

**For discussion
on 10 December 2019**

Legislative Council Panel on Economic Development

**Resources proposals relating to the Government facilities and
equipment to support the Three-Runway System
at Hong Kong International Airport**

PURPOSE

To support the growth in air traffic upon the commissioning of the Three-Runway System (the 3RS) at Hong Kong International Airport (HKIA), it is necessary for various government departments, including the Customs and Excise Department, the Immigration Department, the Hong Kong Police Force, the Department of Health, the Civil Aviation Department (CAD) and the Agriculture, Fisheries and Conservation Department, to provide additional customs, immigration, quarantines, port health control and law enforcement facilities as well as equipment rooms within the Third Runway Passenger Building (TRPB), the expanded Terminal 2 (T2) and various locations at HKIA. In addition, it is necessary for the Hong Kong Observatory (HKO) to procure aviation meteorological systems to support the 3RS. This paper briefs Members on the proposals to –

- (a) procure the aviation meteorological systems to support the 3RS;
and
- (b) upgrade the following Public Works Programme (PWP) projects to Category A:
 - (i) 3402IO - Provision of facilities and accommodation for various government departments to support the Three-Runway System at Hong Kong International Airport; and
 - (ii) 3278LP - Provision of Police facilities to support the Three-Runway System at Hong Kong International Airport.

BACKGROUND

2. To meet the growing air traffic demand and to maintain Hong Kong's competitiveness as an international and regional aviation hub, the Airport Authority Hong Kong (AAHK) is taking forward the 3RS project. The 3RS project includes reclamation of some 650 hectares of land north of the existing Airport Island, the construction of a third runway with associated taxiways, aprons and aircraft stands, TRPB, expansion of the existing T2 into a full service processing terminal, a new Automated People Mover (APM) system, a new Baggage Handling System (BHS), as well as related airside and landside works with associated ancillary and supporting facilities. The scale of works is comparable to the construction of a new airport.

3. Subsequent to the completion of the statutory gazettal processes in April 2016, AAHK has been progressively taking forward the 3RS project. Construction works of the project commenced in August 2016. As of today, reclamation is on-going, with reclamation filling started in May 2018. Other components, such as the advance works of T2 expansion, the detailed design of TRPB, the design and build contracts for the BHS and APM system are proceeding in full swing. According to AAHK, the commissioning of the third runway is scheduled for 2022, after which the existing North Runway will be closed for about two years for reconfiguration into a new centre runway. The commissioning of the entire 3RS is targeted in end 2024. Upon the commissioning of the entire 3RS, HKIA will have the capacity to handle air traffic demand at least up to 2030, by which time the annual passenger and cargo volume are expected to increase to around 100 million and 9 million tonnes respectively.

4. To cater for the growth in air traffic, the relevant government departments need to enhance their services at HKIA to ensure the safe and efficient operation of HKIA. As stated in previous Legislation Council (LegCo) documents¹, a number of government facilities and equipment would be required to support the 3RS, and the Government undertook to seek LegCo's funding approval for such works in batches to tie in with the development stages of the 3RS.

¹ The LegCo Brief (THB(T) CR2/582/08) issued on 20 March 2015, the minutes of meeting of the LegCo Panel on Economic Development held on 23 March 2015 (LC Paper No. CB(4)1036/14-15) and LegCo Paper (LC Paper No. CB(4)1110/17-18(03)) discussed at the meeting of the LegCo Panel on Economic Development on 28 May 2018.

5. Funding application for the first batch of government facilities and equipment², including those for CAD, HKO and the Fire Services Department, to support the 3RS was approved by the Finance Committee of LegCo on 18 July 2018 at a total cost of about \$7.7 billion in money-of-the-day (MOD) prices. The design and construction of the first batch of government facilities were entrusted to AAHK for better integration and management of interfacing issues. The entrustment agreements between the Architectural Services Department and AAHK were executed in June 2019, and part of the construction works commenced in mid-2019 to dovetail with the construction progress of the airfield works.

6. In addition to the second batch of government facilities detailed in **Enclosures 1 to 3** of this paper, provision of some other government facilities to support the 3RS, e.g. information technology equipment/systems, vehicles, vessels, offices, is still under planning. We will continue to seek the necessary funding approval of the LegCo according to the established procedures when appropriate.

PROJECT SCOPE AND NATURE

7. The details and the justifications for the procurement of aviation meteorological systems and the two PWP projects, **3402IO** and **3278LP**, to support the 3RS are at **Enclosures 1 to 3** respectively.

