CHIRP GENERAL AVIATION FEEDBACK
Confidential Human-Factors Incident Reporting Programme

Traps for the unwary

Things might be getting back to 'normal', but we still need to be cautious.

Director Aviation: STEVE FORWARD

Reporting to CHIRP remains suppressed this year compared to norms due to reduced flying during lockdown conditions. However, there has been a steady flow of reports, increasing in recent months, mostly concerning distractions, task fixation and other issues associated with rusty pilots getting back into the air.

I've included 2 charts (on the following page) that illustrate the key factors that CHIRP has seen in recent GA reports, and a breakdown of the latent failings for the Top-7 of these. It's always dangerous to draw conclusions from a small sample size, but the overall messages are clear; procedures, aircraft handling, situational awareness and individual error from distractions all feature heavily and, within these, the 3 stand-out latent failings are the erroneous application of procedures, sub-optimal airmanship and reduced situational awareness in the air.

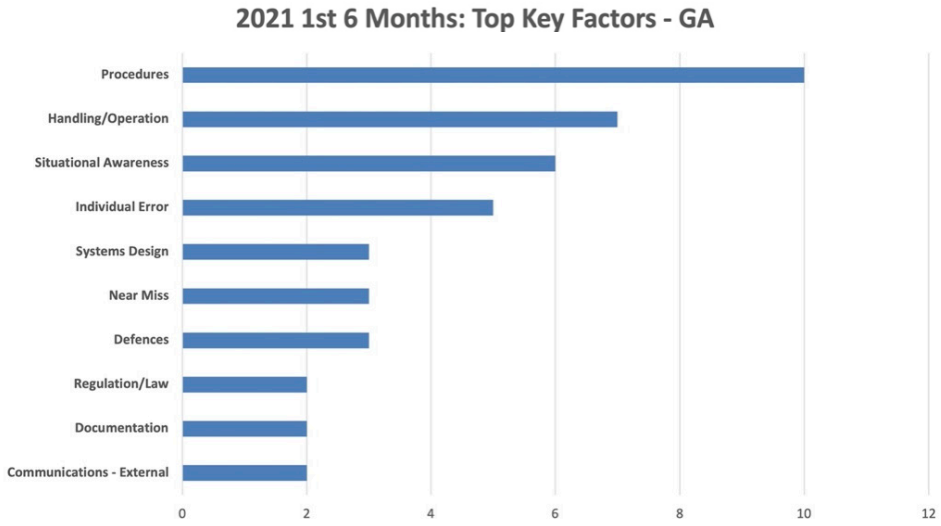
None of this is surprising given the long lay-off that many have experienced, but it serves as a timely reminder for us all to be cautious in our return to flying, beware task fixation, and don't let the myriad of other things distract you from the task in hand. We have a couple of reports in this newsletter that illustrate this well.

Another issue to be aware of is the need to understand what procedures have changed as a result of COVID-19 and make sure we're up to date with all the new regulations. There's a lot of information out there that needs to be reviewed and absorbed, and this requires mental capacity and time to assimilate.

CONTENTS

CONTACT US
01252 378947 | mail@chirp.co.uk
reports@chirp.co.uk | chirp.co.uk

For those with smaller devices, you can view this report in a single-column format. Open the newsletter in Adobe Acrobat Reader and select the 'Liquid Mode' icon in the toolbar.



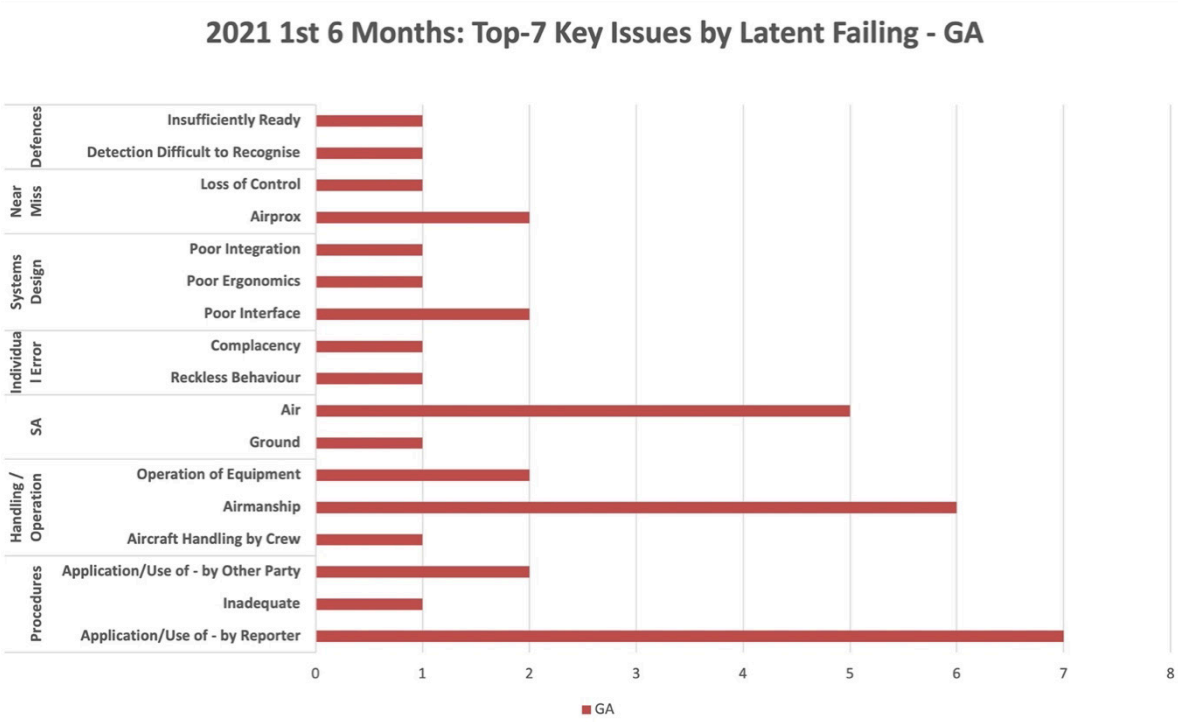
This is particularly relevant in respect of distractions and processing ability when airborne – the human brain is only able to absorb so much before it starts shedding overloading tasks or information. Our sister organisation, CHIRP Maritime, has produced a short video on this topic titled '[Sea of Distractions]' that, although focusing on maritime-specific issues, has parallels with many aspects of aviation workload and is therefore worth a look.

