

EXECUTIVE SUMMARY – 434th UKFSC SIE MEETING – 18 JANUARY 2017

1. **Shoreham Formal Report to be released for publication in late February. (5.1)**
2. **Global Express CFIT prevented by ATCO intervention, descended well below the GP in Hong Kong (400ft at 7 miles). (5.1)**
3. **S92 accident on N Sea unmanned platform 29 Dec, airworthiness issues. (5.1)**
4. **EASA FTL fatigue reports discussion. Post-duty reporting is reactive and not a breach of licence conditions. EASA-compliant rosters can still be fatiguing. (5.2)**
5. **8 Runway Incursions, 15 PLOC incidents, 40 level busts and 59 CAS infringements over last 2 months. (5.3)**
6. **1200 laser attacks during 2016; most were red or green lasers but some white beams had been reported. (5.4)**
7. **Airprox: 266 reports submitted in 2016 (5-year average 187). 94 drone encounters. 81 CAT reports, 16 non-drone. (5.5)**
8. **Unlocked pallet causes aircraft to tip during unloading. Operational pressures and fatigue issues. (5.6)**
9. **Heading indication failures caused by steel screws being used instead of non-ferrous types near the magnetometer housing. (5.8)**
10. **Difficulties with getting information on the state of arrestor cables at Preveza and Gran Canaria (both shared-use military bases); company aircraft not cleared to trample cables. (5.12)**
11. **Heating of cold-soaked aircraft led to build up of cabin pressure, engineer blown off steps, airframe damage when door opened. (5.13)**
12. **Aircraft steps moved by 3rd parties while cabin occupied. (5.13, 5.15)**
13. **Fuel contamination with super-absorbent polymer symptoms? (5.14)**
14. **Helicopter downwash incidents: containers blown over; rotors-running aircraft partially lifted. (5.16)**

**Dai Whittingham
Chief Executive
23 January 2017**

**MINUTES OF THE 434th MEETING OF THE UK FLIGHT SAFETY COMMITTEE
HELD ON 18 JANUARY 2017 AT BAES PARK CENTRE, FARNBOROUGH**

Those present were reminded of the following Confidential Warning which applies to these minutes and to the contents discussed therein:

These Minutes record the proceedings of matters discussed under the Rule of Confidentiality. Circulation to non-UKFSC members, either in whole or part, is to respect the Rule of Confidentiality which states:

“Details of accidents, serious incidents and incidents which may be discussed at this meeting are to be regarded as confidential. You are entitled to make use of the information within your own organisation but please use it with discretion and do not quote anyone by name or organisation without their prior authority.”

ITEM 4 Chief Executive’s Report

4.1 CE had attended the FSF International Aviation Safety Summit in Dubai. There had been some interesting presentations, and comments included a suggested link between flight deck complacency and boredom, and the notion that CRM processes should be extended to the aircraft FMS. Emirates was increasing its non-jeopardy pilot handling simulator training from 4 to 6 hrs per pilot per year. Accident risks for non-precision approaches were 7-9 times higher than for precision approaches; “kind of” (as in self-flown hybrid) approaches were also dangerous. Biases in investigations included Fundamental Attribution Error, which was characterised by success and failure being viewed in others as lucky or idiotic respectively, whereas the same events for oneself were seen as showing competence or bad luck. Administrative error was also introduced, which included the principles of least effort, convenience and blindness to work-round solutions. Cultural biases included “professional indignation” which related to attitudes on responsibility and accountability.

4.2 The MAC Challenge Group had met in December. Despite objections from the floor, the Chairman announced that meeting frequency was being reduced from 3 per year to 6-monthly. There had been earlier questions about the need to run the MACCG at all. CE had pointed out to the meeting that the decision to drop drone reports from the infringement statistics (at the behest of the AIWG) was counter-intuitive; the argument presented by the CAA reps was that sub-7kg drones were not legally barred from CAS so their presence could not be classed as an infringement. This position risked the CAA having an incorrect assessment of the MAC risk arising from unregulated drone ops in CAS.

