AIR TRANSPORT FEEDBACK

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EDITORIAL

Each meeting of the CHIRP Air Transport Advisory Board includes an update from the UK Airprox Board. The April 2014 briefing raised some issues which the Advisory Board hopes will be of interest to air traffic controllers and, in particular, to pilots. Firstly, some general matters relating to flight operations in Class G airspace are described before turning to a more specific example of risk in such operations.

In Class G airspace, the Rules of the Air associated with 'see and avoid' apply at night – and in IMC! Collision avoidance in Class G is an equal and shared responsibility, IFR traffic having no priority over VFR traffic. The Rules – including giving way to traffic on your right – apply in the open FIR, in radar patterns and on the approach. Although instrument approach paths are marked with a 'feather' on VFR charts, there is nothing on such charts to indicate the location of instrument patterns or holds and there is no obligation – other than good airmanship – for other pilots to remain clear of such patterns or approach paths.

UK operators should have conducted their own risk assessments for commercial operations outside controlled airspace (CAS). Pilots should play their part by understanding fully the environment and having an appreciation of the operations of other airspace users. In Class G airspace it is wise to minimise flight time below 3,000ft, especially at times of the day when military and General Aviation (GA) activity is greatest. If you have to be in Class G, a Deconfliction Service provides the greatest risk mitigation. Notwithstanding the difficulty of conducting an effective lookout from an airliner cockpit, you have to do the best you can. Of course it is a balance between looking out and meeting the responsibilities of PF and PM but remember collision avoidance responsibility remains with the pilots. Good practice might include:

- Make the fullest possible use of the autopilot and get your eyes out of the cockpit.
- Allocate lookout sectors (8 – 2 o'clock for the left seat; 10 – 4 o'clock for the right seat etc.)
- Try to have one pilot looking out and covering both sectors when there is a head-in task to perform.
- Without wishing to teach grandma to suck eggs, remember that although GA aircraft are relatively slow moving and crossing rates are low, pause your scan to allow your eyes to detect their movement. Periodically focus your move your head to avoid blind spots caused by airframe obstructions.
- TCAS can be useful in Class G airspace but don't rely on it as many aircraft are not fitted with transponders. Therefore, use the TCAS to best effect but don't get fixated on looking visually for traffic indicated by TCAS (or called by ATC) – keep searching visually for all the other traffic that doesn't create TCAS/radar returns!

On the subject of Class G airspace and TCAS, a less frequently encountered but important risk is illustrated by an Airprox that occurred at FL240 in an active Temporary Reserved Area (TRA) in the Scottish FIR involving an Embraer 145 and a Typhoon. The Typhoon was had departed RAF Leuchars and was climbing to FL240 when it came into conflict with the Embraer climbing to FL250 (Airprox Report 2013096).

Operations within an active TRA are conducted under the Rules of the Air and ATC services conform to UK Flight Information Services (formerly ATSOCAS): to all intents and purposes the airspace is thus Class G up to FL245, a Radar Control Service is not available and, even under a Deconfliction Service, collision avoidance remains the responsibility of the pilots concerned and not ATC. Furthermore, within a TRA, military aircraft may climb or descend at rates in excess of 10,000 fpm: in these circumstances TCAS may not provide reliable indications or advisories nor may ATC radars keep up with aircraft manoeuvring at such rates. The message is clear: if you have the choice, remain clear of active TRAs.

Finally, if any readers have good ideas for minimising Class G risk, CHIRP will be delighted to promote good practice.

Ian Dugmore – Chief Executive

ENGINEERING INTRODUCTION

The summer schedule season is well and truly here and for many staff who work in the aviation world not least the engineering staff, that means busy shifts, less downtime, high staff leave levels and increased pressures. While the level of CHIRP reports from engineers remains low the trends still highlight operational pressure as a principal factor in maintenance related human factors issues.

What are these pressures and what steps can be taken to avoid the pitfalls associated with them?

While we cannot make the pressure go away, many of the problems can be alleviated by following some simple guidelines.

The most significant maintenance related issue we see is failure to use approved technical documentation. Lesson learned: Use the appropriate technical documentation MM, IPC and task cards or stage sheets)

Handovers, Task staging and to-do lists can act as aide memoir's especially when coping with numerous aircraft or issues.

Sometimes the more hurry the less speed, it helps just to steady up, take a bit more time, take care and focus your attention.

Pressures can often be self-inflicted so try to ensure you do not add to the pressure build up by putting things off till later.