Within all of this we also need to be aware that others' risk appetites for post-COVID-19 operations may differ – including passengers, engineering and ground handling staff who may not have the same level of acceptance of the activity and this needs to be taken into consideration. Overt pressure to 'carry on', cope and achieve targets irrespective of prevailing circumstances can introduce unhelpful sources of stress that might have safety impacts of their own.

This applies not just to flight operations, but also ATM managers/ SATCOs, engineering and ground handling teams etc. Everyone is undoubtedly trying to do their best; there needs to be an acceptance that some tasks may take longer than expected due to changed circumstances.

Hopefully, the return to historic levels of flying will start soon, but it will likely be a stop-start process for many as we come to terms with the new-normal. There will undoubtedly be many associated problems and concerns that should be aired for the benefit of all so that we can learn from them before we experience them ourselves. CHIRP stands ready to help where we can, and also to publicise issues that may already have been formally reported elsewhere so that the wider community can benefit. One thing's for sure, it'll be a challenging time ahead; we all need to focus on maintaining safety and looking out for our colleagues in all aspects of aviation. One of the best ways of learning can be from sharing the experiences and tales from those who have been there before, and I have in mind setting aside a page or so in future FEEDBACKs to publish stories in the vein of 'I learnt about flying from that' (ILAFFT). I'm sure there are plenty of things that happen that don't necessarily get reported but which might just give someone else pause for thought in a similar situation. If anyone has any such engaging tales that have a definite safety message then please do send them in, we promise full confidentiality!

Stay safe!
Steve Forward, Director Aviation



COMMENTS FROM PREVIOUS FEEDBACKS

Comment No 1 – GA FEEDBACK Ed 86 Report No5 - Farnborough Airspace Changes

Following lockdown in 2020 and resuming flying in 2021 there have been several changes to controlled airspace in southern England. My experience of this was highlighted recently during a transit of Farnborough's airspace. I have flown over Farnborough many times without incident. The usual routing was via M3/J4 to Tongham. However, on this occasion I must admit to having been thrown by the clearance received. It went something like "... route via M3 from M3/J4 to Fleet Pond, not above 2000ft, direct to Farnham Castle..." Being unfamiliar with these other reporting points, I was trying to locate them on the chart, as well as flying the aircraft and looking out for other traffic. Needless to say I completely screwed up and missed the turning points.

The airfield was fairly busy at the time with executive jets both inbound and outbound, so I should be grateful to the controller to have received a clearance at all. The obvious lesson here is to study the chart more carefully at the planning stage and be prepared for unusual clearances. Apart from my embarrassment over this incident, I am sorry for any extra stress to the controller on that day!

"CHIRP *Response*"

There's a plethora of VRPs in the Farnborough area (some would argue too many and that a review by the CAA AIM Working Group would be useful), which can be hard to identify on a cluttered chart when the pressure is on. Good pre-flight route study is invaluable in ensuring a successful, stress-free flight, and this also includes making sure you're aware of any VRPs near your route that might be used by ATC when they provide you with a service in controlled airspace – in this case the controller used 3 out of the 4 available!

Although the frequency may have been busy, better to swallow your pride and ask for help rather than try to plough on if you're not sure – controllers will generally prefer making sure you know where they intend you to fly than having to sort out any conflictions that might arise if you're floundering about because you don't know what's being asked of you.

Finally, in busy airspace like Farnborough's, be prepared to orbit and, if asked to do so near a VRP, don't orbit overhead because there may be others also orbiting or routing in the area; if everyone does so over a VRP then there's increased risk of collisions – as the CAA policy for VRPs states, pilots should as far as practicable avoid direct overflight of a VRP – they are Visual Reference Points, not Visual Reporting Points.

Comment No 2 – GA FEEDBACK Ed 87 Report No1 – GA1281 – QNH vs RPS

With respect to the use of QNH vs RPS, CHIRP recently received an update from the Military Aviation Authority (MAA) following a request from us that they review their associated regulation (RA3302) to recognise that GA pilots will expect to use QNH by default rather than the military norm of RPS.

The issue arose when a GA pilot was told he had to set RPS when talking to a military controller when what he really wanted to do was to fly on QNH for airspace vertical avoidance reasons. We surmised that the military controller had perhaps sought to place him on RPS so that he could deconflict with military traffic, but we don't know that that was the case.

We commented to the MAA that if military controllers needed to ask GA pilots to use other than QNH then they should at least explain why, and also to allow GA pilots to use QNH if there were no deconfliction requirements. The nub of the problem is that on the one hand the CAA are advising GA pilots to fly on QNH, but when they talk to military controllers they are usually told to fly on RPS. We received the following response from the MAA:

> **MAA Comment:** The subject of RPS policy has been discussed in the MAA and, as it stands, there is no immediate plan to alter the regulation. RPS is used within the military because it provides mitigation against CFIT and MAC, and provides a common altitude reference for coordination/ deconfliction purposes when aircraft are operating within defined geographical areas.
>
> Use of RPS is ingrained during military training and any proposed change will need to be properly safety-assessed and subject to broad consultation which would take significant time. Additionally, we need to consider the HF implications with aircraft on different pressure settings when previously LARS traffic would all be operating on the same pressure.
>
> The points raised regarding provision of aerodrome QNH to civilian pilots and consistency in LARS provision are valid and acknowledged; these points will be taken into consideration in any future review of the regulations. In the meantime, military regulation states that if a pilot asks for the aerodrome QNH it will be provided, but the default setting is to provide the RPS unless asked.

