (the present PP and the above), we hope your goodself and the project proponent can understand that the quality of the present PP is really very far from satisfactory.

18. Thank you for your attention.

*[Stakeholder B]*

cc. WWF-HK

*[Other Stakeholders]*

AFCED

<sup>6</sup> <http://www.epd.gov.hk/cia/register/profile/latest/dir139.pdf>





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[Stakeholder B]

c.c. Mr Donald Tong  
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2 Tim Mei Avenue, Tamar, Hong Kong  
(E-mail: eliaocomment@epd.gov.hk)

8 Aug 2017

Dear [Stakeholder B]

Mai Po Nature Reserve Infrastructure Upgrade Project (ESB-301/2017)

Thank you for *Stakeholder B's* comments dated 27 July 2017 and the discussion meeting on 25<sup>th</sup> July 2017.

WWF supports a transparent consultation on the project profile and we are happy to receive views from [you] and other stakeholders. We will consider them as we proceed with this infrastructure upgrade project, particularly in those areas where we are still evaluating design options based on various geotechnical and other studies on most appropriate build methods. We expect to have more sharing of information, as the detailed design schemes become available from our architect and consultants.

WWF places great importance on active management to assure the ecological and environmental uniqueness of the Mai Po Nature Reserve and related areas, with the provision of services for the responsible access for purposes of education, birdwatching, research into biodiversity and its appreciation. We are proposing improved, universal accessible facilities and in the schematic design planning process we have insisted on a number of improvements to assure the siting of facilities and footpath widening does not cause negative impact on existing trees and other flora and fauna.

I hope the feedback provided here can help you to understand the project and the detailed preparations now being undertaken.

*Demolition and Re-construction of Peter Scott Field Studies Centre*

The demolition and re-construction of a new Peter Scott Field Studies Centre is being carried out with the same consideration to ensure the infrastructure upgrade will not have adverse impacts. The ecological surveys are being conducted by the same team of professional consultants using the same intensity and the impact assessment will be captured in the final EIA report.

together possible

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行政總裁： 江耀祥先生

總辦： 鄧永祥先生  
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Chairman: Mr Edward M. Ho  
CEO: Mr Peter Carmichael

Honorary Auditors: BDO Limited  
Honorary Company Secretary:  
McCabe Secretarial Services Limited  
Honorary Solicitors: Mayer Brown JSM  
Honorary Treasurer: HSBC  
Registered Charity  
(Incorporated in HK Limited Liability)

註冊名稱：世界自然基金會(香港)有限公司 World Wide Fund for Nature Hong Kong  
在香港註冊的有限公司 (Incorporated in Hong Kong limited liability by guarantee)

*Some obvious impacts caused by the proposed works are not thoroughly elaborated in the PP*  
The project is still in the design stage and we are waiting for critical information such as ground investigation results so that we can choose the best design options that would avoid impacts as much as possible. Hence, it is not possible at this preliminary stage to list all the construction methods and their impacts. We will adopt the least impactful/disturbing methods available, such as using pre-fabricated materials as much as possible.

Regarding noise impacts, avoidance is again WWF's first choice. The outdoor construction work within the reserve will only be carried out outside the peak bird migration season. Regarding possible disturbance by visitors during the operation phase, the visits and tours organized by WWF-HK will continue be guided by nature interpreters and WWF staff. Moreover, the new tower hides and footpaths in the reserve will be screened, as in our existing practice, to keep human disturbance to a minimal level and acceptable to the wildlife. The visitors to Mai Po will continue be closely controlled by the permits issued by AFCD and the Hong Kong Police (for the floating boardwalk and bird hides in the FCA) and we have no intention to ask for any additional permits or other new arrangements.

*Necessity for the new "Circular Route Footpath"*

The proposed Circular Route Footpath will provide screened alternative access to the popular Tower Hide 1 and the proposed Tower Hide 1E. When the main footpath is being widened, visitors and students can continue to use the Tower Hide using this new access, thus reducing the inconvenience caused to the visitors by this project. This new Circular Route Footpath will allow us to organise shorter yet interesting tour from the Peter Scott Field Studies Centre, through the mangroves and reed bed along the Circular Route Footpath to the Tower Hide and leave the reserve from the main footpath. This shorter route is particularly suited to those who found walking to the Education Centre too demanding and will reduce the amount of time these visitors spent in the reserve, thus lower the disturbance. It will be a boardwalk design for the main section across the gei wais, similar to those we have in the reserve. The section on the existing pond bund would require a supporting base of compacted soil/rock fill as well as path structure and suitable finish material to be decided in the detailed design.

*Inadequate, misleading and insufficient information in the PP*

We understand that Mai Po gei wais are connected to Deep Bay and any impact on water quality in the gei wais will likely affect Deep Bay. That is why impact avoidance is key to the siting and design of this project. For example, the design of the existing footpath widening has been modified a number of times during the schematic design stage so we can avoid any tree felling. Hence, the width of the future footpath will range from 1.65m to 3.3m with passing bays and learning areas. The new footpaths will rest on the existing pond bunds and there will be no encroachment into water areas of the gei wais nor the fish ponds. The construction method we are looking for is one most compatible with the environment.

Mai Po Nature Reserve is a wetland of international importance and is also a Key Biodiversity Area. Hence, we treat the gei wais and ponds within the reserve as the project area so as to ensure the ecological surveys and impact assessments will cover all the important habitats, fauna and flora.

The project profile signals the start of the statutory processes. We have been putting in a lot of efforts in working with the consultants in modifying the designs to avoid ecological impacts, which we believe is better than mitigation. There are also technical issues such as ground investigation results that we are still waiting for. Hence, many of the designs cannot be finalized at this stage and the reason why not a lot of information is provided in the project profile. The planning application will include more information on the project, the measures to be undertaken to address and minimize impacts. We look forward to an

EIA report being completed in early 2018 and this will not only contain information gathered by the consultants since late 2016, but also the data gathered by WWF, HKBWS and others.

*[Stakeholder B]*

WWF professional staff, like those in , cares a lot about Mai Po and Inner Deep Bay and we have shared aspiration to make this project a success. Our stakeholders engagement will continue throughout the project and beyond and as always we are happy to share information and exchange views with you.

Best regards,



Michael LAU  
Director, Wetlands Conservation

## **APPENDIX G2**

### **Second Round Stakeholder Engagement (December 2017)**



**From:** Michael Lau (WWF Conservation)  
**Sent:** Saturday, December 09, 2017 11:01 AM  
**To:** [All Stakeholders]  
**Subject:** Mai Po Infrastructure Upgrade Project - briefing to Green Groups

Dear All,

We have made significant progress in the design and planning of the Mai Po Mai Po Infrastructure Upgrade project. Our CEO, Peter Cornthwaite, and the team would like to meet and brief you on 13<sup>th</sup> Dec 4:30pm to 6:00pm in our Central Office (No. 1 Tramway Path, Central).

Please let me know who will attend.

See you next week,  
 Michael

Dr. Michael Lau 劉惠寧

Director, Wetlands Conservation 濕地保育總監

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together possible

讓我們攜手成就人類與大自然和諧共存的未來。

Together, it is possible to build a future where people live in harmony with nature.

**From:** [Stakeholder D]

**Sent:** Friday, December 15, 2017 3:20 PM

**To:** Michael Lau (Conservation)

**Cc:** [All Other Stakeholders]

**Subject:** Re: Mai Po Infrastructure Upgrade Project - briefing to Green Groups

Dear Michael

Thank you for meeting with us yesterday to update us on this project. I thought I'd follow up about a couple of the points raised in the meeting. I apologise for the longish email, but I hope you will find time to read the points I raise.

- Need for Tower Hide 3. I'm still not sure that this tower is really needed. In my experience, the existing Tower Hide is almost always empty, except for the times when there is a large group led by WWF. It seems that the problem of demand could be resolved by staggering use of the existing tower, without the need for a new tower. The justification given in the meeting, that birders and photographers don't like sharing the hide with the group, is related to the size of the group and would not be solved by building a second tower that is also used by groups. Separating a birder/photographer hide (not necessarily a tower) from a tour group hide would solve this problem, although reducing group size would be a more effective and public-friendly approach. I hope to see this justification and consideration of alternatives in the EIA.

- Location of Tower Hide 2. As I've discussed before, I don't think the proposed location is particularly good. While this gives good views over one pond at Pond #20, it doesn't help much with viewing the southern end of the reserve (there is not a good view from here to #21, #22, #24 or most of #23), which is your stated aim of the tower. Also, the view from the tower is unsuitable for much of the day due to the angle of the sun (the old canvas tower was mostly used in the evening). I think the location is proposed purely based on the location of the previous temporary tower, without giving thorough consideration of the aims of the tower and the best location to meet those aims. A location overlooking the new roosting area in GW#21 or the inaccessible grazed area of #24 may be more suitable. I'm also not sure that a tower of the size proposed is really needed at this location. Again, I hope that alternative locations will be considered in the EIA to provide justification.

- Sewerage requirements. [A Stakeholder] raised this important point and I didn't think this was fully addressed in the meeting. There will be an increased sewerage load at the PSFSC, due to the relocation of office staff, increased use of the site by visitors and increased use by residents staying at PSFSC. In such a sensitive wetland as the Ramsar Site, I think it is important to demonstrate that the sewerage requirements are being fully met to ensure that there is no negative impact. Simply stating that the building will meet building regulations seems insufficient to me, without any numbers or impact assessment to back this up or to demonstrate that there would be no sewage discharge into Deep

Bay. Shouldn't this reconstruction be an opportunity to improve the situation, rather than maintaining the status quo? This is one issue that should be addressed by an EIA project, which you are avoiding.

- Use of EC and PSFSC. The news that nothing was changing at the EC came as a surprise to me, as it had been a major part of the planning until now. I would be interested to hear more about what you are intending as the use of this building. My understanding is that this is now to be used as an exhibition hall - similar to the existing use, but with the offices removed. Given that there would also be publicly-accessible exhibition space at the PSFSC, and the exhibition space at EC is only used on guided tours, is this really the best use of this building? Could it not be retained as office space and/or conference room, thus reducing the requirement for offices at PSFSC and reducing the need for construction work at PSFSC?

Furthermore, I'm still not convinced about the need for accommodation at PSFSC. This seems to be provided mostly to meet the need of the training course participants, but there seems to be no justification that this is required at Mai Po, rather than using existing accommodation in hotels elsewhere in Hong Kong. Even more appropriate would be an approach to 'train the trainers', perhaps by providing more training courses at existing training facilities in mainland China rather than only providing this training in Hong Kong. This use of buildings, to justify the extensive reconstruction proposed, should be addressed by the EIA that is now being completely avoided by removal of the EC from the EIA process.

Overall I think the various aspects of the project are not fully explained or justified. I am very concerned by the way that the reconstruction of buildings is avoiding any oversight by the EIA, especially now that the renovation of EC also avoids the EIA process. WWF seems to be exploiting to the full extent the loophole in the OZP that allows any work to be carried out at PSFSC without EIA approval, an approach I would expect from the large land developers in Hong Kong but not from an environmental NGO.

The EIA would address important issues such as sewage and traffic that seem to be insufficiently addressed at present. I had hoped that WWF would lead the way in demonstrating to developers what the best practice should be in such an environmentally-sensitive site, and I admit I am very disappointed with the approach taken so far.

