



Recent Developments and Experiences

Background information for ITSA Member States prior to the May 2021 Microsoft Teams tele-conference

State: United Kingdom

Presented by: Crispin Orr, Andrew Moll and Simon French (Chief Inspectors of the Air, Marine and Rail Accident Investigation Branches respectively)

Introduction

The situation in the UK continues to be dominated by the effects of the coronavirus pandemic. A mutation of the virus led to a large increase in cases in December which necessitated a national lockdown through the winter months. However, the rollout of the vaccination programme has been impressive which has helped reduce cases and fatalities to very low levels. In early March the Government set out a roadmap for progressively lifting the restrictions in 4 stages between March and June. All the indications are that this plan is working well. A traffic light system is being introduced for resumption of international travel from 17 May with three levels of risk mitigation measures (quarantine, testing etc) according to the assessed risk associated with each destination.

The Air, Marine and Rail Accident Investigation Branches have continued to operate effectively throughout the last year. Fortunately, the direct effect of the virus has been limited with very few confirmed cases in the AIBs but the indirect effects on our work have been substantial with high levels of home-working and some increased friction within the investigation process. A huge amount has been achieved but we are looking forward to a lifting of restrictions. We are considering how we can incorporate the positive lessons from the last year into our working practices for the longer term.

Major Organisational and/or Staff Changes

There have been no major organisational changes in the AIBs. The Accident Investigation Chiefs' Council, which was established in 2018 to maximise coordination and synergy between the AIBs, goes from strength to strength. It is improving the AIBs' effectiveness, efficiency and resilience through working together on projects such as the development of a new case management system, the negotiation of strong MOUs with external agencies and the pooling of resources for major accident investigations.

There are some changes on the horizon with the AAIB to be designated as the UK's Space Accident Investigation Authority when the legislation comes into force in the summer. Serious consideration is also now being given to the creation of an organisation to undertake safety investigation of the most serious road traffic accidents.

The MAIB has had a lot of staff changes with a third of its investigation staff being recruited in the last 16 months. The RAIB is now entering a transitional phase with Chief Inspector Simon French and two Principal Inspectors retiring in the coming months.

Budget Issues and/or Legislative change

The AIBs continue to be well-funded with no significant change to budgets in the last year. However, the Government will be undertaking a Comprehensive Spending Review in the Autumn and there will be a

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tension between the Government's ambitious plans to invest in the national infrastructure, and the need to begin to address the unprecedented level of Government debt accumulated supporting the economy through the coronavirus pandemic. It remains to be seen what impact this may have on Departmental budgets and, at a much lower level, the resourcing of the AIBs.

A major review has been conducted of the air, marine and rail accident investigation regulations to identify commonalities, differences and which elements are working best in practice. The insights gained are now being used to enable convergence where this is possible within the different international regimes. The Marine regulations will be updated in 2021, Rail in 2022 and Air at some point thereafter.

The other legislative change to affect the AIBs will be Space Industry Regulations which will come into force in July 2021. The first spaceflight launches from the UK could occur as early as 2022.

Case Studies and Challenges

After a quiet period, there has been a sharp rise in fatal accidents in the commercial fishing sector with 8 deaths over the winter, 5 of which resulted from vessel capsizing. Nearly 80% of the UK's commercial fishing vessels are less than 15m in length, and traditionally have been lightly regulated. However, the number of fatalities resulting from small fishing vessels foundering or capsizing quickly, leaving the crews little time to escape, has resulted in numerous recommendations to improve stability standards. New legislation introducing more stringent stability requirements is expected later this year.

The RAIB has had a particularly challenging period with a large and complex investigation following a passenger train derailment at Carmont¹ that resulted in the deaths of two train crew and a passenger, with the Final Report due for publication later in the year. The RAIB is also investigating the derailment of a freight train that caused the spillage of about 330,000 litres of fuel oil into a wildlife conservation area and a major fire that took days to control. In parallel, the Branch is preparing for a high-profile inquest into the deaths of seven passengers in the Sandilands² tram accident that occurred in November 2016.

The AAIB recently published its Final Report³ into a serious incident to an Airbus A321-211 (G-POWN) at London Gatwick Airport on 26 February 2020. Following a biocide shock treatment on its fuel system, which was incorrectly administered, the aircraft suffered serious difficulties with both engines shortly after takeoff. The aircraft landed safely but in different circumstances the outcome could have been catastrophic. This revealed how the redundancy inherent in multi-engine aircraft can be fundamentally undermined by contamination of fuel which affects all engines simultaneously. Safety action has been taken around the world to address the issue and 5 safety recommendations have been made to regulators to promote the classification of biocide treatment of aircraft fuel systems as a critical maintenance task, which would ensure that an error-capturing method is included as part of the maintenance task.

¹ The train struck material washed out from a drainage trench during a summer convective storm; [Interim report 01/2021: Derailment of a passenger train at Carmont - GOV.UK \(www.gov.uk\)](#)

² [Report 18/2017: Overturning of a tram at Sandilands junction, Croydon - GOV.UK \(www.gov.uk\)](#)

³ [Aircraft Accident Report AAR 1/2021 - Airbus A321-211, G-POWN, 26 February 2020 - GOV.UK \(www.gov.uk\)](#)

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Recommendations/Issues of Global Concern

The long-delayed implementation of proposed changes to the regulations governing the design of signage at level crossings is still a matter of concern to RAIB. The Department for Transport is in the process of drafting a public consultation on revised regulations, which it aims to issue later this year. The RAIB is also keen to share experience with ITSA colleagues on two particular themes:

- the maintenance of rolling stock used to convey dangerous goods and associated condition monitoring systems (such as hot wheel detectors); and
- the management of earthwork stability and drainage, and the likely impact of global warming on the risk of catastrophic failure of such assets.

The AAIB has recently issued 15 recommendations⁴ concerning the regulation and oversight of UAS operations. This follows an investigation into the accident involving a 95kg Airspeeder UAV which flew away when control was lost. The aircraft climbed to 8000ft encroaching a holding point for aircraft arrivals into London Gatwick Airport before falling to the ground adjacent to occupied housing when the battery depleted.

Additional Information

Simon French very much regrets he cannot attend the ITSA meeting as he will be giving evidence at the Sandilands Inquest, particularly so as it would be his last meeting before retirement. He would like to send his best wishes and the following message:

*Dear ITSA colleagues,
I have been so privileged to have had the opportunity to meet so many brilliant investigators from across the world at our annual meetings. My first ITSA meeting was in London in 2015, and since then I've been lucky enough to visit Paris, Tokyo, Baku and Quebec. Like all of us, I was disappointed to miss the opportunity to visit Sydney and Helsinki in 2020 and 2021, but so grateful to Greg for keeping ITSA active in these difficult times, albeit virtually. My retirement will be partial, and I hope to remain active in the field of accident investigation for some time to come.....so who knows, we might just meet again!
Good luck for the future.
Your friend and colleague,
Simon*

⁴ [AAIB investigation to Alauda Airspeeder Mk II, \(UAS, registration n/a\) 040719 - GOV.UK \(www.gov.uk\)](#)

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