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*For information by circulation*

**Expansion of Hong Kong International Airport into a  
Three-Runway System (“3RS”)**

**Update on the Implementation of Environmental Mitigation and  
Enhancement Measures in association with the 3RS Project**

This paper encloses an information paper prepared by the Airport Authority Hong Kong to the ACE providing an update on the implementation of environmental mitigation and enhancement measures related to the 3RS Project.

**ACE Secretariat  
July 2024**

# **Expansion of Hong Kong International Airport into a Three-Runway System (“3RS”)**

## **Update on the Implementation of Environmental Mitigation and Enhancement Measures in association with the 3RS Project**

### **PURPOSE**

This paper provides an update to Members on the implementation of environmental mitigation and enhancement measures related to the 3RS Project.

### **BACKGROUND**

2. This paper covers: (a) overall progress of the 3RS construction works; (b) environmental monitoring and audit (“EM&A”) programme; (c) progress on the implementation of marine ecology and fisheries enhancement measures; (d) green building design and sustainable construction; and (e) stakeholder engagement related to the 3RS Project.

### **OVERALL PROGRESS OF 3RS CONSTRUCTION WORKS**

3. The construction of the 3RS at Hong Kong International Airport (“HKIA”) comprises different components, including the formation of about 650 hectares of land; expansion of the Terminal 2 (“T2”); construction of the Third Runway<sup>1</sup>, taxiways and aprons, and the T2 Concourse (“T2C”); provision of a new automated people mover system and a high-speed baggage handling system; reconfiguration of the Centre Runway<sup>2</sup> and construction of airport support infrastructure, utilities and facilities.

4. Further to the official commissioning of the Third Runway in November 2022, flight check for the reconfigured Centre Runway is scheduled for commencement in August 2024. All related construction fronts remain on track, and collaboration with the Civil Aviation Department, relevant Government departments and airport stakeholders on the operational readiness are well underway with the target to commission the 3RS in end 2024. In parallel, all the major building and infrastructure works for the 3RS are proceeding and the Airport Authority Hong Kong (“AAHK”) will open relevant passenger facilities in phases in light of passenger traffic demand.

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<sup>1</sup> The Third Runway was designated as the North Runway in February 2022.

<sup>2</sup> The former North Runway was re-designated as the Centre Runway in December 2021.

## EM&A PROGRAMME FOR 3RS PROJECT

5. The implementation of the EM&A programme for the 3RS Project is ongoing. All EM&A information, including monitoring results, implementation status of mitigation measures, events of non-compliance and the corresponding follow-up actions, etc. are reported on a monthly basis. With the completion of land formation works including seawall construction and all marine filling works, the construction phase and post-construction phase water quality monitoring were completed in 2023. The EM&A information together with the finalised Environmental Permit (“EP”) submissions are publicly available on a dedicated website<sup>3</sup>. The EM&A programme and all the required environmental mitigation measures for the 3RS Project have been properly implemented since the commencement of construction.

6. Chinese White Dolphin (“CWD”) monitoring has continued during 2023 with monitoring results indicating an increase in overall dolphin abundance in Hong Kong waters, estimated at 40 in 2023, compared to 35 in 2022 and 34 in 2021. This was mainly due to the increase in dolphin usage in West Lantau waters in 2023, while there was a slight decrease recorded in Southwest Lantau waters over the period. Although the estimate of total dolphin abundance was marginally higher in 2023, the trend over the last decade is a decreasing one. A decline in dolphin abundance was anticipated in the 3RS Environmental Impact Assessment (“EIA”) Report, which stated that dolphins might shift their habitats away from North Lantau waters during the construction period of the 3RS Project and other concurrent projects in the vicinity.

7. The findings of the CWD monitoring programme since the commencement of construction of the 3RS Project show that dolphins have been continuing to use the western waters of Hong Kong, primarily West Lantau waters, for important ecological activities including foraging and socialising with mother-calf pairs. Stable CWD abundance in Northwest Lantau waters was also observed during 2023.

