



# AIR PILOT



## INSIDE

**THE MASTER'S TOUR PART ONE  
BY ATLAS AROUND THE WORLD  
SCHOOLS GLIDING SUCCESS**



## THE HONOURABLE COMPANY OF AIR PILOTS incorporating Air Navigators

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His Majesty The King

**MASTER:**  
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**CLERK:**  
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# DIARY



## Applications for Visits and Events

Details and application forms for Company events and visits are now available only online – either on the website or via links in the electronic newsletter and events bulletins.

### OCTOBER 2024

1 <sup>st</sup>	ACEC	APH
10 <sup>th</sup>	GP&F	APH
10 <sup>th</sup>	New Members Briefing	APH
11 <sup>th</sup>	Visit to AAC	Middle Wallop
13 <sup>th</sup>	APFC Peter Davis lunch	White Waltham
16 <sup>th</sup>	Visit to RNAS Culdrose	Culdrose
20 <sup>th</sup>	Watercross Line	New Alresford, Hants
20 <sup>th</sup>	APFC End of Season lunch	White Waltham
24 <sup>th</sup>	Trophies & Awards Banquet	Guildhall

### NOVEMBER 2024

2 <sup>nd</sup>	APFC AGM	White Waltham
6 <sup>th</sup>	Visit to NATS	Swanwick
14 <sup>th</sup>	GP&F	APH
14 <sup>th</sup>	Court	Cutlers' Hall
27 <sup>th</sup>	APBF	APH

### DECEMBER 2024

4 <sup>th</sup>	APT/AST	APH
12 <sup>th</sup>	GP&F	APH
12 <sup>th</sup>	Carol Service	St Michael Cornhill
12 <sup>th</sup>	Carol Supper	TBC

Cover photos: Martin JRM Mars *Hawaii Mars* on her final flight - see pp 14-20 (Brock Little); The view from the ramp of Airbus A400M Atlas over the Pacific Ocean during its round-the-world exercise (via Hedley Myers)

## Guidelines for submissions to Air Pilot

Please submit contributions as follows:

- Text in word document, including your name below the title of the piece;
- Photos as separate attachments, not embedded in emails;
- All images to be sent as jpeg files with a file size of at least 2MB;
- Attachments totalling more than 15MB to be sent via WeTransfer only.



# A MESSAGE FROM YOUR EDITOR...



The burden of disruptive behaviour by airline passengers, as discussed by the DAA in this issue, bears heavily on the cabin and flight crew who have to deal with it. While they do have a significant degree of responsibility – it is their job to ensure the safety of the aircraft and its passengers – it should not be theirs alone.

There is a primary responsibility on check-in and staff to prevent people under the influence of alcohol (or, indeed, drugs or other psychoactive substances) from boarding the aircraft in the first place. That responsibility may be taken more seriously by an airline's own staff than by a ground-handling agent less connected to what goes on once the aircraft leaves the gate, but it is still there whoever is doing the check-in (remembering, of course, the fewer interactions accompanying the increasingly prevalent online check-in and carry-on baggage).

Even check-in staff, however, should not be the first line of defence. Even early in the morning, airport bars are open and selling alcohol to those waiting to board their flights. Leaving aside arguments over the justification for drinking in the early hours, many - if not most - of those people will drink responsibly, but some will not. Beyond passengers' own personal responsibility to limit their consumption, UK law (like that of most countries) places a direct legal responsibility on the establishments which sell alcohol and their staff: "You commit an offence as an establishment or as a staff member if you serve alcohol to a person who is drunk."

Although there can be considerable pressure on staff (especially in the presence of crowds) to continue to serve a person already drunk, the law is on the staff's side, both figuratively and physically. There is usually both a police and a security presence in airport terminals, charged with preserving law and order – but how often are they called on to act?

Of course, not every drunk and disorderly passenger has achieved drunkenness through bar service: while in many countries duty-free alcohol may not be opened until the purchaser has left the country (with purchases being handed to the passenger at the gate or aircraft door), some – including the UK – do not, leaving a passenger free to consume it, unsupervised, before boarding. In short, disruption through unruliness is an issue to be solved by concerted action of the industry as a whole, not left to crew to suffer.

*Allan Winn - Editor*

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# NEWS ROUNDUP



## AIR PILOTS FLYING CLUB

The APFC flew into Popham on 6<sup>th</sup> August. In addition to members' own aircraft, one parked and covered machine attracted much interest – the Piper PA-28 was once on the fleet at Hamble College of Air Training, where it had been flown in period by four of the Air Pilots present on the day, PM Jonathan Legat, Liveryman Rob Owens and Upper Freeman Dave Farrow and Paul Heaver. Later in August, the APFC held a successful and well-attended barbecue at White Waltham.

Bad weather played havoc with the Club's planned fly-in to Oaksey Park on 10<sup>th</sup> September: even after it was rescheduled to the following day, just five of the originally planned 20 aircraft made it, along with some 20 of the intended 50 participants. The weather cleared later in the day, allowing the group to enjoy a picnic lunch. □



*The summer barbecue at White Waltham*



*Popham – the Druine Condor of Dave Farrow and Sportcruiser flown by Tony Clinch*



*Oaksey Park – Paul Smiddy's Glasair Glastar and Peter Dobson's Piper PA-32*



*Rob Owens and Adrian Keenan brought the Monsoon 209 to Oaksey; PM Legat brought the Fuji FA200, and the Gushes the Chipmunk*



*The ex-Hamble Piper PA-28 at Popham*



*The group who beat the weather to Oaksey Park*

## COMPANY VISIT: TURNER'S HOUSE

*By Freeman Sqn Ldr David Alexander*

In July, we were privileged to be invited for a private tour of Sandycombe Lodge, J M W Turner's house in Twickenham. We assembled in the beautiful garden for drinks and were welcomed by the Operations Director, Laurie DuPont, who gave us a fascinating introduction to the house and Turner's life there.

In 1807 Turner bought two plots of land between Twickenham and Richmond Bridge and in 1813 built the house to his own design on one of them. In this peaceful spot with no other buildings nearby, he was able to get away from the pressures of London and enjoy a country lifestyle, walking, fishing and sketching along the Thames. His father, known as Old Dad, tended the garden and looked after the house.

The architecture of this little building is quirky, reflecting Turner's own design and the influence of his good friend John Soane. We enjoyed visiting the various rooms which gave us a real insight into how life would have been in Turner's time. We were also able to view the current exhibition "A World of Care: Turner and the Environment", featuring original artworks on loan from the Tate Gallery. The exhibition shows how Turner captured environmental



*The Air Pilots at Turner's House*

and social developments that would go on to change Britain and the world's climate forever. It features an extremely beautiful oil painting of a sunset which may be his only oil painting where the sunset is the sole subject. There are also interesting engravings and mezzotints.

Turner sold the house in 1826, and it went through various changes over the years including use as a shadow factory in World War Two where airmen's goggles were made. The house is now owned by the Turner's House Trust and after extensive renovation opened to the public in 2017. For more information or to visit go to [www.turnershouse.org](http://www.turnershouse.org). We rounded off the evening with a delicious meal in a local Indian restaurant. □

## NORTHOLT VISIT

*By Freeman Sqn Ldr David Alexander*

On 24<sup>th</sup> July, 19 members and their guests were treated to an extremely interesting and informative visit to RAF Northolt. Northolt (then known as Ruislip) was officially opened on 3<sup>rd</sup> May 1915 as the Royal Flying Corps Military School. The site for the current airfield was surveyed in 1914 by none other than our own founder Sir Sefton Brancker! It has the accolade of being the oldest RAF base still in the service.

The airfield, by now known as Northolt because of its proximity to Northolt Junction railway station, was home to No 4 Reserve Aeroplane Sqn equipped with aircraft such as Breguet biplanes and Royal Aircraft Factory BE2s. Also in May 1915, No 18 Sqn was formed at Northolt, equipped with BE biplanes and tasked with home defence against the Zeppelin raiders.

### SOPWITH 'STRUTTERS'

In 1916, No 43 Sqn was formed at Northolt equipped with Sopwith 1½ Strutters, the type making its first flight from Northolt in November 1916 with Harry Hawker as the test pilot. Nos 600 and 601 (Auxiliary) Sqns were formed at Northolt on 14<sup>th</sup> October 1925, No 600

initially operating the Avro 504 and Airco DH.9. It moved to nearby Hendon in January 1927, and back to Northolt temporarily from 25<sup>th</sup> August to 2<sup>nd</sup> October 1939, and again from 16<sup>th</sup> May to 20<sup>th</sup> June 1940, this time operating Bristol Blenheims.

No 601 Sqn's initial path followed that of 600 Sqn; it returned to Northolt from 17<sup>th</sup> December 1940 until 1<sup>st</sup> May 1941, equipped with Hawker Hurricanes. Both 600 and 601 still have a presence at Northolt today.

No 111 Sqn moved to Northolt in July 1934, initially with Bristol Bulldogs, later with Gloster Gauntlets and in January 1938 became the first squadron to be equipped with Hawker Hurricane Mk I's. "Treble One" helped to develop fighter interception tactics with the aid of Northolt's ops centre, very similar to the ones at Bentley priory and Duxford, and subject of a very interesting visit by us.

In 1939 Northolt became one of the first RAF stations to get a concrete runway. During the Battle of Britain, Northolt formed part of 11 Group, and was home to 1 Sqn RCAF, and Nos 229, 264, 303 and 504 squadrons, all

equipped with Hawker Hurricanes except No 264 which was briefly equipped with the Boulton Paul Defiant.

### **(303 (POLISH) SQUADRON**

No 303 (Polish) Sqn deserves some special mention here, as it was the first Polish squadron to be made operational during the battle, following the shooting down of a Messerschmitt Me 110 during a training sortie by F/O Ludwik Paszkiewicz. This action was featured in the film *Battle of Britain* along with various other anecdotes about training the Polish officers, as was the ops room scene where the roof gets blown off, a real event at Northolt during the battle. Northolt's first gate guardian, a Supermarine Spitfire F.22, installed in September 1963, was subsequently purchased from the RAF in 1969 for use in the film. It was replaced by another Spitfire, this time a Mk XVI which was kept until 1989 and is now under restoration to fly with Kermit Weeks in Florida. This aircraft was replaced by the fibreglass replica which remained there until being moved to outside the south side passenger terminal in 2010. A replica Hurricane took over its place as a gate guardian.

No 303 Sqn became the highest scoring RAF unit during the battle, even though it joined the battle two months after it had begun. The second part of our visit was to a room dedicated to No 303 (Polish) squadron. By January 1941 303 Squadron re-equipped with Spitfire Mk Is, and was joined in April 1941 by another Polish squadron, 306, to form the No 1 Polish fighter wing. Later that year it re-equipped with the Spitfire Mk Vb, and after a brief move to Redhill in 1942, No 303 Sqn returned to Northolt in



*A bit of Northolt history: the famous Dakota crash-landing of 1946*

June 1943 to re-equip once again, this time with the Spitfire Mk IX.

During World War Two Northolt was extensively camouflaged: a fake stream was painted across

the runway, and the hangars were decorated to look like the surrounding houses and gardens. Apparently, the camouflage was so good that sometimes even Northolt-based units had trouble finding the airfield!

In 1946 the airfield was used by civil aviation whilst nearby Heathrow was being constructed, notably British European Airways, operating Douglas DC-3s and Vickers Vikings. Aer Lingus and Railway Air Services were amongst other operators from Northolt, the latter operating a Douglas Dakota which crashed into the top of a house

in South Ruislip, after attempting to take off during a snowstorm in December 1946. The unharmed passengers and crew made their way to the ground exiting via the house loft and front door! During 1952 Northolt was recorded as being the busiest airfield in Europe, with some 50,000 movements.

### **MISTAKEN IDENTITY**

This continued up until 1954 when the airlines moved to Heathrow and the airfield reverted to military use, with No 1 Aeronautical Documents Unit moving from nearby RAF West Ruislip. In 1960 a Pan Am Boeing 707 mistook Northolt's runway 25 for Heathrow's runway 23, landing (presumably with some very hot brakes!) with 41 passengers on board. The aircraft was subsequently flown out to Heathrow, but only after having a substantial weight loss programme! A Lufthansa Boeing 707 tried the same thing in April 1964 but was dissuaded from doing so after a red flare was fired.

Civil aircraft movements continued at Northolt alongside the military, but from 1980 until 2008 were limited to a maximum of 28 flights a day. This was increased in 2013 to 12,000 a year and 40 per day as part of a MOD drive to increase revenues!

Notable among the modern incidents was the over-run of Runway 25 by a Learjet in August 1996: fortunately, the passengers, crew and a van driver on the A40, only suffered minor injuries. This accident prompted (after 30 years' delay!) an ILS (Instrument Landing System) to be fitted, to help crews whose first language was not English from suffering a similar fate, as up until then only precision approach radar ("talkdown") was available.

In 2007 the British Forces Post Office was relocated to Northolt from Mill Hill, along with a statue of a First World War soldier reading a letter, the statue having previously resided at Paddington Station.

In 2012 a new police dog section was opened, augmenting the RAF police section already stationed there. On the visit we were very ably briefed on the Police unit's activities at RAF Northolt by Corporals Kers and Upham. They and their relatively small complement of officers are responsible for nearly all security issues on the base, from the odd drunk or speeding offender to passenger and baggage screening on all passenger flights. VVIPs (Royals etc) normally would have their own security arrangements but would still be assisted by the "locals".

### **THE ROYAL SQUADRON**

On 1<sup>st</sup> April 1995 the (then) Queen's Flight was merged into No 32 Sqn, our main hosts for the visit: No 32 is the RAF's Command Support Air Transport fleet, becoming known as "the Royal Squadron". The current fleet consists



of two Dassault Envoy CC1 trijets and one Agusta 109SP helicopter: All of the aircraft currently in use by No 32 Sqn are on the UK Civil register, which apparently causes fewer logistical problems when trying to facilitate overseas trips with non-military personnel on board.



*The Air Pilots inspect the No 32 Sqn Agusta A-109*  
Squadron Leader Sarah Cole warmly welcomed us, standing in for Group Captain Jonathon Hough who was engaged on other duties. Flight Lieutenants Luci Conder and Ben Wober took over from Sarah to escort us around the base for the rest of the visit, which included a very memorable trip to The RAF Regiment's Central Band.

Flight Sergeant Matt Elsom welcomed us to its dedicated building, filling us in with a plethora of facts and figures about the band. There are actually three bands and at least



*The RAF Regiment Central Band entertains the Air Pilots*

one orchestra, comprising around 200+ personnel, some full and some part-time. Last year they attended over 600 functions, ranging from solo musicians to all three main bands being involved at the Coronation. Following his talk, we made our way to the auditorium where rehearsals were underway, conducted by Flt Lt Mike Parsons. The practice finished with a rendition of the RAF March Past, performed entirely from memory!

