

**For discussion  
on 27 April 2020**

## **Legislative Council Panel on Economic Development**

### **Permanent set-up and staffing proposals of the Air Accident Investigation Authority**

#### **PURPOSE**

This paper briefs Members on the permanent set-up of the Air Accident Investigation Authority (AAIA) established under the Transport and Housing Bureau (THB) and seeks Members' views on the following staffing proposals in AAIA with immediate effect upon approval of the Finance Committee (FC) –

- (a) making permanent one non-civil service (NCS) position equivalent to the rank of D2, to be designated as Chief Accident and Safety Investigator (CASI) (which was re-titled from Chief Inspector of Accidents) to lead AAIA;
- (b) creation of one permanent NCS position equivalent to the rank of D1, to be designated as Deputy Chief Accident and Safety Investigator (Deputy CASI); and
- (c) creation of one supernumerary Assistant Director-General of Civil Aviation (ADGCA) (D2) post up to 31 March 2022 as a stop-gap measure to lead AAIA, pending the completion of open recruitment exercise of the CASI position in (a) above. The supernumerary ADGCA (D2) post will lapse with effect from the date of the formal appointment of CASI and in any case not later than 31 March 2022.

#### **BACKGROUND**

2. The People's Republic of China is one of the 193 Contracting States of the International Civil Aviation Organization (ICAO). According to the Standards and Recommended Practices of ICAO stipulated in "Annex 13 to the Convention on International Civil Aviation - Aircraft Accident and Incident Investigation" (Annex 13), a Contracting State is obliged to conduct investigations into air accidents or serious incidents which occur in its territory. A Contracting State is also entitled to participate in the investigations of

accidents or incidents which occur outside its territory but involve aircraft under its registry, and to participate in the investigation of an aircraft accident in the case that a large number of its nationals are involved. Being a Special Administrative Region of the People's Republic of China, Hong Kong is obliged as well as entitled to handle matters in relation to investigations of civil aviation accidents and incidents in accordance with Annex 13.

3. An amendment to Annex 13 which took effect from November 2016 requires that “a State shall establish an accident investigation authority that is independent from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation”. In order to comply with this binding requirement, our policy intention has been very clear, i.e. to establish a permanent AAIA independent of the Civil Aviation Department (CAD), as reflected in the legislative amendments to the Hong Kong Civil Aviation (Investigation of Accidents) Regulations (Chapter 448B) (the Regulations) that came into effect in December 2018. After consulting the Legislative Council (LegCo) Panel on Economic Development in March 2017 on the time-limited set-up of AAIA, and obtaining the FC's approval in July 2017 for the creation of the time-limited NCS position of Chief Inspector of Accidents (which was later renamed CASI) up to 31 March 2020, AAIA was formally established and commenced operation in September 2018<sup>1</sup>. In addition to CASI, the time-limited set-up of AAIA comprised four civil service investigator posts, namely two Senior Operations Officers (SOOs) and two Operations Officers (OOs), and one Assistant Clerical Officer (ACO) post. The time-limited set-up of AAIA also built in the flexibility of secondment of one SOO and one OO from CAD to meet operational needs where necessary, in addition to the abovementioned four investigator posts. The two posts concerned have been deleted from CAD's establishment with effect from 1 April 2020. The organisation chart of AAIA's time-limited set-up is at **Annex 1**. Both the time-limited set-up of AAIA and the NCS position of CASI already expired on 31 March 2020. As the Government explained during the consultation with LegCo in 2017, the reason for establishing AAIA under a time-limited set-up initially was to allow flexibility for the Government to review and determine the long-term organisational set-up of AAIA in light of its actual operational needs and experience. The Government undertook to review the set-up of AAIA, including staffing provision, prior to the expiry of AAIA's time-limited set-up.