PROPOSED ENTRUSTMENT TO AAHK

8. In view of the exceptionally high degree of integration required amongst the airport facilities under the 3RS project and various government facilities located at different parts of the 3RS project area, and the critical interfacing issues such as overlapping works sites, construction sequences, and programme dependence among the proposed works, we plan to adopt the same arrangement as the first batch of government

² The first batch of government facilities and equipment includes (i) three PWP projects 3069GI, 3070GI and 3176BF, for the construction of infrastructure for provision of air traffic control facilities, aviation weather services facilities and fire services facilities respectively; and (ii) the procurement of associated air navigation service equipment and fire services vehicles. The estimated costs of the PWP projects 3069GI, 3070GI, 3176BF and the procurement of air navigation service equipment are \$1,902.9 million, \$281.5 million, \$2,605.8 million and \$2,958.0 million respectively and the funding was approved by the Finance Committee on 18 July 2018. The estimated cost for the procurement of fire services vehicles is about \$228 million and the Fire Services Department will seek funding approval according to the established procedures in phases.

facilities to entrust the design and construction of the two PWP projects, with details in **Enclosures 2 to 3**, to AAHK. The entrustment approach would enable both the 3RS works and the government facilities at the same location to be designed and constructed in a holistic and timely manner. Such arrangement will not only ensure design integration, enable efficient coordination and facilitate control of construction progress under a single managing party, but also ensure timely commissioning of facilities for commencing operation of the 3RS.

PROJECT ESTIMATE AND PROGRAMME

9. The preliminary estimated cost for the procurement of aviation meteorological systems is about \$271.9 million. The preliminary estimated project costs of the two PWP projects **3402IO and 3278LP** are about \$3,025.4 million and \$1,866.6 million in MOD prices respectively. As mentioned in paragraph 8 above, we plan to entrust the design and construction works of the two PWP projects to AAHK after funding approval by the Finance Committee so as to meet the target commissioning of the entire 3RS in end 2024.

PUBLIC CONSULTATION

10. Government facilities are part and parcel of the 3RS. AAHK has been implementing an extensive public communication and engagement plan to engage stakeholder groups for the 3RS project. Over the years, AAHK has reached out to promote the 3RS project and conducted regular 3RS briefings as well as airport visits for the business and aviation sectors, community leaders, residents groups, professional and industry organisations, Members of the LegCo and District Councils, green groups, schools and academic sector and the media. AAHK has also established five Community Liaison Groups comprising members who are District Councillors and community/resident leaders for the five districts in the vicinity of HKIA (i.e. Islands, Tuen Mun, Tsuen Wan, Kwai Tsing and Shatin), and Professional Liaison Groups comprising relevant professionals/experts and academia to enhance communications.

11. The Subcommittee to Follow Up Issues Relating to the 3RS at HKIA was set up from 2015 to 2017 under the LegCo's House Committee to study and follow up on issues relating to the 3RS, including the feasibility of the 3RS, its scope and design details, financial arrangement, environmental impacts, and related matters. The construction works of 3RS commenced in August 2016 and will take around eight years to complete. AAHK will continue to provide progress update to the LegCo Panel on Economic Development on a half-yearly basis³.

WAY FORWARD

12. We plan to seek funding approval from the LegCo according to established procedures, including submitting the two PWP projects to the Public Works Subcommittee and seeking funding approval from the Finance Committee afterwards. Members are invited to comment on the proposed funding applications.

Transport and Housing Bureau
Agriculture, Fisheries and Conservation Department
Architectural Services Department
Civil Aviation Department
Customs and Excise Department
Department of Health
Hong Kong Observatory
Hong Kong Police Force
Immigration Department

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³ The last 3RS progress update was discussed at the meeting of the Panel on Economic Development held on 29 April 2019. The next 3RS progress update would be submitted to the Panel on Economic Development in December 2019.

**Provision of aviation meteorological systems to support
the Three-Runway System at Hong Kong International Airport**

PROJECT SCOPE AND NATURE

Following the Finance Committee (FC)'s approval of the Public Works Programme (PWP) project 3070GI - "Provision of Aviation Weather Services Facilities to support the Three-Runway System at the Hong Kong International Airport", the Hong Kong Observatory (HKO) needs to acquire new aviation meteorological equipment and enhance its existing aviation meteorological systems and equipment to provide the necessary aviation weather services. In this connection, HKO needs to take forward the current proposed project, with the following scope –

- (a) provision of new on-airport meteorological equipment to support the operation of the third runway;
 - (b) provision of new on-airport meteorological equipment to support the operation of the new centre runway;
 - (c) provision of new off-airport meteorological equipment (including a new Terminal Doppler Weather Radar (TDWR) for detection of windshear, and new equipment to support visibility forecasting); and
 - (d) enhancement of existing meteorological systems and equipment to cater for the Three-Runway System (the 3RS).
2. Details of the aviation meteorological systems concerned are set out at **Annex 1**.