Regards  
[Stakeholder D]

**From:** [Stakeholder E]

**Sent:** Tuesday, December 19, 2017 10:23 AM

**To:** Michael Lau (WWF Conservation); [All Other Stakeholders]

**Subject:** RE: Mai Po Infrastructure Upgrade Project - briefing to Green Groups

Dear Michael,

In order to understand [Stakeholders D's] concerns, I need to see the relevant papers.

You said you would send the powerpoint.

Please send what you have.

On sewage,

please note SCMP today with article on Dunwell's toilet systems for remote areas and used in Country Parks.

Are such being considered?

Yours [Stakeholder E]

**From:** [Stakeholder A]

**Sent:** Thursday, December 21, 2017 8:49 AM

**To:** Michael Lau (WWF Conservation)

**Cc:** [All Other Stakeholders]

**Subject:** Mai Po Infrastructure Upgrade Project - briefing to Green Groups

Dear Michael and all,

Sorry I was tied up with other issues and cannot respond to you and the team until now. There are several things I would like to raise.

1) I would say birdwatchers is not a strong justification for an extra bird hide at pond 8 (it could be a strong one if an extra bird hide is built at the mangroves/ mudflats). We know the current bird hide will only be crowded when there are "good" birds there, but the rest of the time it is quite empty. From what I heard in the meeting, my feeling is that the extra bird hide, the circular route, and the new PSFSC are the key components of the upgrade project to cater the increase in visitors and to shorten the route while minimising the impact on MPNR. If it was the problem of birders/photographers/tour groups sharing the same tower, which I guess this has always exist, there should be other ways/measures to deal with this (like what [Stakeholder] said).

2) As mentioned already in [Stakeholder] comments on the PP, I think the project itself and its components (e.g. the scale and location of bird hides) are still not well explained. There needs to be strong justification from WWF and I believe you have all the numbers/figures/support already. It is just the matter of presentation and transparency. Any decisions or discussion made by the MP Management Committee which is important to the current project should also be mentioned. We would expect a full justification of the project and all its components in the upcoming TPB application and EIA report.

3) There needs to be an overall picture of the whole infrastructure upgrade, including the circular route which is now postponed. The roles of each upgrade components play, purposes and functions they serve in the MPNR after the upgrade, and how it is different from the existing facilities, should be explained.

4) Please also clarify if another EIA is required if the MP Management Committee decided to build the route in the future.

5) Sewerage problem. I don't think I need to go into details as WWF should be well-aware of the discussion green groups had with HKCF on the old septic tanks of village houses in Lai Chi Wo. It would be good to check with HKCF if they have experience in checking the effectiveness of the existing STS. If not, it is still worth WWF to look into this so as to ensure no contaminant goes into the water system of the Deep Bay area.

6) Just a friendly reminder of another concurrent project in the Deep Bay area is the upgrade of the Yuen Long Sewerage Treatment Plant, which DSD is planning to submit

their EIA report in early 2018. DSD has actively engaged green groups in it and WWF should know the details. This project and the MP upgrade works both have the potential impacts on the roost of Great Cormorant and breeding ardeids, though maybe at different magnitude and extent.

It seems that details of the Mai Po upgrade project was rushed and early engagement of green groups was missing in the very first place, which has led to this discussion here. We would be expecting "development projects" led by green groups would be doing more than the minimum requirement by the Government departments to ensure no adverse impacts on the environment (like in the case of Lai Chi Wo) and not to follow the footsteps of developers which we have always been criticising. That is why we urge all the upgrade works no matter concurrent or subsequent (including the demolition and re-construction of the PSFSC, widening of the AFCD footpath, the new circular route, the two new bird hides, and the renovation of EC) to be included in both the EIA and TPB assessment process as a component of the project. And now the circular route is taken out and is left in the hands of the MP Management Committee to decide in the future. The current piecemeal approach is not a best practice we would expect from a green group.

If WWF decides to continue to proceed as it is now, please do not expect support from [Stakeholder] as we do not agree with such practice and engagement process. However, we are willing to continue to keep a regular dialogue with WWF and other green groups to provide comments on this project.

I have also added [Stakeholder] and [Stakeholder] in the loop.

Best Regards,

[Stakeholder A]

**From:** Michael Lau (WWF Conservation)  
**Sent:** Friday, December 22, 2017 at 11:23 AM  
**To:** [Stakeholder D]  
**Cc:** [All Other Stakeholders]  
**Subject:** RE: Mai Po Infrastructure Upgrade Project - briefing to Green Groups

Hi, [Stakeholder D]

Thanks for your feedback.

It was good to meet up again to update you on the progress of the project since our last update in July, when we had the meeting with the [Stakeholder] Executive Council, at which you were also present.

Let me first outline why WWF-HK is launching such an infrastructure improvement project. Our goal has always been to manage Mai Po Nature Reserve as a model site for waterbird conservation within the East Asian Australasian Flyway, delivering education and training programmes that make it a regional centre of excellence. Hence, our priority work in Mai Po has always been conservation, education and building the capacity of other wetlands in the region.

This latest project offers a rare opportunity to upgrade and add necessary facilities to improve visitors experience and allow more students and members of the community to come and experience Mai Po first hand. The Mai Po Management Committee has been briefed about this project since 2016 and is supportive.

I was very fortunate to work in Mai Po straight after university and that experience has shaped me as a conservationist. While working there first as a field guide and later as an education officer, I took great satisfaction in seeing many people and students touched by its wonders. In densely populated Hong Kong where there is frequent debate on 'balancing' land use between conservation and development, conservation needs the full support of our society. I think the best way to gain people's heart is to let them connect to nature and in Hong Kong there is no better place than Mai Po.

WWF-HK was the first in Hong Kong to demonstrate that with careful planning, the right facilities and proper management, it is possible to run education programmes and guided eco-tours without affecting the habitats and the sensitive wildlife. In the first 10 years since the reserve was established and under our active management, the improved bird species and bird populations went hand in hand with building the vast majority of the facilities and expanding both the public visit and school programmes.

We have an excellent track record in measures to avoid impact while building our facilities and running education programmes in the reserve. When we built facilities such as the floating boardwalk and the floating hides some years back it could be argued visitors could certainly cope with not going out to the sensitive mudflat areas. The floating hides have of course proved popular and also allowed better monitoring of the birds in Deep Bay and the mudflat ecosystem, while the hide design keeps disturbance to a minimum. Hence, it is with the same spirit in mind that we undertake the present infrastructure upgrade project. The priority work in Mai Po has always been conservation through the active management of the reserve and building the capacity of wetlands in the flyway, the running of our education programme and seeing the potential to improve the visitors' experience and influencing the students and general public.

We are pursuing the installation of two new tower hides and an upgrade from a concrete to boardwalk style path to access from AFCD post to the Tower hides along the route to the Education Centre.

### 1. Tower Hide 3 @ Gei Wai 8

The need for this Tower Hide 3 in addition to the existing Tower Hide 1 is clear as often we have 2 overlapping classes visiting Mai Po based on school timetables. The existing Tower Hide 1 capacity of 60 people (20 people per floor) can accommodate a large class of 35 students but is just not big enough for two classes of students. The situation of inadequate space is aggravated when birdwatchers and/or photographers are in the hide with a class. We now need Tower Hide 3 to be located at Gei Wai 8 with access from the existing main footpath and being close to the reserve entrance. This new Tower Hide will also have a panoramic view of Mai Po and the surrounding Shenzhen and Tin Shui Wai. This is ideal for our education officers to talk about the conflict between conservation and urbanisation. With this new tower hide, we will be able to accommodate 2 overlapping classes of students and better allocate space for both school groups and birdwatchers.

### 2. Tower Hide 2 @ Gei Wai 20

The southern part of the reserve has most of our freshwater habitats and is a regular spot for the eagles in the winter. We recognise the need for a bird hide here to facilitate observations and birdwatching of the freshwater habitats. The location chosen immediately faces pond 20, the three-storey structure will provide a good general view of the southern ponds and is selected being close to the existing footpath between GW18/19 so that users do not need to venture deep into the southern part of the reserve. Bird monitoring/watching in this part of the reserve requires a hide to avoid scaring the birds in the open water habitats away. Moreover the site selection was constrained by a large portion of southern ponds falling within the Scheduled Area, i.e. with possible marble caverns underneath, and is technically challenging to build a tower hide. The location we have chosen is just outside the Scheduled Area. We are building a tower hide to meet today's and future capacity. The front of the tower hide will be facing southwest and hence will offer good viewing during the morning which is also the time for routine monitoring. The two sides of the tower hide will also have viewing windows and will be suitable for birdwatching in the afternoon. Again the Mai Po Management Committee, which has a HKBWS representative and another experienced birdwatcher, had been consulted on the new tower hide facilities design and locations.

I note your comments on a previous temporary 'canvas' hide which used to be popular when Gei Wai 20 attracted many ducks. We know very few birds use the pond 20 now and it is time in our discussions with the Mai Po Management Ctte to outline proposed habitat work. The formulation of the next management plan ensures work can be carried out to improve Gei Wai 20 so that people using the future Tower Hide 2 will be able to see many wintering waterfowl.

I must reiterate the design of the new Tower Hides is in keeping with the current visual appearance and cladding of Tower hide 1 and their heights are slightly lower than Tower Hide 1.

I look forward to your support to these two Tower Hides at Mai Po.

### 3. Education Centre and New Peter Scott Field Studies Centre

Both the EC and PSFSC were built in the 1980's and it is high time for a facilities upgrade to meet present and future visitor and training needs.

The proposal is for minor works with refurbishments and maintenance at the EC with the relocation of the reserve office to the new Peter Scott Centre to free up indoor space for student experience, including citizen science programme e.g. observing diatoms under a microscope. This will enhance the educational value and practical use of EC. This small-scale internal renovation work does not require planning application nor EIA and there will be no external visual impact change.

EC renovation was initially included in the project profile when we were looking at the feasibility of removing the internal stairway and gantry and other structural changes. Our consultants have been doing ecological surveys and impact assessments in preparation for the planning application and EIA. However, after carefully exploring different options, we have opted not to proceed with structural elements and instead concentrate on the minor internal refurbishment to EC to stay within the budget and scope supported by the Jockey Club Charitable Trust. There will be negligible environmental impacts with this programme of internal building minor works. I assume you would welcome this approach.

#### New Peter Scott Field Studies Centre

PSFSC is in GIC zone on asphalt paved land. Even though it does not require planning application and EIA, we are seeking approval from the relevant Govt departments and will fully meet our obligations. As a leading conservation organisation we will ensure full compliance.

For example we recognise Deep Bay is within a Water Control Zone and no additional pollution loading is allowed. The existing PSFSC uses a septic tank plus soak-away pit to deal with sewage. This system has worked effectively since it was opened in 1990 and we have no incidence of overflow or pollution discharge into surrounding area. The new building septic tank and soak-away system will follow EPD's Practice Note and current buildings standards. Our consultants' calculations and subsequent test assure an adequate system will be designed and submitted for approval.

