

# **CHIRP**

## **Air Transport FEEDBACK**

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### **EDITORIAL**

We are coming to the end of the first 12 months under EASA FTLs and some common factors have become evident. It is only fair to add some context before discussing these in detail. CHIRP has seen 34 reports from flight crew and 34 from cabin crew about EASA FTLs and fatigue, which is not many data points considering the number of flights over the course of a year and the number of crew members. However, there are issues that are reported with sufficient regularity to allow some confidence in the identification of trends and pressure points.

Several pilots have reported feeling more fatigued this year than previously. Some of this is due to operators using the full EASA FTL envelope but some is due to operators not using the guidelines and restrictions that were previously self-imposed. Flight crew feel unprotected. The management of fatigue appears to be largely reactive – relying on flight crew to point out weaknesses in rosters through their fatigue reports. Rosters are frequently not flown as planned and the use of discretion is expected and routine. The complexity of flights due to operational, technical and weather factors adds to the fatiguing effect of duties but this is often not reflected in rosters that are planned up to the permitted limits of duty hours. And some operators require flight crew to complete administrative and training tasks that are not recorded as duty. Pressure to fly when unfit to do so and the transition from late to early duties and vice versa are also reported as factors. There is more on transitions later in this edition of FEEDBACK but the issue is not just transitions during a block of duties; transitions either side of a rest period can reduce the

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value of the rest achieved and contribute to cumulative fatigue. The absence of a requirement for 2 consecutive days off in 14 days under EASA FTL is also cited as a contributory factor in fatigue.

The first year of EASA FTL was always going to be interesting. The system and the parameters within it must be kept under review but evidence will be required to support any changes. CHIRP is highlighting the issues reported to us to the CAA and the regulator is required to assess operators' performance in managing fatigue. Flight crew must play their part by conscientious reporting through company channels:

- Predictive reporting when a roster is first issued to raise concerns about a roster and the individual's ability to rest for and within a certain pattern of work.
- Proactive reporting at the start of, or during, the duty (reducing a FDP or increasing rest are methods for managing fatigue included in the regulations).
- Reactive reporting when a duty has evolved in a way that crew members feel that fatigue either did, or could have, affected their performance in a way that they didn't predict at the start of it.

Reporting fatigue to the operator is vital! But don't forget the role of Aero Medical Examiners (AMEs). The CAA uses the network of AMEs to provide warnings and indicators about the health and well-being of the licence-holding population; in the past information from AMEs has been used to identify problems with rostering at individual operators. Most GPs are not AMEs; there are 170,000 GPs in the UK but only 200 AMEs. Therefore AMEs will only become aware of issues if flight crew bring them to their attention during routine consultations or in accordance with their responsibility to seek advice from their AME in the event of significant illness involving incapacity to function as a member of the flight crew. It is understandable that pilots are wary of doctors of all kinds but if an illness or condition is severe enough to keep a pilot off flying it is wise to seek advice from an AME. The added benefit is that, just like ASRs, the AME route is an important conduit for feeding back to the regulator data that could be useful in reviewing the FTL regulations.

Ian Dugmore - Chief Executive

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## ENGINEERING EDITORIAL

Heraclitus, a Greek philosopher, is quoted as saying "change is the only constant in life."

In the Aviation Engineering and Maintenance industry I believe this is a very apt quote, when considering our ever changing industry.

The increase in technology, affecting working practices and skills, along with changing business requirements, dealing with the ever increasing competitive pressures, means change occurs frequently.

When business 'change' affects people, and most business change does, it is imperative that effective communication takes place to all the individuals affected.

CHIRP has seen a number of recent reports concerning business change, with insufficient communication carried out, leading to misunderstanding and undue stress potentially affecting work performance.

When communication is carried out it is not enough to take the "Well I've told them" approach. There needs to be some form of feedback mechanism to ensure that the communication message has been fully understood.

Communication within a business is a company and management responsibility, and the positive impact that good communications can have on Human Factors should not be underestimated.

Dave Tattersall - Deputy Director Engineering

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### COMMENT ON AIR TRANSPORT FEEDBACK 120

May I comment that the CHIRP response to the report on Rostering in FEEDBACK Edition 120 completely misses the point? The reporter is quite correct in asserting that going to sleep at midnight for 3 nights & then needing to sleep at 9pm is all but impossible. This is an extremely well known issue in my airline which uses [intermediate] trips to transition a crewmember down route from a 'late' duty to an 'early' duty (late/early in the ordinary sense, not necessarily as per EASA's crazy definitions!)

CHIRP's response seems to attempt to berate the reporter for use of the word 'late' in a way other than EASA has deemed appropriate... the reporter even concedes that the given roster was legal - the point is that it's insane to expect a human being to do this!

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I had hoped that CHIRP is still able to challenge the crazier aspects of officially sanctioned procedures in the industry; this response wants the line to be toed and as such is, in my view, not the publication's finest hour.

**CHIRP Comment:** We agree. We got this one wrong by concentrating on the definitions rather than the issue of ability to rest. In our defence we think it is reasonable to use the legal definitions of words contained in the regulations and there have been many examples this year of misunderstandings about EASA FTLs that we have sought to clear up. That said, we should also have stated that EASA FTLs provide limits, not targets; rostering up to the legal limit may not be sensible unless the context is considered. With regard to challenging officially sanctioned procedures, CHIRP values its independence and ability to draw attention to shortcomings in regulations and their application. We do so with the regulator and operators whenever these are identified. Finally, although we have printed it many times before, we should have repeated that submitting fatigue reports is the way to provide feedback to operators in respect of rosters that are legal but may nevertheless be fatiguing.