8. While the line-transect surveys show a low usage of the waters around the south of Sha Chau, the continuous passive acoustic monitoring (“PAM”) effort provides evidence that dolphins do continue to use this area, especially in winter. As an initiative beyond the EM&A requirements, AAHK has deployed four F-PODs<sup>4</sup> in North Lantau waters from early 2020, and increased to six F-PODs from May 2022, to provide supplemental information on the temporal and spatial patterns of dolphin usage in these waters. The PAM effort continues to identify the presence of dolphins across this area including the area in the vicinity of the Brothers Marine Park. PAM monitoring has identified more detections during night-time compared to daytime and throughout winter and spring compared to other seasons of the year.

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<sup>3</sup> Dedicated 3RS Project webpage for environmental-related issues:  
<http://env.threerunwaysystem.com/en/index.html>

<sup>4</sup> An underwater passive acoustic monitoring device for marine mammal monitoring.

9. In view of the completion of land formation works, the post-construction phase CWD monitoring commenced in January 2024, comprising vessel-based line-transect monitoring for 12 months to evaluate the CWD habitat usage in Hong Kong waters during the post-construction phase. With the completion of reclamation and marine works, impacts on CWD habitat are expected to subside, and dolphin usage is expected to recover in the long run.

## **MARINE ECOLOGY AND FISHERIES ENHANCEMENT MEASURES**

10. AAHK is committed to enhancing the marine environment for the benefit of marine ecology (including CWD habitats), and fisheries resources in the vicinity of the 3RS Project area. Among others, AAHK has explored and is implementing a range of initiatives and programmes that are beyond the statutory EP requirements. A Marine Ecology Enhancement Fund (“MEEF”) and a Fisheries Enhancement Fund (“FEF”) were established in late 2016 with a total budget of HKD 400 million. As of now, over HKD 93 million has been granted from the MEEF and FEF to 67 qualifying projects. Details of the MEEF and FEF funded projects, including completed project reports, are posted on the dedicated websites<sup>5</sup>. For Year 2024/25, funded-projects involved long-term monitoring of population dynamics of CWD in Lingding Bay, conservation study of ardeids, assessment of fish biodiversity in the Western Hong Kong waters, product development study of nano pearl powder, and cuttlefish mariculture pilot project. In addition to operating the two funds, AAHK continues to voluntarily explore and/or implement a wide range of marine ecology and fisheries enhancement measures in Lantau waters with details described below.

11. Following the completion of the fish restocking pilot test phase 1 in 2019 releasing 8,300 fish fingerlings of yellowfin seabream, black seabream and green grouper, a phase 2 release of fish fingerlings was conducted in the vicinity of the deployed- artificial reef (“AR”) units within the vessel-restricted Hong Kong International Airport Approach Area. In May and September 2023, a total of around 20,000 fish fingerlings of commercially important species, including green groupers, seabreams and white flower croakers were released (Photos A and B in Annex). In addition, about one million shrimp fry were released at Sham Wat Wan and Sha Lo Wan of Lantau in September 2023 (Photo C in Annex). Post-release monitoring of the released fish fingerlings was completed in March 2024 and results from diver surveys provided positive indication that the deployed-ARs form a suitable habitat for both the released fishes and other fish species as well (Photos D to H in Annex).

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<sup>5</sup> Marine Ecology Enhancement Fund webpage:  
<http://env.threerunwaysystem.com/en/meef/index.html>  
Fisheries Enhancement Fund webpage:  
<http://env.threerunwaysystem.com/en/fef/index.html>

12. As recommended in the approved 3RS EIA Report, a new marine park namely the North Lantau Marine Park (“NLMP”), comprising an area of approximately 2,400 hectares, will be designated in North Lantau waters. The Agriculture, Fisheries and Conservation Department (“AFCD”) continues to take forward the relevant statutory procedures in accordance with the Marine Parks Ordinance (Cap. 476), with the Designation Order tabled at the Legislative Council on 19 June 2024 for negative vetting and coming into effect on 1 November 2024.

