Coventry Aeroplane Club
Est 1932

Members' Newsletter

The Newsletter of Coventry Aeroplane Club — Issue 7, Summer 2020

COVID Updates and the Return to Flight

It goes without saying that the virus situation continues to move quickly and it's not possible to provide a rolling update here but did you know that many medicals and ratings which were due expire in the coming months have now been extended by the CAA until November 2020?

Thanks to our corporate membership of AOPA, we can bring you a roundup of the main news and a great jumping off point for you to do your own exploration.

1. CAA Alleviations for EASA part-FCL licence holders.
https://publicapps.caa.co.uk/docs/33/ORS4No1385.pdf

2. CAA Alleviations for non-EASA licence holders.
https://publicapps.caa.co.uk/docs/33/ORS4No1378.pdf
The intention is to align alleviations, dates and requirements with those stated in ORS4 No.1385 for Part-FCL licences.

3. AOPA On-Line Validity Extension Briefing Guide.
AOPA has developed a website tool to assist understanding of the requirements of the CAA's recent ORS4 documents. Pending clarification from the CAA concerning national licence alleviations, the system is currently set up for Part-FCL and Part-MED ratings, privileges and certificates only.
https://www.aopa.co.uk/training-safety/coronavirus-extensions-to-licence-ratings-medicals-certificates-etc-tool.html

4. National UK Pilot Licences post-8 April 2020.
Pilots are reminded that neither the legacy UK PPL nor the NPPL may be used to fly EASA aircraft, irrespective of the pilot's medical circumstances. The CAA released the following information last month:

"UK national private pilot licence holders are not able to fly an aeroplane with an EASA certificate of airworthiness from 8 April 2020 due to a European Aviation Safety Agency (EASA) derogation expiring on 7 April and not being renewed. The change does not affect balloons or sailplanes including powered sailplanes."

This means that if, for example, a pilot has been flying a Cessna 182 / PA28 etc. using a legacy UK PPL, then they may no longer do so unless the licence is converted to a Part-FCL licence. The process to convert to a Part-FCL licence is fairly simple and may be viewed at
https://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=452
and the relevant form for other than online applications is available at
https://publicapps.caa.co.uk/docs/33/SRG1104Issue11enabled.pdf
Note also that to exercise the privileges of a Part-FCL licence on both EASA and non-EASA aircraft once the alleviation of ORS4 No.1370 has ended, a Part-MED medical certificate will be mandatory - it will no longer be permissible for Pilot Medical Declarations to be used with Part-FCL licences.

5. CAP 1913 - Exemption Guidance.
https://www.caa.co.uk/CAP1913
An easy-to-read guide to the various exemptions.

6. CAP 1925 – Preparing to Return to Flight for GA Pilots
https://www.caa.co.uk/CAP1925
Guidance to help GA pilots return safely to normal operations in line with Government advice. Consider also listening to the CAA podcast highlighted elsewhere in the newsletter.

Have You Been Recently?

Have a CovAero FI Check Your Validity...

Whilst the CAA has extended ratings and medicals as described above, it's worth remembering that the **90-day recency requirement** for carrying passengers has **not** been extended. This means that in order to carry passengers the pilot in command must have completed at least 3 take-offs, approaches and landings in a type/class of aircraft before carrying passengers in that class/type of aircraft.
Although the club aircraft are not currently available for hire, the 90-day recency requirement will apply when hire does eventually get reinstated.
If you would like a Flight Instructor to advise you about your own validity please email **licencecheck@covaero.com**
Scans of logbooks and licences are accepted.

Stay Informed with CAA Skywise

SKYWISE
Tailored news, notifications & alerts from the CAA

If you have not already signed up then head over to the CAA website https://skywise.caa.co.uk/subscribe to receive regular emails from the CAA about subjects of your choosing ranging from the latest COVID information to airspace changes and our upcoming exit from EASA.
A mobile/tablet app is available from the same location if preferred.

Love is in the Air!

Club members Rich and Lauren mix married life and flying!

Back in 2017 I surprised my partner Rich with a trial lesson experience for his birthday, he had always said he would love the experience of flying a plane as opposed to jumping out of one. For 7 years he had served in the military as a Paratrooper and therefore spent a lot of time in planes but not flying them. The experience had provided the exact effect I had expected…he loved it!

After racking my brains for several months regarding what to get Rich as a wedding gift, I started to research how he could go about obtaining a private pilot's license. It was at this time I contacted Coventry Aeroplane Club and initially spoke to Claire, the clubs chairwoman. I explained to Claire that I wanted to surprise my husband-to-be with flight lessons so that he could get his pilot's license, but I had no idea where to start. Claire was incredibly helpful and provided me with all the information I needed to have a better understanding of what would be required. In addition she put me in touch with aviation medical professional who could provide guidance on the requirements for the medical examination, as this was something I was concerned about due to Rich being medically discharged from the military.

After speaking to the aviation doctor my mind was put at ease about this idea being a possibility for Rich, so I contacted the club again and spoke to Neil who kindly arranged a visit for myself and my father to speak to him and the instructors before I went ahead and booked anything. I was overwhelmed by the level of information, support and help Neil and the club offered to make what I thought was just a silly idea into a real possibility.

So on the morning of our wedding 13th July 2019, Rich opened his present to find he had been registered as a member of the Coventry Aeroplane Club, had his first lesson booked in for when we returned from our honeymoon, a flight training manual and a flight log book. Rich was thrilled and so was I, as this would not have been possible without the clubs members' discretion with what I was trying to do, their time, help and most importantly their support. I'd like to say a huge thank you from myself, as you've helped me make a dream of Rich's into a reality and I've started our married life with huge brownie points!

Thanks all!
Lauren

Up, Up and Away!

Congratulations to club member **Matt Gittings** who managed to pass his PPL Skills Test just before the lockdown came into force.

To all of those currently grounded flight students chomping at the bit for their own skills test: sit tight, your time will come!

In the meantime, well done Matt from all of us…hopefully you've used the lockdown to plan some great flights!

ABOVE: a fabulous study of RAF C-130K XV292 in full flight.

A Triple Hush

Multiple engine loss ('Triple Hush') over the Eastern Atlantic: a time for cool heads and clear thinking!

At the start of the Falklands Conflict in April 1982, British Forces swung into overdrive and were sent quickly in response to the Argentinian military action in the South Atlantic. All three services were required to gather all available resources in double quick time, to assemble Task Force 317 and then travel the 8000+ miles to the Falklands.

