



AIR PILOT

INSIDE
GLIDING INTO HISTORY
621 HISTORIC FLIGHT
747 BASE TRAINING
ELECTIONS



THE NEW MASTER





THE HONOURABLE COMPANY OF AIR PILOTS incorporating Air Navigators

PATRON:

His Royal Highness
The Prince of Wales
KG KT GCB OM

MASTER:

Capt Robin B Keegan FRAeS

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



With the gradual relaxing of lockdown restrictions the Company is hopeful that the following events will be able to take place 'in person' as opposed to 'virtually'. These are obviously subject to any subsequent change in regulations and members are advised to check before making travel plans.

APRIL 2022

7 th	GP&F	APH
27 th	Luncheon Club	RAF Club
	Cobham Lecture	RAF Club

MAY 2022

12 th	GP&F	APH
	Court	Cutlers' Hall
26 th	Livery Dinner	Drapers' Hall

Cover photos: (Main) 621 Historic Flight's Slingsby Swallow comes into land (Pete Turner); Capt Robin Keegan takes over as Master for 2022/3

Applications for Visits and Events

Please kindly note that we are ceasing publication of printed 'flyers' and application forms for visits and events. From now, details and applications for all visits and events will only be available online - on the website and via links in the e-news and events bulletins which are circulated by email to members.

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 2MB;
- More than 2 images to be sent via a Dropbox file, rather than an e-mail attachment



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A MESSAGE FROM YOUR EDITOR...



The Russian invasion of Ukraine has had some immediate and predictable ramifications – the closure of Ukrainian airspace and the re-routing of flightpaths away from Russian airspace being the obvious ones. The banning of flights by Russian-registered, operated and even linked aircraft into much of the rest of

the world's controlled airspaces (and the reciprocal bans by Russia on operations into its airspace), along with the sanctioning of Russian individuals and organisations and the withdrawal of many western companies from the Russian market, have less precedent, but the potential consequences are more far-reaching.

The bans on Russian airline operations to and from the outside world have led to much of the Russian fleet (nowadays largely western-built and western-owned) being grounded, in itself not a significant short-term problem other than to inconvenienced passengers and to the lessors which are at risk of not getting paid. What is potentially a more serious problem is that some of these aircraft will continue to be flown on services within Russia and to the countries still sympathetic to it. Those aircraft will no longer be being serviced and maintained by the approved organisations – whether inside or outside Russia – which have hitherto handled them, and that they may end up being serviced (if at all) by non-approved organisations or even fitted with service parts and spares themselves not from approved sources.

If or when these aircraft are returned to their lessors or to general international service (not necessarily a guaranteed outcome after Russia launched legislation to effectively “nationalise” its foreign owned/registered fleet), there could be problems of traceability, and a danger to those who operate or fly in them. While the civil aviation sector digests the import of such outcomes the military, meanwhile, has some thinking of its own to do arising from the Russian action in Ukraine.

This is the first time in recent history that there has been substantial engagement between current frontline Russian combat aircraft and missiles and substantial amounts of current western anti-air systems – albeit operated by Ukrainian forces with little or no training in their use. The apparent successes of outnumbered forces unfamiliar with their products (against what are presumably the best available Russian assets) must be heartening for western manufacturers, but must also raise questions about the possible outcomes if it were western air assets being matched against current Russian defensive systems. How would our best aircraft (and tactics) fare in an air-to-ground war rather than the air-to-air environment for which many of them were optimised?

Allan Winn - Editor

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NEWS ROUNDUP



COURT ELECTIONS 2022

The results of the Court elections for 2022/3, held at the Court Meeting on 22nd January and confirmed at the AGM on 21st March, are:

Master: Capt Robin Keegan FRAeS

Master-Elect: Warden Jonathan Legat

Warden: Assistant Elizabeth Walkinshaw (a profile of Warden Walkinshaw is on p11 of this issue)

The results of the elections for Assistant, announced at the Court Meeting on 10th March and confirmed at the AGM (see next issue for a full AGM report), are as follows:

NEWLY ELECTED



Flt Lt David-John Gibbs BEng (Hons) MRAeS

David-John (DJ) Gibbs has been a military pilot since 1996. Originally in the Royal Navy, he transferred to the Royal Air Force in 2019.

He initially flew helicopters before specialising as a QFI in light piston

and turboprop aeroplanes, operating in the Elementary Flying Training, Flying Standards and Central Flying School Examiner roles, and is currently OC 115 Squadron Standards Flight. Since 2009 he has also been a part-time civilian Flying Instructor specialising in vintage piston and jet aircraft. He has been a Member of the Honourable Company since 2016.



Captain Peter Taylor BSc

Peter Taylor flew with British Midland as a First Officer on Boeing 737s from 1992 to 1994, and then moved to Hong Kong with Dragonair, where he was a First Officer on the Lockheed TriStar and the Airbus A330. In

1998 he became a Captain on the airline's Airbus fleet of A320s and A330s, serving as a Senior Training Captain 2000-2020 and Training Manager 2006-17. Having been admitted to the Company in 2018, he served as Head of Youth Development for the Hong Kong Region until returning to the UK in 2021.



Mark Tousey BSBA MBA

Mark Tousey has been a Member of the Company since 2012, and has been the Chairman of a Florida-based private US charitable foundation since 2016. From 1985 to 1993 he was an investment banker in New York and London,

after graduating from Wharton in Philadelphia with an MBA in International Finance. Since 1993 he has been a private equity investor, managing his family trust; a director and/or chairman of various corporate boards and charities (including The Guildhall School Trust); and investment committees.

RE-ELECTED:



Capt Dave Singleton

Dave Singleton was a GA QFI then Deputy CFI before joining Leisure International Airways in 1994 as a First Officer on the Boeing 737 and 767. From 1998 until the present he has been with Virgin Atlantic Airways as a First Officer

and Captain on the Boeing 747-400 and 787. He was first elected an Assistant in 2016.



Capt Pat Voigt

Pat Voigt was an RAF Officer for 16 years. After, as a first tourist, becoming a QFI on the Jet Provost, he spent 10 years flying the BAe Harrier; with operational tours of Iraq, Bosnia and Kosovo, plus carrier operations, and being A2

QFI, air-tester and display pilot. Having joined Cathay Pacific Airways in 2004 on the Boeing 747, he was promoted to Captain on the 777 in 2016. First elected an Assistant in 2019, he stepped down last month from the Chairmanship of the Hong Kong Region. □

CITY SKI CHAMPIONSHIPS

By Upper Freeman Sam Rutherford



The winning team (L to R): Will Fanshawe, Alex Reynier, Megan Bowden, Beatrice De Smet, Zara Rutherford, Sam Rutherford

Over the last few years, the Air Pilots Ski Team has been earning some great results at the annual Inter-Livery Ski Championships in Morzine – at both personal and team level. The event last year was cancelled due to Covid and then the 2022 edition was as well. What to do...?

Salvation came in the form of the City Ski Championships in Crans Montana – and of course we arrived in suitable style, leaving our Piper PA-32 Saratoga and Mooney M20K parked on the apron at Sion LSGS whilst we headed

up the hill. Stalwarts Freeman Beatrice De Smet and Associate Zara Rutherford (just back from her bumble around the world) were joined by newcomer Megan Bowden for the ladies, whilst the boys' side was made up by the usual suspects, Upper Freeman Will Fanshawe, Associate Alex Reynier and me.

It was soon clear that the standard (and competitiveness) was of a level significantly higher than the ILSC – bringing added excitement. We were able to dilute this, however, with choice use of bad jokes and our now-traditional aviation-themed helmet covers, but, at the end of the day, we were there to race – and race we did.

I'm very happy to report exceptional personal results for Will (Silver overall, and Gold overall Over-50) and Megan (Gold for women's snowboard). In the team results we took gold for Inter-Livery Team, which was not bad for our first outing.

We're hoping that the ILSC will take place in Morzine next January, and we're already signed up for Crans Montana next February – no rest for the helmet covers! □



Silver and Gold for Will Fanshawe (Momentum)



Gold for Megan (Momentum)

DAWN TO DUSK WINNERS CELEBRATED



The winners of the 2021 International Dawn to Dusk Competition were celebrated at an Awards Dinner attended by the Master at the RAF Club on 3rd February. The winners, flanked by competition co-ordinator and Assistant Seb Pooley and the Master, were: Air Cdre Neville Parton RAF Ret'd and his

daughter Hannah Parton who came second and are holding the Coventry Trophy, Best Video Award and Family Trophy; Kai Barnett, who won the competition overall and who is holding the Duke of Edinburgh trophy; and Mike Roberts and Nicholas Rogers, who came third and are holding the Tiger Club Trophy.

For the first time the competition was won by a pilot flying a gyrocopter, and there was also a first-time entry for an electric aircraft: entries came from the UK, Spain and Australia. Full details of contestants' themes and the aircraft they flew can be found on the Dawn to Dusk website (www.pooleys.com/dawn-to-dusk/).

Judges for this year's competition included Assistants Seb Pooley and Kat Hodge, Liveryman Peter Benmax and Freeman Ian Seager. □



ADMISSIONS

As Upper Freeman

Tiago BALACO (HK)
Jonathan David Allen BURGESS
John Peter BURGESS
Simon Andrew HAZELL
Aminta HENNESSY (AUS)
Bradley Grant MACE (OS)
Neil POLLARD
Joseph Alan ROSAMOND (NA)
Rajash SINGH (OS)
Mathew Stephen WOODCOCK (NZ)

As Freeman

Justin COTTRELL
Paul TUCKER

As Associate

Valerie CHUA (AUS)
Jack COULTHARD (AUS)
Ian Lloyd Leshan LETHBRIDGE
Hardik SINGH (NA)
Luke Roy STANDLAND

ACKNOWLEDGED BY THE COURT 10th March 2022

REGRADING

To Livery

Andrew BLOOM
Christopher CHAMBERS
Shaun MAYHEW
Sharon NICHOLSON

REINSTATEMENT

As Upper Freeman

Mark HAMWEE

DECEASED

Richard BENNITT
Peter CHATFIELD
Andrew CLARKE
Colin HEATHCOTE
Chris LONGRIDGE
David SIMMONDS

RESIGNATIONS

Simon BLAKE
Keith DAVIS-RUTTER

Andrew HADFIELD
Anthony KELLEHER
Megan LACKFORD
Warren LAWRENCE (NZ)
Darren LIVERMORE
Aaron PEARCE (NZ)
Stephen PIKE
Wendy PURSEY
David SOUTHWOOD
George ZAMBELLAS



HELP SAVE THE UK'S AIRFIELDS!

Visit www.gaac.org.uk/donations to fund the fight

The General Aviation Awareness Council (GAAC) is recognised by Government and fights to protect all UK airfields. Our team of professional advisers works hard on your behalf to keep vulnerable airfields open for flying. Meanwhile the GAAC and the All-Party Parliamentary Group for GA (APPG-GA) have proposed the creation of a legally protected Strategic Airfield Network.

GAAC is a non-profit organisation, so we URGENTLY NEED YOUR HELP to cover costs & expenses, to carry on our valuable work.

If you have a question or pressing need for advice, please visit our website www.gaac.org.uk or contact info@gaac.org.uk or planning@gaac.org.uk

WE NEED THE SUPPORT OF ALL PILOTS SO PLEASE RECOMMEND THIS TO YOUR COLLEAGUES





MASTER'S MESSAGE

By the Master, Capt Robin B Keegan

This is my first Master's Message, and is being written whilst Russian military forces are unjustly attempting to invade Ukraine and overthrow the democratically elected Ukrainian

government. What ramifications this conflict might have on the Ukrainian peoples or UK and European aviation and its fledgling recovery from the effects of Covid-19 remain to be seen.

In common with most previous Masters, the looming *Air Pilot* copy deadline means I am writing this still as the Master Elect prior to the Installation at the Air Pilots AGM in March. I am acutely conscious of the honour the Court has bestowed in electing me Master, and my wife Eileen and I look forward very much to the coming 12 months although I must confess to an element of trepidation at the same time.