Many thanks to our organisers David Curgenvin, PM Chris Ford, who was stationed at Northolt from 2003 until his retirement in 2011, and the RAF - especially those mentioned above, for a most memorable visit! □

# GAZETTE APPROVED BY THE COURT 12 SEPTEMBER 2024

## ADMISSIONS

### As Upper Freeman

Tessa BEYERSDORFF (AUS)  
Charles CAMILLERI (AUS)  
Vanessa Marianne FELKAI (AUS)  
Grace May KAY (AUS)  
Ross KILLIN (HK)  
Benedict Lawrence LAIDLAW  
Onesimo Simisani MASOLE (HK)  
Alexandre Jacques PONCET (HK)  
Kayle Antony WOOLL (HK)

### As Freeman

Hadyn Leslie DAHL (AUS)  
Jonathan HE (AUS)  
Alice HENDERSON (AUS)  
Christophe Henri SIMON  
Joanna Mary WILLIS

### As Associate

Sandeep ADHIKARI (AUS)  
Toby BELLAMY (AUS)  
Callum John BYLES  
Benjamin James DUNK (AUS)  
Jacob Kane FINDLATER (AUS)

Jenna Ellen GOOBY (AUS)  
Isabella LAMB (AUS)  
Shibli SIDDIQUEE (AUS)  
Josef TRIYANTORO  
Ava Minoo UDWADIA  
Wei Jie YONG (AUS)

## ACKNOWLEDGED BY THE COURT 12 September 2024

### REINSTATEMENT

#### As Upper Freeman

Michael EVANS (AUS)  
Sahil HATHIRAMANI (HK)  
Andrew BALFOUR

#### As Freeman

Peter CARTER (AUS)

### REGRADING

#### To Livery

Donagh McCULLAGH  
Sweyn ALSOP

#### As Upper Freeman

Amy BANNISTER  
Philip LITTLEHALES

Richard PAINTER

### As Freeman

Joseph AUDCENT  
James WILLIAMS  
Long Song Ronald CHAN (HK)  
Marcus WOHLRAB

### RESIGNATIONS

David BELL  
Craig BLACKWELL (HK)  
Freddie BULL  
Christopher CARTER (HK)  
Benjamin CHAMBERLAIN  
Gregory CHAMBERLAIN  
Blair DOUGLAS (HK)  
Thomas FERGUSON  
John HAILE  
Julian HICKMAN  
Gavin JOHNS  
Monica KLEINRAHM (AUS)  
Paul KELHAM (NA)  
Angela KOHLER  
Erin LESLIE (HK)  
Jonathan MARCHANT

Alistair MEINZINGER (NA)

Josh REID  
Scott ROBINSON  
Craig RYAN  
Justin SHAVE (HK)  
Christopher SMITH (HK)  
Kate STEEL  
Stefan VAN STADEN (OS)  
Harry THOMAS

### DECEASED

Peter DUFFEY (NA)  
Cliff PHILLIPS  
Andrew RUSSELL  
Tony SHIELDS





# THE MASTER'S MESSAGE

*By The Master, Richie Piper*

August is traditionally a quieter time in the Livery movement and the Company, as many take their holidays.

This includes the office team of the Learned Clerk and Secretariat, who well deserve a break. As Master, I get to see all they do for us, working hard on events, scholarships, supporting committees, finance and all the other things they do to ensure the smooth running of the Company - and not forgetting perhaps their hardest task, of ensuring I sign all the documents, certificates and awards in time! It is a measure of the quality of the team that the office is always a happy place, coping calmly with all the different demands they face. I greatly appreciate all the support they provide Gill and me, and I know previous Masters feel the same.

For the Air Pilots Flying Club, activities continue throughout the summer with fly-ins and the ever-popular summer BBQ. The final fly-in is at Oaksey Park and as I write, 45 people are booked in – it is a very sociable and active group which welcomes new members and can often find a spare seat in an aircraft for a fly-in. The club also sponsors six of the gliding scholarships, four from club funds and two from personal donations from club members. The spiritual home of the club is White Waltham where, again, the club is helping others by installing a defibrillator.

For those of you who remember my three pillars for the year – **Extend, Encourage and Enjoy** – scholarships are a major part of our encouraging young people to get their start in aviation. This year in the UK the 400 scholarships we have awarded (including our Youth Gliding Scheme flights, as reported on p24) are well underway and we have plans to increase that number in future years. I am delighted to report the North American Region is advancing its plans to provide scholarships, drawing on the mature programme in the United Kingdom and replicating it in the USA and Canada. A foundation has been set up and is seeking sponsors and publicity to support its objectives. As you will read in my Tour report, we highlighted NA Region Scholarships in all the meetings, and developed links to support the programme. I am sure the NA team would welcome all members advancing the scholarships cause.

## THE MILITARY CHALLENGE

Many members have connections with the military, and the RAF in particular. Through those connections

and various briefings, those members will know of the parlous state of our armed forces. The steady decline and lack of meaningful investment since the Cold War “peace dividend” massively reduced defence spending and successive governments’ failure to provide sufficient funding have inevitably led to the hollowing out of our armed forces.

Since the ending of the Cold War local conflicts have continued alongside a significant growth in terrorism. We frequently hear of the “over stretch” the RAF is operating under, as the men and women of the RAF continually rise to the challenge with police actions and disaster relief work around the world, but we all saw the threat change very publicly in 2022 with the Ukrainian invasion, the escalation in the Middle East and the growing threat in Asia Pacific.

History has shown peace is maintained by diplomacy and deterrence. In terms of diplomacy, the United Kingdom has traditionally been a key player in shaping world events and, despite our diminished world status, still has much influence. Influence is aided by credible deterrence or having a “big stick”. Sadly, our capability is so reduced we would struggle today to repeat the Sudanese evacuation of May 2023, let alone the Falklands campaign of 1982. The RAF needs the support of the public to ensure that the government makes the level of investment to return the capability we once had, suitably adapted to modern threats - a message members can help communicate.



*London's Air Ambulance has reached its funding target and taken delivery of its new Airbus H135s*

## AMBULANCE SUCCESS

Members will know that the London Air Ambulance is a charity close to our hearts and one we have supported over the years. It is one of my Master's Charities this year.



In addition to the continual need to raise funds to cover the annual running costs, it had to raise an additional £15million to acquire and equip two new helicopters by this October. Whilst it had made good progress through many generous donations, including individuals paying £100 to have their names on the new helicopters, it was behind the curve on fund raising and having to consider various contingencies for a shortfall. However, the Omaze prize draw selected the LAA as the charity that would benefit from its London House draw, guaranteeing at least £1million to LAA. In the end £4million was raised, meaning the target to replace the helicopters was met and the machines are at Oxford airport being fitted out and performing crew training. However, the LAA still needs continuing support to fund its essential service with these new helicopters.

I hope that like me, you are looking forward to the Trophies and Awards Banquet on 24<sup>th</sup> October. It has

always been for me the highlight of the year and promises to be another special occasion, with prestigious guests joining us, not least the award winners themselves, who are a truly international selection. The work of the Trophies and Awards Committee is essential to maintaining the high standards and prestige of these awards, a task it undertakes with true diligence. The result of this work can be fully appreciated as we listen to the Learned Clerk announce the abbreviated citations as the award recipients "fly" a right-hand circuit around the Great Hall to receive their awards.

Finally, may I remind members that the DAA would appreciate comments and views from members on the plans to introduce Extended Minimum Crew Operations (eMCO) or Single Pilot Operations (SiPO), to assist with formulating the Company's briefing paper. The response so far has been slow but there is still time to make your contribution to this important safety subject. □

## TROPHIES AND AWARDS 2024

The following trophies and awards will be presented at the Company's T&A Banquet at the Guildhall in London on 26th October. Fuller details of the recipients and their achievements will accompany the report of the Banquet in the December issue of Air Pilot.

### LIFETIME CONTRIBUTION TO THE AEROSPACE INDUSTRY

The Award of Honour  
*Commemorative Air Force*

### FOR OUTSTANDING COURAGE OR DEVOTION TO DUTY IN THE AIR

The Master's Commendation  
*Flt Lt Paul Wharmby RAF*

The Master's Medal  
*Capt Neil Jeffers*

The Hugh Gordon-Burge Memorial Award  
*Flt Lt Benjamin Davey RAF*

The Prince Philip Helicopter Rescue Award  
*Crew of Rescue 936*

The Barry Marsden Memorial Award

*No. 3 Squadron Royal New Zealand Air Force*

### FLIGHT OPERATIONS

The Sir Barnes Wallis Medal  
*Capt Mario Carretta*

The Brackley Memorial Trophy  
*Flt Lt Adam Roche RAF*

The Johnston Memorial Trophy  
*Air and Space Warfare Centre Protector Test Team*

The Hanna Trophy  
*Capt Frederick Akari*

### FLIGHT TEST

The Eric 'Winkle' Brown Memorial Trophy  
*AH-64E Combined Flight Test Team*

### SAFETY AND SURVIVAL

The Sir James Martin Award  
*Flt Lt Peers Lyle RAF*

The Cumberbatch Trophy  
*Rachel Fricker*

### TRAINING

The Glover Trophy  
*Lt Charlie Homer RN*

The Central Flying School Trophy

*Lt Cdr Robert Hunt RN*

The Pike Trophy  
*Eva Ceh*

John Landymore Trophy  
*at the discretion of the Scholarship Committee*

### FOR SERVICES TO THE COMPANY

The Sir Alan Cobham Memorial Award  
*David and Shirley Hasler*

### REGIONAL AWARDS

The Grand Master's Australian Medal  
*Luke Gumley*

The Australian Bi-Centennial Award  
*Geoffrey Sartori*

The Captain John Ashton Memorial Award  
*Capt Marcus Grey*

The Jean Batten Memorial Award  
*John David Cook*

### AVIATION MEDIA

The Award for Aviation Journalism  
*John King*

# REGIONAL REPORTS



## Regional report: North America

By Liveryman Jonathon Dugdale, Chairman

I was recently privileged to be part of the team escorting Master Richie and Mistress Gill on the Master's 2024 North American Tour. I was thrilled to be in attendance when Richie presented the 2024 Master's NA Trophy to Teara Fraser and Iskwew Air in recognition of her initiatives to expand airline service to the indigenous peoples in remote British Columbia.

This presentation came after I had the rewarding experience of flying Richie and Gill from Vancouver International Airport (YVR) to Qualicum Beach Airport (CAT4) on a scheduled passenger flight in a Piper Navajo. Fellow member Freeman Hal Adams joined Richie and Gill for lunch whilst I prepared for the return flight to CYVR. At present CAT4 is our one scheduled destination airport for passenger service in addition to cargo runs and charters. CAT4 is a non-towered aerodrome with a Mandatory Frequency which we call five minutes prior to arrival on a VFR flight, and on an IFR flight plan we call 10min prior to arrival, whilst staying with COMOX (YQQ) Terminal.

### RNAV APPROACHES

CAT4 is equipped with an RNAV approach for both runways, however, we will favour R29 as it has a PAPI for vertical guidance, with the lights sparked up by five clicks on frequency. Unless the weather is close to minima, we approach with four red lights to balance clearing the 100ft trees 3,000ft from the threshold and safely landing on the short 3,564ft x 75ft runway.

RNAV (Area Navigation) approaches in Canada were introduced in the late 20<sup>th</sup> century as part of a global shift toward satellite-based navigation. Initially employed at major airports like Toronto Pearson (YYZ) and Vancouver International (YVR), RNAV offered greater flexibility than traditional ground-based systems like VOR and NDB. These approaches allowed for more direct routing, improving fuel efficiency and airspace management. By the early 2000s, RNAV approaches became more widespread across the country, including at smaller airports, including Qualicum Beach Airport which has the bragging rights of having the first stand-alone RNAV in Canada! (2017).

Heading back to YVR is more of a formality. Due to resource challenges at YVR, we are typically on an IFR flight plan with flow times providing an eight-minute wheels-up window once we have our approved airways. Sometimes we can receive a VFR Slot time which is a

wheels-down window at YVR spanning about 10min, but these slots are few and far between. Because of a stand of trees at the end of each runway, we take off from CAT4 employing a full-power static-power procedure with 15° flap and 76kt rotation targeting blue line and cleaning up the aircraft forthwith.



*The challenging approach to Qualicum Beach's short runway*

CYVR is Canada's second-busiest airport, located on Sea Island in Richmond, British Columbia. It opened in 1931 and has grown into a major global gateway, serving over 25million passengers annually. The airport features three runways: 08R/26L, 08L/26R, and a smaller crosswind runway 13/31 which is closed by Notam. All active runways are equipped with ILS and RNAV.

### A BUSY CHALLENGE

Flying from an international airport to a non-towered uncontrolled airport and back again in a Piper Navajo is always a busy and challenging 25 – 45 min, depending on the routing. For most of my career, I was a commercial banker and businessman. I earned my PPL in 1999 and then worked on my commercial, multi-engine and IFR ratings. Hours after I completed the first renewal of my IFR rating (2009), I was at the Abbotsford Flying Club enjoying a beer with a friend. I shared that I had just renewed my IFR and I'll never forget what he said: "I just started an airline, come fly with me". I did, and I've been flying Navajos part-time ever since.

Flying has afforded me disciplines, challenges and adventures I never thought possible. It is a privilege to be part of the aviation community, and my membership of the Company has proven to be the icing on the aviation cake. Of my humble 1,500h about half are PIC on the Navajo. When I hang up the headset I will look back on my unlikely career as a pilot with deep gratitude. □





# Regional report: Hong Kong

By Liveryman Rob Jones, Region Chairman

As part of the recovery of the Hong Kong region, one of my greatest desires has been to rebuild and strengthen our ties with local aviation-related authorities that have now re-opened their doors after Covid-19.

As part of my role as Head of Social and now as Chairman, I've witnessed a great desire of authorities in aviation to liaise more closely with the Air Pilots in Hong Kong and to share their knowledge. Over the past few months, we have been granted access to some new and exciting areas around the airport.

In June Air Pilots were welcome by The Aviation and Security Company AVSECO, whose primary role is providing aviation security and safeguarding the travelling public. It has been providing security since the airport opened in 1998 and employs around 4,500 personnel.

We were granted access to passenger screening where we saw how security personnel managed and processed over 49million passengers in the past 12 months. Then we were taken below the airport to see the system that processes and moves those passengers' baggage.

## SECURE CARGO

Our group was next taken to Hong Kong's Air Cargo Terminal, HACTL, to be briefed on how security is managed for the over-1.6million tonnes of cargo that passes through HK each year. We witnessed the x-ray machines and thermal scanners that check for potentially flammable cargo.



*The Tower from the Backup Tower*

In July, Air Pilots visited the Hong Kong Observatory at HKIA tower. The Observatory has had a long friendship with the Air Pilots in Hong Kong, and we work together closely on aviation weather-related matters. This is most notable in relation to the third runway and the terminal buildings being constructed nearby, which will cause considerable low-level wind-shear and turbulence under certain wind directions and speeds. The Air Pilots provided feedback as to what terminology should be included in

the AIP and given by ATC to best explain to aircrew the conditions they may experience.

We were also briefed on typhoon forecasting and severe weather that affects Hong Kong aviation, along with explanations on Light Detection and Ranging (LIDAR), and how it's used to provide wind-shear detection on approach and departure. The LIDAR systems maintain a continuous watch over a three-nautical-mile corridor on the extended centreline of the runways to alert crew of any changes.