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### INCREASED PRESSURE OF WORK

**Report Text:** History - In the last 4 years or so, a lot of experienced engineers have left [company name]. This gave rise to a lot of overtime, (which was a contributing factor in the [a/c regn] incident). Post [a/c reg] incident [company] revised planning and workload in engineering. Overtime continued. For 18 months or so everything seemed level. Although things were changing, as a lot of new people are coming in.

In the last 6 months or so, things seem to have changed dramatically again.

1. Overtime was stopped.
2. Workload was increased by the number of a/c each team worked and the amount of routine and defect maintenance called.
3. The introduction of new people continues, with both young, new, and experienced people of varying cultures and countries joining [company name].
4. In recent months, the introduction of iPads is being forced in.
5. In recent months, a/c are arriving later, giving reduced downtime to work.

With the increased workload, lack of people, new people, language dialects and forced introduction of iPads (which currently causes a lot of stress and frustration), I feel it more probable than ever that another incident may be just around the corner. Having just completed a Human Factors course, where they warn against doing completion and certification duties at 4am, I am worried even more. This morning at 5am, I ended up shouting at a colleague. It was about iPad entries, the introduction of which seems to be the latest hole in the cheese to line up.

**CHIRP Comment:** The concerns raised in the report were dealt with following submission of a report through the company SMS reporting system, through individual communication with the reporter by the local Quality Engineer and management. As a result, a comprehensive review was carried out that satisfied the reporter's concerns. The structure put in place after an incident had been modified because of an organisational change. The modified structure had included measures to ensure that the workload on individuals did not increase and introduced procedures to adjust the assimilation process for newly recruited foreign engineers.

Introduction of new technology can be challenging and cause anxiety. However, it is inevitable that new technology will be introduced into the aviation maintenance industry, which should be supported by adequate and appropriate training.

It was clear that the changes had not been communicated effectively to the workforce, reinforcing the requirement for effective communication for any business changes within the working environment. However, the company's positive recovery actions were well received by the reporter, the workforce and CHIRP.

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### FATIGUE

**Report Text:** I was rostered for a series of early morning starts with report times varying from 0505 to 0555 LT. I live one hour from the crew car park and it generally takes 20 minutes to park and get the

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bus to the crew reporting point. With the best will in the world and the most efficient preparation, I still need to set the alarm to 03:30 to make the earliest report.

I did my best during this series of duties to manage rest, taking some catch up naps during the afternoon after getting home and going to bed at a reasonably early time. By the evening before the last duty I was so tired that I went to bed and fell asleep at 8pm, waking at 0400 having had a full 8 hours sleep.

For the first time in this series of duties I felt well rested; but the events of the day were to show that this was merely an illusion.

I made series of small mistakes, starting with such things as reading the wrong line on the performance figures, then omitting to delete a redundant stop altitude from the FMC; things got worse as after take-off during flap retraction I was first asked, as is normal, to select flap 1 and then later flap Up. When I came to make the selection to Up, I discovered that I had already selected flaps Up when asked for Flap 1, despite the fact that there is a mechanical gate at the Flap 1 position designed to prevent exactly this happening. Fortunately the aircraft was light and accelerating so fast that the lift margin was never compromised. I had no recollection of doing that at all. Further minor errors occurred throughout the flight (no lights on as we descended) and I arrived back at base feeling very unprofessional and embarrassed.

The lesson here is that your level of fatigue is not necessarily a function of how fatigued you feel! I have noticed this effect before when awaking for an early and feeling great, but not actually performing so great. Oddly when I feel very tired I think my brain subconsciously makes sure I try harder!

It was for this reason I stopped using one of those clever smartphone apps (sleep cycle) which monitors your sleeping cycles and only wakes you at the peak of a cycle; correctly claiming that you feel better having woken at a state of light sleep. You might well feel better, but that doesn't guarantee you will perform better.

In my opinion it seems that sometimes fatigue can be insidious - rather like hypoxia. You think it's going well, but it isn't!

I'd be interested if there is any research along these lines to confirm this idea?

**CHIRP Comment:** We are pleased to be able to print this honest report about the insidious nature of fatigue. EASA FTLs require operators to conduct fatigue management training but the recognition of fatigue is not specifically included:

*ORO.FTL.250 Fatigue Management Training*

*(a) 'insert airline name' shall provide initial and recurrent fatigue management training to crew members, personnel responsible for preparation and maintenance of crew rosters and management personnel concerned.*

*(b) This training shall follow a training programme established by 'insert airline name' and described in the operations manual. The training syllabus shall cover the possible causes and effects of fatigue and fatigue countermeasure.*

However, AMC1 ORO.FTL.250 states the FRM training syllabus should contain the following:

*(b) the basics of fatigue including sleep fundamentals and the effects of disturbing the circadian rhythms" and "the effect of fatigue on performance.*

Some operators do include training about recognising fatigue in oneself and others but the reporter has correctly highlighted the practical difficulty of reliably recognising fatigue in oneself on a day-to-day basis. There is research about fatigue that includes observations about its insidious nature. ["The Cumulative Cost of Additional Wakefulness: Dose-Response Effects on Neurobehavioral Functions and Sleep Physiology from Chronic Sleep Restriction and Total Sleep Deprivation" \(Van Dongen et al; "Sleep2 Vol 26 No 2 2003.\)](#) examined the effect of sleep deprivation on cognitive function. Its conclusions include, "... it appears that even relatively moderate sleep restriction can seriously impair waking neurobehavioral functions in healthy adults. Sleepiness ratings suggest that subjects were largely unaware of these increasing cognitive deficits.." This conclusion appears to provide scientific evidence to support the reporter's contention that the effects of fatigue are insidious.