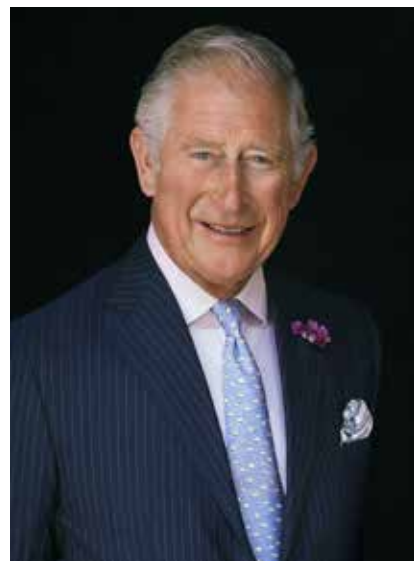
LOOKING BACK

Straight away, I want to put on record my huge admiration of the way both of my predecessors have coped with the Covid-19 pandemic and the consequent disruption to their respective 'years'. Whilst IPM Nick Goodwyn and Lenka have had the chance to take part in some City Livery events, John and Linda Towell had virtually none, whilst both Past Masters and their respective consorts were unable to undertake the Master's Tour. Consequently, I would like to refer to them both a little later on in this Message. Whilst reflecting on the Covid pandemic, our Learned Clerk Paul Tacon, Angie, Eloise, Anna and James have all shown huge flexibility and fortitude to keep the Company's affairs on an even keel during the various lockdown phases, for which they deserve our heartfelt thanks. An announcement has just been made dropping all Covid restrictions in England and moving Covid-19 to the endemic status similar to those of influenza and the common cold. The other unfortunate situation is that the Company is without a Grand Master. There is to be a Service of Thanksgiving for the life of our late Patron HRH The Prince Philip, Duke of Edinburgh at Westminster Abbey later in March. Nick Goodwyn as

Immediate Past Master and I will be attending this service to represent the Air Pilots. Happily, The Court recently received official confirmation that His Royal Highness The Prince of Wales has graciously accepted the invitation to become Patron of the Honourable Company in succession to His Royal Highness The Duke of Edinburgh.

COURT ELECTIONS

I am delighted that Captains David Singleton and Pat Voigt have both been re-elected to the Court and that they are to be joined by David-John Gibbs, Pete Taylor and Mark Tousey as the new Assistants. It is sad to see that Simon Brailsford decided not to stand for re-election, especially as he was a champion for mentoring. We also say goodbye to Dacre Watson. Although it was an unofficial title, Dacre was viewed as the 'Father of the House' and always offered wise counsel. Thank you, Dacre and Simon, for your efforts. I am delighted that Elizabeth Walkinshaw is our new Warden, and so she begins climbing the ladder towards becoming only our second female Master, following the trailblazing lead by Past Master Dorothy Saul-Pooley. Warmest congratulations to all the successful candidates and I look forward to working with you. For those who were unsuccessful this time, please try again.



The Patron, His Royal Highness The Prince of Wales

LOOKING AHEAD

One of the hazards of writing my first Master's Message whilst at the same time composing my speech for the Installation Dinner, is that I will inevitably repeat some of the themes. For those who are subjected to some of the content twice, I apologise. There is still considerable doubt about some aspects of the forthcoming Master's Tour. Having already chosen to split the tour in order to visit Canada and the USA in July or August, there is only a small chance currently that this part of the Tour will proceed. Looking to the Southern hemisphere in the

Autumn, the only country that seems reasonably firm at this stage is Australia with significant question marks remaining over Hong Kong and New Zealand. Only the coming months will tell.

That said, there is still much to look forward to in the coming year. The most notable event will be the Platinum Jubilee of Her Majesty The Queen who, of course, used to be our Patron and, as Princess Elizabeth, our Grand Master. Another notable date later in the year will be the 20th anniversary of Paul Tacon becoming our Learned Clerk. I hope to meet as many of you as possible at the AGM, the Livery Dinner, the Garden Party, the Trophies and Awards banquet or any other of the various events throughout the coming year.

It is now nearly five years since the Company Strategic Plan was published in August 2017. The summary was that: "the Strategic Intent of the Honourable Company is to be recognised as an authoritative body on safe aviation operations and to make a significant impact in the delivery of our purpose." To support this, we had three themes:

- Help and deliver education, training and access to the aviation sector;
- Engage in the government-led Science, Technology, Engineering and Mathematics (STEM) initiative;
- Improve and develop external communications.

Also, the values of the Company are Integrity, Excellence, Independence, Benevolence and Charity.

Whether it be through the work done by Past Master Roger Gault on aviation apprenticeships; attendance at career fairs and air shows led by Steve Durrell and his team; student career showcase days at Guildhall; the Green Aviation Event organised by Liveryman Robert Seaman and Warden John Denyer; the many different scholarships and bursaries with the successful applicants being selected by Kat Hodge and the scholarship team; the current input to Government on modernising controlled airspace in the UK led by Warden Richie Piper; or the many visits organised by David Curgenvin and the Visits Team; I believe that we have pursued these aims and objectives well, in a non-partisan and non-political way although inevitably access to the aviation sector has been sorely affected by Covid-19. All these workstreams and too many more to mention have enhanced the name and fame of the Company.

The intent was that the current Strategic Plan should be reviewed after five years. That period ends this coming Autumn, and the Court will wish to appoint a review team – an ideal opportunity perhaps for some of our younger members to contribute and help set our agenda for the next five years.

LOOKING FURTHER AHEAD

What was then known as The Guild of Air Pilots and Air Navigators (GAPAN) and now The Honourable Company of Air Pilots incorporating Air Navigators was formed in 1929; therefore, our Centenary approaches in 2029. This will be one of the significant events in our history. Who knows what aviation will look like then and what fuel sources we will be using. Whilst it may be tempting to dismiss the 100th Anniversary event as being too far away to need addressing yet, I intend to put a proposal before the Court that we should form a steering group and start planning now.

I have no strong views about the form any celebration should take. Whether it should be a white tie banquet in similar fashion to that held when we received our Royal Charter or, alternatively, a series of smaller events is open for debate. Warden Elizabeth Walkinshaw additionally has suggested the idea of an Air Pilots float at the Lord Mayor's Show that year. Whatever is decided, I can confidently predict that it will cost money, and this is where I refer back to Nick Goodwyn and John Towell.

Because they were not able to undertake their respective Master's Tours, the Company has saved considerable sums of money on their travel costs, and I would suggest that they have therefore inadvertently given us a significant financial legacy which could be used towards the Centenary celebrations. Whilst this money is now held in general reserves and is not specifically hypothecated for our 100th Birthday, if nothing else it does give us some 'seed corn' money if the Court so decides to use it.

If not, we need to consider ways to raise the appropriate funding – again, this is not something that can be achieved simply overnight.

I certainly believe that we should seek the widest participation of our membership, especially our younger members, in planning this Centenary event as we progress towards our Centenary! Need I say more?

There is always room for more volunteers with these endeavours so please think about joining in.

Safe aviating.

□



The IPM, Master and Master-Elect flanked by the Clerk, 2022/23 Wardens Piper, Denyer and Walkinshaw, and the Beadle



PROFILE: THE MASTER

Capt Robin B Keegan FRAeS

Robin was inspired to become a pilot following his first flight in a Vickers Viscount as a passenger at the age of ten. With its larger-than-usual windows, this aircraft was a delight for passengers. He immediately tried to join the Royal Air Force Air Training Corps (ATC) as a cadet but quickly learnt that the minimum age to join was 13. Finally having joined the ATC, he stayed until age 21, rising to Cadet Warrant Officer, the highest cadet rank. During this time, he attended Summer Camps at RAF Stations Topcliffe, Colerne, Chivenor, Wildenrath, West Raynham, Wattisham and Manston, plus a couple of walking and climbing courses with the RAF Mountain Rescue teams at Bethesda in Wales and the Lake District.

Through the ATC he gained an RAF Flying Scholarship



Robin flew the Plessey King Air for 10 years (Master)

which at that time paid for 30h flying towards the minimum 35h required for a Private Pilot Licence, and also his Gliding A & B wings. The Flying Scholarship flying was conducted at Stapleford Tawney on a Forney FI Aircoupe, a very forgiving American two-seater which had the novel facility to slide down the side windows and fly with your elbow sticking out into the slipstream rather akin to driving an American sports car. Robin went solo after 6h 05min. The final five hours towards a PPL was self-funded and involved conversion to a Piper Cherokee four-seater.

Captain of the first XV rugby team at school, he is still a keen rugby supporter and hopes to watch England win the World Cup in 2023. On leaving school, Robin undertook the four-day aircrew selection process at Biggin Hill and was selected for a Direct Entry Commission as a pilot in the RAF, but subsequently did not take up the offer. A brief period as an Assistant Flying Instructor was followed by employment in executive aviation for

the Plessey Company, first on a Piper Navajo but mainly flying a Beechcraft King Air pressurised turboprop twin and, through Plessey, he was sponsored for both his Commercial Pilots Licence and subsequently his Air Transport Pilots Licence and Instrument Rating. Although both aircraft were certified for single-pilot operation, Plessey had a policy that two pilots were carried at all times and both aircraft had full dual controls and instrumentation.

The flying was extremely varied - mainly in the UK, but also across Europe, ranging from major airports such as Heathrow to small grass airstrips in central France. The King Air was equipped with balloon tyres and reverse thrust which made for an extremely flexible aircraft. It was very much a self-contained operation, with the pilots responsible for all aspects including planning, refuelling, baggage loading and even serving drinks to the passengers. It proved to be a very valuable apprenticeship, flying both in controlled airspace and the open FIR. Robin stayed in corporate aviation with Plessey for ten years and it was during this period he joined the Guild of Air Pilots and Air Navigators (GAPAN).

On leaving the corporate aviation world, Robin joined Britannia Airways in the UK as a First Officer on the Boeing 737-200, flying around Europe and the Middle East. Subsequently, Robin became a Training First Officer on the 737, conducting both technical ground school for new recruits and also accompanying them on their first line training sectors as a 'shotgun' First Officer. After seven years in Britannia, he was promoted to command on the 737, subsequently becoming a Line Training Captain.

A move to the combined Boeing 757 and 767 dual-rated fleet in Britannia as a Type Rating Instructor (TRI) followed, which offered a much greater range of destinations, mixing both short and long-haul flying, including transatlantic ETOPS operations to the USA and flights to India and the Maldives. Westbound transatlantic flights to Florida in the Boeing 757 were always challenging, especially if the prevailing winds were very strong. The ability to drop into Bangor, Maine, for a 'splash and dash' refuel



Boeing types flown: 757 (Caz Caswell); 767 (via Steve Bridgewater); 737-200 (Wikimedia Commons/Eduard Marmet); 737-800NG (iStock)





For relaxation – the Harley-Davidson (Master)

was made more welcome by the prospect of one of their famous lobster sandwiches! The 757 was Robin's favourite aircraft. He likens it to the GTI version of an aircraft having both outstanding take-off performance from the Rolls-Royce RB211 engines but also - with a relatively low approach speed coupled with effective braking - it could stop very well, too. Robin also

took part in one of the Hadj pilgrim operations, based in Batham, Indonesia, flying the 767-300 to Jeddah in Saudi Arabia with three pilots and a crew rest facility due to the extended sector lengths of 11 – 12h. Britannia was re-equipping with the Boeing 737-800NG, so another type-change led to his becoming a Type Rating Examiner (TRE) on this aircraft, which meant he had now flown every variant of 737 from the -200 through to the -800NG. The 5th of May 2022 will see the 60th anniversary of Britannia's continuous operations.

In these post-Brexit days, it's interesting to note that the airline started life as Euravia, before changing name to Britannia Airways, which is what it was called for most of Robin's career. For a significant part of its history Britannia was part of the group owned by the International Thomson Company of Canada, which included Thomson Holidays and Lunn Poly travel agents, plus the Piper Alpha oilfield in the North Sea. Subsequently, the 'vertical branding' genie was let out of the bottle and Britannia Airways became Thomson Airways and, following a public flotation and subsequent buyout, is now part of the German TUI Group and therefore now known as TUI Airways. TUI is a massive group which owns airlines and travel companies not only in the UK but also in many European countries including the UK, Germany, Belgium, Netherlands, France and the Nordic Countries. Notwithstanding what was painted on the outside of the fuselage, Robin says Britannia Airways always felt like one big happy family. Subsequently, an early retirement option became available, and Robin ended his commercial aviation career, having amassed over 16,000h.

During his airline career, Robin was a member of the British Airline Pilots Association (BALPA) and through that became an International Federation of Airline Pilot Associations (IFALPA) Director. He was a Regional Vice President Europe for 10 years, attending IFALPA conferences in Tokyo, Jamaica, Stavanger, Madeira, Sydney, Cape Town, Istanbul, Dubrovnik, Mexico City and Auckland, plus a number of European Regional Meetings.