Peter Scott Field Studies Centre is important to WWF-HK and wetland management across the Region. Since its completion in 1990, over 4,500 wetland practitioners, government officials and educators along the flyway have completed our training courses. I am sure you would agree of the need and importance of strengthening the management and protection of wetlands along the flyway in ensuring the migratory waterbirds can complete their journey.

The wealth of experience and knowledge we have in managing Mai Po, running education programmes and facilities has given our centre a reputation for training excellence. The State Forestry Department has written a letter supporting this project and confirming the benefit to the training programme. Participants have practical field visits and work assignments in late afternoon and at night whilst on training and this necessitates staying at PSFSC as the most effective use of time. Your suggested switch to hotels would undermine the benefit of a resident training.

On the benefits of train the trainers and other training assignments at reserves around the Region, we have helped WWF-China in the training course offered in Chongming Dongtan in Shanghai. We also would like to expand to offer both Mai Po based and on-site training to tailor to the needs and issues of different reserves. We are looking to raise the necessary funds to support courses as part of our continuation of the Asia Wetland Conservation Fund over the next 5 years. The Jockey Club support to our facilities at Peter Scott Field Studies Centre is part of the hardware that is necessary to support our work across the Region.

I look forward to your ongoing support as well.

### 4. EIA progress

On the matters of EIA, please note the 12-month ecological surveys are being conducted for components ( footpath and tower hides ) within the reserve and for PSFSC as part of the cumulative assessment. With findings of the EIA we can ensure proper avoidance and mitigation measures are formulated.

We will be happy to update you and others again as we complete the detailed designs and have the opportunity to study the findings of the EIA.

Happy Holidays,

Best,  
Michael

Dr. Michael Lau 劉惠寧

Director, Wetlands Conservation 濕地保育總監

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**From:** Michael Lau (WWF Conservation)  
**Date:** Friday, December 22, 2017 at 11:47 AM  
**To:** [Stakeholder E]  
**Cc:** [All Other Stakeholders]  
**Subject:** RE: Mai Po Infrastructure Upgrade Project - briefing to Green Groups

Dear [Stakeholder E]

Here is the ppt. As mentioned during the meeting, the Circular Route shown in the ppt has been excluded from the project. We received concerns about the potential impacts arising from the Circular Route and has decided to take it out from this project. This would reduce the amount of construction happening at the same time (although the noisy construction would only happen outside the peak bird migration season) and hence the cumulative impacts.

Best,  
 Michael

Dr. Michael Lau 劉惠寧

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**From:** Michael Lau (WWF Conservation)  
**To:** [Stakeholder A]  
**Cc:** [All Other Stakeholders]  
**Sent:** Sunday, January 7, 2018 12:19:17 PM  
**Subject:** RE: Mai Po Infrastructure Upgrade Project - briefing to Green Groups

Hi [Stakeholder A],

Thanks for your comments. I have taken a long holiday break and hence only have time to reply now.

#### **The need for and Location choices of Tower Hides**

The need for the project and new Tower hides and the location choice of those proposed has been outlined in my earlier mail to John. I assure you that in the Planning Application and EIA, we will take the time to reflect on comments and include the details and justifications in the document. We then look forward to your understanding and support to provide such facilities.

#### **Boardwalk Circular Route**

As mentioned in the briefing, a shorter and interesting circular route from the AFCD post to the Tower Hides overlooking GW 8 could provide a good experience for those who do not have the time or the physique to travel all the way to the Education Centre and back. We have decided not to pursue the Circular Route under this project and I can assure you therefore there is no plan to build it in the next five years. After the facilities upgrade to provide a boardwalk built over the existing AFCD to EC footpath and two new tower hides, we will carefully assess the situation and then and only then consider any need for a circular route in 2022 or beyond. This would of course need a separate project and need clear support from stakeholders before we consider this again. If pursued it would be a designated project under the EIAO. We'll consult the stakeholders including HKBWS and other Green Groups at an earlier stage, when and if we begin further planning for this.

You can take reassurance that the circular route will not be part of this project funding, planning and EIAO submission.

#### **Sewage System for Peter Scott Field Studies Centre**

On the centre sewerage system replacement I do not think the situation at Lai Chi Wo is a suitable reference for our project other than the fact that of course WWF should build a proper septic tank and soak away system and demonstrate it is up to latest standards to effectively deal with the sewage.

I attended the two meetings organized by the Hong Kong Countryside Foundation on the "Proposed Hotel (Holiday House) use in support of the Proposed Hakka Life Experience Village@Lai Chi Wo in Village Type Development zone" and am well aware of discussion of the septic tank issue. The village houses concerned have not been used for a long time



and some do not have septic tanks. That is why in the first meeting, I and others raised that they had to make sure the septic tank system proposed and the future management can properly deal with the sewage generated from the project. In particular percolation test by a professional body should be performed and the results included in the planning application to show the system can work in the Lai Chi Wo village. This would have the additional benefit of setting a good example for Town Planning Board to take into consideration for other village house applications in Country Park enclaves. In the second meeting we were disappointed to find out percolation test had not been performed and would not be included in the planning application. Hence, although WWF support their project, we expressed concerns on their waste water treatment and asked the issue to be addressed before approval can be given.

For the Peter Scott Field Studies Centre, we have experience in proper management and use of the existing septic tank plus soakaway system and it has functioned well since it was built in 1990. Our engineering consultant has proposed a replacement tank and soak away with proper calculations and standards for the new building. The design is to operate within the confines of the site. Appropriate fill material will be specified and used in the soakaway system sufficient to achieve a percolation test result of less than 1 minute in accordance with EPD's drawing.

#### Great Cormorant Roost and Egrettry

Thank you for the comments and reference to the Yuen Long Sewage Treatment Plant project. My team attended the DSD briefing and made some comments to lower the potential impacts. In WWF case, the possible impacts of the proposed project components on the Great Cormorant Roosts and Egrettries is one of the key areas of the ecological assessment and this is being studied. As mentioned, there will not be any noisy construction work during the peak migration period, assuring no impact to Great Cormorant roosts.

#### Project profile, design, impact and ecological assessments EIA

In our other earlier project "An Extension to the Existing Boardwalk and New Floating Mudflat Bird-watching Hide at Mai Po Nature Reserve for Education and Conservation Purposes" we did not submit a project profile based on concepts but waited for the detailed design, ecological findings, impact assessments and mitigation measures to be known to us and then we applied for a direct permit.

Although the current infra-structure upgrade project is of limited scale we are sensitive to the proposed works being in or near the ecologically important and sensitive Mai Po Nature Reserve that WWF has been managing since its establishment in 1983. We have been working with the consultants since Sept 2016 for the future upgraded infrastructures to be constructed with sufficient consideration of how to avoid and mitigate possible impacts. We look forward to upgraded facilities to be enjoyed by the students, public visitors, birdwatchers, photographers, reserve staff in the region and researchers while avoiding the impacts to the reserve and the wildlife. In this project, the project profile was submitted last July when we were still in the early concept planning stage and various

options were included for components based on generic build methods and initial information and timelines. I hope you can appreciate that in this project programme we have been steadily moving from working with consultants with generic concepts to more detailed designs and construction specification and that includes defining necessary measures to improve the design based on impact and ecological assessments.

We are preparing the planning application and EIA with the consultants and all the detailed design information now available will be included in these documents. We have advanced considerably since July last year and organized the latest round of meetings with Green Groups to share schematic design details and decisions. We have shared to you that we plan to now limit the project to build Tower Hide 2 and 3 and improve and extend the footpath on the reserve in boardwalk style. We have decided to make no external or structural alterations to the Education Centre and only carry out simple renovation programme. We will pay attention to permit access, controls to the site and in handling waste. We will also pursue an upgrade with a rebuild of the Peter Scott Field Studies Centre as a concurrent project.

We thank you for your latest input and are planning to organize more meetings with Green Groups and other stakeholders in the near future when the finalised designs and the impact assessment & mitigation measures are complete. I would like to invite the HKBWS Executive Council to this future engagement meeting, following up on our last meeting in July 2017. I hope by then the information provided and that in the EIA and planning application will allow you have a better understanding of the detail of the project and the comprehensive measures we are taking to avoid negative impacts on Mai Po and the wildlife.

With this understanding I hope [Stakeholder A] would be in a position to comment in support of the project components.

Best regards,

Michael

Dr. Michael Lau 劉惠寧

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[Stakeholder B]

Dr. Michael Lau  
Director, Wetlands Conservation  
WWF-Hong Kong  
Manhattan Centre, 8 Kwai Cheong Rd.  
Kwai Chung.  
(email: mlau@wwf.org.hk)

16th January, 2018.

By email only

Dear Michael,

### **Mai Po Nature Reserve Infrastructure Upgrade Project**

1. After considering the various aspects of the WWF-HK Mai Po Infrastructure Upgrading Project, our combined experience in ecological advisory work and, also, your recent correspondence with [Stakeholder D] (member of The Hong Kong Bird Ringing Group) and the [Stakeholder A], we would like to, once again, offer WWF-HK our perspectives regarding the project.

### **2. Peter Scott Field Studies Centre (PSFSC) - demolition and reconstruction**

2.1 Undoubtedly, this is ONE of the MAIN components – indeed, the major one – of the entire project, as a whole. Hence, it was rather a shock to learn that it would not be included as a substantial part (and, thus, be properly assessed) under the current Environmental Impact Assessment (EIA) process. Our views on this should have been clearly outlined in our previous submission regarding the Project Profile (PP). Unfortunately, from the informal meeting between WWF-HK and eNGOs (held on 14th December, 2017) as well as your correspondence [Stakeholder C & Stakeholder A] (discussed below), we still do not see a positive outcome or that this issue has been satisfactorily resolved.

2.2 You probably remember, not too long ago, the case of the Sha Lo Tung Columbarium development which was in a similar controversial situation (i.e., to carry out or not to carry out a formal EIA under the EIA Ordinance (EIAO)). At that time, all of us (eNGOs including WWF-HK) considered that the proponent was trying to avoid the formal EIAO process. In an email dated 3rd September, 2008 to the Environmental Protection Department (EPD) regarding

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the Sha Lo Tung Columbarium project, WWF-HK stated the following:

*‘We urge yourself (the Director of Environmental Protection) to confer on all PPPs (Public-private partnerships) the “designated projects” status under the EIAO to ensure that all PPPs can be subject to public scrutiny and penalty through a transparent and standardised statutory procedure...we question if the works area are deliberately adjusted so as to bypass the EIAO mechanism.’*

2.3 Finally, as you would know, the Sha Lo Tung Columbarium project and associated road widening were ALL included under the EIAO mechanism and equally assessed following statutory EIA procedures – even a developer eventually followed our (i.e., eNGOs including WWF-HK) recommendation.

2.4 In the current proposal for the Mai Po Infrastructure Upgrading Project, relatively minor components (as compared to the demolition and reconstruction of PSFSC) such as footpath widening and building of two bird hides are proposed to be assessed under a formal EIA. In contrast, the major component of the upgrading project – the works at PSFSC – would not be placed under the same regime. It would only be assessed under the cumulative impact assessment section of the EIA (i.e., as a separate ‘concurrent project’; the future Environmental Monitoring and Audit (EM&A) programme under the EIAO mechanism would not cover the works for the PSFSC). We sincerely hope that WWF-HK can review this highly undesirable situation.