When everybody is pushing to get the aircraft away just take a deep breath and double check you completed all the things you needed to do. If you are not sure go back and check it again.

Good communication and teamwork are critical to ensuring that things go to plan. So ensure you let other people know what you are doing, particularly flight crew, other team members and control centre staff. Last but not least did you complete all the paperwork, tech log, task card and material transactions?

Good workmanship does not happen by accident it is the outcome of competent people doing things in a professional and meticulous manner. So overall while the number of maintenance related errors is low we should all remain focussed to maintain the standards expected of us.

Bruce Hunter Deputy Director (Engineering)

ENGINEERING REPORTS

MEL INTERPRETATION

Report Text: I work for a UK airline. I am a B2 with full certification on our fleet. I was called out to an aircraft, pre-departure with a TCAS hard fault on ECAM. I was unable to clear the defect, so the pilot looked up the relevant section in the aircraft's MEL. In the MEL it states, that if the aircraft is at a main base, and it is reasonable to fix the defect, it should be fixed. I called our office to see if we had a TCAS computer to replace the defective LRU. We were nil stock. The pilot asked if we had spare aircraft, and on this occasion we did. I left the aircraft and headed back to the office. On arrival, my shift leader stated that the aircraft was good to go, just put the defect in the ADD log! I asked my line manager if this was correct, and he stated that he'd spoken with the CAA recently and they stated that "reasonable" meant if we had enough manpower, spares or time to clear the defect.

As we had no spares, then it was not reasonable to clear the defect and the aircraft would be good to go, once the defect was transferred to the ADD log. Is this correct? In my opinion, the MEL would "expect" there to be enough manpower, spares or time.

CHIRP Comment: **In this instance there is a difference between the requirement as laid out in in the Master MEL (MMEL) and that contained in the company's own MEL. This is common practice. Many operators impose stricter requirements for their MEL than the MMEL (they cannot be lower than the MMEL) to take account of operational factors. In the case of TCAS, these may include prohibitions on specific routes or destinations. It is important that engineers fully understand the operational implications before applying relief through the MEL and vital to ensure the airline operations centre is made aware.**

Subsequent to this report being filed and after investigation by CHIRP it was noted that the MEL contained a general notes section which clarified the position regarding manpower, spares or time. The reporter also noticed this and advised CHIRP accordingly.

The event shows there is some ambiguity that can lead to the type of interpretation that this reporter experienced. The airline concerned has agreed to review the text and staff training on use of the MEL.

MEDA Report – Maintenance Checks

Error: Airplane/Equipment

Error Type: Damage

Main Error: Tools/Equipment

Error Field: Tools used improperly

Description: During a maintenance check the aircraft experienced a very large quantity of Electronic Wiring Interface System (EWIS) defects in the main wheel well and the strut bay area.

Inspection revealed cables where the outer layer insulation jackets appeared to be shredded and unwrapping. Initial thoughts were that either the cleaning product or the power of the steam cleaner was stripping the cables. Also during the inspections protective bags were noted as not being applied properly and they were still full of water some 2 weeks after the start of the input. There were no other findings in areas not cleaned using the pressure washer. We have not found any defects with the same spec cable in other areas or areas in the wheel well where the cleaners have not been.

Note that the stripping that was showing on the cables had not compromised the insulation area of the wiring. The decision to use a higher pressure washer was not taken by the cleaning staff in isolation.

The organisation concerned has taken a number of steps to ensure this event will not happen again, these include:

Producing a video for cleaning staff re the cleaning operation requirements needed to ensure they are operating to an agreed standard practice.

The cleaning crews have also been trained on the EWIS requirements of the task, with the correct equipment being used no further incidents should occur. The responsibility for oversight of cleaning staff has been given to the engineer assigning the task.

The organisation now generates a Job Card for the blanking and cleaning of the wheel wells before the aircraft entry into the hangar.

Steps have been taken to ensure staff are aware of the importance of not getting the connectors wet. This occurs prior to the commencement of the bagging/blanking and cleaning of the wheel wells on the aircraft. The supervisor is tasked with alerting all staff who are carrying out the task activity to the risks involved. Also the staff assigned to oversee the actions of the cleaning staff will be briefed prior to work start by the Engineering supervisor.