13. Over the past few years, the AAHK has pilot-tested several potential marine ecology and fisheries enhancement measures in the vicinity of the proposed NLMP area and the surrounding waters. Pilot studies on the deployment of shellfish reefs (“SRs”) and ARs, and the release of fish fry, have affirmed the potential marine and ecological benefits. As such, these three measures were proposed to be scaled up, helping to provide benefits to marine habitats across the large, interlinked marine protected areas including the NLMP and North Lantau. The design and preparation works of SRs and ARs are underway with target deployments in the second half of 2024, and the release of fish fry is targeted in 2025 and beyond. In addition, a 6-year holistic monitoring plan is being developed to take stock of the broader biodiversity value as created by the scaled-up measures.

## **GREEN BUILDING DESIGN AND SUSTAINABLE CONSTRUCTION**

14. AAHK continues to pursue excellence in green building design and sustainable construction. Subsequent to the completion of the final Sustainability Performance Assessment under the Civil Engineering Environmental Quality Assessment and Awards Scheme (“CEEQUAL”)<sup>6</sup> for the Third Runway and Associated Works and achieved the top Excellent rating for the Whole Team Award in April 2023, AAHK has continued the preparation work for undertaking the BEAM Plus<sup>7</sup> Final Assessments for both the expanded T2 and the T2C upon their commissioning.

## **STAKEHOLDER ENGAGEMENT**

15. To enhance transparency and communication with the community in a proactive way, AAHK continues to engage stakeholders through the Professional Liaison Group (“PLG”) and the Community Liaison Groups (“CLGs”), with a view to facilitating communications, enquiries and complaints handling on environmental issues related to the 3RS Project. The last CLGs and PLG

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<sup>6</sup> CEEQUAL is an international evidence-based sustainability assessment, rating and awards scheme for civil engineering, infrastructure, landscaping and public realm projects.

<sup>7</sup> BEAM Plus, being recognised and certified by the Hong Kong Green Building Council Limited, offers a comprehensive set of performance criteria for a wide range of sustainability issues relating to the planning, design, construction, commissioning, management, operation and maintenance of a building.

meeting-cum-airport-visits were held in June 2024 and July 2024 respectively. CLGs and PLG members were briefed on the latest 3RS works progress and related environmental issues, including the aircraft noise issue as well as other airport related matters.

16. AAHK strives to be highly transparent in its works. The dedicated 3RS Project website provides the general public with up-to-date information on the 3RS Project, including EM&A data and results, updated plans and submissions in accordance with requirements in the EP, presentation materials of the liaison group meetings, as well as information on the status and operation of the MEEF and FEF. Flyers introducing the environmental initiatives of the 3RS Project and short videos on selected MEEF and FEF funded projects are also available on the website for the general public's information and viewing.

## **WAY FORWARD**

17. AAHK will continue to implement all environmental mitigation and enhancement measures, as well as proactively engage with relevant stakeholders on environmental matters for the 3RS Project through the established engagement platforms.

18. Members are invited to note the above and advise.

**Airport Authority Hong Kong**  
**July 2024**

Annex



*Photo A: Stakeholders witnessing the release operation*



*Photo B: Release of fish fingerlings*



*Photo C: Release of shrimp fry*



*Photo D: Green groupers (AAHK's released species) were observed on a deployed-AR unit during post-release monitoring*



*Photo E: Yellowfin seabreams (AAHK's released species) were observed on a deployed-AR unit during post-release monitoring*



*Photo F: Black seabreams (AAHK's released species) were observed on a deployed-AR unit during post-release monitoring*



*Photo G: Spotted scats (non-AAHK's released species) were observed on a deployed-AR unit during post-release monitoring*



*Photo H: Painted sweetlips (non-AAHK's released species) were observed on a deployed-AR unit during post-release monitoring*

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