4. Prior to the establishment of AAIA, investigations of individual air accidents and incidents were conducted by a pool of officers with suitable

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<sup>1</sup> Link to the paper submitted by THB to the Establishment Subcommittee (ESC) of FC: <https://www.legco.gov.hk/yr16-17/english/fc/esc/papers/e17-02e.pdf>

qualifications and expertise in CAD as assigned by the Director-General of Civil Aviation (DGCA) in his then capacity as the Chief Inspector of Accidents under the Regulations. In tandem with the establishment of AAIA, the Regulations were amended to transfer the relevant powers vested in DGCA to CASI and make clear that CASI together with the Accident and Safety Investigators is the accident investigation authority in Hong Kong<sup>2</sup>. The Regulations were also amended to the effect that CASI must cause all air accidents and serious incidents to be investigated in accordance with ICAO's requirements, as opposed to the prior arrangement that DGCA could decide whether to cause an investigation into an accident.

## **JUSTIFICATIONS**

### **Scope of work of AAIA**

5. AAIA is responsible for conducting investigations into all accidents and serious incidents related to civil aircraft that happen within the Hong Kong territory and also those involving Hong Kong-registered civil aircraft that happen outside Hong Kong. The primary functions of AAIA are as follows –

- (a) determining the cause(s) of accidents/incidents, publishing investigation reports, protecting evidence, reporting investigation progress to victims' families or survivors;
- (b) safety management and accident prevention initiatives, such as managing accident and incident database, analysing data to identify safety hazards, proposing safety recommendations and collaborating with the aviation industry to disseminate safety information; and
- (c) providing recurrent training for personnel and maintaining facilities and equipment to ensure readiness for accident and incident investigations and fulfilment of requirements of the Regulations at all times.

### **Enhanced efficiency in the performance of air accident and incident investigations and prevention after the establishment of AAIA**

6. Prior to the establishment of AAIA, investigations of air accidents and incidents were conducted by officers in CAD in addition to their other day-to-day duties. As a result, these officers often had insufficient time to

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<sup>2</sup> CASI and Accident and Safety Investigators are administrative titles in AAIA's set-up that are respectively equivalent to the Chief Inspector and Inspectors under the Regulations.

pursue other air accident prevention and personnel training initiatives set out in paragraphs 5(b) and (c) above. Since the establishment of AAIA, CASI and his team of full-time investigators have been able to devote the majority of their time on air accident and incident investigations, especially during the initial and critical stages of the investigation process. This is conducive to the prompt identification of the causes of accidents and incidents and the promulgation of remedial safety measures in a timely manner, such that safety recommendations can be made known to and adopted by stakeholders in the aviation industry as soon as possible, which in turn is crucial to the promotion of aviation safety in Hong Kong. In addition, the dedicated manpower of AAIA also meant more capacity for pursuing promotion and education initiatives for stakeholders, and for raising AAIA's international profile through speaking opportunities at local and international events and attendance at international fora on accident and incident investigations. Please see **Annex 2** for some of AAIA's performance statistics since its establishment in September 2018. More importantly, the establishment of AAIA that resulted in the clear segregation of the functions of the investigator from those of the safety regulator has further strengthened the impartiality of investigations.

7. Having reviewed the actual operational experience of AAIA, we are of the view that the establishment of an AAIA independent of CAD has brought about tangible benefits to both air accident and incident investigations and prevention. In order for AAIA to continue to effectively discharge its statutory powers in relation to air accident and incident investigations and for Hong Kong to continue to fulfil the binding and on-going requirements of Annex 13, there is a genuine and proven need to transform AAIA into a permanent authority further to the expiry of its time-limited set-up on 31 March 2020. The Government has already made provision for the permanent set-up of AAIA with effect from 1 April 2020.

### **Need for a Chief Accident and Safety Investigator**

8. As the time-limited CASI position expired on 31 March 2020<sup>3</sup>, we need to create a permanent CASI position to head AAIA under the permanent set-up.

9. Given that air accident and incident investigation is highly specialised and complex, and that the causes of accidents or incidents may involve various disciplines of the aviation industry, CASI, who leads AAIA, has to possess professional aviation knowledge/experience, including but not limited to civil aviation legislation, aircraft operation, aircraft engineering, air traffic control,

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<sup>3</sup> The first CASI in charge of AAIA since its establishment was recruited through an open recruitment exercise and was appointed by the Chief Executive as CASI under the Regulations.

airport operation, airline management and safety management, etc. CASI must also possess practical experience in air accident and incident investigations in order to oversee the investigation work effectively. In particular, CASI possesses statutory powers under the Regulations to direct and oversee accident and incident investigation work, including appointing suitable personnel to assist in the investigations as well as allowing authorised persons to gain access to accident sites for preservation of evidence and removal of aircraft wreckage, etc.