CHIRP Comment: **The event concerned demonstrates how relatively low level simple tasks can have significant airworthiness implications. The introduction of a new high power washer to improve the effectiveness of area cleaning was considered low risk. This was a key contributor to the problems experienced. All new equipment should be risk assessed for both operator safety and aircraft safety.**

AIR TRAFFIC CONTROL REPORTS

Safeguarding

Report Text: Interesting to note the comments about safeguarding. At [ ] we try and avoid using the word to pilots and also to surrounding ATC units, as we find they are often no more aware of the concept than pilots. We cannot implement LVPs until safeguarding is in force, even if the conditions warrant it. In this case all we can provide is the IRVR reading, the fact LVPs are not yet in force and ask the pilot's intentions. Our instructions are to implement safeguarding if the weather is deteriorating and likely to reach LVPs, but if we judge that it's actually likely to remain just above the minima, then we will remain safeguarded only. We can be at CAT1 holds in safeguarding because it's relatively easy and quick to switch to CAT3. In LVPs the ILS must be guaranteed protected by the time a landing aircraft is at 1nm, and to achieve this we aim to have a departure airborne by the time the lander is at 2nm. Hence we need bigger gaps, typically at least 10nm. In safeguarding only we don't need that protection, and we can use 5 or 6nm gaps. Hence we are reluctant to go into LVPs unless the weather conditions dictate.

CHIRP Comment: **This report is useful in providing examples of the operational implications of a safeguarded state and full LVPs. It is also worth noting that some airports don't have Met observers on duty for 24 hours each day. Outside the observers' duty hours airports rely on automated systems combined with the controllers' restricted observer's tickets. For a reminder of the limitations of automated systems see the report on Military METARS later in this edition of FEEDBACK.**

Distraction & Fatigue

Note this report has been edited to disguise the location.

Report Text: There is a tendency for managers to 'visit' the ops room for a 'chat' after work before leaving for home. Generally speaking it tends to be anywhere from 5-6pm onwards i.e. during peak periods. These 'chats' last quite some time on occasions.

A couple of days ago, one manager decided to visit the VCR at 1700hrs; nothing strange there except he did not leave until 1830! The whole of the watch changed positions twice during his visit. Everyone tends to be a little distracted when 'the boss is about' - it's human nature! But it is VERY DISTRACTING, so in short bursts it's comfortable and very often a good intention - a good time for an exchange of many topics usually - but at peak times and for 1.5 hours it is too distracting. We are now achieving peak summer traffic levels. This type of visit is far from unusual and we tend to have many other visitors and very often the visit is anything other than short!

This brings me onto point 2 - Fatigue. A great many of my fellow controllers (and assistants too) are ALL expressing the opinion that we do not have anywhere suitable to take a fatigue break. Yes we do have 'rest rooms' but that is a misnomer. Neither are quiet areas suitable for resting. One is basically a corridor with kitchen facilities which are shared with other staff. It is not a suitable place to take a fatigue break and I do not know of any single person who has used it on a break! The other 'rest room' is a large room featuring two constantly used microwaves, kettles, water boiler and fridge. We have a couple of easy chairs/settees table and chairs to use whilst Sky News or Sports is on 24/7! You can't usually hear it; even if you wanted to, due to the microwaves and general hullabaloo! If you want a quiet fatigue break after a busy session, to unwind/relax, then you need to try and find an empty room - but there are none! A lot of staff use the simulator room for some peace, but frequently this room is used. One recently retired controller even purchased a bench to sit outside.....next to the main taxiway! But at least you can get away from Sky News or BBC Breakfast even if there is a 747 taxiing past (150 yards away).

This lack of space/rooms brings me to point 3 - lack of privacy/confidentiality. Our Annual Medicals are conducted in-house. The medical room is very small and close to the managers' offices. Several controllers I know have expressed concern at its location and privacy not to mention the practicality of size and facility! It is possible to hear what is going on in this room if you are in the corridor or across it in an office.

CHIRP Comment: **Distraction in ops rooms is a common problem whether it caused by managers, other members of staff not using the rest rooms during breaks or external visitors. It is good practice to program external visits well in advance and to check with the supervisor shortly before visit commences that there are no problems preventing them going ahead as planned. However, managers should not be discouraged from visiting the ops room and good managers will want to do so during normal office hours, evenings and weekends to meet their oversight responsibilities and to show their interest and engagement. It is the responsibility of the senior controller to step in when necessary and ensure operational controllers are not being distracted by non-operational conversations. Most managers will accept this professional judgment from their senior staff.**

At this Unit, domestic issues such as rest facilities and medical confidentiality can be discussed in a more structured and formal environment through regular meetings between managers and workforce representatives. The suitability of the rest facilities had not been raised as an issue for discussion before the submission of the CHIRP report. However, measures have recently been taken to enhance privacy during medicals; the management offices now operate a closed door policy on the days when medicals are taking place and staff are no longer allowed to wait outside the room for their medical whilst another is still taking place. Good practice would be to promulgate widely the discussions held and decisions made in the staff/management meetings so that all members of staff have visibility of the agreements.