"CHIRP *Response*"

GA pilots should take note that it is almost certain that they will be asked to fly on RPS when talking to military air traffic control units. Before doing so, make sure that you understand that this will give you a lower pressure setting than the local QNH, which will then result in you flying higher if you maintain the same height readout on your altimeter.

Depending on the pressure difference, this may be a factor if you're close to the base of controlled airspace (although, technically, RPS should not be used below controlled airspace – see the Airspace & Safety Initiative 'Key tips – Altimetry' and the Airspace section of the Skyway Code for explanations of the various types of pressure settings). Accepting the need for controllers to have all aircraft on the same pressure setting for deconfliction reasons, you are not obliged to use RPS, particularly if there's a risk of vertically infringing nearby airspace; you should ask for and set the relevant local QNH whenever feasible.

Comment No 3 – GA FEEDBACK Ed 88 Report No2 GA1291 - Jumping Gyroplane

Gyro pilots are taught to pre-rotate with stick fully forward and to bring the stick fully back as they apply full power to get airborne. A safety measure could be a micro-switch that would only allow pre-rotation with the stick fully forward; as soon as the stick is brought back the micro-switch could disengage the pre-rotation. But in my opinion take off with the pre-rotator still selected is a rare event. With regards to gyros, Phil Harwood wrote the modern handbook on pilot training for gyrocopters. I have attached a link to his section on rotor handling. https://m.youtube.com/watch?v=pQfqOqylaNc.

CHIRP *Response*

The main point in this report was that the gyroplane pilot got airborne with the pre-rotator engaged because he had been under pressure to take-off in a busy stream of aircraft and didn't fully complete his pre-take-off checks.

With regard to introducing ways to avoid getting airborne with the pre-rotator selected, bear in mind that modification of modern factory-built gyroplanes is strictly controlled and must be approved by the manufacturer; home-made solutions should not be considered. We've included the reporter's link to Phil Harwood's gyroplane material for interest, we stress that other sources of training and guidance are available, and our inclusion of this link is in no way a formal endorsement of that particular training product.

Comment No 3 – GA FEEDBACK Ed 88 Report No3 - ATC817 - FISOs and SRATCOH

As an experienced AFISO, one time Aerodrome manager and now an Ops manager with experience at a few units here and in Europe, I found this a very interesting article. Unfortunately, FISO fatigue has been an issue for years and I feel the only way it will be properly addressed is by the regulator because, despite being a regular agenda item at AUKFISO meetings since 2011, it has not been addressed by the aerodrome operators.

AFISO's do have control of aircraft, albeit when they are taxiing (and air taxiing for Heli's). Now you may think this is no big deal, but here goes. 1xFISO, 250 movement's, 3x runways, fixed wing, gliders, gliders and tugs, microlights, gyrocopters, helicopters, flight schools for all the above types of flying, busy circuits on multiple runways, plus the glider circuit, taxiways crossing runways, military helicopters, utility helicopters, refuels, vehicles and people airside, on manoeuvring areas, aprons and taxiways up to and including the hold.

This volume and complexity is not unusual. I worked for several years at [Airfield], here AFISO's deal with everything from microlights up to B747-400's and they will soon have an RNAV approach operational, as will other units. Approaches require additional information and phraseology, arguably the service is becoming more professional so I think it's high time the CAA reviewed the role of the AFISO — fatigue and human factors should be included.

Regarding comfort breaks, well, you can't take a break when you are dealing with several visitors who may be unfamiliar with the airspace plus the complex activity already mentioned, especially if they have PPR'd and are expecting a FISO service when they approach the ATZ.

I have worked at other units where there has been sufficient FISO cover for 200-300 movements. It is not acceptable to go in and out of service provision during your licenced hours at a moment's notice unless in very exceptional circumstances, an incident perhaps. Personally, I think if you only have one FISO available with no cover you should NOTAM that AFIS is not available and implement operational restrictions – based-operators only, or similar.

CHIRP *Response*

Our comments in FEEDBACK Edition 88 were not intended to belittle the activities of FISOs – 200+ movements are not uncommon at some airfields and we agree that proper rest and fatigue monitoring are an essential part of the provision of these often complicated services and this is something that airfield managers must take into account.

Equally, that intensity of operations is not that common elsewhere, so the variety in scale of movements and associated rest requirements would be difficult to legislate for at disparate locations. Whether that requires the regulator to intervene on a global level rather than locally to address specific examples of bad practice is open to debate.

If this is a widespread problem then the current approach may indeed need to be reviewed but, in order to do so, the CAA will require evidence, so fatigued or over-extended FISOs should submit ASRs/MORs either through their airfield's SMS or individually using the voluntary occurrence reporting process. This will then cue the CAA to the issue and the potential need for either local or global intervention.

Reports

Report No.1 – GA1292 – Transponder purposely rendered unserviceable

Report Text: I have rendered the transponder in my aircraft unserviceable and thus reduced visibility to other airspace users. I did not want to do this however I feel that I have no choice because of the CAA's abuse of the Mandatory Occurrence Reports [in the reporter's opinion - Ed]. EU regulations (now presumable copied into UK law) prevent use of MOR information for the purposes of apportioning blame or liability.

However, the CAA are doing just that. The CAA are also provisionally suspending licences until a pilot performs some remedial action. Provisional suspension is only permitted by the ANO during investigation however the CAA are abusing this and using it after the investigation is complete. The reason would appear to be that with a provisional suspension there is no right to a Regulation 6 review.

Because [in the reporter's opinion - Ed] the CAA are behaving unlawfully, I have decided that I have no choice but to render my transponder unserviceable as I am legally permitted to do. I am not alone and I have a friend, who is an instructor, and, after suffering the unlawful MOR process [in the reporter's opinion - Ed], he permanently removed, and sold, his transponder.

Company Comment: Mandatory Occurrence Reporting has been both an international and a national legal requirement for decades. The purpose of occurrence reporting is not to attribute blame or liability but to improve civil aviation safety by ensuring that relevant safety information is reported, collected, stored, protected, exchanged, disseminated and analysed, and appropriate safety action is taken to prevent recurrences.

