



**The Chartered
Institute of Logistics
and Transport**

18th August 2014

Chairman
Panel on Economic Development
Legislative Council
c/o Clerk to Panel on Economic Development

Dear Sir,

**Views on the Hong Kong International Airport (HKIA)
- Three-Runway-System (3RS)
- Environmental Impact Assessment (EIA) Report**

Introduction

When invited to comment on the Master Plan 2030 for the Hong Kong International Airport (HKIA) in 2011, CILTHK had rendered its support on the Three-Runway-System (3RS). However, there has been a lapse of three years and with the recent publication of the Environmental Impact Assessment (EIA) Report for the 3RS, CILTHK would like to offer further comments.

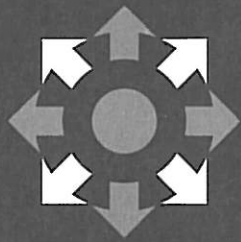
Importance of Hong Kong's Air Transport

The economic development of Hong Kong has been focusing on its four pillar industries, i.e. financial services, trading and logistics, tourism, and producer and professional services. Altogether, these sectors accounted for 58% of Hong Kong's GDP in 2012. To foster Hong Kong's long-term economic development, the Hong Kong SAR Government has committed to strengthening Hong Kong's position as an international and regional aviation hub.

Take the maritime sector as an example, Hong Kong has been facing intensifying competition from ports nearby. As a result, the ranking of Hong Kong's container port in terms of container traffic has declined and the current strategy is shifted to focus on the development of high value-added maritime services. On the other hand, Hong Kong's airport is still the world's busiest international cargo airport and the third busiest airport for international air passengers. However, there is no room for complacency and the constraint of runway capacity is a major threat.

HKIA's 3RS

In 2011, AAHK published its Master Plan 2030 (MP2030) wherein the existing two-runway-system at HKIA would reach its practical maximum capacity sometime between 2019 and 2022. The Airport Authority Hong Kong (AAHK) has proposed to start constructing one more runway at the HKIA in 2016 for commissioning in 2023 and meeting traffic demand up to 2030. However, the latest review by the International Air Transport Association (IATA) suggested that HKIA's practical



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maximum runway capacity might be reached one to three years earlier than what was previously projected and presented in MP2030. As such, the demand forecast in Master Plan 2030 would seem to be conservative and implementation of the 3RS should be proceeded as a matter of urgency.

Consequences of HKIA's Capacity Constraints

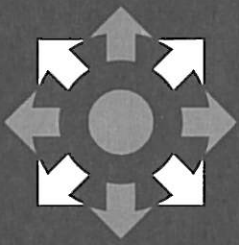
The capacity constraints in the HKIA will lead to, among others, the following severe consequences

- Deterioration of service level due to the lesser choices of routes, higher fares and poorer frequency
- Higher probability of flight delays due to lack of reserve capacity and less flexibility for dealing with contingencies
- Lack of capacity to meet the introduction of new routes, improvement to connectivity increase in frequencies and widening choices of airlines and destinations
- Little growth for new flights with more airlines flying those more profitable first-tier destinations
- More problems for the low-cost carriers to penetrate into the market in Hong Kong
- Shifting of flights to airports nearby
- Diminishing of Hong Kong's overall competitiveness

If Hong Kong is unable to meet its future aviation demand, the city's position as a regional and international hub would be weakened. This could jeopardise the status of Hong Kong as an international centre of logistics, trade, tourism and finance.

Collaboration with Great Pearl River Delta (GPRD) Airports

There are suggestions for HKIA to make use of the airports in the Great Pearl River Delta (GPRD) to supplement its capacity inadequacy. However, the suggestions are considered not practicable. First, the airports in GPRD are each with its own role and according to IATA's forecast, the demand of passenger trips in the region will exceed supply by 100 million by 2030 even if with completion of the planned expansions of all five GPRD airports. Second, there are very few examples of successful collaboration between airports worldwide. Third, the economic benefits that Hong Kong could achieve would be far less than by meeting of all passenger traffic and cargo within its airport.