Robin is married to Eileen, and they have two adult children, James and Olivia. They also have six grandchildren, four boys and two girls. James is a doctor and regularly volunteers on the Dorset and Somerset Air Ambulance helicopter. Olivia works in Medical Education. In his spare time, Robin is keen on field sports particularly deer stalking and riding his Harley Davidson motorbike. People can tend to view deer stalking as akin to killing Bambi, but Robin says this is not true. Most of the six species of deer in the UK are foreign introductions, have no natural predators and can breed quite prolifically. This has led in recent years to a significant increase in collisions between deer and motor vehicles. Deer management is an important part of the countryside, and Robin has qualifications in this field. Deer live a very natural life and produce a tasty, healthy meat low in cholesterol. There are many reasons for managing or culling them. They only have one set of teeth which when they wear out can lead to the animal slowly starving to death. Injured or sick animals need to be culled as a vet is unable to treat them plus, like it or not, they can be incredibly destructive of crops, so numbers do need to be controlled. Ideally, a good stalk is followed by a clean kill and instant death with the animal completely unaware of the stalker's presence. The deer having lived wild and free, Robin believes this is a better end of life for it than being herded into an abattoir and potentially creating stress for the animal.

Robin was a member of the GAPAN Technical Committee for 20 years, but stood down when it became the International Technical Forum, and currently serves on several Air Pilot committees including (as a past Chair) the Aviation Carers and Education Committee, and has just stood down as Chair of Trustees of the Air Pilots Benevolent Fund, although he remains a Trustee. He became a Fellow of the Royal Aeronautical Society in 1999 and has just completed 46 years as a member of GAPAN and The Honourable Company of Air Pilots. As he is about to become the Master of a City Livery Company, Robin is proud to have been born within the City of London at St Bartholomew's Hospital and to have been given the middle name of Bartholomew. □



The final turnaround: with my crew at Faro on my final flight before retirement.

PROFILE: WARDEN ELIZABETH WALKINSHAW



Elizabeth Walkinshaw was elected to Warden at the Honourable Company of Air Pilots Court Meeting on 22nd January 2022. She is only the second female Warden and will therefore become the

second female Master in the Company's history.

Elizabeth has had an interesting career, as a computer programmer and analyst, and as a director in her husband's engineering company. Additionally, she owned and ran her own large, successful horse breeding and competition business.

She learnt to fly helicopters in 1986 and, after 35 years, still loves to fly and enjoys keeping her licence current, having flown Bell Jet Rangers, Agusta 109s and currently, Eurocopter/Airbus Helicopters Squirrels.

Elizabeth attended her first GAPAN Luncheon Club, as a guest, in 2011. At this point, she knew she would like to become a member and be more involved. She was elected a Freeman in 2012, a Liveryman in 2017 and was elected to the Court as an Assistant in 2018.

Elizabeth's involvement in aviation stretches far but is perhaps best demonstrated through her commitment to the Honourable Company and as a long-serving board member of the General Aviation Safety Council (GASCo). She has also served on the Board of the Helicopter Club of Great Britain (HCGB) and is a Committee member of the Candlewick Ward Club giving her a good insight into the City of London.

Her role within the Honourable Company has been extensive. She is a Board member of Air Pilots Property Ltd (APPL), a member of the Bursary Committee, the Mentoring group, the Unmanned Aerial Systems Technical Group (UASTG) and the Airspace Technical Group. She is the Liaison Officer for the Red Arrows and she is a Committee member of the Flying Club.

DELIGHT IN ELECTION

Elizabeth has expressed her delight in being elected as Warden and has emphasised how privileged and honoured she feels to have this position bestowed on her. She says: "I am extremely enthusiastic to serve the Company well, and look forward to the coming years as Warden and Master-Elect in preparation for my year as Master". She understands that these years will give her the

time to 'learn the ropes', meet more people and further hone her skills.

She would like to continue to do all possible to maintain and further improve our reputation with the industry and profession. She will look to promote our Company, and hopes to demonstrate to all, what our great Company and the aviation industry have to offer.

She would like to see the relationship with all sectors of aviation maintained and improved, where possible or necessary, and to show that our Company is unique in the aviation world as being a company for all aviators: commercial, military, and general aviation.

"Our regional network, our Young Air Pilots, aviation safety, unmanned aerial vehicles, space and airspace will be a very important focus of my attention", she says. Similarly, the maintenance of the excellent relationship that exists with all three of the armed services and our affiliated units, and the impact of climate change will also continue to be of great importance.

ENCOURAGING MORE INVOLVEMENT

Elizabeth has written articles for *Air Pilot*, one of which, in 2020, was titled *It Could Be You!* She is keen to encourage all members to become more involved and to play her part in making members of the Company fully aware of the range of opportunities available through their membership of the Company. She intends to write more articles for *Air Pilot*.

She has also taken part in the Lord Mayor's Show on a couple of occasions and is full of enthusiasm to better the Company's presence at the event, particularly for our Centenary in 2029.

Having been involved in the world of motor racing for many years, naturally, it remains one of Elizabeth's interests. She has been involved in the Women's Motor Racing Associates Club [known popularly as "The Doghouse Owners' Club" – Ed] which, over the years has raised huge amounts of money for many charities including the Air Ambulance. Elizabeth has one son who is also involved in motor racing and who became the first Motor Racing Ambassador for the Association of Air Ambulances, promoting their slogan 'Support your Local Air Ambulance'.

Finally, Elizabeth still has a love for horses and may return to riding side saddle. She also still holds an HGV driver's licence. She enjoys walking and swimming and, when on the slopes, she participates in uphill skiing, snowshoeing and cross country. □

REGIONAL REPORTS

Australia Region

By Upper Freeman Rob Dicker



Summer in Australia is, of course, our main holiday season and evokes images of lazy days by the beach or perhaps, following the cricket or tennis. With double-dose vaccination rates approaching the mid 90% mark Australia-wide and travel restrictions, both domestic and international, eased before Christmas this should have augured well for travel, tourism and the aviation sectors. However, this summer has not panned out quite as expected. Carriers reported improving bookings in November and December, in anticipation of open borders, but the Omicron variant arrived just as states were opening up, with daily cases peaking at around 110,000 in mid-January. Daily cases have now dropped to around 20,000 but, the damage was done, with many managing their own risk and cancelling travel plans.

DIVERSE, PERVERSE, WEATHER

On top of all this, the eastern half of Australia has had one of the wettest summers on record. There have been floods in what would normally be the dry, red centre of Australia, cutting the main road and rail links between Adelaide and Darwin for weeks. In late February and early March, southeast Queensland and northern New South Wales were also in flood. The beach has often been a cool and soggy place, but not because of the ocean!

As is usually the case, when the east is wet the west is hot and dry, with Perth and the southwest of Australia experiencing record-breaking heatwaves. West Australia had announced that it would open its border in early February but, on seeing the impact of Omicron in the eastern states, the WA government reneged and postponed opening indefinitely. Just recently it has announced a new opening date in early March.

One thing did become clear over the summer, thanks to some high-profile, would-be tennis players, and that is the requirement to be fully vaccinated in order to enter the country without the need for quarantine. From early March all of Australia is open to any visitor in this category.

Qantas reported its half yearly results recently which reflected the above conditions. Over the period the group's total flying was just 18% of pre-Covid levels, with revenue losses since the start of the pandemic growing to

more than \$Aus22billion. However, it reports that forward demand for both international and domestic services has improved during February and forecasts that domestic capacity will be back to 90-100% and international capacity around 45% of pre-Covid levels by the fourth quarter of 2022 (although that may have to be amended in light of current geopolitical events).

AWARDS PRESENTATION

In early March I travelled to Brisbane, for the first time in more than two years, to make a presentation to one of our 2020 award recipients. Upper Freeman Capt Graham Stokes, head of Training and Standards at Virgin Australia, was the 2020 recipient of the Captain John Ashton



Capt Graham Stokes (L) receives the Captain John Ashton Memorial Trophy from Rob Dicker

Memorial Award for an outstanding contribution to flight standards and aviation safety. Not for want of trying, but because of obstacles like interstate and international border restrictions, work commitments and the like we had been unable to connect before this time - and even then the weather almost intervened to thwart us!

At the Australian Region AGM in March I will be stepping down as Chairman, with Spencer Ferrier taking on the role, so this is likely to be my last regular contribution to *Air Pilot*. I still intend to be active within the Air Pilots, but with a lower profile, and I hope you have enjoyed my articles, keeping you abreast of developments Down-Under, over the last couple of years or so!



Incoming Australia Region Chairman, Liveryman Spencer Ferrier



Regional Report: North America

By Freeman Belinda Scott



The North American region continues to see airline passenger increases as virus numbers begin to decline, however profits for the first two months have been elusive. The big news event for the first two months of the new year has been the implementation of the 5G telecoms network in

the USA and the affects it has had on the aviation industry.

On 23rd December 2021 both Transport Canada and the FAA announced the potential risk of interference to radio altimeters by 5G signals. Transport Canada published a civil aviation safety alert to raise awareness and recommend precautionary operational measures. The FAA also released a special airworthiness information bulletin with similar information.

Radio (radar) altimeters provide a direct measurement of the AGL (above ground level), and clearance height of the aircraft over the terrain or other obstacles. Radar altimeters operate in the 4200 - 4400MHz range and are used with autoland functions, terrain awareness warning systems (TAWS), traffic alert and collision avoidance systems (TCAS), airborne collision avoidance systems (ACAS), and wind shear detection systems.

A MOM (Multi Operator Message) from the Boeing Company to US 757/ 767 operators described potential effects on automatic speed brake deployment after touchdown due to erroneous radar altimeter information, which can result in longer stopping distances. Flight crew were recommended to monitor the situation and manually deploy the speed brakes shortly after touchdown. The MOM further explained that the 757/767 fleet's primary flight control system and thrust reversers will continue to operate normally.

Frequencies are a finite resource giving limited options to those who require them. Innovation, Science and Economic Development Canada (ISED) is the spectrum regulator in Canada. ISED will allow flexible use of wireless systems including 5G systems to operate in the frequency band 3450-3980MHz, which can be argued by some as unfavourably close to radar altimeters and does not allow much room for error.

Studies given to ICAO have shown radar altimeters are vulnerable to interference by any source operating near

this range. One example occurred during Iron Dome mobile all-weather air defence system activations near Tel Aviv airport. This activation interfered with one airline that resulted in inappropriate activations of the EGPWS terrain warning, and autopilot with landing flare being activated at approximately 1,500ft AGL. The flight crew disengaged the autopilot, preventing an accident. Without their quick action, there was a high probability of the aircraft having insufficient altitude to recover from the resulting stall.

Verizon and AT&T originally scheduled the release of 5G for 5th December 2021 but delayed doing so to give the airlines more time to address the issue. The wireless providers continue to work co-operatively with airlines to help ensure a problem-free rollout of their C-band. To further assist the airlines, they will not begin transmitting at 50 airports across America for a minimum of six months. However, 5G is already operational in many other countries. Therefore, operators need to confirm that their radio altimeters are working properly, and check for potential 5G interference before relying on radio altimeter information below 200ft AGL for: CAT I/II/III auto land operation; RNP AR approach/departure; Steep Approach (above 4.5°); NVG operation; offshore RNAV (GNSS)/ARA procedure; helicopter Category A take-off/approach procedure; auto hover; automatic landing operations and



*Approaches near 5G masts should now be safe for most airlines
(BackyardProduction)*

head-up display (HUD) to touchdown operation.

Interference can also create abnormal behaviours in automatic flight systems, so all 5G personal devices carried in aircraft should be set to non-transmitting (eg aeroplane) mode so they do not transmit on the cellular networks or switched off. There is the added potential for devices to be accidentally turned on while stowed in luggage. This is important for flight crew to know so they can maintain situational awareness. It is also pertinent for

flight crew to know that for essential communications, such as during an emergency, crew can use 3G or 4G communication devices safely.

By 20th January 2022 the FAA declared 13 types of radar altimeters as safe from potential interference. These altimeters are used on all Boeing 717, 737, 747, 757, 767, 777, 787 and MD-10/11; all Airbus A300, A310, A319, A320, A330, A340, A350 and A380 models; and some Embraer 170 and 190 regional jets.

This timely finding prevented further travel delays and kept more flights operational.

A week later the FAA announced that an estimated 90% of the US commercial aircraft fleet, including Boeing 737 MAX, was cleared for low-visibility approaches in

5G areas. This was a direct result of collaboration with wireless companies which provided more precise data about the exact location of wireless transmitters and detailed analysis of how 5G C-band signals interact with sensitive aircraft instruments. The FAA was able to precisely map the size and shape of the areas around the airports where 5G signals are located. With this information wireless providers were able to shrink the areas where activating needed to be deferred, and allowed more towers to be safely turned on.