FLIGHT CREW REPORTS

INADEQUATE REPORT TIMES

Report Text: [Operator] crews work extremely hard and many suffer from fatigue. The FTL system was designed as 'limits' but it is now a target and with modern effective computer rostering systems, crews are working to these limits continually.

We have a FRM system which is hailed as being one of the leading examples in the industry. However, the truth is it is ineffective, largely because throughout the management team, it is culturally impossible for anyone to raise their head above the parapet and put a stop to excessive practices. Most of the crews believe the FRM system exists to 'look good' for the CAA.

The problem starts with unachievable report times. We have some 20 bases across the continent and despite many variations in locations and procedures, all have the same report time of STD -1hr. The idea that this would work at so many different bases is absurd. Despite a CAA FODCOM a few years ago, the issue is totally ignored. At [airport], crews regularly report 10 - 20 minutes early, not because they want to but because they have to. I have seen many 0500 local time reports where reporting a minute early would make the duty illegal, yet many crew still report 10 - 20 minutes early.

We are allocated 12 minutes for flight crew planning but this includes printing our own 4 flight plans, NOTAMs and weather briefing; this process itself regularly takes 6 minutes but even longer when the crew room is packed with crews all trying to use the same 2 printers. After 3 minutes briefing the cabin crew, we then have 10 minutes to get to the a/c including going through security. A crew of 6 might just make it to some of the nearest stands if there are

no hold ups at security. Once again at busy times, there is congestion at security, and the furthest stands just take longer to reach anyway. I have left the crew room on time and with no delays in security still arrived 3 minutes late at the a/c. If the crew are recorded by the Despatcher as arriving at the a/c late, questions are asked and this can be particularly difficult for the cabin crew. I have seen the cabin crew briefed and ready to leave the crew room before the actual report time!

The FRM system includes a list of duties which are deemed to be fatiguing and should be avoided. However, these are guidelines and not rules. The regulator may think these guidelines are followed but they are in practice ignored. When one is rostered one of these duties, a fatigue report can be filed. But fatigue reports can take a week or more to be acknowledged and often result in no change being made. I have even seen an e-mail which stated that changes will not be made if they impact the operation. So, the duty which we acknowledge as fatiguing will go ahead anyway. In any event, the FRM systems will analyse the published duty and as described above, the report time is often unrealistic.

At [airport] the Company provides buses between the car park and the crew room and for reporting, these run every 10 minutes. Showing typical disregard for the crews going home for their rest period at the end of a long day, the bus only runs every 20 minutes and after midnight, this becomes an hourly service. So a significant part of one's minimum or near minimum rest, can be spent waiting for the bus.

To avoid fatigue, we need to have realistic duties with realistic report times and an effective FRM system which abides by its own rules and responds more quickly.

The Operator Comments: [ ] has independent compliance and fatigue oversight processes that specifically investigate and review any reduction in pre-flight briefing allowances below a nominal 45 minutes. [CHIRP comment: e.g. following callout from standby]

The relevant specialist safety and compliance department audits the crew management system and contacts the relevant Commander or Cabin Manager to ask if they feel the reduced briefing allowance was adequate. All reports are subsequently sent to the CAA for further review. Such briefing reductions are additionally reported monthly at the relevant Safety Action Group and trends monitored to ensure, in conjunction with Flight Operations, that realistic levels of tasking are maintained and there is no reliance on crew arriving at the crew room early. Similarly the company do not have a trend of pre-flight briefing allowances being cited in fatigue or safety reports.

Irrespective this issue remains subject to fatigue management oversight processes to avoid complacency and to identify any future adverse trends recognising that each airport may be subject to different circumstances and pressures.

The reporter refers to requests to change a roster in advance which they predict will be fatiguing. To be effective any prospective changes need to be assessed against not only the roster characteristics but also the available alternatives including the impact on colleagues. The relevant department prioritise such requests depending on timeframe and, irrespective of the above and despite the difficulties of assessing fitness to fly days or weeks in advance, these are actioned where there is sufficient evidence to justify the intervention. This is without prejudice to the crew member's right to later claim fatigue should no amendment to the roster be recommended in advance. This right is protected by the relevant department which independently manages roster related fatigue absence outside the line management structure.