Optimisation of Air Space Usage

There are also suggestions to optimise the use of the air space to help improving the operational capacity of HKIA. However, runway capacity is considered to be the most critical constraint limiting HKIA's handling capacity. Given the moderate use of the Pearl River Delta (PRD) airspace by HKIA's flights, the room for improvement is limited. In fact, the HKIA's flights are more subject to the constraints mainly on in-trail separations of aircrafts, which would deteriorate further with more use of larger planes.

Airport Development in Nearby Cities

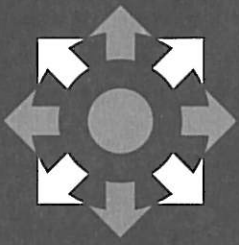
Similar to Hong Kong, plans are in place for improving airport capacity in some major cities in China and South East Asia. Currently, Beijing is now planning to build a second international airport to support its existing 3-runway airport. On the other hand, there are plans to increase the numbers of runways in Guangzhou Baiyun, Shanghai Pudong, Shenzhen Bao'an, Bangkok Suvarnabhumi and Seoul Incheon from 3 to 5, 2 to 5, 1 to 3, 2 to 3 and 3 to 5 respectively. Apparently, the expansion of HKIA should be contemplated without further delay.

Environmental Concerns

Generally speaking, developments and conservation are not necessarily mutually exclusive. On one hand, the construction of the third runway will inevitably create some additional environmental problems thus leading to the degradation of the situation at certain areas. On the other hand, the additional runway would enhance the operational flexibility of the airport thus enabling new measures for reducing the prevailing environmental nuisances to be introduced. In addition, a comprehensive environmental impact assessment would offer an opportunity for both the current and future problems to be identified and tackled in a holistic manner.

For this important exercise, it is necessary for a structured approach to be adopted i.e. identify baseline or problems to be addressed, set goals and develop the measures or combination of measures to be adopted, designate responsible parties for implementation of measures, formulate legal frameworks for achieving compliance, qualify and quantify environmental benefits, quantify investments and operating costs of available options, ascertain relative cost-effectiveness, evaluate potential trade-offs or interdependencies with options for mitigations, establish clear guidelines for implementing the measure, stipulate time frames for implementation, review programme of implementation and effectiveness of measure and follow up with monitoring and audit to ensure future compliances.

In selecting the options of improvement measures, their relative cost-effectiveness should be given due weight. In addition, the interrelationship between different elements should be taken into account and where appropriate, a combination of measures can be adopted for achieving the environmental objectives. Ultimately,



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there is a need to strike a balance with a view to optimising the economic benefits to the community as a whole.

- **Minimising Land Formation Footprint**

The option of reducing the land formation is supported, on environmental and financial ground provided the size of the newly formed area is sufficient to meet future use.

- **Avoiding / Minimising Construction Phase Impacts**

The mitigation of overall marine life impact by employing non-dredge method (DCM) for the reclamation land formation, the realignment of the existing submarine aviation fuel pipelines by HDD method and the diversion of the submarine 11 kV cables by direct bury method with field joint are supported.

In addition, the designation of a Marine Park in the area around the Brothers, Sha Chau, and Lung Kwu Chau is also supported. However, there are grave concerns expressed by some environmental protection group as to whether the Chinese White Dolphins shall return to their current areas of activities after the completion of the project. AAHK should offer further explanation and evidence to allay their worries. Moreover, the compensation principle should apply, and more remedial measures should be put in place to protect the affected Chinese White Dolphins in a timely manner.

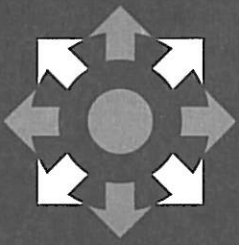
- **Minimising Aircraft and Related Emissions and its Potential Health Impact**

The initiatives being in force or proposed by AAHK for control of emissions from APUs, aircraft handling, infrastructure or stationary related sources and land side traffic sources are supported. However, the demand for land transport will increase in line with the expansion of HKIA and there is a need to plan in advance for meeting with the changes.

