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## A Newsletter for Aviation Safety Professionals

Welcome to the fourth issue of [Safety Links](#).

As safety management practice matures, industry and regulators across sectors and borders are more active in sharing safety information and lessons learnt. [Safety Links](#) provides a platform for you to share good safety management practices and actionable insights for enhancing safety.

### Provision of ARFF Services in the Changing Environment of the 3RS Project

*Interview with Mr. Yip Yun-yu, Div Commander 'Air' (Ag), Airport Fire Contingent of the Hong Kong Fire Services Department NT Command, 4 Apr 2018*

Mr. YIP is currently the Acting Divisional Commander of the Airport Fire Contingent (AFC) overseeing the Aerodrome Rescue and Firefighting (ARFF) at the Hong Kong International Airport (HKIA). He has extensive operational and management experience. Mr. Yip was posted to the AFC in 2012 when the Three-Runway System (3RS) Project of HKIA was under design and planning stage. He has since then been heavily involved with the planning of ARFF services for the 3RS. We are pleased to have Mr. YIP sharing his experience in ensuring the ARFF standards in the midst of the changing environment.



#### A process to manage the changes in aerodrome infrastructural developments

Mr. YIP: The goal of ARFF is to protect life and property in an aircraft emergency. To ensure our readiness in meeting the stringent requirements stipulated by the International Civil Aviation Organisation (ICAO) such as the requirements on response time, the AFC already has a process in maintaining our standards in any infrastructural developments at the HKIA.



Firstly, the AFC actively participates in the Airport Emergency Planning Sub-Committee of the HKIA which is to discuss, review and resolve matters relating to the HKIA's preparedness to cope with emergencies occurring at the aerodrome or in its vicinity. For the 3RS project, we are in close liaison with the 3RS Project Team chaired by the AAHK. We are fully informed of all constructions, developments or changing procedures on land or at sea which may affect ARFF services. The AFC will provide our views at the design and planning stage of these construction activities to minimize the impact on ARFF services. Secondly, if the works will affect ARFF services, for example, closure of emergency response routes used by AFC appliances, the AFC will conduct risk assessments to identify the hazards arising from the construction activities and will consider adjustment to

## Airport Fire Contingent



<http://www.hkfsd.gov.hk/eng/airport/>

## Three Runway System HKIA



<https://www.threerunwaysystem.com/en/overview/w/project-overview/>

## ARFF Training



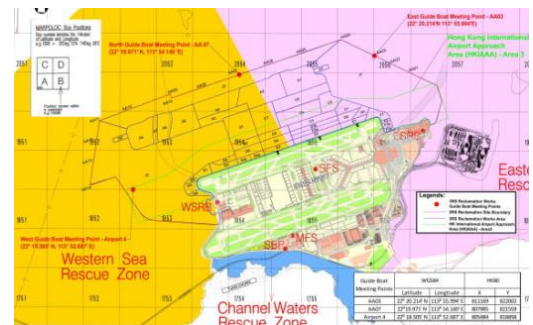
the Mobilising Instructions where appropriate. Thirdly, the AFC participates in the annual full-scale aircraft crash and rescue exercise at the HKIA to test the emergency procedures and responses in dealing with an aircraft accident in coordination with other response parties. Fourthly, the AFC also conducts inspection to the aircraft movement area regularly to ensure that the performance of all firefighting facilities e.g. the pit fire hydrants at runways, taxiways and aprons meet the operational requirements of AFC.

## Challenges posed by the 3RS Project

Mr. YIP: The construction of 3RS is a real challenge to the provision of ARFF services with the reclamation phase being the most challenging. The navigation channels and seabed conditions at the site will change continuously during the reclamation period. It is vital to ensure that in the event of an emergency happens within the reclamation area, the AFC vessels will be able to reach the accident site in coordination with other response parties for effecting Search and Rescue (SAR). The AFC must continuously review the ARFF strategy and devise contingency measures for SAR. These include continuously assessing the sea conditions and the access points to the reclamation site, ascertaining effective communication between the Marine Traffic Control Centre of AAHK and AFC, ensuring AFC personnel are familiarized with the AFC vessels deployment strategy such as the positioning of AFC Command Boats, Speedboats and Daughter Boats in the reclamation works area. Collaboration with the relevant stakeholders is important and the AFC has been liaising closely with CAD, AAHK, Marine Department, Police, site contractors and the 3RS Project Team to work out our mobilisation strategy and emergency procedures. It is indeed a huge challenge in managing the change since there is no precedent to follow.