Aviation authorities are required to investigate and to be proactive. Individuals and organisations within civil aviation are required or otherwise encouraged to report occurrences. Airspace infringements are a reportable occurrence under the relevant rules.

The MOR scheme is part of 'just culture' in civil aviation (see CAP1404, p5). A just culture does not relieve people of accountability for their actions but promotes participation in safety reporting processes and analysis to prevent recurrences. MORs are subject to legal protections relating to confidentiality and the purposes for which the information contained therein can be used. They must be, and are, treated confidentially to maintain full and free reporting from the aviation community and to protect the identity of organisations and individuals, whether they are, for example, pilots, air traffic controllers or airline operators.

Consistent with the international and national legal obligations described above, the purpose of the CAA's Airspace Infringement process (see CAP1404, p6) is to improve safety by ensuring that reported infringements are reviewed and assessed in a consistent way and, if an infringement is found to have occurred, to identify appropriate remedial actions to prevent recurrence.

The process, set out in CAP1404, is aligned to the purpose. It is a proactive process. MORs of airspace infringements are analysed and investigated, and appropriate safety actions are taken to prevent recurrence. The CAA shares all relevant details with pilots who are the subject of a report. Confidentiality is maintained. Pilots are invited to provide their account and comment, and any other relevant information. The review, evaluation and assessment criteria are clearly set out and explained in CAP1404. The remedial actions (see CAP1404, p13-14) are designed to, and focused on, avoiding recurrence. The publication of CAP1404 ensures the process is transparent.

In addition to obligations under the MOR scheme, the CAA is also required by law to ensure that licence holders meet the competency standards required for the privileges that they hold. In a very small number of cases, the infringement is so serious, or is one of a number of infringements by the same pilot, that the CAA is not satisfied or cannot verify that the pilot meets the competency standards and so will provisionally suspend the pilot's licence pending verification that the pilot is competent, as provided for in its legal powers.

"CHIRP *Comment*"

The airspace infringement investigation process is a topic of lively debate in the GA community. It's worth noting that the Airspace Infringement Working Group (AIWG) provides guidance to the CAA on how infringements should be investigated, and the GA-heavy membership of this group are focused on making sure that infringements are looked at in terms of safety and education rather than prosecutions.

Although the AIWG do not assess specific infringements, they have been integral in ensuring that the CAA's internal ICG (Infringement Coordination Group) process is fair and safety-orientated. They have also asked the CAA to look at the way they contact people after an infringement is notified, and particularly the contents of their initial notification letter which could previously have been interpreted as somewhat blameworthy in its content. The AIWG also input to the recent edition of CAP1404, which now describes the infringement investigation process in a much clearer way.

Whatever one's personal views of the infringement investigation process are, there is no case for disabling transponders as a pre-emptive measure to subvert the process. Not only will this deny yourself the use of some airspace, it is an irresponsible action that impacts the safety of others; ATC will be denied vital situational awareness, and other pilots' collision warning systems that rely on transponder information will be rendered useless.

Irrespective of what we may think of the CAA's handling of infringements, transponders are safety tools that have wide-ranging benefits to all. Disabling transponders is unlikely to prevent tracing of an infringing aircraft anyway, primary radar recordings can often be used to determine departure times and locations of aircraft that are suspected of infringing airspace.

Notwithstanding, we agree that the CAA's communications on, and handling of, infringements could have been better and we welcome the fact that they have recently changed the content of their initial contact letter to alleged infringers, which is now much more collaborative in tone.

To put this in context, the reality is that less than 0.25% of pilots infringe, many alleged infringements are closed with no further action due to inconclusive information, few infringers are prosecuted, and the process has been focused much more on education in recent months. Most pilots who are found to have infringed receive only an advisory letter, and about 30% or so are required to attend an Airspace Infringement Awareness Course (AIAC), akin to the speed awareness course for drivers. More information can be found at CAP1404, associated CAP2125 FAQs, airspace statistics and CAA Airspace infringements website.

As for the use of MORs in the infringement process, it should be noted that it is mandatory for a controller to submit an MOR (or an ABANL – Alleged Breach of Air Navigation Law) if they observe an airspace infringement. The use of an ABANL is a legal instrument that would likely result in costly legal involvement for alleged infringers whereas the MOR process is a more flexible tool.

The reporter's assertion that MORs are being used inappropriately for investigations is something of a moot point, if the CAA becomes aware of an infringement by MOR or any other means then it is duty-bound to investigate. The key is to avoid infringing airspace in the first place. Thorough pre-flight planning, the use of GPS-based navigation systems, and talking to ATC are important mitigations, as is the use of the 'Take 2' philosophy whenever you can so that you are no closer to airspace than 2nm horizontally or 200ft vertically whenever possible.

'It's critical that everyone reads their NOTAM brief. Not all NOTAM can be depicted graphically on a map'

Report No.2 – GA1294/ GA1295 – SkyDemon NOTAMs

GA1294 Report: Last year I was flying around the Kent Coast using SkyDemon. I had plotted a route roughly round the coast and not seen any NOTAMS to affect. When I got to Dover I was suddenly alerted that I had entered a RA(T). I quickly exited but couldn't understand how I had missed it. I don't spend hours poring over the map and neither do I wade through an incomprehensible list of mostly irrelevant NOTAMS. I plot my route and look for NOTAMS that will affect it. I was quite cross with myself for missing it during planning.

Then, last week, I noticed a drone in The Channel on FlightRadar24. So I went into Skydemon to see what restrictions there were and there were none shown. I drew a line across the Channel to see if that would tease them out, but no. I checked the NOTAMS list in SkyDemon and, sure enough, there were some in that area (obviously hard to tell from a list of grid refs). Pressing the "View on Map" button forced it to briefly reveal itself.

Some discussion with friends ensued, and one of them found that there is an option, buried in SkyDemon that allows selecting/de-selecting to show graphical NOTAMS. You have to click the layers button and then select Airspace and then you can tick or untick the box. The thing is that I wasn't aware of this option and I've certainly never knowingly unticked it. It was unticked on both my phone and tablet. I thought perhaps that turning it off might result in a big warning somewhere on the screen or perhaps in the Warning list, but no.

