

**Expansion of Hong Kong International Airport into a
Three-Runway System**

Ninth Meeting of Professional Liaison Group

Notes of Meeting

The ninth meeting of the Professional Liaison Group (PLG) was held on 19th December 2019. The Airport Authority Hong Kong (AAHK) and their consultants presented an update on the Expansion of Hong Kong International Airport into a Three-Runway System (3RS) Project, including an overview of the 3RS works progress, a summary of environmental monitoring and audit (EM&A) results since the last PLG meeting, updates on the Coral Translocation and Transplantation studies, details on the implementation of the Marine Ecology and Fisheries Enhancement Strategy (MEFES) and the preparation works for the designation of the 3RS Marine Park.

Members present:

Dr Helen CHIU	American Chamber of Commerce in Hong Kong
Ir Gordon CHO	Dashun Policy Research Centre
Prof Jackson HO	Hong Kong Airline Service Providers Association
Dr Brian KOT	Jockey Club College of Veterinary Medicine and Life Sciences, City University of Hong Kong
Mr Ken LAU	Airports Council International, Asia-Pacific Region
Dr LUI Sun Wing	The Hong Kong Association for the Advancement of Science and Technology
Dr Simon WONG	Ocean Park Conservation Foundation Hong Kong
Dr Cynthia YAU	Marine and Fisheries Ecologist

Members absent with apologies:

Prof CHENG Li	Department of Mechanical Engineering, The Hong Kong Polytechnic University
Mr Ken CHING	Eco-Education and Resources Centre
Mr CHONG Dee Hwa	Ichthyological Society of Hong Kong
Prof CHU Ka Hou	School of Life Sciences, The Chinese University of Hong Kong
Ms Helen COCHRANE	Environment & Energy Committee, The British Chamber of Commerce in Hong Kong
Ms Suzanne GENDRON	Ocean Park Conservation Foundation Hong Kong
Ms Yvonne HO	International Air Transport Association
Prof Alexis LAU	Division of Environment, Hong Kong University of Science and Technology
Ir LEE Ping Kuen	The Hong Kong Institution of Engineers
Ir Kenny WONG Siu Wai	The Hong Kong Institution of Engineers
Mr Philip WONG	Ocean Park Corporation
Ir Prof Steve WONG	The Environment & Sustainability Committee, The Hong Kong General Chamber of Commerce

In attendance:

Ir Kevin POOLE	Airport Authority Hong Kong (AAHK)
Mr Peter LEE	Airport Authority Hong Kong (AAHK)
Mr Martin PUTNAM	Airport Authority Hong Kong (AAHK)
Mr Eric CHING	Mott MacDonald (MM)
Ms Julia CHAN	Mott MacDonald (MM)
Dr David BAKER	The University of Hong Kong (coral expert)
Dr Inga CONTI-JERPE	The University of Hong Kong (coral expert)
Dr Jasmine NG	Environmental Resources Management (ERM)

1.0 Welcome and Introduction

1.1 Airport Authority Hong Kong (AAHK) welcomed members and thanked them for attending the meeting. AAHK provided an overview and updates on the latest progress of the 3RS Project. Environmental consultants assisting in various aspects of 3RS Project implementation were introduced. Particular emphasis was made on the PLG meeting being a two-way communication platform with members encouraged to raise questions and make comments at any time during the presentation.

2.0 Presentation by AAHK's consultants

2.1 MM presented the latest progress on the monitoring and implementation status of the 3RS EM&A Programme, and together with the coral experts, presented updates on Coral Translocation and Transplantation studies.

2.2 ERM presented the latest progress on MEFES including updates of the Marine Ecology Enhancement Fund (MEEF) and Fisheries Enhancement Fund (FEF), progress on the development and deployment of eco-enhanced seawall, progress of the pilot test for fish restocking; and updates on the preparation works for the designation of the 3RS Marine Park.

3.0 Questions and comments from PLG members

3.1 Members raised questions during and after the presentations and the discussion items are summarised as follows.

3.2 A question was raised whether there were any incidents or specific trends observed during water quality monitoring for Deep Cement Mixing (DCM) works. MM responded that there were occasional exceedances of action or limit levels of water quality monitoring parameters, in which all incidents had been investigated by the Environmental Team (ET). All those occasional exceedances were found to be non-project related and were within the levels of natural fluctuations, as such, no specific trends were observed.