10. Throughout an investigation, CASI has to maintain close liaison with the aviation industry (for instance, CAD and/or other aeronautical authorities, Airport Authority Hong Kong, airlines, aircraft manufacturers, aircraft maintenance organisations) to collect statements and evidence from inquiries during the course of investigation and to release safety information to the industry on a timely basis. This implies frequent contacts with leaders of the local and global aviation industry. In this connection, CASI must have certain professional aviation qualifications, reputation and status in the industry, thus enabling him/her to exert authority and discharge his/her duties in an effective manner.

11. Furthermore, as the head of AAIA, CASI's daily work includes ensuring the readiness and capability of AAIA in civil aviation accident and incident investigations and handling, analysing accident and incident data to identify potential safety hazards, coordinating the release of safety information and guidelines on prevention of accidents, and managing the internal affairs of AAIA (including staff deployment, staff training, procurement and maintenance of investigation facilities and equipment, etc.). The above tasks demand very strong leadership, administrative management and strategic competencies, and have to be executed by a professional with a high level of experience in administrative management. Taking into account the above factors and the actual operational experience of AAIA, we consider it appropriate to continue to pitch the proposed CASI position equivalent to the rank of D2. The job description of the proposed CASI position is at **Annex 3**.

### **Need for a Deputy Chief Accident and Safety Investigator**

12. Under the time-limited set-up, CASI had no deputy, and was underpinned only by four non-directorate investigators. Based on our review of the AAIA's operational experience, we consider it crucial that CASI be assisted by a comparably well experienced investigator in AAIA as his/her deputy, who is also capable to stand in as CASI as and when necessary.

13. Given the broad knowledge and expertise required in handling air

accident and incident investigations, which include, for instance, runway incursion, uncontained engine failure, pilot incapacitation and aircraft crash over land or into the sea, it is obviously not possible for any single person to possess the expertise in all disciplines of the aviation profession. By creating a deputy position, the deputy's expertise and experience could be complementary to those of CASI, thus creating a more all-rounded leadership and competent team in AAIA. The deputy is also expected to share out CASI's international obligations, including those in the ICAO and regional cooperation context, such as participation in the Accident Investigation Panel and Asia Pacific Accident Investigation Group of ICAO, so that CASI can devote more time to other areas of work, such as field investigations which is necessary for CASI to keep his/her investigation skills and knowledge up-to-date.

14. In addition, it is foreseeable that the workload of AAIA would increase in the coming years, necessitating a senior deputy to share out the leadership and investigation responsibilities and workload of CASI. Based on the operational experience since AAIA's establishment, it is estimated that although the number of investigation cases to be launched tends to fluctuate from year to year, the case load will gradually increase in the foreseeable future, as compared with the average numbers when investigation powers were still vested with CAD preceding the handover to AAIA. The anticipated increase in workload is based on a host of development trends, including more frequent air traffic movements within the Hong Kong flight information region, partly due to the robust demand for air transport in the Greater Bay Area, with particular regard to the full commissioning of the Three-Runway System at the Hong Kong International Airport, the growth of cross-boundary helicopter services, the continued expansion of Hong Kong's international air traffic network, and the launch of more aircraft types and technology. In fact, by their very nature when and where air accidents and incidents happen are unpredictable. In the unfortunate event that AAIA has to handle multiple accidents and serious incidents concurrently, it will be necessary for a deputy of comparable experience within AAIA to support CASI to spearhead investigation, including the management of and coordination with relevant stakeholders and/or overseas authorities on multiple fronts. The creation of the proposed Deputy CASI position will not only cater for the increase in AAIA's workload, but will also strengthen AAIA's overall capability to carry out investigations into major accidents in a professional and effective manner that is commensurate with Hong Kong's status as an international aviation hub.

15. As adequate experience and expertise will be required of Deputy CASI given the need for him/her to stand in for CASI as and when necessary, we consider it appropriate to pitch the proposed Deputy CASI position equivalent to the rank of D1. The job description of the proposed Deputy CASI position

is at Annex 4.