The published fatigue control guidelines recognise the complexity of effective fatigue management and avoid the simplistic notion that compliance with a rule is sufficient. Making guidelines transparent helps promote an awareness of where potential problems can be avoided by the company in the planning phase or managed by the crew member in the implementation phase.

The principle is to achieve an appropriate balance which facilitates both company and crew member fulfilling their respective responsibilities to minimise fatigue and thereby any potential operational risk.

CHIRP Comment: FRM is a critical part of Safety Management and it is vital that operators and crews alike should have confidence in the processes. However, many reports to CHIRP express anything but confidence in FRM as practised by several operators. Issues include inaccurate data used in FRM because of unrealistic report and finish times, dismissive responses to fatigue reports, pressure to report for duty to avoid adverse comments on personal files and lack of visibility on the use of FRM data in rostering.

It remains CHIRP's view that crews must continue to play their part in FRM by reporting conscientiously to ensure operators have all the relevant data. We have also written to the CAA to highlight that the issues reported above are undermining confidence in FRM as a process for maintaining an appropriate balance between commercial/operational imperatives and the pressure on crews to meet these imperatives while fulfilling their roles safely.

LINE CHECKS

Report Text: This report does not relate to any specific flight, merely the conduct of in seat line checks by some of our 'keener' trainers. Until recently on our long haul flights the trainer/checker would monitor the flight/pilots from the jump seat and would possibly ask the occasional question during the flight. Unfortunately some of our newer trainers want to share their vast knowledge and have a question and answer session during the flight. I have also witnessed one of the trainers asking the SCCM (the head cabin crew member) to keep the cabin crew out of the flight deck during the flight.

This practice of questioning was quite manageable for a short time on a day flight to the USA but some trainers are now having a few hours of questions on the return leg. This obviously is when we are not at our best mentally. More importantly after an eight or ten hour flight and landing back into the UK this should not be happening. Not only does it put us on edge at night time but having been awake for the entire flight is a flight safety issue. In my humble opinion a question and answer session should be conducted in the simulator or indeed the classroom.

Lessons Learned: Yes. Keep the questions to the simulator/classroom. It is stressful enough flying with a trainer/examiner for some people and in today's environment with increasing fatigue this subject needs to be addressed.

The Operator comments: We are compliant with IEM OPS 1.965 which states that, "the line check is considered a particularly important factor in the development, maintenance and refinement of high operating standards and can provide the operator with a valuable indication of the usefulness of his training policy and methods. Line checks are a test of a flight crew member's ability to perform a complete line operation satisfactorily, including pre-flight and post-flight procedures and use of the equipment provided, and an opportunity for an overall assessment of his ability to perform the duties required as specified in the Operations Manual."

In complying with the above regulation the Line Training Captain has the opportunity to confirm operational understanding of SOPs. The operator has ATQP approval from the CAA permitting line checks to be conducted every two years. For mixed fleet flying on this Line Check covers the operational understanding for different types of aircraft flown. This is achieved through discussion between the crewmember and the Line Check Captain. The discussions are not a comprehensive question and answer session. They are a means of demonstrating competency given the circumstances of the day. They are covered at an appropriate time within the flight with full consideration to ensure they do not pose a distraction. They are a professional discussion of operational topics to ensure that our flight crew training is achieving its purpose and that operational safety standards are maintained.

CHIRP Comment: CHIRP pilot members sympathised with the reporter's concerns about over-night Q&A sessions but recognised that Line Checks are a valuable opportunity to discuss subjects that cannot be covered in the course of simulator or ground training sessions.

EASA offers little relevant general guidance on Line Checks and so their conduct remains a matter for Operators. Some companies provide a 'guide to line training' to ensure standardisation and temper any tendency to over enthusiasm by trainer/checkers.

Pilots on Line Check should expect all aspects of their performance to be closely observed throughout the designated flight. A Check Captain should intervene in matters concerning the conduct of a Line Check only if the safety of the flight requires it. However, it should be expected that the Check Captain will at some suitable point in a flight wish to engage in a discussion with the Candidate which develops the context of the Check. Check Captains should be careful to identify an appropriate time and scope for such a discussion. For Candidates qualified on mixed fleets, it will be helpful to be briefed beforehand if the scope of the questions will include more than one aircraft type. Check Captains should also be mindful that once advice has been given, this may alter the mind-set of the Candidate and could prompt the immediate adoption of relatively unfamiliar procedures or techniques. No two Line Checks are the same, depending on the circumstances and/or time of the flight and some common sense is required. In long haul operations in particular, Check Captains must ensure that the timing and nature of an in-flight discussion is not likely to prejudice the fitness of the Candidate to participate in a subsequent descent and approach to destination. Any difficulties which a Candidate experiences in either respect and is unable to resolve to their satisfaction should be taken up with the Operator so that they can monitor the extent of any problem and address it.