The visit also allowed our members to quiz the forecasters on matters we may not fully understand and to enhance our knowledge and thus improve safety. One of the most common questions from crew is why the Macau forecast and Hong Kong forecast can be quite so different when they are so close together? The answer is that TAF and METAR provided by Hong Kong Observatory is based on an 8km radius from the airport. The forecasters want to give us the most precise information available that will affect the airport, and if the radius was any larger it would nearly always contain thunderstorms. This in turn may encourage us to carry more fuel than we need for the conditions.

## TALKING CONTROL

Most recently in August, Air Pilots visited Air Traffic Control both at the Civil Aviation Department, where the area controllers are based, and then on to the tower where the controllers who manage the tower, ground and delivery frequencies are based. This was one of our fastest-filling and most oversubscribed visits. We received a brief from the President of the Hong Kong Air Traffic Control Association before being shown the large room of area controllers where we were able to put some faces to the voices we are so familiar with. We were introduced to the Arrival Manager software that assists controllers with sequencing and spacing; it quite simply gives a positive or negative value of time to lose or gain and the controller does the rest. We then moved onto the backup control tower to see an exact copy of the operational tower; this allowed us to see all the equipment, hear the transmissions and ask questions without disturbing the controllers.

Coming up are visits to the Integrated Airport Centre and Cathay Catering. I believe the more we see and interact with those around the airport, the better overall operational picture we'll have and this in turn will make us safer and more knowledgeable. □





# Regional report: Australia

By Liveryman Capt Adrian Young, Chairman

Over the past six months, the Australian aviation industry has witnessed the challenges of deregulation which was introduced in Australia over 30 years ago. Since then, many airlines have come and gone. With this in mind the Government released the *Aviation White Paper* a proposed policy “roadmap” to support the local aviation industry.

The white paper has been developed during a period of frenetic media and political interest in aviation and follows the challenges of the post-Covid-19 restart, the exit of Bonza and Rex’s entry into voluntary administration. The white paper notes:

- The importance of aviation to Australia’s economy;
- The lasting impact of the Covid-19 pandemic on domestic air travel;
- The persistent concentration of the domestic airline sector;
- The slower recovery of international aviation after Covid-19;
- The projected future growth in aviation demand;
- The significant operational changes that decarbonisation and climate adaption will demand;
- The risks and opportunities of the rollout of drones and new technology.

One key element the Government has chosen to address is concerns about the treatment of consumers and the operational performance of airlines, by introducing an Aviation Industry Ombuds Scheme, funded by industry, by 2026. It will apply to airlines and airports, backed by general consumer law, rather than an EU261-style compensation scheme for delays.

## WORKFORCE

To address current skills shortages and position the aviation workforce to meet the needs of the sector, the white paper outlines a range of policy initiatives including:

- Asking large Australian airlines to train and employ newly qualified pilots rather than relying on recruiting experienced pilots from other aviation businesses and
- Establishing a gender equity charter.

The Region is aiming to engage with Government to ensure that the white paper’s proposals meet and support the industry’s needs.

Our Technical and Air Safety team continues to grow with representation from one of our Young Air Pilots – Angus Muir. Angus has a background in safety, in particular human factors, and will provide an added dimension and input to the committee. The Technical and Air Safety Committee

continues to engage with various stakeholders on airspace changes and proposals and GPS spoofing and jamming.

The Australian Region’s scholarship program continues to go from strength to strength. Our Aviation Careers and Education Committee headed up by Wing Commander (Retd) Arnie Morscheck has established another two scholarship programmes. The first is from Flight Standards in the Northern Territory of Australia which is offering two general aviation-ready scholarships. These courses are designed to prepare a new commercial pilot for employment in the general aviation sector. The second is from Upset Prevention and Recovery Training (UPRT) Australia which is offering two level-one courses to support pilots in understanding Upset Prevention and Recovery techniques. Our scholarship program is now offering more than 15 scholarships.

The Australian Region launched its inaugural Member’s Webinar series in late August. The first speaker was Captain Shane Tobin, CEO of UPRT Australia. His talk to members was insightful and engaging on a training technique which has been applied to all avenues and standards of pilots. More webinars will follow.



Young Air Pilots enjoy the Air Experience Day

## YOUNG AIR PILOTS

Young Air Pilots Australia has certainly driven various initiatives including a mentoring program across the region, speaking at various career fairs and hosting a simulator experience day. Four YAPA members joined YAPA Training Lead, Upper Freeman John Deecke, at the Qantas Flight Training Centre for an Airline Experience Day.

The YAPA members were given the chance to experience a take-off, various inflight scenarios and an ILS landing at Melbourne RWY 16. One of the lucky members said, “I walked away with a deep appreciation of the skills and attributes required to operate jet aircraft”.

Finally, the YAPA team is working on a “Future Air Pilot” program which will work to inspire the next generation of aviators by visiting primary and high schools and universities, to deliver engaging, informative and inspiring presentations about our members’ experiences in aviation and provide guidance on pursuing careers in aviation. □





# REPORT: THE YOUNG AIR PILOTS

*By Freeman Dominic Registe, Chairman*

With busy summer flying schedules already significantly wound down at the time of this issue, October typically affords a somewhat welcome respite. The end of the summer months also signifies the culmination of the Air Pilots scholarship campaign, with the deadline passing for all scholars to have completed their training. With our social media channels (@youngairpilots) capturing a small proportion of our scholars' enjoyable moments far more effectively than my words ever could, the next generation motivating the next generation is a particularly powerful concept, and one that I hope will continue to inspire more into the air.

Supporting Young Air Pilots into aviation remains an integral part of the Company's objectives and providing aspiring aviators a unique perspective into the industry remains at the heart.

## BRITISH AIRWAYS VISIT

Over the summer our Young Air Pilots gathered at British Airways' Global Learning Academy to gain an appreciation of what it is like to work and train for the British flag carrier. The day started with coffee and pastries while we were briefed by Capt Mark Smith (Head of Flight Training) and Capt Ross Lynch (Chief Pilot Training) on their flying careers to date and what we could expect from the exciting day ahead.

With BA's newest fixed-base A320 simulator assigned to the group all day (and the A380 simulator for half the day!), everyone had the opportunity to work on their jet flying skills and learn from some of the airline's Airbus instructors and examiners. Everyone was also able to experience Safety Emergency Procedure (SEP) training, which included smoke in the cabin drills and a descent on the all-important emergency evacuation slides - something crews only do once in their career upon joining BA.

In the afternoon Lucy Silvester (Head of Pilot Recruitment) teamed up with Senior First Officer Guy Bowen, who showcased the various pilot career pathways into BA, along with some invaluable information on its flagship Speedbird Pilot Academy and recruitment. They kindly answered every question directed their way and took the time to provide tailored career advice to those Young Air Pilots in the early stages of their flying career.

The day concluded with Capt Simon Cheadle (Director of Flight Operations) and several other senior fleet managers and pilot trainers taking part in a fascinating Q&A session, as well as touching on how they got to where they are



*Young Air Pilots get a taste of airline flying in the British Airways simulator centre*

today. Needless to say, the day surpassed all expectations and as well as learning more about the airline and a career as a pilot, some fantastic connections were also created.

Thank you very much again to British Airways for organising such a brilliant day and we look forward to seeing you soon! A special thanks must also be extended to Young Air Pilot Martin Oakes for helping to organise the day.

## T&A ANTICIPATION

This October issue of Air Pilot also coincides with final preparations for the Trophies and Awards Banquet, undoubtedly the highlight of the Air Pilots social calendar. Recognising outstanding industry achievement and attracting distinguished aviators from around the world to the historic Guildhall, London, it promises to be a spectacular evening. With a record number of Young Air Pilots having attended the 2023 banquet, we are already on course to surpass this number, and I very much look forward to enjoying your company later this month.

With several informal socials planned for later on in the year, and a number of leading airline recruiters also due to be in attendance at them, the Young Air Pilots social calendar promises to end the year on a relaxed yet informative note. □

# THE MASTER'S TOUR PT 1: NORTH AMERICA

*By the Master, Richie Piper*



*The Master and Mistress at ICAO*

August is traditionally a quieter time in the Livery, although the Air Pilots Flying Club's fly-ins are in full swing. For the Master, it is normally the time the tour of the regions begins with North America. The Master has the option of splitting the tour into two parts, with the Southern Hemisphere portion commencing after the Trophies and Awards Banquet. The North America region combines members from Canada and the USA: the chair normally alternates between the two countries each year, with Liveryman Jonathon Dugdale, who is based in Abbotsford in Canada, undertaking the role this year. A key person in terms of organising the Tour is Donna Farquhar, the administrator of the NA region, whose efficient organisation not only ensures that the tour runs efficiently, but who plays a key part in coordinating a very geographically spread region.

The Tour has a busy schedule, entailing various meetings (sometimes four a day) with industry bodies to advance the views of the company and support the region's initiatives. The work of the International Technical Forum (ITF) and its Technical Groups are fundamental to this process and the comprehensive briefing documents provided by the DAA were very valuable indeed. Topics such as the long-running recommendation to adopt True North for navigation along with newer initiatives, such as runway incursions and single-crew CAT operations, were some of the key items for discussion.

At each meeting I explained about the Company's awards which the T&A Committee diligently evaluates and encouraged my various hosts to submit nominations for any suitable candidates they knew of. This was so that our awards continue to be international in nature and that the T&A Committee has the raw material necessary to undertake its work.

One key topic the region wished me to raise was the launch of the scholarships programme for North America. The intention is to draw on the mature programme in the United Kingdom and replicate it in the USA and Canada. A charity foundation has been set up and the next steps are to publicise the scheme and to attract both sponsors and applicants. It was pleasing that many of the organisations we met with not only welcomed the initiative but would help the region establish connections.

## VANCOUVER

Therefore, 7<sup>th</sup> August saw Gill and me winging our way to Vancouver; a city we had previously passed through rather than visited properly. As some members may know, I gained a seaplane rating quite some time ago and currently fly a Consolidated Catalina amphibian...

It was for this reason that it was nice that our hotel downtown was only a 5min walk from the Olympic Cauldron and the Vancouver Harbour seaplane base. Here three companies provide scheduled services and tour flights. The scheduled services are a vital lifeline especially to bases on Vancouver Island. Most of the floatplanes are single or twin de Havilland Otters and, although the Pratt & Whitney PT6 is a great workhorse turboprop engine, there are still a number of radial-engine DH Beavers used where a service has small passenger numbers. There was no sign of the electric-engined variant currently under development. Vancouver Harbour combines the water with associated boats and floatplanes, the joys of Stanley Park and enhanced with the backdrop of the mountains.



*Vancouver Harbour seaplane terminal is heaven for Beaver and Otter watchers*

Some days there was a strong crosswind across the pontoons, requiring good handling skills, especially when leaving the windward side of the dock. The turbine Otters have an advantage in that they can utilise reverse thrust, especially coming alongside. The warm welcome which the Canada region provides includes attending the Abbotsford



Airshow on whose board regional chair Jonathon Dugdale sits. We were very grateful to Jonathon and past chairman Liveryman Alistair Beaton for twice driving an hour to pick us up to attend the Airshow, return us to Vancouver and drive back to Abbotsford where they live!

### Award for Iskwew

Our first official activity was to witness the service Iskwew (pronounced ISS-KWAY-YO) Air provides, and present an award to its owner and executive lead Teara Fraser. Iskwew operates three Piper Navajos from Vancouver airport around the area and Jonathon flies as one of its Captains. This meant we could enjoy taking a flight from Vancouver airport to Qualicum Beach airfield on Vancouver Island. These flights are normally operated as two-crew, especially as the area is busy with CAT and floatplane flights below 2,000ft. It did raise a smile when ATC alerted us to a “floater” (meaning floatplane) at one o’clock! It was a hazy day, caused by the forest fires further north, so Jonathon and his copilot Juan were busy monitoring traffic alerts on their iPads.



*Iskwew Air Piper Navajo at Qualicum Beach Airport*

As we lunched, Jonathon had to refuel the aircraft and load it for the return flight - the pilots have to do all these tasks since there is no ground support. On a hot day (density altitude of 1,200ft and airport altitude 190ft) with full load of passengers, careful fuel planning and loading were required because of the strip length and the tall trees at the end of the runway, which the farmer refuses to cut back.

Teara Fraser is a commercial pilot and licensed AME and in 2019, less than a decade after she earned her commercial pilot’s licence, she became the first indigenous woman in Canada ever to run an airline when she launched Iskwew Air [see a profile of Teara and Iskwew in *Air Pilot* December 2023]. In March 2021 Iskwew Air announced the launch of its aircraft maintenance organisation led by a woman of colour, the date chosen because it was the 40<sup>th</sup> anniversary of the first woman in Canada being licensed as an aircraft maintenance engineer. September 2022 saw Vancouver airport and Iskwew Air enter an agreement to promote “...sustainable air transportation, bringing innovative technology solutions to serve social, ecological and environmental justice”. Accordingly, it was my privilege on behalf of the NA



*The Master presents the NA Region Master’s Trophy to Teara Fraser, NA Region Chairman Jonathon Dugdale at left*

Region to present Teara Fraser, Founder and CEO, and her company with the North American Region Master’s Trophy in recognition of her initiatives to expand airline services to the indigenous peoples in remote parts of British Columbia.

### Abbotsford show

This year being the centenary of the Royal Canadian Air Force, the anniversary was naturally marked by the Abbotsford airshow, where our first attendance was for the evening show. Unlike in the UK, airshow acts continue beyond sunset into official night. Acts included the Lockheed Martin F-22 clearly showing diamonds in the reheated exhaust and an impressive slow and controlled “flat spin” using vectored thrust descending from quite some height. There were the usual pyro displays from a Rutan Long Ez and a twin-jet-powered glider, whose good performance and pleasing sound matched the gracefulness of the display. The show finished with a drone display celebrating the RCAF’s centenary. The drones rose in four decks from the ground (with one rogue one disappearing rapidly behind the crowd!) as if being lifted from a giant play box. The quality of the images created easily matched those seen at the Coronation and D-Day 80 commemorations, with greater animation including turning propellers and wheels. The RCAF centenary featured heavily with its various roles and aircraft: one of the most popular was a NORAD radar screen with Santa flying across on his sleigh.



*Drones mark the RCAF Centenary at Abbotsford*

The Airshow on the final day included the same items plus many more including a number of heritage formations. I have always thought the Douglas A-1 Skyraider as a relatively large single-seater but the F-22 forming alongside rather dwarfed it. Another major difference in display regulations between the UK and North America is the number of crowd



### NORAD's Father Christmas at Abbotsford

overflights (both towards and from crowd rear) items include in their displays, often five overflights performed by each act. Some appeared to be well below 1,000ft when over the crowd. We also had the opportunity to meet a number

of potential members and hopefully encourage them to complete an application.

### Aviation College

Alistair took us to visit Vancouver Aviation College to see the fantastic facility Mostfa Khosrowtaj (President) and his team have for students from many countries around the world. The excellent facilities are matched by the professional, yet happy spirited, students and instructors working together. Alistair is both an instructor and mentor there, and even arranged for newly qualified instructor Kringtina (Kristina) Dicdican to supervise us flying a Cessna 172 from Pitt Meadows airport to downtown



Newly-qualified instructor Kristina checks out the Master on the Cessna 172

Vancouver and back. I hope I was a good student! It was interesting that the equivalent cost of training to become a commercial pilot in Canada is around £20,000 less than in the UK, largely

accounted for by the Treasury's insistence on charging VAT of flight training, unlike other educational fees.