Both wireless providers and airline operators are committed to working together to try and avoid additional disruptions to the aviation industry that have already been caused by the pandemic. □

Regional Report: Hong Kong

By Assistant Pat Voigt



Pat and Nicci Voigt prepare for their imminent departure from Hong Kong by making a final visit to the Aviation Club at Kai Tak

As I approach the conclusion of my two-year tenure as Hong Kong Regional Chairman, I have to confess that it has not transpired as I had hoped, because of not only the dramatic impact of governmental policies on global aviation but also the knock-on effects to our region.

Unlike fellow regions, due to the nature of Hong Kong with a traditionally strong expat pilot community, the effect of job losses has sadly but inevitably led to the departure of some members.

However, many have repatriated to their home countries and have continued, or hopefully will continue, their membership of the Air Pilots within these established regions. Despite these losses, I and my General Committee (GC) have been heartened by the continuing recruitment of new, and indeed the rejoining of some lapsed, members.

We sincerely hope that this trend continues, and that

we will soon return to the usual social whirlwind that epitomises the Hong Kong Region.

By the time that this article is published the Hong Kong Region will have not only a new Chairman but also a new Vice-Chairman, as Michael Dreghorn has sadly decided to step down. On that note I would like to publicly thank Michael for his unwavering support – and, indeed, my thanks go to all GC members for their hard work throughout my term in office. Michael and I believe that we are handing the Region over in a very healthy state, led by a strong GC, and we wish all members well for the future: may it flourish, root & branch! □



Retiring Hong Kong Region Vice Chairman, Upper Freeman Michael Dreghorn

YOUNG AIR PILOT UPDATE

By the retiring and incoming Chairmen



FREEMAN

WILL WRIGHT

Over the past few years, it seems that change has been the only constant. A slight cliché perhaps, but I know one very strongly felt within our industry, family lives, and personal networks. Managing it has represented a significant challenge

to many. Lest we forget, it remains so in parts of the world. My personal thoughts are with those Air Pilots in places like Hong Kong, who are still under a great deal of pressure with Covid-19 restrictions continuing to be a very real inhibitor to 'normal' life.

At the time of writing, peace, that has existed in Europe all of my life, has been devastated with the Russian invasion of Ukraine. This, again, represents further global uncertainty in a world that had looked to be on the path to recovery. For many young aviators this is more than a growing concern. Those who were targeting jobs in the post-Covid recovery are concerned that they will have to continue to hold out, meanwhile supporting themselves by staying relevant and current. Some have left to return to previous industries, and may well never return. The same applies for those forced into a new career to sustain their livelihoods.

I hope that initiatives like the Job Retention Scheme, and organisations like ours, can do enough to keep hold of proactive individuals who would contribute to our industry. I fear, though, that for many the chance to fly a jet commercially has passed. Time will tell the tale of the Russian invasion and potential escalation. By the time this goes to print, I'm sure much will have changed. I will, however, be pleased to see a change for the better, particularly for young aviators, because there remains a great deal to be optimistic for.

On a note of positivity, I am very pleased to announce that Dom Registe will be taking over from me as the Young Air Pilots' Chair. I know Dom personally and with you having joined the committee last year, I know that the future is very bright with you at the helm. I'll always be on

hand to support you should you need it. Before I hand over, I'd like to briefly thank the remaining committee members for all their hard work over the past few years. The climate we have been working in has been very tricky at times, and we have achieved a great deal. Thank you. With that said, Dom, you have control.



ASSOCIATE

DOMINIC REGISTE

It is a pleasure to be greeting you all as the newly appointed Young Air Pilots Chair, taking over from Will Wright. Will has, without question, lifted the YAP community to new heights, and I am very grateful I have the opportunity

to openly thank him for his tireless work behind the scenes. Needless to say, I am looking forward very much to continuing the good work, and I will endeavour to enhance the YAP community even further.

As with so many of you, the infamous 'aviation bug' caught up with me at an early age and I joined the RAF Air Cadets, where I was able to complete my first solo in a Grob 109b in just over six hours. Eager to learn and progress flying-wise, and with a good flying record so far, I passed selection at 612VGS to be a staff cadet and advanced on to become an instructor, amassing 400+ instructional hours in the process.

With plans to go down the commercial pathway, I applied to The Honourable Company of Air Pilots and was awarded a prestigious Cadogan PPL scholarship in 2014. After completing the course, I was incredibly fortunate to be asked to join The Honourable Company of Air Pilots' scholarships team, and have formed part of the interview and selection panel ever since.

Now a qualified commercial pilot, navigating the repercussions of Covid-19 like so many of us, I am extremely excited to work with such a talented group of young aviators and, of course, the members of the wider company who underpin all that is good in aviation. I am looking forward to meeting as many of you as possible and helping in any way that I can. □

CAT SAFETY NETWORK UPDATE

By Assistant Ed Pooley



This time last year, as the pandemic interlude tentatively appeared to be drawing to a close, the delayed start to the efforts of the Company's CAT Safety Network got under way. The purpose was to see if we could take advantage of the collective experience in our midst to make

a practical contribution to the world of operational safety as influenced by pilots. The field is crowded but 'informal' guidance on 'best practice' is often increasingly lost in the necessary focus on correct documentation and procedural compliance, both very important but sometimes without context.

Look no further than the varying real-world effectiveness of 'Safety Management Systems' and on localised changes in response to events rather than a truly objective and independent focus on potential safety issues. This was seen at the start as our differentiated 'place in the sun' and one which our membership could help us fill with concise Safety Briefing Notes of generalised and thereby widespread applicability.

The six of these that we have published so far can be seen via the Members' Section of the Company website. The members of the 'Coordinating Sub Group' (CSG) of the Network are currently beginning work on several more such Notes which are planned for issue in June. These are likely to tackle Circling Approaches (for those still permitted to fly them!), the role of the Safety Pilot during early-stage line/route training, and the sometimes-overlooked challenges of GNSS-based approaches. Subject to input from our rotary wing members, we are also currently hoping to be able to include our first explicitly rotary-wing Briefing Note, on the sometimes-overlooked risk of Vortex Ring, in the next batch.

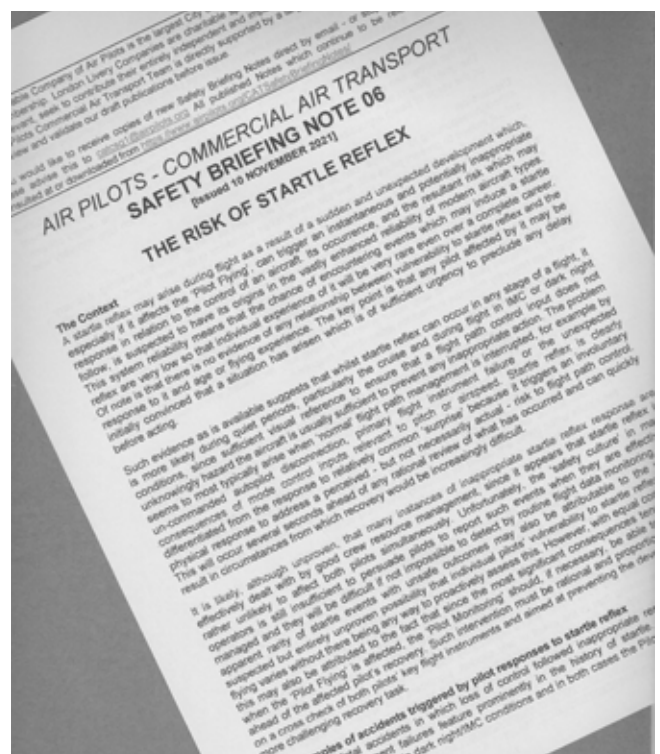
MAKING A DIFFERENCE

The key to our underlying aim of "making a difference" is, of course, not only the value of what we publish, but also the size and nature of the audience it reaches. In that respect, the extended instability of the commercial passenger sector has resulted in not only forced redundancy and early retirement, but also a massive increase in the movement of experienced pilots around the world to find jobs as the recovery of the sector has proved to be both temporally and regionally erratic.

Despite such flexibility on the part of many, a recent worldwide survey found that, overall, more than a third of qualified pilots were not back flying, with the worst region being Asia/Pacific, where half of all qualified pilots were still grounded.

Whilst high-end business aviation and cargo have thrived, many passenger airlines in all categories have ceased operating and, in their place, many more opportunist start-ups have appeared on every continent to challenge the survivors. In some cases, the start-up is run by those who were behind carriers which ceased operations directly or indirectly as a result of the pandemic. That is unsurprising, as it allows a millstone of debt to be left behind in favour of what can be the relatively modest cost of a new venture. Such 'flexibility' is exemplified by the Icelandic rebranding of WOW to PLAY, an example which should come as no surprise when it happens in a small country which has historically punched above its weight in the airline business.

One notable response to the disruption of the pandemic has been a dramatic increase in the number of dedicated ACMI (Aircraft, Crew, Maintenance & Insurance) operators. Their mission is often to meet demand anywhere in the world at a cost lower than an airline can do for itself on what is often not a long-term contract. Unfortunately, as a pilot, it doesn't matter where your



nominal base is; you are likely to be moved anywhere at what can be relatively short notice, a lifestyle which is not for everyone but may end up being a necessity.

MAINTAINING CONTACT

Given that the distribution of Safety Briefing Notes relies almost entirely on the use of pilots' Company email addresses which are allowed to receive external mail, the direct consequences of this unstable pilot employment market have made - and continue to make - the task of not only building up our distribution list but also continually updating it a lot more time-consuming than we expected. We have lost touch with around a third of the recipients of our first three Notes and have also had to extend our reach to the many new cargo and passenger start ups. However, the considerable effort expended has resulted in our most recently completed mailing reaching well in excess of 4,000 pilots currently working for over 450 operators based in 125 of the 193 States which are members of the International Civil Aviation Organisation, the UN agency which oversees the regulation of aviation and in particular its safety.

This brings me finally to an appeal to members of the Company who would like to join the CAT Safety Network and apply their experience to the absolutely vital

task of reviewing the drafts created by the CSG so that they can be effectively validated before circulation. This is a process often omitted when the views of a membership organisation are widely distributed, but which we believe is vital. However good our drafts have been, the feedback submitted by Network Members during the peer-review stage so far have been absolutely crucial to maximising the value of the Notes as eventually published.

If you can spare an occasional call on your time and have a solid background of multi-crew transport aircraft command on any aircraft type, fixed wing or rotary, we would welcome new members. To register your interest, all we need first is the completion of a very short 'flying experience' form which is available on request from catsafetynetwork@airpilots.org.

Please note that with all communications carried out by email, Network membership is absolutely not confined to UK Members, welcome as they are. The validity of our output depends on its generic content being globally applicable, and demands a global perspective built on awareness of a wide range of regulatory environments.

So if you are interested in joining us and are an 'Overseas' member (whether attached to a Region or not) please don't hold back! □

AIRSPACE WORKING GROUP UPDATE

By Warden Richie Piper, Leader, Airspace Working Group



A country's airspace and its management are key infrastructure assets to aid travel for both for business and leisure, and also significant global reach. The UK is fast approaching an airspace crisis as traffic volumes are set to return whilst emissions need to be reduced. The UK is languishing with

1950s design and technology, which also does not reflect the current levels of aircraft performance. This, together with the UK's smaller airspace compared to larger countries and the resultant high concentrations of traffic, means we are approaching an airspace crisis.

Aviation, being a younger industry than rail and shipping, can learn from these longer-established sectors. Rail has long understood that the network infrastructure is a national asset to be managed as a nationwide resource. Over 20 years ago the maritime sector mandated AIS (the equivalent of ADSB) for large ships, and it is commonly found on small craft, too, as it is inexpensive. Prior to

AIS adoption, sailors already had Digital Selective Calling on their VHF radios, where a single button press sends a digital distress signal containing the ship's identification and GPS position and switches the radio to the distress frequency. Aviation needs to catch up.

The Air Pilots Airspace Technical Group has been working to understand the needs of all airspace users, the flaws in the current approach and to devise an improved approach for the future. This has included working with government, the regulator and key stakeholders. There is now significant momentum for change, with a CAA public consultation under way [closing on 4th April – Ed], and this article seeks to update members on our work and the recommendations that we are making. If nothing else, we hope all members will look at the 'elevator pitch' [see over - Ed], so they are able to express the Air Pilots view.

The downturn in traffic caused by Covid has bought us some time, and more importantly, a window to revise our airspace and systems over the next five years. The current delays and holding stacks are not acceptable operationally or economically.

Even more pressing is the need to reduce the emissions of aviation as part of addressing the climate emergency. There are initiatives such as Synthetic Aviation Fuel and, ultimately, hydrogen as a fuel source to help address this. The scale of the undertaking is not to be underestimated, but a new airspace design and management system can contribute a reduction in emissions in the order of 10%, ahead of other initiatives maturing.