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### EASA ROSTERING

**Report Text:** Over two weeks and 2 days I had three single days off. That period included a two day simulator, SEP, a 5 day long haul trip, and two east coast US two crew trips. All sectors featured MEL items to deal with or minor failures; however, at least there were no weather issues. Then I had two days off, a third east coast, three days off and then a late report east coast to complete the month. This was all allowable under EASA, however I believe work patterns like this are flawed and ultimately will contribute to an incident. One issue is that the fatigue isn't necessarily clear until well into your duty day, far too late on a long single sector to stop.

I keep fit, eat reasonably etc., however, I felt desperately tired on approach to home base, briefly fell asleep driving home (half hour commute), had memory issues and disrupted sleep from over tiredness. Generally felt run down all month, and suffered irritability etc.

I have been long haul for 20 years; I know 'tired' and the normal feeling of being 'Long-haul', this is beyond that. Nobody likes EASA FTLs amongst those working them. 17 hours FTL if you are three crew no matter what start time/ acclimatisation? Coming back from a three day east coast US at midnight local, two crew, 11 hours allowed?

That last late report east coast had delays on both sectors. My colleague admitted to me that on departure on the last sector back to UK he was praying nothing went wrong as he worried his tiredness might be a factor. I felt the same.

I won't work a roster like that again, I will have to go fatigued.

**CHIRP Comment:** The report clearly demonstrates again that duties that are legal under EASA FTLs can be fatiguing. It also illustrates the difficulty for hard working and well-motivated pilots of knowing when to say, 'enough is enough'. The reporter did not submit a fatigue report because he did not feel it was appropriate after completing the duty. We have heard other pilots express a concern that admitting to having felt fatigued during flight could result in punitive action. Assuming that no one would commence a duty when knowingly fatigued, flight crew should not be concerned about punitive action. As noted in the editorial, if a crew member commences a FDP in good faith but subsequently feels sufficiently fatigued during the duty that they consider their performance was, or might have been, impaired, a post flight fatigue report is appropriate and correct.

It is also worth considering, when assessing the fatigue potential of a planned roster, that a simulator duty can be at least as tiring as an airborne duty.

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### SIGNING OFF OF UNCHECKED WORK

**Report Text:** Due to sickness on day in question, only 2 B1's in attendance. One of which was acting up, there were not enough certifying engineers to carry out two checks and no B2's available to carry out the B2 tasks. B1's and mechanics with no approvals were told to do the work and that the B1's would sign for it all as being carried out and inspected by them. An hour before the end of the shift the manager came in to sign off second aircraft and took one of the previously unqualified mechanics to one side to give them an approval, asking him to sign the relevant approval paperwork there and then, possibly backdating in case authority ever looked into things. This is against company procedure which requires a practical logbook to be completed and assessment to be carried out.

Personnel knew that signing for all work carried out (without being checked) is illegal but felt pressured by management.

**CHIRP Comment:** This report was raised through the UK CAA Website and raised as an MOR, with subsequent follow up by the CAA as well as being reported to CHIRP. It highlights the pressure that can be exerted onto personnel to carry out duties outside the scope of their capability and approval.

Signing off unchecked work is totally unacceptable as it significantly compromises aircraft airworthiness. Regulations and procedures are there to ensure continued airworthiness of aircraft and as such should be adhered to. Whilst it is possible to ignore and circumnavigate regulations and maintenance procedures, it is the integrity of Certifying Engineers that provides the 'backstop' for continued aircraft airworthiness by ensuring all applicable regulations and procedures are followed.

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### EASA SCHEDULING AND EXTENDED REGULAR LONG BREAKS

**Report Text:** Until EASA scheduling rules came into force, a 2 day 'Long Break' was required every 14 days. I hadn't realised how valuable a reset this Long Break was until it was replaced under EASA by a requirement for 2 blocks of 2-day Recurrent Extended Recovery Rest Periods (RERRP) per month, at a time of the operator's choosing.

A pilot might now be scheduled a 2-day RERRP in the first few days of the month and another towards the end of the month with practically continuous rostering for weeks in between. This is of undoubted value in getting the most from a pilot on a reserve/standby block, for example. But such a long, shapeless flow of work with no meaningful break in sight and no opportunity to completely disengage from work for weeks on end is dispiriting and exhausting.

Lessons Learned - The human body hasn't changed since the advent of EASA and we pilots are no better equipped now to deal with such arduous work patterns than we might have been when such rostering would have been illegal. The former '2 days off every 14' rule served an important purpose and should not have been discarded under EASA.