DISTRACTION FROM CRITICAL DUTIES

Report Text: Arrived at aircraft to find a fairly routine technical issue requiring engineering input for dispatch. Previous experience of similar issues would suggest a 20-minute engineering input followed by a ground run. We decided to delay boarding, ideally until ground run complete, as we had the air conditioning turned off for the repair. All seemed to be progressing and we got air-conditioning back so decided to board. Just as this decision was made an engineer informed us it would be a further 2 hours to action the repair. We quickly stopped the boarding pending further information. I was informed passengers were getting 'restless' in the terminal and repeatedly asking for information. There is a very big drive in the company and by our union for pilots to engage more with passengers. As

a result I felt obligated to go into the terminal to personally announce the delay and reason to the passengers. What I had not anticipated was the adverse reaction from a small number of passengers that got considerably angry and vocal with that anger in my face. I think perhaps that other frustrations with their holiday, coupled with the opportunity to have someone to blame for something, resulted in a completely out of proportion response. I returned to the flight deck and found my focus had completely gone from my safety critical duties. My co-pilot commented on the noticeable change in my character and ability. The engineering delay gave me an opportunity to sit down, calm down, and regain focus.

Lessons Learned: I had not anticipated the reaction and anger that I faced. In future I will be aware the risk in making myself the focal point for passengers to vent their anger and will go to lengths to avoid putting myself in this situation again. It clearly had significant potential to result in distraction during the safety critical duties of the flight with obvious consequences. I am concerned that as this program of enhanced customer contact develops, myself and other flight crew will feel obligated and perhaps pressured into facing situations like this and it is distracting from our primary role of flying safely.

CHIRP Comment: **The requirement for pilots to engage with passengers in this way seems to have resulted from the withdrawal by operators of management support downroute. That said, Captains talking to passengers is a powerful tool in customer relations provided it can be done with reasonable chance of avoiding the type of situation encountered by this reporter. Not everyone is naturally good at this kind of engagement but it becomes easier with practice. The majority of passengers welcome contact with the aircraft Captain but a small minority may be dismissive or become aggressive. Captains need to be well prepared and withdraw if necessary. Reporting adverse experiences through appropriate channels, as this pilot has also done, allows procedures and techniques to be developed and shared as well as identifying times/flights/locations where engagement may be unwise. The bottom line is flight safety; if the circumstances are such that engagement with the passengers is likely to result in stress that could affect your performance in the cockpit – don't do it.**

NOTAM Saturation

Report Text: The awful events of 16 Jan 2013, when a helicopter collided with a crane inside the London CTR killing two people, have led to a significant increase in the reporting of cranes and nests of cranes inside the LCTR. So much so that the provision of the information is now in my opinion having an adverse effect on safety. Whilst the initial 'bolted horse and stable door' reaction is fully understandable, we now have the situation where on normal day's flight into London, no fewer than 32 cranes are listed in today's NOTAMs. These are all listed by Lat/Long to two decimal places. The ability of pilots to get any meaningful data from these listings is nigh on impossible. With the best will in the world, pilots operating in the LCTR do not have the time or inclination to accurately plot 32 cranes before getting airborne on a daily basis and then transfer them to an ordinance survey map. The crane that was hit had been NOTAMed for some time and did not prevent this tragic accident. Some of today's NOTAM cranes are as low as 150' agl, considerably lower than most London buildings. No unlit buildings are marked on CAA charts and most in central London are 200' plus.

In order to properly warn pilots of significant obstructions in the LCTR it is time we reviewed what is significant. Otherwise we are leading to information overload and the inability to accurately inform pilots of possible dangers. Structures I believe, have to be lit when in excess of 150m when not in the vicinity of an aerodrome. I would suggest this is a sensible altitude to warn of cranes as well, bearing in mind the requirement to maintain 1000' clear of obstacles when operating over a congested area. Otherwise the one new significant obstruction gets lost in the 'white noise' of legal 'back' covering. NOTAM information needs to be concise, accurate and significant. With between15-30 pages of NOTAMs to be checked by a single pilot, without any ops room support the task, whilst possible becomes onerous, and that's when things are missed.