I think the lesson here is that moving maps, which are now being heavily touted by the CAA, are still not failsafe –you can easily end up in a situation where NOTAMS are not shown and without knowing that you are missing them.

GA1295 Report: I have noticed a few times before that SkyDemon does not correctly plot NOTAMs, especially where UAV are concerned. On this occasion, a NOTAM for a restricted area was given which did not display the correct shape; I checked with the NATS and NOTAMinfo sites and the NOTAM had been displayed incorrectly on SkyDemon. On NOTAMinfo the correct area was displayed; the same NOTAM on SkyDemon was wrongly shown as a circle that was larger than the extremes of the NOTAM in places. SkyDemon is only useful for NOTAMs when they have been checked against another source. Using it for NOTAMs that pop up after departure is better than nothing, but for smaller, irregular pieces of airspace it can be wrong.

SkyDemon Comment: The most important thing about the first report is that the reporter begins by admitting that he does not bother reading the NOTAM brief. It is critical that everyone reads their NOTAM brief. Not all NOTAM can be depicted graphically on a map, and possibly this person has been lulled into a false sense of security by the fact that most of the time, they can. All our documentation emphasises the importance of reading your NOTAM brief. The secondary factor is that the user turned off graphical NOTAM depiction. All users are at liberty to do this; not everyone likes the feature and for those that choose not to use it, it would be very annoying if we warned them constantly about their choice.

We cannot comment specifically on the second issue because the NOTAM does not appear to currently exist. However it's important to understand that perfect graphical depiction of NOTAM is not possible, because the NOTAM system was not designed to convey geometries in this way.

Instead, we machine-read NOTAM Item E and in most cases are able to interpret the coordinates and display a useful polygon to the user. In the few cases where we can't do this, we fall back to showing the circle of influence of the NOTAM (from its Q line). This likely shows an area larger than the NOTAM author intended but is failsafe, putting the onus on the pilot to determine for themselves whether the NOTAM will affect their flight. If a user reports a NOTAM that they think we could depict better, we would usually investigate.

❝ CHIRP *Comment* ❞

The use of electronic planning systems has revolutionised flight planning and execution but, as with all things computerised there are traps that we can fall into if we're not careful or don't understand how the systems are set up. In that respect, it's important to properly familiarise yourself with whatever electronic aids you plan to use in flight before you use them so that you're aware of their foibles and nuances of use (we understand that the use of electronic navigation aids will be added to the PPL syllabus in the coming months in recognition of their growing popularity).

There are arguments for and against having some form of warning that graphical NOTAMs are deselected, and any such warning would need to be mechanised in such a way as not to become a frustration in itself.

In the case of the first report it seems that the graphical display of NOTAMs must have been deselected at some point because SkyDemon confirm that the default installation is that they are selected on; they also confirm that display settings are not applied across devices registered to an account so, if they are changed on one of them, it shouldn't alter the others.

The bottom-line though is that you should always get into the habit of reviewing the NOTAM list itself to understand the content of any that might apply whether or not they are displayed graphically on the screen. With regard to the display of complex NOTAM shapes, electronic planning systems rely on automatically-read coordinates and, even when these are correct within the NOTAM information, some systems are not able to draw the associated complex shape. This appears to be the case for the second report, where SkyDemon reverted to a simple circle that encompassed the entire NOTAM shape. Although undesirable, at least this meant that it displayed the NOTAM in the safe sense of being too large rather than not displaying some elements of the NOTAM at all.

We understand that the latest version of SkyDemon has improved NOTAM display capabilities and so it is hoped that reversion to a simple circle will be less common. Finally, for those using the NATS www.ais.org.uk website for NOTAM information, be aware that the site changed its address to www.nats.aero/ais on 12th August 2021.

Report No.3 – GA1296 – Airspace infringement

Report Text: My first flying for 8 months after lockdown. Went up from [Airfield 1] with a more experienced pilot on a local flight for 1 hour refresher and landed back at [Airfield 1] to drop off the other pilot followed by an immediate departure for [Airfield 2] via [Reporting Point]. Contacted [Radar Unit] and stayed with them until 10 miles from [Airfield 2]. Realised abeam [Airfield 3] that I had failed to reset the QNH from the QFE at [Airfield 1]. SkyDemon log shows that I flew at about 2800' during that period with a max of 2900' in London TMA Class A.

On landing back at [Airfield 1] I asked whom I should contact to explain and apologise but they said there was no record of any infringement. Why was I not advised in flight by [Radar Unit] that I was too high? I haven't been contacted by anyone re the infringement.

Lessons learnt: Failure to rigorously go through checks on an immediate second flight; not checking correct QNH when first advised by [Radar Unit].

❝ CHIRP *Comment* ❞

CHIRP is grateful to the reporter for their frank and honest report, and their permission to publish. We were able to review a recording of the flight and this showed no Mode C/Alt readout at all for the duration of the flight. We relayed this to the reporter, who conceded that it was possible that they may have forgotten to select Mode C/Alt on. With no Mode C/Alt showing, ATC would have 'deemed' the aircraft to be outside controlled airspace and so that was probably why no infringement was recorded.

But that is not to say that there might not have been a serious risk of mid-air collision because ATC would not have given potentially conflicting traffic in the controlled airspace any avoiding action on the reporter's track because they would have deemed it to have been outside controlled airspace.

It's good practice to periodically ask ATC for a height readout check to ensure that transponders are functioning correctly, especially if you are planning to fly near or into controlled airspace, and it's worth remembering that on initial contact with ATC you should pass Callsign, Departure Point & Destination, Present Position and Level (see CAP413 para 3.31); this may have prompted the pilot to note that the altimeter setting was wrong.

