December 2016

AIRCRAFT OWNER & PILOT

The official magazine of the Aircraft Owners and Pilots Association

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AIRCRAFT OWNER & PILOT

December 2016

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Published by:
First Aerospace Media Ltd
Hangar 9 Redhill Aerodrome
Redhill RH1 5JY
Tel. +44 (0) 1737 200948

Advertising/Subscriptions:
AOPA UK
The British Light Aviation Centre
50A Cambridge Street
London Sw1V 4QQ
Tel. +44 (0) 20 7834 5631

Head of Advertising: David Impey
Tel. +44 (0) 7742 605338
Printing: Holbrooks Printers Ltd

Articles, photographs and news items from AOPA members and other readers are welcomed. Please send to the Editor. Inclusion of material in *Aircraft Owner & Pilot* cannot be guaranteed, and remains at the discretion of the Editor.

Material for consideration for the February 2017 issue should be received no later than 10th January 2017.

Cover image: Cessna Citation Longitude.

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Chairman's Message

From Strength to Strength

By George Done

It is a fact of life that the greatest concentration of general aviation activity occurs in south-east England. In the winter months, when weather tends to curtail flying, this makes London a relatively attractive place to hold meetings and seminars because of its good transport links.

In November 2015 the General Aviation Safety Council (GASCo - which is strongly supported by AOPA) held a safety evening in the premises of Hayward Aviation in the heart of the City of London. It was considered a great success so a repeat performance was organised at the same venue and time of year, and attracted more than 90 attendees.

For similar reasons, but on a smaller scale, the recent AOPA Flight Instructor Refresher Seminar was held, not at Abingdon, the usual venue, but in AOPA's own premises at 50a Cambridge Street close to Victoria Station. The feedback obtained from the participants was very positive, and the venue will be used again. Our editor, Ian Sheppard, who recently gained his Instructor Rating, attended and provides his observations on page 38.

AOPA Flight Instructor Refresher Seminars were launched, with CAA approval, 16 years ago by the AOPA Instructor Committee, under the chairmanship of the late Ted Girdler. They are now run by David Scouller, who took over from Ted as chairman, and organised by John Pett, AOPA Board member.

The CAA continues to monitor and approve the seminars on a regular basis. The Instructor Committee has, for decades, been the birthplace for many innovative initiatives in the area of flight training and piloting skills development. These include the IMC Rating (now IR(R)), the Aerobatics Certificate, the Ground Instructor Certificate and the embryonic NPPL.

The AOPA Wings Scheme came into existence in 2003 and was recognised by the CAA in 2015 under its PROUD Scheme ("Pilot Recognition for Operational Up-skilling and Development"). This ability to contribute positively to the wellbeing of general aviation is one of AOPA's great strengths.

Eight years ago, David handed over the chairmanship of the committee to Geoffrey Boot, Vice Chairman of AOPA. Geoffrey is a well-known personality in GA circles due to his air racing activities, with his wife, Suzi. Perhaps less well known, he served as a member of the Airprox Board for many years.