2.5 As WWF-HK would be aware, under the EIAO, residential or recreational developments (of any size) other than New Territories Exempted Houses within the Deep Bay Buffer Zone (DBBZ) 1 or 2 are listed as Designated Projects<sup>1</sup>. This strict requirement is a reflection of the uniqueness and extreme importance of the Deep Bay Area. Although one may say that the PSFSC is neither a residential nor a recreational facility, the impacts generated by this centre are indeed no different to those listed facilities – there is space for accommodation; visitors use the centre nearly every day generating a lot of sewage with impacts such as disturbance to the environment as well as traffic issues. Most importantly, the centre is located within a Ramsar Site (well within the DBBZ).

<sup>1</sup> [http://www.epd.gov.hk/cia/english/guid/ordinance/sh2\\_1-q.html](http://www.epd.gov.hk/cia/english/guid/ordinance/sh2_1-q.html)

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### 3. Need/ justification of additional bird hides

3.1 After reading the emails from [Stakeholder D & Stakeholder E], we are highly concerned about the necessity for building the two new/ additional bird hides. As pointed out in their emails, the existing single bird hide is 'quite empty' or 'almost always empty' (in contrast to what was mentioned in your email – crowded, at some times, e.g., when there are overlapping guided tours for student groups). We share the sentiments expressed by [Stakeholder A & D] – why is it that the occasionally crowded situation cannot be improved by a better arrangement or scheduling of the guided tour groups (e.g., reducing group size, avoiding overlapping itineraries)? Indeed, less construction simply means less carbon emissions. We consider that instead of pouring more concrete (e.g., the foundations of the new bird hides) at the Ramsar Site, a better option would be to explore a more effective administrative arrangement to solve the 'crowding' issue, which, only, happens occasionally.

3.2 We hope that detailed and solid data (e.g., information on projection of future visitor numbers/ changes in tour types/ breakdown of visitor categories/ numbers), which are now completely lacking, can be clearly provided and shown, in order that we may fully understand the justification or actual need for building the two extra bird hides, as requested in our previous submission for the PP (and also recently by [Stakeholder C & Stakeholder A]).

### 4. Sewage impacts of the PSFSC

4.1 Although there will be 'upgraded' facilities (e.g., larger indoor space) to accommodate the predicted increase in future visitors under the current proposal, we are frustrated to learn that WWF-HK would not take this chance to concurrently upgrade the sewage treatment facility of the PSFSC.

4.2 WWF-HK should be highly familiar with the deficiency and inefficiency of the Septic Tank and Soak Away Pit system (STS), which have long been criticised by eNGOs (including WWF-HK). In the Town Planning Board hearings regarding Village-type Development Zones in Country Park Enclaves in which we (eNGOs including WWF-HK) have all attended and made representations, the issues regarding STS have almost always been discussed and we all know that it is NOT a desirable system for treatment of sewage especially in areas with a high ground water table such as wetland areas, even though there is a practice note issued by the

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Government (ProPECC PN 5/93<sup>2</sup>). Now, however, the very same system is being proposed to be used by the WWF-HK for the reconstruction of the PSFSC within a Ramsar Wetland Site.

4.3 Indeed, the problems of STS are well documented, as reflected from some Government papers submitted for discussion in the Legislative Council:

EPD stated: 'Septic tank and soakaway systems are commonly used for treating the wastewater arising from unsewered village houses. However, they provide only a minimum level of sewage treatment. The effluent from a septic tank still carries very high nutrient, organic and microbiological loads. These can only be effectively attenuated by the soakaway system in circumstances where the ground conditions are suitable and development density is low.'<sup>3</sup> [Remarks: The same statement has been cited by the WWF-HK in a submission against the use of STS at To Kwa Peng and Pak Tam Au.]

EPD also stated: 'Soakaway systems operate by allowing the effluent to percolate through the soil so that pollutants would be removed in a natural manner. However, if a system is located in an area where the underground water table is high such as an area in close proximity to watercourses, it cannot function properly.'<sup>4</sup> [Remarks: PSFSC is surrounded by water bodies such as fish ponds, Gei Wais and marshes (please see Figure 1)].

4.4 Furthermore, effluent from an STS can cause a discharge to a water body. This is because the liquid which comes from a STS is an effluent (as stated above). It becomes a percolating-type discharge (or other type) from a septic tank as per Section 2 of the Water Pollution Control Ordinance (WPCO). The ground and ground water near it, or some distance away, could be part of the 'waters of Hong Kong or Inland Waters' (in the present case, the waters of Deep Bay Water Control Zone (WCZ)) as per the definitions in Section 2 and so the discharge entry point takes place at that point. EPD in appropriate cases are expected to apply the general prohibitions contained in the WPCO against those who discharge sewage matter by depositing of it in any place where any component of it is likely to enter the waters of Hong

<sup>2</sup> [http://www.epd.gov.hk/epd/sites/default/files/epd/english/resources\\_publications/files/pn93\\_5.pdf](http://www.epd.gov.hk/epd/sites/default/files/epd/english/resources_publications/files/pn93_5.pdf)

<sup>3</sup> <http://www.legco.gov.hk/yr05-06/english/panels/ea/papers/ea0522cb1-281-1-e.pdf>

<sup>4</sup> <http://www.legco.gov.hk/yr07-08/english/panels/ea/papers/ea0108cb1-519-1-e.pdf>

4



Kong or inland waters (which includes the ground in which ground water is found) within a reasonably foreseeable time by percolation etc. The point of discharge is defined as being the place where the matter first enters the body of water.

4.5 In the Deep Bay Area, WWF-HK should be fully aware that there is a 'Zero Discharge Policy'. According to the Government, in order to ensure compliance with Deep Bay zero discharge requirements, **any projects (in the Deep Bay WCZ) should avoid increasing residual pollution loading into Deep Bay**<sup>5</sup>. After completion of the proposed project (with more bird hides and upgraded (more indoor space) facilities), we can expect that the future visitor numbers to the Mai Po Nature Reserve will increase substantially. We would like WWF-HK or your consultant to clearly clarify how this upgrading project in which STS is still proposed to be the sewage treatment facility can meet the 'Zero Discharge Policy' for Deep Bay (it would be reasonable to expect there will be an increased pollution loading due to the increase in visitor numbers).

4.6 Indeed, in contrast to the current proposal by the WWF-HK, a completely different approach has been adopted by the Hong Kong Government in solving the sewage problems in remote areas without public sewers. In recent years, a new sewage treatment system called the 'membrane bio-reactor' has been installed in more than 130 public toilets within the Country Parks of Hong Kong, to replace the old-fashioned systems (e.g., septic tanks)<sup>6</sup>. This new system has also been installed in some tourist centres managed by the Government, such as the Zero Carbon Building in Kowloon Bay and the Woodside Biodiversity Education Centre of the Agriculture, Fisheries and Conservation Department<sup>6</sup>. These examples clearly show that there is at least one better alternative, which is now widely used in Hong Kong, to replace the STS. In view of the above, we sincerely hope that WWF-HK can critically review the proposal of using STS in the future PSFSC, which is within a highly sensitive wetland – the Ramsar Wetland.

4.7 Finally, we would like to reiterate that we are highly concerned about the sewage impacts generated by the new PSFSC. If the works at PSFSC are not going to be included as a major part of the EIA, we really do not know how this issue can be subject to public scrutiny (e.g., under the present arrangement, we doubt that the EM&A programme under the statutory EIA procedure will cover the monitoring of water quality around the new PSFSC during its

<sup>5</sup> <http://www.legco.gov.hk/yr14-15/english/fc/fc/minutes/fc20150714b.pdf>

<sup>6</sup> <http://www.dunwellgroup.com/ProductsServices/DECL/Bio-Toilet/JobReference.html>

construction and operational phases).

#### **5. Increased disturbance deep inside the Biodiversity Management Zone (BMZ) of the Ramsar Site**

5.1 A new bird hide is to be built in the central part of the Gei Wai area and the Education Centre (EC) is to be turned into an exhibition hall for guided tours, students, etc. We can expect that, with these two new (or renovated) facilities, there will be more visitors and even more vehicular traffic entering the BMZ of the Mai Po Ramsar Site. Of course, we understand that there would be measures such as bamboo screening or something similar to reduce the disturbance to waterbirds using the wet areas of the Gei Wais/ ponds, as illustrated during the informal meeting on 14th December, 2017. However, we would just like to say that birds are not the only important biological component of this wetland area. The Gei Wai area is also important to many non-flying terrestrial wildlife such as herpetofauna, wild mammals like the Leopard Cat and the Eurasian Otter, the Mai Po Sesamine Crab, etc.

5.2 The bunds are important traveling routes and habitats for the aforementioned non-flying animals. We would like to know how potential impacts on these animals caused by the potential increase in visitor numbers/ vehicular traffic such as road kill, barrier effect (e.g., caused by the bamboo screen) and disturbance impact/ edge effect (e.g., more tours) would be mitigated. In general, human activities should be directed away from the centre of a nature reserve instead of pumping in more people (that is why the Mai Po Nature Reserve was designated as a Restricted Area in the first place under the Wild Animals Protection Ordinance). We hope that WWF-HK can fully elaborate upon how the current proposal would not significantly impact on the BMZ of this Ramsar Site. As discussed above, the need for the additional bird hide in the central part of the Gei Wai area is also highly doubtful.

5.3 In addition, the ponds surrounding the EC are important to waterbirds. We are concerned that if the visitor number to the EC is to be increased as a result of the upgrading proposal, how can the increased disturbance by people be mitigated?

5.4 Again, a clear projection of future visitor number and breakdown by categories should be provided as well as sound mitigation measures for visitor impacts.

## 6. Traffic impacts

6.1 We have carefully examined the layout plan of the future PSFSC. We are concerned that the parking space at this facility would be reduced (as compared to the present size of the vehicle parking area). Some of the cars/ school buses now using the existing parking space within the centre would be forced to park along the Tam Kon Chau Road in the future. As WWF-HK would know, the Tam Kon Chau Road is a sub-standard single-lane two-way carriageway. Thus, we are highly concerned about the aforementioned situation. We hope WWF-HK can provide a detailed traffic impact assessment regarding this issue. Once again, unfortunately, if the works at PSFSC are not going to be included as a major part of the EIA, we really do not know how this issue can be subject to public scrutiny.

## 7. Environmental Monitoring and Audit (EM&A) for the demolition and reconstruction of PSFSC

7.1 As we mentioned during the informal meeting, we have spotted an excavator with the WWF-HK logo involved in a suspected unauthorised development case during one of our field visits in the Lok Ma Cha area. We mentioned this episode because we do not want to see, in the future, contractors involved in the PSFSC works would engage in environmentally destructive activities within the Ramsar Site (e.g., dumping of construction and demolition waste in the fish pond area) and, thus, they should be strictly monitored. We consider an EM&A programme should be carried out for the demolition and reconstruction works at PSFSC. Nonetheless, if the PSFSC works is not going to be included as a major part of the EIA, we really do not know how this issue can be subject to public scrutiny (or whether or not there would be an EM&A for the works at PSFSC).