But the main lesson from this report is to highlight the insidious effects that skill-fade and distraction can have after a long lay-off when you are potentially unknowingly working at maximum capacity; we all need to take note. As a final reminder, and although not deliberate in this case, apart from certain exemptions, SERA.13001-13020 requires transponders to be turned on at all times, with all available Modes A, C and S selected (as appropriate to your transponder's capabilities) unless otherwise directed by ATC.

Report No.4 – ATC818/ GA1301 – Airfield airside driving

Report Text: I was operating in a ground vehicle on the manoeuvring area during a promulgated closure that the tower controller had also advised me of via RT. During this period I was waiting to re-enter the active runway when a medical helicopter and a fisheries patrol aircraft both called up on frequency, unable to raise ATC on RT. The pilots (clearly unaware of the closure) eventually realised that ATS was closed and communicated their intentions with each other clearly. Both aircraft were inbound to the airfield. I was unable to establish visual contact with either aircraft so decided to wait calling on RT and entering the active runway.

The helicopter pilot then announced he was approaching the active runway from the reciprocal end - not appropriate or safe in my opinion - before breaking off into an impromptu right hand circuit and go around. The other aircraft meanwhile was orbiting awaiting ATS to reopen (which had not happened at the promulgated time and subsequently opened 15 minutes later).

Having established visual contact with the helicopter now downwind, I announced my intentions to enter the runway and vacate. The helicopter pilot acknowledged before turning into a very short base leg and final and announced he would remain West of the runway intersection. Why he couldn't have flown a standard traffic pattern or extended downwind is beyond me.

As a vehicle driver on an uncontrolled airfield with active traffic I felt that safety was seriously compromised and an incident could easily have occurred. This is happening far too often of late and is becoming very concerning. These closures are regular and the airfield has a lot of helicopter traffic that approaches from all angles, meaning airside drivers have to be extremely alert at all times. In my view, it won't be long before the holes in the Swiss cheese line up and an incident occurs.

As a GA pilot I have visited uncontrolled airfields regularly and have also driven on airfields outside of operational hours; however, I have never had to deal with a situation like this. It serves as a key reminder for both aircrew and ground crew to constantly maintain the highest vigilance whether there is an ATS service present or not. Also standard procedures for joining the circuit are vital - I have NEVER seen anyone join via an approach to the reciprocal before breaking off to downwind. What happened to Standard Overhead Joins?

Report GA1301: I am a member of a Flying Club that operates on a fairly busy active airfield. The Club's facilities of Clubhouse, Hangar and Fuel Bowser are all situated on an active part of the airfield. There is an agreed, well-used and satisfactory arrangement to transit back and forth to the Club's facilities.

I arrived at the airfield to carry out some admin tasks in the Club House. I initially followed the agreed and reliable procedure including the signing out of a hand-held ground radio from the security office at the main entrance. I drove to the painted FOD checking area at the edge of the active airfield, inspected my tyres etc., for FOD and then drove on and into an active taxiway without ATC clearance. My radio was switched on and I could hear other radio calls.

On arrival at the Clubhouse I picked up my radio to report 'taxiway vacated' and, in that instant, realised that I had proceeded without clearance - fortuitously there were no aircraft using the taxiway at the time. I immediately contacted the Tower on the ground radio to report and apologised for my unauthorised vehicle movement. I followed this up with a call to the ATC supervisor in order to further apologise and confirm the details of the event.

At the time, and subsequently, I am unable to account for why this happened, my radio was switched on, I had heard other vehicles receiving clearances and I had noted helicopters flying. I have twenty years' experience of driving on airfields with radio communication and have never even come close to doing this before. I visit the flying club more often when ATC are open than when they are closed so I am very familiar with the correct procedure. I have visited the flying club several times in the last few weeks, both with ATC open and closed, so I don't believe "recency" to be an issue.

It is easy to make a mistake with a routine task. I now place the radio on the seat of the car whilst checking for FOD - to get back into the car I must pick up the radio, thus reducing the chance of repeating the incident.

"CHIRP *Comment*"

For report ATC818, if the airfield was notified as non-ATC then it would likely have reverted to Air/Ground (A/G) status unless otherwise specified. If it was operating as A/G then the helicopter pilot was within his rights to use any runway direction that he wanted provided he integrated with other circuit traffic.

In that respect, it sounds as if both aircraft had communicated with each other and so they were probably deconflicting amongst themselves. However, it's important that everyone is aware of what was going on, including those driving vehicles on operating surfaces, so communication is the crux of the issue – airfield operators need to make it clear to all users when there will be sterile periods, non-availability of service and what the 'out-of-hours' procedures are.

Report GA1301 offers a different perspective about airside driving. It's clear that this was an unfortunate and uncharacteristic slip that may have resulted from the routine nature of the event which probably meant that the reporter was somewhat on 'autopilot' at the time, having done this journey many times before.

Unconscious competence is a well-known human factors phenomenon where tasks with which we are very familiar end up being completed by 'muscle memory' to the extent that we have no recollection of doing, or not doing the task even shortly afterwards.

An example being driving a car, where we've all no doubt experienced the situation where we arrive after a long journey with no recollection of how we got there.

Unfortunately, because our minds' are not fully engaged, unconscious competence can easily slip into unconscious incompetence when we miss out a step in the process. The reporter's analysis is spot-on; one way of breaking this chain is to insert an additional task that requires conscious effort – picking up the radio from your seat being a good way of reminding you to make that call. Hopefully, there's a sign at the FOD-check area reminding drivers to call ATC before entering the taxiway but, if not, that might also be a suggestion for ATC.

Both reports highlight the need to maintain situational awareness of active runways/strips when driving or operating on any airfield, and that pilots also need to be alert and ready to go around at any time in case a runway/taxiway incursion occurs. Aircraft always have priority on an airfield whether or not ATC are operating, and it is the driver's responsibility to give way to aircraft at all times. The ATC818 reporter's comment "*It serves as a key reminder for both aircrew and ground crew to constantly maintain the highest vigilance whether there is an ATS service present or not*" says it all – this is the key message.