Jonathon and Alistair, along with their wives Christa and Diane, very kindly showed us the sights of British Columbia. Whilst enjoying a waterside beer in Ambleside I spotted a ship leaving the harbour in the distance with the distinctive features of Cunard. Utilising ASI, the maritime equivalent of ADSB, I could confirm it was the *Queen Elizabeth* sailing for Alaska.

### Last flight of Mars

Other excursions included a ferry trip to the provincial capital Victoria on Vancouver Island. This was very topical because one of the last two flying Martin Mars, named Hawaii Mars, undertook its last flight from Sproat Lake on the island, where Coulson Aviation had operated it, to Patricia Bay where it was to be de-watered and towed across Victoria airport to be displayed in the BC Aviation Museum. The flight occurred whilst we were at

the Airshow, but we saw it moored on the water at Pat Bay and, of course, visited the museum. Many will know of the Republic Seabee seaplane, which featured in the James Bond film *The Man with Golden Gun*, but as well as an example of that aircraft, the museum had alongside it the Trident TR-1 Trigull, designed to replace the Seabee and featuring retractable tricycle gear and floats to reduce drag and a more powerful engine to increase cruise speed. Two prototypes were built in British Columbia but sadly the project ultimately failed as the aircraft were too expensive to produce.

The *Hawaii Mars* is the last of six built - the original prototype and five ordered by the US Navy as patrol boats. As large as a Boeing 747, it was originally designed as an "aerial battleship" carrying 10t of bombs and protected by four powered machine-gun turrets. However, it was considered too vulnerable to attack due to its low airspeed, so the Navy repurposed it for transport use, mainly on the San Francisco to Honolulu route. The *Marshall Mars* was lost near Hawaii, consumed by an engine fire after being evacuated, but not before, on 19<sup>th</sup> May 1949, it had set a record carrying 301 seamen and seven crewmen between the Californian cities of Alameda and San Diego. The remaining four flew record amounts of naval cargo and personnel between San Francisco to Honolulu efficiently until 1956, when they were sold for scrap but later resurrected as water bombers by Forest Industries Flying Tankers.

Sadly, *Marianas Mars* crashed in 1961 during firefighting operations with the loss of all four crew members and just over a year later *Caroline Mars* was damaged beyond repair by Typhoon Freda. The two survivors eventually passed to Coulson Aviation which operated them in the fire suppression role. *Hawaii Mars* had a refit in 2005 including new cockpit displays and continued working fighting fires until 2015. This massive aircraft needed all of its 10,000HP (7,460kW) and a long run of water to get airborne, even at light weights. When operational, it could drop 25,000l of water on each drop. Having sat on the water at Sproat Lake, when Coulson decided to donate *Hawaii Mars* to BCAM a lot of work was needed to get it ready for flight again, including bringing back retired crew who had the experience and knowledge of how operate this aircraft. The engines/propellers will be removed to be fitted to *Philippine Mars* so it can make its final flight to Lake Theodore Roosevelt in Arizona and then be dismantled for the 150mile (250km) road journey to the Pima Air and Space Museum.

Interestingly, De Havilland Canada (which bought the Canadair operation from Bombardier) is putting the new DHC-515 into production as a development of the piston CL-215 and turboprop CL415 to meet the





*Martin Mars Hawaii Mars rests at Patricia Bay after its final flight*  
growing demand for water bombers with the increased occurrence of devastating forest fires.

## OTTAWA

The meetings with industry bodies started in Ottawa, where Liveryman Peter Allen (whom I had the pleasure of Clothing in the Livery this May) was our guide. Peter was the CFO involved in setting up Nav Canada, the privatised civil air navigation services provider, so he was familiar and known to many of the organisations we met with.

In Canada, unlike the United Kingdom, transport is covered by one regulator and one investigator, Transport Canada, and Transport Safety Board (TSB). TSB responsibilities include aviation, rail, maritime and pipelines as does Transport Canada with the exception of pipelines but the inclusion of dangerous goods. In the UK there are separate bodies for transport sectors with different funding models for each. Road safety is funded the Department for Transport (DfT), Rail is funded by National Rail licences and although train drivers' licences are personal, the £250 cost of a 10-year licence is paid by the train company rather than the individual. The Maritime and Coastguard Agency regulates maritime matters where fishermen and pleasure masters do not require licences, and charges for professional maritime licences are substantially cheaper than in aviation. Aviation regulation is performed by the CAA on behalf of the DfT, which requires it to be fully funded by the user, which means that airports, airlines, schools, manufacturers, maintenance organisations, pilots, examiners, etc are charged fees. It would be interesting to compare value for money and service levels across the different sectors.

A recent incident in Vancouver Harbour where a Beaver floatplane taking off collided with a leisure motorboat will mean that the TSB is well placed to cover the entire investigation. Another difference from UK regulation is that in Canada a seaplane has the right of way on the water when operating in a designated seaplane operating area, whereas in the UK, a seaplane has no right of way over any maritime traffic.

The TSB maintains a watchlist of five areas of concern affecting aviation: two are aviation specific, covering Runway Incursions and Runway Overruns with the three others being cross-industry covering Fatigue Management, Regulation Surveillance and Safety Management.

## Runway incursions

Runway incursions in Canada have doubled between 2010 and 2021 and a significant report was published by the TSB in 2019. Runway overruns occur more frequently in landings but rejected take-offs are also a significant risk. The TSB recommendations include extending runway end safety areas (RESAs) to 300m and, whilst Transport Canada accepted the recommendation, it is only being implemented at airports with over 350,000 movements a year, and the requirement is for RESAs of 150m. The phased nature of the implementation and the artificially low movements during Covid-19 will mean this recommendation will not be fully implemented until the early 2030s.

At the Canadian Air and Space Museum (CASM) we were given a privileged tour including the reserve hangar which is normally off limits to the public. It has two superb buildings containing many treasures to tell the story of Canadian aviation. It was interesting to find that the first British subject to fly a heavier-than-air aeroplane was Canadian Frederick Baldwin in the AEA Aerodrome No 1 Red Wing, on 12<sup>th</sup> March 1908, and that the first flight of an aeroplane in the British Empire was by Douglas McCurdy, in the AEA Aerodrome No 4 Silver Dart, at Baddeck in Canada on 23<sup>rd</sup> February 1909. (The Aerial Experimental Association consisted of three Americans, including Alexander Graham Bell and Glenn Curtiss, and two Canadians, Baldwin and McCurdy.) Peter was keen to point out the Avro Canada C102 Jetliner, of which only the nose section remains, was the second purpose-built jetliner to fly, only 13 days after first flight of the de Havilland DH106 Comet. Only one C102 flew before the Canadian government directed Avro to abandon the project and to focus production on the Orenda turbojet and CF-100 jet fighter programmes.

*All that is left of the pioneering Avro C102 jet airliner, at the BC Aviation Museum*





Commander Chris Hadfield's re-entry space suit and seat were displayed in the space section. Hadfield travelled to and from space in a Russian rocket and was thus not allowed to keep any souvenirs, but these artefacts were allegedly smuggled out wrapped up as a baby chair!

### **RCAF Centenary**

The Royal Canadian Air Force (RCAF) is celebrating its centenary this year and it is perhaps fitting that it reverted to this name a few years ago from the previous title Air Command. I am sure this is to the pleasure of many, not least our Patron, HM The King. There have been multiple events throughout the year celebrating the anniversary and it has featured at many Airshows and events. There was an interesting street display of RCAF history near the Senate building in Ottawa at part of the celebrations. The UK is doing its bit to support the centenary with our affiliate unit RAFAT (the Red Arrows) flying over as we headed to Montreal, and they were to appear at the Toronto and Gatineau airshows, the latter with the Canadian Snowbirds and US Thunderbirds teams. The UK's Chief of the Air Staff, ACM Sir Rich Knighton, also attended.

The head of the RCAF, known as the Commander, Lt Gen Eric Kenny, kindly met with us to discuss how the Air Pilots, and the NA Region in particular, can support and enhance the relationship with the RCAF. Discussions focussed on the current initiative to establish scholarships in the USA and Canada, enhancing affiliations and working with the Air Cadets.

### **MONTREAL**

We then travelled to Montreal to meet with ICAO on our own. All pilots will know of ICAO but perhaps not know how it operates. It was established by the Chicago Convention following meetings in that city in 1944, initially as the Provisional International Civil Aviation Organization. Two years later, at a meeting in Montreal, it was fully ratified by 193 states, together with a decision to locate ICAO headquarters in the city, Montreal being the third largest aircraft manufacturing centre in the world at the time. Canada has been very supportive in providing a home for ICAO, recently seeing off a bid from Qatar.

Visiting ICAO is similar in feel to a visit to the United Nations although it is on Canadian, rather than neutral, soil and delegations are accommodated within the ICAO building, something that is not considered appropriate at the UN. It functions via an open assembly, Air Navigation Commission and Council. The Assembly debates and discusses various matters and the ANC agrees (usually unanimously) the regulations of 17 of the 19 ICAO articles (the other two articles are covered by the security team) and the amendments are passed by the Council

which consists of 30 States, mostly permanent members like the UK and USA, and a few revolving seats which other countries occupy in turn. A number of observers like the EU can also attend. Unlike the ANC, which has no time limit, the Council limits speeches to two minutes. There are ten States of Chief Importance on the Council, which includes the UK and until recently included Russia, but other member states decided its recent actions were incompatible with that status.

### **Forward-looking**

Unlike the two safety boards which we met, which are necessarily backward-looking, being driven by incidents, the ICAO's remit is very much forward-looking, and it is keenly engaged in subjects of interest to the Air Pilots. One area of general concern for ICAO is when countries file a variation to ICAO standards, meaning that international standards are not universally adopted. This can lead to confusion and incidents where international crews are not fully conversant with certain countries' local rules and implementation. One small example is in the UK where ATSOCAS (Air Traffic Services Outside Controlled Airspace) differ from ICAO standards, and in several airspace infringements by foreign crews, unfamiliarity with the UK variation from ICAO standards has been a key factor. The discussions covered key areas of mutual interest and further information will be exchanged.

It is important that we build upon the Master's visit each year, and maintain the high-level access we are afforded by ensuring there is suitable follow-up linking the work of the international Technical Forum and its Technical Groups. I am working with the DAA Nick Goodwyn and new ITF Chair, Mike Zaytsoff, to strengthen these engagements.

One cause that the Air Pilots has been advancing for many years is the case for adoption of True North for navigation. As well as the cost savings, in terms of publications and runway signage in regions that experience significant variation change, the flipping of the poles, which could happen at any time, will cause much disruption. Naturally countries such as Canada are very keen to advance this change since they already have to rely on other methods of navigation in their Northern territories due the movement of the North Pole.

Whilst other countries such as the USA are supportive, they do not see the issue as a high priority and indeed GAMA, on behalf of its members which manufacture aircraft and systems, believes the adoption is not as simple as many believe. It states that much complex software redevelopment will be required across multiple equipment and systems, and estimates the cost at \$US2 billion. It believes therefore that the change should not be adopted before 2040. ICAO recently held a conference on this topic with another planned in the autumn and we will add

our work to the input on this process.

### WASHINGTON DC

The Tour then moved onto Washington DC where we were hosted by Liveryman Bill Pinney, aided by Upper Freeman Roddy Dennis (Technical Director for the NA Region) and John Nyren. Bill is a docent for the



Roddy Dennis, John Nyren and Bill Penney with the Mistress at the NASM in The Mall in Washinton DC

Smithsonian and thus we were privileged to benefit from his guided tours of both Smithsonian National Air and Space museums at the Steven F Udvar-Hazy Center, Dulles and on the National Mall. The Museum at Dulles should not be missed as it is one of

the best aviation museums in the world. One exhibit I had not seen before was at the entrance, and will be of great interest to one of the Assistants on the Court who is a bit of a Trekkie - the model of *Starship Enterprise* used on the original TV series of *Star Trek*. A special exhibit is the Shuttle Orbiter *Discovery*, which flew the most Shuttle missions (39) and spent 365 days in space during its 27-year career.

The Lockheed SR-71, Boeing B-29 *Enola Gay* and the Boeing 367-80 are notable exhibits to ponder. Bill related that, as you might expect, the *Enola Gay* is the exhibit



Bill Pinney and The Master with the Shuttle Discovery at the NASM Steven Udvar-Hazy Center at Washington Dulles

most viewed by Japanese visitors. The Boeing 367-80 or *Dash 80*, as it is better known as, was something in which Boeing invested heavily, and bet the future of the company on this prototype for the 707 and KC-135 much as it had for the B-17. The NASM on the Mall was not quite as good as on previous visits because of refurbishment work reducing the public space by half, meaning the Ryan *Spirit of St Louis* and Apollo-Soyuz docking exhibits were

currently not on display.

Our first meeting was with GAMA (General Aviation Manufacturers Association) which campaigns and lobbies on behalf of its members. The



The grandfather of the Boeing jetliner family – the 367-80

supply chain is still a major concern for its members but in general the post-Covid-19 recovery had been strong. Green aviation was one of the topics discussed, especially on leaded avgas replacement, where environment legislation and effective replacements, available at scale and with high compatibility, were not yet aligned. One area that GAMA did not see as a priority was the adoption of true north for navigation, as mentioned above.

### Strong FAA team

The Federal Aviation Administration (FAA) fielded a strong team and, based upon the pre-meeting briefing we sent, set a very full agenda with many domain experts on hand, both in the room and remotely. Many discussions points were covered including: lithium battery fires; crew fatigue; airspace modernisation; commercial space integration; 5G update and conflict zones. The USA domestically does not suffer GPS jamming and spoofing in the same way as Europe, the Middle East and Asia Pacific do, but naturally its airline operators are affected and hence there is growing concern.

One topic of discussion was single-pilot Part 121 (Commercial Air Transport) operations. The FAA currently has no formal policy on the subject and has received no government direction on the matter; but it is currently undertaking much research in this area. It is naturally aware of the pressure from airliner manufacturers and operators wishing to move to adopt this practice and, unusually for a regulator, is having to consider regulation change which is not driven by past incidents. We advanced the Company view that there needs to be a clear examination of the safety case and for informed consent of passengers.

Liveryman Kathy Abbot, the FAA's Chief Scientific and Technical Advisor on Flight Deck Human Factors, highlighted some interesting research she is leading on Human Factors around this subject. Rather than focussing on human errors the research is into how crew enhance safety by monitoring and preventing safety issues by working as a team. In discussion we also highlighted the training benefits associated with multi-crew operations that would be lost if single-pilot operations were adopted.



*The "Rocket Garden" at Kennedy Space Center*

### Professional enthusiasm

The meeting with the National Transportation Safety Board (NTSB) was very enjoyable, not only witnessing their professionalism and enthusiasm as we visited the laboratories, but that our hosts were also passionate aviators. The workload mandated on the NTSB is much greater than for other equivalent bodies. Like

the Canadian TSB it is a multi-modal organisation, and each aviation investigator covers 40 investigations each year. The greater use of digital technology in investigations was much in evidence.

