



AIR PILOT

INSIDE

**AGM ELECTIONS
AND REPORT**

WORKING WITH COVID

FLYING COVID FREE





THE HONOURABLE COMPANY OF AIR PILOTS

incorporating Air Navigators

PATRON:

His Royal Highness
The Prince Philip
Duke of Edinburgh KG KT

GRAND MASTER:

His Royal Highness
The Prince Andrew
Duke of York KG GCVO

MASTER:

Sqn Ldr Nick Goodwyn MA Dip Psych CFS RAF (ret)

CLERK:

Paul J Tacon BA FCIS

Incorporated by Royal Charter.

A Livery Company of the City of London.

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Except where specifically stated, none of the material in this issue is
to be taken as expressing the opinion of the Court of the Company.

DIARY



All physical events have been postponed until further notice. Some meetings will take place through video-conferencing. For the latest situation please visit the calendar page of the Company's website:

<https://www.airpilots.org/members-pages/company-calendar/>

Guidelines for submissions to Air Pilot

Please submit contributions as follows:

- Text in word document, including your name below the title of the piece;
- No embedded photos;
- All images to be sent as jpeg files with a file size of at least 2 MB;
- More than 2 images to be sent via a Dropbox file, rather than an e-mail attachment.

Access the Company's website
via this QR code,



or follow us on Twitter @AirPlotsCo



Cover photos: Mt Pirongia, from Tiger Moth ZK-BLI,
flown by NZ Regional Chairman Allan Boyce (J R King);
The new Master.



A MESSAGE FROM YOUR EDITOR...



A CUT TOO FAR?

The British Government's latest defence review, released on 22nd March, signals yet another period of change for the RAF, but also raises serious questions about its future scope and role and, therefore, its future requirements for aircrew.

At headline level, the outlook isn't very positive.

Amongst the more-than-100 aircraft which will be retired early are all 14 of the RAF's remaining Lockheed Martin C-130J Hercules (recently upgraded and previously slated for service until 2030); its Boeing E-3D Sentry AEW aircraft (going a year early and not replaced until 2023); its 24 remaining Tranche-1 BAE Systems Typhoons (recently upgraded for an expected life until 2040 but now going by 2025); 36 BAe Hawk T.1s and numerous helicopters. These cuts come on top of the recent retirement of the Bombardier Sentinel R.1 fleet and the announced departure next year of the Royal Flight's four BAe 146 airliners.

There is, of course, good news to go with the bad, as the review suggests (but without specifying numbers) increases in the number of Lockheed Martin F-35 Lightning IIs to be acquired, and several ongoing replacement programmes – but in general the numbers of replacement aircraft are lower than those they are replacing. Thus, for instance, nine Boeing E-8A Poseidons will replace the long-gone final fleet of 16 BAe Nimrod MR.2s; and the five E-3Ds will be replaced now by only three Boeing E-7A Wedgetails. Where the Army Air Corps originally procured 67 AgustaWestland AH.1 Apaches, the order for their replacement, the updated Boeing AH-64E Guardian, amounts to just 38 aircraft.

Some capabilities will, however, disappear: there was a good reason why the Hercules fleet was upgraded to last longer in service, because they were better suited to delivery of smaller loads into slightly smaller fields than the Airbus A400M Atlas which will now be the RAF's smallest fixed-wing airlifter. The Hawk T.1s (other than those serving with the Red Arrows) have been used in recent times primarily in an 'aggressor' training role, for which there appears to be no obvious successor with the Tranche 1 Typhoons also going.

The review also sees a continuing requirement for the future Tempest next-generation fighter, but against that must be set the reported view of the current Chief of the Air Staff that by 2040 some 80% of the aircraft in the RAF fleet will be unmanned. If that does turn out to be the case (remembering the eventually doomed infamous 1957 Duncan Sandys prediction of the RAF losing its manned aircraft capability...) it begs the question of how the RAF's recruitment and training requirements will be reduced or redirected, and how soon. Unmanned air systems still require crew to fly them, but in a far different environment from that of the 'live' cockpit, and with a far different training progression from the current progression from air experience in a Grob Tutor through Prefect, Texan II and Hawk or Phenom to combat or transport operations. This review might not signal the end of the RAF as we know it, but it does signal a very different future.

Allan Winn - Editor

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AGM REPORT

The Company's 2021 Annual General Meeting will go down in history as the first (and, it must be hoped, the last) to have been conducted virtually. As usual, all the AGM papers are available in the Members section of the Company website, but in this AGM Special news section we are presenting the Hon Treasurer's Report, profiles of the new Master, Warden and Assistants, a tribute to the Immediate Past Master by his predecessor, and a few screen grabs from this most unusual of evenings.

HON TREASURER'S FINANCE REPORT

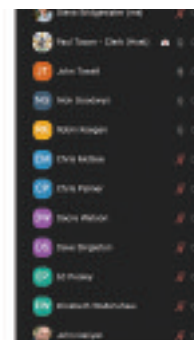
The Honourable Company's financial result for the year ended 30th September 2020 was an operating surplus of 3.2% of total income compared with 0.54% of total income in 2019. This increase was due primarily to lower accommodation costs following the move to Air Pilots House and also to reductions in certain costs due to the restrictions in activities brought about by the pandemic. Total income in 2020 was approximately 7.5% lower than in 2019 due substantially to the loss of income from functions and ceremonies because of the restrictions on activities from March onwards. Some 56% of total income arose from Quarterage and Livery Fines, with the balance received from the Gladys Cobham Trust and investment income, together with a lesser amount than usual from functions and ceremonies (although this was compensated for by a reduction in the associated direct costs).

On the expenditure side, total operating costs were approximately 10% less than in 2019 but, as mentioned, this was achieved mainly through the reduction in accommodation costs and savings on costs of functions and ceremonies from the lower activity level from March 2020 onwards. As a large proportion of annual expenditure is fixed, there was little variance in ongoing cost levels in each category of this expenditure between 2019 and 2020, with the major items in 2020 comprising staff costs and accommodation and administration expenses. The other major items were Air Pilot, the net cost of Functions and Ceremonies and investment management costs. Expenditure in the remaining cost categories was smaller individually.

The Income and Expenditure account also includes items which do not form part of the operating results but are dependent upon changes in the valuations of the Honourable Company's investments, which are managed



IPM John Towell presides for the last time



by our advisers, J M Finn. The accounts record separately the realised gains or deficits on disposal of investments and the unrealised surplus or deficit on the annual revaluation at 30th September of the investment portfolio. A small deficit on disposals arose in the year, but this is calculated by reference to valuation in September 2019. The Income and Expenditure account has also included substantial increases in unrealised gains both in the 2019 and 2020 years which demonstrate how much the portfolio has benefitted both from the general increases in investment values in recent years and the decisions made by our investment advisers.

The balance sheet of the Honourable Company maintained the same value in September 2020 as it had in September 2019. The largest category of assets in the balance sheet is our investments which represented some 74.7% in September 2020, only fractionally less than the 75.1% in September 2019. The balance sheet also includes the Company's share in the ownership of Air Pilots House which, together with other fixed assets such as office equipment, amounts to the remaining 25.3%.

There remains some uncertainty over the timing of the lifting of the current restrictions which will have a direct impact on the scale of the Company's functions and ceremonies and the associated income and expenditure.

Although the values of our investments are subject to market variations because of world wide economic and other factors, at the operating level, the costs associated with the Company are more dependent on inflationary rises. The ownership of Air Pilots House provides far

greater control over occupation costs than was the case previously. Therefore despite the uncertainties brought about by the pandemic and recognising that investment markets can be volatile, it is anticipated that the modest operating surplus budgeted for 2021 will be achieved. □



Newly installed Master, Warden and Assistants wear their self-presented badges of office



Master Nick Goodwyn takes over

2021 AGM REPORT - Time to Get Off My Perch *By 2020-21 IPM Malcolm White*

I recall the words of Past Master Colin Cox – “Time to Get Off or was it, to Fall Off My Perch” – delivered when John Towell was Installed as Master on 16 March 2020. The decision to hold the Annual General Meeting and the Installation Dinner was a delicate choice but given consideration it proved to be the last safe moment and the right thing to do. No one who attended was taken unwell by the virus, perhaps due to the wine and port consumed on the night. However, what was to follow was different and unpredictable.

It is time to reflect on the year which John and Linda Towell have experienced. The term as Master is a hectic privilege and usually a fun year; but Vanessa and I wanted to share our admiration for the way in which they as a couple have led the charge. Their year was unique and hopefully a one off, but as the year unfolded keeping us all informed was a mighty challenge. Zoom dominated, and here John deserves a PhD for attending a virtual White Tie Dinner which was a first, and hopefully the last. There are many other examples. As a couple they have helped to keep us all together and for that they deserve our unreserved appreciation. They missed the face-to-face contact with our Membership and other City Liveries; they missed some of

the splendid events usually held in The City and their visit to the Regions was cancelled. Hopefully, they can catch up in due course? They certainly deserve the opportunity.

In closing, I offer the thought that when any of us embark on the flight plan to join the Court the way ahead takes time to grasp. The process has served The Company well throughout its history, but nowhere on our risk register was a global pandemic and the damage to aviation and the industry that we represent. The business agenda did not go away; the need to review process and move on remained a constant; the letters did not stop, and virtual communications went through the roof. This was a team effort ably supported by Head Office and colleagues. But John was in The Chair and he kept us on the front foot. He helped develop and reinforced the value of our young membership, mentoring in the round, and due diligence. This was his year as our Master and Ambassador and on behalf of all I know I am sure you will join me in sending our warmest thanks and congratulations to John and Linda for doing such an outstanding job.

I will now “Fall Off My Perch” and move to the back benches to join Colin and other Past Masters. □

AGM REPORT

PROFILE OF THE NEW MASTER SQN LDR NICK GOODWYN

Nick's aviation interest was ignited by a British Airways pilot, a regular visitor in his father's Surrey country pub, who took him to Gatwick and sat him in the left hand seat of a Boeing 707. A trial flight on Nick's 12th birthday in a Cessna 172 from Shoreham cemented a lifelong passion for flying.

That flight from Shoreham was also memorable because he has a distinct memory of seeing two exotic aircraft, a yellow P-51 Mustang and a T-6 Harvard, arriving that day. The P-51 was owned by the late Ormond Haydon-Baillie who based his collection at Duxford, where Nick would later grow up around the vintage aircraft.

Nick was born in Epsom, Surrey and schooled locally until his father, after serving a commission in the Royal Artillery and many years in the Territorials, while working and building a career in the City in banking, decided to purchase a beautiful 16th century pub and restaurant, the Parrott Inn at Forest Green, eight miles off the extended centreline from Gatwick.

Sent to Epsom College and now deeply interested in aeroplanes, Nick joined the RAF section of the school CCF. In July 1980, he learned to fly on the Kirby Cadet, going solo on his 16th birthday in WT914 after only 1h 42min instruction and 40 launches.

In the meantime, the family had moved from The Parrott and emigrated to France, but the business they had planned did not bear fruit so in 1976 the family returned to England and by very good fortune (for Nick), bought the Black Horse pub in Fowlmere.

With the newly-restored Blenheim (Nick 2nd from right) at Duxford, 1987



It was still the early days of what is now IWM Duxford and a number of the members of the fledgling Duxford Aviation Society, private owners and their volunteer supporters and other aviation enthusiasts frequented the Black Horse, not least the Ormond Haydon-Baillie 'crew' including some such as Liveryman John Romain MBE, and Don Selway, an ex-RAF Pilot and part owner of an airworthy Vickers Varsity. So Nick, aged 13, was encouraged to show up and start helping out.

Nick says: "I had the great fortune to spend so much of my time (an angry letter to my father from my sixth form headmaster 'asking for a photo of your son as we have forgotten what he looks like' bears witness to how much) as a 'hanger rat', immersed in a magical world of restoring and operating vintage aircraft in the film and display world."

Around that time, the now-specialist aviation and film company Aces High, had purchased C-47 Dakota TS423 *Mayfly* which had been used by the RAE for trials of the Ferranti/Marconi radar used for the Lightning. "My first memory, though, of *Mayfly* was visiting the aircraft when it was at Biggin Hill at the 1980 airshow and witnessing the sad loss of the A-26 Invader which was a sobering introduction to the reality of the perils of aviation, as we from Duxford of course knew the crew".

"My logbook, which I kept religiously (and still do), tells me that in this period, I was lucky to fly numerous times in the Varsity, Dragon Rapide, Chipmunk, Auster, T-6, Ju-52, B-17 'Sally B', Lockheed T-33 and P-51 and around 50 hours in the Aces High Dakotas".

*Solo in the Jet Provost, Linton-on-Ouse, 1989
(All pictures via The Master)*





Receiving Wings, RAF Valley, 1990

With Hawk at Tactical Weapons Unit, 1992



By 1981, Nick was at a sixth form college in Cambridge (see angry letter above...). The tutor asked him what he wanted to do as a career to which he replied: "Join the RAF as a pilot". Ignoring the response that "No one from this school has ever, or will ever, achieve that", Nick applied for a flying scholarship, travelled to RAF Biggin Hill for selection and was successful. So, in September 1982, he spent six weeks with the David Fairclough Flying School at Leavesden flying the PA-38 Tomahawk. His first instructor was John Eames, a Concorde Captain, and he was sent solo again after 7h 40min and completed his PPL in 38 hours - he had yet to learn to drive a car.

Nick was very fortunate once again as he was invited to join the team of engineers and volunteers who were in the latter stages of restoring a Bristol Blenheim, owned by ex-RAF pilot, racing driver and racing team owner Graham Warner's British Aerial Museum.

"I was hugely inspired and encouraged in my flying at that time by some incredible mentors and richly talented pilots such as John Romain and the late John Larcombe. I acted as co-pilot a couple of times in the Varsity with the late, and very much missed, Past Master Hugh Field as Captain. I also flew a number of times with the mercurial test pilot, Dizzy Addicott, a real mentor to me, in both the T-6 and

DC-3. Mark Hanna sat me in a RAF Phantom at one of the airshows, after which I needed little convincing what I wanted to achieve. Both he and his father Ray often asked how my flying training was progressing and offered advice once I'd joined the RAF".

The restored Blenheim flew again for the first time in May 1987, in the hands of John Larcombe and John Romain. Nick says that it was a very exciting and emotional event and the culmination of so many years hard work by the team, in which he was incredibly proud to play a small part. Sadly, this restoration was short lived as the Blenheim came to grief at Denham during a display at the GAPAN Garden party a few weeks later.

The remainder of that summer was spent supporting the launch of the appeal to get the Blenheim flying again. Nick's logbook shows that he flew many times that summer with John and with Graham in the Beech 18, Max Holste Brussard, Auster AOP9, Storch and Harvard. He was also helping the team to restore the IWM's FW 190 before its return to display at Lambeth.

Nick's burning ambition had always been to fly with the RAF. After another trip to the Officers and Aircrew Selection Centre at Biggin Hill, where he passed the selection for pilot but comprehensively failed his navigator aptitude tests, resulting in an awkward interview with the selection officer. He was offered a place on Initial Officer Training at the RAF College Cranwell where he was commissioned on the Queens Parade on 28th July 1988. While waiting for flying training to commence, he was sent to 72 Sqn at RAF Aldergrove to spend three months and many hours in the rear cabin and cockpit of the Wessex across the province. After a further short hold with Cambridge UAS he arrived at RAF Linton on Ouse to commence flying training.