Command Boat



Emergency Response Plan for the 3RS Reclamation Works

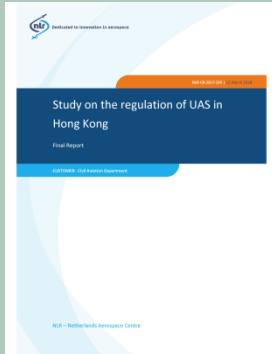
## Provision of ARFF Services on Commissioning of the 3RS

Mr. YIP: To ensure that AFC will continue to meet the ICAO requirements on ARFF after the commissioning of the third runway and the associated facilities, we have already started our planning on the provision of new facilities such as two new Airside Fire Stations and a Speed Boat Launching Facility to enable swift rescue and firefighting in case of aircraft ditching incidents. Moreover, one additional landside Fire Station cum Ambulance Depot will also be provided to support ARFF operations at HKIA.

Manpower planning and training are of equal importance. Our Headquarters ensures that personnel posted to the AFC are well acquainted with operational tactics and strategy in ARFF operations. To meet the manpower demand for the 3RS project at different stages, a well-structured training programme for different levels of rescue personnel including aircraft firefighting simulator training has been put in place since 2016. We will also send our Officers to attend overseas ARFF conferences and pay visits to other airports to broaden their exposure and keep abreast of the latest ARFF technology and practices. In addition, AFC will review ARFF incidents happened overseas to ensure that we will have procedures in place to tackle similar incidents.

**Closing by CAD:** We are thankful to Mr. Yip for sharing the AFC proactive approach in ensuring the standards of ARFF services in anticipation of the drastic changes in the operating environment at different stages of the 3RS project.

## Consultancy Study Report



[https://www.cad.gov.hk/english/uas\\_view.html](https://www.cad.gov.hk/english/uas_view.html)

# CAD Launches Public Consultation on Regulation of Unmanned Aircraft Systems (UAS)

To assist the Government in refining the UAS regulatory regime with a view to accommodating the technological development and diversified uses of UAS, the CAD commissioned a consultant to conduct a study on the regulation of UAS. The objective is to strike a reasonable balance between facilitating the development of UAS and protecting public safety.



In April 2018, the CAD published the consultation paper and the consultancy study report to consult the public on the proposed directions for regulating UAS. The public may send their views to the **Coordinator of UAS Consultation** ([uas\\_view@cad.gov.hk](mailto:uas_view@cad.gov.hk)) by July 3, 2018.

## IATA Press Release



[http://www.iata.org/pre\\_ssrroom/pr/Pages/2018-02-22-01.aspx](http://www.iata.org/pre_ssrroom/pr/Pages/2018-02-22-01.aspx)

# Hong Kong Airlines Hosted the IATA Accident Classification Technical Group

*Capt. Ruben MORALES, General Manager, Corporate Safety, Hong Kong Airlines Limited*

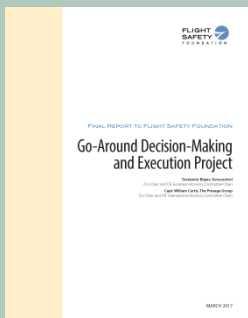
Hong Kong Airlines Limited (HKA) hosted the winter meeting of the IATA Accident Classification Technical Group (ACTG) from 8-11 of January 2018 to review and analyse aviation accidents, identify contributing factors, determine trends and areas of concern relating to operational safety and develop prevention strategies for the airlines industry. Safety data and



information in the ACTG report will be used in the IATA Annual Safety Report which is the definitive yearbook to understand and track commercial aviation's safety performance, challenges and opportunities. Statistics generated by the ACTG shows that 2017 was a very safe year for jet passenger aircraft.

**Closing by CAD:** We are glad to note that HKA has hosted the IATA meeting, which is instrumental in global accident prevention. For more information on airline safety performance in 2017, please refer to the IATA website.