We were also hosted at the Airbus Experience, a multimedia presentation highlighting Airbus' products and their presence in the USA. This included a focus on research into new technologies such as green aviation, space and eVTOL. One of the disadvantages of being Master is that you are normally expected to go first on any activity. Hence, I was challenged to go first on the sim! Rather than the usual Funchal approach, we selected the Courchevel Altiport in France, in a single turbine aircraft. My excuse for a poor landing is that I was figuring out the controls and giving a demo to the others! Roddy, John and Bill all did much better than me. It is hoped that NA scholars could benefit from a visit to the Airbus Experience in the future.



*The Apollo 14 Command Module on display at KSC*

### FLORIDA

I have always had a great interest in the NASA's Apollo programme and through the Air Pilots, have met a number of astronauts. I give talks about Apollo but had

never visited the Kennedy Space Centre (KSC), so at the end of the trip, for my birthday, we visited the KSC. We were certainly not disappointed, with the two highlights being the Saturn V and the last Shuttle Orbiter to fly, *Atlantis*, a veteran of 33 launches. Gill and I were the first into the Shuttle experience on the day, and the way the aircraft is revealed is quite stirring. No less emotional was standing under the immense and powerful Saturn rocket. The Apollo 14 Command Module and Lunar Module 9 (which was due to travel on Apollo 15 but was replaced by the Extended Lunar Module with the Lunar Rover) are among the wealth of original artefacts on show.

Just before we left for the airport to return home, we visited the Valiant Air Command Warbird Museum and were guided around by veteran Michael Higgins, who very kindly gave me his Pacific



*The majesty of the mighty Saturn V launcher*

Air Forces patch he wore on operations. This was another absorbing visit, especially if you enjoy 'century' fighters and Blue Angels jets. We were very pleased that the Boeing B-52 cockpit we entered had recently had air conditioning fitted as it was rather warm!

### Interesting novelty

The Fairchild C-123K Provider was an interesting novelty, originally designed as a large assault glider; it was then powered by piston engines for its short-range transport role, later augmented with two jet engines for take-off boost, and then a prototype was equipped with four jet engines. Not many aircraft can have started as a glider; progressed to prop and then jet variants! This example exhibit covered all those aspects, with main power from two 2,300hp radial engines augmented by two General Electric J-85 jet engines and a cover on the nose where the tow cable would have attached.

Thus, we had completed a very busy but enjoyable Part I of the Master's Tour, hopefully advancing the causes of the Air Pilots in general and the NA Region in particular. We must again express our thanks to everyone who organised, accompanied and supported us on the Tour. We greatly appreciated the welcome and kindness that was extended to us by all but especially Donna for organising the tour and Jonathon, Alistair, Peter and Bill for driving us many miles to meetings and sights. □

*"Master, you are cleared to land" – at the controls of the Shuttle mock-up at Kennedy Space Centre*





# DISRUPTIVE PASSENGERS – A WORRYING TREND



*From the Desk of the DAA, PM Nick Goodwyn*

The last edition of *Air Pilot* highlighted concerns over the risk to the wellbeing and safety of flight and cabin crew from increasingly abnormal weather events. There is another growing concern for their safety and a risk to operations which has seen a significant rise in mandatory reported incidents, especially since the increase in operational tempo of commercial air operations post-Covid-19. The number and severity of reports of disruptive passengers has grown exponentially.

As reported recently on the BBC, Ryanair chief executive Michael O’Leary said: “Aeroplane passengers should be restricted to two drinks at airports... introducing alcohol limits at airports would help tackle a rise in disorder on flights. Violent outbursts are occurring weekly due to alcohol,” he said, especially when it is mixed with other substances. “We don’t allow people to drink-drive, yet we keep putting them up in aircraft at 33,000ft.”

Crew members and other passengers have become targets, with delays allowing longer drinking times at airports adding to the problem. O’Leary said it was difficult for airlines to identify inebriated people at the gate, especially when they boarded in a group.

An Airports UK spokesperson said that disruptive behaviour, whether arising from alcohol or other causes, “...is unacceptable and could lead to substantial penalties. Airports are committed to providing a safe and enjoyable travel experience for all passengers and we’re pleased that the vast majority of travellers continue to enjoy their journeys responsibly.”

## REGULATORY RESPONSIBILITY

In 2021 the UK introduced into additional requirements

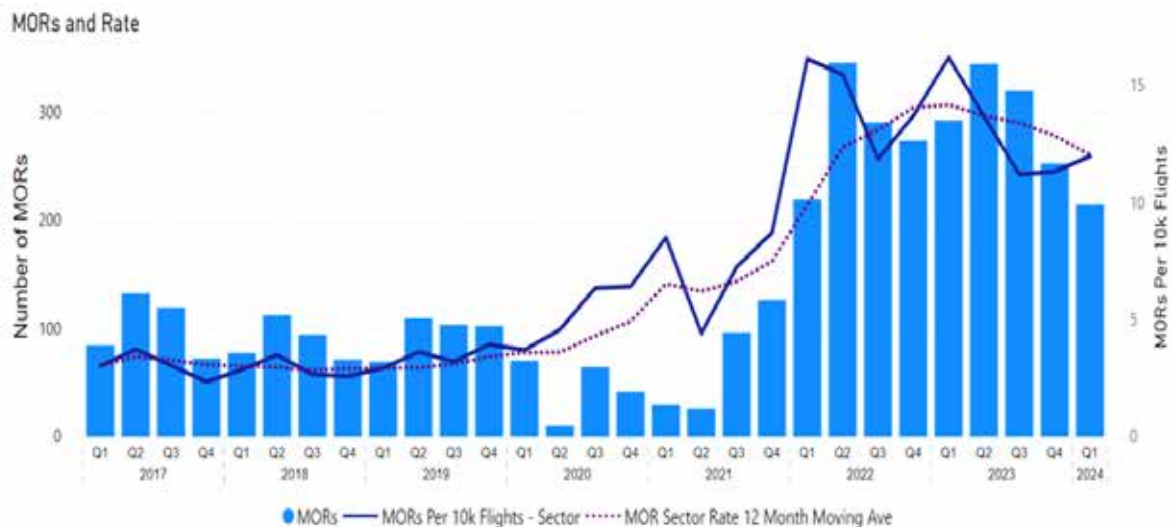
for operators for the prevention and detection of the misuse of psychoactive substances, as retained CAT.GEN.MPA.170 *Psychoactive Substances*. This states that:

*“The operator shall take all reasonable measures to prevent a person boarding an aircraft or being on board an aircraft when that person is under the influence of a psychoactive substance and is behaving in such a way as to risk endangering the safety of the aircraft or of another person on board of the aircraft.”*

Under the associated acceptable means of compliance (AMC) issued late last year (AMCI CAT.GEN.MPA.170(a) *Psychoactive substances*): “The operator’s measures to prevent a person boarding or being on board an aircraft while under the influence of a psychoactive substance, and/or demonstrates behaviours that risk endangering the aircraft or persons on board, should include:

- (a) the provision of information and training to passenger handling staff (where appropriate) and crew members on the recognition of persons who may be under the influence of a psychoactive substance; and
- (b) the procedures to be followed by passenger handling staff (where appropriate) and crew members to prevent such a person from boarding or being on board the aircraft.

This regulation and its AMC show a subtle variation from the existing EASA regulation in force before the UK’s departure from the EU, which states: “...to ensure that no person enters or is in an aircraft when under the influence of psychoactive substances to the extent that the safety of the aircraft or its occupants is likely to be endangered.” Note that it was “ensuring” rather than “preventing” with no reference to identifying “behaviours” of such persons.



*The recent history of Mandatory Occurrence Reports shows a massive increase in disruptions (CAA)*





*Passenger restraint is a last resort available to cabin crew*

There is no EASA equivalent AMC for CAT.GEN.MPA 170 (a). Why highlight this subtle difference?

It places a significant increase in the roles and responsibilities of all flightcrew and, ultimately, the

responsibility on the aircraft Captain in such circumstances as might be reported as disruptive passenger behaviour (although the regulation is also intended to cover ground handling staff, aircraft engineers and cleaners and anyone involved in the aircraft's operation). As an operator's regulatory responsibility, there should be an allied increase in the requirements for the awareness and training of flight and cabin crew around this subject and the complex area of how to recognise and mitigate against human behaviours whilst under the influence of psychoactive substances. This in itself is challenging.

The UK aviation regulations define a psychoactive substance as any alcohol, opioid, cannabinoid, sedative, hypnotic, cocaine, other psychostimulant, hallucinogen or volatile solvent. EASA defines psychoactive substances as

"...alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, with the exception of caffeine and tobacco."

### THE CHALLENGE

Clearly, the majority of passengers travelling are not, and will never be, disruptive. However, it is the spike in occurrence reports, and the chronology post-Covid-19 that are a cause of concern. Understandably, there are major variations based on the types of service, airline structure, route and destination, passenger group, time of travel and seasonal capacity load. For example, there is a wide variation between say a national carrier, long haul and predominately business and, say, a low-cost seasonal holiday medium or short-haul carrier. The de-identified statistics shown are real but reflect the latter: however, the trend is across most industry sectors.

The reasons for the changes to human behaviours post-Covid-19 are no doubt complex and beyond the scope of this article but clearly something has changed and anecdotally, as described by a senior carrier crew: "People have forgotten how to travel and behave". The statistics are not attributable to just misuse of psychoactive substances but also, in just one week in June 2024 in

### CASE STUDY

Not long after take-off, four men who were all travelling independently realised that they knew each other from school. They gathered towards the rear of the aircraft laughing, joking, very friendly but loud. During this extended period of time, the cabin crew had served the men four or five alcoholic drinks each. After the first service, the SCCM asked the men to return to their seats, as they don't like to have a congregation of customers in the door area. One of the four, passenger W, did not return to his seat but chatted in a polite and friendly manner with some of the cabin crew for a long time before returning to his seat.

Passenger W returned to the galley a little while later, he was being loud, and SCCM asked him to be a little quieter, so as not to disturb passengers. Passenger W's behaviour suddenly changed, and he responded by saying: "Don't be like the police; I don't listen to the police; I have shot police", then used his finger and hand depicting a gun. The SCCM felt threatened, but in control. Passenger W returned to his seat and slept for about an hour. Later the CM4 saw passenger W heading towards the rear toilets. The CM4 thought he looked like he was going to be sick, so waited for him with a glass of water outside the toilet. When passenger W emerged from the toilet, he started touching and stroking CM4. Passenger W was told that his behaviour

would not be tolerated. He returned to his seat and slept.

Later passenger W seemed to wake in a rage, came into the rear galley, stating: "I need the loo" and acted like he was looking for somewhere to do this in the galley. CM8 indicated where the toilets were. Passenger W pushed past customers to get to the toilet, passenger X pushed him back and passenger W put passenger X into a "headlock" and started punching him in the head, approximately seven times. The CM4 intervened, and passenger W retreated to the galley. However, passenger X was trying to re-engage, and passenger W was then seen coming out of the galley with two smashed glass bottles in hands, trying to get to passenger X, repeating: "I'm going to cut you like a fish".

Another passenger, passenger Y, tried to intervene and passenger W proceeded to try and stab passenger Y in the face/head. Passenger Y managed to turn his body and injury was sustained to his upper torso and under upper arm. Passenger W appeared to immediately "realise" his actions, and dropped the bottles, which the CM8 kicked away. Passenger W returned to his seat. The flight crew was contacted and consent was given to use the restraint kit, if needed. Passenger W spent the remaining 1h 20min crying, praying, and reading poems. Upon landing the police boarded the aircraft and passenger W went with them willingly.

the UK, to: Intoxicated / drinking own alcohol; Refusing to obey commands; Shouting and swearing at cabin crew; Physically assaulting cabin crew; Attacking other passengers; Threatening passengers and children; Smoking/ Vaping onboard.

There is really great work undertaken by the ICAO Cabin Safety Group (ICSG) on Cabin Dynamics, existing ICAO guidance material, prevention, policies & procedures, training and passenger awareness. Operators training focusses on de-escalation techniques (creating space, stance, eye contact, staying calm, appearing confident, use of voice, listening, asking questions, resisting arguing, attitude and avoiding ultimatums) and the five-step



*Unruly passengers are not just a British problem: this is part of a campaign by the CAA Norway (Luftfartstilsynet)*

process of engaging with the disruptive passenger: ask to stop; tell them why they must stop; explain options ie stop or potential consequences (diversion, return flight cancelled, police meet the aircraft, fines/imprisonment); confirm they will not stop; act.

It is also a necessary requirement for cabin crew to undertake training in defensive techniques and use of restraining kits on board. Experienced crew say that this was never something that they felt they needed but is now widely recognised as increasingly relevant. Operators have rightly increased the training requirements and also undertake considerable efforts to increase their mitigations of disruptive passengers through intelligence-led work in the terminals, at check-in and at boarding. However, this can be dependent on the point of departure and use of airline staff at check-in as opposed to third party ground handling services.

Last year, CHIRP reported on the increasing challenge of coping with disruptive passengers, noting that ICAO has defined a four-tier threat-level hierarchy. The ICAO level of threat ranges from verbal abuse (Level 1) through to attempted or actual breach of the flight crew compartment (Level 4). This year the Norwegian CAA, with EASA, has run safety campaigns aimed at preventing unruly behaviour, with clear guidelines on what is acceptable behaviour on board an aircraft and at the airport. #flightmode (#flymodus) was aimed at

## CASE STUDY

Crew face challenges in recognising and understanding behaviours which may not be readily apparent. Just after take-off there was a commotion in the cabin because a passenger (Passenger A) was convinced other passengers were plotting to kill him. Passenger A was petrified, shaking, opening overhead lockers, going through other passengers' possessions looking for a gun or weapons that was going to be used to kill him. The SCCM tried to calm Passenger A but was unable to, so moved him to a 'safe space'. Once moved, Passenger A eventually calmed down and confided in the SCCM that they were Bipolar and had their medication stolen from the hotel. Passenger A remained calm in flight but refused to eat or drink: 40 minutes before landing the SCCM explained to Passenger A that after landing other passengers would start to retrieve their possessions and that this was normal. When the SCCM took their seat for landing, Passenger A was out of their seat and shouting: "They are going to kill me" and that the plane was going to crash. Several cabin crew left their seats to restore calm. The SCCM advised the other cabin crew to take their seats and tried to reassure Passenger A. Passenger A grabbed the SCCM's hand tightly and would not let go. The SCCM could not return to their seat for landing. The SCCM considered using the restraint kit, but decided it was not required.

passengers to give awareness about bad behaviour and its consequences related to air travel. It was displayed at airports, on commercial aircraft and on social media during the summer of 2024. (<https://luftfartstilsynet.no/en/passengers/aviation-collaborates-against-unruly-passengers/>)

## SUMMARY

The significant increase in reports of disruptive passengers, notably since the pandemic, is alarming. The additional regulatory responsibilities of the operator to take all reasonable measures to prevent a person boarding an aircraft, or being on board an aircraft when that person is under the influence of a psychoactive substance and is behaving in such a way as to risk endangering the safety of the aircraft or of another person on board of the aircraft, are challenging and fall mostly on the shoulders of the individual flight and cabin crew. The dichotomy appears to be that airports encourage passengers to fully enjoy the thrill of travel and pre-flight hospitality as a key element of their financial models, and yet the safety and wellbeing of flight and cabin crew are on the frontline of dealing with the consequences. Should more be done? □





# YOUTH GLIDING SCHEME 2024

*By Liveryman Zöe Gell*

The Air Pilots Youth Gliding Scheme (APYGS) was set up in 2004 by

Liveryman John Mason in order to offer London school pupils an experience that they would never have had before: a flight in a glider. Save for a brief hiatus during Covid-19, the scheme has run each year since its inception and many young people, often from very challenging backgrounds, have taken to the skies around the London area. The APYGS is now in its 20<sup>th</sup> year, which is a considerable achievement in itself. This summer will have seen nearly 300 youngsters get airborne, taking the APYGS past an impressive milestone of over 2,000 flights - an achievement of which the Air Pilots can be very proud. Time and again, groups of youngsters have overcome their fears and been rewarded ten-fold with the delights of the skies. An experience summed up by one student as "...the most fun I've ever had".