Nick relished his time learning on the Jet Provost T.3 and T.5, going solo at RAF Dishforth on 26th April 1989. On

Over the Alps by Tucano to visit Italian Air Force, 1993



*With XIII Squadron, Marham, 1995
(3rd from right, front)*



With XIII Tornado in Akrotiri



AGM REPORT

his birthday that year; his flight commander arranged for Nick to have a trip in a Harrier T.4, which was a stand-out experience. After completing basic flying training he moved to the Hawk at 4 FTS, RAF Valley for advanced flying training and was awarded his wings. However, Nick, who was the winner of the Cup of Honour and BAe Trophy on his Hawk course had been selected to become a 'creamie' QFI and was posted to CFS at RAF Scampton for the instructor's course before his wings ceremony. This prompted another dressing down on the first day of ground school for being incorrectly dressed without wings – despite protestations that he had yet to receive them! Nick graduated from CFS as a probationary QFI and returned to Linton to teach on the JP and then the Tucano when it entered service. By the end of his tour he had become an A2 QFI, Pilot Navigation Instructor and student aerobatic check pilot.

It was then back into the training system with a refresher on the Hawk and then tactical weapons training. Bizarrely, he won the BAe trophy for the second time on that

Leading CFS Tutor four-ship, Cranwell, 2010



course and while he was streamed to fly the Jaguar (his first choice) he was posted to the Tornado GR.1. "I converted to the Tornado GR.1/A Recce/Bomber and served with XV(R) and then XIII Sqn based at RAF Marham, where my first 'Boss' was Liveryman His Excellency ACM Sir Steven Dalton".

During this time he flew operational sorties in the Middle East, flying from Turkey and from Saudi Arabia as well as undertaking numerous detachments to North America and Europe. Nick qualified as the Squadron Electronic Warfare Instructor and also became a Qualified Targeting Manager

He says: "My first instructional tour in many ways set the tone for my career and shaped my approach to flying in that while I was a more-than-competent fast jet operator and loved flying the Tornado as a crew, I realised that my flying skills and passion were better utilised in teaching and developing others". So after a brief spell as CFI on Northumbrian UAS on the Bulldog, Nick was posted back to No 1 FTS at Linton, first as a Sqn ExO and then for three years as OC CFS Tucano Standards Flight. This was the start of a hugely 15-year varied career with CFS

wearing the famous pelican staff badge with pride.

A car accident as a passenger and serious back injury led to two months' rehabilitation in Headley Court and a temporary loss of his 'bang seat' medical category, so in 2002 he was posted to the CFS 'Tutor' Sqn at RAF Cranwell, responsible for the training of new elementary QFIs for all three services. In 2004, Nick was invited to join CFS Examining Wing and he became an A2 Examiner 'all types' and Command IRE. For Nick, his examiner's tour was the pinnacle of his instructional career.

He says: "I was so lucky to fly some 18 different types from microlights to the F-16 and the F-35 Lightning II FMS at Eglin AFB in Florida. In all my time with CFS, I travelled through some 26 countries learning about their Air Forces and training, advising, standardising and acting as an ambassador for CFS and the RAF". As part of his CFS role, he was asked to be the liaison officer and ex officio to the GAPAN Education and Training Committee and sit on the flying instructors sub-committee and so began his journey with the Air Pilots.

On CFS, he served both in the UK and on numerous overseas visits including South America, Russia and in Iraq. He had a period as OC Elementary Examiners and was also the Subject Matter Expert for 'historics' standardising the Battle of Britain Memorial Flight and Army Historic Flight instructors in the course, which he flew and examined on the Chipmunk, Beaver and Harvard. This also provided the excuse to return to Duxford and fly once again with John Romain in the two-seat Spitfire, which Nick describes as his "trip of a lifetime...which does not do that justice". In addition during this tour, he gained rotary wing experience flying both the Wessex and the Squirrel.

Nick was promoted in 2008, and took command of 115(R) Sqn, CFS – responsible for the tri-service training of all new and refresher QFIs and the standardisation of all instructors in Elementary Flying Training. This tour also included four busy seasons as the RAF Tutor Display Supervisor.

Nick moved in 2011 to be OC CFS Flying Training Development Squadron. Shortly after this, Nick says, the real culmination of his CFS career was without doubt commanding the Human Performance Training Squadron (CFS HPTS) where he was responsible for the cognitive and performance development of all airborne instructors and aircrew students through the Aircrew Performance Coaching Programme, Human Performance for Instructors Course and through the delivery and evolution of the RAF Airmanship Model. During this period, Nick was returning

from a CFS visit to advise the Bangladesh Air Force on board an Emirates A380, in whose Business Class champagne bar "... I was very lucky to get chatting to a fellow passenger, and that is how I first met Lenka who is now my wife."

In January 2015, Nick was posted from CFS and seconded to work with the Civil Aviation Authority in London. Now living in Epsom with Lenka, he realised that his time with the RAF had run its course and while he reflects that his was not a 'stellar' career, it was just under 30 years of service of which he loved every minute. He decided to leave the RAF in August 2016 to start his own business focusing on Performance Coaching and individual, team and organisational development but in 2018 he was invited to apply to return to the CAA to become the Pilot Peer Support and Pilot Performance Business Lead in the Flight Operations Department where he is currently still working. Having joined the then Guild in January 2006, he was the Chairman of the Air Pilots Education and Training Committee and has served on, and as Chair of, the Flying Instructor Sub Committee. He became the inaugural Chair of the Air Pilots Careers and Education Committee and also chaired the Flight Instructor Scholarship and Apprenticeship selection panel. Nick was awarded a Master Air Pilots Certificate in 2006 and took the Livery in May 2010. He was elected as an Assistant to the Court in 2013 and to Warden in January 2017.

Nick and his wife Lenka juggle busy working and family lives with their young son Benji and Nick's daughter Maddy and he is actively interested in vintage aviation and oenology and has a wide variety of other interests including FI, rugby and test cricket.

Nick sums up: "I have been very lucky to have lived my life in and around aviation and becoming Master of the Air Pilots is truly the icing on the cake. The Air Pilots is a wonderful organisation full of truly dedicated aviators and it can really make a difference. We can inspire the next generation of aviators, as well as influence the ever-changing aviation environment and we can open the door for others, whatever their background or culture and I am proud, yet humble, to be a part of that". □

Flying with Liveryman John Romain MBE in the Spitfire



GAZETTE

APPROVED BY THE COURT

11th MARCH 2021

ADMISSIONS

As Upper Freeman

Timothy COSTLEY (NZ)
Andrew Charles Berkeley
FITZHARDINGE (HK)
Mark John GRIGG
Andrew David HAMBLIN (NA)
Ewan KELBIE
Adrian MASO
Nicola Dawn METCALFE
Michael Steven MIGDOLL (HK)
Harry PETROPOLOUS (HK)
Peter Charles RICHINGS (AUS)

Philip John TODHUNTER
Mark Christopher WALKER

As Freeman

Andrew Jago BROWN

As Associate

Michael James ASHWORTH
Dominie Beatrice HEALD
Keighley Laura HORSTEAD
Ryan Higford KEYTE

ACKNOWLEDGED BY THE COURT

11th MARCH 2021

REGRADE

To Livery

Colin BELL
Ameen BUDAGHER
Victor FLINTHAM
Adrian KEENAN

To Freeman

Robert MACKENZIE

DECEASED

Victor CANNOCK
John CHISHOLM
Eric THURSTON
Keith WHITE

RESIGNATIONS

Richard ABOBOTO
Samuel CARPENTER
James CONOLLY
Catherine DIETRICH
Jennifer DODMAN
Richard HALEY
Spike JEPSON
Tom ROBINSON
Ken SMART



PROFILE: WARDEN JOHN DENYER

John Denyer was elected as a new Warden of the Court in January. John's interest in aviation started as a lad when his family took him each year to Farnborough Air Show. The 1960s jets

made a big impression and when he graduated from Surrey University with a physics degree, he chose to become a scientist at RAE Farnborough, as his father had done during World War Two.

An early role was assisting with the design of special cockpit lighting to enable night vision goggles (NVGs) to be used to pilot aircraft at low level, initially helicopters and then fast jets. He spent 150 hours as a flight trial observer in all the British military helicopter types and was also fortunate to get two flights in a Hawker Hunter. Almost all this flying was at night and mostly below 250 feet!

During this period he spent time working for the late Freddy Stringer, Past Master of this Company. To give John some flying experience to help him better understand the piloting workload of his test pilot colleagues, Freddy persuaded the RAE to fund 10 hours of flying training at White Waltham. John showed some aptitude for piloting and completed his first solo after 6½ hours. He decided that it was now or never if he wanted to gain his PPL, so he dug deep and funded it himself.

Freddy was to have another impact. He nominated John for the GAPAN Sir Barnes Wallis medal for his work on the Urgent Operational Requirement that pressed NVGs into service for the Falklands war. He spent time at operational RAF and RN bases, as well as on board HMS Hermes and at Ascension Island, completing installations and briefing crews on NVG use with the special lighting. Finally, a few years later and with some hours built mainly on the Chipmunk at Farnborough Aero Club, John was invited by Freddy, who instructed there, to join GAPAN, setting him on course for where he is today.

John spent eight years at RAE working on avionics, sensors and space projects until he left Farnborough in 1989 for a policy job in the Ministry of Defence's Defence Research Agency (DRA) Implementation Team in London.

His subsequent MoD appointments included a six-month staff course at the Joint Service Defence College at Greenwich in 1991 before joining the British Embassy in Washington DC for three years.

John returned to Farnborough in 1995 to join the DRA he had helped to create five years earlier. As its Assistant

Director of Business Planning, his responsibilities included corporate planning, financial and business modelling, and managing internal investment.

In 1997 he was appointed Operations Manager of the Defence Evaluation and Research Agency (DERA) Aircraft Test and Evaluation Sector at Boscombe Down, responsible for the airfield, business, operations, the aircraft fleet and the Empire Test Pilots School.

Then, as Director PPP, John project-managed the implementation of the Public Private Partnership that saw DERA floated on the London Stock Exchange to become QinetiQ Ltd.

As Director Ranges in 2001, he led the QinetiQ range sites around the UK, initiating restructuring, downsizing, and insourcing change programmes to bring the business onto an economic footing. His 1,500-strong team provided a wide range of test, evaluation and training for the RAF, Navy and Army from the secure and highly instrumented environment of its 23 sea, land and air ranges and airfields. John then applied his negotiating skills to secure three important contracts for QinetiQ: the 25-year Long-Term Partnering Agreement running the ranges and Boscombe Down; the Combined Aerial Target Service contract (a 20-year deal for QinetiQ's delivery of a UAV target service to the RAF, Navy and Army); and the multi-billion-pound Defence Training Rationalisation contract (subsequently cancelled by government just before the deal was signed). He left QinetiQ in 2010 to start his own consultancy helping SMEs to win large government contracts.

Within the Company, he has served on the Environment Committee as both Secretary and Chairman and is on the International Technical Forum. Having been secretary of the Air Pilots Flying Club he still serves on its committee, and is also a Trustee of the Gladys Cobham Trust.

Now retired, John lives with his wife Kate in rural Hampshire. He is a Fellow of both the Institute of Physics and the Royal Aeronautical Society. He still flies with the Farnborough Aero Club (Chipmunk and PA-28). He owned a Turbo Arrow for ten years with a small group at



John and Kate (via John Denyer)

Frensham, and has a share in a Tiger Moth there. He also enjoys skiing, cycling, sailing and photography, and is a freelance keyboard player with a number of bands. □

AIR PILOTS ASSISTANTS

The results of the recent election for Assistants to the Court are as follows:



Stephen Bridgewater (newly elected): Steve joined the Company in 2007 and became a Liveryman in 2018. An aviation author and magazine editor for more than two decades (currently Editor of *AOPA UK* and Deputy Editor of *Air Pilot*) he was a co-founder of the Guild Young Members committee and its PR Officer 2008-11.



Wing Cdr Steven Dean (newly elected): Steve has been a Member since 2013 and a Liveryman since 2017. He has served on the Scholarships Sub-Committee since 2015 and on the ACEC since 2020. He is also heavily involved in the Company's scholarships, aptitude testing and mentoring programmes, and on the Young Members Development Committee. A 30-year Tornado pilot with the RAF, he is now Project Manager for the Normandy Memorial Trust, building a UK D-Day and Normandy Campaign Memorial in France.



Katherine Hodge (newly elected): Kat joined the Company in 2000 after winning a Breitling PPL Scholarship in 1999 and became a Liveryman in 2008. A co-founder of the Guild Young Members Committee, she chaired the GYM 2008-11, and has been a member of the ACEC since 2015. She has been a member of the promotions team, has worked on the Scholarships programme for 10 years, and has been on the Young Members Development Group since 2020. A Senior First Officer on the Boeing 787 with Virgin Atlantic, she is also the airline's Pilot and Cadet Liaison Officer.



Edward Pooley (re-elected): Ed became an Upper Freeman in 2007 and a Liveryman in 2010, and has been an Assistant since 2018. A retired airline pilot, and a full instructor on light aircraft, he is founder of the Company's

Commercial Air Transport Safety Network and its nominee as Director/Trustee on the Confidential Human Factors Reporting Programme (CHIRP) since 2014. Now an aviation safety consultant, he is also the Company's first nominee on the Flight Safety Foundation European Advisory Committee, sat on the TASC 2007-15 and is a registered Mentor.



Elizabeth Walkinshaw (re-elected): A Company member since 2012 and Liveryman since 2017, Elizabeth was elected as an Assistant in 2018. She is also a Director of Air Pilots Property Ltd, a member of the Academic Bursaries

Selection Panel and of the Drones Technical Group, a Mentor and the Company's liaison with the RAF Red Arrows. The owner of an equine breeding and competing business and an enthusiastic helicopter pilot, she is a Board Member of the Helicopter Club of Great Britain, and a Board Member, Trustee and Treasurer of the General Aviation Safety Council.



Dr Samantha Waller (newly elected): A Freeman of the Company since 2012 and a Liveryman since 2017, Sam is a member of the Academic Bursaries Selection Panel and the Space Technical Group, and has served on the

Environment Committee and on the Promotions Team. With qualifications in zoology, behavioural ecology and neuroscience, Sam has had a variety of professional and voluntary roles, which currently include (as detailed on pp31-32 of this issue) work on Project Wingman and cabin crew with British Airways. □



MASTER'S MESSAGE

Sqn Ldr Nick Goodwyn

As I write this message, the Duke of Edinburgh has just left hospital and we offer him our best wishes for a speedy and full recovery. The Duke

was our Grand Master from 1953-2002 and is currently our Patron. He will celebrate his 100th birthday on 10th June this year and we will wish to celebrate accordingly. This is my first Master's Message to you, having had the great honour and privilege of being installed as Master of the Honourable Company of Air Pilots, incorporating Air Navigators, at our AGM and Installation meeting on Monday 15th March. With some trepidation, I may add, as I have calculated (and mathematics was never my strong point so I hope I am correct), I am the 68th Master to be installed throughout the rich history of our organization and since the (then) Guild was formed in the autumn of 1929. I have reflected on all those great aviators who have held this office before me and I am not insensible to or in any doubt of the obligations and responsibilities that devolve on me to sustain the reputation and high regard in which this Company is held. I have always believed in giving service beyond self.