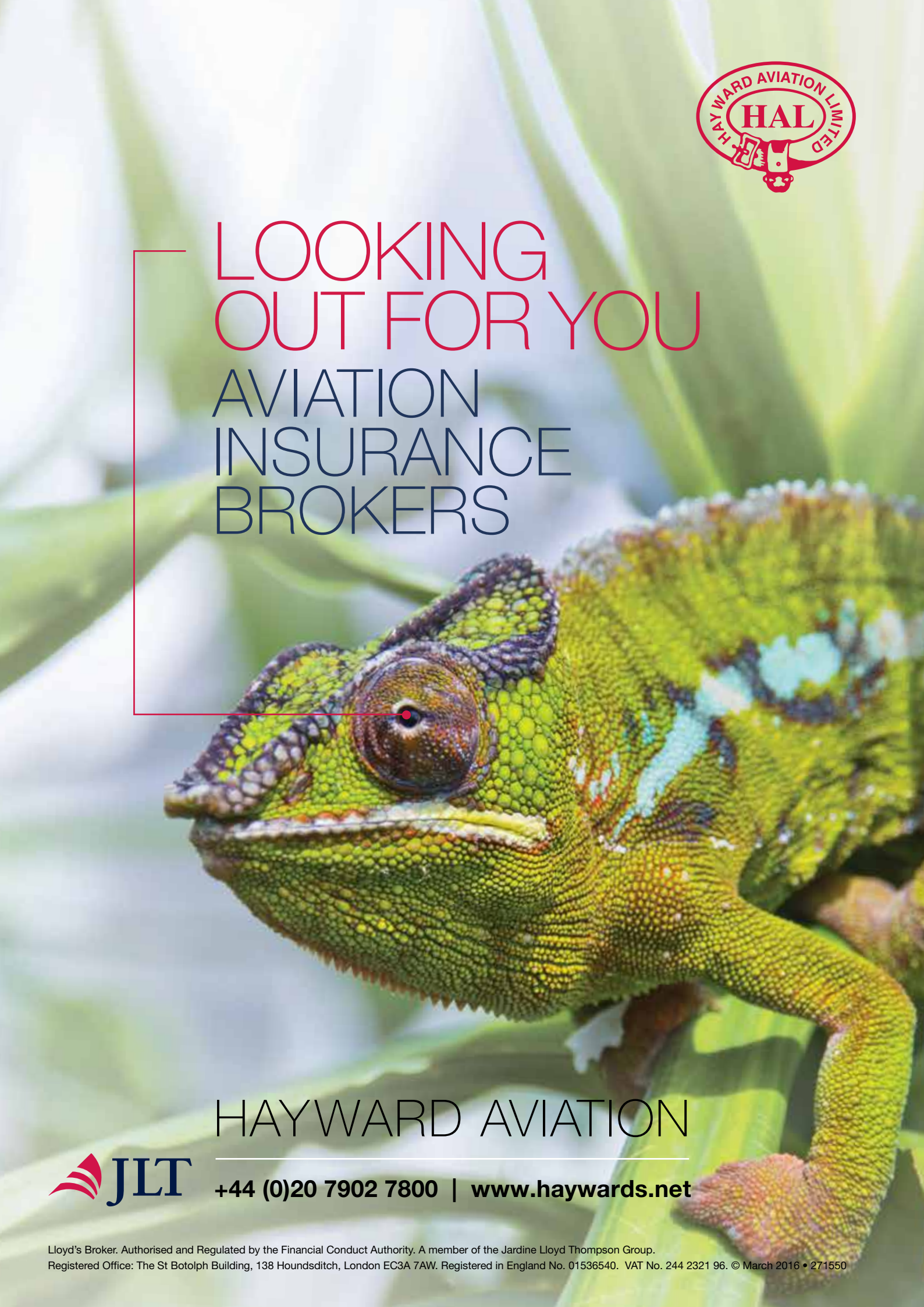
Aside from AOPA, Geoffrey has always had a keen interest in politics, to the extent that he has now been elected to the Isle of Man (where he lives) Parliament as a Member of the House of Keys (MHK), and has been appointed as Minister for Environment, Food and Agriculture.

"We are extremely fortunate that Ian Marshall has agreed to take over from Geoffrey Boot as chair of the Instructor Committee."

His ministerial duties are now such that he is unable to devote as much time as before to AOPA, and has had to resign as Vice President and from the chair of the Instructor Committee. We will miss his cheery outlook, and we thank him for his dedication to AOPA and wish him every success in his future political life.

The depth and strength of AOPA is such that we are extremely fortunate that long-standing member of the Instructor Committee, Ian Marshall, has agreed to take over from Geoffrey. Ian has served with bmi as senior management Captain but never left his GA roots behind, having been an instructor/examiner for 35 years.

