CHIRP

Confidential Human-Factors
Incident Reporting Programme

Aviation FEEDBACK

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GENERAL AVIATION

CHIRP GENERAL AVIATION FEEDBACK
Confidential Human-Factors Incident Reporting Programme

Caution, consideration and courtesy

Director Aviation:
STEVE FORWARD

This is the period of greatest danger if we overstretch either ourselves or the overall system as the taps turn on and the skies fill up again

There's probably only one topic on everyone's minds at the moment, and that's how we all safely return to flying as lockdown restrictions ease. The CAA have been pro-active in publishing a number of articles (including CAP1919), podcasts, a new Skyway Code and a Clued Up magazine, and other organisations such as the LAA and GASCo have also delivered useful videos and safety material to provide food for thought. So, rather than me repeating these messages again here, access the links above and spend a couple of hours reviewing the material to make sure you're absolutely happy with what it is that you intend to do, and have prepared fully for any contingencies by conducting a thorough personal Threat & Error Management (TEM) analysis for your return to flying. In doing so, remember that all parts of the aviation system are under stress at the moment, not just pilots and controllers. Engineers, ground handlers, emergency crews, operations teams et al will all be rusty as flying ramps up again from what has been a dire period both mentally and professionally. As the tempo increases, this is the period of greatest danger if we overstretch either ourselves or the overall system as the taps turn on and the skies fill up again. More than ever, defensive flying, heightened awareness of potential risks and threats, ensuring →

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an open and collegiate culture in addressing any issues, and maintaining an awareness of the pressures that everyone will be under will be vital. Caution, consideration and courtesy to others should be our watchwords, allied to a frank assessment of our own and our colleagues' potential weak areas so that they can be openly discussed, understood and mitigated. After an honest appraisal, what are those areas in which you know you are likely to be weak and unpractised? What pressures are the ground teams and engineers under to get operations up and running again, and what support do they need given that they might also not be firing on all cylinders due to lack of recency? Focusing on the job in hand is vital from pre-flight to end of flight; it's easy to say, but external worries, issues and extraneous conversations need to be left outside the 'sterile' cockpit environment so that all attention can be given to the complex task of flying the aircraft. On that first trip, don't be too ambitious, give others a wide berth, and just take some time to fly the aircraft for a while to get used to the basics of handling, trimming etc – as those wise words say, a superior pilot uses his superior judgment to avoid situations which require the use of his superior skill!

Reporting to CHIRP has been reduced in recent months due to the lack of flying but, even so, the three reports included in this edition of FEEDBACK are worthy of consideration. The importance of thorough pre-flight aircraft checks is highlighted, especially when they have been hangared for some time; don't rush those pre-take-off checks because that's the time when you're likely to be at peak stress levels as you imminently leap into the air again; have some last-chance checks in mind before you open those throttles; avoid press-on-itis, if it doesn't feel right then stop; and do give some consideration and leeway to Air Traffic Control because they also won't be used to the likely increased traffic levels and will be getting back into the groove again after a very quiet period over the last few months. Finally, it's all too easy to become immersed in the actual business of flying the aircraft and maintaining perfect height, speed, attitude etc but don't forget the other things such as lookout, attention to routing and communicating clearly to others. The old adage of Aviate, Navigate, Communicate is as valid now as it ever was so prioritisation of your attention is the key to an enjoyable and stress-free flight!

Stay safe!
Steve Forward, Director Aviation

Think about the Air Traffic Controllers, too

COMMENTS ON PREVIOUS FEEDBACKs

Comment No 1 – The benefits of ATC

Another helpful, easily read issue of CHIRP - thank you. To me essential reading and always something to learn. I have a comment on GA FEEDBACK Report 5 - well two. My first is that controllers sometimes get a 'bad press' but my experience is generally that they help, wanting incident free airspace on their watch at the minimum. It's correct that we do not rely on that, but help they do. It reminded me of the time on a Basic Service flying the Luton/Stanstead corridor I received the call 'G-xx still a Basic Service; traffic opposite direction.....' My other is that I regularly use Class D. Rarely refused - in fact never – although I've had to orbit once or twice... Two reasons: Good places to see, and I know I'll be safe! Thanks again, valuable work.