My career, as detailed elsewhere in this edition of *Air Pilot*, bears witness, I hope, to my enthusiasm and dedication to promoting excellence in individuals and our organisation and seeking to serve for the benefit of others. As Master, I offer myself to all the Air Pilots to fulfill that commitment in my year.

The AGM and Installation sees the beginning of the new year for the Company and for the Court. I would like to extend a warm welcome and congratulations to the newly elected Warden, John Denyer, and to the newly elected (or re-elected) Assistants, Steve Bridgewater, Steve Dean, Kat Hodge, Ed Pooley, Sam Waller and Elizabeth Walkinshaw. I would also like to thank those Air Pilots who put themselves forward for elections but who were not successful this time around, as we thrive as a Company when our members seek to get involved at any level in any of our activities. Please consider standing again next year.

A REFLECTION ON THE PAST YEAR

This has been unprecedented and when the IPM, John Towell, was installed last March, no one could have anticipated how turbulent and disruptive the effects of the Covid-19 pandemic would be for all of us personally, our Company and livery activities and for aviation at every level. I would like to pay a particular tribute to John and to Linda for their outstanding contribution to our Company in such challenging circumstances.

John has provided inspired leadership and dedication during this last year and has taken the Company forward, ensuring that, as the effects of the pandemic ease, we can look forward to brighter skies ahead with real confidence. Through his drive and vision, we embraced the virtual world of Zoom meetings and webinars, we stayed connected, and his energy has been a catalyst in fulfilling his ambition to realise the potential of this livery company to be more effective, to seize opportunity, to support and mentor our members and to make a real difference. I hope to build on the foundations that the IPM has laid in his year. I know that John and Linda have not been able to enjoy the traditional Master's year, as they would have liked, and that it has been at times difficult for them. I hope that we can honour them both appropriately as soon as we are able to and that they may be able to share with me, and enjoy, some of the livery events as and when the livery company calendar opens again. As with the IPM's year, the traditional Master's Tour to the regions, whilst it is being planned, remains in some doubt, even this far out.

I would also wish to offer my respects and condolences to all those who have suffered loss in the last year and to those who we have lost, not least Past Masters Ron Bridge, Hugh Field and Colin Cooke-Priest. We hope to be able to gather to pay those respects to all we have lost at a Company Service in St Michael Cornhill in due course.

May I add at this point my thanks and gratitude in advance to our Learned Clerk, Paul Tacon and the Secretariat of Eloise, Anna, Angie and to James for all their hard work and for the way that they have kept the Air Pilots running seamlessly throughout the year. They are an outstanding team, led by an outstanding Clerk. I look forward to working closely with you all in the year ahead. I would also like to record my appreciation in advance of my year of

the hard work carried out by all the honorary posts: Nick Goulding the Hon Treasurer; Past Master Peter Buggé as archivist assisted by Alan Jackson, and the editorial team of Allan Winn and Steve Bridgewater; whose work on Air Pilot is so richly enjoyed by us all. Not least, I look forward to the wisdom, guidance and company of Reverend Peter Mullen and the Venerable Ray Pentland and our Beadle Ted Prior in keeping me straight and level and on track through the year.



CCF Gliding Scholarship, Epsom College, 1978

THE YEAR AHEAD

As I write this message, the Prime Minister of the UK has given us a roadmap for the next stages of this pandemic, and with the vaccination programmes in the UK progressing well we can afford ourselves at least the prospect of better times ahead and the potential for a return to, though what I believe will be, a redefined normality. I suspect that there are still some pockets of turbulence to go through. We are a Company with a global membership, so I hope that all of our members in the regions will enjoy a similar return of normality in good order too. I look forward to working with all the Chairs of the regions in my year and I will value our regular regional

conference calls in developing our shared goals and ambition. On that note, I am excited by the energy of the International Technical Forum and the work of the DAA, John Turner, in taking the broad scope of the relevant and targeted working groups and topics forward. We have our recent engagement with the Department for Transport and Aviation Minister and the synergy of our shared views on advocating a rational debate on aviation and the environment, the re-start and regeneration of the aviation industry post-Covid-19 and supporting flightcrew returning from furlough or from redundancy. The withdrawal from Europe is an opportunity for UK aviation and perhaps the moment to reclaim our reputation as setting the bar and leading on flight training, instructional and examiner standards and pilot development. The future of all aspects of pilot performance, be it fixed wing, EVTOL, unmanned and in space, is within the sphere of our influence as the Air Pilots.

One cause dear to my heart is supporting the whole health and wellbeing of flightcrew. It is one that is, I think, enshrined in what we do as Air Pilots and exemplified by our mentoring and peer support initiatives. I have often been drawn in conversation with members who epitomise why they joined the Air Pilots by the desire to give something of themselves back to aviation. It goes beyond this. We all intuitively know that inspiring pilots to be the best that they can be, and ensuring that they are cognitively, emotionally and physically well, is intrinsic to enhancing flight safety.

Closer to home, my aim this year is to continue the work initiated by the IPM, and in line with the Strategic Plan of 2017, in ensuring that we remain, as a company, fit for purpose for the foreseeable future with good governance, transparency and resilience. This last year has

Returning to Incirlik from Op Warden sortie, Tornado, 1996



demonstrated that unforeseen events can challenge every organisation to its core, but we can learn lessons from that. I will support and work closely with our excellent Clerk, the GP&F and the re-vamped Audit Committee to ensure that we can be confident of our future as a modern Livery Company. I would like to ensure that we sustain a solid membership base, across all the regions, that we are actively considering our long term financial stability and growth and that we remain relevant, influential and attractive as a Livery Company and as a 'home' for aviators. I look forward to drawing from the experience of the Court, the Past Masters and the wider membership to secure that future.

I have been hugely impressed by the dynamism and energy of the Young Air Pilots. Their leadership team and leading lights have been inspirational throughout the lockdowns, as they have faced their most testing period whilst forging new careers in the industry, seeking that first appointment or just taking those first steps into aviation. The programme of events they have created - virtual coffee mornings, development days, webinars and virtual social get-togethers - has been superb. I hope that the young Air Pilots will feel increasingly integrated as part of our Company and enjoy every facet of our company and the Livery movement.

In my year, I would like to give due recognition, pay tribute to and promote the sheer diversity of opportunities that are encompassed by the Air Pilots. The scale and scope of the Scholarships and Bursaries that we offer, and the wonderful effort of so many members in sifting and interviewing, is inspirational and reflects that we can and do make a difference in motivating new and young aviators.

INFLUENTIAL COMMITTEE WORK

Our committees such as the ACEC and the ITF enable us to be relevant and have influence, keeping pace with technological, educational and career change in our industry. The Trophies and Awards Committee and the Banquet recognise and reward excellence, and I look forward to hosting our dinner at Guildhall in October where we will celebrate our winners from both last year and this. It will also mark the 30th anniversary of our Company awards dinner being held at Guildhall, when we were the only Livery Company granted permission by the Lord Mayor to do so. I hope we will also be able to mark the 100th anniversary of the formation of the Royal Australian Air Force. Additionally, I look forward to facilitating the Cobham Lecture in April and, with some optimism at least, the Tymms Lecture 'live' back in the RAF

Club in September.

We are equally fortunate to have our vibrant clubs such as the Air Pilots flying club, as well as those groups of members who participate in inter-livery shooting, skiing and the golf society, and whilst we have so dearly missed the Summer Supper, the Luncheon Club and guest speakers last year, we also look forward very much to the Luncheon Club restarting when we are able to do so. I sincerely hope that the flying club will once again soon be able to have fly-ins, its BBQ and seasonal lunches. Our company visits, always so popular, have been on hold and, as we emerge from lockdown, I hope that the visits team will be able to return to business as usual with a re-constituted programme at some point, which I am sure will be an enthusiastic balance of supply over eager demand. It is often through such visits, and the company dinners, that we are able to maintain our links with our affiliated military units highlighting another important and special collaborative relationship that we hold dear as a Company. I look forward to a busy year ahead, although I feel that it remains unclear as to what and when and how this Master's year will unfold. Much uncertainty remains, at least in the near term. My wife and consort Lenka and I will be juggling busy working and family lives with our young son Benji and my daughter Maddy but we are all excited and committed in supporting the Air Pilots in this, my year as Master. □

Master Nick and Mistress Lenka (All pictures via the Master)





YOUNG AIR PILOT UPDATE

By Freeman Will Wright – YAP Committee Chair

In my last update, I had the unenviable task of summarising a full year of development work in one article. It was a challenge. Rationalising every conversation, exciting opportunity, training session, or engaging meeting is an impossibility. However, what is possible to say is that the concatenation of each pillar of work, and those responsible for driving and influencing the direction of the YAP Committee, has been 'synergy' personified. The setting of the foundations over the past 12 months has been crucial to providing a springboard with which the young members can become a truly dynamic and engaged group that contributes fully to Air Pilots life.

Until now the Young Air Pilots Committee was not a recognised committee that reported into the Court. By the time you read this, we will be. That is a testament to all those who have contributed over this past year. It is a vote of confidence in the YAP Committee and a mark of the importance placed on young members by the Company. I am very much looking forward to exploring the possibility within this group.

Building on this foundation, I am keen to explore two main areas in the coming year:

ENGAGEMENT

Engagement serves two purposes with respect to young aviators. First, it serves to underpin our reputation as a source of knowledge and expertise within the aviation industry. Second, it allows us to be visible and entice prospective members into the Company through professional connection. The mechanisms that underpin these two purposes are social media, communications and outreach.

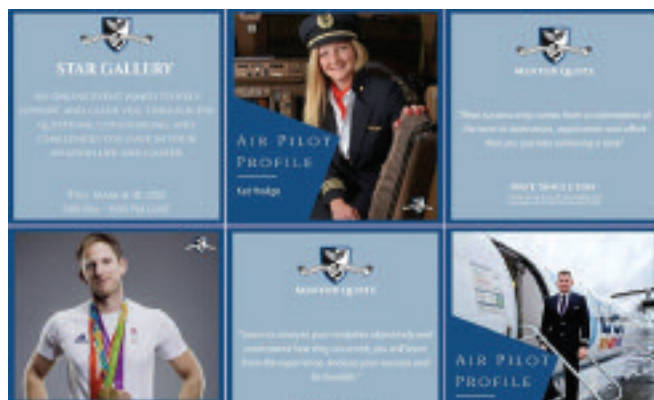
The Air Pilots do a marvellous job at supporting the next generation. I'd like the YAP Committee to be contributing

more to this great work. We know that young people utilise social media platforms to get their information, engage with industry 'influencers' and seek inspiration. Therefore, we have a fantastic opportunity to showcase all the great work we do using the presence we are building on Facebook, Instagram and the like (@YoungAirPilots). Further, the potential to engage flying clubs, universities and other professional aviation organisations is, as yet, untapped.

EVENTS AND VISITS

As we are all aware, the past year has not been one for the typical Air Pilots social calendar. As much as the Company has transitioned very well into adopting online forums, I think I speak for all when I say we are very much looking forward to resuming the social status quo. As 'green shoots' become more ubiquitous in every-day language, so closer becomes the date at which we can 'clink' glasses and resume flying (albeit not at the same time). For me, that means preparing potential solutions for the unknown. Creating a pipeline of planned events and visits is a sensible solution. This plan can later be adapted as necessary and if required. I prefer this approach to the alternative; playing catch-up once restrictions are lifted by Boris Johnson and the government. As it stands, we are reviewing the possibility of hosting the much-heralded Young Aviators' Dinner at the RAF Club, alongside our friends at the Air League. There is a multitude of other potential events, visits and socials on the horizon.

I also want to quickly update you all on the new developments in the Career Development and Training (CD&T) pillar. In the past couple of weeks, we have made significant progress on delivering the 'One Stop Shop' and complimentary "Star Gallery". The aim of the former is to provide our membership with a central location to access information on the lifecycle of a pilot. It will contain around 15-20 documents to provide guidance on the next career move. This may be choosing a training course, reframing mindset to command or considering moving into management. There will be something in there for every proactive *Air Pilot*. The latter is a supporting panel forum to answer any aviation-related questions in a relaxed, informal and low-risk setting. The panellists will be around six experienced 'heads', with each session tailored to a specific topic. I really hope these two developments are highly subscribed to and provide real value to those using them. Stay safe. Blue skies and tailwinds. ☐



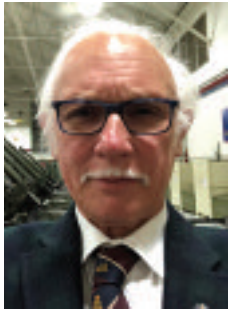
REGIONAL REPORTS

North America Region

Out of Africa



By Liveryman Alistair Beaton, Chairman, North America Region



The 1985 Academy Award-winning romance/drama movie, *Out of Africa*, loosely based on a true story and starring Meryl Streep and Robert Redford, has always been one of my favourite films. It takes me back to the year 2000 and the first of three short visits to Zambia, (formerly known as Northern Rhodesia),

where I worked as a holiday relief pilot for CMML Flight Services.

The 19th century British hero, Dr David Livingston, (a fellow dour Scotsman), physician, pioneer explorer, an appointed British Consul and Christian missionary, was the first European to cross south central Africa from East to West on foot. Livingston was commissioned by the British Government to explore the 2,700km Zambezi River between 1858 and 1864, in order to find a possible navigation and shipping route for legitimate British commerce and trade to south central Africa and bring to an end the Arab/African slave trade, which Livingston detested.

Just over 30 years later a team of seven medical/missionary doctors boarded a merchant ship in England and set sail for Angola. At the invitation of an African helper, Dr Walter Fisher was invited to travel in Livingston's footsteps to the Mwinilunga District of Northern Rhodesia, to provide

medical care to the Lunda people. The wetlands of this area and the source of the Zambezi River are the breeding ground for the Anopheles mosquitoes that carry the deadly malaria parasite that currently kills up to 50,000 men, women and children every year in Zambia.

Dr Fisher set up his first dispensary around 1906 on a sloping escarpment that rises 400ft above the flat surrounding tree-canopied bush. While the top of Kalene Hill was relatively free of malaria, it also lacked water resources and eventually the expanding dispensary, 250-bed bush hospital and the mission activity moved down to its current location in the shadow of the hill.

For well over 100 years missionary doctors, nurses, midwives have followed Dr Fisher's footsteps to Kalene and to the other associated bush hospitals that have been set up along the Zambezi River. Of course today they do not have to walk from Angola's west coast or from South Africa's Cape Province; they can arrive safely by air in the comfort of CMML's aircraft. It was told to me that real missionaries don't travel by air and if not walking everywhere, they should use a bicycle accompanied by two lions following in line astern! Proof of God's protection - no doubt!

Capt Bruce Poidevin and his wife had initially gone to Zambia from Ontario, Canada, to provide practical support to the bush hospital at Kalene; maintaining roads, buildings, vehicles and other infrastructure. In the early 1990s Bruce recognised the advantage and efficiency of introducing air travel to the mission staff at all of the bush hospitals. A non-profit flight services was set up when Bruce purchased a Cessna Turbo 207A around 1993. He carved out a 4,500ft runway at Kalene and was instrumental in building runways at the other bush hospitals. In the first year of operation the Cessna 207 accumulated 350h of safe flying. Bruce was later joined by an experienced MAF pilot/engineer to assist.