In addition to the UK airspace being outdated, it has been further compromised by repeated applications for controlled airspace from many airports. This flawed process is often based on traffic levels that are never achieved or maintained, and rarely is any airspace released. Although access is promised to transiting traffic, this is rarely optimal.

Therefore, airspace needs to be designed and controlled as a national asset. Our submission is that airports may apply for controlled airspace to protect their traffic but it will be managed on their behalf by a national air traffic service and funded in part by the airport. Managing the key middle level of airspace as a national resource rather than a local asset is essential and will further improve safety and efficiency and reduce infringements, as well as increasing capacity.

There are many other new users competing to be serviced by the new airspace. Space is a growing and important sector but relatively easy to accommodate. However drones, UAVs and personal flying taxis, etc will have major impact and potential for safety reduction. The Maritime Coastguard Agency is already using drones over the Channel, and their use denies airspace to conventional aircraft. The MCA even seeks to take over regulation of airspace from the CAA, thereby causing further fragmentation.

The current level of UAV activity has been managed through segregation by establishing Temporary Danger Areas, but even these are now not working for UAV operators, as new TDAs are often not granted as they conflict with existing ones.

There are some basic tenets of our recommended approach:

- Shared rather than segregated airspace;
- Adoption of new technology to support airspace users and managers;
- Simplified three-level model of airspace using only Classes A, D and G;
- Aerodromes to control their own zones but middle and upper airspace to be managed by a national airspace service;
- Dynamic flow control to ensure all stages of flight are efficient;
- A higher and uniform transition level;
- Dynamic controlled airspace that is released and activated as variable demands require. ATIS, FIS-B and other methods used to notify users of its status

Airspace needs to change to meet the current and future needs while solving the current limitations. It is imperative we get this right, as we will have to live with the result for decades. This really is a once-in-a-lifetime opportunity and, if we get this right, it is a win for everyone:

- Increased airspace capacity;
- Reduced delays and greater operational efficiency;
- Reduced emissions;
- Reduced noise nuisance.

The Airspace TG is publishing more detailed papers which I hope this brief update will encourage you to read. □

‘ELEVATOR PITCH’

UK airspace is based on old technology and design principles, and outdated aircraft performance, and is further compromised by piecemeal additions.

The UK's limited geographical area and busy airspace need much more efficient airspace design and ATC provision.

Significant emission reductions (approx. 10%), as well as significant operational cost reductions and reduced delays, can be achieved with new airspace design.

The new airspace design needs to consider all airspace

users in a shared, rather than segregated, approach incorporating dynamic controlled airspace; ie release when not needed.

A simple three-level design of airspace backed by a national contiguous air traffic service, and common raised transition level. Middle level to be Class D and upper level Class A. Aerodromes only own control zones at lower level.

Adopt new technology such as ADSB and dynamic flow control to ensure a “known environment” and elimination of delays/holds. □

MAINTAINING STANDARDS: FL LT DAVID-JOHN GIBBS AND RAF FLYING TRAINING IN 2022

By Liveryman Vic Flintham



A casual question about the unfamiliar 'cfs' post-nominal led to a discussion between two newly-clothed liverymen about current RAF pilot training, the role of RAF Wittering and 115 Sqn. That led to an invitation from then-new Liveryman (and now new-Assistant)

Flt Lt David-John (D-J) Gibbs RAF cfs to visit Wittering – where he is OC of the 115 Sqn Standards Flight – to learn more. It transpired that 115 Sqn, RAF Wittering and D-J have one thing in common – multiple occupations!

BASIC FLYING TRAINING IN THE ARMED SERVICES

Current arrangements for training pilots for the three services are complex and are mainly managed within the United Kingdom Military Flying Training System (UKMFTS) contracted to Ascent Flight Training. Management of the Grob G115 Tutor T.1 fleet comes within a contract managed solely by Babcock.

Pilot training is overseen by 22 Group which includes four flying training schools and HQ Air Cadets. Royal Navy and Army candidates undertake Initial Officer Training having applied to fly, and at some stage secure up to 15 hours grading flying with 727 NAS at Yeovilton or 674 Sqn at Middle Wallop.

Once selected for flying training the student is trained within the Elementary Flying Training (EFT) unit with LVII Sqn or 703 NAS on the Grob G120TP Prefect T.1 at RAF Barkston Heath or on the Tutor with 16 Sqn at Wittering. The Prefect is turboprop-powered, has an all-glass digital cockpit display and a retractable undercarriage, making transition to fast jets simpler. The six-month training programme includes 25h flying and around 20h in simulators plus ground school: a pilot's first solo comes after 11h. The course for those students trained on the 'legacy' Tutor within 16 Sqn extends to 50h.

On satisfactory completion of elementary training pilots are streamed for rotary wing, multi-engine or fast-jet training at 1 Flying Training School (FTS) RAF Shawbury (Airbus H135 Juno HT.1), 3 FTS RAF Cranwell (Embraer Phenom T.1) or 4 FTS RAF Valley (Beechcraft Texan T.1 then BAE Systems Hawk T.2) respectively.

To provide air experience for RAF Air Cadets and university undergraduates there is a fleet of Tutors.

There are presently 15 university air squadrons (UAS) and 13 co-located air experience flights (AEF) under 6 FTS spread across 12 airfields which also incorporates 115 Sqn. In addition, 13 volunteer gliding schools (VGS) operate the Grob G103A Viking T.1 glider within 2 FTS at Syerston to provide further air experience for cadets.



The Grob Tutor is the starter for RAF pilot training

QUI INSTRUIT PRAECEPTORES?

Who indeed instructs the instructors? The answer, of course, is the RAF Central Flying School (CFS). The CFS was formed at Upavon in 1912 to

train military pilots, from 1917 applying the disciplined approach promulgated by Major Robert Smith-Barry. The School moved to Wittering in 1926, returning to Upavon nine years later, becoming in April 1942 the Empire Central Flying School, reverting to its original title at Little Rissington in 1946.

The CFS transferred to its present HQ at Cranwell in 1976, with spells at Leeming and Scampton. CFS now comprises two distinct wings – Examining Wing and Development and Delivery Wing.

The latter incorporates the Smith-Barry Academy, providing oversight of innovation, especially in respect of synthetic training. There is also a development team operating as CFS(Helicopters).

The Examining Wing based at RAF Cranwell routinely checks out, among others, qualified flying instructors (QFIs) and helicopter instructors (QHIs). QFI/QHI instructors are outposted to RAF Valley, RAF Syerston and RAF Shawbury. The function for the widespread Tutor units is centred on RAF Wittering, specifically with 115 Sqn which is in effect the OCU for Tutor instructors. It was also the unit commanded by IPM Nick Goodwyn between 2008 and 2011.

115 SQN AT WITTERING

The Squadron, presently commanded by Sqn Ldr Rich Kellett, comprises two flights, one to train Tutor instructors, the other to maintain standards. The Instructor Training Flight (ITF) comprises three Full Time Reserve Service (FTRS) flight lieutenants and the target throughput



115 Squadron has an exemplary history of action

QFI students must have a minimum of 500h plus at least one operational tour and most come from rotary or multi-engine backgrounds.

The ITF course is of 22 weeks duration and begins with a ground school at Cranwell covering instruction processes and the technical aspects of the Tutor. Conversion training typically takes 15h and the trainee then moves on to learning to become an instructor.

Unusually for a fixed-wing aircraft the Tutor is flown from the right-hand seat, thus the QFI student flies from the left-hand seat with the instructor taking the student position – and indeed the student role on occasion.

in a normal year is 16 QFIs. ITF is accountable for training instructors working with the Tutor in 16 Sqn (which has 12 QFIs), 727 NAS and the Army's 674 Sqn plus the UAS and AEF units. The

The Standards Flight is where Flt Lt Gibbs enters the scene, as OC with one regular and three FTRS flight lieutenants plus a Babcock captain. The Flight is accountable for conducting biennial standardisation checks for all Tutor QFIs, running work-up courses for category upgrade and Instrument Rating Instructor candidates, conducting assurance visits to all Tutor units, authoring the Tutor training documents and flight reference cards, providing expert advice to HQ and assisting ITF when necessary.

Formed at Catterick on 1 December 1917 as a bomber squadron 115 Sqn was disbanded in 1919, reformed in 1937 and operated bombers throughout the war and then post-war to the Canberra, disbanding again in 1957. With 224 aircraft and over 1,400 aircrew lost on operations the squadron endured the highest loss rate of any in the RAF. Between 1958 and 1993, 115 Sqn operated as a navaid calibration unit. It was reformed in 2008 in its current role. □

FLT LT D-J GIBBS BENG(HONS) MRAES CFS RAF

Recently-elected Assistant David-John Gibbs, D-J or 'Gibbo' has had as varied a career as his illustrious squadron and its home base. Born in Southport, he graduated from the Royal Military College of Science with a degree in aeromechanical systems engineering, joining the Royal Navy in 1996. He flew the Westland Sea King in both Support and SAR roles during which time he qualified as an IR instructor, EW instructor and managed two seasons as the Sea King display pilot with 771 NAS. Not content with the main day job he also flew the Tutor with 10 AEF and displayed the RN Historic Flight Chipmunk.

D-J completed the QFI course in 2007 and delivered RN EFT on the Slingsby T.67 Firefly, securing an A2 category. Then it was back to helicopters before joining 115 Sqn training Tutor QFIs and then to CFS Exam Wing evaluating the Prefect for UK military service, examining on the Tutor and, once it was fully in service, the Prefect, and conducting instructor standardisation with Tayside Aviation (Air Cadet Pilot Scheme) and RAF Halton Microlight Club. In 2019 he made the momentous decision to transfer to the RAF, spending a year as a Boeing E-3D Sentry co-pilot before settling into his present role.

Notwithstanding a fulfilling and demanding work commitment he manages in his spare time to collect and race vintage boats, maintain a 1974 MGB and collection of autocycles, manage a significant collection

of vintage gliders at Saltby, have a part share in a Chipmunk and Fournier RF4 and is the CFI for the Classic Jet Preservation Group flying most marks of Jet Provost and the Aero L29 Delfin. In 2018 D-J was awarded a Master

Air Pilot certificate and sits on the Company's Flying Instructors Working Group. It may be difficult to believe that there remains any time in the week but he also goes in for model engineering, target shooting and fine dining.

D-J's career to date has included c2,500h on helicopters, 1,000h on vintage types including the de Havilland Tiger Moth as well as the jets, 2,000h on military training aircraft and around 1,100 glider launches. For over 50 years *Flight International* has run a *Straight & Level* column, written by previous Editor Mike Ramsden [and others including the current Hon Ed] under the pseudonym Roger Bacon. From time to time the column has honoured respected contributors to aviation with the epithet 'Total Aviation Person' and with his varied aeronautical interests D-J surely fits the bill. And unfulfilled ambitions? Well, if Liveryman John Romain is reading this... □



Flt Lt David-John Gibbs oversees the standards of the trainers



FLYING CESSNA'S FLAGSHIP

By Assistant Steve Bridgewater

Scrolling through my social media as I sat drinking coffee in the departure lounge at Farnborough, I stumbled across a meme that simply said: "I used to think I was indecisive, but now I'm not so sure."

"Ha," I thought to myself: "that's one thing that certainly doesn't apply to me". However, 20 minutes later as I climbed the steps aboard Cessna's latest Citation business jet I was struck by a wave of uncertainty... should I turn left and take a seat up front, or should I turn right and partake in the opulent luxury (and free biscuits) on offer in the cabin?

Fortunately, the good folk at Textron Aviation took pity on me and on this occasion I was allowed the best of both worlds, sampling this incredible machine from both a pilot's and passenger's point of view.

Cessna first introduced the Citation business jet range to the market in 1972 but things have come a long way since those first straight-wing executive aircraft. Today, the products on offer range from the straight-wing, seven-seat Citation M2 Gen2, nine-seat CJ3+, ten-seat CJ4 Gen2 and 12-seat Citation XLS Gen2 to the larger Citation Latitude and Longitude.

The cruciform-tailed Latitude wowed the market when it was introduced in 2015. It introduced a new stand-up circular fuselage with a flat floor and its twin P&WC PW306D turboprops could lift up to up to nine passengers or fly four passengers on legs of 2,700nm. However, the Longitude really is a game changer.

SUPER MIDSIZE

The Cessna Model 700 Citation Longitude is parent company Textron Aviation's contender in what has become known as the super-midsize class of business jets. These carry eight to 12 passengers, can cruise in the region of 450kt (the Longitude reaches 483kt), fly between 3,000 and 3,500nm and come with a price



Garmin G5000 primary flight displays dominate the cockpit

tag of \$20 - \$30million. Faced with the likes of the Gulfstream G280, Bombardier Challenger 350, Embraer Legacy 450/500/600 and the Dassault Falcon 2000S,

Textron Aviation was up against strong competition. Its new jet needed to have US coast-to-coast capabilities and really needed to stand out from the crowd.