JUSTIFICATION

3. Within the framework of the International Civil Aviation Organization (ICAO), HKO is a designated meteorological authority and is responsible for the provision of weather services for international air navigation in Hong Kong. It is thus the responsibility of HKO to acquire and enhance the aviation meteorological systems and facilities to support the 3RS.

4. At the meeting on 18 July 2018, FC approved the upgrading of the PWP project 3070GI, which is part of the first batch of government facilities to support the 3RS, to Category A. The facilities include a meteorological garden, equipment rooms, equipment sites, as well as underground cable duct system linking the above facilities with various existing aviation weather services systems and facilities and the HKO office at the existing Air Traffic Control (ATC) towers and the new ATC tower. As foreshadowed in the papers to the Legislative Council (LegCo) Panel on Economic Development (LC Paper No. CB(4)1110/17-18(03)) and the Public Works Subcommittee of LegCo (PWSC(2018-19)25), apart from the construction of these facilities, HKO will also require new systems for providing the necessary aviation weather services to support the 3RS, and funding approval for such systems and equipment would need to be sought separately. Details are set out below.

Provision of new on-airport meteorological equipment to support the operation of the third runway

5. In accordance with the International Standards and Recommended Practices of ICAO¹, each runway has to be equipped with its own meteorological equipment to monitor the atmospheric conditions at specific locations of the runway for safeguarding the safety of flights taking off and landing. Such information, including surface wind speed and direction, runway visual range (RVR), visibility and height of cloud base, will be measured using equipment such as anemometers, RVR transmissometers, forward scatterers and ceilometers respectively.

6. Besides, for the safe and efficient operation of the third runway, windshear alerting, wake vortex and lightning sensing equipment commensurate with the standards for the existing runways are required for the third runway. In addition, considering the distance of the third runway from the existing meteorological facilities, it is necessary for HKO to acquire a set of meteorological equipment at the new meteorological garden and a new wind profiler for measuring the surface and upper air conditions near the third runway.

¹ ICAO Annex 3 – Meteorological Service for International Air Navigation.

Provision of new on-airport meteorological equipment to support the operation of the new centre runway

7. The commissioning of the third runway is scheduled for 2022, after which the existing North Runway will be closed for about two years for reconfiguration into the new centre runway. Upon reconfiguration of the runway, the meteorological equipment at eastern and western ends of the existing North Runway would have to be relocated. While HKO would make use of existing meteorological equipment for the new centre runway as far as possible, new meteorological equipment such as two new sets of anemometers would be required for collecting additional climatological information at the relocated sites.

Provision of new off-airport meteorological equipment

8. Windshear is a hazardous weather phenomenon that has brought about aircraft accidents around the world. Issuance of windshear alerts in good time is of paramount importance to ensure aviation safety. HKO currently makes use of a TDWR installed at Brothers Point TDWR station for detection and alerting of windshear and microburst in rainy conditions. The older TDWR at Tai Lam Chung TDWR station (installed in 1996) had served as a back-up since 2015 but would hardly be able to function (not even as a back-up) shortly. To cope with the air traffic growth upon the commissioning of the 3RS, it is necessary for HKO to acquire and install a new TDWR at the Tai Lam Chung TDWR station for windshear and microburst detection for Hong Kong International Airport (HKIA).

9. The two TDWRs will work in tandem to ensure uninterrupted, timely and accurate detection and alerting of windshear. At times when one of the TDWRs is not serviceable due to reasons such as maintenance or repair, HKO can rely on the other TDWR to maintain the windshear alerting services. This arrangement can also ensure a smoother transition upon replacement of one of the TDWRs in future.

10. To ensure sufficient lead time in the forecast of visibility drop, HKO also needs to install new equipment to support visibility forecasting at other off-airport locations, such as Lung Kwu Chau and Hong Kong-Zhuhai-Macao Bridge.

Enhancement of existing meteorological systems and equipment to cater for the 3RS

11. Apart from acquiring new equipment to support the 3RS, HKO also needs to enhance its existing systems and equipment, so as to cope with the increased scale of its operation. Enhancement of the existing meteorological systems, such as the Aerodrome Meteorological Observing System and Windshear and Turbulence Warning System, is necessary to process the additional data from the new equipment and provide the required warning and alerting service for the 3RS. Moreover, extension of these existing systems are required to support the new Airport Meteorological Office at the new ATC tower.

Users' Support

12. HKO has consulted the aviation users through the Liaison Group on Aviation Weather Services and the Windshear and High Impact Weather Panel, comprising representatives from the Airport Authority Hong Kong (AAHK), pilots and airlines, on the relevant meteorological facilities and systems in support of the 3RS. They are supportive of HKO's proposals.