In May of 2000 I was honoured to provide some much-needed holiday relief to the CMML pilots in the first of three tours of duty in Zambia. The first order of business was to have my Transport Canada Airline Transport Pilot

Alistair with the CMML Cessna





The remoteness of Zambian flying

Licence validated by the Zambian Civil Aviation Authority. Like all Zambians, the CAA folks are very welcoming and in short order I had a Zambian licence for "Flying Machines" a typical old-style British booklet type with the pages tied in place with shoelace.

Next came the route checks. At that time there was very little in the way of navigation aids except for VORs at the international airports. GPS was still a dream, therefore dead reckoning was the state-of-the-art means of navigation. The first route check flight was from Lusaka International Airport to Chitokoloki to drop off a Canadian missionary's wife, who had just arrived via London on British Airways. Chitokoloki is located on the banks of the Zambezi River, has a 150-bed hospital and a small leper colony. The flying time was 2h 50min - by Land Rover it would have taken two to three days.

My next flight was to home base at Kalene. The route is initially eastbound to avoid Angola, where at that time a civil war was happening. Once clear of Angolan airspace and changing course northwards over Kabompo, 1h 35min later, I saw for first time the shining metal roof tops of the hospital buildings on approach to landing. The dirt/grass airstrip is about 4,500ft above sea level. Bruce built a great hangar from bricks that he and his team made and fired in their own brick kiln. The hangar has an adjoining apartment for Bruce and his wife Marilyn and their two sons. Marilyn does dispatch and flight watch over the HF Radio, when the Cessna is in the air.

The following day we left early on a flight to East Mnkoshi and then onwards to Lusaka. This was in total a 4h 30min

flight. Fortunately the Cessna T207A is fitted with long-range fuel tanks and can fly up to seven hours at a push! At Lusaka International Airport, CMML Flight Services has an office/bedroom in the terminal building, where arriving or departing CMML passengers can take their ease, while awaiting international flights or departing on delayed flights. CMML also operates a guest house in Lusaka and it is the pilot's responsibility to ensure the guest house is well stocked and looked after by the on-site caretakers.

After a good night's rest and a cooked meal, next morning we were off to Sakeji. The descendants of Dr Walter Fisher have a large property at this location and although no longer active with the mission, the Fisher family host the famous Sakeji Christian School. A visit to the classrooms at the school reminded me of a scene out of Charles Dickens! Lusaka to Sakeji is a 2h 30min flight and CMML Flight Services is tasked to take the children of families working at the numerous hospitals and mission stations, back and forth to visit their parents during school breaks.

Other locations visited during this route check phase, were Chavuma on the Zambezi River, where there is a 120-bed hospital and within a reasonable driving distance of another 130-bed hospital at Loloma, which has no airstrip. Visits to Mukinge and Mwinilunga were also sorties that were carried out.

One essential visit when working in Zambia is to the local Chief! Once you have his blessing, you are good to go! But don't forget to take a small gift from your homeland. If you do, you will definitely be the Chief's friend for life! □

New Zealand Region

A weekend with the Chairman

By Freeman John King

New Zealand has stayed largely free of Covid-19, not least because of its strict closed-borders policy which has effectively shut down its international air services, but within its borders, flying has remained envyingly accessible.

Graeme Wood, Tiger Moth Club of New Zealand Club Captain, was on the phone. "There's a couple of seats going down to Taumarunui, one in the Beaver and one in a Tiger. You'll be flying with Allan Boyce," said Graeme.

Taumarunui is significant to the Tiger Moth Club, which was formed there in October 1969 and, for more than half the years since, has been returning to its roots for an annual spring fly-in to welcome the supposedly warmer weather for the flying season. The magnificent grass aerodrome was built in the early 1960s, with a runway of sufficient length

(at 1,250m) to accommodate aerial topdressing DC-3s, and has long been a strategic stop near the centre of the North Island.

ZK-BLI, the Tiger Moth whose front seat I occupied for the weekend, has had a largely blameless career. Built in the de Havilland New Zealand factory at Rongotai, Wellington, it served as NZ1448 in the RNZAF from October 1942.

Sold into civilian use in 1955, late enough to escape the aerial topdressing fate of so many of its contemporaries, it was operated by several aero clubs before entering private ownership in 1979. It is now owned by the Tiger BLI Syndicate, a group of largely retired airline pilots based at Ardmore in Auckland.

Author John King hurries to join NZ Chairman Boyce on departure from Taumarunui after stowing the chocks



My pilot for the weekend was Allan Boyce. Allan won an Air Training Corps flying scholarship in 1965, which piqued his enthusiasm enough for him to join the RNZAF's No 5 Officer Cadet Course, leading to No 44 Aircrew Course at Wigram in January 1966. He graduated in April 1967 and spent two years flying Vampires. That was followed by three years back at Wigram, instructing on Harvards, Devons and Airtourers, before progressing to A-4K Skyhawks at Ohakea.

Finishing his 8½-year short service commission, Allan looked around for an airline job. Within three months he was in the right-hand seat of an Air New Zealand DC-8. The inevitable cyclical downturn in 1978 saw him posted to Stansted for eight months as a DC-8 first officer with Transmeridian Air Cargo. Then it was back to Air New Zealand, this time on the DC-10 and later the Boeing 747-200 and Boeing 767, soon becoming Training Captain on the latter. After a total of 25 years as Flight Examiner and other staff pilot positions he eventually made the B777, which lasted for three years to retirement age.

In 1989 he also became only the second New Zealander to join the then Guild of Air Pilots and Air Navigators (after Peter Rhodes). Now a Liveryman, Allan served as Chairman of the New Zealand Region from 1997 to 2001 and 2012–2013, and was elected to the Court four times between 2003 and 2014. His present position of New Zealand Chairman dates from March 2019, and he's also been on the Council of the Royal Aeronautical Society (New Zealand Division) for 25 years.

Ardmore to Taumarunui is comfortably under two hours at Tiger Moth speeds, even with a moderate headwind. We set out on a Friday afternoon in perfect weather, unusual in New Zealand's normal spring conditions of brisk westerlies. Navigation was helped by the sort of visibility I've always liked—being able to see a couple of hours ahead to avoid having to make any sudden decisions. We aimed for the left-hand side of the 3,144ft volcanic bulk of Mt Pirongia, easily visible after departing southwards from Ardmore. Keeping the village of Pirongia and the Waipa River off the port wingtip guaranteed avoiding the south eastern corner of the Hamilton control

zone - its overlaying CTA/D doesn't start until 2500 ft, well above normal Tiger Moth cruising levels. Staying on the same heading we routed via Te Kuiti, easily recognisable as the only town of any size directly en route. Te Kuiti's own aerodrome, 33nm north of Taumarunui, is a useful bolthole in case Taumarunui is fogged in, and from there it's possible to see the 2,530ft flat-topped Mount Hikurangi that stands at the head of the valley containing Taumarunui aerodrome.

Allan made an impeccable landing, modestly fending off praise as a "fluke", and we picketed ZK-BLI in a neat line of a dozen de Havilland biplanes, mostly Tiger Moths leavened by a single Thruxton Jackaroo and Gipsy Moth. Other vintage aeroplanes including Harvards, Chipmunks and Beavers were arrayed behind, with modern nosewheel devices relegated to their own park, out of the way beyond the hangars.

Tiger Moth Club regular fly-ins are primarily social events, to the extent that it's been agreed never to cancel one even if it's impossible to fly there. Saturday's perfect weather was taken up with flying competitions—flour bombing, spot landing and aerobatics with all pilots encouraged to take part. Allan and I as a crew seemed to pose no threat to the results, but it was a relaxed sort of day with plenty of time to chat to friends not seen since the last fly-in.

Sunday morning dawned without frost but with fog, so nobody was in a hurry to head homewards. Eventually we took off on Runway 01 in conditions as ideal as Friday's, with all distant landmarks clearly visible to Mt Pirongia and beyond. Again, navigation was no problem. However, the same couldn't be said of communications. I'd thought long silences from the Captain were merely part of his natural reticence but something was amiss in his headset. Still, it all came right in time for the Ardmore rejoin, and we landed after one of those Tiger Moth flying weekends to savour. There's a great deal to be said in favour of this open-cockpit flying. □

Hong Kong Region

By Assistant Captain Pat Voigt, Hong Kong Regional Chairman

With the governmental restrictions that have remained firmly in place since my last missive, there is little that I can lend as to an update from the Hong Kong Region.

However, one major and positive event was the Regional Conference Call (RCC) held in early February, naturally held via Zoom. This relatively new initiative last year by 'Head Office' and prior to the impact of the restrictions, has been one of the few benefits of the new forced medium of Video Conference Calls. With a carefully managed time slot by the Learned Clerk, this conveniently allows the majority of the Colonial Chairman to join with sensible body clocks and my thanks goes to the Master et al for waking so early to facilitate this.

The very fact that we are the only City of London Company to have any

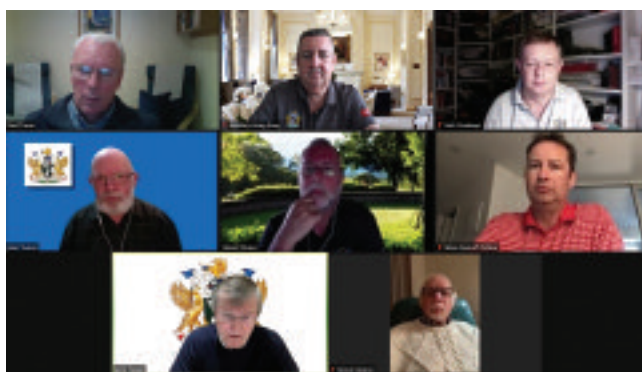
Regional arms, let alone four, is reason enough to utilise this huge and relatively untapped resource of aviation 'experts'. As my first year as regional Chairman and two years as an Assistant to the Court draw to a close, I have had more time than expected to consider how best to promote and further the aims of the Honourable Company of Air Pilots. One of my many considerations, is that from my perspective to ensure that we achieve our Company's far reaching goals, it is paramount that this international forum and global inclusion of the

membership is drawn upon, in support of the core business in London.

I sincerely hope that in my next introduction to our Regional articles, I will be able to report a significant increased level of membership involvement and events, in addition to our continued support both at peer and a more personal level.

I will close with some thoughts which I write in February but feel it appropriate that should be published in April,

shortly after your handover Master John. I am well aware that both you and Mistress Linda have experienced a very different year in office compared to the one that I know you had anticipated and meticulously planned. Therefore, I take this opportunity to thank you both for handling it so well and for the support that you



The Regional Conference Call

have provided to all the Company's Members around the world. I wish you the best of luck in your tenure as IPM and look forward to joining you in the early hours from Hong Kong for the usual post-Court socialising. To Master Nick and Lenka, may I on behalf of the Hong Kong Region wish you both every success in the year ahead and whilst the varying worldwide restrictions are clearly going to persist for some of your time, I firmly believe that the future does look brighter. It is time to get back on our feet and launch airborne once more. ▢

Aviation English in Hong Kong

Finding the Next Generation of Local Pilots

By Upper Freeman Brendan J Roscoe

Around seven years ago, whilst settled into a relatively undemanding B777ER roster in Hong Kong, I came across a training provider (Aviation English Asia Ltd) that was looking for pilots to review and bring authenticity to teaching materials.

The students came from diverse backgrounds, some even holding commercial licences, and included quite a few cabin crew and staff in roles such as cargo handlers, load

controllers and flight dispatchers. I had the satisfaction of later seeing some of my students on the line. Many had a genuine long-term interest in aviation, but some just saw airline recruitment adverts in local newspapers and decided to try rather than pursue a career at HSBC!

Students had the main objective of passing the ICAO English test which is required both for licensing purposes and for gaining a place on the cadet programmes run by



Brendan Roscoe re-united with the Chipmunk on which he first soloed 44 years earlier

Cathay Pacific, Dragonair and Hong Kong Airlines. Unlike much of the industry, we removed the emphasis from “beating the test.” I collaborated with a language teaching expert to create over 400 hours of teaching material which simultaneously developed students’ technical knowledge and language skills, with the emphasis on listening to ATC pilot interactions, group role play and visual imagery.

As elsewhere in the world, the aviation scene has been turned upside down by Covid-19 and, with increased restrictions, we suffered significantly reduced class sizes. HK Express was bought by Cathay Pacific and subsequently Cathay Dragon ceased to exist at a most inopportune moment. The cadet market was put on ice, so we unshelved courses to support the most realistic path to begin the dream of becoming a pilot – self-sponsored flight training. To bridge the gap between school/university and flight school, we designed the Basic Aeronautical Knowledge Certificate Programme. The challenge now is attracting high-calibre candidates with the ability to see through the present problems and maintain their long-term goal to be a pilot, bearing in mind the enormous number of aircrew currently kicking their heels rather than tyres!

The task of teaching ‘aviation English’ appears easy to Western pilots, as in the main we speak the language as natives and are familiar with the operational environment – therefore we can automatically teach it. But an effective language teacher ‘facilitates’ language practice in the pupil by using the language themselves, through the medium of charts and documentation, group discussions, role play and listening to real pilots on tapes.

A hot topic in Hong Kong at present is the effect that traditional rote learning - and enforced changes to the school curriculum requiring more of the same - is having

on the type of critical thinking required in the profession. The decision to abandon English as a medium of teaching in government schools after 1997 has also had a discernible effect. The main value in my approach is to introduce out-of-the-box thinking and anecdotal events from my experience as a military QFI and civil pilot to make it more interesting. Flying older aircraft such as the Chipmunk, Hunter and Canberra meant engine failures were not an uncommon experience, unlike in today’s reliable machines. As most of the older, bolder pilots will recount, a lot of their aviation knowledge and tips on how not to ‘screw up’ came from informal chats in the bar after flying: a tradition, sadly much rarer now both in the military and civil aviation.

One thing we introduced was to have an end-of-year visit to a Kowloon pub. Surprisingly, many of the young aspirants had never been in a bar nor tasted beer. As we considered this failing would rob them of potential life-saving advice in the future, I gave talks on the history of alcohol and aviation - both good and bad - and encouraged them to approach the bar, adopt the pose and confidently order a beer. They enjoyed it along with Irish pub grub.

ATTRACTING THE RIGHT CANDIDATES

Another issue is encouraging the right type of candidates from such a small population pool with little history of aviation. My generation was brought up with tales of derring-do from World War Two and the advancements in aviation since then. We washed aircraft, begged for flights, joined the Air Cadets at 14, could fly gliders solo at 16, benefit from the RAF Air Experience Flights, University Air Squadrons and could visit major airshows every year. None of that is possible within Hong Kong and the locked flight deck door has long precluded any possible motivation from that source.

However, hopefully this new generation may just be in the right place at the right time when things recover, so the main task is to get the message out there that aviation will continue to be a rewarding career in spite of the likes of Covid-19, video conferencing, AI and robotics etc. As always, it’s up to all of us to fellow aviators to “sell the dream”! □

Brendan Roscoe teaching English to local students





Australia Region

By Upper Freeman Rob Dicker, Regional Chairman, Australia

On 31st March, 2021 the Royal Australian Air Force (RAAF) marked the beginning of a year of centenary celebrations. The first flight of a military aircraft in Australia had occurred in 1914 at Point Cook, just outside Melbourne, Victoria and in November 1920 the Australian Air Board was established. This put forward a submission to the government recommending the establishment of an independent Australian Air Force (AAF). The AAF was duly formed by proclamation in the Commonwealth of Australia Gazette on 31st March 1921 and the 'Royal' prefix was added in August 1921.