- 3.3 A question was raised on the validity of using Closed-circuit Television (CCTV) system for Dolphin Exclusion Zone (DEZ) monitoring as it was noted that no dolphins had been observed during the trial and implementation stages. The AAHK team responded that during the course of implementation, the CCTV system has been reviewed by the ET, Independent Environmental Checker (IEC), as well as the dolphin experts Dr Thomas Jefferson and Dr Bernd Wursig, in which the performances of the system, including detection range, clarity of images are meeting all the requirements for DEZ monitoring even during night time circumstances. The AAHK team added that QA/QC checks and drills for Dolphin Observers (DOs) were conducted by the ET regularly to check the competency of DOs on DEZ monitoring.
- 3.4 A question was raised concerning the effectiveness on the use of CCTV system to assist DOs in the monitoring of DEZs and whether the use of CCTV system would be extended to DEZs of other Contractors. The AAHK team responded that the use of CCTV system is an improvement and alternative method to the conventional deployment of DOs on working barges as DOs would monitor the real-time CCTV images in an indoor environment. Furthermore, the CCTV system offers high quality images even in the night time and during adverse weather; and allows the zooming in to the images for closer inspection whenever necessary. The AAHK team added that the use of CCTV system for DEZ monitoring by other Contractors would be encouraged.
- 3.5 A suggestion on the use of infrared camera was made for DEZ monitoring during night time. The AAHK team responded that the use of infrared camera had been tested previously by a Contractor. However, since the body temperature of marine mammals is similar to the seawater temperature in Hong Kong waters, detection results by infrared camera were not satisfactory. Thus alternative monitoring methods such as the CCTV system were subsequently investigated.
- 3.6 With regards to the Passive Acoustic Monitoring (PAM) of Chinese White Dolphin (CWD), the AAHK team mentioned that PAM had been implemented since the commencement of marine works. AAHK expressed that starting early 2020, they would deploy Cetacean-Porpoise Detector (C-POD) devices for additional monitoring of CWD.
- 3.7 A question was raised on whether the transplanted coral fragments included the holdfasts, and a suggestion was made to include an ex-situ stage to allow coral fragments to develop a more robust holdfast before transplanting them to the recipient site. The coral experts responded that the holdfasts were included when transplanting the

corals, and there was a certain degree of difficulty to replicate the natural attachment of coral fragments to the substrate.

- 3.8 For coral transplantation study, with regards to the smaller area at the recipient site versus the long stretch at the existing airport's northern seawall where the corals were located originally, a question was raised on whether the area at the recipient site was sufficient to support coral growth, or whether the transplanted corals were too densely spaced at the recipient site. The coral experts responded that only a subset of the coral colonies at the northern seawall were transplanted to the recipient site and that this coral species had been observed to naturally occur at similar densities at other sites in Lantau, hence the recipient site should be able to support the transplanted corals.
- 3.9 A question was raised on the type of food that the coral species would typically feed on as it might affect the suitability of the recipient site for coral translocation and transplantation. The coral experts responded that currently no studies have been done on this.
- 3.10 A question was raised on whether eco-enhanced seawall blocks were also installed in the subtidal zone. The AAHK team responded that eco-enhanced seawall blocks would be installed in the subtidal zones of some sections of vertical and sloping seawalls.
- 3.11 A comment on the fish species released during the fish fry release operation was made in which the released species were high commercial value rather than CWD prey species. The AAHK team responded that the intention of fish fry release was to improve the overall fisheries resources in Lantau waters and this enhancement measure was not specifically targeting CWD prey species.
- 3.12 Regarding the implementation of the proposed Hong Kong International Airport Approach Area (HKIAAA), a suggestion was made to explore opportunities in enhancing its marine ecological value. The AAHK team responded that the eco-enhancement of seawall design and the planned Artificial Reef Deployment pilot programme at the HKIAAA are initiatives to enhance the marine ecological value of the HKIAAA.
- 3.13 A question was raised concerning the effectiveness of the designated 3RS Marine Park in enhancing the marine environment. The AAHK team responded that the connection of the 3RS Marine Park with future "fisheries no-take zones" (i.e. Sha Chau and Lung Kwu Chau Marine Park and the proposed HKIAAA) aimed to help better conserve and enhance ecological resources, including limiting fishing activities and

imposing a 10-knot speed limit on marine vessels. This could result in possible positive impacts on CWDs and could also enhance fisheries resources in North Lantau waters.

3.14 A question was raised on whether the designation of the 3RS Marine Park would affect future construction of subsea pipelines in North Lantau waters. The AAHK team responded that construction activities were generally not be allowed in marine parks and any project which may have an adverse impact on marine parks would be required to go through relevant statutory processes.

3.15 A comment was raised regarding the proposed CWD monitoring framework of 3RS Marine Park SMART goals by comparing CWD abundance and density obtained from vessel line-transect data during the first six years after 3RS Marine Park designation (i.e. 2025-2027 and 2028-2030) with the three years of data obtained during the pre-3RS construction period (i.e. 2014-2016) could be constrained due to the shorter pre-construction time period proposed. The AAHK team responded that the duration of the pre-3RS construction period was determined based on the project-specific baseline data that would be available for the analysis.

4.0 Conclusion

4.1 AAHK thanked PLG members for their attendance, insights and suggestions.

Airport Authority Hong Kong
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