“CHIRP *Response*”

CHIRP is always grateful for any comments, supportive or critical! In this case we agree with the reporter about the clear advantages of talking to ATC if they're available and you have the time and capacity. Depending on how busy they are, you may or may not get a Traffic Service, but even just letting them know your details and intentions can be of great benefit to them and other pilots who may hear you on frequency. Just be clear as to what service you are requesting: as the report in Edition 87 mentioned, you can't rely on receiving Traffic Information if you ask for just a Basic Service – you may be fortunate and receive some if the controller notices a conflict but you can't bank on that because the controller has no obligation to monitor your flight and they may be busy dealing with other traffic on a different part of their radar screen.

Comment No 2 – Airspace Infringement

CHIRP received a number of comments regarding the updated format for FEEDBACK. Most people liked the new, fresh layout but it has to be acknowledged that some were less enthusiastic about the change to 3-column format. Depending on how you read FEEDBACK and what electronic device you use, the 3-column format can be a bit irksome if you have a small-screen device because of the need to scroll up and down to read the columns. In response, we're looking at whether we can publish FEEDBACK in other formats, namely HTML, which I'm told is adaptive to the screen size. We can't make any promises because, as ever, money is tight and new formats can be costly to implement, but we hope to see what we can do in future to try to accommodate all electronic devices (and those who wish to print out FEEDBACK and read it in hard copy!).

Reports

Report No.1 – GA1290 – Unexpected Gifts at Christmastide

Report Text: I have had a PPL for 36 years, and owned my fully-hangared Beech Baron for 11 years. I have clocked over 400hrs and 270 landings in her. It was the last day of her current 50hr cycle, and she had not been flown for 2 weeks. I was in the middle of my Class Rating Instructor course, so perhaps was more than usually vigilant with the pre-flight checks. Something seemed wrong with the aileron travel, especially to the right; it was not full and was "soft" at the limit of travel. After taxying to the run-up area and warming the engines (which needed turning over), I returned to the hangar. A passing fellow pilot spotted the problem - an acorn stuck between the aileron and wing. Moving the aileron revealed a whole line of them. [Maintenance Organisation] detached the aileron, and removed a total of 120. All the other cavities were checked, but Squirrel Nutkin had chosen only one site on this aircraft and the turbo air intake on another aircraft in an adjoining hangar. This has been a 'mast' year for oaks (massive acorn production): so squirrels have had to come up with ingenious hiding places. ['Mast' derives from the Old English mæst, meaning the nuts of forest trees that have accumulated on the ground]. In 36 years, this is the first potentially lethal pre-flight problem I have encountered. The unexpected happens, those checks are there for a reason...

❝ CHIRP *Response* ❞

This was a really good save by a pilot who did the right thing by returning to the flight-line when noticing the unusual control response rather than succumbing to the temptation to press on and fly; how many of us might have continued with the flight in the same situation? The passing colleague and maintenance team should also be commended for their diligence in stripping down the aileron, and for checking the other aircraft in the hangar to reveal the turbo-intake cache. The incident really does emphasise the importance of thorough pre-flight checks, especially if the aircraft hasn't flown for a while, and it's worth remembering that aircraft in hangars are not immune to the attentions of such rodents – there have been other examples of similar situations in the past, ranging from mice and birds nesting in control runs to other squirrels repeatedly depositing acorns in the undercarriage of hangared aircraft.

'Had I reduced power I might have lost rudder authority'

Report No.2 – GA1291 – Jumping Gyroplane

Report Text: Although very familiar with the type, this was my first flight in this particular gyroplane. It was a very busy flying day and it felt like I had to break into the stream of landing aircraft. I lined up, pre-rotated [the rotor blade] to 200RPM and added power swiftly for take-off. The aircraft rolled 10ft and leapt into the air turning to the right. Surprised and impressed by the take-off performance, I pushed the nose down to stay down and gain speed along the runway. I needed lots of left boot and wondered if there was a problem with the tail. I also noted that the stick was very heavy and I was fighting the aircraft. I then realised I hadn't released the pre-rotator and was in effect flying a helicopter. I released it and the aircraft swung left at 90º to the runway still at 10ft. I removed the left boot-full of rudder , corrected the heading and take-off continued without further incident.