The Honourable Company of Air Pilots is presenting two swords to the RAAF to commemorate this historic occasion. Covid-19 restrictions permitting, the first of these – the 100th Anniversary Officer's Sword – will have been presented to the Chief of Air Force, Air Marshal Mel Hupfeld, at a ceremony in Canberra on 31st March.

This sword, designed by PM Robert Pooley and manufactured by Pooley Sword Ltd, is inscribed with the names of all those who have served as the senior officer of the Royal Australian Air Force. The first name is that of Sir Richard Williams KBE CB DSO who is widely regarded as "father" of the RAAF and who served as the first, and longest serving, Chief of the Air Staff on three separate postings between 1922 and 1939.



Sir Richard Williams

FIRST PILOT

Williams was born in 1890 in South Australia, the son of a copper miner from Cornwall, England. After a standard education for that time, he enlisted in the military at the age of 19. In August 1914 he took part in Australia's inaugural military flying course at Central Flying School, at Point Cook, and after soloing in a Bristol Box-kite became the first student to graduate as a pilot on 12th November 1914.

During World War One, Williams served as commander 1 Squadron, Australian Flying Corps (AFC) and as commander of the RAF's 40th (Army) Wing operating in


Egypt and Palestine, where he received the Distinguished Service Order for conspicuous gallantry. In 1919 he was awarded the OBE for his wartime service.

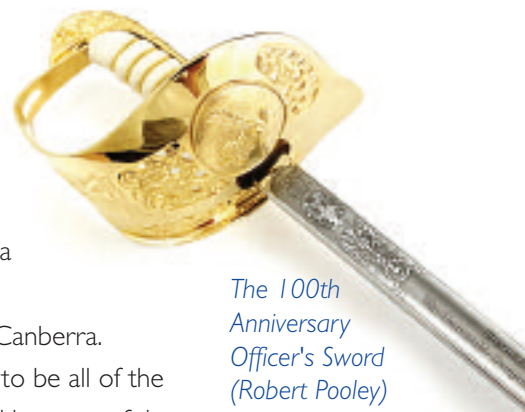
On his return to Australia, Williams served as the air adviser to the joint Army-Navy Board. With the establishment of the Air Board in 1920 he became its senior officer with the title of First Air Member. With the rank of Wing Commander, he became the Chief of the Air Staff in October 1922. During his tenure he was committed to the establishment, preservation and development of the RAAF which was the subject of deep and internecine Service rivalries that threatened to disband it¹ According to Williams, only after 1932 was the independence of the Air Force assured².

Williams' major air warfare study, *Memorandum Regarding the Air Defence of Australia*, was considered prescient in many ways and its concepts continue to influence RAAF strategy³. Williams was promoted to Air Marshal in 1940, the first to achieve this rank in the RAAF. That the RAAF is celebrating its centenary can, in many ways, be attributed to its first Chief.

On 31st March 2021, the RAAF was due to receive a new Queen's Colour, presented by the Governor-General at a closed parade at Government House, Canberra.

Also on parade were to be all of the colours, standards and banners of the Royal Australian Air Force, to be followed by a flypast of more than 60 current and heritage RAAF aircraft over Lake Burley Griffin.

More details of events during this centenary year and information of the RAAF's 100-year history can be found at: <https://airforce2021.airforce.gov.au> 



The 100th Anniversary Officer's Sword (Robert Pooley)

¹Frederickson, Lewis (2020). *The Australian Air Campaign Series - I, Armageddon and Okra*. Sydney: Big Sky Publishing Pty Ltd
^{2,3} Stephens, Alan (2006) [2001]. *The Royal Australian Air Force: A History*. London: Oxford University Press, pp50–52 and pp42–45



FROM THE DESK OF THE DIRECTOR AVIATION AFFAIRS

By Liveryman John Turner

In January 2020, before Covid-19 began playing havoc with lives, families, friends and aviation I wrote: "We will undoubtedly continue to hear increasingly strident calls for more political focus on the environment and climate-change countermeasures." Little did we expect that commercial aviation activity would implode just two months later; with only a gradual increase to the end of the year, leaving total commercial flight numbers down by 41.7%^A. Even today, daily commercial flight numbers are only about 60% of 2019 levels. So calls to counter climate-change have been relatively few, with the subject staying low on political (and media) agendas as governments faced a more urgent threat.

Turning to history, the 1918-19 Spanish Flu pandemic had three distinct peaks in infection and mortality rate in most parts of the world. The third wave was less severe than the second but it was significantly worse than the first in many areas. Subsequently, the virus did not disappear but began to mutate into a far less deadly form that was nearly indistinguishable from seasonal flu. Genetic traces of the 1918 virus present in seasonal flu even to this day^B. History often repeats itself, but our understanding of viruses and genetics has advanced tremendously over the last 100 years, to the extent that we have the ability to both identify the genetic makeup (and mutations) of a virus and to produce vaccinations targeted accordingly. However, vaccinating the global population will take time and a huge international effort to overcome the logistical hurdles involved. Aviation will

undoubtedly play a crucial role in the distribution of vaccines across the world, just as it did in transporting protective equipment at the start of the pandemic.

Nonetheless, until vaccination takes widespread effect within a population, we remain reliant on the five traditional methods of protection against a pandemic, namely: quarantine; social distancing; masks; washing hands and surfaces; and fresh air with adaptive schooling. (Adaptive schooling is not a new phenomenon. In 1665, an outbreak of bubonic plague caused a young Isaac Newton to be sent from Cambridge University to his family's farm. It was on that farm that he allegedly witnessed the falling apple that led to his law of universal gravitation.) With vaccination rates varying markedly across Europe, German Chancellor Angela Merkel provided a salutary reminder of the importance of achieving global vaccination as quickly as possible when she warned that her country could enter a third wave if it lifted its lockdown too quickly.

Aviation needs to be at the forefront of the climate change debate (iStock)



Returning to the environmental theme, The Honourable Company of Air Pilots has long recognised the need to advocate for aviation in the climate change debate. The United Nations Framework Convention on Climate Change (UNFCCC) Twenty Sixth Conference of the Parties (COP26) is planned to take place in Glasgow on 1st - 12th November 2021, hosted by the UK in partnership with Italy. This will put climate change firmly back on the global stage, making it important for us to convey the reality of aviation's role and environmental position.

SHOWING OUR CREDENTIALS

Our Environment Technical Group (ETG) has picked up that challenge and is forming plans to 'showcase' aviation's green credentials in the City of London during September/October this year and possibly with a stand in Glasgow during COP26 in November. That stance could be based on the low contribution that aviation actually makes to global warming (contributing only 1.9% of global greenhouse gas emissions in 2016^C) in contrast with other sectors that contribute several multiples of that figure. However, rather than challenge other sectors we hope to focus on our own, by showing how aviation will plan to meet the carbon challenge of 'net zero by 2050.' This is an extremely large subject and, while ETG members are not experts in aviation sustainability, they are doing what they can to identify the potential technologies and solutions. They are also seeking engagement with partners in the aviation industry to expand on awareness and increase our influence on government and the media. If this is a topic that interests you, please feel free to contribute to our ETG's work by contacting me at daa@airpilots.org.

Quite separately, our Airspace Technical Group (ATG) has found common ground and joined forces with the Association of UK Flight Information Service Officers (AUKFISO), British Airline Pilots' Association (BALPA), the General Aviation Alliance (GAA) and the Guild of Air Traffic Control Officers (GATCO). The consortium has released a Joint Position Statement as follows:

"The departure from EASA, as part of Brexit, and the reduction in flight movements due to the pandemic present the UK with a once in a lifetime unique opportunity to totally redesign outdated UK airspace, its regulation and procedures and the technology that supports it.

While the UK's Airspace Modernisation Strategy is a welcome step in the right direction, it continues the piecemeal approach of airspace infrastructure modernisation of the last 70 years,

imposing minor or localised modifications based on legacy technology and infrastructure. If the UK is to continue being at the forefront of aviation worldwide, it requires an ambitious vision of a modern, safe, efficient, environmentally friendly and cost-effective airspace structure, which benefits from current and future technology and which encompasses the needs of all airspace users.

"[We] seek to refocus the Airspace Modernisation Strategy and develop a holistic vision of the UK airspace which will support aviation and the wider UK economy."

The press release, including details of the partner organisations, is available on our website^D and reported on the **Flyer** website^E. Although it is not explicit in the position statement, the ATG principles include achieving safety for all air users through effective 'sharing rather than segregating' and of keeping the rules and procedures as common internationally as possible.

Both the ETG and ATG comprise members from the Regions as well as the UK, as do our Space and Unmanned Air Systems Technical Groups. Just like the International Technical Forum, all meet regularly by Zoom, with start times chosen to accommodate everyone from the various time zones, sharing the burden of early starts and late finishes on individuals as fairly as possible.

Finally, in case you have not discovered it yet, The Honourable Company of Air Pilots has a LinkedIn page that we endeavour to keep updated with relevant and/or interesting information. The page link is <https://www.linkedin.com/company/the-honourable-company-of-air-pilots> (also available from the Air pilots website front page) but you can also find articles related to the Technical Groups by using the hashtags #airpilotsspacetg, #airpilotsenvironmenttg, #airpilotsairspacetg, #airpilotsuastg. Alternatively, you can join the hundreds of people who already 'follow' us. □

^A <https://www.flightradar24.com/blog/commercial-flights-down-42-in-2020/>

^B <https://www.history.com/news/1918-flu-pandemic-never-ended>

^C <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>

^D <https://www.airpilots.org/commentary/press-releases/the-uk-airspace-of-the-future/>

^E <https://www.flyer.co.uk/?s=airspace>



A SNAPSHOT OF AUSTRALIA'S SPACE SECTOR

By Upper Freeman Dr Paul Dare

Australia's space sector is growing, and changing, rapidly, but this snapshot produced at the encouragement of the Space Technical Group gives an accurate picture of the position at the beginning of 2021.

SOME MILESTONES IN AUSTRALIA'S SPACE HISTORY

Australia has a long history of involvement in the global space industry. To attempt to recount that history here would be to do it an injustice, however a few of the important milestones include:

1947. Establishment of the Anglo-Australian Long Range Weapons Establishment, later known as the Woomera Rocket Range, and now officially called RAAF Base Woomera. This site, located 450km north west of Adelaide, South Australia, is the western world's largest test range facility, at 122,000 sq km (approx. half the size of the UK). The facility includes the land area and the airspace above (Woomera Restricted Airspace). It is currently operated by the Royal Australian Air Force (RAAF), and used by numerous countries for civilian and military projects, including testing of defence materiel, civilian rocketry, and communications.

Early 1960s The opening of the various tracking stations across Australia, including Muchea (Western Australia), Parkes (New South Wales), Carnarvon (Western Australia), Island Lagoon (South Australia), and Honeysuckle Creek (Canberra). They were used in the 1960s and early '70s for communicating with Mercury, Gemini and Apollo spacecraft, as well as other interplanetary satellites. Muchea tracking station is featured in the 1983 film *The Right Stuff*, and Parkes Observatory is the subject of the 2000 film *The Dish*. Many of these tracking stations are still operational.

1967 The launch of Australia's first satellite, WRESAT 1, from the Woomera Rocket Range.

1984 The first Australian-born astronaut, Liveryman Paul Scully-Power, entered orbit on Challenger mission STS41-G.

1996 The second Australian-born astronaut, Andy Thomas, entered orbit on Endeavour mission STS-77. It was his first of four missions to space.

2018 Establishment of the Australian Space Agency.

THE AUSTRALIAN SPACE AGENCY

In 2018 the Australian Space Agency (ASA) was officially established. It is a federally funded government body, located in Adelaide, South Australia, a city which hosts the headquarters of many defence prime contractors and space companies, both established and emerging. ASA is currently headed by Enrico Palermo (ex-Chief Operating Officer of Virgin Galactic) and is the peak body for "space" in Australia. It differs from NASA and ESA in that it does not conduct state-based space operations and missions, but instead it promotes private industry to develop space businesses. The key roles of ASA include:

- Developing national capability;
- Leading international collaboration;
- Regulating Australian space activities;
- Inspiring Australia in space;
- Administering and funding space programs;

Recent successes for the ASA include signing the Space Bridge Framework Arrangement with the UK, and signing a Memorandum of Understanding with the Indian Space Research Organisation. In 2019, ASA signed a partnership agreement with NASA on future space cooperation, with a focus on NASA's Moon to Mars programme.

THE AUSTRALIAN SPACE INDUSTRY

The Australian space sector is growing rapidly. In 2018 the sector was valued at AUD\$3.9 billion, and is forecast to grow to AUD\$12 billion by 2030. It is seen as being a significant part of the fourth industrial revolution. Due to the vibrant start-up ecosystem in Australia, much of the growth in the space sector will originate from start-up companies. It is estimated that start-up companies make up 87% of the Australian space market and typical start-up companies operating in this sector include:

- Southern Launch – a provider of small satellite launch services;
- Fleet Space Technologies – builder of nanosatellites and developer of IOT technologies;

- Myriota – developer of low-power, direct-to-orbit satellite connectivity for the IOT;
- Gilmour Space – a rocket company developing new capabilities for launching small satellites;

There are of course dozens of other companies operating in the space sector. Representation for the companies operating in the space sector is provided by the Space Industry Association of Australia, a national organisation formed to promote the growth of the Australian space sector by facilitating communications between its industry members and state and federal government bodies.

State governments in Australia are also keen to develop their local space sector businesses. For example, in South Australia the South Australian Space Industry Centre (SASIC) works to encourage space industry innovation, research and entrepreneurial development. SASIC was established by the South Australian state government in 2017 to be a focal point for space-related activities by local, national, and international companies, as well as for a range of state government departments.

SPACE AND DEFENCE

The defence sector in Australia has a long association with space, dating back to the 1940s and the establishment of the Woomera Rocket Range. Defence (and especially the RAAF) is currently the biggest single customer for Australia's space sector, although this will certainly change as the commercial space sector ramps up in the coming years. Three defence projects that are currently underway in Australia include: providing the Australian Defence Force (ADF) with better (more direct and more timely) access to Earth observation satellite data; developing an indigenous sensor suite for Space Situational Awareness (mapping satellites and space junk); and rolling together the ADF's existing narrowband and wideband SATCOM systems.

EDUCATION

Many Australian universities are providing degrees in space-related subjects, and the number of space related degrees are increasing every year. A unique offering in the academic sector is the Southern Hemisphere Space Studies Programme (SHSSP), a five-week residential summer school hosted by the University of South Australia and the International Space University. In 2021, because of Covid-related travel restrictions, the summer school was held virtually in January and February (the southern hemisphere summer). □



*Launch of rocket to test hypersonic speed (more than Mach5), Woomera, May 2016
(Commonwealth of Australia, Department of Defence)*





PROMOTING OPERATIONAL SAFETY WORLDWIDE

By Assistant Captain Ed Pooley

The Commercial Air Transport Safety Network has launched its first Safety Briefing Notes

The fact that the accident rate in Commercial Air Transport (CAT) has been dramatically reduced as the amount of air travel, the Covid-19 episode excepted, has continuously increased has been a consequence of multiple primary origins. However the perennial problem, despite the comprehensive regulatory framework provided by the International Civil Aviation Organisation (ICAO), has been the variable delivery of aircraft operator oversight by States. This has inevitably translated into a huge gap between CAT operators achieving the highest standard of operational safety and those at the opposite end of the scale. However, these days, there are so many 'safety nets' to prevent 'near misses' turning into fatal accidents that the rate of occurrence of such accidents themselves is not a reliable guide to risk.