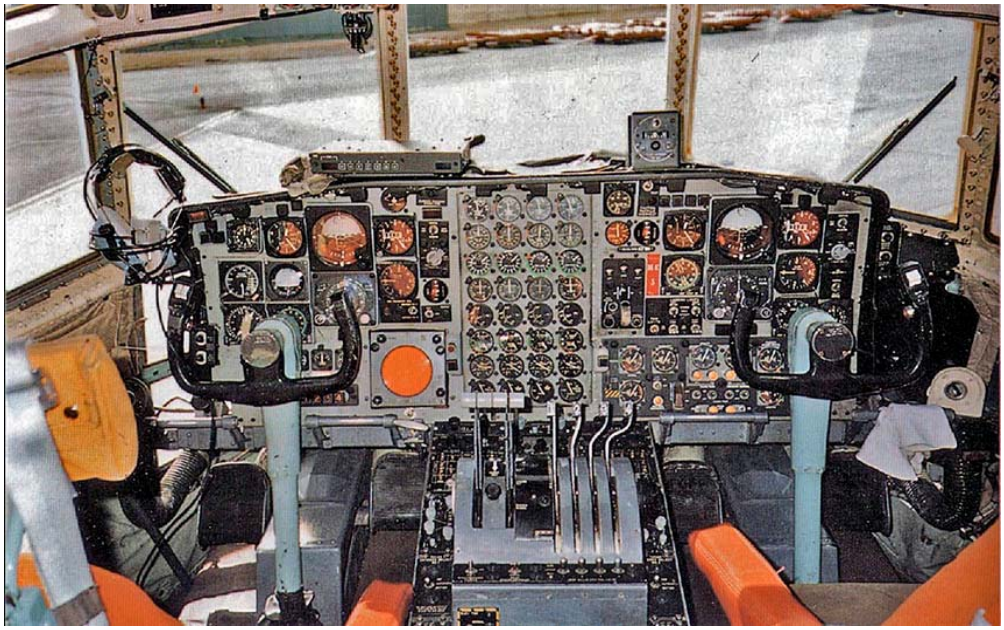
What happened over the next several months amazed us all. For once the Royal Navy, the British Army and the Royal Air Force achieved what seemed the impossible – cross service co-operation!

I was serving as a captain on LXX Squadron at RAF Lyneham on the C130 Hercules. Our task was to transport equipment, supplies and munitions, initially as far as Ascension Island for onward delivery to the Task Force. To enable an individual aircraft to keep flying and thus productive, Lyneham crews were organised as constituted 'Slip Crews' into a 'Slip Pattern' and the aircraft, and its payload, was handed over or 'slipped' to a fresh crew at each land based refuelling stop.

Normally the RAF operate to peacetime or CAA equivalent rules regarding engine out performance (Performance A), but at the start of OPERATION CORPORATE, the name given by MOD to the mission, the Hercules C-130K Maximum Take-Off weight (MTOW), was raised by 20000lbs (almost 10 tons), from 155000lbs to175000lbs. This was known as 'Military Operating Standards' or 'MOS' with commensurate reduced safety margins in the effect of engine failure on Take Off.

In normal peacetime operations, a single engine failure would not or should not cause a problem with aircraft handling, and controllability, during all phases of flight. However operating at the heavier MOS, during the take-off there is no such luxury and power reduction would be necessary on the opposite live engine to avoid uncontrollable yaw (lateral swing) below the minimum control speed on 2 engines (V_{MCA2}).

On 9th April my LXX Squadron crew left Lyneham on our first CORPORATE slip pattern; flying Hercules XV204 and operating task ASCOT 4773. The radio call sign was and still is today, a left over from Air Support Command Operational Traffic (A.S.C.O.T). Our route to Ascension was via Gibraltar and Dakar (Senegal). We flew with a basic crew, ground support being deployed down the route earlier, for aircraft turn round servicing.



ABOVE: There might be 4 of everything but many of the analogue gauges and controls will be familiar to PA-28 drivers

My crew consisted of Flying Officer Chris Tingay (Co-pilot), Squadron Leader Chris Morris (Nav), Flight Sergeant Gordon Hampson (Air Engineer) and Sergeant Keith Jones (Air Loadmaster). On arrival at the aircraft, the flight was significantly different and non-standard, as the crew were given 'ground type respirators', just in case our 'Wizz Bang' payload got a little too 'Wizzy' or 'Fizzy'!

The outbound route was fairly uneventful; despite being much heavier than usual in that we were now operating to Military Operating Standard (MOS).

Our next 'leg' in the 'slip pattern' was to operate ASCOT 4785 with XV292 out of Gibraltar to Dakar for a refuelling stop en-route to Ascension. The Gibraltar runway is fairly short, (6000') with the added difficulty of having to turn left shortly after take-off from Runway 27, to track 150M to avoid infringing Spanish airspace on the other side of Algeciras Bay. Operating to the heavier MOS, the standard 'Take Off brief' was modified by adding – '*that in the event of any significant loss of power, the flight engineer <u>was</u> to initiate fuel dumping immediately',* rather than wait for extensive check lists. In the meantime the nose of the aircraft would have been lowered trying to regain airspeed. A further modification to the Take Off brief was that we would not be turning left until the aircraft was cleaned up and had reached 'Flaps Up safety speed'. I was not overly concerned about penetrating Spanish airspace, but more concerned with maintaining safe control!

Take off from Gibraltar was late evening for a night flight down to Ascension. Again after our heavy and exciting exit from Algericas Bay, the long transit to Dakar (Yoff) airfield was fairly uneventful. On arrival at Dakar, circa 0100 (middle of the night) we were surprised to see the local ground grew wearing woolly hats as they felt it distinctly chilly circa, 23C! Fuel stocks at Gibraltar and at the American run base at Ascension were quite low at the early phase of OP CORPORATE. With impending heavy RAF traffic at Dakar and Ascension, with C-130s every 4 hours, VC10s and civil chartered Ex-RAF Shorts Belfasts; RAF crews were authorised to uplift maximum fuel (full tanks) at Dakar to conserve stocks and minimise uplift at Gibraltar and Ascension (Wideawake airfield).

Take off from Dakar's 9000' runway was a little less tense and the transit to Ascension through the ITCZ (Inter Tropical Convergence Zone or Tropical Weather Front) was extremely 'illuminating', the lightning being particularly bright and active in the middle of the night. This meant keen use of the weather radar to determine how far to deviate off track to avoid the massive towering Cumulonimbus clouds (which extended from well below and way upwards above our level) and plan the best way through and around the huge thunderstorms and to avoid turbulence especially with a heavyweight aircraft. We arrived at Ascension which is just below the Equator at 08S 15W, shortly after dawn. Finding this very small volcanic island so steeped in Napoleonic history was fascinating and satisfying. In 1982 there were no precision runways aids at Wideawake Airfield (no Radar or ILS) just an NDB & TACAN beacon (military VOR/DME) which was fine for positioning long finals for Runway 14.