### **Justifications for appointment on NCS terms**

16. Air accident and incident investigations require a wide array of expertise of which many are not readily available in Hong Kong, e.g. aircraft and aircraft engine design, avionics manufacturing and other onboard equipment certification. Most air accident investigation authorities around the world engage professionals from different countries to build up their own pool of expertise for their work. To allow greater flexibility for AAIA to recruit the most suitable persons with the required calibre from a wider pool of candidates, including overseas and local aviation experts where appropriate, and to cater for the unique nature of air accident and incident investigation and the dynamic developments in aviation technology, we propose that both the CASI and the Deputy CASI positions be appointed on NCS terms with a view to ensuring that AAIA will be led by the most suitable persons with relevant up-to-date knowledge of air accident and incident investigation in the light of the ever-changing industry developments and circumstances.

### **Support from Non-directorate staff**

17. Under the time-limited set-up, CASI was supported by a team comprising five time-limited civil service posts, namely two SOOs, two OOs and one ACO. To provide continued support to the proposed permanent CASI and Deputy CASI in the conduct of investigations, we have already made the five time-limited posts (including the two SOOs, two OOs and one ACO) permanent with effect from 1 April 2020, further to the expiry of AAIA's time-limited set-up on 31 March 2020. A maximum of three additional investigator(s) will be recruited on Non-Civil Service Contract (NCSC) terms in future depending on operational needs. Such arrangement will provide flexibility for AAIA to obtain additional manpower with suitable expertise from outside the civil service as and when necessary, considering the diverse and dynamic nature of air accidents and incidents. The proposed organisation chart of the AAIA's permanent set-up is at Annex 5.

### **ALTERNATIVES CONSIDERED**

18. ICAO's requirement as detailed in paragraph 3 above is an on-going one. As part of the People's Republic of China, which is a party to ICAO, Hong Kong has the obligation to continue our compliance with the requirement concerned. As regards the proposed CASI and Deputy CASI positions, we have critically examined the possibility of re-deploying existing staff resources

within THB to take up the posts. Given that air accident and incident investigation is a highly specialised subject and that the CASI and the Deputy CASI positions demand strong aviation background and competence, it is not possible to deploy staff members from THB, who are usually generalists, to take up the duties. Taking a holistic view of the above factors, we consider that the most appropriate approach is to transform AAIA into a permanent set-up under THB and to appoint two professionals to take up the CASI and the Deputy CASI positions through open recruitment.

## **TRANSITIONAL ARRANGEMENTS**

19. The contract of the first CASI ended on 31 March 2020, following the lapse of the time-limited CASI position (on NSC terms) on the same date. Currently, the most experienced investigator in the existing team of AAIA is leading AAIA temporarily. Upon funding approval of FC, we will proceed with an open recruitment exercise for the CASI position. An open recruitment of such a senior position will inevitably take a relatively long time, especially if relocation to Hong Kong of the selected person is needed, and/or if he/she has to end an existing employment prior to joining. For the time-limited CASI position approved by FC in July 2017, the position was only filled 14 months later in September 2018. Because of the importance of AAIA, it is not acceptable for there to be a long gap between the creation of the CASI position and the filling of it. We therefore need a transitional arrangement to ensure that AAIA can continue to be led by a suitably experienced and competent person in the interim. Having explored different options and with reference to international experience, we consider it most practical to identify an existing civil servant in CAD with relevant accident and safety investigation experiences at suitable seniority to fill the gap. We conducted researches on international practices and noted that certain AAIA-equivalent organisations would rely on the civil aviation authorities for filling important positions and/or participating in air accident investigation duties where necessary. The key is how to preserve the independence of the AAIA-equivalent organisations from the civil aviation authorities in those cases. After careful consideration, we have come to a view that the CAD officer to be identified should not be given the option to revert to CAD after taking up the time-limited ADGCA post in AAIA to avoid any perceived conflict of interests or implications on the impartiality of AAIA's investigations. In the circumstances, CAD should identify a suitable officer to take up the post.