FINANCIAL IMPLICATIONS

13. The estimated cost for the project is about \$271.9 million. A cost breakdown is set out at **Annex 2**. In addition, the project will entail an annual recurrent cost estimated to be \$1.1 million in 2021-22 and gradually rising to \$14.5 million in 2024-25 and onwards.

14. Under the Government's "user pays" principle, the costs for HKO to provide aviation weather services will be fully recovered from airlines (through en-route navigation charges) for overflying aircraft without taking off / landing at HKIA and from AAHK through services charge for aviation weather services for aircraft taking off / landing at HKIA. The additional recurrent cost and depreciation cost arising from the project will be taken into account in setting the en-route navigation charges and the aviation weather services charges for AAHK in future.

IMPLEMENTATION TIMEFRAME

15. Subject to Members' views, we will seek funding approval from the Legislative Council according to established procedures. HKO will procure the systems and equipment in accordance with the standard procurement procedures of the Government. The project will be completed in phases, with the required systems and equipment ready to support the commissioning of the third runway in 2022 and the entire 3RS by end 2024.

Hong Kong Observatory

December 2019

Annex 1 to Enclosure 1

Details of the proposed aviation meteorological systems to support the Three-Runway System (the 3RS) at Hong Kong International Airport (HKIA)

(a) Provision of new on-airport meteorological equipment to support the operation of the third runway

Item	Equipment / Systems	Details
1	Meteorological equipment near the third runway	To comply with the Standards and Recommended Practices of the International Civil Aviation Organization, a suite of meteorological equipment is required for safeguarding the safety of flights taking off and landing by monitoring the atmospheric conditions at specific locations of the runway. Such equipment for the third runway includes anemometers (for measuring winds), Runway Visual Range (RVR) transmissometers (for assessing runway visual range), forward scatterers (for measuring visibility) and ceilometers (for measuring height of cloud base).
2	Light Detection And Ranging (LIDAR) systems	A LIDAR system is a specialised equipment to detect windshear when there is no rainfall. Two LIDAR systems are required for the third runway for mutual backup.
3	Short-range LIDARs	A short-range LIDAR is a specialised equipment to detect wake vortex generated by aircraft when there is no rainfall. Two short-range LIDARs are required, one for monitoring wake vortex dissipation at the eastern end and the other at the western end of the third runway.

Item	Equipment / Systems	Details
4	Short-range Doppler Weather Radars	A short-range Doppler weather radar is a specialised equipment to detect wake vortex generated by aircraft when there is rainfall. Two short-range Doppler weather radars are required, one for monitoring wake vortex dissipation at the eastern end and the other at the western end of the third runway.
5	Lightning sensing equipment	Two sets of lightning sensing equipment are required at the eastern and western ends of the third runway for monitoring lightning activities of the third runway and its vicinity.
6	Meteorological equipment at the new meteorological garden	A suite of meteorological equipment including pressure sensors, temperature, humidity sensors and raingauges is required at the new meteorological garden to measure the surface weather conditions near the third runway.
7	Wind profiler	A wind profiler is required for monitoring winds at higher altitudes of the third runway.
8	Weather cameras	Weather cameras are required to support the observation of weather conditions along the third runway.

(b) Provision of new on-airport meteorological equipment to support the operation of the new centre runway

Item	Equipment / Systems	Details
9	Meteorological equipment near the new centre runway	A suite of meteorological equipment, including anemometer, RVR transmissometer, forward scatterer and ceilometer, are currently installed at the eastern and western ends of the existing North Runway. To avoid any interference with the Civil Aviation Department's (CAD) air navigation service equipment to be relocated for the new centre runway, the meteorological equipment at eastern and western ends of the existing North Runway would have to be relocated as well. Additional equipment is required at relocated sites, such as two new sets of anemometers for collecting additional climatological information.

(c) Provision of new off-airport meteorological equipment

Item	Equipment / Systems	Details
10	Terminal Doppler Weather Radar (TDWR)	TDWR is a specialised equipment for detection of windshear and microburst in rainy conditions. A new TDWR is required to ensure uninterrupted provision of windshear and microburst alerting services to cope with the air traffic growth upon the commissioning of the 3RS. It will be installed at the Tai Lam Chung TDWR station.
11	Equipment to support visibility forecasting	Equipment to support visibility forecasting includes forward scatterer and weather cameras, etc. Hong Kong Observatory plans to install the equipment at off-airport locations (such as Lung Kwu Chau and Hong Kong-Zhuhai-Macao Bridge) for monitoring the visibility to the north and west.