7.2 As mentioned above, EM&A should also be carried out for the water quality around the PSFSC. Of course, we would also highly recommend that an Ecological M&A should also be carried out as it is within a Ramsar Site. Unfortunately, since WWF-HK do not currently intend to have the demolition and reconstruction of the PSFSC assessed and monitored under a complete EIA mechanism, we are highly concerned as to how the works at PSFSC can be subject to public scrutiny and penalty through a transparent and standardised statutory procedure.

7

## 8. Marine ecological impacts

8.1 We would like to, once more, point out that the Gei Wai area is largely inter-tidal and many important fauna within are indeed marine organisms, e.g., fishes such as mullet, mudskippers, the sesarmine crabs, Gei Wai shrimp (as stated in our previous submission). We are surprised to see that in the PP there is no mention about the potential impacts of the project on marine ecology (e.g., impacts on the sesarmine crab due to the new facilities). We hope that this issue will be appropriately handled and sorted out during the EIA process.

## 9. Concluding Remarks

9.1 We would like to mention that the above are just our preliminary views based on the highly limited information provided by WWF-HK at the present time. We hope that the concerns of [Stakeholders A & C] as well as ourselves, including submission to a full EIA process, can be adequately addressed with more information provided in the near future. Otherwise, [we] would be very reluctant to be forthcoming with any support for the entire project, based upon the current situation.

9.2 These days, the Hong Kong community is critically aware and highly sensitive to the issue of double-standards. The general public would expect even higher standards from charity groups and NGOs. As an old friend and collaborator of WWF-HK (an important relationship that we will maintain and nurture in the future), [we] hope that everything undertaken for the captioned project will be straightforward, easily explainable and seen to have been conducted with the highest standards, under the scrutiny of an open and due process.

9.3 Thank you for your attention.

[Stakeholder B]

cc. [Other Stakeholders]

8

**From:** Michael Lau (WWF Conservation)

**Date:** Wednesday, February 7, 2017 at 10:52 AM

**To:** [Stakeholder B]

**Cc:** [All Other Stakeholders]

**Subject:** RE: Mai Po Infrastructure Upgrade Project – [Stakeholder B]'s further comments

Dear [Stakeholder B],

Thanks for your further comments. The purpose of the briefing to Green Groups in Dec was to provide up-to-date information on the modifications of the proposed project, the build methods, design and measures to avoid/minimize impacts and an opportunity to hear your questions, concerns and suggestions. Indeed some of the comments like the window design features at PSFSC are most helpful.

The consultation meeting by no means substitutes the statutory process planning application and EIA process. I am however happy to provide feedback to your points here. The survey findings, analysis, impact assessments, detailed measures and EM&A will be included in the planning applications and EIA that are being prepared by our consultants. We'll arrange further meeting with Green Groups and other stakeholders when these submission documents are ready.

First I would like to clarify a couple of points before responding to your comments:

- (1) The Mai Po Sesarmine Crab was described from specimens collected in the coastal mangroves in Mai Po, not inside the gei wais. Subsequent research and studies in Mai Po gei wais (e.g. the one by Henry Lui) never found this species in gei wais (Henry, please correct me if I am wrong). The coastal mangroves is under the natural tidal cycle while the gei wai mangroves are subject to a different, man-manipulated water exchange regime in which water is only let in and out through the sluice gate about 10 times a month. The macro benthos fauna was quite different between these two habitats (Lui, Lee & Sadovy, 2002). Hence, I am interested to know from what source you think Mai Po sesarmine crab occurs in gei wais.
- (2) The Mai Po Education Centre has always had an exhibition hall since it was opened in 1986. We are going to do internal renovation only including the exhibition hall, the exhibits and classrooms/workshops in this project. It is not correct to say we are turning the Education Centre into an exhibition hall. It is one and the same.

#### **Demolition and Reconstruction of Peter Scott Field Studies Centre**

The proposed Sha Lo Tung Columbarium Development is clearly a designated project and that's why GGs including WWF and KFBG successfully pushed for EPD to stipulate an EIA to be done. For PSFSC, it is not a designated project under EIAO. We are not trying to go around any process but will comply with the law. As mentioned in the briefing, we will still conduct a full and detailed assessment (similar to a statutory EIA) to be included in the submission Appendix, together with its EM&A programme on ecology, waste management etc. with Implementation Schedule and details publicly accessible. A trip-ticket system will

be adopted to ensure that all recyclable construction waste is recycled off-site. Furthermore, the EM&A programme requires regular inspection of the works by our future Environmental Team (ET) and an Independent Environmental Checker (IEC), including audits of waste generation, recycling and disposal that will be reported regularly. It will also cover Ecological Sensitive Receivers (ESRs) in the vicinity of PSFSC. The future PSFSC, like our current centre, will be open to visitors and users and our operation is always under public scrutiny.

The PSFSC is for community and schools education on conservation, biodiversity and sustainability, community volunteering and supports wetland training courses and the habitat management operations of the Mai Po Nature Reserve. It will have accommodation for our programme participants and will receive visitors. The Green Hub, an unique facility for promoting sustainable living, has similar facilities for community educational use.

As mentioned in previous briefing, we are exploring the provision of shuttle bus services linking with links to public transport or nearby parking and will promote environmentally friendly transport. Traffic Impact Assessment has been carried out. Group visits to the reserve are booked in advance and we will notify them in advance to arrange their own coach parking other than in Tam Kon Chau Road.

We know that a septic tank and soakaway pit system (STS) can only operate effectively under certain conditions. That is why WWF shared the same concerns with GGs on village house using septic tank in country park enclaves. As you know, although percolation test is supposed to be carried out to ensure they meet the standard, in practice the test are often ignored when new village houses are built. For our new PSFSC, our engineering consultant is looking into the septic tank and soakaway system and technologies to fully meet EPD and our own high standards. Ground investigation has already been done and we have the ground water information. We are now looking at appropriate technology with engineers to ensure a water saving and clean sewerage solution suitable for the new PSFSC. We are looking into systems to treat the sewage from PSFSC to ensure there will be no additional pollution load to Deep Bay in accordance with legislation. We will update you soon on the approach.

#### **Need and Justification of the proposed project and the Tower Hides**

The need of new facilities is based on our day-to-day management of the reserve, running of the programmes and our aspiration to provide memorable experiences to connect our community visitors with nature. Our three goals for managing Mai Po are conservation, education with community engagement and capacity building and we strive to increase its educational value, while not undermining the conservation value of the reserve. I expect [Stakeholder B] would have gone through similar thinking when their visitors facilities and services were upgraded to modern standards. In this project we recognise the need to improve facilities that will serve the community well into the next few decades and enable the community to benefit from bringing visitors to encounter the amazing biodiversity of this special place. In the process we will further protect the biodiversity in Mai Po and further afield in Hong Kong and across Deep bay through our conservation management and advocacy work. It is our aim to have positive impact on



the Mai Po habitat, biodiversity and on the visitors, an approach where people and nature can thrive.

I am sure you can appreciate that the birds do move around a lot depending on the season, the tide, the habitats, the water level, etc. Although it may seem there are already quite a number of hides scattered in the reserve, at any one time only a small number offer good views of the birds and concurrent use by the visitors. The visitors to Mai Po are also not spread out evenly but they tend to peak on weekends and holidays during the cooler months for general public visits and weekday mornings for school students to fit the school timetable. The hide usage planning is based on usage patterns of various groups and concurrent usage of both WWF and other authorised visitors. As mentioned, the existing Tower Hide is an education stop for the school groups because of its strategic position being the first hide closest to the reserve entrance and having a good panoramic view over the reserve, Shenzhen and Tin Shui Wai. It is not big enough to accommodate two classes at the same time and there is a present need to provide more capacity near this location. In the last three years, a total of some 1,100 school classes visited the reserve and over 70% of these visits are concurrent with another school group or public tour. We have received comments from teachers, students and our nature interpreters that more indoor space is needed in the PSFSC Visitor Centre, Education Centre and the Tower Hide. It is for these reasons an additional Tower Hide is proposed.

#### Visitors number and disturbance

As mentioned in the briefing, Mai Po has in the past received over 40,000 visitors per year. From 1993 to 2004, the number of visitors hovered at a peak of between 35,000 and 45,000 per year. During this period, the water birds including Black-faced Spoonbill using Mai Po and Deep Bay was unaffected. After that, the visitor number declined with the opening of the Wetland Park and some incidences of Mai Po closure due to Avian Flu. In recent years, we have around 24,000+ students and members of public visiting Mai Po annually. After the completion of this new project, we estimate the visitor number will gradually recover to previous levels in 3 years' time, with some 36%+ more students and/or general public coming to experience Mai Po biodiversity. This new target of over 32,000 visitors is still less than the numbers during 1993-2004. In terms of impact our team is also looking to adjust tour duration times to further moderate visitor hours within the reserve. We ensure visitors are guided by our Education Officers or Nature Interpreters and we are governed by the permits we have been issued by AFCD. The bird hides and screening have always been successful in keeping disturbance at acceptable minimal level to the birds, the most sensitive group of wildlife. As mentioned before, with the upgraded facilities, we would be able to offer quality shorter tours to suit the needs of those who do not have the time or the physique. Hence, we are confident that we can allow 36% more students and general public to have a memorable experience in Mai Po without compromising the ecological and conservation value of the reserve.

The Mai Po gei wais were constructed by local villagers in the 1940's. These man-modified wetlands have since been actively managed by people since, first for commercial shrimp farming, then in the 1970's some were converted to deeper water fish ponds. Since 1983, WWF gradually took over the ponds and managed them for better ecological value ,

conservation and education. Heavy machines such as bulldozers and diggers were used to remove or form bunds, make islands in order to change some of them to high tide roost or to deliver freshwater wetlands. These wetlands are transitional habitats and subject to natural succession. Whether keeping them productive as commercial gei wais by villagers in the past or to maintain their ecological and biodiversity value by WWF, actions are necessary such as completely draining of the ponds, baking the pond mud dry and desilting work using machinery. In the case of WWF approved management plans outline changes made to alter and reform aquatic and bund communities in a particular pond followed by the restoration and establishment of new communities. Mai Po has supported good numbers of internationally, regionally and locally threatened bird species and, together with Deep Bay, is a wetland of international importance. Birds are the most sensitive wildlife group to disturbance. That is why we pay so much attention to them and use them as indicator of disturbance levels. That is not to say other wildlife groups are ignored and we have targeted management actions for them and they will also be covered in the EIA.

You brought up an issue of potential impact on non-flying animals caused by an increase in number of visitors/traffic such as roadkills, barrier effect, disturbance impact/edge effect could be mitigated. We note most of the mammals in Hong Kong are nocturnal while the construction of hides/ footpath and operation of the vast majority visits are during the day and in any case on foot in the reserve. Our camera trap surveys confirmed this behaviour and also showed that terrestrial mammals in Mai Po tend to use the footpaths/boardwalks and other man-made structures. WWF has some limited access by vehicular traffic into the reserve, normally daytime, in accordance with our working operations / safety needs. Vehicular traffic including ours into the reserve is something we want to see limited and this enforcement is under the control of AFCD.