20. It is proposed to create a supernumerary ADGCA (D2) post in AAIA with immediate effect upon FC's approval up to 31 March 2022. The supernumerary post will lapse upon the successful filling of the CASI position



by open recruitment (and in any case not later than 31 March 2022). The job description of the supernumerary ADGCA (D2) post is the same as the proposed CASI position set out at **Annex 3**.

## **FINANCIAL IMPLICATIONS**

21. The total remuneration package for the proposed NCS CASI and Deputy CASI positions will not exceed the full annual average staff cost of \$3,093,000<sup>4</sup> and \$2,556,000, including salaries and staff on-cost, for a civil service post ranked at D2 and D1 level respectively. As regards the five additional non-directorate civil service posts mentioned in paragraph 17 above, the additional notional annual salary cost at mid-point will not exceed \$5,288,640, and the full annual average staff cost, including salaries and staff on-cost, is about \$6,997,000. The annual cost of hiring a maximum of three additional investigators on NCSC terms will not exceed \$6,288,912.

22. We have included the necessary provision in the draft Estimates of 2020-21 to meet the staff cost and other operating expenses, and will reflect the resources required in the Estimates of subsequent years.

## **PUBLIC CONSULTATION**

23. The industry supported the establishment of AAIA in 2017 as they, particularly airlines and pilot associations, had been requesting the Government to establish an independent air accident investigation authority over the years. The proposal of turning AAIA into a permanent set-up to fulfil ICAO's standard should have the continued support of the industry.

## **ADVICE SOUGHT**

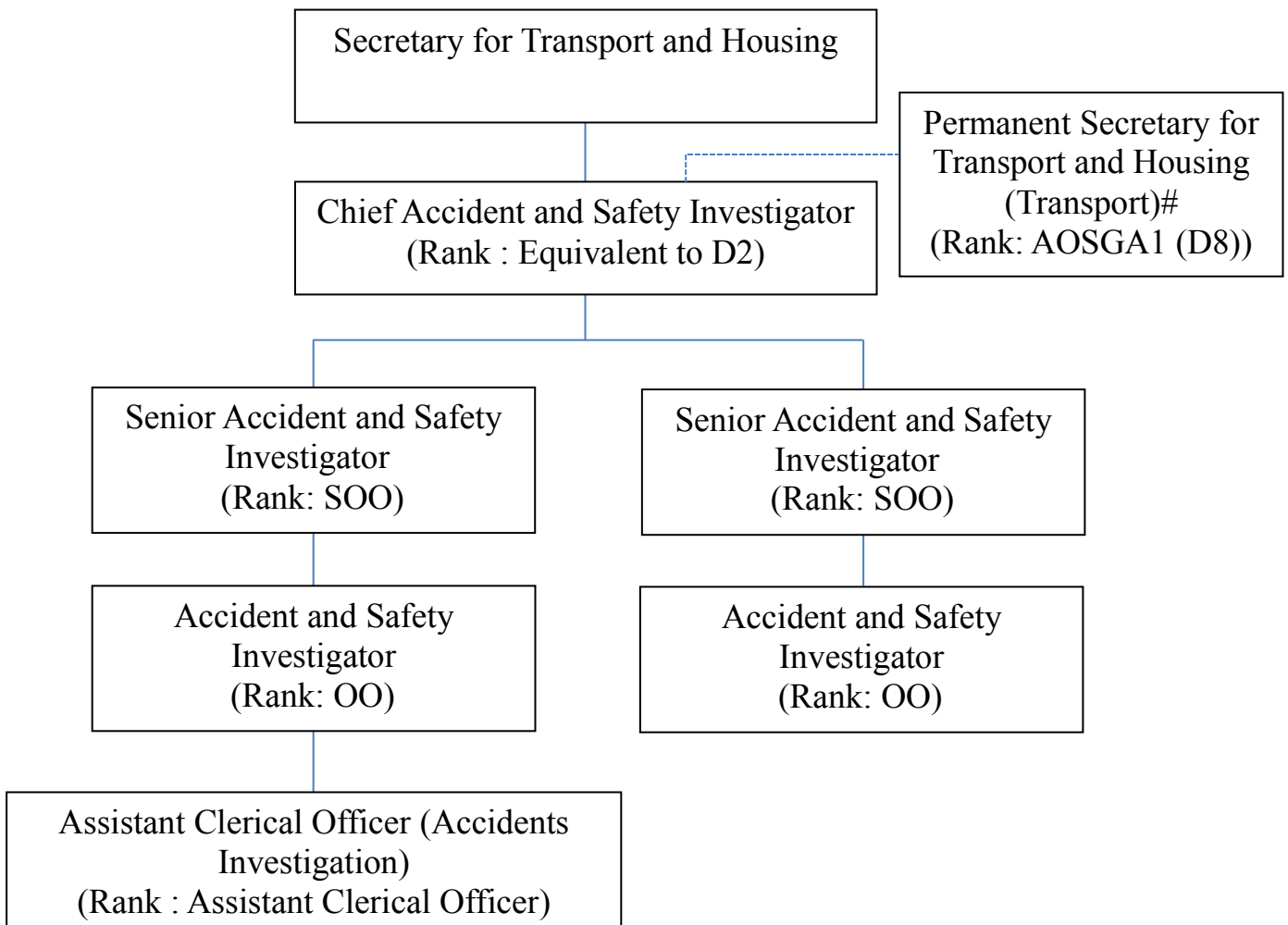
24. Subject to Members' views, we will submit the staffing proposal in paragraph 1 above to ESC for endorsement and FC for approval.