(d) Enhancement of existing meteorological systems and equipment to cater for the 3RS

Item	Equipment / Systems	Details
12	Aerodrome Meteorological Observing System (AMOS)	AMOS is a system for observing weather conditions along airport runways and neighbouring areas. Enhancement of the AMOS is required for interfacing with new meteorological equipment supporting the new centre runway and the third runway.
13	Windshear and Turbulence Warning System (WTWS)	The WTWS integrates data from a host of meteorological sensors including TDWR, LIDAR, AMOS and wind profilers, and provides timely alerts (such as those related to windshear and turbulence) for landing and departure areas of HKIA. The proposed enhancement covers the integration of data from the new anemometers, LIDARs, wind profiler and TDWR, and the provision of alerting services for the 3RS.
14	Airport Thunderstorm and Lightning Alerting System (ATLAS)	ATLAS is a system which provides lightning alerts to ground staff working outdoors at the airport. Enhancement is required to enable integration of data from new lightning sensing equipment and extend its coverage to additional areas.
15	Aviation Thunderstorm Nowcasting System (ATNS)	ATNS is a nowcasting system to provide rapidly-updated short-term forecast of convective weather in arrival and departure corridors. Enhancement is required to extend the coverage of the system to the arrival and departure corridors for the 3RS.

Item	Equipment / Systems	Details
16	Meteorological Data Processing System (METPS)	METPS is a computing system for acquisition, processing and distribution of weather information to support the operation of HKIA. It interfaces with the air navigation service equipment of the CAD and provides weather information to airlines and flight crew. Enhancement of the METPS is required to process the additional weather information and to cope with the higher demand on the system capacity arising from the 3RS.
17	Enhancement to the existing TDWR at Brothers Point	The existing TDWR at Brothers Point provides alerts for the existing two runways and has to be enhanced to provide alert for the third runway. Additional workstations and associated software for the existing TDWR are also required for use in the new Airport Meteorological Office (AMO) to support the operation for the 3RS.
18	Meteorological satellite and weather radar processing and display workstations	These are workstations for processing and displaying information from various meteorological satellite and weather radars. Additional workstations and associated software licence are required for use in the new AMO.

Item	Equipment / Systems	Details
19	Other hardware, software, communication facilities, networking equipment and equipment to facilitate integration with new air navigation service equipment of CAD and the new AMO	Additional hardware, software, communication facilities, networking and other equipment are required for development, generation and display of aviation weather information from various meteorological facilities, and for supporting integration with new air navigation service equipment of CAD, new AMO and existing meteorological facilities.

Annex 2 to Enclosure 1

**Estimated non-recurrent expenditure for the proposed aviation
meteorological systems to support
the Three-Runway System (the 3RS)
at Hong Kong International Airport**

	Non-recurrent expenditure	\$ million
(a)	Provision of new on-airport meteorological equipment to support the operation of the third runway	76.4
(b)	Provision of new on-airport meteorological equipment to support the operation of new centre runway	9.7
(c)	Provision of new off-airport meteorological equipment	123.0
(d)	Enhancement of existing meteorological systems and equipment to cater for the 3RS	38.1
(e)	Contingency	24.7
	Total =	271.9

3402IO - Provision of facilities and accommodation for various government departments to support the Three-Runway System at Hong Kong International Airport

PROJECT SCOPE AND NATURE

The scope of the project comprises –

- (a) fitting out works for the government premises/facilities located inside the Airport Authority Hong Kong (AAHK)'s buildings including the Third Runway Passenger Building (TRPB), the expanded Terminal 2¹ (T2), gate houses and plant buildings at the Eastern Support Area (ESA) and the Western Support Area (WSA), aircraft recovery equipment store at WSA and the new Integrated Airport Centre (IAC) at the existing Airport Island, which include the followings:
 - (i) customs hall facilities, baggage examination cubicles/baggage handling rooms, X-ray image interpretation room, detention facilities, command centres, search rooms, dog kennels and related supporting facilities, and other office and operational areas at TRPB and the expanded T2; staff egress checkpoints and search rooms at gate houses at ESA and WSA to be administered by the Customs and Excise Department (C&ED);
 - (ii) duty offices, secondary examination waiting lounges, computer rooms and other office and operational areas at TRPB and the expanded T2 to be administered by the Immigration Department (ImmD);
 - (iii) police reporting centres, interview rooms, equipment rooms and other office and operational areas at TRPB and the expanded T2, equipment rooms at plant buildings at ESA and WSA and the new IAC to be administered by the Hong Kong Police Force (HKPF);

¹ The existing T2 only provides departure services. Under the Three-Runway System, T2 will be expanded to provide full-fledged terminal services, serving arrival and departure operations.