**CHIRP Comment:** This report is the 3<sup>rd</sup> we have received citing the absence of the '2 in 14' requirement in EASA FTL as a factor in increased fatigue. The rest requirements in EASA FTL are based on the work that crew member has completed. Unfortunately, although there is research to show that one needs to have a single day off, including 2 local nights after 7 days of duty, there was no comparable science to support a '2 in 14' fixed requirement. The impact of disruptive duties was recognised with the requirement for the single day off and 2 local nights rest to be increased to 60 hours when the crew member undertakes 4 or more disruptive duties within that work block. This is to allow for extended recovery of working a number of early, late or night duties.

Disruptive schedule means:

- (i) for "early start" a duty period starting in the period between 05:00 and 06:59 in the time zone to which a crew member is acclimatised; and
- (ii) for "late finish" a duty period finishing in the period between 00:00 and 01:59 in the time zone to which a crew member is acclimatised;

To qualify for the 60 hours rest, the 4 disruptive duties can be in any combination of early and/or late and don't need to be continuous. There are also additional time off requirements to allow for recovery from crossing time zones. Again all this is based on the work that has immediately been completed prior to the rest period. The addition of the 2 x 2 days off each month was to provide for additional recovery and prevent cumulative fatigue.

Issues associated with cumulative fatigue should be reported to the operator as this is very specific to the operation type and the operator is required to manage such issues to keep crew members free from fatigue.

Notwithstanding the explanation and mitigations above, CHIRP believes intuitively and from members' own experience that 2 days off every 14 was a sensible and desirable requirement from a human and professional perspective. Its value was proven over many years of practical application under CAP371 and it is to be hoped that evidence like this CHIRP report will assist in its introduction into EASA FTLs.

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### SPLIT SHIFTS

**Report Text:** Within my company I have seen split shifts used on many occasions as a last minute resort when an afternoon crew got sick and a morning crew, which was on standby following 2 morning sectors, got put on a split shift to be legal to operate the evening rotation as well.

I can recall that a split shift can only be rostered and not made available to the planning department as they see fit. I am unable to find confirmation of this and needless to say it does not state this in my company ops manual.

**CHIRP Comment:** From CAP 789:

*13.1 The ability to extend an FDP by a Split Duty was never intended for use as an 'on the day' operational tool. The use of Split Duty was developed as a planning or rostering device so that affected crew members could plan their pre-flight rest and off-duty activities accordingly. Instances have been reported where normally rostered FDPs have been extended by declaring*

*any unexpected delay as part of a Split Duty. Operators are advised to check that this unintended use of Split Duty is not occurring in their operation.*

*13.4 Exceptionally, where there is a significant delay which could not have been foreseen, and with the agreement of the Commander, an unplanned Split Duty may be used. The Commander will consult with the rest of the crew, who must remain undisturbed until the agreed report time. Operators should keep a record of the use of Split Duty as part of their roster monitoring processes, which should be made available to FOIs on request.*

The guidance in CAP789 is encouraged but not enforceable under EASA FTL except in so far as crew must be told of the split duty and not disturbed during it.

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### MEAL OPPORTUNITIES

**Report Text:** Would you be able to tell me if ORO.FTL.240 about nutrition is legally binding? My company does not give any meal opportunities.

**CHIRP Comment:** ORO.FTL.240 states:

*(a) During the FDP there shall be the opportunity for a meal and drink in order to avoid any detriment to a crew member's performance, especially when the FDP exceeds 6 hours.*

The use of the word 'shall' in EASA regulations indicates a mandatory requirement. Therefore the opportunity for a meal and drink is mandatory. The regulation goes on to state:

*(b) 'insert airline name' shall specify in accordance with AMC1 ORO.FTL.240 how the crew member's nutrition during FDP is ensured.*

EASA has published Acceptable Means of Compliance (AMC). AMC1 ORO.FTL.240 Nutrition:

#### MEAL OPPORTUNITY

*(a) The operations manual should specify the minimum duration of the meal opportunity, when a meal opportunity is provided, in particular when the FDP encompasses the regular meal windows (e.g. if the FDP starts at 11:00 hours and ends at 22:00 hours meal opportunities for two meals should be given).*

*(b) It should define the time frames in which a regular meal should be consumed in order not to alter the human needs for nutrition without affecting the crew member's body rhythms.*

The AMC are not legally binding and operators may propose alternative means of compliance (AltMoC). However, the AltMoC should achieve compliance with the implementing rule. AltMoC must be agreed by National Authorities and EASA and should be published in the Company Operations Manual.

CHIRP recognises that on many flights there is the flexibility for cabin crew to have meal opportunities managed by the cabin supervisor. Also, until further guidance is available, compliance is achieved if flight crew take nutrition during the cruise portion of flights. However, for operations comprising multiple short sectors with no nutrition opportunities in flight, operators should consider adding time for a meal to one of the turnarounds. Commanders and cabin supervisors can then manage the opportunities tactically in response to the operational factors of the day.

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### CALLING IN SICK

**Report Text:** [The report was submitted by a Captain about a member of the cabin crew].

The crewmember has [ ] years in the company. During this period the crew member has called in sick once and been offloaded by the Commander due to illness once.