Well, walking out to Cessna's demonstration aircraft, which had called in at Farnborough on its way to the Singapore Airshow, I can certainly attest to the sheer



The Longitude's exterior elegance is a far cry from the utility of the original Model 500 Citation 1 of 50 years ago

quality of the product. I know it's an often-over-used description, but from its stylish carbon fibre winglets to its sleek t-tail the Longitude really does look like it's flying at 483kt even when its standing on the ramp. The walkaround with demo pilot John Cathcart was a non-event; almost everything is automated. You don't even dip the oil: the quantity is given to you in a digital readout behind a small flap in the side of the fuselage.

This was a pattern that continued not just on the exterior checks but also on the flight deck before and during the flight. The Longitude has dual hydraulics systems and five sources of electrical power (generators on both engines; two batteries and the APU runs a 500-amp DC generator that can operate at up to FL350.). The dual hydraulics provide redundancy for the hydraulically operated fly-by-wire rudder as well as the brake-by-wire and spoiler-by-wire systems.

For those more familiar with older generation jets it really is a revelation and one eye-catching system is designed to handle control surface jams. While these are thankfully very rare, if an aileron or elevator jams, a pitch-and-roll disconnect system kicks in and the pilots can disconnect their control yokes, leaving one in control of the remaining functioning aileron or elevator.

With an initial 6,000ft/min climb rate Textron Aviation reckon it would take just 20 min to reach 43,000ft, but departing Farnborough to the southwest the 15,330lb





There is 6ft of headroom in the stylish interior

of thrust from those engines rocketed us to our initial clearance of 3,000ft in just over half a minute from brake release! This really is a 'hot ship'.

As is expected with modern cockpits, the panel is almost minimalist in appearance, comprising of touchscreen Garmin G5000 primary flight displays and multi-function displays, but almost everything you need to know is also projected onto the swish Head Up Display (HUD) unit at eye level.

"What do you think?" asked John as we cruised over the Isle of Wight. I thought long and hard about how my response would go down, but luckily John laughed when I replied "It's boring!" He agreed; flying this aeroplane is a non-event, which is just how it should be.

With that it was time to go in search of those biscuits in the main cabin. Down the back there is everything you would expect from a \$25million executive jet with all of the creature comforts an executive—and his/her entourage—would need.

That includes a 6ft-high cabin, enabling all but the lankiest of passengers to stand upright, a flushable toilet and bathroom sink with running water; an optional divan, berthable seats and connectivity solutions that bring Wi-Fi internet and even text messaging to the cabin. Needless to say, I took advantage of the Wi-Fi to update my social media as I paused briefly in the galley, which includes ovens, a sink and plenty of storage. Buyers can also opt to have a side facing seat in the galley at the expense of catering space.

Back in the cabin there's 4G technology on the form of Gogo Avance L5, which allows passengers to stream films or surf the internet and a specially downloaded app allows you to control cabin lighting and temperature, and even open and close the window shades.

SSHHH!

In fact, the Longitude was most notable for what 'wasn't' there. I can honestly say that I have never flown in such a quiet aircraft, and this is where Textron Aviation team has really excelled. Settling into the plush leather seats opposite Tom Perry, Vice President of Sales for Europe, he

explained that the company had gone to great lengths to reduce cabin noise.

Textron Aviation touts the Longitude as having "the quietest cabin in the super-mid size market" and this is due in part to features such as damped flooring, isolated interior panels and acoustic windows. Tom explained that the engineers found that the more they silenced the airframe the more hitherto-unheard sounds came to light. Cables moving within the side walls, pulleys turning overhead or motors whirring below the floor all became audible. "It became quite an obsession for the development team," laughed Tom.

And then, right on cue, John lowered the first stage of flap as we began our approach into Farnborough. I'm not sure I've ever noticed how aerodynamically noisy it is when you drop the flaps, but with such little ambient sound the 'note' changed as each stage of flap was lowered.

The touchdown was faultless and a combination of thrust reversers, fly-by-wire spoilers and the aforementioned brake-by-wire antiskid system brought us to a smooth halt. The latter are electrically controlled and hydraulically actuated by those split hydraulics, with the inboard and outboard brake discs powered by different sides of the system. If one side becomes inoperative, the other can power both sets of main gear brakes. The thrust reversers are also automatic, the pilot merely needing to press the paddles and pull the levers fully back. Passing through 85kt IAS the thrust levels are programmed to go from maximum to idle thrust by the time 45kt is reached. The pilot no longer needs manually modulate reverse thrust and maximum braking is achieved.

The Longitude is the roomiest, quietest, most capable and most luxurious of all Citations, and NetJets has already ordered 175 for its fractional ownership scheme. Others have been delivered to private and corporate customers, including Scotts Miracle-Gro. It received its Longitude in February and the delivery marked a significant milestone for Cessna as it was the 8,000th Citation jet delivered since production began in 1972.

As we taxied back to the stand at Farnborough I was reminded about my apparent indecision.

Sadly, the question wasn't whether I could afford the Longitude's \$25million asking price – it was about how many complimentary biscuits I should eat before John shut down the engines and it was time to disembark. □



Toilet and Galley are at the rear of the cabin (all pictures Cessna)



621 VOLUNTEER GLIDING SQUADRON HISTORIC FLIGHT

By Liveryman Peter Turner

I often wonder what percentage of aviators, both private and professional, owe their love of flight and flying careers to that most inspiring of movements, the Air Training Corps, now the Air Cadets. Certainly, many of the pilots I have rubbed shoulders with over my six decades of flying are ex-Cadets.

In my case, it started on a balmy June day in 1961 when, at the age of 14, I was caught talking in class by our tech drawing teacher, one Bill Moody. "Turner what are you talking about?" "Nothing sir!" "Well, you can talk about nothing in my study at four o'clock!" "Oh sir!" "Four o'clock Turner". "Yes sir," I mumbled.

At the appointed hour and thoroughly peed off, I presented myself. It was the start of my life as an aviator. You see, Mr Moody was an Air Cadet flying instructor at 621 Gliding School, Weston-Super-Mare, and had overheard me chatting enthusiastically about being at the local airfield at the weekend watching the gliding.



The fleet in 2017 prior to leaving Hullavington. From the Top, clockwise: Venture T2 ZA656, Swallow XS651, Sedbergh WB992, Cadet MkIII XA310, Prefect WE992 and, in the centre, Grasshopper WZ828. (Al Stacey)

He asked me if I was a cadet in the school's ATC squadron – Number 159. I wasn't, so he advised me to join on Friday and present myself at the airfield on Sunday. A small problem – well, a big one actually – was that my father, who had served in the RAF in Burma in World War Two, did not want me to join because of his wartime experiences. It was to be many years before I understood why. The result was my mother signed the parent's consent and I was in. I dread to think what trouble this caused between my parents!

My chemistry teacher, Ewart Alford, was the CO of 159; my physics teacher, Stan North, second in command and my woodwork teacher, Arthur (Robbie) Robinson MBE was the CO of 621 GS! Not only that but two of the school prefects, Brian House (still a close friend) and Chris Parkman were instructors there too! As I climbed the steps of the aviation ladder, we all became good friends.

On Sunday 24th June 1961 I duly presented myself and after a day 'helping' was rewarded with a flight in Slingsby T.21 Sedbergh WB991 with one Mike Garner, an RAF loadmaster at Lyneham, a lovely man and very competent instructor. From that point on flying became my life. I spent every weekend on the airfield, graduating from 'helper' to solo pilot, to staff cadet and on to become an instructor at the age of 18.

On the way I was awarded a flying scholarship and gained my PPL, the first leg up the ladder to what was to become my professional flying career.

I never lost touch with the school – later to become 621 Volunteer Gliding Squadron. When I became manager and CFI of the Achilles School of Flying at Weston, we all operated in harmony with each other alongside the Mendip Gliding Club of the RAF Gliding and Soaring Association (RAFGSA) and so it went on. I attended the various squadron bashes through the years and along with many old and new friends there I kept in touch.

BIRTH OF THE HISTORIC FLIGHT

In 2003, 621 VGS celebrated its 60th Anniversary and over a period of a week flew from its present and past airfields – Hullavington, Weston-Super-Mare and Halesland (now the home of Mendip Gliding Club). As part of this exercise, it borrowed two Slingsby T.21B Sedbergh TX.1s – one from the Air Cadet Vintage Fleet at Syerston and the other, WB922, from a syndicate at the Dorset Gliding Club. This glider, now owned by the Historic Flight, is the one in which Prince Andrew flew his first solo – the 'Royal Barge', no less!

My role that week was to aerotow the T.21s, including transit tows between the three airfields. In all, my logbook of the time records 15 tows over the period. I also flew my Discus glider from Halesland to land at Weston, then launch again and return to Halesland running the Mendip ridge in strong ridge lift.



Long-time gliders Brian House and 621 HF "Boss", Flt Lt Adam Clarke (Pete Turner)

All participants enjoyed the experience of flying the Sedbergh so much that a plan was hatched to create the Historic Flight with the aim of preserving flying examples

of types operated by the ATC/Air Cadet movement while giving past and present staff and cadets from not just 621 VGS but other units a taste of 'the good old days'.

With the Air Cadet Organisation being a public-funded body, the HF had to exist as a private venture. However, with the blessing of HQ Air Cadets and Hullavington's Army landlords, permission was given to store HF's fleet in 621's hangar and fly at Hullavington on days when the squadron was not operating. Since they were private gliders, they had to be operated under the British Gliding Association (BGA) laws and rules with BGA instructors supervising. With several BGA instructors on the staff of 621 this was not a problem.

And so it was that in May 2003 the HF started operating with a Wilde Winch (a converted wartime barrage balloon winch) gifted by the RAFGSA and borrowed Sedbergh TX.1 XN185. This was replaced three months later by WB922, the 'Royal Barge', which was purchased from the Dorset Gliding Club syndicate. The Flight's leader was Flt Lt Adam Clarke, who remains the boss to this day and doing a great job.

In 2006 Al Stacey, an instructor member of the HF, magnanimously offered the flight the use of his Slingsby Cadet TX.3 XA310. Coincidentally, this glider had been operated by 621 from Weston-Super-Mare and several of the HF members, including myself, had flown our first solos in this very machine - a real blast from the past! Al followed this generous act by loaning the flight his Slingsby Prefect TX1 WE992 in 2008, the year I joined the flight as an instructor. My first flight was in (more accurately, on!) Slingsby Grasshopper WZ828, which had been purchased in 2007. Now that was a blast - literally!

In 2011 Slingsby Swallow XS651 was gifted to us by the ever generous Al Stacey. This is our 'hot ship', a delight to fly and, with an enclosed cockpit, very popular on cold winter days!

In 2014, an ex-Air Cadet Venture T.2 motor glider, ZA656, was purchased by a group of HF members and joined

the fleet at Hullavington as a syndicate aircraft. For the convenience of the syndicate members, it is based at Sandhill Farm but regularly visits Nympsfield.

Our T.21, having been completely stripped down by members under the watchful eye of Dave Bullock, won the Best Civilian Aircraft award at the Royal International Air Tattoo in 2016. This was a true testimony to the enthusiasm and skill of our team, and in keeping with our policy of maintaining the fleet in A1 condition.

MULTIPLE RE-POSITIONINGS

With this fleet of five, the flight continued to operate from Hullavington until 2016 when the MoD sold the airfield to the Dyson organisation, and both the squadron and HF were obliged to leave and relocate to Little Rissington. Unfortunately, "Rissi" was not open to HF operations and so we moved to the Vale of White Horse Gliding Club's base at Sandhill Farm in 2017.

With hangarage only available for the Barge, and with the relatively short airstrip making operations inefficient, it was decided to find a new home, and so it was that we moved to the Bristol and Gloucester Gliding Club's site at Nympsfield in 2019. We have been made very welcome here and thanks to the high standards set by the boss, Adam, we continue to operate quite freely as an integral unit within the club.



From the primitive Grasshopper to the more sophisticated Sedbergh (Peter R March)

The HF is one of the friendliest flying entities that I have been involved with. You simply couldn't want to be with a nicer bunch of enthusiasts.

The flight is self-funding and only viable through the freely-given services of a hard-core band of members. However, since moving to Nympsfield, our costs have escalated and, although we are solvent, it is becoming increasingly more difficult to cope.