I came to like the predictability of Ascension weather - minimum temperature 23C, maximum usually never more the 29C with a persistent South Easterly breeze at 15kts from the SE Trade winds. Green Mountain (2900') is usually capped with light cloud resulting in a damper climate and rare green vegetation. The rest of the island is a volcanic ash tip! Lyneham crews were warned by the Lyneham Station Commander, that if any individual suffered from sunburn and then went sick, they would be subject to Court Marshall! From what I remember the accommodation was basic but the food in the American commissary (run by Pan American Airways, yes, it was still in its heyday) seemed exotic and distinctly more interesting than in RAF messes!

Hercules XV292 was reloaded to the gunnels with empty beer kegs

ASCOT 4785 was offloaded and with other offloaded freight eventually helicoptered out to the Southbound Task Force by RN and RM helicopters. Hercules XV292 (4785) was reloaded to the gunnels with empty beer kegs – the beer having been consumed by the Royal Navy on the transit from Southampton. Minimum fuel was uplifted at Ascension for the safe 5 hour return to Dakar. Take off from Wideawake's 9000' runway was straight forward, again for a night flight to track North to Dakar and for a second night transit through the impressive ITCZ.

Once more the aircraft was refuelled to full tanks at Dakar before continuing

our next leg to Gibraltar, but little did we know what surprise lay in store. Again the heavyweight daylight Take off from Dakar and the subsequent climb to the North West was uneventful. We were again obliged to circumnavigate the Spanish Canary Islands (Argentinian sympathy?)

"Within seconds No4 was suffering the same loss... then No1 engine also hiccupped and joined company!"

However on that fateful (our first of many) 'Slip Patterns' on OP CORPORATE, and some 5 hours after leaving Dakar and 12+ hours after leaving Ascension, events took a very different course and became very exciting! At 1113Z (GMT) some 215 nautical miles from Gibraltar we were cruising at FL270 (27000ft) with an Outside Air Temperature (OAT) of -56C. At the time I was sitting on the crew rest bunk; 'enjoying' my 'compo' (military tinned rations) beef burger sandwich, no civil flight rations on this flight, there was a War ON! Co-Pilot Chris Tingay reported that No3 engine was losing torque (power) and my initial reaction / comment was to state that it must be a 'Torque' gauge failure. He quickly retorted that he was having to squeeze left rudder to maintain balanced flight. Within a few more seconds No4 was suffering the same loss and I then leapt into my seat when No1 engine also hiccupped and joined company! At the time of the excitement all 4 engines were being fed from the External Wing tanks, and were in the process of being emptied having flown for 5 hours. We all have to thank Flight Engineer Gordon Hampson for his quick thinking, in that he had now selected the primary direct fuel feed from the main wing tanks to each engine known as 'Tank to Engine'. This ensured that the remaining No2 engine maintained positive power and kept us all alive to survive the incident.

I have to explain that the C-130 has 4 Allison T56 turbine powered propeller engines (TurboProps) designed specifically for the aircraft in 1954, but which run at a constant speed from start-up to shut down. The fixed geometry of the turbine blades at a constant 13820 RPM gives smooth gas flow with minimum shock losses, resulting in very high efficiency and good specific fuel consumption (SFC).

ABOVE: XV292 during a quieter moment, playing host to an admiring crowd

They normally produce a very healthy 4510 BHP from each engine and are incredibly responsive. However that constant engine speed, is controlled by 13' 6"' (4.1 metre) diameter 'Hamilton Standard' 54H60 electro/hydraulic propellers. Those propellers are huge paddles and bite a lot of air! In the event of no fuel arriving at the engine; the propeller simply fines off (blade angle reduces) and effectively becomes the biggest airbrake in the world! Worse still the system has a negative torque sensor which when triggered, coarsens the blade angle and the aircraft twitches left and right in yaw (swing). The only positive result is that you end up with perfect electrical and hydraulic outputs from the affected engines but NO power!

Without fuel - the propellers on Nos 3, 4 and then No1 had become mega airbrakes and were NTS'ing (negative torqueing) causing jerky reaction in yaw. The indicated airspeed (IAS) was decaying as if on a landing run and I don't know why - but I chose 180kts as my target speed - to be well above the stall and above VMCA2. We commenced our inevitable descent, down towards the Atlantic. We descended mid ocean off Morocco and perhaps Casablanca was slightly nearer, but we opted to go left hand down towards Faro (Portugal) as the nearest suitable airfield. A Pan (urgency) call was initiated.

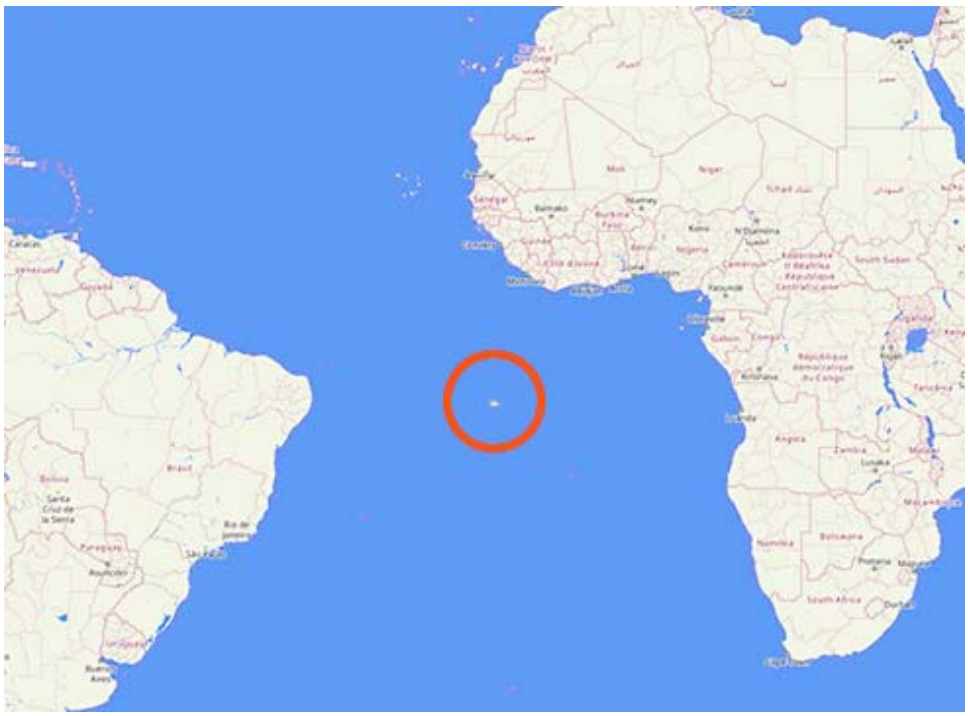
Navigator Chris Morris had calculated that our single engine stabilising altitude was below sea level and I learned recently that he still hasn't forgiven himself for not dishing out the crew life jackets (part of his nominated role). We didn't notice amongst the excitement!