There will be more about Ian, and the future direction of the Instructor Committee, in the next (February) issue of *Aircraft Owner & Pilot*.



AIRCRAFT OWNER & PILOT

Editorial

By Ian Sheppard

Small World...

It's often said that aviation is a small world, and after 20+ years as an aviation journalist I am finding this more than ever. Take JMR's (Mike Ramsden's) new book, for example. I started out with Mike at the Royal Aeronautical Society in August 1993. He was about to retire for the second time - he had taken over as editor of *Aerospace* magazine when he retired from *Flight International* after many years at the helm.

Mike's new book is about Sir Geoffrey de Havilland, and has been expertly reviewed (as ever) by David Ogilvy (p43).

As I write this I am in Windhoek en route to Lusaka (then Dubai) from Cape Town. In Cape Town I was fortunate enough to have a guided tour of Stellenbosch Airfield by AOPA South Africa treasurer, Peter Blaine. There, under a cover, they have a de Havilland Vampire! (See page 36).

And of course on this page there is another DH aircraft - although the main historical focus in this issue is on Miles Aircraft, thanks to Peter Amos (p28).

Another 'small world' thing happened when I went to "shoot" some GPS approaches in Florida (they have so many!) only to find the instructor (Tony Pool) used to work with my Instructor Rating instructor, Jill Develin. More about the FAA IR in Feb's issue.

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AVIATION SERVICES

Chief Executive's Diary

A Fresh Approach

By Martin Robinson

CEO, AOPA UK

Whenever I sit down to write the diary pages for the magazine I surprise myself at the volume of work that goes on through AOPA.

As you know, the CAA has secured funding in support of 8.33kHz radios, i.e. 20%, although (at the time of writing) we are still waiting for the CAA to announce how they will handle the transactions.

While this issue may be new to many members, this funding has been made possible because of the work that was done by IAOPA when the Single European Sky rules were being developed between 2004 and 2006. It highlights the long-term protection that AOPA/IAOPA engages in on behalf of general aviation – so, for me, 8.33 is not a new subject.

The CAA has our thanks for making the application and you, the member, should be able to backdate your claim for the 20% (so long as your purchase was not made before the date of the CAA's application, which was earlier this year).

I am also working on low-cost loans to be made available through European funding arrangements.

3rd October

I attended a meeting of the GNSS Approaches for General Aviation (GAGA) group. Attending this meeting were Ken Ashton and Philip Church – AOPA UK/Helios successfully bid for funding to support the development and introduction of LPV approaches at to two or three GA aerodromes. These aerodromes will benefit from up to 60% funding and a professional team who will help to deliver LPV approaches in line with the requirements of CAP 1122 (and CAP 765 where it is applicable). This project will deliver, upon completion, enhanced safety and increased business opportunities at these aerodromes.

4th October

The General Business Aviation Strategic Forum (GBASF) Finance Sub-Group at the CAA met. Unfortunately, there is still a large under-recovery of the CAA's fees as they apply to the GA Unit.

I think that, in the end, the CAA will have to accept that there will always be a level of under-recovery from GA. However, having a well-organised and safe GA operation in the UK is of benefit to all airport/airspace users.

> ***"...Project [GAGA] will deliver, upon completion, enhanced safety and increased business opportunities at these aerodromes."***

6th October

I attended a meeting at the Home Office regarding changes later next year in relation to the eGAR (Electronic General Aviation Report system). We have had an assurance from the Home Office that existing eGAR systems will remain, but the Home Office will also have an eGAR portal because in the future no paper form of eGAR will be accepted. European pilots flying into the UK will also need to use the eGAR system.

7th-9th October

IAOPA Europe held its Regional Meeting in Bucharest, Romania. The meeting covered issues that included FCL matters – GNSS, airspace, EASA etc. Discussions included how to improve communications, such as the IAOPA Europe eNews and the iaopa.eu website.