4.3 The UK Laser WG would be meeting on 19 January. WG members understood that specific anti-laser measures were expected to be put before Parliament in the current session. It was important that pilots continued to report attacks at the earliest opportunity. (CE Note: a prosecution for laser offences (aircraft endangerment) is due to be heard in a Liverpool court in February.)

ITEM 5 Information Exchange and Extracts from MORs

5.1

- The Shoreham Formal Report had completed the consultation phase and was being released for publication in late February (possibly 22nd).

- A Bermuda-registered Global Express descended well below the GP in Hong Kong (400ft at 7 miles). CFIT was prevented by ATCO intervention.
- An S92 accident occurred on an unmanned oil platform on 28 December; factual details were published in an AAIB [Special Bulletin](#) on 11 January. As the helicopter entered the hover on its 2nd approach of the day, it yawed rapidly to the right and at the same time rolled 20deg left, rotating through 187deg before coming to rest near the edge of the deck. Evidence of overheating and extreme wear was found on a bearing in the tail rotor pitch change shaft, which required urgent airworthiness activity. HUMS data showed signs of the impending failure; the manufacturer has reduced periodicity of HUMS interrogations and was conducting a review of analysis processes. The FAA now requires its S92 operators to inspect the affected components every 10 flying hours.

5.2

- There had been questions concerning the implications of submitting reports post-duty, as it could be argued the individual had been fatigued on-duty and therefore was in breach of their licence conditions. CAA advice was that reporting fell into 3 categories: predictive, from roster analysis; proactive, on the day of duty but arising from previous duty periods; and reactive, for fatigue that was not predicted at the start of the duty period. There was thus no problem submitting with post-duty reports.
- Some companies had adopted a position whereby a roster period could not be considered fatiguing as it met the FTL conditions; the CAA confirmed this was an incorrect interpretation of the regulations.

5.3

- The last 2 month's stats showed 8 Runway Incursions, 15 PLOC incidents and 40 level busts (of which 4 lead to loss of separation).
- In one LB incident, the aircraft was instructed to descend to 4000ft but went lower. It climbed after ATCO intervention but went up through the cleared altitude and into conflict with higher traffic. In the second, an aircraft descended through its cleared 6000ft after the crew increased ROD because the PF felt they were high on profile; this action de-activated the ALT capture mode. There was a loss of separation with opposite traffic at 5000ft, CPA was 1.6nm/500ft.
- There were 59 CAS infringements over the 2 months. In one incident involving an untraced light aircraft, 2 avoiding turns were required; the controller became distracted by the infringer, which led to a loss of separation against a 3rd aircraft.
- Some good practice regarding drone operations was being reported from Aberdeen. Operators of drones being used in connection with nearby building work were liaising with ATC and airport operations to successfully reduce the MAC risk. However, there had been an incident the previous week with an untraced drone operated locally.

5.4

- There was active engagement with industry on the disruptive passenger issue. Some aspects (such as sale of alcohol) were not subject to CAA regulation and would require a cross-Govt approach.
- Laser statistics showed around 1200 attacks during 2016, but these MORs were UK-only. The beam colours had also been considered; most were red or green lasers but some white beams had been reported. It was probable the white light attacks were high-luminescence torches rather than lasers. (CE note: white laser beams can only be generated by combining lasers of other colours, and the colours tend to separate at longer ranges. These devices are cumbersome and unlikely to have been used against aircraft as they are intended for the entertainment industry.)