## FSF Study Report



[https://flightsafety.org/wd-content/uploads/2017/03/Go-around-study\\_final.pdf](https://flightsafety.org/wd-content/uploads/2017/03/Go-around-study_final.pdf)

# Study on Go-around Decision Making

In the ICAO APRAST/10 meeting in April 2017, the Flight Safety Foundation (FSF) presented a study report "**Go-Around Decision-Making and Execution Project**" relating to the psychological drivers contributing to intentional non-compliance with stable approach policies. The report analysed past accident data and found that the "approach and landing" is the most common phase of flight accounting annually for approximately 65 percent of all accidents. The report noted that collective industry performance is poor, with approximately 3 percent of unstable approaches result in go-around policy compliance and concludes with safety recommendations. States were asked to review the recommendations for discussion at the APRAST/12 in May 2018.

CAD supports the recommendations in FSF's report, and encourages Operators to review the report and make cultural changes together.

# Transforming “Data” to “Actionable Insights”

## **Tail Strike Incident**

An Airbus A321 aircraft experienced a tail strike incident during landing which resulted in damage of skin panels of the aft lower fuselage section. The operator later identified the most probable root cause was related to a glitch of the flight control software (ELAC). Subsequently, the CAD shared relevant safety information with other air operators which operated the same aircraft type in Hong Kong. The manufacturer had provided a software upgrade on ELAC in 2017.

## **Tail Tipping During Cargo Loading Operations**

A B747 freighter was on the onset of tipping while unloading cargo at an overseas airport. Investigation found that the cause was attributed to the non-compliance with the zone unloading requirements by the loading staff. Mitigation measures which included refresher training and enhanced communication between the loading staff at the upper deck and the main deck were implemented.

## **Overcarriage of Cargo**

A ULD with shipment weighing 1.5 tonnes was mistaken as an empty container and overcarried back to Hong Kong. Mitigation measures such as warehouse system enhancement and briefing of the correct handling procedures had been conducted by the GHA concerned.

## **Serious Incidents - Runway Incursion**

In the latter half of 2017, two serious incidents involving runway incursion occurred at the south runway at the HKIA. In September, a Boeing B744 freighter entered the active runway 07R while an Airbus A333 had been cleared for take-off and was commencing the take-off roll. In December, an Airbus A333 was cleared for take-off on runway 07R before a Boeing B748 freighter cleared the runway crossing at the departure end. The incidents are being investigated by the Accident Investigation Division.

## **Engine Fire**

A freighter aircraft, while making the final approach to Runway 07L at the HKIA, experienced an engine fire warning at about 50 feet above ground. The aircraft continued the approach and completed the landing. Subsequent engineering inspection identified fire damage at the engine core exterior of one of the engines. The engine was later sent to the manufacturer’s facilities for investigation by the Accident Investigation Division and the manufacturer.

## **Working at Height**

An aircraft maintenance engineer fell from a working stair and sustained fatal head injury while attending engine repair work on an A330 aircraft. The incident was a reminder of the importance of compliance with company SOP especially when working at height. The airline was requested by CAD to enhance its re-training and conduct briefing of safety procedures to frontline staff. A follow-up audit was conducted by CAD to ensure all mitigation measures had been implemented. The AAHK also briefed members of the aviation community on this incident and reminded airlines and franchisees / licensees that all ramp staff shall wear appropriate PPE and strictly comply with companies’ operating procedures.



### **HKIA Ramp Safety Handbook**



[https://extranetapps.hongkongairport.com/iwov\\_extra/OpenFile/Ramp+Safety+Handbook.pdf?path=%2Fetra%2FExtranet%2FSSEPS%2FSafety%2FRamp+Safety+Handbook.pdf](https://extranetapps.hongkongairport.com/iwov_extra/OpenFile/Ramp+Safety+Handbook.pdf?path=%2Fetra%2FExtranet%2FSSEPS%2FSafety%2FRamp+Safety+Handbook.pdf)

### **Contact Us**

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**HK Civil Aviation Department**

sso@cad.gov.hk

## **What is “Safety Links” and how can I contribute?**

**Safety Links** provides a platform for aviation professionals to share good safety management practices and lessons learnt with other sectors, such that we can all learn from your experience and plan for safety improvement. Please contribute your knowledge and safety suggestions.

The information may be de-identified upon request.



Our business