The Honourable Company is involved in many activities in support of aviation safety but in recent times, any influence on safety in the CAT industry has only been achieved on a UK or Regional level. Nothing we have been doing has made any contribution, visible or otherwise, to safety improvement beyond our various national or regional boundaries. The opportunity to use our collective international perspective to contribute more generally to global aviation safety, specifically with respect to commercial air transport, seemed to be worth exploring.

It was widely believed at one time that 80% of CAT accidents could be attributed primarily to aircraft technical defects and only 20% to the pilots but we now know that, in simple terms, roughly the opposite is true. As this realisation dawned, it has been widely recognised that if we are ever to 'level up', we need to share the safety lessons learned by some with others so they don't have to re-learn the same lesson. This process of sharing best practice - in a range of ways - has been effective to a degree for many years but remains a work in progress.

Enter the Honourable Company and the CAT Safety Network, which is now enabling a large number of our suitably experienced members to develop (core group) and collectively validate (all network members) independent pilot-centric perspectives on specific safety issues. The peer review function provided by network members based both in the UK and many other parts of the world means we can confidently use the 'authority' of the Honourable Company to headline a credible, useful and visible contribution to CAT operational safety.

Our first 'product' is Safety Briefing Notes. We know that those aircraft operators with the most need often have (or choose to have) the least time to proactively consider risk-to-safety issues risks they haven't yet encountered. On the other hand, we also know that large well established aircraft operators sometimes tend to rely on the considerable experience within their own operations to deliver all the risk awareness they need, which may be most, but perhaps not quite all, of what they need to know. This matters to pilots because the way operational risk is managed by an aircraft operator is going to be a very strong influence on how most of its pilots then fly most of the time. This is particularly so when we have achieved accident-rate reduction largely through compliance with increasingly complex standard operating procedures.

For a range of reasons, we have decided that Safety Briefing Notes should be limited to two sides of A4 paper including a standard Air Pilots header. They are initially going to follow what we hope will turn out to be a resilient four-part format in the following order:

- A short description of the chosen safety issue.
- A short summary of a relevant accident or serious incident which has been independently investigated (i.e. in accordance with ICAO Annex 13 no blame principles).
- A short discussion about the ways the operational risk posed by this safety issue may be mitigated.
- Some recommendations (separately) for both aircraft



operators and pilots formulated as suggestions rather than directions.

In all respects, Safety Briefing Notes are designed to act as an invitation to both aircraft operators and pilots to consider whether the way they are operating adequately addresses the safety issue covered. They are intended to assist generically with the effective mitigation of risk and to do so in a way which can compliment both the process of safety regulation and the overall achievement of safety beyond the mandated documentation of a safety management system.

After holding off for almost a year until signs of a return to something more like normality in aviation, we are now beginning the publication and distribution of these 'Safety Briefing Notes'. The first three should have been issued well before you read this and they cover lack of recency, in-seat controlled rest and rarely-used normal procedures.

The notes will be available on the Members section of the Company website, and will also be e-mailed to those members who have given their current CAT flying details in the Members database. Others who wish to have the notes e-mailed to them should contact the Network as below.

At this stage, both Safety Briefing Notes and the member Safety Network which is making them possible are at the

proof-of-concept stage. If it appears that we can establish an unoccupied 'place in the sun' with a product which is useful to the industry, then it will be time to explore other opportunities to make our mark on global CAT safety improvement. It will also be vital to ensure that the network and its core group are sustainable by a process of continuous recruitment.

The network welcomes (and needs!) new members who have significant command experience on multi-crew aircraft types, both fixed wing and rotary wing, and are either still flying or have retired but consider themselves to be still in touch with the CAT operating world in a way that would enable them to help validate network outputs. The majority of current members are the wrong side of 50 (although that's absolutely not a requirement!) so we do need to maintain continuous recruitment.

If you're a current CAT pilot with less than 'significant' command experience or even an experienced First Officer with expectation of a command in the foreseeable future then you are welcome to join the network as an Observer which, if we survive, will position you nicely to become a full member in future years.

In either case, please express interest to

catcsg1@airpilots.org 

*The first Safety Briefing Note,
now published*

practical and economic pressure because of Covid 19, will still recognise the need to carefully risk manage the return to regular flying. Not reduced, but use of and access to full flight simulator. Regardless of whether alleviations to normally require State Safety Regulators or not, safety management operator carries out and documents a full risk assessment consequences which have resulted from lack of regular training sessions at normal intervals following a significant being operated. Without such an assessment and pilot recency is likely to increase the accident and operator and its pilots are exposed.

Safety Recommendations To Aircraft Operators

- If temporary alleviations to normal pilot licence regulator, their implications associated with flight operations to deliver an equivalent prevails using the requirements to which you be considered appropriate to provide correct line pilots who have recency-related conditions that an extra level of release supervision is particular attention should be paid to pilot hold type ratings which cover multiple variants to fly in command from both seats.
- Careful consideration should also be given to regular flying will justify recurrent minimum. It may also be worth considering needed to fly a reduced programme would help support operational safety both during

To Pilots

- If the aircraft operator for whom you fly normal flight and/or simulator recency requirements you comply with them.
- Even if you're 'legal' to fly, skill fade is degrees so assume 'armchair flying' yourself. Maybe some 'armchair flying' whole of your normal and non normal recency makes you unsure of your a standard which both you and your of are in place, be prepared to seek a training pilot and/or a competent colleague justified.
- Pilots who are current on more than multiple variants of an aircraft type of seats should be particularly mindful
- If you are involved in training for careful in exercising your recurrent the return of pilots to regular flying a

The Honourable Company of Air Pilots is the largest City of London Livery Company and the only one with a global membership. London Livery Companies are charitable specialist professional and trade bodies which, where relevant, seek to contribute their entirely independent and impartial expertise to their areas of interest. The Air Pilots Commercial Air Transport Team is directly supported by a large network of Company Members who review and validate our draft publications before issue.

If you would like to receive copies of new Safety Briefing Notes direct by email - or stop receiving them - please advise this to catcsg1@airpilots.org All published Notes which continue to be relevant can be consulted at or downloaded from <https://www.airpilots.org/CATSafetyBriefingNotes/>

AIR PILOTS - COMMERCIAL AIR TRANSPORT SAFETY BRIEFING NOTE 01

[Issued 02 MARCH 2021]

PILOT RECENCY WHEN NORMAL RATING VALIDITY REQUIREMENTS ARE RELAXED

The Context

In response to Covid 19, some State Safety Regulators have temporarily relaxed normal requirements for re-validation of ICAO-compliant professional pilot licence ratings. In some cases, operators who normally have recency requirements more restrictive than regulatory requirements have relaxed those too. This has left licence holders in one of three positions in respect of the operation of commercial air transport flights:

- Normal recency requirements have been alleviated subject to a specified alternative regime
- Normal recency requirements have been alleviated without a specified alternative regime
- There has been no change to normally applicable recency requirements

Coupled with one of these, many pilots are only flying at much less frequent intervals and there is a potential for pilots to be undertaking commercial air transport flights after excessive intervals since their most recent previous flight or full flight simulator session. In respect of regulatory alleviation from normal licence validity requirements, being permitted to use extended licence privileges does not guarantee proficiency.

An apparent example of the avoidable consequences of lack of recency

In September 2020, an Airbus A330-300 Indonesian scheduled passenger flight from Jakarta to Medan touched down partly off the destination runway whilst making a manual landing following an otherwise uneventful flight during which "line standardisation" flying for a Captain new to type was being conducted. The Instructor Pilot in occupying the right seat who was PF for the landing involved was dual rated on the A320 and A330. Although he had last acted as PF from the left seat one month previously, he had not done so from the right seat for six months. The Captain under supervision had not flown for 7½ months after gaining his type rating and initial type experience at another airline in a different country. The investigation is continuing, but in the apparent absence of any risk mitigation response, the investigation agency has issued a formal Safety Recommendation to the State Safety Regulator that they "develop guidance for implementing the alleviation or require the aircraft operator to adopt the existing guidance issued by ICAO".

Discussion



DRONES OVER AUSTRALIA

By Upper Freeman Rob Dicker

The Company's International Technical Forum has established an Unmanned Air Systems Group and, as Australia was the first state

to introduce regulations for drone operations, it would perhaps be useful to have an overview of drone operations and regulation in that country.

There are no definitive statistics on the number of drone users in Australia, but estimates range from 150,000 to over 1 million. If we assume a rate of ownership of 5% of the population that would give over 1.25 million users.

Data for commercial drone users is based on the number of people who hold either a remote pilot licence (RePL) or a remote operator certificate (ReOC). As of mid-June 2020, there were over 16,300 RePL holders and over 1,900 ReOC holders which represents a growth rate of around 42% over the previous two years.

Following the introduction of 'excluded' category operations in 2016, there were over 10,000 online notifications from commercial drone operators intending to undertake drone operations in accordance with the standard drone operating conditions.

In addition the Australian Defence Force (ADF) operates a number of RPAS (Remotely Piloted Aircraft Systems), of various weights and differing in complexity ranging from Visual Line of Sight to Beyond Visual Line of Sight operations. The ADF exercises regulatory control over its RPAS operations.

CIVIL DRONE REGULATION

Regulation of drone operations is accomplished through the Civil Aviation Safety Regulations (CASR) Part 101 and their associated Manual of Standards (MOS). The CASR Part 101 was first introduced in 2002 and updated in 2016: it covers licensing and general operations. The MOS was introduced in 2019 and covers training, operations in controlled airspace and operations for extended visual line of sight. In framing the 2016 updated regulations CASA took the view that a very small drone (<2kg) operating at low speed posed a low risk to persons or property. The regulations define various drone categories by take-off weight and Standard Operating Conditions (SOC) including:

- Visual line of sight (VLOS);
- ≤ 120m (400ft) AGL;
- During daylight hours;
- > 30m from people;
- Not within a prohibited or restricted area without permission of the controlling authority;

- Not over a populous area;
- Not within 5.5 km (3 nm) of the movement area of a controlled aerodrome;
- Not in the area of a public safety operation;
- Only one drone operated per pilot at any one time;

Provided the drone operation is conducted within the SOC and the general conditions of CASR Pt101 by a very small (<2kg) or in some cases a small (<25kg) drone the operation is classed as 'excluded' and may be conducted without the requirement to hold a RePL or a ReOC. No exemptions are allowed.

All other operations are classed as included and require the operator to hold a ReOC and the pilot to hold a RePL. These operations still need to operate within the general provisions of the CASR but exemptions can be granted.

To be eligible to hold a RePL the applicant must have:

- passed an aeronautical knowledge examination for a flight crew licence or;
- passed the theory component of RePL training;
- completed an RePL practical training course
- passed a flight test;
- at least 5 hours of experience of operating a drone;

To hold an ReOC, as with an AOC, you must have the organisational structure and personnel to support the intended operation.

From 28th January 2021 CASA has required drones to be registered if they are flown for business or as part of employment (registration is currently free and lasts for one year) and for operators who intend to fly a drone for business or as part of their job to be accredited.

Accreditation is currently free and lasts for three years and applies to those businesses that are operating in the excluded category. CASA has also advised that all RPAS will need to be registered in the future.

Flightplan for a drone operation



CASA has outlined the requirements for specialised drone operations such as large RPAS or ops beyond visual line of sight (BVLOS), in its Advisory Circular on RPAS operations. In general this will require a Specific Operations Risk Assessment (SORA) as created by the Joint Authorities for Rulemaking on Unmanned Systems (JARUS).

DRONE DEVELOPMENTS IN AUSTRALIA

In January 2021 Airobotics announced that it had received the first CASA approval to operate automated multi-rotor drones from its Remote Operations Centre (ROC) BVLOS with no aircrew needed at the client site. CASA has also approved Wing Aviation, a subsidiary of Alphabet Inc, to operate a drone delivery system in some Canberra, Australian Capital Territory and Logan, Queensland suburbs after a year-long trial.

Over the last few years Airbus has been trialling its Zephyr solar-electric stratospheric Unmanned Aerial System (UAS), with a wingspan of 25m and weight of less than 75kg, in northwest Australia and BAE Systems its PHASA-35, with a wingspan of 35m, from Woomera. The Zephyr set a 26-day endurance record in 2018, flying from Arizona, but suffered two crashes in Australia, attributed to turbulence, during its climb to operating altitude.

The Australian Defence Force is due to introduce the Northrop Grumman Triton MQ-4C RPA into service in 2024. The aircraft is a development of the Global Hawk and will be able to mount 24h operations from its base at Edinburgh, South Australia. In collaboration with Boeing, the ADF is developing the Loyal Wingman unmanned aircraft which first flew in February.

DRONE ISSUES

Drone Proliferation

CASA has reported that the rate of growth of drone ownership has, at times, been greater than 100% per annum. This leads to questions as to whether the regulations are keeping pace and are fit for purpose and whether the regulator is devoting enough manpower to the sector: Drone regulations were updated in 2016 and a Manual of Standards was promulgated in 2019.

Education

Whilst those operators that have obtained a ReOC and/or a RePL will have gone through a process of formal training, the vast majority of drone owners will not. To counter this CASA has undertaken a number of education initiatives.

CASA is working with retailers, wholesalers and manufacturers for them to become Drone Safety Advocates and ensure that purchasers of drone equipment are given information at point-of-sale, either in the product box, in-store display or through their websites about when, where, and how they can use their drones safely.

With the future introduction of registration for all RPAS it is likely that registration will be conditional on the owner/operator passing a short quiz on drone operating rules. A voluntary quiz is already available on the CASA website.



Boeing's Loyal Wingman made its first flight on 27th February (Commonwealth of Australia, Department of Defence)

CASA is also working with schools and universities to ensure that they understand and follow the rules when using drones as part of their curriculum.

The RPAS digital platform has been developed by CASA as a central source of trusted data on drone rules and regulatory information that can be used by third party software developers to create mobile or web based apps that help show users where it is safe and legal to fly drones in Australia. To date CASA has approved five, such apps. Education for manned aircraft pilots is also important, particularly those that operate at low level on a regular basis who should be cognisant of the risks of legal drone operations anytime they operate below 500ft AGL.

Operations Beyond Visual Line of Sight

The potential of drone operations can be enhanced by operations beyond visual line of sight, eg continuous mapping and inspection of power lines. At the moment such operations are being treated as "specialised" and require a detailed application to CASA.

Integration of Manned and Unmanned Airspace

In August 2020 Australia's air navigation service provider, Airservices Australia, released a Request for Information for the development of a Flight Information Management System that integrates unmanned aircraft system traffic management (UTM) and ATM. In the interim Airservices Australia has deployed a drone detect-and-track programme at 29 of the busiest airports in the country.

Safety of Drone Operations

In 2017 the Australian Transport Safety Bureau released a safety analysis of remotely piloted aircraft systems covering the period 2012 to 2016. Whilst there were no reported collisions in that period the report noted 180 "encounters" most of which occurred in capital cities, Sydney in particular, and over above 1,000 ft above mean sea level (AMSL).