There was also a debate about 'Brexit' and whether it was appropriate for the leadership of the region to continue to come from a state that has voted to leave the EU. As a result of the discussion I decided not to seek re-election to the position of senior vice president IAOPA when my term ends on 31st December 2016.

24th October

Another meeting with a Home Office representative. AOPA has agreed to work with the Home Office to circulate information in respect to the eGAR portal that should be available within the next 12 months.

That afternoon there was a meeting with Dr Bruce Holmes, the author of the Small Aircraft Transportation System (SATS). This meeting also included NATs, Helios and AOPA. It was a futuristic look at how technology will play a greater role in air traffic management and airspace generally.

25th October

ICB/61 (Industry Consultation Body). This Group advises the Commission on all European airspace matters – the key points discussed included the Network Manager and the performance of the Route Network System – changes to the Network can impact the airspace that GA uses.

The Commission is seeking better use of Europe's airspace for all users and so changing the existing systems is a huge task, not just with service providers and users but also with EU Member States. The Chairman of the ICB has done a very good job, in my view, in pulling all the various elements together.

26th-27th October

These two days covered the work of the EASA Advisory Body which is going through a change where in future it will be known as the Stakeholder Advisory Body (SAB). I have held off writing

Chief Executive's Diary...

about these changes because I have been waiting to see how they will be rolled out.

I was around in 2002-3 when the Commission established, by way of a Regulation, the Advisory Body of Interested Parties (ABIP). To make it clearer the name was amended to EASA Advisory Body (EAB); its task was to advise the Management Board of EASA (Member States) about the industry's views on the work programme and finances.

In effect, the EAB was the independent voice of the industry. One of my major achievements on this Body eventually led to the development of the GA Road Map. However, I feel that given the current developments, the SAB (Stakeholder Advisory Body) will be far less independent.

Some of the current members of EAS/SAB have expressed concern over the involvement of EASA in deciding which individuals may or may not have a seat on the SAB. The Regulation remains unchanged in that it lists which organisations should be represented on the Body, and then leaves it to organisations to decide who they send, which is the right way to do it.

The SSCC (Safety Standard Consultation Committee), which reported directly to EASA, has effectively been dissolved – albeit 'tucked into' the SAB, whereas the EAB reported to the Management Board. In EASA's mind this may be more efficient (or more in the Agency's control) but, in my view, it leaves a big hole when it comes to an independent voice providing input on safety matters and financial aspects when it comes to the industry's role and impacts on it.

I think it removes a level of democracy. I am also surprised that the UK Management Board representative has not voiced an opinion about these changes. There needs to be an industry counter-balance, otherwise – as we have seen in the past – Regulators are not properly 'challenged' when it is appropriate to do so. Its role is now unclear.

Furthermore, as EASA does not pay for the representatives to attend the EAB/SAB, why should they have a say in who may attend? The industry must be able to hold EASA to account in a positive environment. EASA funding arrangements are now 70% from industry (via cost-recovery) and 30% from community funds.

Having said all of this, EASA is meant to be going into a 'cool-down' period as some Member States need to catch up on all of the changes.

9th November

There was a meeting at AOPA with SFC and CAT following the Government's announcement with respect to visas for foreign students seeking professional flight training. Again, thanks to the CAA and its CEO Andrew Haines for all the support on this issue (and in particular thanks should go to Peter Gardiner).

10th November

We had a meeting with Roger Hopkinson (LAA) and Marc Bailey (BBGA) to discuss the up-coming meeting with the CAA Board.

11th November

I attended the CAA Finance Advisory Committee – the main discussion was in relation to the CAA's transformation programme. There are clearly issues in relation to the CAA maintaining a level of 'business as normal', while also trying to manage change. I am aware of problems with the CAA's centralised services, because members have made me aware. So if you have problems that are not being addressed, please let AOPA know – send an e-mail to info@aopa.co.uk. We accept that change is difficult but it should be managed too.