Report No.5 – ATC818/ GA1301 – Airfield airside driving

Report Text: The walk-round was going well until the port cowling fasteners proved difficult to fasten; blood and swearwords were spilled. I did the rest of the walk-round while waiting for advice from a fellow pilot by email, by which time I'd got them fastened. On the take-off run I noticed that the speed wasn't building, and realised that the pitot was still covered. I had room to stop, taxi clear and shut down to correct my error - the rest of the flight went well.

There are those who HAVE tried to take off with the pitot cover in place, and those that WILL try - I have moved from Category 2 to 1... The cover had recently been put back into use, and it was the first time I'd seen it on this aircraft - I was used to not needing to do it. Remove the cover as soon as possible - I could have done it while removing the tiedowns. I should perhaps have started the walk-round again, with more attention paid to the checklist I had with me. The pre-take off emergency brief "If there's a problem on the runway - stop (etc.)" drummed into me by my instructor is clearly important!

❝ CHIRP *Comment* ❞

As the reporter comments, they will not be the first to have missed something during pre-flight checks due to distractions but it seems that another aspect was the change to procedures in using the pitot cover which also meant that this was a new element that didn't quite fit in with their usual habit/ SOPs. Pre-occupation with one aspect of checks (in their case the fasteners that wouldn't close) is a well-known human factors issue that can cause us to mentally move away from our normal routines. Add in the new pitot cover procedure and this was a recipe for error to which many would have succumbed.

The important thing was that the reporter did exactly what they were taught on recognising that the airspeed was not registering on take-off. This was a very good save; one of the most important checks one can do during the take-off roll is to confirm not just that airspeed is building, but that it is building as rapidly as expected.

As people get back into the air after the winter layoff and post-COVID lockdowns they need to be meticulous in doing their checks and take things carefully to make sure things are not missed if they get distracted by other issues. Engineers have learnt this the hard way, and many are taught that if they get distracted or focused on a single element of a procedure then they should consciously go back 2-3 steps in the sequence to make sure that things have not been missed.

It may not have helped in this case where the pitot cover was a new procedure, but at least it means that we positively have to think about what we are doing and this may trigger us to any errors. New procedures need to be deliberately introduced with care at all times so that they are properly included in our thought processes and routines.

Report No.6 – GA1298 – Task fixation

Report Text: My aircraft was built originally with Vacuum Gyros and standard 'six pack' panel. SkyDemon was used to enhance SA displayed on a kneepad-mounted iPad. Recent installation of Pilot Aware and associated traffic info led to more and more time looking in at my kneepad in flight which was deemed unsatisfactory and undesirable. I elected to replace Vacuum gyros with multi-function electric ADI and panel mounted touchscreen to enhance lookout and minimise 'heads in time'. I was also keen to verify my visual assessment of 500ft AGL against equipment for future A/G photo sorties planned with an observer.

The flight in question was a post-mod calibration and assessment flight involving medium level AOA calibration and assessment of toppling limits (if any) of the multifunction ADI/ DG together with an assessment of SkyDemon facility to toggle between altitude and Height AGL not previously attempted on the kneepad installation. The medium-level assessment was completed uneventfully and a remote mountain area was selected to test the AGL function.

Suitable gently rolling terrain was identified and the aircraft descended to approx 500ft AGL. When the touch screen was toggled to AGL, incorrect selection of the PLOG page (an adjacent screen option) resulted due to cockpit vibration; this required a further selection of 'Back' to return to original page. A further attempt was made with similar results. Third attempt was aborted mid-sequence due to concerns over time spent 'heads in' and attention returned outside just in time to observe a parked vehicle disappear under wing leading edge. I must have come perilously close to

infringing the 500ft rule and days of self-recrimination followed before I realised others might benefit from my mistakes hence this CHIRP.

Lessons Learnt:
1. Touchscreens are much more difficult to use in flight than on the ground in simulator mode due to cockpit vibration, unlike other more tactile systems (e.g. Radio/ Transponder) where rotary clicks can be felt and counted 'heads out' and the selection checked with a glance.

2. No territory is truly remote. A lone mud covered vehicle is difficult to spot at distance against a mud background especially where no roads/tracks exist.

3. Minimise in-flight selections on a touchscreen. Select required options on the ground before take-off then leave it alone.

4. Consider transferring en route info (Frequencies/Squawks etc) from the touchscreen to a Frequency Card or kneeboard before flight to minimise inflight workload and switchery.

❝ CHIRP *Comment* ❞
The reporter's comments are very well timed as people get back into flying now that lockdown is easing. Task fixation is a perennial problem which requires real discipline to overcome and the reporter's experience is timely in reminding us about its perils - the old adage of 'Aviate, Navigate, Communicate' is as relevant as ever, as is the 80:20 rule for time spent heads-out versus heads-in.

Much is rightly made of the temptations surrounding slavish following of the 'magenta line' and the ever increasing amounts of information that are available on contemporary avionics/hand-held equipment – they offer huge benefits in situational awareness overall but can end up draining capacity when things don't work as expected or require a degree of focus to select menus etc.

That being said, the 'old fashioned' searching for maps and dealing with the inevitable map-fold at an inopportune moment add their own levels of excitement at times. As a final thought, if you're planning to conduct a check of equipment that will require a degree of heads-in time then, if you're flying in a multi-seat aircraft, think about taking someone with you who can look out both for other aircraft and ensure terrain avoidance is maintained.

Report No.7 – GA1299 – When right of way is wrong

Report Text: Following the standard departure routing from [an airfield easterly runway], most aircraft will route eastbound. Controlled airspace and rising terrain to the north results in very little room for manoeuvre. I spotted another aircraft routing southbound on my left, approximately 2nm @ 11o'clock when first spotted, at the same altitude and with a constant bearing. Despite my [Aircraft type] being equipped with an Avidyne TAS605 system, the other aircraft was not visible on the G1000 display.

After about 15 seconds when the other aircraft showed no sign of having seen us, and now at a range I'd estimate as just over 1nm, I instructed my student pilot to make a 30-degree banked turn to the left to pass behind the other aircraft. During our turn, the pilot of the other aircraft may have made a very slight turn to their left, although the conditions were turbulent and it could just have been caught by an updraft. Our closest point of approach was approximately 1nm.

