Expansion of Hong Kong International Airport into a Three-Runway System
Second Meeting of Professional Liaison Group

Notes of Meeting

The Professional Liaison Group (PLG) held their second meeting on 11th April 2016. At the meeting AAHK and their Consultants presented an update on Three-Runway System (3RS) Project progress, environmental monitoring and audit (EM&A) results for the period from commencement of 3RS advanced works, detail on the Deep Cement Mixing (DCM) Trials and progress updates on the Marine Park Study, the Marine Ecology Enhancement Fund (MEEF) and the Fisheries Enhancement Fund (FEF). After the meeting members visited the Midfield Concourse where they were briefed on the successful incorporation of a wide range of innovative green design features at the recently opened facility.

Members present:

Mr. Grant Abel	Ocean Park Hong Kong
Ms. Evelyn Chan	International Air Transport Association
Dr. Helen Chiu	American Chamber of Commerce in Hong Kong
Ir. Gordon Cho	Dashun Policy Research Centre
Mr. Dee Hwa Chong	Ichthyological Society of Hong Kong
Ms. Helen Cochrane	Environment & Energy Committee, The British Chamber of Commerce in Hong Kong
Prof. Jackson Ho	Hong Kong Airline Service Providers Association
Dr. Brian C W Kot	Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University
Ir. Lee Ping Kuen	The Hong Kong Institution of Engineers
Dr. Lui Sun Wing	The Hong Kong Association for the Advancement of Science and Technology
Ms. Shadow Sin	Ocean Park Conservation Foundation Hong Kong
Ir. Kenny Wong Siu Wai	The Hong Kong Institution of Engineers
Ir Prof. Steve Wong	The Environment & Sustainability Committee, The Hong Kong General Chamber of Commerce

Members absent with apologies:

Prof. Alexis Lau	Division of Environment, Hong Kong University of Science and Technology
Mr. Ken Lau	Airports Council International, Asia-Pacific Region
Prof. Li Cheng	Department of Mechanical Engineering, The Hong Kong Polytechnic University
Mr. Ken Ching	Eco-Education and Resources Centre
Prof. Chu Ka-hou	School of Life Sciences, The Chinese University of Hong Kong
Ms. Yvonne Ho	International Air Transport Association
Mr. Simon Ng	Civic Exchange
Ms. Suzanne Gendron	Ocean Park Conservation Foundation Hong Kong
Dr. Cynthia Yau	Marine and Fisheries Ecologist

In attendance:

Ir. Kevin Poole	Airport Authority Hong Kong
Mr. Peter Lee	Airport Authority Hong Kong
Mr. Tommy Leung	Airport Authority Hong Kong
Mr. Martin Putnam	Airport Authority Hong Kong
Mr. Lawrence Tsui	Airport Authority Hong Kong
Mr. Craig A. Reid	Environmental Resources Management
Dr. Jasmine Ng	Environmental Resources Management
Mr. Eric Ching	Mott MacDonald
Ms. Julia Chan	Mott MacDonald

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 3RS Project progress. Environmental consultants assisting in various aspects of 3RS project implementation were also 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 and airport visit.

2.0 Presentation by AAHK's Consultants – Environmental Resources Management (ERM) and Mott MacDonald

2.1 ERM presented the latest information on the Marine Park study and the MEEF and FEF including:

- Proposed approach to the Marine Park Study
- Potential management options and enhancement measures for the Marine Park
- Proposed funding arrangements, management structure and tentative establishment timelines for the MEEF and FEF

2.2 Mott MacDonald presented the latest information on the 3RS advanced works, EM&A results and the DCM Trial including:

- Brief summary of planned works and progress to date on the diversion of the existing submarine aviation fuel pipelines
- EM&A monitoring work and results including for Air Quality, Noise and Chinese White Dolphin (CWD) monitoring and site inspection activities
- Details on the SkyPier High Speed Ferries (HSF) route diversion and speed control arrangements including compliance monitoring and training for SkyPier Ferry Operators (SFOs) and HSF Masters
- Summary of SkyPier HSFs compliance from December 2015 to February 2016
- Detail on DCM Field Trials including information on the trial works done including key water quality and underwater noise monitoring results

3.0 Questions and comments from PLG members

3.1 Members raised questions during and after the presentation and discussion items are summarised below.

3.2 A question was raised on whether any cross-boundary consultation with Mainland experts and/or Authorities on CWD abundance data and population dynamics in the Pearl River Estuary (PRE) had taken place to date. The AAHK team responded that progress was being made due to a recently commenced Ocean Park Conservation Foundation (OPCF) project, funded by the Hong Kong International Airport (HKIA) Environmental Fund. The OPCF project has as a primary goal to develop a CWD conservation strategy for the entire PRE. A first workshop was recently held involving leading international cetacean experts as well as Hong Kong and mainland experts; in the workshop threat levels faced by CWDs in the PRE were scoped. A second workshop involving key HK and PRE stakeholders will follow to assist in determining key action areas and priorities for the conservation strategy. Further CWD abundance data gathering continues by CWD research team(s) in the PRE, providing significant new information on the population dynamics of CWDs in the broader region. AAHK noted that the HKIA Environmental Fund is for one year only; although this sort of project could seek future support from the MEEF.