CONCLUSION

As long as operations are carried out within the regulations it would appear that conflict with other airspace users should be avoided. When drones are operated outside the regulations, whether by negligence or ignorance, or when manned aircraft operate below 500ft AGL then the potential for conflict exists and needs to be mitigated.

Further information can also be found on the CASA website. □

WHAT HAVE GROUNDED CREW BEEN DOING DURING THE PANDEMIC?

By Assistant Dr Samantha Waller

As we are all very aware, the aviation sector has been significantly affected by the pandemic which has resulted in many workers being furloughed, grounded or made redundant. Airline crew have sought other jobs and opportunities, including as delivery drivers, supermarket workers, charity volunteers and NHS workers to name just a few. As cabin crew for British Airways, my last flight landed on 16th March last year and I have been furloughed since last April. I have certainly experienced the effects of the 'Coronacoaster'! However, many key workers have been working incredibly hard throughout the last year, none more so than those in the NHS.

A charity called Project Wingman was created last March with a view to supporting the incredible NHS staff now and in the future. Project Wingman is a group of current and former aircrew from all corners of aviation. They set up airline-style lounges in hospitals and provide space for NHS staff to relax, unwind and de-stress around their long shifts in support of staff wellbeing. Flight and cabin crew have the skills to put people at ease, provide an ear to listen and empathise with those working in highly disciplined and pressurised situations.

WINGMAN GETS A BUS

I have been volunteering for Project Wingman, mostly behind the scenes, to help raise money and assist with the Wingman Wheels initiative. A lot of hospitals have the facilities to be able to create a lounge where staff can relax,

During the fundraising phase, Samantha Waller (right) waits to welcome NHS staff on board during filming for an ITV news story.



Wellbee, the newly refurbished mobile lounge on location in London.

have a cup of tea and a treat, but many lack the space. Therefore, it was decided to raise money to purchase a bus to create a mobile lounge to try and make the Project Wingman lounge truly accessible regardless of where the hospitals are located. A Crowdfunder appeal was launched in the autumn, a suitable double-decker bus was found and it visited a hospital in Kent to test the idea and raise awareness of the campaign. Enough money was raised to purchase the first bus, which has now undergone a transformation and is presently visiting hospitals in London and the south/east of England. The NHS staff are very thankful and have said that talking to smiling crew boosts morale and allows them to relax, if just for a moment.

Setup at Richard's local NHS hospital's Project Wingman branch, with current and retired airline staff: Richard Painter, Simon Hathaway and Julie Moody. (All via Sam Waller)





Project Wingman welcomes visitors

Many thanks to those Air Pilots that have very generously donated flights as rewards for large donations to the charity! The 'Wellbee' bus has a volunteer team looking after logistics, site visits, liaising with hospital trusts, crewing and donations. If you are able to volunteer at a lounge at one of the hospitals or even just for a few days on the bus when it comes to a location near you, I am sure Project Wingman would love to hear from you.

Richard Painter, an Associate Member of the Honourable Company of Air Pilots, has also been volunteering for Project Wingman and as an NHS Responder. In his local area, he has been receiving notifications via the NHS 'Responder' app (which is traditionally used for trained personnel to respond to cardiac arrest cases for the public). The app allocates cases to you from callers within a certain radius of your location. It is also very flexible as you put yourself as 'on duty' when you have capacity and it has allowed him to meet and support residents who have been vulnerable or otherwise in need since the start of the COVID lockdown. He says it has been a thoroughly worthwhile and heartening experience and one he would recommend to anyone with spare capacity through reduced flying duties and happy to give back to those who are working so much harder than usual throughout the Covid-19 crisis.

AIRCREW JOIN THE NHS

Many crew, including myself, have put their First Aid qualifications and experience to good use and have started working as Health Care Assistants and Vaccinators at the



Samantha Waller puts the needle in

many vaccination hubs around the country. The role you are allowed to undertake varies from area to area depending on the recruitment criteria, but luckily my academic qualifications allow me to vaccinate.

Having undertaken a fairly lengthy recruitment process, over twelve hours of online learning and assessments, a practical training session and competency training and assessments, I vaccinated in excess of 200 people during my first few days. Working in the hub is much like being onboard. You work with different people every day, many patients are nervous and some have been in lockdown or shielding for so long, they just want to have a chat. The camaraderie is very similar to that of crew and each person working in the team has a different background and reasons for coming forward to help with the vaccination effort. It is incredibly rewarding and most patients are very thankful – I was even given a box of chocolates during my first week.

PLANE CHAT

As we are acutely aware, the pandemic and associated lockdowns have had a profound effect on loneliness and mental health. With this in mind, I realised that there were probably a considerable number of aircrew that were grounded, furloughed or retired that miss that connection with colleagues and passengers and decided to reach out to them. I thus created a group in the autumn called 'Plane Chat' and we generally meet every Wednesday for a catch up via Zoom. Both flight crew and cabin crew have joined us to talk about flying, whether in the past or present, including stories about trips during the pandemic and those stand out destinations that we miss. We exchange tales over a coffee or something stronger and have a good old 'galley chat'. We have supported each other through academic exams, low points where we haven't been outside or been able to see anyone in person, the joys of starting new jobs that we did even know would exist a year ago and we have learnt an awful lot from each other. We are so lucky to have such incredibly interesting and talented people as members of The Company. I miss The Company's social gatherings and visits and can't wait to see you all in person again soon. If you would like to join in, please find Plane Chat on Facebook or Twitter or contact me (details on the membership database) and I'd be happy to welcome you and send you the meeting information. I hope that the efforts of all those in the aviation sector who have supported the nation's fight against Covid-19 go some way to helping us return to some semblance of normality and we can all take to the skies again very soon. □

WHEN THE FLYING STOPS, THE DONKEY HOPS

By The Editor



Inevitably, some pilots are seeing the end of their flying careers, whether through the effects of Covid-19 or otherwise. What do you do when the flying stops? One Air Pilot who has had to face up to that question is **Liveryman Polly Vacher**, now preparing for her next adventure with twin-donkey rather than single-Lycoming power.

Less than two years ago, Polly Vacher was a celebrated lady pilot with two circumnavigations of the world – one east-west and one north-south – and just under 3,000 hours to her credit, with a Piper Dakota 235 in the hangar at the private airstrip shared with, amongst others, husband Peter's Hawker Hurricane R4118. Then, in October 2019, a routine operation to improve the sight in her right eye led instead to the total loss of sight in that eye.

That meant an immediate end to a flying life which had begun 25 years earlier in Australia, where Peter's job had taken them. Polly, already an experienced skydiver with 245 jumps logged, wanted something they could do together, so they both learned to fly in Canberra.

Flying her own Piper PA-28 Dakota, she embarked on her first circumnavigation, eastabout, in 2001. As became typical of her major flying adventures, this one involved sponsorship and eye-catching publicity deals. The RAF came to the party with a Harrier in formation to see her off, and two more to greet her return: preparing for that involved a 1h flight in a Harrier, and a training sortie over Rutland Water for the formation flying. A very visible form of fund-raising on this trip was charging 1,800 people £25 each to have their names on the Dakota's wing. This flight earned her the Company's Master's Medal.

Polly's 2003/4 north-south circumnavigation was an altogether more challenging affair: for a start even avionics manufacturer Bendix-King was unsure if its GPS would work near to and over the Poles, so she had to learn navigation by the sun. Her training by Pete Thorn to deal with emergencies stood her in good stead when the Piper's engine stopped during a change-over of fuel tanks not long after crossing the North Pole – fortunately to start again after she had lost only 100ft or so of altitude. Three years later, Polly rose to a new challenge, to visit all the airfields in the UK and some RAF stations during the

summer of 2007, and taking a disabled passenger flying from each of them – 220 airfields in total including midnight touch-and-goes at Heathrow and Gatwick. All of this was part of a campaign in conjunction with the British Women Pilots Association that raised £1½million for Flying Scholarships for the Disabled, with the late King Hussain of Jordan funding six of the 10 annual scholarships.

All of this stopped suddenly with that eye operation in 2019 – but the learning from the sponsorship fundraising and detailed preparations for round-the-world flying has found a new outlet. It was while recovering from the operation that she received a get-well card from the Vicar of St Melangell in Llangynog, Powys in North Wales and had, in her words, "a lightbulb moment". She would take her two donkeys on a fund-raising drive to raise money for multiple sclerosis (she has a 26-year-old nephew with the condition) from her home in Oxfordshire to St Melangell. "It's not dissimilar to planning a world flight," she says: "You have to plan all the stops and prepare everything properly, keeping off main roads where possible." At 2mph the donkeys will do just eight miles a day, pulling a four-wheeled, four-seater carriage, and the preparation has included teaching them to go up hills and through water – neither behaviour being natural to the animals. The drive ('Donkathon') is currently scheduled for June, subject to Covid-19 rules etc – more details at www.donkathon.org.

Has Polly missed flying? "Not really," she says. She has been up a couple of times, but: "It's gone. That's the best way – otherwise you'd be hankering after it all the time." If she has one piece of advice for others in a similar position, it is this: "One door closes; another opens – but you have to see the other door!". □

You CAN lead a donkey to water...



LIVERY LIFE BEGINS AT 100

Liveryman Flt Lt Colin Bell DFC AE FRICS RAF (Ret)

By The Editor

At the January Court meeting Flt Lt Colin Bell was accepted into the Livery of the Company: that may not, on the surface, appear to be unusual, but it is, for a number of reasons. For one, Colin Bell is a centenarian; for another, he has an exceptional World War Two record, but his full-time career as a pilot finished no fewer than 75 years ago.

Colin was in a group of around 40 trainee RAF officers who were sent to the USA under the Arnold Scheme in 1940. As this was before Pearl Harbour and America's entry into the war, they had to be civilians, so they were officially discharged from the RAF and arrived in Lakeland, Florida, dressed in "...cheap civilian suits". There, they would be trained on the Boeing Stearman ("A wonderful aeroplane, infinitely better than a Tiger Moth", says Colin) before being sent on to Macon, Georgia and Dothan, Alabama to fly the North American AT-6 (Harvard) before graduating and being awarded their US pilots' wings. (All this meant that they were not awarded RAF wings at the time, and it wasn't until 2019 that Colin was, belatedly, finally presented with his.)

With the USA by then formally at war, and Colin expecting to be sent home to fight, he was instead informed he was to stay in America as an RAF officer and an instructor of both US and British pilots, there being a shortage of experienced instructors. Eventually in 1943 he was sent back to Britain, to train as a night-fighter pilot. This involved converting to twins (the principal night fighter then being

the Bristol Beaufighter), which was undertaken on obsolete Bristol Blenheims at Spittalgate, but there were no squadron vacancies available. At that point, Colin's career took a new turn with the arrival on base of Group Captain "Hamish" Mahaddie, who was recruiting high-time (more than 1,000h) pilots for AVM Donald Bennett's Pathfinder squadrons.

As a result Colin soon found himself at Downham Market flying Mosquitoes on 608 Squadron, part of the Light Night Strike Force. He teamed up with Canadian navigator/bomb-aimer Doug Redmond, and together they resisted the 'suggestion' that they should sign up immediately for two tours – Redmond memorably stating that: "I want a Victory Medal, not a Victoria Cross." After a hectic training schedule of 12 flights totalling just over 24 hours flying in seven days, the two were declared operational at the beginning of September 1944 and flew their first operational sortie five days later. That first trip, to Hanover, was nearly their downfall, after straying over the strong defences around the German port of Emden on their way home: they survived an airframe-taxing power dive from 25,000ft to 10,000ft to evade the flak, and learned a valuable lesson...

Much of 608 Squadron's work was, as Colin puts it, 'nuisance' flying: "We weren't marking as such, but would often do a spoof run to a different target [than for the main bomber force] and drop markers to fool the night fighters – too late they found they had been duped." Nevertheless, on almost every run they were carrying the Mosquito's standard payload of four 500lb bombs, so in 50 operations (only two of which were in daylight) over the seven months to March 1945, Colin and Doug dropped nearly 45 tons of explosive on Germany.

On the instrument panel of these Mosquitoes were two radar warning lights: a red one warned of tracking by ground-based radar; and a white one (fed by a sensor on the tail) that the aircraft had been found by a radar-quipped

Colin after flying in Rod Lewis' Mosquito, 2018 (Pictures via Colin Bell)





Colin in RAF service

fighter. On one occasion over Berlin ("If you were going to get into trouble, it would be over Berlin") the white light came on as they were leaving the target. "We knew a prop-driven aircraft couldn't catch us, only a jet, so we dropped 10,000ft and lost him," says Colin, "but two minutes later [the light] came back on and we couldn't shake him off." Redmond thought it might be a false signal, but Colin, knowing the Messerschmitt Me.262 had only 45 min endurance, kept low ("Jets use lots of fuel low down") and eventually lost the pursuer. Colin later discussed this encounter with the late Eric "Winkle" Brown, who opined that: "You were lucky to come out of it alive".

At the end of their tour Colin and Doug went their separate ways – after VE Day Colin to begin ferrying Mosquitoes from the Canadian factory in London Ontario across the Atlantic, via Goose Bay, Labrador; Bluie West One, Greenland and Reykjavik, Iceland into Prestwick. He brought nine or ten aircraft across on this route, which he describes as being more fraught in some ways than flying combat operations, as his navigators were inexperienced. He then went on to fly diplomatic mail, again by Mosquito, visiting cities as widespread as Cairo, Athens, Rome and Copenhagen. On one occasion, he had a tyre burst on take-off in France: unfortunately, he had an unauthorised

passenger on board in the nose-cone, so could not do the wheels-up landing that this failure would normally call for. After what he describes as "...a bit of a dicey landing" on the good wheel, he had an equally awkward interview over his failure to do a belly landing, but was ultimately relieved to receive a Commendatory Endorsement for landing the aircraft without damage. He finally left the RAF in 1946 – though he stayed in the Reserve, flying Chipmunks at weekends for 14 years – and qualified as a Chartered Surveyor, initially in Government service and from 1983 until 2019 in his own private practice.

In recent years he has become a popular member of the speaking circuit, and has also revisited his RAF history. In 2017 the Air Power Foundation in Texas, which raises funds for disabled ex-service people, invited him to Dallas for its annual meeting, at which he was pleased to meet General Jimmy Doolittle's co-pilot. More evocatively, Rod Lewis offered him a flight in the New Zealand-restored Mosquito PZ474. "It was a wonderful experience," says Colin:

"Climbing into it was quite emotional." More recently, as a result of his giving an after-dinner speech at Goodwood to some clients of the bank J P Morgan, he was invited to go flying with one of the guests in a Cirrus light aircraft, in which he has subsequently visited several parts of the UK including RAF Coningsby. A month after that speech, he went back to Goodwood to fly the Boulton Paul Spitfire. When asked to compare the Spitfire to the Mosquito, his answer was telling: "There's nothing a Spitfire can do that a Mosquito couldn't – but the advantage is that the Mosquito has **two** Spitfire engines..."