During the entire night between the 24th and 25th the crew member was throwing up and suffering from diarrhoea. These symptoms remained until about 0700L. The crew member was not able to sleep during this period. The crew member had an upcoming 11h 15min duty period with a report time of 1200L on the 25th. The crew member was with the intention to report for this duty, clearly unfit to fly. The crew member was explaining to me (the reporter) that it would not be possible to call sick due to the fact that the day after the duty was annual leave. The crew member was under the impression that the company would not believe the sickness and was fearing disciplinary action.

I (the reporter) managed to convince the crew member to call in sick. The crew member called sick at 0839L. When the crew member was trying to give the crew controller the symptoms (it is company policy

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to interrogate staff of symptoms when calling in sick) the crew member was interrupted. The crew controller (identity available on request) was immediately challenging the crew member on the fact that the 26th was an annual leave day. The crew controller repeated the fact that the sick call was made the day before an annual leave during the call. The crew controller ended the sick call by wishing the crewmember "to have a nice day", implying in a sarcastic manner that the crewmember was lying. After the conversation the crewmember was upset and regretting calling sick.

Lessons Learned - As a Captain I find myself operating with sick cabin crew on an almost weekly basis. I have offloaded cabin crew more than once.

The 2 most common reasons given when asked why they choose to fly sick is:

- 1) Complicated and punitive procedures (needs to self-certify in the crew room on the day of calling sick)
- 2) Fear of career hampering (all sick days stored in personal file indefinitely and is used for promotions and base requests) [Operator] claims a just culture. This is not a just culture.

Crew control needs more oversight. Crew control needs to be made aware of crew's responsibility of reporting fit to fly. Crew control needs to be aware of their role as facilitators to allow crew to comply with EASA CAT.GEN.MPA.100 (OPS MANUAL A 6.1)

Crew controllers do not have the training nor knowledge to act as managers, HR or supervisors. They need to be aware of the potential safety hazard they create acting as such.

**CHIRP Comment:** The subject of cabin crew reporting for work when unfit to fly was covered in the editorial to the previous edition of FEEDBACK. The following remarks apply to all crew members. The word 'sick' is frequently used incorrectly to mean unwell. However, in this report the word was used correctly. A crew member suffering from sickness and diarrhoea could easily pose a risk of contagion to other members of the crew and passengers. Some pathogens can be spread by direct contact or through the air and take effect within hours, posing an immediate and serious safety risk. Anyone suffering from sickness and diarrhoea should not return to work until they have been clear of symptoms for a minimum of 24 hours or, preferably, 48 hours.

Self-certification from anywhere other than the sickbed is inappropriate. While it is necessary to accept a crew member's declaration of being unfit to fly at the time it is made, it is also appropriate to follow up absences with normal HR management processes. Provided these processes recognise the legal obligation on crew members to fly only when fit to do so, they should not run counter to a Just Culture but are a necessary part of running a complex operation with many employees.

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### ATC INAPPROPRIATE INTERACTION

**Report Text:** We were proceeding south after an uneventful sector. However, there were a large number of build ups in the London area. Aircraft were performing weather avoidance and the frequency was extremely busy. I was weather avoiding on my own a/c.

The air traffic controller was heard over the frequency to be publicly berating an aircraft. The aircraft kept requesting avoiding action - some they got, some they didn't (a bit like my own. The controller said something like 'I have told you before XXX don't make any turns, you can't make any turns unless I tell you to, just don't do it' and then "all aircraft don't make any turns unless I tell you to, just don't do it".

This has weighed on me rather heavily. In the London area I appreciate traffic density is high, and that weather avoiding action increases controller workload significantly. But it is totally unrealistic to tell an a/c not to turn. As a Captain I have done (I did on this day) and I would again take action to prevent my aircraft flying into a very active cell (i.e. one with red or magenta in it) without ATC approval in order to protect it - and take my chances avoiding traffic accordingly. It's a Hobson's choice - one way is almost certain death and the other at least offers a chance.

Their tirade was both humiliating, unnecessary, broke the CRM between the controller and the a/c and exposed a complete lack of understanding by the controller of the risks faced actually in the aircraft with passengers and a very active cell ahead - rather than in an air conditioned control room. If nothing else their outburst just blocked a valuable frequency for several useful seconds. It didn't affect me, that day, so I didn't ASR it. But I do want to CHIRP it as I think it should be escalated in NATS, so that the controllers have an appreciation of just how difficult it is at the pilot end, as well as their end with a screen full of potentially conflicting a/c.

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Lessons Learned - On bad weather days, controllers should split frequencies or implement flow to enable R/T to sensibly take place between a/c and controllers to assure safe flight. Sorry if it costs more. When asked for more info to help identify the place, date and time:

I don't know the precise sector, but a subjective observation is that the sectors west of LHR on Q41 are now, at peak times, almost unmanageable. I am frequently unable to 'check-in' due controller workload, and on several occasions have merely waited for the controller to call me, lest a check-in call further block the frequency.

**CHIRP Comment:** There is no place for unprofessional behaviour on the RT. A broadcast seems quite a sensible move in this scenario but better phrases could have been chosen! Unfortunately, in the absence of an accurate date and time for the incident, it was not possible to locate the RTF recording and verify the exchange. It is important for flight crew to submit MORs to facilitate investigations when situations became fraught or appear to go awry; accurate timings are essential in any report and highly desirable to include frequencies and sectors.