In addition to flying at Cambridge, Booker and Dunstable, 2024 saw a significant expansion of the scheme in partnership with the British Gliding Association (BGA). Flying days were held at three new venues, the Yorkshire, Cotswold and Southdown clubs, with participants selected at BGA Go Gliding events at each venue. Students experienced simulator trips, talks, hangar tours and other gliding activities with the BGA before going flying a few weeks later with the Air Pilots. Feedback from the students and new venues has been superb and this venture has proved to be an excellent way to introduce youngsters to aviation.

## **CAMBRIDGE GLIDING CENTRE - PM CLIFF SPINK**

Gransden Lodge Airfield is set in the heart of the Cambridgeshire countryside and once echoed to the sound of Rolls-Royce Merlin engines of such aircraft as the de Havilland Mosquito and Avro Lancaster. Today it is the home of the Cambridge Gliding Centre (CGC). One could not wish for a better setting for a day's gliding as the airfield really does transport you away from urban bustle of life in London. For the many students who came to the CGC they not only get the thrill of a flight in a high-performance training sailplane, but for those on their first trip into the country away from the metropolis, a chance to be enthralled at watching kestrels, buzzards, hares and partridge in the wild.

CGC is a very friendly and efficient organisation and from the time the students arrive they are quickly immersed in the briefing and the activity of the club. A burble in the distance signalled the arrival of Liveryman Martin

Blaze in his Boeing Stearman, and together we were to help the CGC staff go through the cycle of the briefing, parachute on, weigh, and strapped into the glider. There is an inevitable level of nervousness amongst the students as this is so outside of any experience they have previously had. Still, this slight unease is vastly outweighed by an eagerness for the adventure to come.



*Cambridge Gliding Centre, Gransden*

The gliding instructors take some time explaining the effects of controls as the essence of the flight is for the students to fly the glider themselves. Checks complete, and with a thumbs up from the student sitting in the front cockpit the Robin tug aircraft taxis forward; a few seconds later, the combination is accelerating down the grass runway. The flights averaged about 20min and one could not help get wrapped up in the post-flight babble of excitement as the students compared notes as to who was today's 'ace of the base'. The whole day is a thoroughly uplifting experience (pun intended) for the students, teachers and instructors/staff, and it is to the great credit of the Honourable Company of Air Pilots that it sponsors such days. As the school bus leaves on its trek back to London, the airfield is handed back to the kestrels, buzzards and hares....

## **COTSWOLD GLIDING CLUB – LIVERYMAN DACRE WATSON**

Liveryman Tricia Nelmes and I were pleased to attend the STEM Day on 12<sup>th</sup> June at Aston Down, home of the Cotswold Gliding Club. There were 30 students present from four different schools and a good mix of boys and girls: ages varied from 15-18. The students were divided into three groups rotating through three sets of activities.





*Cotswold Gliding Club, Aston Down*

I attached myself to the first group and received the initial safety briefings by India Morrell (BGA programme co-ordinator).

First stop was one of the glider hangars containing some of the oldest gliders flying (think Slingsby Sedbergh here) to the most modern. Adrian (CGC Membership Secretary and instructor) encouraged questions, explained how the controls worked and gave enough time for most of the students to be able to sit in a glider cockpit.

Some 45min later, the students were back in the classroom for India to deliver a demonstrated talk on how wings and controls work, as well as the effect of changes in weight and balance. The third visit was to the gliding simulator. Every student from all three groups was offered a flight: it was obvious just how much the students enjoyed this part of the day.

The final session brought all the students together again. There was a good deal of questioning from both sides and the final written quiz showed a pleasing number of questions answered correctly from the morning's exercise. Clearly, they had been listening.

The APYGS gliding day took place on 13<sup>th</sup> August. The students were actively encouraged to take part in all the work it takes to move a glider out of the hangar, towing to the runway and preparing for flight. Retrievals were done by the students, some driving the buggies with an enthusiasm beyond their years. Mike Weston, the CFI, gave a thorough safety briefing on the cockpit layout, function of the controls and use of the parachute supplied. Aerotows would be used for all the launches and flights generally lasted between 20 and 30min.

As always seems to be the case at these events, when they arrived in the morning, the students were subdued and unsure; by the afternoon and end of gliding, they were relaxed, mixing well and enthusiastic to come back for more - a good result. The CGC staff were warm, engaging, patient and watchful throughout a long day and we owe them a huge thanks.

## YORKSHIRE AND SOUTHDOWN GLIDING CLUBS – ASSISTANT PETE TAYLOR

Southdown GC and Yorkshire GC were two welcome additions to this year's Youth Gliding Scheme. Both clubs hosted BGA Go Gliding STEM days with 20 students each from local schools and community groups. The top 12 students from each day were then selected to take part in an APYGS flying day during which they would receive a trial flight in one of the clubs' gliders.

I was lucky enough to attend the Go Gliding day at Southdown in June. The day was hosted by India Morrell and Liz Sparrow from the BGA and comprised lessons on STEM subjects, simulator flights and visits to gliders on the airfield. All of the students were very enthusiastic throughout the whole day, and it was a challenge to pick the top 12 at the end of the event.

Flying was planned for 7<sup>th</sup> and 14<sup>th</sup> July. Unfortunately, poor weather precluded any flying on the 7<sup>th</sup>; however, the "can do" attitude of all of the staff members at the gliding club resulted in all of the students flying on the 14<sup>th</sup>. Southdown reported that all of the students were utterly thrilled with the experience, and several took up club membership to carry on with their flying journey.



*Yorkshire Gliding Club at Sutton Bank*

Following a BGA Go Gliding event at Yorkshire Gliding Club, the APYGS flying day was set for 20<sup>th</sup> July. As the photos show, it was an absolutely glorious, sunny day with the Yorkshire Dales providing a stunning back drop. With the safety brief complete, the day's flying began, and each student spent around 30min in the air. It was amazing to see the team spirit developing so rapidly within the group. Once the glider lands, it has to be manhandled back to the launch point, and there was no lack of enthusiasm from the students to get this done. Post-flight, the students engaged in some serious pilot talk about what they had just experienced in the air – it seemed like they'd certainly got the bug! □

# AFFILIATED UNIT PROFILE: XIII SQUADRON RAF



*By Flt Lt Ollie Daniels*

It is not a secret that drones, or more properly, Remotely Piloted Aircraft Systems (RPAS), and specifically military RPAS, are the bogeymen of aviation in many people's eyes. In many cases a level of media sensationalism surrounds their use in a military context, resulting in misconceptions within the public about how they function, who controls them, and how they are utilised. Indeed, even aviation enthusiasts are not immune from these misconceptions, which are invariably compounded by the inherent levels of secrecy synonymous with the sorts of missions that RAF RPAS undertake.



*The Reaper will shortly be replaced by the Protector in XIII Sqn service (all pictures Crown copyright/MoD)*

Currently, the only RPAS fully in service with the RAF is the General Dynamics MQ-9A Reaper, flown by aircrew on XIII Squadron from RAF Waddington. The personnel conduct missions from inside a Ground Control Station (GCS) that is often thousands of miles away from the aircraft. This GCS acts as the cockpit of the aircraft, and the nature of the missions given to Reaper means the crew often have a better understanding of the pattern of life and reality of the tasking area than many conventionally crewed assets.

## WORLD WAR ONE ORIGINS

XIII Sqn formed on 10<sup>th</sup> January 1915, and was assigned to Army Co-Operation tasks during World War One. As World War Two broke out, XIII deployed to France, flying the Westland Lysander, until it was re-fitted with the Bristol Blenheim, contributing to the 1,000 Bomber Raids and Dieppe Raid. The squadron then deployed to North Africa in the light bomber role and as pathfinders for the heavy bomber force in 1942. After World War Two, XIII was re-assigned as a reconnaissance squadron and performed duties around the Mediterranean until it was disbanded in 1981. Reformed in 1990 at RAF Honington and equipped with the Panavia Tornado, the squadron

was assigned to reconnaissance duties during the first Gulf War, conducting the RAF's first and last offensive strikes and earning the nickname 'SCUD Hunters'. The squadron moved to RAF Marham in 1994 and flew in the second Gulf War in 2003. In 2010 the squadron deployed to Afghanistan as part of Operation HERRICK before deploying on Operation ELLAMY over Libya in 2011.

The squadron reformed in 2012 at RAF Waddington, equipped with the MQ-9A Reaper. It flew its first Reaper mission in 2013 on Op HERRICK over Afghanistan, and in 2014 the squadron found itself operating in two geographically disparate theatres as Operation SHADER over Iraq/Syria began. While UK Reaper missions in Afghanistan ceased at the end of 2014, the squadron has remained committed to continuous operations. Alongside Op SHADER, XIII Sqn is capable of responding to emerging situations including supporting evacuation of persons from conflict zones or engaging with emerging adversaries.

## CREW OF THREE

The RAF's Reapers are operated by a crew of three, with a pilot, sensor operator (SO), and mission intelligence co-ordinator (MIC) controlling the aircraft for the duration of the sortie. The pilot's role is self-explanatory, and all aviation backgrounds are present on XIII Sqn with fast jet, rotary, and multi-engine pilots, as well as direct entrant personnel who have never flown other operational aircraft. The pilot will also be the captain of the aircraft and has final say and launch authority over any weapons.

It is important to note that the pilots go through the same elementary flying training (EFT) course as they would on any other platform, and a recent change has resulted in 'RPAS Pilot' established as the fourth option that students going through EFT could be streamed to. This step change in the way the RAF views RPA operations, as no longer the 'ugly stepchild', acknowledges the increasingly vital and futureproof role that these aircraft have in conducting operations.

The SO primarily controls the camera of the aircraft, mounted underneath the nose. During critical stages of flight and when transiting to the tasking location, this camera is typically in a neutral position, looking directly ahead to give situational awareness to the crew. Once on task, the camera will be used to gather intelligence on the tasking area, using full-motion video to provide whatever service is requested of Reaper. Given the large amounts of information coming into the GCS, the SO will





*The Ground Control Station allows pilots to fly from thousands of miles distance*

often act as a co-pilot for the captain, assisting with fuel planning, airspace, and emergencies. On weapons events the SO will operate the laser to guide the weapon to the target. This is a commissioned or non-commissioned role (WSO/WSOp), and there is a mix of experience from ex-Tornado navigators to direct entrants.

The MIC is the primary liaison with external agencies that oversee the sortie for that day. MICs are service personnel from an intelligence background and ensure the intent behind the mission is met by giving the crew more precise information pertaining to the target. The MIC is linked into other intelligence agencies within the RAF, allowing them to build a greater level of situational awareness and update the crew in near real-time as situations change.

### UNCOMPLICATED CONTROLS

The method in which a Reaper is controlled is not as complicated as it may first appear. As an example, a pilot sitting in the GCS at RAF Waddington commands a 20° right bank via the control stick just as in a conventional aircraft. This command is then relayed to a satellite dish which beams the signal to a satellite. This in turn sends it to the aircraft, which carries out the function it has been commanded to do. The data from the aircraft, including the 'feed' (the video imagery of what the camera is looking at), aircraft positional data, and other avionics data are then sent back along the reverse pathway. This entire process takes less than two seconds. There is no point at which the aircraft is not under the control of its crew members, but this dislocation between aircrew and aircraft invariably adds to some of the speculation and misinformation surrounding the platform.

Behind all of this sits an extensive team designed to provide support to UK Reaper operations. XIII Sqn has dedicated personnel for briefing the weather in theatre, a team of intelligence analysts, operations support, and a host of US and UK contractors that assist with the maintenance and systems of the aircraft. Other RAF squadrons provide support to Reaper missions,

analysing intelligence and disseminating it as required, providing a bridge between the operational squadron and those units that it supports. Sitting above all of this, in 83 Expeditionary Air Group's headquarters in Qatar, is a team that provides the legal and political basis for Reaper operations. In the event of a potential weapons engagement, a board including a lawyer, a policy advisor and a targeteer will provide advice to a senior RAF officer, who provides oversight and approvals for operations.

### CLOSE MONITORING

XIII Sqn is a well-oiled and closely monitored machine. There are several mitigations in place to ensure that every sortie flown is compliant with UK policy and international law, with the first, and most important, of these being well-trained crews. Every person who has interacted with XIII Squadron has heard the same stories - that Reaper is operated by computer gamers who are so disconnected from the reality of the situation that they essentially carry out weapon engagements at will. This could not be further from the truth.

XIII Sqn's taskings are monitored more closely, and are under more scrutiny, than those of any other operational squadron. The crews are well trained to operate under immense pressure and, whilst there is no physical risk to the aircrew, every sortie that is flown is in defence of the UK and its population. This is ingrained in the mind of every member of XIII. As the former Chief of the Air Staff, ACM Sir Michael Wigston said: "As Reaper has shown in Iraq and Syria in the last eight years, that is the lethal arm of defence. Other parts of defence would consider themselves to have that title, but it is actually air power and Reaper. The Reaper force has taken 1,400 enemy combatants off the battlefield."



*Reaper: "A lethal arm of defence" with no physical risk to aircrew*

Reaper is an aircraft at the forefront of technology, which will only be improved upon by the upgraded MQ-9B 'Protector' soon to be in service. This will be flown by XIII Sqn after Reaper operations conclude. □



# ATLAS SPANS THE GLOBE

*By Liveryman Sqn Ldr Hedley Myers*

In summer 2023, I deployed as Aircraft Commander of an RAF Airbus A400M

Atlas bound for the Pacific alongside a RAF Airbus A330 MRTT Voyager tanker aircraft to participate in the largest exercise so far of its type, the US-led Ex MOBILITY GUARDIAN 23. Air mobility assets from France, Japan, Australia, New Zealand, Canada and the UK joined US colleagues at Andersen Air Force Base on the island of Guam in the Western Pacific.