## **Transport and Housing Bureau April 2020**

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<sup>4</sup> This will cover the annual staff cost of the supernumerary ADGCA (D2) post proposed to be created as a stop-gap measure before the successful filling of the CASI position by open recruitment (and in any case not later than 31 March 2022).

**Organisation Chart of the  
Air Accident Investigation Authority under Time-limited Set-up  
(up to 31 March 2020)**



Legend:

AOSGA1 Administrative Officer Staff Grade A1

SOO Senior Operations Officer

OO Operations Officer

# CASI reported to the Permanent Secretary for Transport and Housing (Transport) on administrative and personnel matters.

Note:

The time-limited set-up of AAIA also built in the flexibility of secondment of one SOO and one OO from the Civil Aviation Department to meet operational needs where necessary, in addition to the four investigator posts as shown.

**Key Statistics on the Air Accident Investigation Authority’s Performance  
since its Establishment in September 2018**  
(as at 8 April 2020)

(a) Number of investigations of air accidents/ serious incidents transferred from the Civil Aviation Department	10 cases <i>(5 accidents and 5 serious incidents)</i>
(b) Number of investigations of air accidents/ serious incidents launched by the Air Accident Investigation Authority (“AAIA”)	15 cases <i>(3 accidents and 12 serious incidents)</i>
(c) Number of investigation report published	1 case <i>(Accident)</i>
(d) Number of investigations of air accidents/ serious incidents completed (viz. having reached the “notice of report and representations” stage as per Regulation 11 of Cap. 448B <sup>5</sup> )	8 cases <i>(3 accidents and 5 serious incidents)</i>
(e) Number of on-going investigations of air accidents/ serious incidents	16 cases <i>(4 accidents and 12 serious incidents)</i>

<sup>5</sup> As per Regulation 11(1) & (1A) of Cap. 448B, if it is practicable to do so, a “notice of report” should be served by AAIA to stakeholders as defined under the provision concerned, who may make representation in writing within 28 days of service of the notice or within such further period as may be allowed by the Inspector-in-Charge. As per Regulation 11(2), the notice must

- (a) include particulars of any proposed analysis of facts that may affect the person on whom, or in respect of whom, the notice is served; and
- (b) include any conclusions as to the causes of the accident or incident that may affect that person.

(f) Average time taken to complete an investigation (from the commencement of investigation work to the “notice of report and representations” stage as per Regulation 11 of Cap. 448B)	19.75 months <sup>6</sup>
(g) Number of promotion and education initiatives conducted/attended with an active role; overseas AAIA-equivalent delegations received	23 events
(h) Number of meetings at international fora on air accident and incident investigation attended	7 meetings

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<sup>6</sup> Excluding item (c) as the bulk of the work was conducted by CAD prior to the establishment of AAIA.