The incident has been followed up by the ANSP but it would have been more valuable as a learning opportunity if it had been possible to play back the recording to controllers. Aircraft Commanders have to do what is necessary to maintain the safety of their aircraft but several aircraft manoeuvring to avoid weather puts a great deal of pressure on controllers. The reporter was incorrect in suggesting that cost was a factor in the availability of resources to operate during periods of bad weather. Planning routinely begins 3 days in advance using Met forecasts, desired flow rates and any other relevant factors to determine the number of staff required. Also, when significant weather events are forecast a Met forecaster is present in the Ops room to assist in giving up-to-date TS/CB activity information.

The report provides a useful opportunity to consider how to minimise the problems caused by bad weather. The following Top Tips were compiled through cooperation between pilots and controllers under the auspices of the Safety Partnership Agreement:

What pilots should know:

- Controllers cannot see thunderstorm cells on their radars.
- Requests for specific weather avoidance headings/levels may result in you going outside of controlled airspace. Be familiar with UK FIS (CAP 774) as the ATC service you will receive will change and you will become responsible for your own separation.
- A requested routing may infringe the airspace of other controllers and co-ordination will need to be carried out before the routing can be approved.
- Where multiple aircraft are weather avoiding, it may be necessary to separate all aircraft in the sector by level.
- Other aircraft which are avoiding weather may affect your routing.
- Controllers can pass on to pilots information relating to thunderstorms gathered from Met feeds (not to the radar) and pilot reports.
- RTF workload will increase as weather avoidance causes an increase in calls and requests from pilots.
- The location of weather cells is dynamic; reduced landing rates, due to aircraft unable to land at airfields, will increase en route holding.
- Sector capacity may be reduced to allow for increased separation requirements and loss of holding areas.
- If you turn to avoid weather without a clearance from ATC, you may no longer have separation from aircraft around you.

What pilots can do:

- Tell controllers as soon as you know you will need to avoid a thunderstorm.
- Be precise when giving information on location and size of thunderstorm cells.
- Where possible, be flexible on what clearances you can accept - you may prefer to turn left, but can you turn right and still avoid the weather.
- When requesting a heading, advise the controller how long you anticipate it will be before you are clear of the weather.
- Advise ATC when clear of weather, but remain on the last assigned heading unless otherwise instructed. (The weather avoidance heading may now be being used tactically to separate you from other aircraft.)
- Be proactive; think about what you can do, as well as what you can't.
- Keep RTF transmissions to a minimum.
- If you can't follow the SID tell ATC before getting airborne.
- Give the controller as much warning as possible of diversion intentions.
- If you are unsure, always check.

And we repeat the CHIRP Top Tip – if it all goes wrong, submit an MOR after the flight!

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### ENGINE VIBRATION

**Report Text:** As we were climbing after take-off on our return to base, I had just started preparing to hand out landing cards. I thought that I could feel vibration, so I thought I would quickly go through the cabin and deliver the landing cards but at the same time I would see if I could feel the vibration as I went down the cabin.

Before I could do this, one of my colleagues called on the interphone to report the vibration. As we had both now noticed this I immediately called the flight crew. The reply I got was that the aircraft was "A crock of \*\*\*\*" but not to worry about it! They had felt it too.

During the flight, one of the crew said there was a noise at the back of the cabin like a whining, buzzing bee. I told them to tell the flight crew which they did and was told it was a seal. They said they didn't think it was a seal but felt that they were being patronised and pointed out that if they didn't report these things and if something happened they would have been disciplined if they hadn't reported it. How do things get mended if they aren't reported?

After the flight no mention was made to any of us about our vigilance from the pilots.

Lessons Learned - I would still encourage my crew to be vigilant and report anything they think is unusual, even when at risk of being patronised.

Apparently the company is encouraging a safety culture, but our reporting felt like it wasn't taken seriously or that it was too complicated for us to understand.

**CHIRP Comment:** Reports from the cabin crew should be received with a positive response. After landing flight crew should take the opportunity to thank the cabin crew, clear up any misunderstandings and indicate whether a tech log entry will be made. Some operators have SOPs to require debriefs following flights in which incidents occur. It is good practice and common courtesy.

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### LACK OF AIRPORT SECURITY AND BAGGAGE SCREENING

**Report Text:** Our airline operates daily services in and out of [a foreign airport]. I noticed/realised, for the first time on departure from [ ], that there are absolutely no baggage security checkpoints at this airport until one reaches the departure gate.

Passengers can enter the departures hall freely, then pass through immigration, then duty free shopping area with bags unchecked. There are hundreds of passengers and staff milling around. The stand is at the far end of one of the terminal buildings and is approximately a 20 minute walk, even using passenger travellators. It is only on arriving at the gate that passengers are subjected to a baggage search and personal x-ray.

In the wake of the airport bombings recently - notably Brussels and Istanbul, is it not extremely lax of this airport to have such a cavalier approach to security?

I hope it doesn't take the loss of some passengers and crew by an airport terrorist to make changes.

N.B. aircraft are also parked right by the gate - just outside....

**CHIRP Comment:** We are publishing this report to remind readers that we all have a responsibility to report security concerns to relevant authorities and that reports are taken seriously. Department for Transport officials have confirmed that they have contacted the relevant National Authority about the issues raised in this report.

