

For Information

**Legislative Council Subcommittee
to Follow Up Issues Relating to the
Three-runway System at the Hong Kong International Airport**

Introduction

This paper sets out the response of the Airport Authority Hong Kong (“AAHK”) to the issues raised by Hon Albert Ho in his letter dated 9 November 2015 which are under AAHK’s purview.

(a) Capital/Construction Cost of the Three-Runway System (“3RS”) in the “An Update of Airport Master Plan 2030 Economic Impact Study for the Hong Kong International Airport by the Enright, Scott & Associates Ltd” (the “ESA” Report)

2. The construction cost of HK\$154,726 million (in 2012 dollars) estimated for Scenario 2¹ in the ESA Report comprised the following items² –

- (a) around HK\$28,908 million for the provision of midfield facilities and general improvements to the capacity of the two-runway configuration, including works relating to the Midfield Developments (i.e. Phase 1, Phase 2 and Remaining Midfield Area Development); Automated People Mover Depot Underground Structure; Terminal 1 Annex Building; Intermodal Transfer Terminal; New Western Apron, Multi-storey Carpark; and North Commercial Area Landlord Provisions;

¹ Three investment scenarios were analyzed in the ESA Report. Scenario 2 refers to investment made to expand the capacity of the two-runway configuration beyond that in the status quo situation (i.e. no capital investment made to expand airport capacity beyond that already committed by 2012 for the 2012 to 2015 period plus maintenance investment to maintain the resulting capacity) and to construct a third runway at HKIA plus maintenance expenditure in order to maintain pre-existing and new capacity (see paragraph 2.2.2 of the 2015 ESA Report at http://info.threerunwaysystem.com/pdf/en/economic_impact_study_of_the_three_runway_system.pdf).

² See Section 8.2 of the 2015 ESA Report. Component numbers may not add up due to rounding.

- (b) around HK\$4,820 million for the third runway enabling works; and
- (c) around HK\$120,997 million for the 3RS main construction works.

3. For the purpose of comparing the construction cost of 3RS as estimated in the ESA Report with the current estimate of HK\$141.5 billion, only item (c) above is relevant. The estimated construction cost of HK\$120,997 million in the ESA Report was assessed under the economic impact model (i.e. calculated on the basis of GDP deflator³) and was in 2012 dollars. AAHK's current estimate of HK\$141.5 billion is in money-of-the-day (MOD) prices calculated on the basis of the Government's price adjustment factors.

(b) Tender Price Adjustment

4. As set out in LC Paper No. CB(4)420/15-16(01) submitted to the Subcommittee in December 2015, the MOD price of the 3RS project was derived on the basis of the Government's price adjustment factors set out in PWSCI (2013-14)15 issued in March 2014. The prices of public sector building and construction output were assumed to increase by 6% per annum from 2014 to 2018; 5% per annum from 2019 to 2021 and 4.5% per annum from 2022 to 2024. We understand that the same approach has been adopted in all other public works projects. AAHK has not made any adjustment to the tender prices indexes.

(c) Maintenance Investment as Referred to in the ESA Report

5. Maintenance investment refers to the costs incurred in maintaining assets in good operational conditions. In the context of the ESA Report, maintenance investment refers to the investment made to maintain the current two runways (estimated at HK\$50,310 million) and the third runway (after it becomes operational) in good operational conditions (estimated at HK\$45,632 million).

³ The GDP price deflator is an economic metric that accounts for inflation by converting output measured at current prices into constant-dollar GDP (Source: investopedia.com).

(d) Mott MacDonald's Report

6. The Mott MacDonald's Report quoted presumably refers to the "Project Profile for the Expansion of Hong Kong International Airport ("HKIA") into a 3RS" completed by Mott MacDonald in May 2012. The requested information is set out below :

- (a) The construction of the 3RS will take some eight years to complete, counting from the date when reclamation commences;
- (b) The total estimated construction cost for the 3RS is HK\$141.5 billion in MOD prices, inclusive of project contingency; and
- (c) The MOD estimated is derived on the basis of the Government's price adjustment factors as set out in PWSCI (2013-14)15 issued in March 2014.

(e) NATS Airspace and Runway Capacity Study

(i) Runway Stagger

7. According to NATS' Phase 2 Study Report completed in 2008, the third runway should be staggered within a range of 1,000-1,500m to the west of the existing North Runway in order to meet the obstacles clearance requirement.

8. Subsequently, AAHK commissioned a consultancy study in 2008-2009 to thoroughly evaluate airport layout options, which confirmed that the third runway should be staggered 1,140m to the west of the existing North Runway. The 1,140m stagger has been confirmed to be the most optimum alignment that achieves the highest efficiency in apron operation and at the same time would minimize the reclamation overlap with the contaminated mud pits. We are not aware of the 1,525m stagger mentioned in Hon Albert Ho's letter and have not conducted any study in that regard.

(ii) Provision of Soft Copies

9. Soft copies of "Airspace and Runway Capacity Analysis Final Reports" compiled by NATS as part of AAHK's work for the

HKIA Master Plan 2030 have been uploaded on AAHK's 3RS designated homepage (http://www.threerunwaysystem.com/en/Information/Consultancy_reports.aspx). As regards the compact discs that came together with the reports, they contain mainly commercial information or data which cannot be released.

(f) Further Development Beyond 3RS

10. Through the preparation of a 20-year Master Plan, which is reviewed and updated every five years, AAHK sets out the strategic direction of the future development of the HKIA. At the time when the HKIA Master Plan 2030 was drawn up, expanding HKIA into a 3RS was deemed sufficient to meet Hong Kong's air traffic demand until 2030. AAHK is currently conducting the HKIA Master Plan 2035 which will examine the development needs of the HKIA up to year 2035.

**Airport Authority Hong Kong
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