- (iv) health screening rooms, client waiting rooms, consultation rooms, anterooms, isolation rooms and other office and operational areas at TRPB and the expanded T2 to be administered by the Department of Health;
 - (v) equipment rooms for air navigation service equipment at TRPB and the expanded T2 to be administered by the Civil Aviation Department; and
 - (vi) an animal inspection room, interview rooms, an inspection area and other office and operational areas at the expanded T2 to be administered by the Agriculture, Fisheries and Conservation Department;
- (b) construction of C&ED's Customs Dog Base at ESA and vehicle control kiosks and vehicle search bays with canopies at ESA and WSA;
 - (c) construction of underground cable duct systems linking the new premises/facilities of C&ED, ImmD and HKPF with their existing premises/facilities at the existing Airport Island;
 - (d) integration of C&ED's facilities with AAHK's Baggage Handling System (BHS); and
 - (e) refurbishment works at the existing premises/facilities of C&ED and ImmD located inside Terminal 1.

2. The locations of relevant buildings and the underground cable duct layout are shown at **Annex 1**.

JUSTIFICATION

3. Upon the commissioning of the entire Three-Runway System (the 3RS), the capacity of Hong Kong International Airport (HKIA) will be substantially enhanced, and will be able to handle an annual air traffic movement of 620 000 and air traffic demand at least up to 2030, by which time the annual passenger is expected to increase to around 100 million². Under the 3RS, TRPB will provide transfer, security screening, holding

² HKIA handled 74.7 million passengers in 2018.

and boarding gate loading areas for 30 million departing and arriving passengers per year. After the expansion of the existing T2 to provide full-fledged terminal services, passengers departing and arriving HKIA via TRPB will complete their check-in, customs, immigration, quarantines, security processes and handle their baggage at the expanded T2. In view of the long distance between TRPB and the expanded T2, a new high-speed BHS and Automated People Mover System will be provided for conveying the baggage and the passengers between the two buildings. Additional gate houses will also be provided at strategic locations to segregate the restricted area from the public area.

4. To support the smooth operation of the 3RS with the additional airport facilities and services as mentioned in paragraph 3 above, provision of government premises/facilities for customs, immigration, quarantines and port health control services, and law enforcement at TRPB, the expanded T2, the gate houses, various AAHK's buildings, BHS, etc., is necessary to support relevant government departments to exercise their duties.

FINANCIAL IMPLICATIONS

5. We estimate the cost of the project to be about \$3,025.4 million in money-of-the-day prices.

ENVIRONMENTAL IMPLICATIONS

6. The works form part of the designated project "Expansion of Hong Kong International Airport into a Three-Runway System" under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). The Director of Environmental Protection approved the 3RS EIA report on 7 November 2014, with the Environmental Permit (EP) granted on the same day. We will require the contractors to implement all of the relevant environmental mitigation measures and environmental monitoring and audit (EM&A) requirements specified in the approved 3RS EIA report, and shall comply with relevant conditions under the EP as well as all other applicable statutory environmental requirements during the development of the government facilities.

7. During the construction phase of the government facilities, the contractors shall implement effective mitigation measures that are not limited to, where relevant, water spraying in site areas, wheel washing and covering of materials on trucks to reduce dust emissions; use of quality powered mechanical equipment, movable noise barriers and noise enclosures for noise mitigation, and shall ensure full compliance with the construction noise permit system and other requirements of the Noise Control Ordinance; installation of sand/silt removal facilities and implement proper treatment of site runoff to meet requirements and standards under the Water Pollution Control Ordinance.

8. As regards construction waste management, the contractors shall comply with all 3RS EIA, EP and EM&A manual commitments for waste management and waste minimisation captured in the approved 3RS Project Waste Management Plan (WMP) (November 2015). The contractors shall also comply with project-specific approved waste management plans, separate inert portions from non-inert portions of construction waste and shall reuse inert construction waste on site or in other 3RS construction sites as far as practicable. The disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively will be controlled in accordance with WMP commitments and through strict implementation of the government's trip-ticket system, which requires contractors and site supervisory staff to undertake duties and responsibilities in tracking movements of construction and demolition materials from works sites to designated disposal destinations.

HERITAGE IMPLICATIONS

9. The project will not affect any heritage sites, i.e. all declared monuments, proposed monuments, graded historic sites and buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