CHIRP Comment: **In accordance with ICAO standards, structures above 300ft/91.4m are promulgated in the UK AIP and included on 1:250 000 and 1:500 000 VFR charts. Temporary obstructions above the ICAO thresholds must be the subject of NOTAMs. The CAA comments that a project has begun that aims to reduce NOTAM proliferation, standardise the content and structure of NOTAMs in the UK as well as looking at other, and better, means of promulgating navigation warnings. Warnings about tall structures in London are a particular concern and it is recognised that too many warnings may only serve to lead pilots to miss those that are essential. The project will look for quick wins as well as long-term enhancements to the notifications system.**

Military Metars – a comment

Report Text: I have to strongly agree with the author of the letter regarding the point of the slow refresh rate of military METARS. Taking Cornwall as an example with its changing weather, it would help greatly if Culdrose were updating their weather more robustly. Also consider the Police Units round the country who require to launch in the middle of the night and could do with more weather data than the handful of airfields they have at the moment. From what I know about the Met office is that they record the weather constantly and I would have thought it's only the

push of a button that would publish the weather. Isn't that a small price to pay for better Flight Safety? I thought the whole reason of the MOD was to keep us safe from danger.

The Military Aviation Authority (MAA) comments: METARs are provided every hour and updated if the weather deteriorates (SPEC M prefix) or improves (SPEC B prefix) significantly. Practicality dictates that producing observations every 15 minutes is unrealistic given current manning levels; it takes 15 minutes to conduct a manual observation, then the observer has to input the data into Digital ATIS, plus inform ATC of changes. There is always going to be a lag (of approximately 15 mins) between the onset of poorer weather and the inputting of the data into system due to the observing procedures. Some civilian airfields do produce automatic observations that are updated more frequently; however these observations have no human input and are derived from automatic weather station sensors. These observations are less reliable when it comes to observing visibility and cloud. For example the cloud height is assessed using a laser cloud base recorder which looks vertically at only a small patch of sky and the visibility is derived by measuring humidity, which takes no account of a fog bank lurking a short distance away. In summary, manual observations are far more accurate, even if they do take longer to complete.

CHIRP Comment: A robust case would need to be made to provide Met services beyond those necessary to support military operational or training tasks - and someone would need to pay. Given the limitations of automatic weather station sensors and the size of many of the geographic areas to be covered, it would be difficult to make that case.

Door Closing – Trip/Fall Hazard

Report Text: In accordance with a new regulation (I believe it is DfT rather than a company procedure), I attempted to close door 1L of the aircraft having parked and disembarked. The design and position of the steps around the aircraft door necessitated me leaning out and over the step platform in order to unlatch the exterior door handle from the outside. I then pulled the door closed without incident. My concern is that during wet, windy or any inclement conditions, this could be a slip hazard as one has to lean out over the platform to grasp hold of the door. There is no support beneath the step platform, nor has the company or DfT provided any training information to mitigate against the risk of slipping in this fashion. We do not wear rugged outdoor footwear with suitable grip unlike the ground staff. I fear this is a dangerous and poorly thought out procedure.

Lessons Learned: If I were to fall whilst closing the door on a remote stand and become injured, I do not know what support I would receive from the company, hence to preserve my license and physical fitness, I will not attempt this door closing procedure with the aircraft parked off stand.

CHIRP Comment: The requirement to close the doors on unattended aircraft stems from EU security regulations. The DfT is not responsible for providing training information. Rather, health and safety practice is for the operator to undertake a risk assessment where there is a potentially significant risk and then come up with adequate mitigation to control the identified risks. This will normally include adequate information and training. The report above has been passed to operator who comments that if an activity is judged to be unsafe, it encourages its staff not to undertake the activity. It may be safe to undertake this activity when dry but not when the weather is inclement.