On reflection, I consider I was lucky that I did not realise my mistake till the airspeed had built up. Had I reduced power immediately (the taught procedure for any take-off issue), I might have lost rudder authority, which would have caused the aircraft to rotate right, land and roll-over. Releasing the pre-rotator too soon without sufficient airspeed would have caused the aircraft to rotate left, land and roll-over. You probably need to be solo in a powerful tandem aircraft to achieve this take-off so it won't happen with an instructor in the back. The consequences for the gyro of getting it wrong are severe, which is probably why it has not been tested and documented. This particular gyro had the most efficient and comfortable pre-rotator I have ever encountered. Maybe there is something to be said for having something less grippy? I did wonder if there could be a safety feature where the brakes cannot be released while the pre-rotator is engaged? But that might have just resulted in a pure vertical take-off. A power restrictor might also solve it but I see no easy solution.

❝ CHIRP *Response* ❞

This was another good save by a pilot who was able to keep control of the gyroplane in a very tricky and alarming situation as they ended up at 90º to the runway as they got airborne. The key messages are to be conscientious in completing checks (especially the before take-off checks, even when things are busy), and be very cautious when making significant control selections (i.e. disengaging the pre-rotator) near to the ground. Another important lesson is that the reporter should have landed immediately and asked the maintenance team to inspect the pre-rotator and rotor-head gear because they can be quite sensitive to overspeed and overstress; being fairly insubstantial pieces of equipment, there are limits to what they can take if their design rotation speed is significantly exceeded. The reporter's comments about possible modifications to prevent the situation occurring again are food for thought and interesting reading but are probably not viable due to design-authority implications and, arguably, probably not necessary anyway because this is likely to be a fairly unusual event. As we return to flying after a long layoff due to lockdown and the winter lay-off there is plenty of scope for mistakes and errors of this sort due to lack of recency so be thorough in doing those checks and don't allow yourself to be rushed into the air.

Report No.3 – ATC817 – FISOs and SRATCOH

Report Text: Since 2015 I have been employed as a FISO at [airfield] after working in ATS as an ADI rated ATCO for 6 years. For as long as I've been performing this role, I have been surprised that FISO's and A/G operators do not come under SRATCOH [Scheme for Regulation of Air Traffic Controller's Hours] regulations as detailed in CAP670 Part D Human Resources, parts 1 & 2. As you no doubt appreciate, most, but not all, GA airfields survive by making minimal profits and having to keep operating costs low, relying on staff who perform the role either on minimum wage or voluntarily, happy to undertake their duties for the enjoyment it offers. Generally, any surplus cash resources are directed elsewhere rather than allocated to staff welfare such as break and relief cover, etc.

Since return from COVID-19 lockdown, the GA industry has been trying to recover from lack of, or minimal cash flow and, since the removal of lock-down restrictions, GA aircraft movements have increased exponentially. As a recent example, as duty FISO, I handled in excess of 200 movements during a full day flying programme, with no relief from a second FISO or A/G operator, or formal lunch break, and no ATSA as a result of post-COVID cost-cutting. This makes for a very challenging and stressful duty, and more importantly, a safety concern. There remained little spare capacity to handle potential emergencies, incident or unusual circumstances, or even time for comfort breaks! This is starting to become the norm, rather than the exception, especially during periods of favourable weather.

I appreciate that some will react, and I hear shouts of "200 movements is not a lot" as many GA airfields handle in excess of this number regularly. However, my response would be that there is no accolade granted or bravado in being able to claim that you handled and safely integrated an excessive volume of movements at the expense of safety, fatigue, and the health and welfare of individuals. One needs to take account of the complexities of the operation, with a mix of GA types, heli's, microlights, and gliding with poor RT, standards of airmanship and aircraft radio equipment. Currently, there are a lot of GA airfields significantly busier in terms of movements than the commercial airfields since return from COVID-19 lock-down.