10. The project does not require any land acquisition.

Agriculture, Fisheries and Conservation Department

Architectural Services Department

Civil Aviation Department

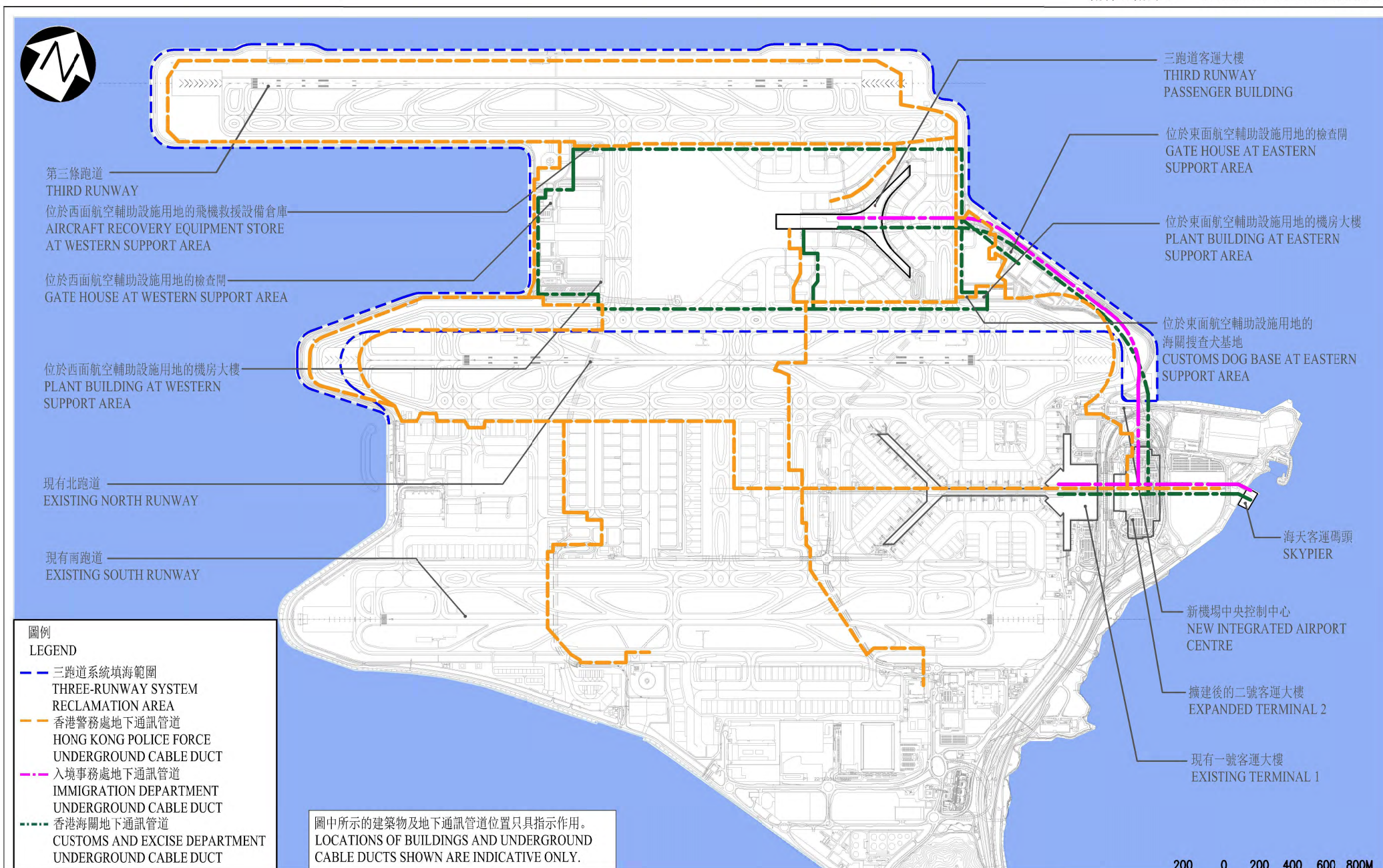
Customs and Excise Department

Department of Health

Hong Kong Police Force

Immigration Department

December 2019



位置圖
LOCATION PLAN

3402IO
香港國際機場三跑道系統的相關政府部門設施及辦公地方
PROVISION OF FACILITIES AND ACCOMMODATION FOR VARIOUS GOVERNMENT DEPARTMENTS
TO SUPPORT THE THREE-RUNWAY SYSTEM AT HONG KONG INTERNATIONAL AIRPORT

**3278LP - Provision of Police facilities to support
the Three-Runway System at Hong Kong International Airport**

PROJECT SCOPE AND NATURE

The scope of the project comprises –

- (a) construction of a new Airport District Operational Base (OB) at the Eastern Support Area (ESA) to be completed by the end of 2024; and
 - (b) internal alteration works to the facilities of the existing Airport Police Station (APS) to be completed by the end of 2024.
2. The location plan is at **Annex 1**.

JUSTIFICATION

Increasing Demand for Police Services

3. The Airport District (APTDIST) of the Hong Kong Police Force (HKPF) is responsible for policing Hong Kong International Airport (HKIA), including general patrols, prevention and detection of crimes, handling emergency incidents, dealing with public reports and enquiries, etc. The existing APS at Catering Road West, comprising an 8-storey Office Block and a 5-storey Barrack Block, accommodates APTDIST, the Police Dog Unit as well as the Communications Branch.