As mentioned before, the new Tower Hide 2 will overlook the freshwater habitats in the southern part of the reserve which so far receive few visitors. It will actually sit on the edge of the freshwater habitats and a new properly screened footpath of less than 200m will be built to link it to the existing footpath along Gei Wai 18/19. This location is chosen to allow birdwatchers/ photographers and researchers to watch the birds including eagles in the southern ponds without the need to venture into this less disturbed part of the reserve. We are confident that it will not cause any significant disturbance to the wildlife both during the construction and subsequent operation phase. Our reserve based team have a wealth of experience and have supervised building of similar boardwalks in the coastal mangroves and installed floating hides at the edge of the Deep Bay mudflat, the Core Zone of the Ramsar Site. In fact, GGs including [Stakeholder B] and [Stakeholder A] wrote a letter of support for our 2006 application for a direct permit to build the latest boardwalk and floating hide, which we much appreciated. We are also thankful to [Stakeholder A] who provided funding for the earlier construction of another floating hide, and to the many WWF community supporters and birdwatchers who donate money for the construction and maintenance of many of the reserve facilities and the management of the reserve. A new Tower hide 2 facility will be beneficial to researchers and experienced birdwatchers alike.

## Marine Ecological Impact

For the construction of the new Tower Hides foundation, we will time this work with the earthmoving work in the respective gei wais when they will be completely drained down outside the bird season. This approach to construction will ensure zero pollution to gei wai water and minimal disturbance to the wildlife during the works. With no pollutants entering into the gei wai aquatic system, there will be zero pollution entering the marine ecosystem of Deep Bay. This approach will be explained in detail in the EIA Report.

I hope the explanations and detailed information that will be provided in the EIA and planning application can fully address your comments. I can assure you that WWF is looking to demonstrate the highest environmental standards in the project and strive for the best conservation and education outcomes into the future. In managing Mai Po and working with the community and government we have an ongoing responsibility to provide a level of modern facilities to protect the reserve biodiversity and support users experience and connection with nature. These goals can be delivered in the Mai Po Infrastructure Upgrade project.

I look forward to further sharing with you project details in the coming weeks and seeking support from *[Stakeholder B]*.

Best regards,

Michael

Dr. Michael Lau 劉惠寧

Director, Wetlands Conservation 濕地保育總監

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**together possible**

讓我們攜手成就人類與大自然和諧共存的未來。

Together, it is possible to build a future where people live in harmony with nature.

**From:** *[Stakeholder B]*

**Date:** Wednesday, February 7, 2017 at 12:23 PM

**To:** Michael Lau (WWF Conservation)

**Cc:** *[All Other Stakeholders]*

**Subject:** RE: Mai Po Infrastructure Upgrade Project – *[Stakeholder B]*'s further comments

Dear Michael,

Thank you for your reply. But I would like to provide you some of my immediate responses and clarifications:

### 1. *Perisesarma maipoense* (Mai Po Sesarmine Crab)

Researches regarding this species are very scarce but recently there has been a scientific paper published by Prof. Peter NG and in which its ecology has been summarised in detail, as follows:

"Soh (1978: 12) stated that he obtained his specimens from "Burrows in muddy substratum near the water edge at Mai Po marshes". Lee & Leung (1999) commented that in Mai Po, the species was only found on the raised levees of drainage channels and drier bunds near the tidal limit in mangrove areas, and is absent on the landward side of the border fence road. The present specimens from northern Vietnam burrow in the mangrove littoral zone, in areas both above and close to the average tide level. The crabs are amphibious and occur mainly in brackish water areas. They always live at the edge of the mangroves and have been observed inside the mangrove forest itself. The crabs have been obtained from different habitats. In the garden of the Mangrove Ecosystem Research Station at Giao Thuy District, the soil is relatively hard but the crabs nevertheless make burrows in the dry substrate. They also occur at the base of the sea-dyke slope where there is firm mud and grass growing (at Xuan Thuy); as well as in areas with wetter and muddier substrates near the water's edge."

From the above latest information observed in Vietnam, it is obvious that this species can move inland and live on dry areas (e.g., 'garden') (like many other sesarmine crabs). I would consider it would not be inappropriate to consider that this species would also appear inside Gei Wais, especially those with mangrove, and in view of the mobility of this species. Indeed, I think it is better to 'assume' they would also appear in Gei Wais - this is, indeed, a precautionary approach which we always urge the project proponents/developers to follow.

2. You mentioned that the Sha Lo Tung Project is 'clearly' a DP. But I think at the beginning this would not be what EPD and/or the project proponent would think, and thus an 'Environmental Assessment' not under the statutory EIA process had been proposed (around 2008). At that moment, clearly the Government and the project proponent would also think that the SLT project was NOT a DP (same as what you think for PSFSC). Only after Environmental NGOs and many other people requested they pushed the project into

the legal framework. Anyway, you mentioned a lot like ET, EM&A, IEC, etc. (for the demolition and construction of the PSFSC?), I just like to ask one question: would all these be conducted under the statutory EIA process (i.e., following statutory EIA procedures, requirements and properly mentioned in the EIA report) for the demolition, construction and operation of PSFSC. If the PSFSC project is only included in the 'cumulative impact assessment section' of the EIA, I cannot understand what you mentioned below would appropriately be carried out under the formal EIA requirements.

### 3. Bird hides and facility upgrading

As you should know, I have never been to the bird hide; but what I mentioned were mainly based on the observation by the users (e.g., *[Stakeholder A]* and *[Stakeholder D]*; actually, copied and pasted their observation - 'quite empty and almost always empty').

You also mentioned about the upgrading of *[Stakeholder B]*'s facilities. But I would like to clarify that based on my understanding, our upgradings were seldom done for encouraging more people to come; instead, most of the upgradings were caused by safety reasons and for improving the environments. As you should know, *[Stakeholder B]* also requested visitors to pay entrance fee in 2006 and this was partially due to the fact that we would like to 'limit' the number of visitor, as we knew that *[Stakeholder B's facility]* is a place of high ecological and conservation importance.

You also mentioned 'Green Hub' below. But I would like to mention that it is completely surrounded by a high density urban landscape and, to be honest, it was a project initiated by the Government - we did not take the lead to ask for the project, and now we preserve a green oasis with its heritage in the urban centre of Tai Po.

### 4. Sewage impact

We look forward that a new system/ thinking may be involved and we look forward to your reply regarding this.

### 5. Barrier effect

I have seen Javan Mongoose and Eurasian Otter during daytime. We look forward to the ecological impact assessment section regarding the road kill, barrier and disturbance issue (of course it should include the crab).

These are just my prelim. views and we look forward to further discuss the project with an aim to protect the Ramsar Wetland Site.

Best,  
*[Stakeholder B]*

**From:** *[Stakeholder B]*

**Sent:** Thursday, February 08, 2018 10:26 AM

**To:** Michael Lau (WWF Conservation)

**Cc:** *[All Other Stakeholders]*

**Subject:** Re: Mai Po Infrastructure Upgrade Project – *[Stakeholder B]*'s further comments

Dear Michael,

I have read your email and also my previous reply to you again. I have also gathered some more information about Green Hub. Just like to share with you and others more on two points. Btw, I think most of the issues/concerns mentioned in our previous letter to WWF regarding this project are still valid, and, unsolved. Well, let's talk about the Crab, and Green Hub.

### 1. The Crab

It is a Sesarmine Crab with the ability to walk on dry areas (like most other Sesarmine Crab species) - having an amphibious habit. They do not confine to purely-aquatic environments and obviously they can move around, on the ground, easily. I think you should know that Gei Wai is indeed a MARINE habitat providing nursery grounds for many aquatic/ semi-aquatic organisms, and these organisms are the important food source of waterbirds - these are the basic ecological function of Gei Wai, indeed; this also shows that Gei Wais are well connected, ecologically, with the mangrove mudflat of Deep Bay. So on one hand Gei Wais are feeding grounds for waterbirds, BUT, on the other, they are also important nursery grounds/ habitats for aquatic/ semi-aquatic organisms originated from the marine environments (e.g., the mangal Deep Bay area). In the Gei Wais, the water of course (mostly) is brackish, and many contains mangrove and mangrove shorelines as well. These are just the conditions required by the Mai Po Sesarmine Crab (as mentioned in the paragraph of my previous email, which is from a scientific paper published in an international peer-reviewed journal, not local technical reports/ magazines/ thesis). In addition, past surveys could not locate this species within the Gei Wais does NOT mean that they would not/ cannot inhabit the Gei Wais NOW. Or, simply speaking, because of their low numbers (i.e., RARE species), they were just not easy to be found and thus absent from the survey results. Even it may be true that they did not appear in Gei Wais, in the past, they can recolonise/ colonise the Gei Wais, at present, in view of the fact that the habitat conditions are indeed largely suitable. For instance, there is now a mudskipper species (the large-finned mudskipper) regularly inhabiting the Gei Wais, which only appears in Hong Kong in recent years and has never been recorded and reported by any scholars or researchers from Mai Po, despite the fact that Mai Po has been subject to a lot of scientific studies/ researches. Mai Po bent-ringed firefly of course is another example (e.g., potential colonisation/ recolonisation). Finally, as mentioned in my previous email, simply following a precautionary principle, and in view of the habitat conditions of Gei Wais and the flexible habitat requirements of this crab (i.e., "The crabs have been obtained from different habitats"), it is NOT unreasonable to predict that this species would also appear in Gei Wais (well, I am not saying that there will be

Golden Coin Turtle/ Giant Panda in Gei Wais; this is unreasonable). Since this is a rare species of conservation concern, extra efforts (and care) should be put in protecting (and locating) this species, in order to make sure that no any single individual would be impacted. I am happy to discuss this more in the future discussion meeting.

## 2. Green Hub

After clarifying with our *[colleague]*, I would like to provide you some additional information regarding Green Hub. Indeed, *[Stakeholder B]* have never added any new building structures to the area, or expanding the original structures, because of the revitalisation project. That means the footprint of the developed areas now appearing in Green Hub is same as the footprint of the abandoned police station. And, as mentioned, it is within an urban centre; in contrast, PSFSC is within a highly sensitive Ramsar Wetland Site.

Well....the above are all I want to add. If there would be chance in the future I could elaborate and share more.

Anyway, I would like to reiterate that it is great to see that a new sewage system would be under consideration.

Thank you for your time.

Best,

*[Stakeholder B]*

**From:** *[Stakeholder D]*

**Sent:** Thursday, February 08, 2018 3:20 PM

**To:** Michael Lau (WWF Conservation)

**Cc:** *[All Other Stakeholders]*

**Subject:** Re: Mai Po Infrastructure Upgrade Project – *[Stakeholder B]*'s further comments

Dear Michael

I would like to refer to the following quote from your response to *[Stakeholder B]*:

"The proposed Sha Lo Tung Columbarium Development is clearly a designated project and that's why GGs including WWF and KFBG successfully pushed for EPD to stipulate an EIA to be done. For PSFSC, it is not a designated project under EIAO. We are not trying to go around any process but will comply with the law. As mentioned in the briefing, we will still conduct a full and detailed assessment (similar to a statutory EIA) to be included in the submission Appendix, together with its EM&A programme on ecology, waste management etc with Implementation Schedule and details publicly accessible."

As far as I understand, the PSFSC renovation is to be carried out by the same project proponent (WWF), using the same funding source (Jockey Club), and at the same time as the proposed works within the Nature Reserve. Information about the project has been provided to me and to the Green Group representatives at the same time as information about development proposals within the reserve. Planning for the PSFSC work appears to be undertaken by the same staff concurrently with planning for development within the reserve.