With the restoration of a Slingsby Cadet TX2 XE761 in progress and to keep the fleet and sundry equipment in fine fettle, we are having to look for a way of improving our finances.

So, if you are interested in becoming part of the HF or able to support it in any way, please contact Joey Beard at joanna.beard@hotmail.com. To improve our utilisation and finances we are now opening our membership to other than current or ex-Air Cadets. □

BOEING 747 BASE TRAINING

By Liveryman Captain Obet Mazinyi



Flying has certain memorable dates that are of note to a pilot, and they never forget these well into retirement. Typically, every pilot I know will remember the first time they flew their first solo. Most will give you exact details as to the aircraft, who the instructor was, what

airfield and more. Other dates of note are the first time they flew a jet aircraft or when they did their first takeoff in a large aircraft like a Boeing 707/ 737, Vickers VC-10, Airbus 330/340/380 or McDonnell Douglas DC-10 to name a few. You notice that I left out the Boeing 747 from that list of aircraft- this was deliberate as it is the main subject that follows on here.

I've spent close on 23 years as a base training Captain. My first foray into the world of instructing on jet aircraft began on the BAe 146-200 back home in Zimbabwe. The instructor that was tasked to train me was ex-RAF Capt John Cresswell, who was at that time a British Aerospace customer support Training Captain. I became a base training Captain shortly after in Air Zimbabwe having also completed a company course as IRE/TRE on the 146. I spent some exciting times teaching and training new first officers and command upgrade pilots who also had to complete a session doing touch-and-go takeoffs and landings from the left seat before they could go on



Obet learned his training skills on the Air Zimbabwe Bae 146-200 (BAE Systems)

to line training. The training was conducted at Harare international airport. I found the BAe 146 such a good first aircraft for a new base trainer as it was rather docile

and very easy to recover from any unusual attitude(s) attempted by a trainee.

OFF TO HONG KONG

I then moved on to the Boeing 707, also in Zimbabwe (Air Zimbabwe) before taking the leap to the Far East where I joined Air Hong Kong - also on the Boeing 707-300 series at Kai Tak airport in 1989. In over 20 years, I've conducted base training at Harare (Zimbabwe),

Dubai (UAE), Prestwick, East Midlands, Penang (Malaysia), Shenzhen, Zhuhai, Macau, Clark (Philippines) and Hong Kong. The aircraft types have been the BAe 146-200, 707, A300-600 and the 747-100/200/400.

Although I was already an IRE/TRE in Air Zimbabwe, these qualifications were not immediately approved by the Hong Kong Civil Aviation Department. I already held a UK ATPL so a year later in 1990, Air Hong Kong sent me off to the UK to complete a Civil Aviation Authority-approved course for qualification as an IRE/TRE. It was an excellent course conducted on a HS 125 full motion



Obet continues base training on the Cathay Pacific 747-400 – his favourite aircraft (Lasse Fuss, Wikimedia Commons)

simulator at Gatwick and it's a pity it was discontinued by the CAA a few years later.

On return to Hong Kong, I became an IRE/TRE on the 707 and later upgraded to Base Training Captain. Not long after, in 1992, I moved on to the Boeing 747 Classic after completing a conversion course run by Virgin Atlantic at Gatwick airport on behalf of Air Hong Kong. Talking about memorable dates, my first takeoff in a Boeing 747 is one of those days. I remember it well - the Training Captain ironically was an ex-Cathay Pacific Captain, Tony Ling. I took off from London Heathrow in a Boeing 747-243 G-VGIN bound for Prestwick airport where I did my first-ever 747 landing as a touch-and-go.

On to the base training business, then. For those who may not know, a base training Captain is an instructor with the authorisation and, obviously, the necessary qualifications to train new pilots on how to take off and land for the very first time in the real aircraft – in my case the 747. The pilots under training would have completed a full conversion course in the simulator, and the base training is essentially touch-and-go landings with an empty aircraft until they are proficient. Most get it by the third/fourth landing. It's an expensive business nowadays. Once they 'get it', as it were, I get them out of the seat and get the next candidate in, often doing the changeover on the

downwind leg of a circuit. Increasingly, in recent years, the candidates have been low flight-hour pilots with experience in the order of 250h total in aircraft, a CPL and no jet time whatsoever, often upgrading to a First Officer position.

TRAINING DAY

On the day of base training, everyone is excited (including myself) about what is a fun day out flying. The base training airport is chosen so that we can get in quick circuits (not always easy). Most recently, with airports not so busy due to the pandemic, we've been using Macau, which is very convenient and a short hop from our base in Hong Kong.

So, what am I looking for when I train a new pilot to land the 747 for the first time? I'm looking for ability to anticipate where the aircraft will be based on his/her inputs and importantly the ability to maintain wings level at the correct speed with a controlled rate of descent to the desired touchdown point. Initial training such as base training still requires that candidates achieve an



A new First Officer completes his touch-and-go landings (Author)

acceptable level of accuracy, with line training used later to finesse certain handling issues.

Many candidates find the 747 quite intimidating when they step on board, but soon love it once in the seat- it's a gentle

giant of an aircraft. They soon find out that the aircraft is responsive and handles like a big light aircraft! One area that takes time for candidates to get used to is the pilot eye height. We sit quite high on the 747 and judging the flare and, later on during line training, the taxiing and judging the turns can be tricky - it's a long aircraft.

For the most part, I hardly put my hands on the controls but have had to in some instances, to salvage a high sink rate/low speed, a sudden wing drop, or help out a candidate struggling in lumpy or windy conditions.

WHAT HAPPENS IN A TOUCH-AND-GO, THEN?

Well, the main things are not to arm the speed brake, as this would raise the spoiler and thus dump the lift on the wing. We do not arm the autobrake for obvious reasons – we are doing a touch-and-go after all, not stopping. We also do not select reverse thrust. If by accident, the student was to select reverse thrust during the touch and go, I would immediately make it a full stop landing. Everything happens pretty quickly and my actions during

the landing roll as instructor are: reset the stabiliser trim to the takeoff range (stops the distracting configuration warning activating), set the flap lever to 20°, stand the thrust levers up to get the engines spooled up then when they are stable, advancing the thrust for another takeoff. All the while I'm watching the control inputs by the candidate such as rudder/elevator and ensuring we are remaining on the runway with an eye out for a possible engine failure as thrust comes up.

It is such a pleasant sight to see a candidate smile with satisfaction when I tell them: "You know where the ground is - you're done - Next!"

Once all the candidates for the day have completed the requirements and have attained proficiency, in typical Cathay Pacific tradition, they are awarded a most delicious meat or vegetable pie.

I have my own personal thing about the pies: I hold a pie ceremony on the upper deck on return to Hong Kong and present each candidate with a well-earned pie, then there's a photo-taking period as the excited pilots take photos near the engine, shake hands etc.

The last thing is head back to the office to complete and sign all the paperwork so they can have the 747 endorsed in their licences.

The 747 has been my favorite aircraft to conduct training sessions but the BAe 146-200 has a special place too having been my first command and also the first aircraft on which I conducted base training. The 747 classic was a bit more involved and needed co-ordination with the Flight Engineer during the touch-and-go landing roll.

There are calls for the practice of base training on the aircraft to be stopped and all the training be completed in the simulator, but I would say: "Long may it continue, especially with low-hour pilots - it is important."

Finally, I would say that I get a great deal of satisfaction when I sign off some new pilots on the 747 fleet. You never forget the look on their faces when it's over:

I am still a base training captain (Aircraft and simulator) with Cathay Pacific Airways and look forward to the next batch of candidates. Long live the aircraft I call the 'Boeing 747 SUPERJET!'



Proud, newly-qualified First Officers on return to Hong Kong (Author)



Air-to-air refuelling with a helicopter requires different techniques (Lockheed Martin)



HELO TO A HERCULES

By PM Dr Ian Perry

Many of us are very fortunate and privileged to do the things we like. I like flying: I always have, and I always will. Sometimes a lot of people collectively make that enjoyment something quite unique, as in this particular little adventure.

On one of my visits to the US, I was invited to visit Eglin US Air Force Base. This 700-acre (280ha) site hosts one of the biggest air force bases in the world, and is a bit smaller than Heathrow. It was built in 1935 as a bombing and gunnery base, and today there are some 3,000 personnel there. It is home to several flying units, Special Forces, and the host Unit for my visit was the 96th Test Wing.

I had been invited, as I had asked our Liaison Officer of the day, to see if I could fly a Sikorsky CH-53. This is a large multi-engined helicopter, known colloquially as the Jolly Green Giant. This large machine has undergone all sorts of modifications over the years. The latest model at the time of my visit was the CH-53E Super Stallion, used mainly by the US Marine Corps, which has 152 of them. It has a dual digital automatic flight control system, engine anti-icing, Doppler radar, FLIR etc and carries various mounted machine guns depending on its mission. It has three General Electric T64 turboshaft engines, and can carry 55 passengers with centerline seats installed: it is normally configured with 37 seats. It is the largest single rotor helicopter used by the US military. The CH-53 was originally developed as a scaled-up version of the Sikorsky S-61 (the basis of the UK's recently retired Westland Sea Kings), and up until the E variant had only two engines and six, rather than seven, blades on its main rotor. The one modification that I was interested in was its ability to refuel in the air.

BRIEFING BY JEEP

I arrived courtesy of the US Army Air Corps, and was met by the CO of the Base. The weather was fine, the Colonel introduced himself, and made me feel very welcome. I was also introduced to Capt Oliver who was to be my flying instructor for the day. I was briefed, as we drove off in an open-topped Jeep, that I was going to fly the helicopter to 7,500ft, where at a certain place I was to encounter a Lockheed Martin C-130 Hercules. I was then going to go through the procedure of refuelling, in the air, using real fuel. Apparently, there is normally a great deal of practice done before anyone is allowed to do the real thing.

The CO said that as I was only there for the day, and could apparently fly a helicopter, I was to have the whole experience. "On the way back from your initial task," he said, "you will pick up a Space Capsule and bring it ashore." The USAF has a different Space capsule recovery regime from that of the USN. The Airforce hooks it up as an underslung load and brings it ashore before the astronauts can get out, whereas the Navy inflates a collar, and the



The refuelling probe is prominent on the starboard nose of the CH-53



The view from the cockpit, with drogue clearly in sight (Airman First Class Veronica Pierce, US Air Force)

astronauts get out at sea. It does of course depend on where the capsule splashes down, the sea state at the time, and who gets tasked with the pickup. I Digress.

By now we are arriving somewhere down one of the many flight lines. Here was my trusty charger for the day, an HH-53C model. "Enjoy your trip," said the CO: we all saluted, and he was driven away. I climbed into the body of this large machine, and I was introduced to the Crew Chief, as there were three other people flying with us this day. I was shown forward through the cabin door to the flight deck.

"Into the left-hand seat please," said Capt Oliver. I got into the seat, strapped in and adjusted it, with help from the Crew Chief, and then I looked out. The refueling probe was in front of me with a good line of sight. "Follow me through start up." I followed him through as we were on a very strict time schedule.

START-UP WITH A DIFFERENCE

This large machine wound itself up. All the dials and displays began to light up. Soon I was sitting in almost any multi-engined aircraft cockpit, except this one had a collective lever. After the warming-up period and ground checks, it was brakes off and we began to taxi to dispersal. I soon found that the pedals worked on the ground, and it did turn left and right, with toe brakes to slow it down. We talked to the tower: our callsign for today was very special; it was "Doc One", and we were told we were number one for take-off. At the takeoff point I was told that I had control.

I slowly wound up the power with my left hand on the collective to the instructed level. I then gently pulled up

the collective to find myself in a gentle well-controlled hover. Auto-stabilisation is a great piece of kit. Very little pedal input was necessary as she held the heading we were on. I eased the cyclic forward increasing power as I went. She came away from the hover very smoothly and we transitioned away climbing steadily. "Trim," he said. "Trim, Trim." Now, those who have flown this type of helicopter would know exactly what he meant. Remember I am just a simple country boy, and this is the biggest helicopter I have ever flown. "Trim," he said again: "it is on top of the collective." I found the knurled button and nudged it forward with my thumb. We suddenly seemed to shoot upward by a few hundred feet. "That's better," he smiled, as we smoothed our way up to 7,500ft. I had been keeping the heading I was given, as he talked to Ops Control.

"There it is," he said, and there it was: I could just make out a C-130 about two miles away, confirmed by our radar. We changed frequency, and there we were talking to the C-130. I was told to increase power and catch the plane up, making sure that I descended onto it, as he said we would not want our guest chopping off the drogue. For those who may be interested there is some footage on the internet of someone refuelling, who, for some reason, pitched up and chopped off the refueling probe.