4. Under the Three-Runway System (3RS) development, the area occupied by HKIA will increase by about 650 hectares, while the annual passenger using HKIA is expected to increase to around 100 million by 2030. As such, the demand for policing service will substantially increase. At the same time, in view of the global threat of terrorism, the risk of terrorist attacks targeting HKIA, being a critical infrastructure, should not be overlooked. The existing APS at Catering Road West will not have enough capacity to support the increase in demand for police service arising from the 3RS development. Therefore, it is necessary for HKPF to build a new OB to meet operational need.

Emergency Response

5. At present, the APS is situated at the southeast side of HKIA, which is approximately 8.3 kilometres (km) from the western end of the existing North Runway (i.e. the farthest point). When the 3RS is in operation, the western end of the third runway will become the farthest point, which is around 10.5 km from the existing APS. When there is an emergency incident, it is crucial that HKPF's emergency response team can arrive at the scene as soon as possible. Any undue delay is not acceptable.

6. The new OB at ESA will be around 5.8 km from the western end of the third runway such that the time to reach the western end of the third runway will be substantially shortened. When the entire 3RS is commissioned, HKPF will adopt a dual-base strategy, comprising the existing APS and the new OB, for responding to emergency incidents, rendering more comprehensive, effective and efficient protection to HKIA.

Counter Terrorism

7. Terrorism threatens major cities around the world and airports are one of the main targets of terrorists. Between 2016 and 2018, there were five terrorist attacks¹ on international airports around the world with nearly 700 casualties. As a highly open international city, it is of paramount importance for Hong Kong to remain vigilant to the risk of terrorist attacks at all times. HKPF has the duty to protect HKIA from any potential threat of terrorist attack.

8. To effectively respond to any possible terrorist attack at HKIA, it is necessary for the specialised units of HKPF to promptly arrive at the scene. The new OB will be located at a strategic location in close proximity to all three runways, apron area, passenger terminals and waterfront. It will accommodate the counter-terrorism units (including the Airport Security Unit and the Special Duties Unit), Police Dog Unit, District Traffic Team and District Intelligence Section of the Airport District, so as to provide quick response in the event of a terrorist attack.

¹ The five terrorist attacks occurred at Brussels Airport in Belgium (March 2016), Ataturk Airport in Turkey (June 2016), Orly Airport in France (March 2017), Bishop Airport in USA (June 2017) and Mitiga Airport in Libya (January 2018) respectively.

9. The counter-terrorism units based in the existing APS will be relocated to the new OB for enhanced operational efficiency. The existing office layout and accommodation arrangement at the APS will be modified accordingly to meet the operational needs of the APTDIST.

FINANCIAL IMPLICATIONS

10. We estimate the cost of the project to be about \$1,866.6 million in money-of-the-day prices.

ENVIRONMENTAL IMPLICATIONS

11. The works form part of the designated project “Expansion of Hong Kong International Airport into a Three-Runway System” under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). The Director of Environmental Protection approved the 3RS EIA report on 7 November 2014, with the Environmental Permit (EP) granted on the same day. We will require the contractors to implement all of the relevant environmental mitigation measures and environmental monitoring and audit (EM&A) requirements specified in the approved 3RS EIA report, and shall comply with relevant conditions under the EP as well as all other applicable statutory environmental requirements during the development of the government facilities.

12. During the construction phase of government facilities, the contractors shall implement effective mitigation measures that are not limited to, where relevant, water spraying in site areas, wheel washing and covering of materials on trucks to reduce dust emissions; use of quality powered mechanical equipment, movable noise barriers and noise enclosures for noise mitigation, and shall ensure full compliance with the construction noise permit system and other requirements of the Noise Control Ordinance; installation of sand/silt removal facilities and implement proper treatment of site runoff to meet requirements and standards under the Water Pollution Control Ordinance.

13. As regards construction waste management, the contractors shall comply with all 3RS EIA, EP and EM&A manual commitments for waste management and waste minimisation captured in the approved 3RS Project Waste Management Plan (WMP) (November 2015). The contractors shall also comply with project-specific approved waste management plans, separate inert portions from non-inert portions of construction waste and

shall reuse inert construction waste on site or in other 3RS construction sites as far as practicable. The disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively will be controlled in accordance with WMP commitments and through strict implementation of the government's trip-ticket system, which requires contractors and site supervisory staff to undertake duties and responsibilities in tracking movements of construction and demolition materials from works sites to designated disposal destinations.

HERITAGE IMPLICATIONS

14. The project will not affect any heritage sites, i.e. all declared monuments, proposed monuments, graded historic sites and buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

15. The project does not require any land acquisition.

**Architectural Services Department
Hong Kong Police Force**

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