5.5

- With 2016 reporting believed to be complete, there had been 266 Airprox reports submitted, high when compared with the 5-year average of 187. Drone encounters had more than doubled, with 94 incidents reported compared with 40 for 2015.
- Of the 81 CAT reports, only 16 were non-drone and only one of those was risk-bearing (2 x RJ at LCY). A good year for CAT!
- Drone reports all involved risk rather than actual collision. Initial results of trials suggested that most encounters were at lower speeds and that damage levels were less than expected.
- A B767 departing from LGW was given a heading change. The crew selected heading change mode on the FMS but left the heading bug on the departure track so the aircraft turned towards LHR and into conflict with an A380. The conflict was resolved via a sequence of ATCO actions, the B767 crew having failed to comply with the avoiding action call as they identified the wrong aircraft as the conflicting traffic.
- A B777 joining the LAM hold turned in the wrong direction because the reciprocal track had been set in error. The aircraft turned left towards LHR and into conflict with a departing B777. The incident occurred as the ATCOs were handing over on shift change and was well spotted and resolved by the new controller.
- Investigations showed there were still misunderstandings amongst foreign operators about Class G operations, specifically that there was no guaranteed separation provided by a Deconfliction Service.

5.6

- A C130 was damaged in Bangkok while supporting the Red Arrows tour of the far East. 5 pallets were being unloaded; after 3 had been removed, the team adjusted the ramp angle to provide better clearance. The forward pallet had not been locked down and shifted aft, causing the aircraft to tip and bringing the flaps into contact with a piece of ground equipment. On review, cargo handling instructions were unclear. This was a high-profile task which had generated operational pressure, and there were also fatigue issues involved.
- The Service Inquiry into the fatal Puma accident in Kabul (Oct 2015) had been published on the [MAA website](#). The key message was the dangers of distraction: the 'Soccer Field HLS' was being used (for soccer) when the initial approach was made, and in the subsequent repositioning the crew lost sight of the formation leader while trying to avoid no-overflight areas and then hit the tether wire for an aerostat balloon. The tail rotor drive shaft was damaged in the wire-strike and then failed, causing loss of control. The wire-strike risk was known but it was believed the main rotor blades would shear the wire. In the event, the wire passed down the retreating blade side of the disc and into contact with the tail pylon.

5.7

- A parked aircraft was hit by another taxiing company aircraft at London City. Initial investigations showed some potential issues with ramp markings, the marshaller was also moving while signalling.
- A go-around in the UK ended with a level bust. The PF had not activated the GA mode so there was no altitude capture while the aircraft followed the FMS sequencing.

5.8

- The Seneca fleet is Garmin 1000 flat-panel fitted. There had been 3 incidents of heading indication failures (a red X), and there was no standby wet compass. Investigation found that steel screws had been used instead of non-ferrous types near the magnetometer housing. The Garmin system checks GPS data against the magnetometer output and displays the red X in the event of a disagree.

5.9

- The company had provided crews with a de-identified chart of FDM events. Crews were now asking for routine access to their own data. Was this data provision a good idea or not? **Discussion.** There was no problem with letting people know how they were performing but some operators had found a tendency for individuals to start ‘intelligence-gathering’ by comparing results with other pilots and then trying to work out who were the weakest on the fleet (ie having more reports). This could be avoided if the data was provided on-line and remotely, with the FDM team controlling the access.

5.10

- The company had a policy agreed with staff that saw crews automatically removed from rosters for 72hrs following any serious incident. This was to avoid operational decisions placing pilots in a situation where they might be required to operate despite having been affected by the incident. More research into post-incident effects was being done. “Incident” needs to be carefully defined.

5.11

- As part of work to produce EAPPRI v3.0, a working group at Eurocontrol was clarifying the definitions being used for runway incursions, as it was clear there were different understandings across the community.

5.12

- Difficulties had been experienced in getting the correct information on the state of the arrestor cables at Preveza and Gran Canaria (both shared-use military bases). An aircraft had trampled the cable at Preveza without the crew being aware it was rigged/supported; the aircraft is not cleared to trample cables. Information was not being included in NOTAMs or on the ATIS. The FlySmart performance programme would include an arrestor-gear performance option that would be used initially as a mental prompt.