**Proposed Job Description of  
the Chief Accident and Safety Investigator**

Rank: Non-civil service position equivalent to the rank of D2

Responsible to: Secretary for Transport and Housing / Permanent Secretary  
for Transport and Housing (Transport)

**Main Duties and Responsibilities –**

1. To lead and manage the Air Accident Investigation Authority, including staff deployment, staff training, procurement and maintenance of investigation equipment, facility maintenance and record management, etc., as well as to formulate strategies and measures to enhance accident and incident investigation and safety management procedures, thereby ensuring Hong Kong's capability and readiness in conducting aircraft accident and incident investigations in compliance with the Hong Kong Civil Aviation (Investigation of Accidents) Regulations (Cap. 448B) and Annex 13 to the Convention on International Civil Aviation ("Annex 13").
2. To carry out the statutory functions and exercise the statutory powers granted under Cap. 448B, in particular to conduct investigations into all air accidents and serious incidents in Hong Kong, and those that occur outside Hong Kong but involve aircraft under its registry.
3. To prepare and submit investigation reports to the Chief Executive, stating the circumstances and causes of accidents/serious incidents and making safety recommendations to prevent recurrence of accidents.
4. To oversee the collection, protection and analysis of relevant aviation safety information and data with a view to identifying potential safety hazards and disseminating aviation safety messages to the industry for education purposes.
5. To regularly review and update the legal provisions, arrangements and procedures for aircraft accident and incident investigations, in order to ensure Hong Kong's capability and readiness in accident and incident investigations in compliance with Cap. 448B and Annex 13.

6. On behalf of the Hong Kong Special Administrative Region Government, to participate in international organisations or activities in relation to air accident and incident investigations and aviation safety; and to maintain close liaison with international organisations on relevant issues.
7. To provide support and professional advice to overseas air accident investigation authorities when necessary (e.g. when aircraft registered in Hong Kong are involved in accidents or incidents occurred overseas).
8. To supervise the reporting (e.g. progress of investigation, information relating to the accident investigation) to be made to survivors and families of victims of air accidents.

**Proposed Job Description of  
the Deputy Chief Accident and Safety Investigator**

Rank: Non-civil service position equivalent to the rank of D1

Responsible to: Chief Accident and Safety Investigator (“CASI”)