"Our R/T call had become a 'Mayday' to Faro approach..."

Loadmaster Keith Jones suggested and offered to jettison the aircraft payload (our beer barrels) out the back and off the cargo ramp! I replied that if we ended up in the water, then I wanted my personal beer barrel! Co-pilot Chris initially attempted to transmit a 'Pan' call to Faro Approach control but was blocked by two German Sportflieger (PPLs?) cruising along the Portuguese coast. They were enjoying chatting to each other in German on the approach frequency and Chris the Co, couldn't get a word in. Fortunately Chris the Nav had previously enjoyed an exchange tour with the Luftwaffe on Transalls with LTG 61 at Landsberg and - in best colloquial Bavarian - told them *'Most firmly and brusquely' to 'Go Away'!!* This enabled our R/T call which; by then had become a 'Mayday' to Faro Approach. There was confusion with Faro Approach as to how many engines we had lost, taking several attempts to confirm we only had one engine remaining. On descent into warmer air and with the higher pressure 'Fuel Dump pumps' also selected, we gradually restored power to engines Nos 1 and 4, No 3 remaining out till the end. At no point

ABOVE: All in a day's work.
Author *(right)* and crew back on the ground, looking forward to re-fuelling!

BELOW: A long way from everywhere:
Ascension Island in the South Atlantic.



did we appear frightened, because we were far too busy attempting to get around the problems that were presented to us.

After a safe arrival at Faro, we shut down with a sense of relief. The local Shell man came out to the aircraft and we witnessed the water drain checks from the wing tanks. This resulted in a filthy grey dirty dishwater type fuel, arrive in the glass receptacle that was atop the pogo stick device. Essentially we had picked up duff fuel, i.e. water contaminated fuel from the lesser used ground storage tanks at Dakar. Water is heavier / more dense than aviation fuel, and thus settles at the bottom of aircraft fuel tanks. The C-130 external wing tanks are single skin and thus the fuel within would have been extremely cold (OAT -56C). Which is why on emptying the external tanks, water contaminated fuel was sucked up; and quickly froze on impact at the engine fuel heater / strainers.

"My mother subsequently instructed me never to fly XV292 again"

The local handling agents had arranged HOTAC (hotel accommodation) but as a crew we decided to get the aircraft back to Gibraltar as there was a war on! Many captains harangued me over that decision but we maintained 'tank to engine' feed for the short trip due East to Gibraltar and flew at 5000' in the warm air. We enjoyed a good flight through the Straits of Gibraltar and uneventful landing and headed off to the bar for some well-earned beers after a very long 18+ hour day. We were keen to get aircraft XV292 back to RAF engineers for a full fuel flush and for the crew to get airborne again very soon in a serviceable aircraft - without it turning into a simulator ride!

My mother subsequently instructed me never to fly XV292 again as the numbers add up to unlucky 13!!

The moral of the story is…Don't ever skimp on checking for water in the fuel before flight!

WORDS: Patrick Fitzgerald
PICTURES: Robbie Shaw, Patrick Fitzgerald

“A I F O A”

Aviation Is Full Of Acronyms!

...so just for fun, and to help out those who may not have seen some of these before, here is a list of every acronym we could find in this edition of the newsletter; if you find any more then award yourself a pat on the back - we can answer those next time! With articles in the newsletter ranging from military operations to electronic projects it’s probably safe to say you won’t come across all of these in standard PPL* flying! The answers are listed at the end of the floatplane feature.

*Sorry about the acronym!

AFIS
AGM
AOPA
ASCOT
BHP
C
CAA
CAP
DME
E
EASA
EFB
ESR
FCL
ft
GA
GMT
GNS
HOTAC
hp
IAS
ILS
ITCZ
kts
lbs
LED
M
M
mA/hr
MED
MOD
MOS
mph
MSA
MTOW
NDB
NF
NOTAM
NPPL
NTS
NW
OAT
ORS
PAN-PAN
PC
PCB
PPL
PPR
PVA
R/T
RAF
RFFS
RPM
S
SE
SFC
TACAN
USB
VMCA2
VOR
VRP
W
µF
µH

Virtual Committee

Granted, it might look like a cross between “Guess Who” and “Celebrity Squares” but this is your committee embracing video conferencing to do business during the enforced lockdown period.

Hopefully you’ll see this translate into a smooth operational plan when the time is right to resume club and school flights.

What a motley looking bunch!

The CAA Speaks...

There’s naturally much focus on how best to safely return to flight following an extended period on the ground. In this podcast, Jonathan Nicholson and David Pratt talk to Hannah Foskett and Neil Winbolt from the CAA's General Aviation unit about how to prepare to return to the air after a longer than usual break from recreational flying.

If you’re reading this in PDF format then click on the image below or,
alternatively, visit https://soundcloud.com/user-134290775/safety-advice-and-tips to listen.
Find more information from the CAA at www.caa.co.uk/CAP1919 and www.caa.co.uk/CAP1925

The Loon Had Floats

Given a choice between a Cessna 152 and something a little different, what would you go for?

It was on one of our holiday jaunts with Rod and Carolyn Edwards that Angela and I found ourselves in the area of New England known as The New Hampshire Lakes.

This particular morning and early afternoon had been spent at a delightfully scenic location called The Castle in The Clouds. This is the name of a fairytale house located high up on a mountain overlooking the beautiful 750 square mile Lake Winnipesaukee. The drive up to the house not only allows a stunning close up view of a large waterfall but on a clear day also grants the fortunate visitor panoramic views of a large part of the state of New Hampshire.

The House itself was built in 1913 by one Thomas Plant, for his second wife. Mr Plant had made his fortune in the shoe trade and had risen to such prominence in American society that film stars and politicians such as Teddy Roosevelt often visited him. The property is built with individual stones resulting in a tasteful blend of Tyrolean and other European architecture. Inside it is full of early versions of what are now considered to be up to date appliances and systems. For example, showers complete with jets directed horizontally at the whole body as well as from above. A central vacuum system feeding each room to allowed for cleaning without the need to carry a heavy cleaner about and of course, Central Heating.