It seems clear to me, therefore, that WWF have been treating this renovation work as part of the same project as the proposed works within the reserve boundary. This project is unquestionably a Designated Project, hence your submission under the EIAO. To claim that the PSFSC works is not a Designated Project requires that you specify the boundary of your project planning to deliberately exclude this work from the EIA submission. This has given the impression that you are avoiding making the PSFSC work subject to public scrutiny under the EIAO. The EIAO makes clear that such practices should not be permitted, and, as *[Stakeholder B]* points out, the situation is analogous to the previous case at Sha Lo Tung, where WWF argued the case directly opposing their current standpoint on their own submission.

If, as you claim, the PSFSC will have a "full and detailed assessment (similar to a statutory EIA)", then surely this assessment could be included as part of an EIA submission, at no additional cost to WWF. There seems to be no reason to avoid this situation, and the current approach of WWF to avoid any public scrutiny of this part of the project makes it appear that the organisation has something to hide, or that you think the PSFSC will not pass the EIAO.

I would encourage you to reconsider the situation, and to consider including the PSFSC as part of your EIA submission for the project as a whole, rather than breaking the project up as is currently the case.

Regards

*[Stakeholder D]*

**From:** [Stakeholder B]  
**Sent:** Thursday, February 08, 2018 05:32 PM  
**To:** [Stakeholder D]  
**Cc:** Michael Lau (WWF Conservation); [All Other Stakeholders]  
**Subject:** Re: Mai Po Infrastructure Upgrade Project – [Stakeholder B]'s further comments

Dear [Stakeholder D]

Your analysis is very clear. Just to clarify one point - it is not renovation work; it is demolition and reconstruction; the scale is much larger.

Best,

[Stakeholder B]

**From:** [Stakeholder B]  
**Sent:** Friday, February 09, 2018 09:23 AM  
**To:** Michael Lau (WWF Conservation)  
**Cc:** [All Other Stakeholders]  
**Subject:** Re: Mai Po Infrastructure Upgrade Project – [Stakeholder B]'s further comments

Morning, Michael,

Yesterday I visited the PSFSC again, and took some pictures. Attached please see some photos showing an abandoned pond adjoining the PSFSC. It seems that the water quality of this pond is not too good (e.g., scum and oil could be seen at the surface).

I would like to know:

1. Is WWF-HK aware of the conditions of this pond? Have WWF-HK checked the water quality of this pond (e.g., E.coli level or faecal coliform level) so far? If yes, can WWF-HK provide us the data? Have WWF-HK compared the water quality of this pond with other ponds within the Deep Bay Area?
2. Would the water quality monitoring and audit to be carried out (as mentioned in your email: EM&A) for the PSFSC include this pond and other water bodies adjoining the PSFSC? The monitoring should include: baseline, construction and demolition phases and operational phase.
3. Would the aforementioned water quality monitoring and audit results be properly included and disclosed under the statutory EIA process, and thus anyone from the public community can check easily?

Just some thoughts and recommendations, thank you.

Best,

[Stakeholder B]



**From:** Michael Lau (WWF Conservation)  
**Date:** Tuesday, February 13, 2017 at 09:36 AM  
**To:** [Stakeholder B]  
**Cc:** [All Other Stakeholders]  
**Subject:** RE: Mai Po Infrastructure Upgrade Project – [Stakeholder B]'s further comments

Dear [Stakeholder B],

Thanks. Quick feedback as below:

### **Mai Po Sesarmine Crab**

Indeed the paper by Prof Peter Ng is very useful and we referred to it when we conducted the biodiversity survey in Mai Po and Deep Bay in 2014/2015. I'd like to draw your attention to the comment by Lee & Leung (1999) that "this species is absent on the landward side of the border fence road". The landward side of the border fence road is actually the gei wai bund. You probably know that both Prof Lee Shing Yip and Dr Leung Siu Fai are the pioneer researchers studying the Mai Po gei wais. Subsequent research by Henry and our recent survey also failed to find this species in gei wais. For the Vietnamese specimens, they were obtained in the mangrove littoral zone. As explained earlier, the water level in gei wais are artificially controlled and very different from the natural tidal cycle. Moreover, the banks of the gei wai bunds are steep, again very different from the gentle profile of natural tidal mangroves. Henry's research in Mai Po showed that macro-benthos fauna are quite different between coastal mangroves and gei wais. The evidence available does not show this species occurs in Mai Po gei wais and that's why as a biologist and responsible for the management of the reserve, I am curious to know the source of your point that "Gei Wai area is important to Mai Po Sesarmine Crab". Whether this species occur in the gei wais or not actually would not matter to our upgrade work as the mangroves in the gei wais will not be affected and there will be zero pollution to the gei wai water.

### **[Stakeholder B] Experience**

[Stakeholder B] was established in 1995 and I joined the organization from 1998 to 2011. Since its establishment that put focus on nature conservation, sustainable living and holistic education, there had been a number of visitors facilities upgrade (such as the new reception, the plaza, the farm shop and the Sun Garden Café), new exhibits and the provision of shuttle bus service to the upper farm area. I am proud to have worked for [Stakeholder B] and fully support the facilities upgrade, new exhibits and additional services because these are important to attract visitors to this special place and connect them with nature. I am lucky to have experienced many magical moments with nature which shaped me to become a field biologist and work in conservation. I think most people working in Green Groups would have similar memorable experience. Should we not offer better and more opportunities to the Hong Kong people?

### **Barrier Effect**

The gei wais in Mai Po has been under regular, active management which involves draining down ponds, drying pond mud and earthmoving for decades and the habitats are man-modified wetlands. The target visitors number three years after the completion of the upgrade project (over 32,000) is still considerably below the peak of 35,000 to 45,000 from 1993 to 2004. The visits organized by WWF will continue to be guided by our educators and nature interpreters and are governed by permits issued by AFCD. Our team is also looking into offering shorter tours to further moderate visitor hours within the reserve. The bird hides and screening have always been successful in keeping disturbance at acceptable minimal level to the birds, the most sensitive group of wildlife. Hence, we do not think this issue warrant in-depth consideration in this project. Having said that we would like to learn from [Stakeholder B] experience on assessing and minimizing these impacts as you are also managing an important site for both conservation and education. We'll arrange a meeting with Andy and Gary in the near future on this topic.

Best,  
Michael

Dr. Michael Lau 劉惠寧

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**From:** Michael Lau (WWF Conservation)  
**Date:** Tuesday, February 13, 2017 at 09:42 AM  
**To:** [Stakeholder B]  
**Cc:** [All Other Stakeholders]  
**Subject:** RE: Mai Po Infrastructure Upgrade Project – [Stakeholder B]'s further comments

Hi, [Stakeholder B],

Thanks. The small pond concerned is privately owned and has not been managed for over 30 years.

As mentioned, we are now looking at appropriate technology with engineers to ensure a water saving and clean sewerage solution that will not add additional pollution load to Deep Bay in accordance with legislation. We will update you soon on the approach.

Michael

Dr. Michael Lau 劉惠寧

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**From:** [Stakeholder B]  
**Sent:** Tuesday, February 13, 2017 01:05 PM  
**To:** Michael Lau (WWF Conservation)  
**Cc:** [All Other Stakeholders]  
**Subject:** Re: Mai Po Infrastructure Upgrade Project – [Stakeholder B]'s further comments

Dear Michael,

Sorry not replying you earlier as I just read your email...very busy in fighting against inappropriate development this morning.

After reading your email... my feeling is that...without the findings of a properly conducted EIA...how can the answers made by you below be so conclusive?

Of course I am not challenging the results of various past 'studies' but what I have mentioned in my previous email (but not in your email below) is that a PRECAUTIONARY approach should be followed. Can you completely rule out the possibility that the Mai Po Sesamine Crab would be recolonising/ colonising the bunds of Gei Wais, under a background that indeed it can inhabit various habitats (including GARDEN) as mentioned in Prof. NG's study? Based on the findings of this latest scientific paper, I would not be surprised if it can be found next to the Education Centre, indeed. I think only a more up-to-date assessment (e.g., the EIA) can provide us more definite answers on whether the current proposal would significantly impact on this species. If we can make a definite conclusion now, why an EIA is still needed? Previous local and overseas studies or even 'recent surveys' of course provide us a very good 'reference point'; but the spirit of an EIA is that it would be more specific, pinpointing a specific development and its potential impact (e.g., area to be affected) - an EIA is different to a scientific study. I would be more comfortable if the recent surveys mentioned in your email did extensively cover and intensively search through the area to be actually affected.

Regarding the experience of [Stakeholder B], thank you for giving me a chance to elaborate more our stand. As I mentioned in my previous email, indeed we would like to 'limit' the number of visitors to the [facility] because we found that too many visitors would actually overtax our facilities, and, actually, we believe that more people would unavoidably mean more disturbance, and this definitely would threaten the value of an ecological hotspot of Hong Kong - the [facility]. I think the same mindset of course should also be applied to the Ramsar Site. In addition, as part of our ongoing review, we have recently even banned the general public from driving inside our [facility]. Some may feel that we are losing the opportunity to 'educate' more people but our view is that a real and proper balance should be struck between conservation and education (or development for education); we cannot put the cart before the horse.

For the barrier effect, as mentioned above, I hope that a more definite conclusion can only be given after a proper EIA is actually done. I hope you know that what I mentioned,

no matter this effect or the impact on the crab, are potential impacts indeed and that's why an EIA has to be carried out to determine the significance of these impacts. For instance, if the EIA found that none of the affected bunds contain the crab, then the impact on this species may consider to be low. But, as I said, without a proper EIA, following a precautionary approach, it is better to assume that this species may be threatened - we are talking about a rare species. A properly conducted EIA can confirm the potential risks are minimal or low, thus ensuring the impacts upon biodiversity will be properly taken into consideration.

Finally, of course you and your team are most welcomed to visit *[facility]* again (I remember you and your team have come some time ago). Indeed, in recent months, our farm has been visited by many Government teams as they would like to learn from us about our conservation works

Best,  
*[Stakeholder B]*

**From:** *[Stakeholder B]*

**Sent:** Tuesday, February 13, 2017 01:07 PM

**To:** Michael Lau (WWF Conservation)

**Cc:** *[All Other Stakeholders]*

**Subject:** Re: Mai Po Infrastructure Upgrade Project – *[Stakeholder B]*'s further comments

Hi, Michael,

Nice to hear that and we look forward to see a proper sewage treatment facility for the PSFSC.

Best,

*[Stakeholder B]*

**From:** [Stakeholder D]  
**Sent:** Tuesday, February 13, 2017 04:43 PM  
**To:** Michael Lau (WWF Conservation)  
**Cc:** [All Other Stakeholders]  
**Subject:** Re: Mai Po Infrastructure Upgrade Project – [Stakeholder B]'s further comments

Dear Michael

I absolutely agree with your comment that we should encourage more people to experience nature, as is possible with [Stakeholder B's facilities]. However, the situation at MPNR is not the same as that at MPNR. At [Stakeholder B's facilities] it is possible for an individual or a family to visit on their own schedule, to travel around the site at their own pace and to spend as much or as little time on site as they wish (within the opening hours). The Wetland Park operates under a similar process.