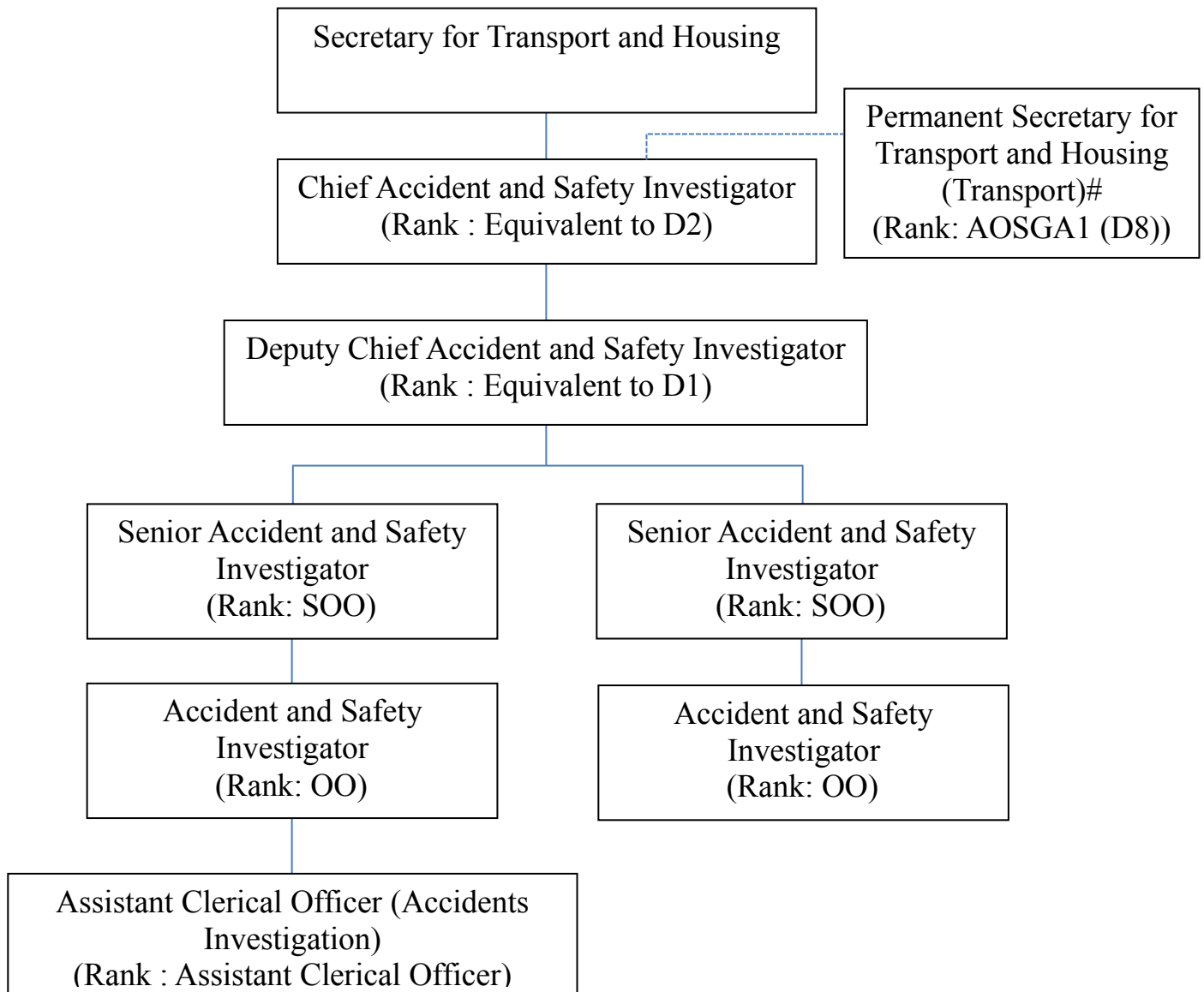
**Main Duties and Responsibilities –**

1. To assist CASI in leading and managing the Air Accident Investigation Authority, including staff deployment, staff training, procurement and maintenance of investigation equipment, facility maintenance and record management, etc., as well as to formulate strategies and measures to enhance accident and incident investigation and safety management procedures, thereby ensuring Hong Kong’s capability and readiness in conducting aircraft accident and incident investigations in compliance with the Hong Kong Civil Aviation (Investigation of Accidents) Regulations (Cap. 448B) and Annex 13 to the Convention on International Civil Aviation (“Annex 13”).
2. To deputise CASI during his/her absence and/or his/her overseas duty visits/training, including standing in CASI’s capacity to carry out the statutory functions and exercise the statutory powers granted under Cap. 448B.
3. To assist CASI in overseeing the collection, protection and analysis of relevant aviation safety information and data with a view to identifying potential safety hazards and disseminating aviation safety messages to the industry for education purposes.
4. To conduct aircraft accident/incident investigations or supervise investigations conducted by other investigators as directed by CASI; and to assist CASI in providing support and professional advice to overseas air accident investigation authorities when necessary (e.g. when aircraft registered in Hong Kong are involved in accidents or incidents occurred overseas).
5. To assist CASI in regularly reviewing and updating the legal provisions, arrangements and procedures for aircraft accident and incident investigations, in order to ensure Hong Kong’s capability and readiness in accident and incident investigations in compliance with Cap. 448B and Annex 13.

6. On behalf of the Hong Kong Special Administrative Region Government, to participate in international organisations or activities in relation to air accident and incident investigations and aviation safety; and to maintain close liaison with international organisations on relevant issues.
7. To assist in supervising the reporting (e.g. progress of investigation, information relating to the accident investigation) to be made to survivors and families of victims of air accidents.



**Proposed Organisation Chart of the  
Air Accident Investigation Authority**



Legend:

AOSGA1 Administrative Officer Staff Grade A1

SOO Senior Operations Officer

OO Operations Officer

# CASI reports to the Permanent Secretary for Transport and Housing (Transport) on administrative and personnel matters.

Note:

A maximum of three additional investigators may be recruited on Non-Civil Service Contract terms in future depending on operational needs.