ACCELERATE AND DESCEND

The cruising speed of this machine is usually around 160kt; the C-130 was at 190kt. At about 500yds I could now see the drogue and started to descend and aim towards it. It seemed very close to the wing of the plane. I had my camera with me and asked my friendly instructor if we

could somehow photograph this exercise. "No problem," was the answer, and we began a very strange sequence of events. He would photograph me and the probe, then I took a picture, and so on. I chased the drogue around for a bit, until I got the message about how it was slowly oscillating and how I might lock into it. "Do not rush it," said my teacher: "take it slowly, there is no time limit."



Different helicopter, same technique: a UH-60 Blackhawk clearly demonstrates the need to be above the hose of the tanking Hercules (via Author)

I began to close in, eventually managing to engage my proboscis into the drogue, and a voice said we were locked on. The C-130 loadmaster then said we had fuel, and the fuel began to flow. It is not an easy task staying with the drogue, maintaining the height and the speed. It needed a lot of concentration with regular trim to be remembered, as we were now getting heavier. After what seemed an age, but was no more than 10-15 minutes, we finally had what we had come for: "Disengage," came the voice of the load master, and, "fuel off." I never saw a drop spilt, but I did see our fuel gauge increase. We slowed back down to our original speed and the C-130 went its way doing a wing waggle as it went.

"Well done," I was told, "that was good." I still wonder if he had his hands on the controls: I would not know, and could not see, but I have my suspicions, except he did picture me at the moment of engagement. The crews, of course, have called the act of refuelling by many names and descriptions, most of which, being anatomical, cannot be described in these columns.

We had photographed the whole event. "Now we have plenty of fuel, go fly it," he said, so I could now fly the machine with less urgency than before. I did some turns, some climbing and descending. I was in helicopter heaven driving this huge machine at will, around the Florida sky.

I had been into ecstasy managing to put that proboscis into that drogue. The hardest part was staying with it for 15 minutes, adjusting the power, the trim and maintaining a heading, as we became heavier and heavier. This applies

to all aircraft refuelled in the air. Many of us in our Company have done refuelling, and many have witnessed refuelling, as guests sitting or looking out of the windows of the refuelling aircraft. Some of us have done it more than once. We have witnessed pilots failing to hook up and made remarks about how that person missed.

MORE THAN GETTING HOOKED UP

I can tell you, as many of our colleagues will tell you, there is a lot more to it than just getting hooked up. It is harder in a helicopter as its aerodynamics do not make it a suitable vehicle to maintain smooth flight at its higher speed. It needs more adjustment in flight than a fighter, or any other larger fixed-wing aircraft, as tankers often refuel tankers to stay longer aloft longer. This model does of course have stability electronics which help a great deal. It is still not as smooth as a fixed-wing machine.



Probe extended, a Sikorsky CH-53 prepares for refuelling from a KC-130 Hercules (iStock)

On this fascinating day I had actually been part of a joint team exercise which had been put on mostly, it would seem, for my benefit. It was the main topic of conversation in the Eglin Officers Club that evening.

It seemed that everyone had heard of my performance and my trim switch surprise, and I was asked what other interesting experiences I had flown. I told them that on my initial Flight Medical Officers Course, I had flown in and had actually done flick rolls using the trim switch, Capt Oliver, in a T5 Lightning at Mach 2. USAF flight surgeons normally only get flight experience, but not at that speed. I was, they all agreed, very fortunate, and all of them without exception wished they could do flick rolls at that speed, using the trim switch.

Anglo-American relations were at an all-time high. I can never thank all those USAF people enough. I did write to everyone, but thanks are never enough for providing this particular person with yet another incredible flying experience. It was an experience not normally available to those who have only worn a UK Army Air Corps blue beret - a flight not normally available to anyone else, in fact, who does not belong to the US Airforce, US Marines or US Coastguard. □

THE OPENING OF THE BRITISH NORMANDY MEMORIAL

Assistant Steven Dean, a former RAF fast jet pilot, has spent the last four years managing the project to build the British Normandy Memorial at Ver-sur-Mer in France.



The pathways in the centre of the Memorial are laid out to resemble the Union Flag (all pictures, Steve Dean)

As January drew to a grey and overcast close, I was sitting in my office in Norfolk, reflecting on 2021 as the most extraordinary of years. Four years ago, I became involved in the project to build a war memorial in France to commemorate the 22,442 men and women under direct British command who died during D-Day and the ensuing Normandy campaign during the summer of 1944. Air Pilot previously published a couple of articles about the construction, but the last week in October marked the absolute pinnacle of my involvement, as we welcomed surviving Normandy veterans from the UK to site for the very first time.

LOCATION

The British Normandy Memorial sits on the commanding ridge overlooking Gold beach, geographically the middle of the five D-Day landing beaches, and one of the two British beaches (the other being Sword). Off to the east, you can see the remnants of the Mulberry Harbour pontoons at Arromanches. These are most evocative in the pale orange beams of first light towards the white cliffs of Omaha and Utah beaches beyond. Looking down to the beach when the tide is out, there are now rows and rows of mussel beds, appearing as though they are left-over remnants of Rommel's Atlantic Wall 'Belgian Gate' anti-tank obstacles.

DESCRIPTION

At the focal point of the memorial is the sculpture of three soldiers, cast in bronze and each standing almost three metres tall atop a 27t granite plinth. The names of the 1,475 soldiers, sailors and airmen killed on 6th June itself are on the eight-metre-high Memorial Court walls, which surround the statue on three sides. These walls also carry the anchoring inscription for the memorial and quotes from the King and other political and military

leaders at the time. An area the size of two rugby pitches is encircled by 160 stone pillars with the names of the rest of those lost, set out in chronological order. This design, by date, allows visitors to sense the ebb and flow of battle throughout the summer months.

Although it is the British Normandy Memorial, and only records foreign personnel embedded in British units, there are still 38 different nationalities represented on it. As you might expect, these are predominantly from Commonwealth countries, or the occupied countries of Europe. Also indicative of the make-up of the armed forces at the time, of the 22,442 names, only two are women. Both were army nurses working on a hospital ship, who died when it was attacked. The ages of those commemorated on the Memorial range from 16 to 64, although the average is around 26.

6TH JUNE 2021

The British Normandy Memorial was formally opened to the public on 6th June 2021. Only two of us were able to travel to France because of the isolation requirements on the way out and on the way back. Onsite, we were only able to welcome a limited number of French guests because of the rules restricting massed gatherings that were in place in France. Back in the UK our Normandy veterans and UK-based friends and the rest of the team all gathered at the National Memorial Arboretum, near Lichfield, to participate in a dual-location opening ceremony, linked by live satellite feed and projected onto huge screens. There was a video message from our royal patron, The Prince of Wales; and in France wreaths were laid by the French defence minister, Mme Florence Parly, and the British Ambassador, Lord Llewellyn.

On the way home to the UK, the two of us who had managed to get to France were invited to a



The Memorial sculpture



One of the inscribed stone pillars, facing the adjacent French Memorial

celebratory dinner at the British Embassy in Paris to mark the completion of the Memorial construction.

COMMONWEALTH WAR GRAVES COMMISSION

As the summer progressed, our focus turned to organising the transition of the maintenance task from our construction team, who were contractually responsible for the initial 12-month bedding-in period, to the Commonwealth War Graves Commission (CWGC). Those who have visited any of the CWGC's cemeteries across the globe will surely attest to the fact that it is the preeminent organisation when it comes to tending for the horticulture and maintenance of sites built to commemorate the memories of those service personnel killed in conflict. It tends to cemeteries from many conflicts, although its core business is restricted to those from the First and Second World Wars, which means the Normandy Memorial Trust has to pay for its services maintaining the 22ha site. To do this, there are two gardeners permanently based onsite.



The main wall of the Memorial records the names of those who fell on 6th June 1944 itself

The British Normandy Memorial is a new type of site for the CWGC in terms of scale and that there are no graves there, only names, despite the fact that it is the only location where all of the fallen from this campaign are recorded in one place. Responsibility for the maintenance was formally handed over at a small ceremony next to the D-Day sculpture on 6th October; and we hope that this marks the start of an enduring relationship with the CWGC.

VETERANS

One of the key drivers throughout this project has been to deliver the Memorial whilst there are still Normandy veterans alive to come and visit it. After three aborted attempts to visit, the Spirit of Normandy Trust finally managed to bring a coach full of veterans and the support team required for a group of nonagenarians to see the finished structure. We were also able to welcome veterans George Batts MBE *Légion d'Honneur*, who had the original idea for the Memorial and secured initial Government funding, and Harry Billinge MBE *Ld'H* who has raised over £40,000 himself and inspired many thousands more in donations.

STORIES

For anyone who visits the site, the Memorial hits you on a number of levels. First there is the scale of the site and the beauty of the location. At the next level is the wonderful design and the huge number of names. Finally, and

arguably most importantly, are the individual names. When you stop and think and realise that each of the inscriptions relates to a story of a son or brother or husband or father; and the ripple of effects that a single death has on all those left behind. The following stories illustrate the kind of personal tragedy associated with every single name carved on the Memorial.

First, I met a woman who showed me the name of her father's best friend on the Memorial. He was a glider pilot, and on the way to Normandy on the night of 6th June piloting a glider behind an RAF bomber; their tow rope snapped mid-Channel and the glider with around 30 fully armed troops onboard just descended into the sea where they all drowned, before even making contact with the enemy.



Eight of the Normandy veterans who were able to visit in October 2021

I then met an 83-year-old man in floods of tears pointing at a name on the wall. He told me that he was just six years old when his brother Raymond died at the age of 21. His brother was a wireless operator in the RAF who was shot down over Caen on the night of 6th June 1944. His captain ordered the crew to bail out of their stricken Dakota. Raymond successfully left the aircraft and parachuted down, but landed in the river Orne and drowned. His body was found some days later.

Flying Officer Charles Edward Anderson's name is on column 252. He was an RCAF pilot serving with 298 Sqn RAF, who died on 5th August 1944, aged 22, when his Halifax bomber was shot down by a German night fighter. He stayed at the controls of the stricken aircraft so that the rest of his crew could bail out safely. Shockingly, he and his crew had previously survived being shot down and rescued near Caen in the early hours of D-Day on 6th June 1944 whilst towing a glider full of airborne infantry.

THE FUTURE

The British Normandy Memorial is now open to the public and it depends on visitors and benefactors to maintain it in top condition to educate future generations so that they never repeat the mistakes of the past. You can help preserve this incredible monument to



educate future generations, by making a donation or becoming a Guardian of the British Normandy Memorial; or show your support by visiting our online shop.

www.britishnormandymemorial.org



INTO THE OVERSHOOT

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

STRATOLAUNCH 'READY TO ROC'...

Mojave-based Stratolaunch LLC has resumed air testing of the world's largest aircraft (by wingspan). The Roc (named after Sinbad's mythical bird that was so big it could carry an elephant) was designed by Burt Rutan's Scaled Composites as an aerial launch platform and has a 385ft (117m) wingspan. Although the Roc first flew in April 2019, the project stalled after just three flights following the death of key investor (and Microsoft co-founder) Paul Allen. However, the company has now been sold to Cerberus Capital Management and the Roc has returned to testing. On its fourth flight, on 24th February, its undercarriage was retracted for the first time. Ultimately, the Roc will be used to launch rocket-powered, autonomous, re-usable testbeds carrying customisable payloads at hypersonic speeds above Mach 5.



(Stratolaunch)

...BUT ANTONOV'S DREAM IS OVER

Within hours of the Roc spreading its wings, the world's heaviest airlifter – the unique Antonov An-225 Mriya ("Dream") – was destroyed in a Russian attack on its base at Hostomel Airport in Ukraine. Originally completed in 1988, the six-engine An-225 was originally intended to transport the Soviet space-shuttle Buran, and it was shown in that configuration at the 1989 Paris Airshow. After the Buran project was cancelled, and years of inactivity, the An-225 was refurbished and re-engined with 51,600lbf-thrust Progress D-18T turbofans, and has lately been performing outsize-cargo charter work. The 88.4m (290ft)-wingspan aircraft was the largest ever put into service, with a maximum take-off weight of 640t and a heaviest-ever recorded payload of 253.82t.



(A Greeg/iStock)

MOTHS GATHER

Many of the planned tributes planned for the 90th anniversary of de Havilland's Tiger Moth last year had to be postponed or cancelled due to pandemic-related restrictions. One such postponement was the gathering at Luskintyre airfield in New South Wales, Australia which finally took place on 21st January. Organised by the resident Luskintyre Aircraft Restoration Company, the tribute included 17 airframes lined up in a figure '90'.



(Luskintyre Aircraft Restoration Company)