The MOR system exists where concerns on issues such as SRATCOH and fatigue can be documented, but then there is a possibility that limitations on the number of movements will be imposed with CAA intervention, at the detriment to potential financial recovery for Aerodrome Operator's and the longer term viability of airfields.

I am sure this topic will generate a lot of comment and feedback from various interested parties, stakeholders, etc, which will be good to initiate dialogue on this subject. I hope the CAA instigates a long-overdue review of duty time by all ATS staff, not just ATCO's that the CAP legislates for, to achieve improved safety of ATS and Airfield operations with a review of duty, rest, and break periods for all ATS staff.

CAA Comment: The Scheme for the Regulation of Air Traffic Controller's Hours (SRATCOH) has been replaced by EASA regulation ATS.OR.320 'Air traffic controllers' rostering system(s)' contained within Reg (EU) No 2017/373 Annex IV Part-ATS. This places requirements upon Air Traffic Control service providers to manage the risks of occupational fatigue amongst Air Traffic Controllers and has been in effect in EU law since 1 Jan 2020 (and forms part of UK's retained EU legislation). These provisions are in-line with ICAO Annex 11 requirements on FRM (Fatigue Risk Management). The issue for FISOs is that they are 'nationally licensed' personnel and so they are not within the scope of ICAO Annex 1 on Personnel Licensing. That said, the CAA developed and consulted upon (in late 2018) concepts for the future of FISO training, qualification and licensing arrangements, and this included outline proposals relating to the introduction of a policy on FRM (CAP1669). Unfortunately, in part due to significant workload associated with EU-Exit and our COVID-19 response, the CAA Personnel Licensing Policy and ATM Oversight Team have been unable to progress these concepts since the close of the consultation on 7 December 2018 and, at the moment, there is no intention or remit to bring FISOs under 'SRATCOH' type regulations. Aerodrome operators have a responsibility for ensuring that operations are managed in a safe manner and that the level of traffic is appropriate to the service being provided. There is absolutely nothing to prevent a FISO reporting through MOR, whistleblowing, or directly to the CAA inspectors any unsafe situation caused by overload or fatigue, in fact it is their duty to do so and, when made aware, as we have been in the past, we have addressed the issue with the unit concerned.

❝ CHIRP *Response* ❞

It's not just pilots and controllers who have a responsibility for avoiding fatigue, FISOs, engineers, ground handling teams and emergency crews all have similar responsibilities. For controllers, SRATCOH and its replacement Reg (EU) No 2017/373 Annex IV Part-ATS (see text box) were devised in order to ensure that those in direct control of aircraft were not fatigued or over-stressed; although FISOs will undoubtedly be busy at times and provide a critical service, they are not actually in control of aircraft and so the immediate risks from mistakes are not quite the same. Nevertheless, FISOs have an important role to play, and basic human factors theory acknowledges that humans cannot concentrate or perform intensive tasks for extended periods without breaks. In this respect, the CAA highlights in their comment that it is incumbent on Airfield Managers to ensure that their FISOs are able to take breaks, and FISOs also have a personal responsibility to do so themselves, but that's sometimes easier said than done. CAP797 'Flight Information Service Officer Manual' says nothing about duty periods, rest or fatigue, and it appears that the only applicable 'rules' are contained within national employment law which mandates an uninterrupted 20min rest break during the working day

if people work more than 6 hours a day. More broadly, ICAO offers useful overall guidance on fatigue management for Air Traffic Service Providers as a supplement to Doc9966 'Manual for the Oversight of Fatigue Management Approaches' but none of this is directly specific to FISOs.