In 2019 he was approached by Ian Redmond, the son of Colin's wartime navigator Doug who was researching a book about his father's experiences. Ian Redmond came over from Canada for a week's visit with Colin, and in 2020 published *Bloody Terrified, The True Story Of A Pathfinder Crew In The RAF's 608 Squadron During WWII*, which details the pair's 50-operations tour and makes for fascinating reading. (The title of the book derives from an incident of their seventh mission when, as they were making their bombing run over Berlin, the very close explosion of a flak shell under the aircraft caused both engines to quit because of g-loading. After the engines eventually re-started and they were heading home, Colin asked Doug if he was frightened: "No," came the reply, "bloody terrified!" □



MERCY SHIP OF THE SKIES LIFTS PEOPLE AND SPIRITS

By Liveryman Su Ingle

In early 1946 Douglas C-54 Skymaster BuNo 56498 flew the 6,000 mile journey from Japan to Honolulu and on to Delaware New Jersey via San Francisco. On board were British former prisoners of war, including survivors of the Burma Rail Road, who then crossed the Atlantic by ship to Britain. Now once again, it is coming to the aid of British servicemen, as military veterans find purpose and comradeship in a project to restore it.



Allan Vogel

The Skymaster, the only one of its type in Britain, was saved from being scrapped in 2017 by Allan Vogel, an aircraft broker and member of the Management Committee of the Historical Aircraft Association (HAA). He was visiting North Weald Airfield in Essex when he saw to his horror another Skymaster being cut up for disposal. Allan

discovered that the owner had acquired two of the aircraft, famous for their role in the Berlin Airlift, but now intended to sell them for scrap. They had been flown from the USA to Britain in 2002 for use in a Steven Spielberg film about the Berlin Airlift, but sadly the film was abandoned, and with it, the aircraft. Allan was determined to save the remaining Skymaster and persuaded the owner to give him three months to work out a rescue plan.

To find out the provenance of Skymaster 56498 he wrote to the Smithsonian Museum, and learnt of its long and illustrious career, spanning almost 30 years. Known as the Mercy Ship of the Skies, it was built in 1945, serving with the US Navy and US Marines in the Pacific during World War Two. It went on to serve during the Korean and Vietnam Wars flying troops and supplies as well as thousands of litres of blood for transfusions at mobile army surgical hospitals (MASH). As well as helping repatriate British prisoners of war, it also evacuated hundreds of wounded men from some of the twentieth century's biggest conflicts. Armed with this historical ammunition, Allan appealed to the owner to spare the aircraft, who agreed to give it to a charitable trust set up by Allan provided it was returned to an airworthy condition.



The C-54 Skymaster flying vital supplies in Vietnam War

Save the Skymaster is a million-pound undertaking, but it is not just about returning an icon to the skies. This is more about lifting people and their spirits. With the invaluable aid of a voluntary team of licensed engineers, it has already helped transform the lives of military veterans, many of whom face isolation or unemployment. Until the Covid lockdown a group of them have been working on the aircraft and found that the project has given them purpose, routine and comradeship at the same time as allowing them to learn vital skills. The most senior veteran volunteer is Sam Evans, an engineer and aircraft mechanic who worked on Harriers and Phantoms in the RAF for 17 years. The project has enabled Sam to meet other RAF engineers and veterans who have experienced the struggle to adapt to civilian life after years in the armed forces. For him it's about being part of a team, working towards a common goal.

The plan is to put together a special training programme to increase the veterans' practical and theoretical engineering knowledge, giving them an introduction to aviation engineering and better equipping them to join the workplace. The charity has applied for funding for these courses, which they intend to make as holistic as possible addressing emotional as well as practical needs. The transition from military life to civilian life is stressful at the best of times and this has been exacerbated by the pandemic. David Shaw, CEO of the Veterans Foundation, has praised the scheme, which supports and motivates the veterans giving them an enthusiasm that is really beneficial.

But it's not just veterans that benefit. The opportunity to volunteer on the aircraft can also give much needed emotional relief to those still serving in the armed forces, and Save the Skymaster actively encourages servicemen suffering from post traumatic stress disorder and other conditions to get involved in the project.

APPEAL TO YOUNGER GENERATION

The restoration also appeals to the younger generation. Budding engineers who have lost their internships due to the pandemic have joined the team, and the plan is to train them in 'hands on' aviation engineering. The charity is keen to inspire more young people to take up engineering, and to this end there is also a potential partnership with Stansted Airport College. Jennifer Hogan, the college's head of engineering, is supportive, as the College has many students with a very keen interest in aircraft, and the Skymaster will give them an option different from working for some of the big passenger airlines. Students who have already worked on the aircraft see it as a tremendous opportunity, giving them an experience that not everyone may have, so giving them that edge.

Liveryman Steve Bohill-Smith is a trustee of the charity and re-iterates this. "Working on this project will have a huge impact on young people's lives. The opportunity to work on big prop liners like the Skymaster is quite unique for young people and will most certainly enhance their careers in aviation going forward." It was a trip on an Invicta Airways Douglas DC-4 (the civilian version of the Skymaster) from Manston, Kent to Rotterdam, Holland at the age of ten that inspired Steve to pursue a life in aviation. Until lockdown he has been working on the Skymaster, and along with the rest of the team is passionate about the project and determined to make all the plans a reality.

It's hoped to get the engines running this summer, and the long-term objective is to display the Skymaster on the airshow circuit. Allan describes it as a flying museum, "...ensuring that this legacy of hope that Skymaster 56498 represents is not lost, but rather celebrated and embraced for future generations going forward."

But before that there is a great deal of work. The original 18-month plan to get the Skymaster in taxiable condition has been severely delayed by the pandemic, as not only has lockdown completely stopped work, it has also had a seriously detrimental effect on fund-raising.

Tasks to be completed include servicing components, stripping paint, and corrosion removal. For certification reasons, several jobs including overhauling the four engines must be completed by specialist firms, which of course



The Skymaster at North Weald (Steve Bridgewater)



Steve Bohill Smith in the cockpit



*Volunteers working on the Skymaster
(All pictures, except where noted, from Save The Skymaster)*

increases the expenditure.

As Allan explains: "The cost of restoring the Skymaster is staggering, but the way in which this enables us to touch others' lives is even more immense. If we can make a difference to just one veteran's life or help a struggling engineering student gain their internship, then it makes this entire project worthwhile. It is not just about restoring an aircraft – it is also about restoring lives."

For more information visit: www.savetheskyrmaster.org. □



MY ENCOUNTER WITH A DC-10

By Past Master Ian Perry

"Would you like to come up and visit the Captain?" So said the very pleasant young lady, quietly leaning across us so that all else around could not hear. I got out of my seat and said to my late wife, who was very used to this sort of thing: "See you in Faro".

We were at some 30,000ft, just entering Spanish air space after leaving London. The pleasant young lady tapped on the cockpit door and I was welcomed onto the flight deck.

The view was astounding. It was one of those days when you could see the whole of the Iberian Peninsula. It was 8/8 blue all the way. Not a cloud in the sky. My friendly Captain, whose medicals I had done for some time, shook my hand and began to unbuckle himself and got out of his seat. "In you go", he said, and much to the First Officer's surprise, I sat down in the seat, fastened myself in, and began to look around.

I have to say, and our friendly senior training captain knew, that I had a lot of experience on Boeing 707s, and a bit on Lockheed TriStars. My 707 experience was down to the fact that I had been Kuwait Airways' Medical Officer for some years, and the way you get to know all of your pilots is to fly around the world with them. I did the same with the TriStar operators, but never flew the actual machine, only a simulator.

Our TC leaned forward and now proceeded to remove all the automatic controls. He then said to me: "You have control". The F/O could not believe what he was hearing. "I have never ever flown this aeroplane hands free," he said. You had better fly with this TC again," was my reply.

So, to the business at hand: I proceeded to gently lift the nose, watch the speed, lower the nose, watch the speed, bank to the left, keep the nose up, and to the right, keep the nose up, and then back to maintaining the heading and the height. Do nothing to frighten the passengers. I found as others will confirm, that this was a very nice plane to fly, firm not docile and very responsive.

"What would you like to do?" I was asked. How about

gently descending down beyond St George's Point, a gentle left turn, establish at 5,000ft, and then run along the coast. I could move gently right and then gently left, so that the passengers on both sides of the plane can see the Algarve, and where they might be going. "That is a good idea," said the TC. The F/O looked on in amazement.

A GHOST AT THE CONTROLS?

St George's Point, for those who do not know Portugal, is the furthest land point into the Atlantic. If you are looking down from 30,000ft it is the right-hand end; if you are looking at a map it is the left-hand end. That is exactly what we did, a nice gentle descent, having got Air Traffic's clearance. For some reason we seemed to be the only aircraft in the sky. Out to sea, a gentle 90° left hand turn over the sea, roll round onto the heading for Faro, establish at 5,000ft, maintain heading, height and speed. All the time the F/O had been looking at me as if I was some sort of ghost, who had appeared out of nowhere and was actually hand flying his plane. The passengers had been told what was happening (not that I was flying the plane), and according to the cabin staff they were enjoying the views. It is not often you get the opportunity to roll a big aircraft gently to the right, and then to the left, so the passengers can see out of both sides. Goodness only knows what anyone on the ground thought, but it was rather fun. There is no way that anyone would or could be allowed to do it today, or would they?

When we got to within 25 miles of Faro, I said I was not authorised to land it. I handed over control to the F/O and climbed out of the seat. Our friendly TC got back into his seat, and said to the F/O: "You want to hand fly, you are going to land it, so carry on," which he proceeded to do, with the biggest smile from ear to ear, and he carried out a real greaser of a landing, which you could do with a DC-10. It was far better than any Airbus or Boeing arrival. Mind you a Boeing, especially a 707, could be greased on in very skillful hands.

We taxied around to dispersal and I thanked them. As I was leaving, the F/O said to me: "You can come and fly with me any time Doc, it has been a real pleasure". What a great compliment. I am sure he went on and, I hope, had a very successful flying career. If he is reading this, please let me know.

Hands up all those who have hand flown a large passenger aircraft full of people? □

It was a Laker DC-10 just like this... (Via Steve Bridgewater)



MICROSOFT FLIGHT SIMULATOR 2020

A Review by Past Master Peter Buggé

With another lockdown looming and winter not far off, trying the new Microsoft Flight Simulator 2020 introduced last August seemed like a good idea and £60 for the basic version wouldn't break the bank. I downloaded it to my desktop PC to see whether it would run – it did, but not well enough to use as the PC, although quite good for everyday tasks, had integrated graphics and a separate dedicated graphics card is essential for FS2020. However I had seen enough to take it further so I bought what is effectively a high-specification gaming PC with a 4.05GHz processor with 16GB RAM, an RTX 2070 Super graphics card which has its own 8GB memory and two solid state drives (SSDs), one running Windows 10 and the other dedicated to FS2020.

The initial FS2020 download is 91GB and with the updates issued so far it now takes up 116GB in the SSD, so you really do need plenty of storage for future updates and additions and to allow the programme to run freely. A good broadband connection is required too – I have about 100mbps. A second monitor side-by-side with my existing one allows me to map-read or look at aerodrome charts on one screen while 'flying' on the other.

There are some good tutorials for FS2020 available on the internet to explain the comprehensive range of settings for graphics, sound, traffic, camera etc but what works best will depend on both the computer being used and personal preferences. After the initial set-up the only setting I regularly change is the elevator sensitivity in the Controls option which needs to be reduced for the Zlin Savage Cub to avoid it being overly sensitive in pitch.

I use an old Logitech Attack 3 controller, which looks similar to the Airbus sidestick, the buttons and trigger of which can be set to operate about a dozen functions. The weather, date and time of day can be set to given parameters or left 'Live' which will give correct wind, cloudscape, precipitation and visibility and weather broadcasts.

I started with the Cub to refresh my stick and rudder skills. It handles realistically and the aircraft can be trimmed 'hands off' and three-point landings can be made. I did some local flying to get the feel of the controller and to check out the methods of changing the camera views; holding the right button down while dragging the mouse works well and hitting Ctrl and Space Bar together reverts to a reference eye position in the cockpit, but various camera control methods are possible; the keyboard End key switches the picture between inside and outside.



Visuals are extremely accurate - Compton Abbas in real life and on screen (Peter Buggé)



ACCURATE OUTSIDE VIEW

The view outside is impressive, looking pretty much as the real world does although large buildings can look like factories and bridges, rivers and vertical features like cliffs are sometimes not quite right. A house in a particular street can be found and terrain, roads, fields and hedges are accurately shown.

The Airbus A320 is difficult to fly until one gets used to using a mouse, keyboard and controller to operate the knobs and switches but I have successfully 'flown' Heathrow to Zurich with initial flight planning to determine airways routing and fuel uplift, then flying the correct SID, airways and STAR for an ILS approach and landing. While not all aircraft systems can be operated or displayed inputs can be made through the FMC/MCDU and both 'managed' and 'selected' autopilot modes are available together with flight director and auto-thrust; the PFD and ND screens are accurately shown. The visual picture is very good both within the flight deck and outside as the light and clouds change with altitude, weather and time. Unfortunately ATC has a very American flavour which can spoil the realism, for example a transition altitude of 18,000ft is used when departing Heathrow.

Overall FS2020 is impressive and great fun. It's more than a game and is good enough to check out a route before actually flying it or to practise map reading or circuits at your local airfield, but prior experience of the more complex aircraft like the A320 is desirable or the learning curve is very steep indeed. □

INTO THE OVERSHOOT

A round-up of less-formal items which have caught the Editor's eye

ELECTRIC ROLLS-ROYCE ROLLS

Rolls-Royce has successfully taxied its 'Spirit of Innovation' which it hopes to demonstrate as the world's fastest all-electric aircraft. The successful taxiing tests of the 500hp (400kW) machine are a prelude to flight-testing due to start "in the spring" according to RR. The manufacturer, which is working with motor and battery maker YASA and aviation start-up ElectroFLIGHT under the ACCEL (Accelerating the Electrification of Flight) programme, has a goal of setting a world speed record for electric aircraft of more than 300mph. News of the taxiing progress comes as RR announces that it is working with airframe manufacturer Tecnam and Scandinavian airline Widerøe to deliver an all-electric commuter aircraft into passenger service by 2026.



(Rolls-Royce)



(Airbus)

FIRST FLIGHT FOR LAST AIRBUS A380

The end of a turbulent story of unfulfilled promise was marked on 17th March, when the last of 251 Airbus A380s made its maiden flight from Toulouse to Hamburg Finkenwerder for completion – just under 16 years after the type's first flight on 27th April 2005. MSN272 will be operated by Emirates Airlines, whose 123 orders accounted for 49% of the type's production. Ironically, given the role that big twins have played in dashing Airbus' hopes of selling 500 or more A380s, one day earlier Boeing flew the final 787 Dreamliner to be built at its Everett, Washington, factory – all future 787s will be assembled at Charleston, South Carolina.

FLYING CAR CERTIFICATION SHIFTS UP A GEAR

The Terrafugia Transition flying car has obtained a Special Light-Sport Aircraft (LSA) airworthiness certificate from the FAA. The 100hp Rotax 912iS-powered "roadable aircraft" has been designed to meet the safety standards of both the FAA and the US National Highway Traffic Safety Administration (NHTSA). The company says it will now begin selling 'flight only' versions to owners with a view to the airframe being both sky and road-legal by mid-2022. The Transition has an airborne cruise speed of 100mph and can use either Mogas or 100LL aviation fuel. Standard features include Dynon Skyview avionics, hydraulic disc brakes on all four wheels, an airframe parachute and folding wings that allow it to be stored in a single-car garage. Terrafugia claims a 400-mile range and useful load of 500lb.



(Steve Bridgewater)