3.3 A question was raised on whether the vessel transect lines adopted for EM&A CWD Monitoring are the same as those in the AFCD long-term marine mammal monitoring programme and if the dolphin specialist(s) employed are the same as those used during the Environmental Impact Assessment (EIA) stage. The AAHK team responded that the vessel transect lines adopted for EM&A CWD Monitoring tie in with those adopted by the AFCD long-term marine mammal monitoring programme, although there are some adjustments to the vessel lines near the works area. The dolphin specialists employed for the EM&A programme are the same as during the EIA stage.

3.4 A question was raised if there are any risks due to HSF / other vessel congestion in the Speed Control Zone where the diverted SkyPier HSFs are required to slow down to below 15 knots. The AAHK team responded that during the scheme design stage appropriate Marine Traffic Risk Assessments by a specialist marine consultant had determined that change(s) in marine traffic risk due to the SkyPier HSF route diversion is very minor and risks remain well within acceptable levels. Navigation simulations by experienced mariners identified that SkyPier HSF route diversions do not impose any significantly increased difficulty for vessel passage.

3.5 A question was raised if there are any deterrents in cases of repeated violations of HSF speed limits. The AAHK team responded that AAHK tracks individual compliance by monitoring the AIS transponder signals from SkyPier HSFs in real-time. In cases where HSFs are seen to deviate from routing and speed requirements AAHK seeks relevant supporting information on the “potential deviation” from the relevant SFO. When the “potential deviation” is not supported with valid reasons (valid reasons include maneuvering to safely avoid nearby vessels, speeding up or overtaking other vessels in the interests of passenger safety, diverting due to restricted visibility / adverse weather conditions for safety reasons) further actions may be taken. Actions are not limited to a requirement for further training for HSF Masters on the diversion and speed control and/or formal warnings to SFOs and individual HSF Masters.

3.6 A question was raised on how to determine if the noticeable drop in Dissolved Oxygen (DO) levels during the water quality monitoring for the DCM Trial was due to natural fluctuations. The AAHK team responded that when DO level abnormality was observed, investigations were carried out to examine other water quality parameters measured at the same time in order to determine if the exceedances were due to natural fluctuations rather than due to the DCM Trial.

3.7 A question was raised whether the low value of DO levels had been measured at different depths at the monitoring locations. The AAHK team responded that monitoring is typically undertaken at 3 depths at each monitoring location. It was noted that low DO levels were commonly observed at the lower (nearest the seabed) monitoring depth with similar results obtained from both upstream and downstream control stations at that time, indicating low DO levels were not a result of the DCM trial activities.

3.8 A question was raised if there are any conclusions in regard to different performance of the three types of rigs deployed for the DCM Trials in terms of environmental and engineering performance. The AAHK team responded that all of the rig types trialed had performed well during the DCM Trials with the intensive monitoring programme in place for all trials showing negligible environmental impact. The trials had also successfully demonstrated the engineering feasibility of the DCM method.

3.9 A question was raised on whether water currents may have any effect on water quality during the DCM Trials. The AAHK team responded that water quality monitoring for both upstream and downstream stations was undertaken during mid-ebb and mid-flood tides such that the downstream station would pick up any sediment release or other pollution caused by DCM works during periods of high water current flows. The AAHK team emphasised that the extensive monitoring undertaken during the DCM Trials show that the contaminants in the Contaminated Mud Pits are successfully contained within CMPs during DCM works activity.

3.10 A question was raised on the type of technology being used to track the spatial movement of HSFs. The AAHK team responded that the installation of Automatic Identification System (AIS) is required on all HSFs and AIS signals are used to monitor HSF movements in real-time. A control center has been set up by AAHK for monitoring HSF's speed and movement.

3.11 A question was raised if the change in water currents due to the land formation of the 3RS Project may affect the sedimentation rates around North Lantau waters and whether the change in hydrodynamics has been assessed. The AAHK team responded that changes in tidal and current regimes have been assessed in the approved EIA Report at which time the changes were not found to be significant in terms of sedimentation or other water quality impacts. AAHK also noted that water current speeds and direction would be measured at designated monitoring stations during the construction phase. AAHK also advised that marine water quality monitoring in the vicinity of HKIA has been periodically undertaken since HKIA commenced operations specifically to monitor if runoff from HKIA is causing any measurable impact in water quality in surrounding waters over time; findings have shown no discernible impacts from HKIA operations since airport opening. A PLG member suggested it may be interesting to look into the correlation between sediment accumulations over time and the potential impacts from this on fish in ecologically sensitive areas.

3.12 A question was raised on how AAHK plans to manage potentially polluting runoff from the expanded airport areas to nearby waters. The AAHK team explained that a range of environmentally friendly designs have already been incorporated into the existing HKIA, for example, potentially polluting runoff has to be diverted from storm drains for treatment prior to follow on discharge to storm or the foul drainage systems. Existing facilities that manage potentially polluting runoff include aircraft maintenance hangars, vehicle and Ground Services Equipment maintenance areas, designated aircraft washing areas, the on-airport fuel tank farm and the fire training area. AAHK emphasised that best practice environmental management and pollution control arrangements would be safeguarded in all 3RS developments at least in line with previous good practices and in support of the clear HKIA ambition to be the world’s greenest airport.

4.0 Conclusion

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

Airport Authority Hong Kong
June 2016