A total of 78 aircraft took part in this and adjacent exercises in the Pacific region in order to practise and demonstrate the ability to work together across the Pacific's expanse to defy what Gen Mike Minihan, Commander of US Air Mobility Command, described as "...the tyranny of distance". To prove the A400M's global-reach capability, crews from 24, 30 and 70 Sqns flew direct from RAF Brize Norton, UK, to Guam non-stop, covering the near-8,000 nautical miles in 20h 36min – a record-breaking effort and the first for this aircraft type. The aircraft not only carried its own equipment, but also had a full freight bay loaded with a ground power set, specialist medical equipment and stretcher fits for the Critical Care Air Support Team (CCAST), and general exercise freight to ensure the detachment was self-sufficient upon arrival.



*The record-breaking Atlas crew at Brize Norton (all pictures via Author)*

Each of the three crews on board took a turn at operating and resting whilst not on duty. My crew and I flew the last 8h leg of the long-range insertion, taking the controls as we coasted out from Alaska into the expanse of the Pacific. The crew rest facilities in the freight bay of the A400M were rudimentary, but air mobility crews are used to making the most of any situation, so strung

hammocks above the freight and placed camp mattresses with sleeping bags in any available space to get good rest during the journey. The Air Loadmasters made the back of the aircraft as cold, dark and quiet as possible to aid sleeping and always had hot drinks and meals available. When crews were not trying to sleep, many of them could be seen watching movies on tablets, reading or listening to music.



*The makeshift crew rest area aboard the A400M*

## GREAT CIRCLE ROUTE

The mission used a polar great-circle route with the first Air-to-Air Refuelling (AAR) bracket over Greenland supported by a Voyager aircraft from the UK. Flt Lt Adam Roche (24 Sqn) and his crew conducted all three of the AAR brackets, allowing the other two crews to concentrate on the route planning. The second and third refuelling brackets over Alaska and the north pacific were supported by a forward-deployed Voyager, which after the final AAR bracket returned to Eielson Air Force Base, Alaska to refuel and swap crew. It then picked up the exercise passengers and continued to Guam to join the exercise the next day. The A400M Project Office, Flt Lt Jack Hamilton Barber (70 Squadron) commented that because of the extreme northern routing: "It was strange to fly for over 20h and remain in daylight the entire time". After the long oceanic transit with literally nothing to see, the Islands of Saipan, Tinian and Guam appeared, first on the radar and then could be seen ahead in the distance - green jewels in the expanse of bright blue – a welcome sight after the long haul.

As Flight Commander Training from 30 Sqn, responsible for all operational squadron training across the Atlas Force, I was tasked in the role of Atlas Detachment Commander. The UK Detachment Commander, Wg Cdr

'Fozzie' Foster, Deputy Commander Air Wing at RAF Brize Norton, led the small 54-strong RAF contingent supporting the A400M and Voyager with a lean engineering, admin and comms team. The Atlas team hit the ground running and was ready for tasking within hours of arrival, clearly demonstrating the key principles of agile combat employment (ACE) – keeping things moving in dynamic environments away from the support structures of established operating bases.

### STANDING IN FOR HERCULES

Because of delays in other partner nations deploying, the A400M crews were quickly put to work to deploy four Lockheed Martin C-130 Hercules loads of freight and passengers to Palau in the Philippines to enable a USAF Lockheed Martin F-35 deployment as part of a parallel exercise in the region. This task was easily completed in only two A400M moves, so an additional move was added to clear the backlog once the planners realised how much the A400M could move in one go, and that it's not merely a new Hercules. In practice the A400M can carry two to three times the load of a C-130 into the same small island airports whilst carrying the internal fuel load to return unsupported. This tempo of tasking continued throughout the exercise.

In addition to co-ordinating freight and passenger moves across the region, I was fortunate to be the UK lead for a Large Force Element airdrop using 11 aircraft from six nations. The air package comprised US, Canadian and Australian C-130Js, a Japanese C-130H, US and Australian Boeing C-17s with French and British A400Ms. The drop zone was the North Tinian airfield, now disused, that was the launch site of the Boeing B-29 *Enola Gay* on its historic missions in August 1945.

### JOINT MISSION

As Deputy Mission Commander of this first major multi-aircraft serial, my roles included driving forward a joint mission plan to exploit the capabilities of the varying aircraft types, whilst catering for the differing crew skillsets and operating procedures to ensure the 11 aircraft had a safe and executable plan to conduct a concentrated drop of stores (both live and simulated) - on time, on target! Timing and altitude contracts and a rigid deconfliction plan would be key to safety, and this plan was put into action on several occasions as a line of large thunderstorms impeded the recovery. Several aircraft, short on fuel, were forced to divert, whereas my crew and I enjoyed the A400M's impressive endurance with an extended sightseeing tour of the island chain and an hour in the hold drinking tea waiting for the weather to clear.

Other exercise serials included a multi-national search and rescue event where the French, British and Australians



*Air-to-air refuelling from RAF Voyagers was key to the record flight*

demonstrated their procedures for radar and visual search, followed by drops of rescue apparatus to a team of 'volunteers' bobbing around the Pacific in a dinghy. The planned mass Air Land serials to INFIL / EXFIL by day and night using Night Vision Goggles (NVGs), had to be cancelled because the island was still recovering from a recent typhoon that had caused severe damage across the region, including rendering the tactical landing zones (TLZs) unusable. To limit the chances of contaminating other islands in the region with the invasive arboreal Brown Tree Snake, the use of off-island TLZs at such a high operational tempo could not be supported by the snake check teams required to inspect all aircraft prior to every departure. The primary check of the freight bay and undercarriage areas could not be conducted safely by the dog teams for such a prolonged period or whilst the engines still were running.

### AEROMEDICAL INTEROPERABILITY

A key theme throughout the exercise was the interoperability of aeromedical evacuation (AE) teams and their capabilities. Numerous real-time medical flights put AE teams through their clinical paces with a mix of live (simulated) patients and sophisticated medical dummies that could present a plethora of complex medical conditions in flight, including the highest level exercised by the RAF's Critical Care Air Support Team (CCAST). The UK team was instrumental in the training of other nations





*Aeromedical missions were a vital part of MOBILITY GUARDIAN 23*

aboard our aircraft, but also employing British equipment and procedures on other nation's aircraft.

A prime example of this was a short-notice mission to take AE teams, led by the RAF team, on the A400M for a long-range task to Hawaii as part of a key leadership engagement event and demonstration. The 9h flight provided ample opportunity to practise a wide variety of patient handling and medical procedures. To demonstrate the versatility of the aircraft and role, the return leg was conducted overnight to meet the RAF Voyager tanker - itself returning from a night mission to support a fast jet exercise - over Wake Island at first light to conduct an AAR serial. This enabled the Atlas to land back at

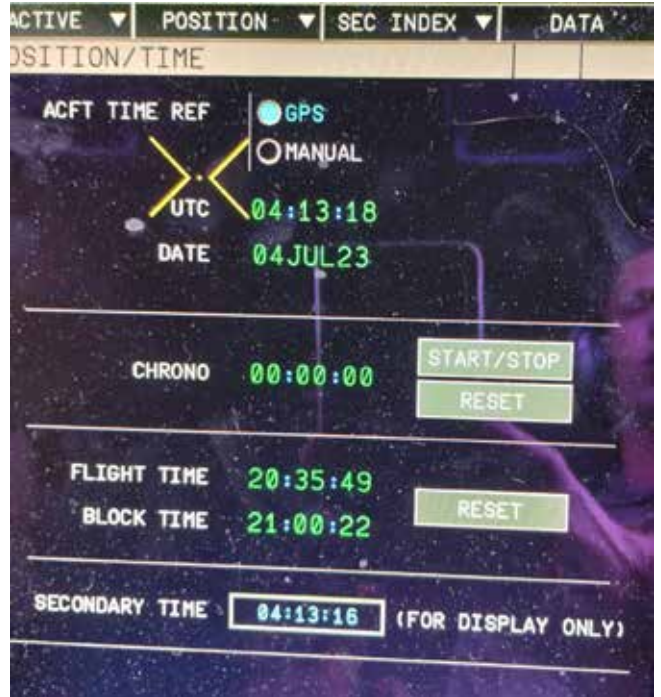


*Wake Island was one of the numerous bases visited on the exercise*

Andersen AFB with sufficient fuel to conduct an engine running offload (ERO) of AE staff and patients and a crew change to take the aircraft immediately on the mass Airdrop sortie for a further 5h. Every element of this ambitious plan worked seamlessly to prove the agility of the Atlas and its crews, and demonstrate they are real force multipliers and force enablers, especially within the ACE concept.

### ELEPHANT WALK

The two-week exercise culminated in a mass taxi of all deployed assets for a photoshoot known as an 'Elephant Walk'. The choreography to corral fast jets, transport aircraft, tankers and bombers from their remote parking locations to line up, in order, on the secondary runway was a detailed piece of art. However, the second element of French Rafale jets taxiing the wrong way was not considered in contingency planning and this induced a rapid re-plan over the radio to ensure all 23 aircraft were in order and facing the correct way!



*Proof on the FMS of a record-breaking non-stop flight for the A400M*

Since we had already flown more than halfway around the World, we just kept going West to complete a 'Global', recovering to the UK via Bangkok, the RAF detachment Al Minhad in UAE and RAF Akrotiri in Cyprus. It has been a great opportunity to join our coalition and partner nations in this exercise and to demonstrate first-hand the immense capability and versatility of the A400M Atlas, especially over vast distances to small airfields. All players have been very impressed with what we, the UK, can do and how we do it. We always had a queue of people wanting to fly with us! I am immensely pleased with all that we have achieved - 17 sorties in 12 days including AAR, Air Drop, Search and Rescue, AE, freighting... oh, and once round the world! I am very proud of the crews and small team of support personnel who have made this happen in such challenging conditions. A senior exercise commander commented "The A400M and the team are a credit to the RAF and have represented the UK to the highest standards – a 'BZ' (well done) to all involved". □



# A SHETLAND DIARY

By Liveryman Jeff Boyling

Following our brief mention of his Shetland mission in August's Air Pilot, Jeff Boyling gives a fuller account of his evocative mission.



The Catalina crew – author Jeff Boyling in centre

**May 2023:** I am visiting Shetland because of its connection with Consolidated PBY Catalinas. At Lerwick New Cemetery I note the Commonwealth War Graves Commission (CWGC) headstones and investigate. Two stand out: side-by-side are Flt Lt David Hornell VC and F/O John Dickson. The latter was in the crew of F/O John Cruickshank VC, the world's last surviving World War Two VC holder. The 80<sup>th</sup> anniversary of the award of these two VCs to RAF Coastal Command pilots flying Catalinas will be in 2024. I start thinking about how best to commemorate these two VC holders.

A plan covering key locations is prepared: Aberdeen (home to John Cruickshank), Lerwick New Cemetery, Sullom Voe and Wick (Catalina bases), RAF Lossiemouth (home to current RAF maritime fleet) and any Coastal Command base along the way.

The choice of aircraft is easy. Cruickshank was flying a Catalina of 210 Sqn RAF whereas Hornell was flying a Catalina (Consolidated Canso A amphibian) of 162 (BR) Sqn RCAF. The aircraft I fly is G-PBYA, a Canso A built by Canadian Vickers at Carterville Quebec and operated by the Royal Canadian Air Force from 1943 until 1961. As the only Catalina still flying outside of the Americas it is the obvious choice for *Operation Shetland*.

A small and experienced crew is selected to assist me in carrying out Operation Shetland. I deal with the planning in terms of route, airports, fuel, transport and accommodation. G-PBYA is available during July and a decision is made on what days are significant, subject only to weather.

**Day 1, Tuesday 16<sup>th</sup> July:** I have already lost one pilot due to Covid-19 and the weather is not ideal. However, we get airborne out of IWM Duxford and head north, overflying a number of former RAF Coastal

Command stations including Leuchars and Woodhaven. In deteriorating weather, plans for a visual approach into EGPD Aberdeen change to a radar vectored ILS. After media interviews a wreath is laid at Aberdeen International Airport RAF Memorial.

**Day 2, Wednesday 17<sup>th</sup> July:** A very important day as it is 80 years to the day since the action in which Cruickshank won a VC. Leaving EGPD we orbit his Aberdeen home to see him sitting outside waving. Then we fly back over the airport for a low approach (floats down but gear up) and go-around. A left turn has us heading to RAF Lossiemouth, also commemorating the day and a Catalina doing a low pass is an

added bonus! After arriving in Sumburgh wreaths are laid on the graves of Hornell and Dickson at Lerwick New Cemetery and at the Sullom Voe Flying Boat Memorial.



The graves of F/O Dickson and Flt Lt Hornell VC

**Day 3, Thursday 18<sup>th</sup> July:** A local flight over Lerwick New Cemetery, a Catalina crash site on Yell and Sullom Voe (where Cruickshank beached his badly shot-up Cat) before heading to Wick where a wreath is laid at a memorial to Hornell VC.

**Day 4, Friday 19<sup>th</sup> July:** A busy day with four sectors to fly. First, off to RAF Lossiemouth to meet the AOCS Air Cdre Bill Gibson, senior officers and some of the Poseidon crews. Then to Inverness via the Tain Air Weapons Range. The only things at this former Coastal Command station are the floats. A short local flight to thank those who helped G-PBYA back in 2020 takes in Alness and Invergordon former Coastal Command stations. Last stop is Oban, home to Catalinas and Shorts Sunderlands in World War Two.

**Day 5, Saturday 20<sup>th</sup> July:** Return to Duxford. It is hard to see the Catalina crash site on Jura, and both Wig Bay and Stranraer are bypassed because of the weather. Back at base four hours later the crew take stock of 14h 26min of flying to commemorate two Catalina VC winners, their crews and the wider Coastal Command community. Duty done. Lest we forget!

[A fundraising page aimed at defraying the cost of undertaking this mission is still open at <https://www.gofundme.com/for-operation-shetland> - Ed]

□





# REBUILDING A GNAT

*By Upper Freeman Matt Wilcock*

In 1974, at the age of seven, I was given by my parents a book titled *Aircraft* by David Mondey, not to get me interested in aircraft but to continue to fuel my passion as I was already utterly and completely hooked. On the cover was a photo of the Red Arrows flying the diminutive Folland Gnat, which lit a long burning desire to fly one. I now own one of those very Gnats, ex-Red Arrows Gnat, XR987 which is currently under restoration in New Zealand and this is how it all came to happen.

I had been involved in a few aircraft syndicates, and it was always great to meet other warbird enthusiasts, but the desire to own an aeroplane that I could really call my own was a very strong pull. So in 2016 I started to trawl the pages of various aircraft selling websites. I quickly noticed a few Gnats for sale, which seriously piqued my interest.

Knowing it was high-performance aircraft, I contacted the CAA in New Zealand to ask if there were any restrictions on importing and operating such a type: happily I was told that there were none, and that the aircraft would be classed as an experimental type. Also luckily for me, at the airline where I work were a number of ex-RAF fast-jet pilots and a few of them had been QFIs on Gnats and ex-Red Arrows pilots, so I asked a lot of questions of them around operating such a jet, and was assured it was the most fun you could have with your clothes on!