Ideally, Aerodrome Manual/AFIS Manual operating procedures and associated Safety Management Systems should detail procedures to ensure that FISOs are able to take breaks. Some airfields are more pro-active than others in this regard, although this is largely due to the management team at the aerodrome rather than any regulatory requirements. If Airfield/Air Traffic Service Managers are not scheduling sufficient breaks or appropriate levels of manning then this should be reported, with specific details, to the CAA either within the MOR system or by whistleblowing. In this respect, it's worth noting that FISOs, as with ATCOs, have an obligation under Reg (EU) 2015/1018 Annex III Para 3 to report: "(6) Fatigue impacting or potentially impacting the ability to perform safely the air navigation or air traffic duties; and (7) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident."

Ultimately, whilst taking a break might disrupt operations if there was no replacement FISO, a FISO going 'off frequency' for comfort breaks is a fairly normal occurrence and simply involves a broadcast call to that effect with the expected duration of the reduced level of service. For more structured breaks, airfields could state either by NOTAM or within their AIS entry that there will be no FISO service between certain times so that staff could take proper meal breaks etc. Finally, noting the reporter's comments about the fragility of airfield finances at present, there needs to be a pragmatic approach from both airfield managers and FISOs to ensure that any procedures are both workable for FISOs but also ensure that onerous rest or break limitations are not introduced such that airfields might choose not to employ FISOs at all and instead revert to Air/Ground only, as has happened with some airfields in recent times.

Relevant sections of EU Reg 2017/373 pertaining to Air Traffic Controllers' rest and fatigue

ATS.OR.310 Stress
In accordance with point ATS.OR.200, an air traffic control service provider shall:
(a) develop and maintain a policy for the management of air traffic controllers' stress, including the implementation of a critical incident stress management programme;
(b) provide air traffic controllers with education and information programmes on the prevention of stress, including critical incident stress, complementing human factors training provided in accordance with Sections 3 and 4 of Subpart D of Annex I to Regulation (EU) 2015/340.

ATS.OR.315 Fatigue
In accordance with point ATS.OR.200, an air traffic control service provider shall:
(a) develop and maintain a policy for the management of air traffic controllers' fatigue;
(b) provide air traffic controllers with information programmes on the prevention of fatigue, complementing human factors training provided in accordance with Sections 3 and 4 of Subpart D of Annex I to Regulation (EU) 2015/340.

ATS.OR.320 Air traffic controllers' rostering system(s)
(a) An air traffic control service provider shall develop, implement and monitor a rostering system in order to manage the risks of occupational fatigue of air traffic controllers through a safe alternation of duty and rest periods. Within the rostering system, the air traffic control service provider shall specify the following elements:

(1) maximum consecutive working days with duty;
(2) maximum hours per duty period;
(3) maximum time providing air traffic control service without breaks;
(4) the ratio of duty periods to breaks when providing air traffic control service;
(5) minimum rest periods;
(6) maximum consecutive duty periods encroaching the night time, if applicable, depending upon the operating hours of the air traffic control unit concerned;
(7) minimum rest period after a duty period encroaching the night time;
(8) minimum number of rest periods within a roster cycle.

(b) An air traffic control services provider shall consult those air traffic controllers who will be subject to the rostering system, or, as applicable, their representatives, during its development and its application, to identify and mitigate risks concerning fatigue which could be due to the rostering system itself.

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Aviation and Maritime Confidential Incident Reporting

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For help and advice to help you get back flying safely, download the 24-page ***Clued Up* Time to Get Going magazine** - it's packed with hints, tips, advice and features, simply search online for CAA CAP 2129

VERSION 3

UK Civil Aviation Authority

THE SKYWAY CODE

"As an aerobatic display pilot I really value the accessibility and helpful reminders of the SkyWay Code; it is a one-stop shop for everything you need to consider before you brief and head out to your aircraft to go flying. I encourage all pilots to take the time to read through this free online document."

Kirsty Murphy
Blades Aerobatic Display Pilot and former Red Arrow pilot

The SkyWay Code provides practical guidance for GA pilots, students and flight instructors on operational, safety and regulatory issues relevant to their flying.

Download your copy at: **www.caa.co.uk/skywaycode**