Lessons Learnt:
1. Despite having right-of-way, if the other aircraft hasn't seen you, it is incumbent upon the aircraft with right of way to avoid the collision.

2. When flying in congested airspace, a good pilot carrying out good TEM will consider the standard approach paths of all local airfields, avoiding common routings and VRPs when not talking to the appropriate airfield is good airmanship.

3. Even having a very well equipped aircraft with Garmin G1000 and Avidyne TAS605, if the other aircraft isn't emitting some sort of electronic Conspicuity (EC), collision avoidance still requires an active visual scan.

These three lessons were very well made to my student on this sortie!

❝ CHIRP *Comment* ❞
We all use expressions like 'On the right, in the right' to recall the rules, but it's worth remembering that there's really no such thing as 'right of way' in its purist form in such circumstances.

Although the rules of the air (SERA.3210) are titled 'Right-of-way' the text of the appropriate paragraph about converging aircraft (SERA.3210(c)(2)) only talks about who should give way to whom, not who has right-of-way. Although it's a subtle distinction, the wording is intentional for exactly the reasons the reporter mentions so that people don't operate under the impression that they have a legal authority to press on just because they have 'right-of-way'.

In such circumstances, SERA.3210(a) does require the aircraft with 'right-of-way' to maintain heading and speed, but that doesn't mean that you can't alter height for example. Also, at the point when collision risk becomes imminent then, as the reporter did, the overriding rules about 'avoiding collisions' take precedence over everything (SERA.3201 General and SERA.3205 Proximity) and so you must then manoeuvre as required to avoid the collision.

The reporter did exactly the right thing when sighting the other aircraft; monitor it to see what it does and assume that it's pilot hasn't seen you. If the other aircraft manoeuvres to avoid you then all is good, if it doesn't then it's likely that the other pilot hasn't seen you and so you will need to do something at an appropriate point. The decision about when to do something depends on the geometry and risk etc so it's not possible to be definitive, but when you think that things are getting too close and not improving, then act.

The reporter's point about Electronic Conspicuity is also valid; collision-warning systems will only work if the other aircraft is emitting a compatible signal. There are a number of systems in use and not all of them talk to each

other; transponder-based systems are not infallible because not everyone has a transponder fitted (although if they have a serviceable one fitted, then it's a legal requirement to squawk as required under SERA.13001).

Although this incident showcased a positive outcome by the pilot concerned, those experiencing an Airprox should report them to the UK Airprox Board (UKAB) at their website www.airproxboard.org.uk. They should also inform the ATC unit they are talking to because this will alert both the controller and possibly the other pilot to the incident so that relevant records and material can be retained. UKAB are not only interested in the close-shaves; incidents of this sort also provide useful perspectives about what went right in such encounters, which reinforce the messages they are trying to communicate.

Report No.8 – GA1300 – Aircraft not at circuit height in ATZ

Report Text: I was approaching [Airfield] from the North in my Eurostar EV97 for an overhead join at 2000ft AGL. I heard [other aircraft] make a downwind radio call for runway [xx] left hand. I then spotted the aircraft to my port side (10 o'clock) at the same height 2000ft AGL, forcing me to take avoiding action. The [other aircraft] looked to remain at this height until calling final runway [xx]. His steep approach meant he had to 'go around' and I recall this was their second 'go around' before landing. When I spoke to the pilot on the ground, they seemed unaware of the height error, said they were 'having trouble with thermals' and apologised.

Lessons learnt:
When joining overhead, keep visually scanning your heading and height as well as the circuit traffic even if the radio calls suggest no other traffic is in the circuit. Never assume an aircraft is where the pilot says it is, especially in the circuit.

❝ CHIRP *Comment* ❞
From what the reporter says, it certainly seems that the pilot of the other aircraft was much higher than they thought when they called 'Downwind'.

The reporter's comment about the need to stay alert and maintain a good lookout in the visual circuit despite what other pilots might call on the radio is wise guidance for all, ensuring that you have built up situational awareness about what is going on in the visual circuit before you join is vital, using all available sources of information: radio calls from other pilots and the tower; Electronic Conspicuity equipment if fitted; and thorough lookout to ensure that other pilots are where they say they are – and don't forget that there may be pilots operating with no radio so a positive check of all parts of the visual circuit and joining tracks should be conducted before you yourself join.

Although no-one intentionally does these things, mistakes can happen, and lookout should always be prioritised as the primary means of deconfliction. Sadly, there are many instances where, despite the protection of an ATZ, aircraft come close to each other either because they were not maintaining their own situational awareness or procedures have not been properly followed.

As ever, it's always worth refreshing yourself about procedures now and again, and the Skyway Code has a useful piece in the Aerodrome Operations section about visual circuit procedures and associated calls that serve as a good reminder to all.

Although this incident is a timely prompt about the need to follow procedures in the circuit, as in the previous report, CHIRP recommends that pilots notify such incidents to the UKAB (www.airproxboard.org.uk). As we mentioned before, UKAB is not just interested in the close calls, they also like to publicise such lessons as this for the benefit of the wider community. They have access to radar recordings which will also enable them to determine both aircrafts' parameters, and they will also contact the other pilot to get their perspective, which is something that we at CHIRP have no remit to do. They're a friendly bunch at UKAB, and they'll be delighted to look into any report and review the circumstances; they also operate to the same confidentiality remit as we do at CHIRP.

CHIRP
Aviation and Maritime Confidential Incident Reporting

Steve Forward
Director Aviation – ATC, Flight Crew and GA

Jennifer Curran
Cabin Crew Programme Manager – Cabin Crew

Phil Young
Engineering Programme Manager – Ground Handling and Engineering

Rupert Dent
Drone/UAS Programme Manager - Drone/UAS

CHIRP, One Kingdom Street, Paddington Central, London, W2 6BD
01252 378947 | mail@chirp.co.uk | reports@chirp.co.uk
chirp.co.uk