5.13

- A cold-soaked aircraft on the ground at Calgary had a heating unit attached in accordance with the AFM. The unit ran out of fuel and stopped, leading other ground staff believed the aircraft was fully shut down, so doors were closed etc. Subsequent refuelling and restarting of the heater unit led to a build-up of pressure in the cabin, though not sufficient to trigger the warning lights. The engineer who opened the door was blown down the aircraft steps, the door gust lock was broken and the aircraft was subsequently found to have sustained a dent to its fuselage.
- During engineering work the AME partly closed the no 4 (L) door while he worked inside the aircraft. After completing the task 45 minutes later, he opened the door to find that a 3rd party had moved the aircraft steps in preparation for the next task.
- An A330 captain requested underwing de-icing. The operator tried to manoeuvre the de-icer truck basket under the wing with which it predictable made contact.

- Confusion between personnel over de-fuelling procedures led to 1.5 tons of fuel being spilled on the ramp.

5.14

- The US press was reporting that of the 104 fatal helicopter accidents in the USA between 2009-2013, half involved LOC, inadvertent IMC entry or low-level operations.
- The NTSB had published its [most wanted list 2017](#). For aviation, these desired improvements included: reducing fatigue-related accidents; eliminating distraction; ending alcohol and drug impairment; safe shipment of hazardous material; expanding use of recorders; and requiring increased medical fitness.
- An incident with a Cathay aircraft in 2010 had resulted from Super-Absorbent Polymers (SAP) contaminating the fuel. A recent B777 RTO at 115 kts was attributed to SAPs affecting engine control. It was thought that the first symptom of SAP contamination was slow delivery rates when refuelling.
- The Jabiru (light ac) is a composite construction and has its GRP fuel tanks sealed with a sloshing compound. Fuels such as MOGAS contain alcohol (ethanol) which denatures the GRP and sealing compound, which is why one Jabiru owner found his aircraft melting in the hangar...

5.15

- While the crew were cleaning the cabin post-flight, a member of the ground staff removed the aircraft steps – another near miss.

5.16

- Heavy helicopter downwash hazard is significant and there had been 2 recent incidents. While carrying out underslung load training the aircraft overflowed 3 small ISO containers that had been presumed to be weighted down with their contents. All 3 containers blew over, fortunately all away from the HLS and ground personnel.
- The second incident occurred when a pair of helicopters landed to refuel. The first had landed and refuelling personnel were under the forward rotor disc when downwash from the second landing aircraft caused the rear of the first to lift (reducing blade clearance on the forward disc); the pilot rapidly lowered the back of his aircraft onto the ground.
- An awareness campaign coupled with detailed post-flight inspections was aimed at reducing the incidence of loose articles or equipment falling off or from helicopters. Insecure panels had been a particular problem.
- There had been several instances of ground damage occurring during hangar entry or exit.

5.18

- The company had adopted a zero-tolerance policy on disruptive passengers following 5 diversions during 2016. It was now cabin crew discretion on serving more than 2 drinks to individual passengers, and no alcohol was being served before 0800. There was also an on-board announcement about expectations of passenger behaviour. Return flights for disruptive passengers were being automatically cancelled and 6 month, 12 month or lifetime carriage bans were being imposed. Criminal prosecutions were being sought where necessary. Where the company was self-handling, gate staff had been trained to refuse to board those already behaving badly.

5.18

- An S-92 on a SAR task near Lydd was overflown by a drone at 100ft.
- Crews were beginning to suffer from information overload (ground-based traffic).
- There appeared to be an industry-wide reduction in the quality of products being received from the OEMs.

5.19

- Coastal proximity means the helicopter requires frequent compressor washes, and the operating base therefore has a de-ionised water plant installed. During the annual review and survey of the premises, traces of *Legionella* were detected in the plant. (CE note: this hazard is also relevant to all operators with heating or air conditioning systems!)

Chief Executive

UKFSC

23 January 2017