After marvelling at this beautiful house we made our way via the restaurant, down to lake level again with the intention of visiting a local Loon sanctuary. For those such as I who had only heard of Loons but had not the faintest idea what they look like I must explain that they are a migratory bird that could easily be classified as a large duck or goose but scientists have in fact categorised them separately due partly to the fact that they have a solid bone structure. This makes them a very heavy bird and contributes to the fact that they sit very low in the water when swimming.

ABOVE: The author's first floatplane landing on Berry Pond, New Hampshire

The Loon is an extremely shy bird and has a very distinctive and somewhat mournful cry that carries for miles in the wilderness that is its favourite summer habitat. Loons were featured in the last film that Henry Fonda made. It was called 'On Golden Pond' and was shot on location in the very area that we were touring in. On the way to the Sanctuary I happened to spot what looked from a distance like the Fin and Rudder of a Piper Cub, just protruding above the reeds surrounding a small pond at the edge of Moultonborough airfield. I nudged Rod. We both smiled and made a mental note to return this way.

"...we decided to treat the ladies to a close up view of an aeroplane!"

ABOVE: Rod studying the aircraft whilst Clifford studies Rod's camera. The Water Rudder is in the 'Up' position

The Loon sanctuary comprised of a visitor centre and a trail leading through trees standing in the rather waterlogged surroundings of a very secluded section of the shore of Lake Winnipesaukee itself. After about half an hour scrambling through the trees and crossing very boggy areas of landscape we came to the lakeshore. Several hides had been set up for the use of visitors, but not one Loon was to be seen. There were mosquitoes a plenty but no Loons! There followed another half hour progression back to the car after which Rod and I decided to treat the ladies to something that they had really been missing since we arrived in the USA: the sight of an airfield and, if we could manage it, a close up view of an aeroplane!

I drove back to the spot where we had seen the fin and rudder, adjacent to Moultonborough airfield. Turning off the main road we found a small hut at the end of a paved runway and beside the hut there sat a young man reading a magazine. Lazing at his feet was an old mongrel bitch who eyed us with mild curiosity. Rod and I went over to the young man who introduced himself as Howard Trevor. He explained that he owned the Cessna 172 that was parked nearby. His reason for being there was to sell joy rides around the nearby Mount Washington. We told him that we were not so much interested in the C172 but were intrigued with what we could now see was a float plane down on the shore of the nearby pond.

"That's mine too" said Howard, clearly delighted by the fact that we were not so keen on seeking a joy ride in the Cessna but were more interested in the aeroplane that was his real pride and joy. He told us that it was a 1946 model Taylorcraft B12 and that he regularly equipped it with skies in the winter and as now, floats in the summer. He had replaced the 65hp Continental A-65-8 engine with an 85hp unit in order to take advantage of the latter's better performance when operating out of the small stretch of water that lay before us. He referred to the small lake as "The Pond" and it was only later that we learned that it was indeed named 'Berry Pond'.

After a little more conversation he realised that we were quite serious pilots and he agreed to let us have some time in N75115. Obviously we would both have to have dual rides because neither of us had float plane ratings. Howard got into his old estate car and although his dog was quite advanced in years, she nimbly jumped onto the open tailgate. We drove in convoy down to the slipway and had a good look at the aeroplane whilst Howard prepared her for flight. The paintwork was a little faded but the fabric was good all round, the cockpit instrumentation was, as you would expect in a machine of that vintage, rather sparse.

There were a couple of novel features worthy of note. The first was the length of chain such as might be found operating a high flush toilet cistern. This was used to pull up the water rudder. When the key ring on the cockpit end of this chain was looped over a cup hook on the instrument panel it efficiently locked the aforesaid rudder in the 'up' position. The second feature of note would probably give our CAA apoplexy. This consisted of a rose decorated, glazed porcelain handle on the sliding portion of the cockpit side window. But it was practical and it did work!

Howard explained that he had not expected to fly the Taylorcraft that day and had pulled the aeroplane up onto the slipway and tied it down to enable it to better weather some high winds forecast for the early hours of the following morning. As part of the pre flight inspection he opened panels in the top of the floats and using a sponge, dried out the various compartments. The old dog continued to monitor the proceedings, obviously having seen it many times before.

When all was ready and Rod was installed in the left hand seat, Howard stood on the forward section of the right hand float just behind the propeller and hand swung it.

The engine fired first time and he nimbly swung round the wing strut and into the right hand seat. A burst of power and the aeroplane slid off the wooden slipway onto the water. We watched as they taxied over the water lilies near the shore and out into the clear water. The little floatplane disappeared round the headland on our left and I thought that it would be some time before it would come back into sight, however in only a matter of thirty seconds it reappeared and as it came into view it lifted effortlessly into the air.

We watched as the Taylorcraft grew ever smaller and eventually, when only

the faint sound of the engine could be heard to the west, the old dog, who had up to now observed every move with interest, sighed as if to say. “He’s gone flying and left me behind yet again!” She then lay down and dozed.

ABOVE: Once inside it was quite comfortable. Note the window handle and the ‘half wheel’

Some twenty minutes later the old dog roused herself and looked skyward, this time to the east. We knew that they were on the way back and soon we too could hear the sound of the engine and make out the shape of the plane in the distance.

“It came to a halt about three feet from the dog’s nose!”

We clearly observed a waggle of the wings as they passed behind us on a downwind leg followed by an approach in the opposite direction to take off. This was to enable both the climb out and the approach over the only area surrounding the pond that was almost clear of trees. After landing the floatplane taxied towards the slipway at quite a high speed but the old dog stood her ground and I realised that she knew exactly to the inch how far up onto the slipway the plane would come before stopping. Sure enough, it came to a halt about three feet from the dog’s nose!

Rod climbed out, Silly Grin firmly in place. We then helped Howard to push the floatplane back into the water. He held a rope attached to the opposite float and with just one tug on it spun the machine round in its own length.