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### RADAR IN THE TOWER (RiTT)

**Report Text:** I am concerned about the implementation of RiT (Radar in the Tower) at [ ] airport following a protracted trial period. Multitasking is what RiT is about, combining controlling disciplines and hoping it is as safe as each discipline individually. RiT combines the radar function with the ADC function, which is itself the AIR and GMC function combined. While this practice has its merits and may be suitable at some airports (e.g. PPR only, occasional traffic CAT1 airports etc.) I believe the ATC operation at [ ] airport is complex enough to warrant investigation as to whether this procedure is appropriate without additional safeguards, if appropriate at all.

## CHIRP – Confidential & Independent Reporting

With RitT at [ ], it is the complexity and spontaneity of the environment, not the individual task at hand that is of concern. Being a CAT 3 airfield, the airfield lighting, ILS monitoring and reduced visibility procedures have a complexity that is greater than a CAT 1 airfield. Whilst scheduled traffic can be predicted, non-scheduled traffic including emergency services cannot. Workload can suddenly increase to process, accommodate and provide flexibility for these flights. Individually, the procedures for specific actions such as a runway change, emergencies, equipment faults and failures, CAT A helicopter procedures, coordination with adjacent airfields etc. are not arduous. Collectively, however, the responsibility is significantly greater where there are more and more complex systems and procedures in place.

As well as doing RitT, during a night shift the controller is responsible for the provision of all Meteorological information and all ATSA tasks, including flight planning, taking phone calls, and various administrative functions. The AUTOMET generally works well in generally good conditions. However, there are recognised shortcomings with the system that require manual intervention, and these usually occur during adverse weather.

[A few years ago] during a night shift and in IMC, a [ ] initiated a parabolic descent below its cleared altitude and below the terrain safe altitude. This went unnoticed by the crew but was immediately spotted by the radar controller who alerted the crew to the descent. The aircraft was within seconds of a CFIT event. This is the continuous radar monitoring that is being lost with RitT. It is easy to say 'prioritise your tasks' or 'you should still be scanning' but with so many more tasks to encompass and more scanning items other than radar to be incorporated, a simple task such as creating an EFPS strip for a runway inspection would interrupt the radar scan sufficiently not to spot such a deviation for those critical seconds.

Due to the local geography, inbound aircraft are subjected to three, four or more descent instructions before establishing on the ILS; on RWY [ ] the turn in is critical once committed to minimum radar vectoring levels. Considering that CFIT and Level Busts are two of the unit's safety priorities as several level busts have occurred over the last twelve months, the monitoring that this requires is constant but is not achievable with RitT.

Fatigue is an area which is not acknowledged and has not been addressed. There is no doubt that RitT is more tiring than either the ADC or radar disciplines individually. Controllers are planning ahead for longer and are at a heightened state of alertness throughout the RitT session and have responsibility for the whole radar, tower, Met and ATSA tasks. Because of the RitT sessions during the trial are limited in length (it's very rare that a controller does RitT for more than two hours total time during a night shift - most never have), the tiredness of the session manifests itself later during the shift, not during the RitT session itself. This adds to the tiredness caused by shift work in general (the night shifts are the fifth and sixth working days of the cycle) and the natural fall off of circadian alertness during the early hours. From my experience, the more tired a controller becomes, the less capable he/she is of assessing their own performance and of making reasoned and rational decisions. It's all very well saying the controller is responsible for ensuring he/she is fit for duty, but is it reasonable to expect a tired controller to assess their own decision making capability?

The Trial of RitT took place over two and a half years, although through short staffing and a lack of fully valid controller, relatively few RitT hours were actually accrued. The limited hours of the trial meant that ATCOs rarely had to undertake all the night shift responsibilities of systems checks and ATSA duties whilst the trial was in progress. It is on the basis of the trial feedback data that the RitT procedure is being introduced. However the feedback is mainly subjective; controllers have assessed their own performance, with no independent monitoring or analysis. Regarding the situational awareness questionnaire, how would a controller know if they had missed something and would they really say they didn't have situational awareness when this could result in OCA action?

From [the implementation date], RitT can be provided at any hour of the day, subject to an assessment of light traffic levels. I am amazed that this is being allowed to take place.

**CHIRP Comment:** In response to the reporter's concerns, the ANSP reviewed the trial process and results. The only element of uncertainty remaining was whether the radar screen would be usable throughout the year as the angle of the sun changes. While this is being tested in service, the availability in the control building during all RitT operations of a controller who can immediately re-open the Approach position if the Tower controller required it is considered to be an appropriate mitigation to this issue and many of the reporter's other concerns. RitT procedures have been adopted at other sites in the UK and abroad and many previously concerned controllers have been won over once the practice became familiar.

### AIRCRAFT DEPARTING WITH CONTAMINATED WING

**Report Text:** I was a passenger, but Professional licence holder on flight [ ] on [ ] Dec 2016. I was standing at the gate and watched the turnaround before boarding [the aircraft]. During the turnaround I did not personally witness anyone conduct a tactile inspection of the upper wing surface.

Upon boarding, I noticed the upper wing surface appeared to have frost on it which was growing from the outer 2/3 of the wing to the tip including the spoiler panels and aileron. The apron was well lit with flood lights. The METAR at the time was [ ] 2020Z 24003KT CAVOK M03/M03 Q1027 NOSIG

I was becoming concerned that no de-icing would take place. As we prepared to push back I got up from my seat and went to the rear galley to ask the cabin crew if we were going to de-ice. The crew at the rear galley contacted the front who spoke to the pilot to raise my concerns who said he was happy to depart. I persisted and told the crew I would not sit down until an inspection had taken place.