*XR987 in Yellowjacks days*

## THE CHOICE

In May 2019 I decided to go and view two Gnats, one that had been on the market for quite some time near San Diego and another new to market in Florida. Having only five days off work made for a very compacted trip, however after looking at both jets I settled on XR987 in Florida. I then began the process of looking for an

engineer to go and assess the Gnat and was lucky enough to find a gentleman in Australia with long experience in the RAF as an engineer on this generation of jets, and since leaving the service he had been involved with many Gnat and Hunter projects. His assessment was that XR987 was in very good condition, and it also came with a huge amount of spares which ultimately turned out to



*It all fits in by a Gnat's whisker!*

be almost two full 40ft containers of spare parts.

So began the sales process, which was fairly straightforward, beginning with the seller putting me in touch with an escrow company in the USA which handled the money transfers. This company also did title searches while the sales broker drew up the sale and purchase agreement. Once the sale was completed it was time for the engineer to head back to Florida to disassemble the Gnat and put her in containers for the long journey to New Zealand. This was completed in August 2019 - according to the engineers, the very worst time of year to do so! The heat, thunderstorms and associated rain along with the occasional threat of a hurricane made the entire process more challenging than normal.

## GETTING CLEARANCE

With the Gnat now packed up and ready to go, the next step was obtaining an export clearance, a fairly straightforward process I thought. Enter the DDTC or Defense Department of Trade Control, a military agency in the Pentagon which oversees all military equipment sales and export. The export of any military equipment, no matter how small or large, falls under ITAR, International Trade in Arms Regulations. To put it bluntly, exporting any military equipment from the USA





*Coming back together*

is a long and very painful process, and despite the Gnat not being armed, or even American, it is covered by these regulations. After many months of frustration in June 2020 I employed a legal firm which specialises in dealing with ITAR and the DDTTC on matters of exporting military equipment and in August 2020 I finally received export clearance, something I was beginning to think was never going to happen.

Export clearance obtained, I thought it prudent to get the Gnat underway as soon as possible and in October 2020 she was booked to leave Port Everglades Florida enroute to the Port of Tauranga on New Zealand's east coast, via Cartagena, Colombia. Just to add to the hurdles, Covid-19 was at this point wreaking havoc around the world, so when XR987 arrived in mid-December 2020, I wasn't able to be there to see her as she was unloaded. Enter my friend Andrew Gormlie at the wonderful Classic Flyers Museum at Tauranga airport, who gathered together a work party of volunteers and unloaded XR987 from the containers and into their hangar where she was a very popular resident, even without her wings attached! With Covid-19 continuing its impact, New Zealand was essentially closed up, externally and internally, so getting any work done was next to impossible and the Gnat was grounded and sat for many months at the museum.

In January 2021 the decision was made to truck the Gnat to my engineer's shop, Aero Restorations, just south of the general aviation airport at Ardmore near Auckland, to begin the process of restoration. We were largely sailing into uncharted waters with the restoration as neither the engineers or myself had anticipated just how much work would be needed. When I purchased the Gnat, it was with the expectation that it was all-but airworthy and would need only some work done to bring it back up to a safe condition to fly.

## A FULL OVERHAUL

This, however, was not the case, and a full overhaul of the aircraft systems was deemed necessary to ensure the safest possible condition we could get the aircraft to prior to any flying being undertaken. To date, the entire hydraulic system, which is the lifeblood of the Gnat, has been completely overhauled with new seals, gaskets, hoses and various other equipment worked on to an all-but new condition. We are now at the stage where the tail will be re-attached and then we will begin full testing of all aircraft systems. When the Gnat was in the USA, the cockpit was upgraded to a more modern version and along with it the electrical system was completely rewired. Once this testing is complete, it will be time to look at the engine to ensure it is going to be ready to use: it is quite new in terms of Bristol Orpheus engines and it is in very good



*The updated instrument panel*

condition having been only flown a few hours when it was operating in the USA.

During all this restoration work, my wife and I took a holiday to Europe and the UK in May 2023. I had been in touch with the Gnat Trust at North Weald and was able to organise a flight in one of its Gnats, XR538. That day is etched in my memory as it is, without question, the single most fun, exciting and memorable hour I have ever spent in any aircraft. I could not keep the smile from my face, and it gave a much needed boost to enthusiasm to get my own Gnat flying as soon as possible. I can't thank the guys at the Gnat Trust enough for taking me flying - it was simply fantastic fun!

The Gnat project has been at varying times a challenging, exciting, frustrating and seemingly never-ending journey however, with such great progress recently we can look forward to seeing a very historic aeroplane in the skies of New Zealand soon. □



# TIME TRAVEL BY TRIMOTOR

By Liveryman Dacre Watson

She was quite old, really; nearer to 90 years of age than any guess one would like to make. Her belly seemed to hang heavy towards the ground, her dignity only being maintained by a small tail wheel barely strong enough for the job. Powered by three Wright Whirlwind engines heavily exposed to the airflow for cooling, her nose pointed skywards, giving an illusion of a somewhat aged and corpulent grasshopper contemplating one last effort to get airborne.



Dacre's father (R) with Fairchild FC-2

Yet, in her day, from 1929, and for a few short years until the arrival of the Douglas DC-2, the Ford Trimotor was the only airliner which could cross the Andes between Santiago and Mendoza with any vague sense of regularity. She replaced the Fairchild FC-2 which could only achieve the altitude required (15,000ft) to fly through the Uspallata Pass if it carried no passengers with the mail and, even then, the weather had to be good.

My father's second flight in an airliner was on a Panagra (Pan American Grace) Trimotor from Santiago to Buenos Aires with many stops *en route* in about 1932. It says much about the flight that he returned to Santiago by train.



Similar to the Panagra Ford - LanChile's Trimotor

It was, at that time, a flight for the brave, and as often as not the aircraft would return to its departure point (Santiago or Mendoza) having been advised of bad weather in the Uspallata Pass. This advice came courtesy of two meteorologists stationed high in the Pass at some

14,000ft and where they lived for three months at a time.

The procedure was that the Trimotor would get airborne from, say, Santiago flying north to Los Andes, climbing all the time to 15,000ft which was considered the minimum height for a safe crossing. Once near the western entrance to the Pass, contact would be made by WT with the Met Station which would then pass an assessment of the conditions to be expected for the crossing. The flight was always



Period Panagra publicity

turbulent and windy and beset by frequent snowstorms. So, at Oshkosh, I was about to emulate my father's flight on a Ford Trimotor some 90 years after his first and only flight in such a craft. True, on this occasion, the weather was benign while the terrain presented no challenges.



The Oshkosh Trimotor

My flight only lasted 30min, but I had fulfilled a long-held dream. There were, literally, hundreds of aircraft present at Oshkosh, but for me, the Trimotor was the only one I saw. [Dacre's flight was in the 1929 Ford 4-AT-E Trimotor NC8407, owned by the Experimental Aircraft Association and based at Oshkosh - Ed]

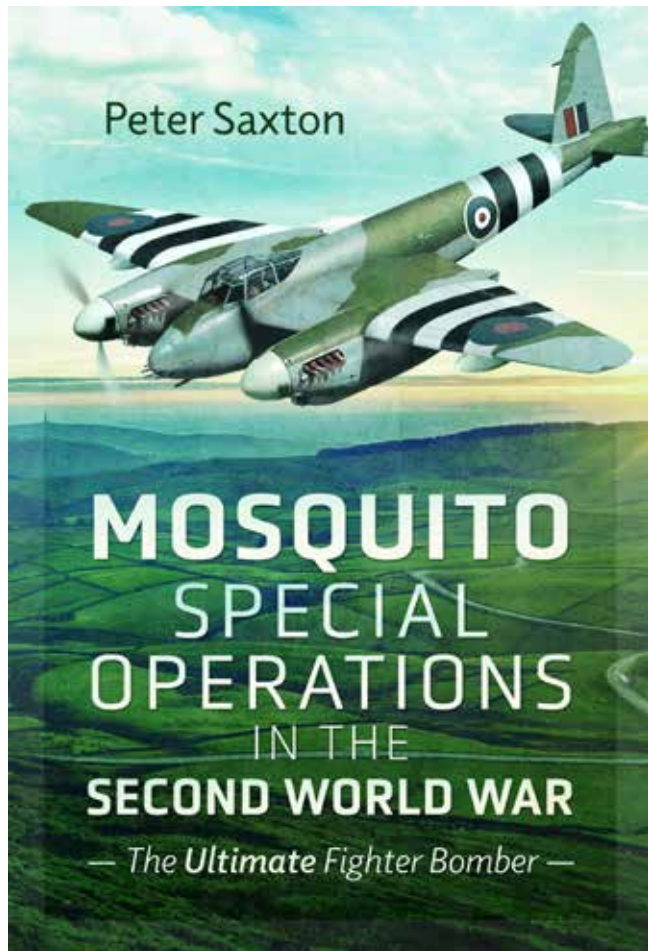
Dream fulfilled - the view Dacre's father might have enjoyed





# BOOK REVIEW: *MOSQUITO SPECIAL OPERATIONS IN THE SECOND WORLD WAR* by Peter Saxton

Reviewed by PM Chris Hodgkinson



There have been many books about this aircraft, the genius design concept of Sir Geoffrey de Havilland but this, by Upper Freeman Dr Peter Saxton, is the first to concentrate on the 'Special Operations' for which it was eventually used. The quotation from Reichsmarschall Hermann Göring neatly encapsulates the German assessment of the aircraft: "It makes me furious when I see the Mosquito. I run green and yellow with envy". Built almost entirely of wood, the Mosquito was conceived as an unarmed light bomber and, while it was successful in this role, it evolved into a U-boat hunter, ground attack fighter bomber, shipping strike, night fighter and reconnaissance machine and with an almost unlimited list of other roles.

The ex-RAF pilot author, who had served in Special Ops whilst in the military, details the main Special Duties roles developed during the war for use by this remarkable aircraft. These included, but were not limited to, intruder operations, where AI radar-equipped night fighters were

released to hunt over Western Europe by night. Intruders were ordered to concentrate on the disruption of airfields and aircraft, leaving the transport infrastructure to Bomber Command. Later the squadrons were re-briefed to concentrate on shooting down Luftwaffe bombers returning from raids on the UK, either by infiltrating the returning streams or hanging around over the Luftwaffe bases all over Northern Europe, waiting for enemy aircraft to return.

Everyone knows about 617 Sqn and the Barnes-Wallis bouncing *Upkeep* bombs, but fewer know about 618 Sqn formed for a single purpose – to carry similarly backwards-rotating but smaller *Highball* spherical mines. A little-known Special Duty was the elimination of local Gestapo HQ forces in various locations and destroying their records to protect personnel involved with the Resistance.



*Mosquito used for Highball trials (c) Crown Copyright IWM)*

Although not a long book, it succinctly details several 'Special Operations' roles that many may well not have been aware of, made possible by this very special de Havilland aircraft which was both versatile and speedy. *Mosquito Special Operations in the Second World War – The Ultimate Fighter-Bomber*, By Peter Saxton: 144pp, hardback; published by Pen & Sword Aviation, [www.pen-and-sword.co.uk](http://www.pen-and-sword.co.uk); ISBN: 9781399059480; £22.00 □

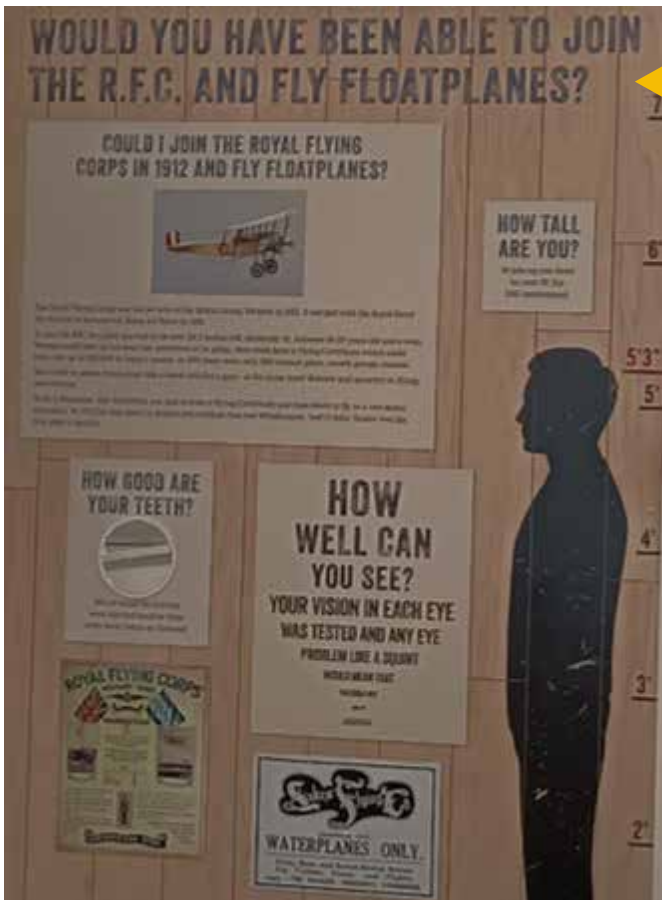
## CORRECTION

In our article Dakotas for D-Day (August p22) we incorrectly reported that Dakota-towed gliders led the assault on Pegasus Bridge. In fact the first six Horsa gliders were towed by Handley Page Halifax aircraft of 298 Sqn, Tarrant Rushton.



# INTO THE OVERSHOOT

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



## WATERBIRD'S NEW NEST

The Waterbird project, where Freeman Anne Hughes is a Trustee, has been given permanent exhibition space at Windermere Library, next to the story of the Windermere Children in adjoining rooms. These children were rescued from Auschwitz and moved into the Sunderland workers' vacated accommodation in 1945.

Edward Wakefield's 1911 seaplane *Waterbird* led to aviation activity on Windermere, culminating in Short Sunderland flying boats being built there in World War Two. A wall in the first room encourages young people to consider the requirements for joining the RFC in 1912 by involving them in checking out height and physical fitness along with the questions that were asked of applicants. The second room tells of the 1911 *Waterbird* along with other aircraft flown in 1912, and the RNAS which was based on the lake in World War One, along with the story of the replica flown annually at Windermere. □

## BREWERY DOGS

Behind the sinister sunglasses, members might recognise a number of PMs and other members of the Court, at an impromptu pre-Court Meeting (organised by PM Keegan), at the 10<sup>th</sup> Anniversary City Beerfest, held in Guildhall Yard. They are: PM Robin Keegan, Assistant Pat Voigt, PM Jonathon Legat, Master-Elect John Denyer, PM Mike Grayburn, PM Michael Fopp, Warden Dave Singleton. Photo by Warden Elizabeth Walkinshaw, sunglasses by Rivertown Brewery. □



## STAND UP FOR GLIDING

Assistant Grp Capt Baz Dale, Commandant of Company Affiliated Unit 2 Flying Training School, was on hand on 1<sup>st</sup> September when the newly stood-up 612 Volunteer Gliding Squadron (VGS) flew its first cadet from RAF Little Rissington. Previously flying from Abingdon Airfield until 2014, 612 VGS is now delivering RAF Air Cadet gliding opportunities, ranging from initial gliding induction flights through to Gliding Scholarships and advanced gliding training.

The stand-up of 612 VGS brings together volunteers from 621 and 637 Volunteer Gliding Squadrons. On the day, Assistant Dale re-presented the official painting of the 612 VGS badge to its current Officer Commanding, Sqd Ldr Phil Woods RAFAC. □