Now it was my turn. The door was quite small even for my fairly small frame but once inside I found the cockpit to have about the same amount of room as a Cessna 152. Howard asked me to set the throttle and turn on the magnetos. He then repeated his prop-swinging act and was soon seated beside me in the right hand seat. He instructed me to hold the control column well back and to taxi initially towards the middle of the visible part of the pond. The procedure of holding the nose up is intended to ensure that the bows of the floats don’t dig themselves into the water, a phenomenon that could easily lead to disaster. As we reached the centre of the lake Howard took over and started a fairly tight curving turn to the left. I could now see round the small headland that we had observed Rod and Howard disappear beyond. To my astonishment there was only about 100 yards of water hidden by it and Howard tightened the turn even more, both to be able to line up for our take off run and to avoid the small beach at the end of the pond. The further effect of our turn was to churn up the pond a little, thus reducing the surface tension and allowing the floats to get up onto the step quicker. The full 85-horse power was unleashed and with the column still held well back we surged forward. Howard commented that the extra power that the larger engine gave certainly reduced the clenching of the sphincter muscle when operating out of this small pond, however we only used about a third of the available run to get airborne and we were soon climbing at in indicated 450ft per minute and 70 mph.

I was given control and found that the rudder had to be used correctly to balance turns. At this point Howard explained that the artificial horizon (not an attitude indicator) actually came out of a second world war B25 Mitchell bomber and had only been fitted a few weeks earlier. Well so what, it worked!

I looked around and pondered on the question of where we would go if the donkey up front suddenly went quiet. I could see nothing but trees and in the distance, tree covered mountains. We continued the climb and after a few minutes I began to see a large expanse of water in our eleven o’clock. This was Lake Squam (pronounced Swom). It was quite a strange feeling for a pilot used to looking for the sanctuary of large open spaces of dry land to feel more comfortable as we approached the second largest lake in New Hampshire.

“Dropping down to about 500ft Howard stood the little machine on a wing”

Howard pointed out the line that he had chosen for a landing run and I over flew it to get a look at the wind lines on the surface. Unlike the pond, this stretch of water was exposed; consequently the wind direction had to be taken into account for landing and, of course, for take off. After flying a conventional circuit, looking for boats in the vicinity and also for any obstructions on or just below the surface of the water, I was allowed to follow through on the controls for the actual landing. There are no flaps on this aeroplane so the pre landing checks were very straight forward and the speed was brought back to 70mph bleeding down to 60mph as we crossed the up wind shore line. The flare was followed by a gentle splash down. The speed fell off very quickly and we were down to a crawl in no time at all.

Howard told me to try a take off. The first thing was to check that the take off run would not conflict with any boats, then to ensure that we were still pointing as near to the wind as we could. Holding the column firmly back I applied the power. As soon as I could feel the elevators starting to become effective I eased the stick very slightly forward to get up onto the step. The

aeroplane flew itself off and once again we were climbing into the clear blue American sky. About half a mile beyond the far shore of the lake Howard asked for control again. Dropping down to about 500ft he stood the little machine on a wing, orbiting a small clearing containing the framework of a house that his brother was in the process of building.

"Climbing out, I was aware of that old 'Silly Grin' on my face."

Climbing away I took control again and flew back in the general direction of the pond. On the return trip Howard pointed out Mount Washington, the highest mountain in the continental USA. Once again I marvelled at the huge expanse of trees. What must it be like flying over a South American Jungle for hours on end?

As we neared the pond we carefully examined the runway and the circuit of the adjacent airfield to ensure that we weren't going to conflict with any traffic arriving or departing from it. I joined down wind for the pond and was quite surprised that Howard did not offer to take control. Following the down wind checks I flew a descending base leg prior to turning onto a curving final approach. I glanced enquiringly at Howard. He replied to my unspoken question with "You're doing fine, carry on."

I decided to fly the approach as I would have done a flapless 152 approach but adjusting the speed to the numbers that Howard had used at Lake Squam. Crossing the lakeshore I let the machine continue to descend until the shoreline to my left appeared to be at about eye level in my peripheral vision. I then initiated the flare. There was very little float and she touched down gently, this was immediately followed by the, by now expected, rapid deceleration. I dropped the water rudder and Howard took over. Gunning the engine again he repeated the trick of running straight at the ramp and using it to stop within three feet of his faithful dog. Climbing out, I was aware of that old 'Silly Grin' on my face. One look at Rod and I could see he felt the same.

We helped Howard to turn the floatplane round again and pull it up onto the slipway. After we had tied it down securely, he presented us with the sectional chart that we had used during the flights.

It transpired that he had applied for an engineering position within the European Airbus program and if successful he would be based in the UK, probably in Bristol. We expressed our hope that this would be the case and if so, we would then be able to return the favour by introducing him to flying in the UK, about which he had heard some very weird tales. We exchanged phone numbers and then went on our way.

Well, we hadn't seen any Loons but we sure had some fun and in doing so, had both caught the float plane bug! The next year found me once again at Berry Pond, this time with daughter Joanna in tow but that's another story.

WORDS & PICTURES: Clifford Hill

"A I F O A"

Aviation Is Full Of Acronyms!

Check below to see how you did

AFIS Aerodrome Flight Information Service
AGM Annual General Meeting
AOPA Aircraft Owners & Pilots Association
ASCOT Air Support Command Operational Traffic
BHP Brake Horse Power
C Centigrade
CAA Civil Aviation Authority
CAP Civil Aviation Publication
DME Distance Measuring Equipment
E East
EASA European Aviation Safety Agency
EFB Electronic Flight Bag
ESR Equivalent Series Resistance
FCL Flight Crew Licence/Licencing
ft foot/feet
GA General Aviation
GMT Greenwich Mean Time
GNS Garmin Navigation System
HOTAC Hotel Accommodation
hp horsepower
IAS Indicated Air Speed
ILS Instrument Landing System
ITCZ Inter Tropical Convergence Zone
kts knots
lbs pounds
LED Light Emitting Diode
M Magnetic
mA/hr milliamp/hour
MED Medical
MOD Ministry Of Defence
MOS Military Operating Standard
mph miles per hour
MSA Minimum Safe Altitude
MTOW Max Take Off Weight
NDB Non-Directional Beacon
NF nanoFarad
NOTAM Notice To Airmen
NPPL National Private Pilots Licence
NTS Negative Tourque Sensing
NW North West
OAT Outside Air Temperature
ORS Offical Record Series
PAN-PAN urgency message
PC Personal Computer
PCB Printed Circuit Board
PPL Private Pilots Licence
PPR Prior Permission Required
PVA Polyvinyl Acetate
R/T Radio/Telephony
RAF Royal Air Force
RFFS Rescue Fire Fighting Service
RPM Revs Per Minute
S South
SE South East
SFC Surface
TACAN Tactical Air Navigation
USB Universal Serial Bus
VHF Very High Frequency
V_{MCA2} Min air speed with 2 failed engines
VOR VHF Omni-Directional Range
VRP Visual Reference Point
W West
µF microFarad
µH microHenry

The Quest for Power!