The Commander came and glanced out of the windows and then came to see me. I told him I believed there to be frost on the wing at which point he asked me if I knew the fuel temperature and walked off. I was taken aback, as I agree the fuel could melt the frost. However, it only appeared after the landing and I believe the dew in the air would freeze. I am not convinced fuel can de frost cold soaked ailerons and spoiler panels that are NOT in direct contact with the wing that has fuel in it.

The aircraft departed and there were no consequences. Personally I should have refused to depart on the aircraft until either a tactile check had been conducted or de-icing taken place considering the temp M03/M03.

The problem as you can see from pictures I can provide [pictures not included in FEEDBACK] is either of us could have been correct. The ONLY way to check would have been a tactile inspection with a temp of M03/M03. I do not believe that the Commander could have been certain he departed with a clean wing without a tactile inspection, even if the fuel temperature was above Zero given the conditions and the view of the wing.

Lessons Learned - In the future, travelling as a passenger I would not have sat down and would have stood my ground until a tactile inspection would have taken place.

**CHIRP Comment:** On receipt of the CHIRP report the operator asked the operating aircraft Commander to file an ASR before conducting an incident review. The investigation accepted that the Commander had carried out a pre-flight inspection and at that time the wings were clear of contamination. The Commander did not knowingly dispatch with contaminated wings but realises now that he should have given more consideration to the passenger's concerns at the time.

Advice from passengers is a difficult area. There are well-documented cases where passengers have alerted crews to problems that might otherwise have gone unnoticed. However, well-intentioned advice from unqualified passengers can be a huge distraction. If there is an opportunity to do so, establishing the credibility of the passenger might help in applying "due consideration" to strike the appropriate balance.

Pilots are used to dealing with anti-icing and de-icing issues. Some aircraft types are particularly sensitive to very light frost and others are permitted to allow frost in localised areas; fuel temperature is a relevant factor, another being whether the wing is metal or composite. All these factors could cause confusion in a passenger's mind about the true status of a 'clean wing' and failing to reassure nervous passengers could lead to a disruptive passenger incident. Caution should be the over-riding watchword.

### ERCAN AIRSPACE

**Report Text:** For many years the airline industry has been transiting ERCAN Airspace (the boundary between Turkish and Nicosia Airspace). It would be true to say that this is a CRM/Human Factors issue that has continued for years and possibly illustrates the industry's indifference to act upon CRM issues.

There is confusion as to who/what ERCAN are or do; crews omit to contact the relevant or appropriate ATC service; crews accept ATC instructions from ERCAN in contradiction to Nicosia ATC instruction, etc. Air Safety Reports are a plenty with reference incidents at this airspace boundary. However due to 'politics' the industry has chosen to ignore what is a massive safety issue, which looks likely to be unresolved for many more years.

Lessons Learned - Is it not time for the aviation industry to demand a resolution to this ATC issue?

**CHIRP Comment:** The issue raised in this report is a longstanding one. It is a risk factor that operators should address using their SMS; are operators prepared to tolerate the risk as it stands, mitigate the risk or stop using the airspace? This operator has confirmed that it has identified the issue of ERCAN advisory airspace as a deviation from normal ATC practices and as a result the difference creates a risk to the operation. This risk, like all ATC risks, is monitored by the Company. It is mitigated by promulgation of clear information to crews on who the controlling authority for each sector is. In seeking a resolution of the issue, the operator is one of a number that have raised it with the joint CAA and Department for Transport State Safety Partnership.

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### **BULLYING COMPROMISING AVIATION SECURITY**

**Report Text:** The Manager at [airport] for [company name] has been reprimanded for bullying and compromising the integrity of the x-ray security staff at by making them clear items that he says, "he knows what they are?" This is causing an awful lot of stress to the staff at the hub.

He will continually pull things out of the hand search section and scrub them off the pulled sheet; when employees complain he bullies and manipulates them into doing his wishes.

The security x-ray staff are ALL concerned about this situation but because of the regime of fear created by their manager, no one takes it any further.

I feel this is not correct as there is a statement of work in place for the operation and nowhere is it stated to 'use common sense' or 'it is ok - we have loads of these going through'.

There is going to be a horrendous incident, and this attitude will allow it to happen.

**CHIRP Comment::** The reporter was concerned about the impact the 'bullying' was potentially having on security and stress levels; they also felt intimidated in raising their report through the company reporting system due to concerns over potential 'retribution'.

After obtaining the reporter's consent, and in order to facilitate an appropriate investigation, CHIRP submitted the report through the UK CAA Whistleblowing process. The subsequent investigation confirmed that security procedures had not been followed motivated by a well-intentioned but misguided desire to maintain the flow at all costs. Measures were introduced to prevent a recurrence.

Pressures of work are not an excuse to shortcut security procedures and breaches of these should be reported immediately. A company-supported 'Just Culture' policy, in conjunction with a confidential reporting process, would have alleviated the reporter's concerns in reporting the manager and potentially ensuring a more timely resolution of the issues.

Detailed information about the CAA Whistle-blower scheme will be included in the next edition of FEEDBACK.

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