On the other hand, there is a need to keep track of emissions from the aircraft. While continual enhancements to aircraft fuel efficiency and other technical improvements are anticipated, the gain would likely be offset by the future increase in airport operations and growth of other aviation activities. As such, AAHK should make use of the opportunities arising from the implementation of the 3RS and the improvement in operational flexibility to minimise the emissions from the aircraft engines. For those aircrafts which are not meeting the desirable standards, the levying of additional charges should be considered.

- **Minimising Aircraft Noise and Potential Health Impact**

The mitigating measures proposed by AAHK through noise reduction at source, noise abatement operational procedures, airport infrastructures and operating restrictions and air traffic management measures like the adoption of noise



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preferential routes/runways, reduced power/drag, continuous descent approach and limited engine ground running are supported.

It is recognized that the design of flight paths in Hong Kong is subject to the constraints of the size and hilly topography of the city. As such, it is not possible for the flight paths to be planned completely clear of all residential developments. On the other hand, the new technologies and technical improvements adopted by the manufacturers could further produce noise reductions.

In any case, it is recognised that the adoption of some less satisfactory flight procedures are necessary due to different constraints arising from time to time. To avoid unnecessary nuisances to the public, such less optimal arrangements should be kept to the minimum. Similar to the treatment of air emissions, the levying of additional charges on those aircrafts which are not meeting the desirable noise emission standards should be considered.

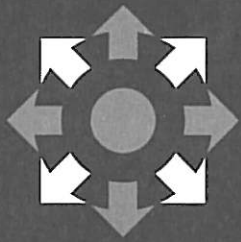
As a continual exercise, AAHK should keep in view of further technological advancement and adopt the state of art measures to ameliorate any adverse environmental impacts wherever possible.

Financial Costs and Planning Works

According to MP2030, the cost of 3RS was estimated to be around \$136.2 billion in money-of-the-day prices. Given the scale of the investment, there are bound to be public concerns. As the planning works of the 3RS is still ongoing, AAHK is not able to prepare a more precise estimation on the construction costs. AAHK should continue to make its best efforts to accomplish the remaining planning works and recommend feasible financial arrangement options for the 3RS project. On the capital expenditure, the AAHK should exercise control by incorporating a cap in the future tender process. In addition, AAHK should address the labour shortage at HKIA in a proactive manner as there seems little hope of significant improvement to the problems in the years to come.

Public Engagement

It is recognized that AAHK has already made remarkable effort for engaging relevant stakeholder groups and lobbying for the general support for the 3RS project. However, given the public attentions on the project in particular the environmental impacts, AAHK should strengthen its communication and engagement plan as and required. In the process, AAHK should remain open and transparent throughout. To improve public confidence, AAHK should employ independent bodies with the necessary professional knowledge, experience and expertise for addressing issues like the provision of a Marine Park for accommodating the Chinese White Dolphins as and where appropriate.



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Long term planning

If the current projections are correct, the airport will reach saturation again in the foreseeable time horizon. Given the long lead time for airport development, strategic plans for dealing with the long term demand should be formulated. If the construction of a fourth runway at HKIA is considered a feasible option, it may be prudent for some of the works to be planned and incorporated in the current project.

Conclusion

Without the third runway, the competitiveness of Hong Kong's air transport will continue to deteriorate. As such, the timely implementation of the third runway is essential to cater for Hong Kong's medium and long-term air traffic demand and maintain the competitiveness of HKIA amidst intensifying competition from other airports in the region. To expedite the process, AAHK should solicit public support through public engagement exercises and more importantly develop publicly acceptable measures for addressing the environmental concerns.

It is also anticipated that the financial costs of the 3RS would be subject to stringent public scrutiny. AAHK should remain well prepared well in advance. In conclusion, AAHK should handle the controversial issues in a timely and tactful manner so as to avoid unnecessary delay to the implementation of the project.

Yours sincerely,

Prof Becky Loo
President

The Chartered Institute of Logistics and Transport in Hong Kong