Within MPNR visitors are obliged to join a guided tour with WWF. This is a very different experience, as visitors will need to keep to the schedule of the guide and the group rather than explore on their own. One result of this is that the hides become overcrowded at the times of the visit, even though they are quiet at other times. Another is that visitors are required to pay the cost for the guide, significantly increasing the cost of the visit (\$30 for a full-day visit to KFBG or HKWP vs \$280 for a half-day visit to MPNR). I know from conversations I have had in the past that many experienced birdwatchers who join the MPNR guided tours do not enjoy the tour because they are not able to visit at their own pace, and resent the high cost. I question whether this model really attracts a life-long interest in conservation for those taking part, who would not be able to afford a regular visit the way they might at [Stakeholder B's facilities].

I realise that this is partly the result of the permit system at MPNR. I do think that a change to the permit system would be beneficial, as I have discussed with you in the past. This is also one reason why I think that managing ponds outside the reserve boundary, closer to the PSFSC, would be useful, so that visitors can explore these at their own pace without the need for the AFCD permit and without disturbing the core area of the reserve (guided tours to the core area could then be offered as a high-end experience, not as the only way to visit the site).

So far, I am not convinced that the proposed developments will address these issues. I think that ensuring better access for less-able visitors by making the footpath and hides wheelchair-accessible is a great idea. Maintaining and upgrading public facilities is really needed. But I would hope that the EIA would provide more details about the need to construct additional hides, and about how this will benefit HK public and wildlife, rather than just being an additional place for the tour groups to go. I also think that it would be preferable to publicly explain (in an EIA) why the PSFSC should be demolished and reconstructed, rather than reconsidering the use of the existing building; for example, what is the benefit to the HK public and visitors from providing overnight accommodation

at this site? (Note that KFBG and HKWP do not provide overnight accommodation as part of their facilities).

At the moment, the main beneficiary of this proposal seems to be WWF, both from the money raised from Jockey Club and the future charging of visitors on public tours or overnight accommodation. You are proposing development on an ecologically-sensitive site and within a G/IC zoning, where the primary beneficiaries should be wildlife and the Hong Kong public and community.

Regards  
 [Stakeholder D]

## **APPENDIX G3**

### **Third Round Stakeholder Engagement (June 2018)**

## Summary of Questions raised by Government Departments and Responses from WWF:

**Q1)** *[Government Dept.]* asked about the parking arrangement after the build of PSFSC (however this applied to the period of constriction as well) and whether the reduction in the size of the forecourt would lead to illegal parking on the single track Tam Kon Cha Road.

WWF responded during the meeting:

- 1) TD had already conducted a TIA on the current plan (which the plan with a) a single entrance, b) 5 parking spaces, c) a turning pocket to facilitate the drop off and u-turn of a 12m coach and d) 2 electric charging points) TD had no adverse comments.
- 2) WWFs plan was for shuttle buses to ply a route from (probably) Yuen Long MTR station to PSFSC via Castle Peak Road.
- 3) The route would be chosen to pass as many parking lots as possible to pick up people who could not get to the MTR station
- 4) WWF was also looking to borrow space from local parking lots in the Tam Kon Chau area for overspill parking as had been done successfully in the past before.

**Q2)** *[Government Dept.]* noted the imminent start of the internal renovation works at EC and suggested that because the EC was mentioned in the EIAO Project Profile that WWF may a) have to wait until the EIA was approved before starting work on the renovation or b) resubmit the Project Profile.

*[Government Depts.]* suggested and WWF agreed to prepare digest of the works at EC (maybe in the form of a PowerPoint presentation). WWF initially suggested that we wait until after the EC tenders were awarded to share these details with *[Government Depts.]*, but subsequently suggested the digest could be produced of the details provided in the Expression of Interest package.

WWF responded during the meeting:

It was suggested that the EIA might be submitted sometime in the next 2-5 months (depending i) on how soon the PSFSC STT could be received and ii) on how many queries WWF got on the THs and FP from Stakeholders) this implied a significant delay to the start of the renovation of the EC

WWF post-meeting response:

Regarding MPEC, WWF's consultant wrote to EPD on 12 December 2017 to explain that the refurbishment works stated in the Project Profile (i.e. the internal renovation and the new external fire services structures) were to be deleted; and provided further clarification on 21 March 2018. EPD agreed on 11 April 2018 that the Project Profile remained valid for the present scope of work. The internal renovation works are not a DP and the laying of the new power line is also not a DP.

**Q3)** *[Government Dept.]* asked about whether there would be any upgrade to the Septic Tank and Soakaway Pit for the EC

WWF responded during the meeting:

- 1) Since the EC was principally for schools and there was only a marginal 10% increase in the number of schools forecast to visit the EC after renovation that this was still within the design capacity of the current system.
- 2) A survey had been conducted and the system was still working perfectly.

**Q4)** After hearing WWFs outline on the PSFSC Sewage Treatment Plant (namely that it would produce Group A quality water rather than the required Group C and that the water would be discharged into a suitably enlarged Soakaway Pit) and after hearing WWFs outline on the PSFSC Greyscale Treatment, (namely that it would produce water to flushing standard which would be reused for flushing) *[Government Dept.]* noted that they had asked for a formal letter describing the features of the forthcoming Sewage Treatment Plant (which they had not yet received).

WWF post-meeting response: The letter requested was issued shortly after the meeting.

## Summary of Questions raised by Green NGOs and Responses from WWF:

**Q1)** *[Stakeholder B]* asked about the nature of the kitchen at PSFSC.

WWF responded that the kitchen was modelled on Green Hub with a Light Café style menu.

**Q2)** *[Stakeholder D]* asked about the current usage of the toilets at PSFSC.

WWF advised that the current usage was of the order of 870 litres per day with a design capacity of 8,700 litres per day. The future system would be designed for a maximum of 24,000 litres per day using the worst case scenario formula provided by EPD however it was expected that the actual usage would be about 10% of that.

**Q3)** *[Stakeholder A]* asked about the reflectivity of the Solar Panels for PSFSC in respect of bird strikes or the Lake effect.

WWF responded that they were currently looking at three suppliers LG, Atal and Siemens, and would be trying these panels out at Island House (IH) in terms of efficiency and reflectivity over the course of the next few months. Everyone was welcome to come and have a look.

**Q4)** [Stakeholder A] also asked about the reflectivity (in respect of bird strikes) and energy efficiency of the windows at PSFSC.

WWF replied that WWF just starting on the detailed design stage for PSFSC and as such they could keep people informed about the best materials to prevent bird strike and maximise energy efficiency.

**Q5)** In response to the news that WWF would perform greening trials at Island House [Stakeholder D] remarked that the greening trial would not be fully representative of MP at IH but he acknowledged that this was a good thing to do.

**Q6)** In response to the news about the material being considered for the tower hides and the footpath [Stakeholder D] remarked that the OPEX would be a concern.

WWF agreed and advised during the meeting that there would be modelling done to take this into consideration. Also WWF had started setting aside contingency funds to cater for any increase in OPEX.

**Q7)** In response to the news about the use of the Greyscale water for flushing at PSFSC [Stakeholder A] was of the opinion that the water could be used for gardening as well.

WWF promised that the team would check the WSD standard on flushing water to see if this would be safe to do so.

**Q8)** In response to the news about the decision to set a minimum height for screening and the boardwalk of 6cm to mitigate against any barrier effect for small animals or invertebrates, [Stakeholder B] was not convinced that this was the right height however he did not suggest any other. He suggested also that if animals followed strict routes underpasses could be built at select locations, however [Stakeholder D] did not think that any set patterns could be identified.

**Q9)** In response to a description of the height of the tower hides, [Stakeholder D] was still in doubt as to whether the need for three storeys could be justified on capacity alone.

WWF advised that capacity was only one consideration and in Tower Hide 2 for example this was not the major consideration. The major benefit of a three storey hide was to provide height which allowed for views over a much greater area. Visitors would be concentrated and occluded in one spot and if this location had height too then a greater area of the reserve would be freed from human disturbance.

**Q10)** [Stakeholder D] also asked about the nature of the hoardings for the Footpath and the Tower Hides

WWF advised that as far as he could control it the hoardings would be minimal and largely demarcational consisting in mesh fences or netting.

**Q11)** [Stakeholder A] also asked about the duration of the works for the Tower Hides and the linkage to the Mai Po Habitat Management plan especially the footings.

WWF advised that the HKJC project would follow the Habitat Management plan as this is where the ecological priority lay. Effort would be made to ensure that all the work could be finished in one bird season (6 months) by greater use of prefabrication. It was targeted to finish the footings in two months for example.

**Q12)** [Stakeholder D] asked at what point the public would be informed about the start date and duration of the renovation works for EC

WWF advised that the tenders had not yet been awarded but he expected that a notice could be issued in July

**Q13)** [Stakeholder A] also asked about the parking arrangements for the duration of the works for at PSFSC

WWF advised that there were broadly two solutions.

- 1) WWF-HK had been exploring options and got use of some overspill parking in the area for recent events. This would be explored further in the coming 6 months.
  - 2) WWF-HK has also been exploring shuttle bus services from local transport interchanges (and was even looking into electric shuttle buses). Such a service could also be routed in such a way as to take in the overspill parking locations for the convenience of those who could not use public transport.
- WWF also briefed the meeting on options for the temporary reception and enquiries were now focused on local village houses rather than a container in the carpark. ([Stakeholder A] requested that this information be posted to visitors as soon as possible (this query was also posted to the Mai Po noticeboard website)

**Q14)** [Stakeholder A] also asked about the number of parking spaces after the start of the construction of the future PSFSC.

A14) WWF advised that there would be only around five parking spaces in the new forecourt although two of these spaces would be for electric vehicles. Priority would be given to electric vehicles (using solar powered charging stations) and to disabled parking



**Q15)** [Stakeholder D] suggested featuring bird and bat roosting boxes in the new PSFSC and Tower Hides.

WWF promised to look into this.

WWF ended the meeting by requesting that the team examine the possibility of using solar pipes or optical fiber solutions to improve natural lighting inside the tower hides.

#### **Summary of Questions raised by Local Community and Responses from WWF:**

**Q1)** Whether there would be any lifts in PSFSC.

WWF advised that a lift would be provided but that it would only serve the 1/F not the roof.

**From:** [Stakeholder A]

**Date:** Friday, June 15, 2018 at 11:08 AM

**To:** Nicole Wong (WWF Corporate Affairs)

**Cc:** [All Other Stakeholders]

**Subject:** Re: Meeting in June - Mai Po Infrastructure Upgrade Project Update

Dear Peter, Nicole and Guy,

Thank you for updating us on the project yesterday.

I mentioned about solar panels yesterday because recently we came across a few projects with solar panels near ecologically sensitive areas. There seems to be some research on the ecological impacts of solar panels, though not extensive, and so far there are some mitigation measures to these potential adverse impacts. But still, it would be good to take a precautionary approach in sensitive areas like Mai Po. Here is the link to the RSPB policy briefing on solar energy for your reference, just in case you have not seen it before.

[http://ww2.rspb.org.uk/Images/Solar\\_power\\_briefing\\_tcm9-273329.pdf](http://ww2.rspb.org.uk/Images/Solar_power_briefing_tcm9-273329.pdf)

Best Regards,  
[Stakeholder A]