GENERAL AVIATION REPORTS

Protocol for Airspace Infringements

Report Text: Flying near the [ ] CTA, squawking the appropriate conspicuity code and listening out on the corresponding frequency I overheard ATC asking another aircraft with the conspicuity code to respond. The other aircraft appeared to have infringed CAS. ATC asked this aircraft a number of questions related to the infringement, where the aircraft had come from and so on and a little while later another controller who sounded like a supervisor asked a couple more. The pilot of the aircraft sounded distraught at the error and although the questioning was not aggressive it seemed to be mainly related to recording the event rather than establishing safety. I formed the view that the pilot was now so focussed on the error and the reason for it that the safety of the aircraft during the remaining flight was compromised. The pilot would need to be very resolute to be able to put those considerations aside and concentrate properly on safe recovery and landing. I understand the importance of analysing infringements but data collection could come later. I wonder if there is a protocol for the immediate actions that recognises the HF impact of these events on the pilot. Once airspace safety had been assured the pilot could have been told which would have moved the mental focus from the cause of error to the solution. The pilot could have been advised that the aircraft was clear of CAS or given a simple clearance confirming the situation was now under control again, re-establishing normal procedures and the situational awareness which would have been lost in the event. In this case the pilot had used the listening squawk system to mitigate infringement risk and it had been effective so they could have been told that which would have also helped the transition back to safe flight. It would be unfortunate if the process of dealing with an infringement resulted in a HF related accident later in the flight.

The Air Navigation Service Provider comments: On average [ ] airspace is infringed over 10 times per quarter, often resulting in a rapid increase in ATCO and pilot workload. Air traffic controllers are required to provide extra separation between IFR traffic and unknown traffic within controlled airspace.

The incident reported was resolved by the radar controller turning a departing IFR jet away from the unknown traffic. This traffic was using the [ ] listening out squawk and was subsequently identified after two blind transmissions by ATC, allowing normal ops (from an ATC perspective) to resume. The questions asked by ATC were timely, relevant, and appropriate given the stage of flight of both aircraft. The pilot contacted [ ] ATC after landing and explained the situation from his point of view, allowing us to complete an internal investigation as per company procedure.

ATCOs understand the need for CRM and can appreciate the workload of a pilot during normal ops. This workload no doubt increases when the pilot finds themselves in an unusual or unplanned situation, just as a controller's workload can increase when faced with an airspace infringer. There is no set way in which a controller deals with an infringement. They are trained to do whatever they see fit (with the exception of issuing a reprimand on the RT) to ensure safety and regain standard separation against traffic whose intentions are unknown.

***CHIRP* Comment:** Airspace infringements cause stress for controllers and pilots alike. It is mandatory to submit an infringement report in accordance with CAP 382. Any immediate information requested from the infringing pilot will be to establish the exact situation in order to minimise the risks to other traffic inside CAS and remove the need for increased separation standards. However, the controller will also want to assist the infringing pilot. Unfortunately the safety implications do not end with the resolution of an incident. Although this report was about an airspace infringement, distraction caused by analysing a mistake, concern over one's performance and the potential implications of an incident are well-known phenomena throughout aviation. Mistakes happen; it's difficult to do, but vital to concentrate on the job in hand and save the analysis and debrief until an appropriate time.

CABIN CREW REPORTS

The report below and the comments of the Cabin Crew Advisory Board were published in Cabin Crew FEEDBACK Edition No 52.

Poor CRM

Report Text: During the cruise, a passenger pressed the call bell. They appeared to be very concerned about black smoke they could see from their seat, which was coming from one of the engines.

I looked for myself and their observations were correct. I said I would ask the Captain. When told about what the passenger had seen, the Captain did not even check out the window and told me to tell the passenger that it was normal. I replied that the terminology the passenger had used made me feel that they knew what they were talking about and that they did seem genuinely concerned and would they be able to speak to the passenger to reassure them. The Captain said no. I reassured the passenger to the best of my ability but I did not feel that they were satisfied. The CRM we are trained on each year seemed farcical by the actions of this Captain and I feel very let down and unsafe knowing that he expressed no concern whatsoever.

Lessons Learned: Re-iterate CRM. It is a useful tool that was not used at all in this scenario.

***CHIRP* Comment:** Four of the principal aims of CRM training for flight crew and cabin crew are to develop accurate and effective decision making, to develop good communication skills, to make effective use of all members of a crew and to gain a good understanding of each crew member's role.

Aviation is a safety critical industry where it is essential to work as part of a team to reduce the possibility of unsafe situations occurring. It is a widely known fact that poor CRM has been a contributory factor in previous aviation accidents, so it should be encouraged that if a crewmember or a passenger - as this report detailed - observes a possible problem with the aircraft that these observations are immediately passed to the flight crew. Due to varying aircraft sizes and the ability to see from the flight deck what the passenger or crew member may have seen, it may be wise for the flight crew to check for themselves, if possible. The flight crew should provide a response to reassure both the cabin crew and the passenger and allay their fears.