In a world where even the CAA is embracing portable cockpit technology, one intrepid club member sees what can be done to ensure that the technology doesn't let us down in a critical moment.

The modern day GA pilot is fast becoming more reliant on electronic flight bags, SkyDemon, Garmin pilot and even Windy.com. There is an ever growing need to keep your iPad, tablet and phone charged on the go and unless you have had USB ports properly fitted to your own personal dart, at some point you will have charge anxiety.

So what are your options?

Before we can go into that, the question "what are the important things we need when we fly?" needs answering. Clear crisp radio and lack of a cockpit fire(!) Yes I know most aircraft have a cigarette lighter socket like cars used to have, but really are you going to trust a non-approved product not to inject noise into your avionics and reliably charge your preferred screen without letting the smoke out (choking you on dielectric nasties in the process)?

If you're like me you don't mind swapping aircraft, maybe you'll plug in your own headset, but you won't want to spend an hour attaching various gadgets, ram mount and a rabbit's foot to your yoke for good luck. Get in, taxi, fly: that's what we all want. The quicker we're in the air the quicker that bacon butty is in our hands at our chosen destination.

Which actually brings me to why so many of us use SkyDemon. We set the route the night before, take it with us, check everything is ok then jump into the plane and go. I don't know of any schools which will let you take the GNS430 home with you, so that you can program it before you set out!

So what do you do? Carry a power bank, biggest that fits your flight bag? Only batteries are heavy and we all know flight bags get big quickly. Then you have to find a pocket in the aircraft to stash it and, in a PA-28, there is really just one in easy reach – and it's very small – and what if you forget to take the power bank with you in the first place?!

We need something we already carry on every flight...and then it came to me. The kneeboard!

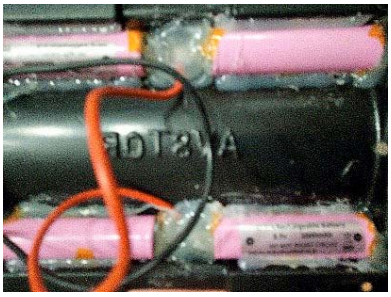
My specifications? A kneeboard that keeps my Android or Apple EFB fully charged...so that's exactly what I made.

I got my basic "AV8TOR" tablet kneeboard from eBay. From memory this was around £15. After a flew flights I found it top heavy; yes you can strap it to your leg, but it gets in the way and you really want to put it out of the way in crucial phases of flight. So, after a while I drilled out the rivets and took it apart, confident I could fit some standard 18650 lithium

cells in there. Which is exactly what I did.

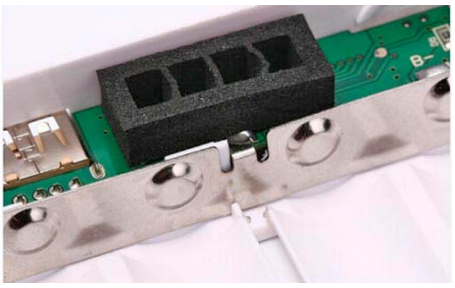
There are many manufacturers of lithium cells, some cheaper than others and as reliability was top of my agenda, I opted for four Samsung 2600mA/hr cells. Even then you need to be careful with your purchase as you cannot solder directly to a cell without damaging it. So, you need the ones with solder tags, which is basically a strip of nickel that's been spot welded to the contacts. Even at this point there are a few things I would do differently next time regarding selection of tab positions, I chose same side tabs when opposite would have made life easier.

The cells arrived and I carefully soldered them all in parallel, ensuring the cells were the same voltage before connecting them together. These cells can deliver a lot of current so if you connect a fully charged one to a discharged cell you risk damaging the cells with shock charge/discharge. At this point I powered up the hot glue gun and stuck everything in place. Remembering that it must cope with my bouncy landings, I went overboard with the glue. Note the use of high temperature kapton tape to insulate.



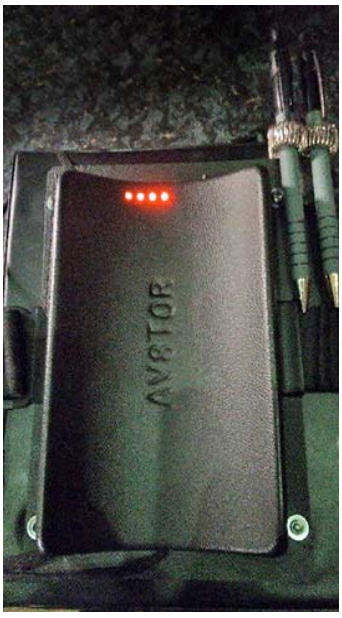
Now I needed to think about how I was going to charge and discharge this battery pack. The requirements are 4 cells in parallel, so I searched for “4x18650 Charger Kit” and found this:

Since I was only after the board, I purchased the Barbie pink model as it was cheapest! When it arrived, I de-soldered the metal battery connections and USB socket and got to work finding the best place to put it. Note the black square on the PCB is a sponge light guide for the indicator LED`s. and is not needed:



Here is the unit powered up for a test:

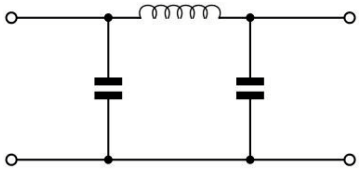
I found the board ideal with battery connections both sides of the PCB. All that was left to do was to drill a group of holes for the indicators to shine through and use a craft knife to make a square hole for the USB mini plug. Then I needed to drill a hole for the switch.



Note I used hot glue to fill back in the indicator holes to make four nice translucent windows. I wasn't too worried about the foam light guide, as it’s against your knee anyway.

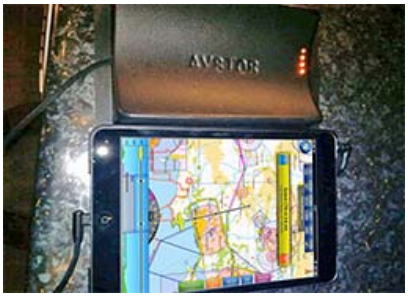
The final touches:

Not convinced a KCF7113 power bank chip and a few surface mount ceramic layer capacitors would be enough noise immunity, I added a filter module between the charger circuit and its input/output:



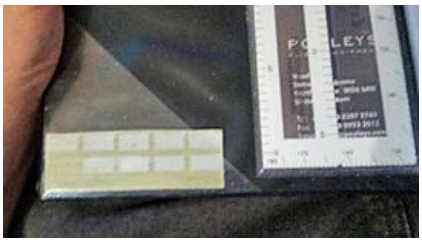
The inductor came from an old PC power supply (10µH), and the capacitors I used were a combination of 10µF electrolytic and low ESR 22nF polypropylene in parallel on each side.

To avoid damage to the iPad port should the whole thing be dropped, I opted for a right-angled lightning output cable. A few pop-rivets later... Job done!



But there is more...

To stop the iPad overheating when covered over, the iPad has magnetic sensors to the right of the home button. These tell the iPad to power off the screen. With an old iPad cover and a pair of scissors, you can add the same function to your kneeboard…



...and with a small slit with a craft knife and some PVA the magnets are easily concealed behind the pocket. Hidden magic!

WORDS & PICTURES: Dave Penson

News From the Field

As we all look forward to the re-opening of our home airfield, there are some associated items of news that you may find of interest:

Coventry Airport Re-opening

Richard Pace, Oversight Director of Coventry Airport has indicated that there will be a phased re-opening of the airfield subject to the Department for Transport's guidance regarding Recreational General Aviation being updated to permit flying training. Initially this will be on a one day per week licenced basis in June to maintain staff currency and then to operate on a Monday to Friday 9-5 basis with effect 1st July 2020.

Phase One
June: One Day Per Week
Open on **Wednesdays** from **1000 - 1630** local **during June**.

AFIS and **Fire Service** RFFS Cat.1 (2/3 on remission) will be available.

Physical payments will not be accepted. Payments when not on account will be made by telephone/credit card.

Strict PPR will be required, ideally 24 hours' notice to be given. PPR can be obtained by **emailing** ats@coventryairport.co.uk
In addition, circuits must be booked out over the phone in the usual manner. The airport is keen to point out that if you have not received an acknowledgement email then you do not have PPR!

Coventry Airport staff have been issued with new COVID-19 procedures which aim to ensure the airport conforms with Government guidelines. Several of the new measures are relevant to us at Cov Aero and are detailed below:

Social Distancing must be observed at all times. This means remaining a minimum of 2 metres from all other airport users.

Fuelling: Ground Crews will be on hand to provide fuel in the usual manner. There are some new points to note:

- **Pilots must remove their fuel caps** and then stand away from the aircraft/refueller.
- **Pilots must not touch** any elements of the fuel installation or bower, including the bonding cable.
- **There will be no need to sign** for fuel but you should verbally confirm with the refueller the quantity uplifted so our records match yours.
- **Pilots must replace their own fuel caps** (which is best practice anyway).

Ground Crews will be issued with suitable PPE for their own safety and yours. The airport goes on to recommend that pilots carry their own sanitiser with them for use as they move about the site.

There will be **strictly no admittance** to the Fire Station or Tower for visitors.

Phase Two
July: Five Days A Week
From **Monday 1st July** the airport will be open from **Mondays to Fridays 0900 - 1700** local daily but will remain **CLOSED** on **Saturdays** and **Sundays**.

Out of Hours flying is permitted under indemnity scheme, either on closure days or during evenings. The level of traffic demand will be kept under review to determine any change to these operating hours.

New Out of Hours Indemnity

Shortly after the airport closure in April, an updated **Operations with Reduced Facilities Indemnity Agreement** was released. It is version 6.0 dated the 3rd of April 2020 and, as well as Out of Hours, permits (with prior authorisation) operations when the airport is NOTAMed closed. If you wish to operate **any** aircraft, either Out of Hours or when the airport is NOTAMed closed, you must do so in accordance with the new Agreement.

For PPL Hirers of **Club aircraft**, the Agreement is on the Club noticeboard and, as with previous versions, you must read it and then sign the attached signature sheet before undertaking such operations. **Aircraft owners** will have their own arrangements for getting this Agreement concluded with the airport.

Just for clarity, and at the risk of stating the obvious, the agreement is specific to aircraft and pilots. Unfortunately, due to Covid-19, the Club aircraft (ie COVA and COVC) are **not currently available** for PPL Hire. However, the Club is working on this and will let you all know how we progress.

Remember that when PPL Hire does eventually get re-instated the **90-day currency requirement** for carrying passengers will still be in effect.

Club AGM...again!

The gathering of 50+ members is obviously not permissible nor sensible in the current environment and so the Committee agreed to defer the AGM to such time as gatherings such as this are allowed by government guidelines.

Please note that it takes approximately 6 weeks of preparation to hold the AGM, so it won't happen the day after the rules are relaxed! We have considered a virtual AGM, but with 50+ attendees and no method of voting, we didn't believe this would be worthwhile.

The future may be uncertain, but please be assured the AGM will be held as soon as it is safe and practical to do so!

Virtual Ground School Anyone...?

As you are no doubt aware, one of the perks of learning to fly at Coventry Flying School is that Ground School mentoring sessions are **provided for free**.

During the virus lockdown period a few members have been experimenting with online mentoring sessions and the responses seems positive. We'd like to know if our students would be interested in making greater use of online mentoring classes via Skype, Zoom or alternative suitable platform.

Please let us know!
Get in touch with any committee member or email committee@covaero.com

It's Your Committee...

Coventry Aeroplane Club is owned by its members and run by a General Committee elected at each AGM.
The committee members are also directors of the two limited companies owned by the club.

Officers:
Chair: Claire Leadbetter
Vicechair: Vacant
Secretary: Rowan Smith
Treasurer: Neil Hedges

General Committee Members:
Peter Gibson, Richard Holland, David Penson, Stuart Robottom-Scott, Anthony Ryan, Lauren Tilsley, Alex Whyte, Stefan Winkvist

Head of Training/Chief Flight Instructor:
Mark Rawlings

Want to Join us?
Email us at **committee@covaero.com**

Safety
...is at the heart of everything that we do. If you want to discuss or report a safety issue, please email safety@covaero.com

...and it's Your Newsletter

We hope you enjoy reading this newsletter – our aim is to produce them for Club members quarterly.
What else would you like to see?

Heartfelt thanks go to all of the contributors of this newsletter, and to photographer Robbie Shaw who kindly gave us permission to use his stunning photograph of XV292. Why not have a look at some of Robbie's other photos on sites such as www.airliners.net/search?user=74633

If you have enjoyed reading the flying features then remember that all of them have been written by club members just like you. Do you have a flying story that you would like to contribute? If so we would love to hear from you!

Get in touch with any committee member or email
committee@covaero.com

Do you use Social Media?
Follow us on Facebook, Twitter and Instagram