The CAA consultation or its charging schemes is on the AOPA website but, generally speaking, there is a 1.5% average increase across all schemes other than air shows (which is much more).

12th November

The Members Working Group took place at White Waltham. Thank you to all those members who participated, and thanks to all who give up the occasional Saturday to support AOPA – many of the topics discussed are included in the pages of this magazine.

14th November

I met with Naveed Kapadia of Airways Aviation, Oxford – there was a discussion about opportunities in relation to attracting foreign students to the UK for professional flight training.

15th November

Members of the GBASF (Marc Bailey, Roger Hopkinson and I) had our annual meeting with the CAA to discuss the progress of the GA Strategy.

It was generally accepted that progress was being made but an awful lot has to be done if we wish to meet the Government's stated aim of making the UK the best place in the world for GA. Brexit was touched upon again and we, the GA industry, said we must look for new opportunities to grow UK GA.

16th November

Back to the CAA for a high level discussion with the authority and NATS about the on-going issue of infringements. This work continues and we will keep you updated.

17th November

The DfT hosted a Single European Sky update with some reference to Brexit. In short, there is no immediate change in the relationship with the Single European Sky – "We are in until we are out." So the work continues and AOPA continues to apply the maximum amount of resources to the workload.

Other Groups like the Corporate Members Group and the Instructor Committee, as well as the work of other individuals, mean that we cover all of the important issues facing GA.

Without your support we cannot do the work so a BIG thank you to all our members. If you know someone who is not a member, please tell them they need to join and give their support to the work that keeps us all flying.

Merry Christmas and Happy New Year!

AOPA: Working for You

Wings Scheme/Mentoring at Club Level Key to Increasing Pilot Numbers...

Report of MWG meeting, Saturday 12th November, White Waltham Airfield

The AOPA Members Working Group met at White Waltham on Saturday 12th November.

Members attending included David Chambers from Kemble, Anthony Kerios from Oxford and David Krill from Elstree (but moving to Bournemouth with his work).

The Wings Scheme was discussed first and it was decided that the 'pilot' scheme with White Waltham would be publicised as it developed so other airfields and flying clubs/schools could also decide if they might tie their own schemes in with AOPA Wings too.

Chris Royle noted that one White Waltham pilot had flown to 100 different airfields as a challenge, and suggested this might be something that can be recognised under the scheme. White Waltham also has Awards and a Pilot Awards Dinner each year.

Martin Robinson, AOPA CEO, said that more than 500 Wings certificates had been awarded over the approx. 8 years it had been running. And it is recognised under the CAA's Proud scheme ("After many years of trying to get the CAA to endorse it").

He said that AOPA was still not promoted to someone on issue of their PPL, although they are automatically entitled to Bronze Wings.

Pauline Vahey, MWG chair, said she hoped that an article could be published in AO&P in the February or April issue next year to update members on ow White Waltham was doing, "to show others how they can do it too."

Martin also said a lot of lapsed PPLs think it is prohibitively expensive to get back into flying, and note that the U.S. had a Rusty Pilots programme to help address this. It was suggested that Andy Torkington from 'Get Into Flying' and Ian Seager who runs Flyer magazine may help in this respect.

A discussion followed on mentoring and it was decided that the AOPA approach may need changing with more emphasis on encouraging mentoring in general rather than running a specific pairing scheme, putting inexperienced pilots with more experienced ones. The details are something that may be handled better at club/airfield level, it was suggested. Alan Burrill noted that there is a list of people that are willing to act as 'mentors' on the AOPA website.

It was suggested that members be invited to write in short accounts of flights where they had acted as mentors to other pilots for publication in AO&P.

The possibility of providing the eventual article about White Waltham's experience for publication in the magazines and newsletters/e-mails of other clubs and airfields was raised also.

The discussion moved on to the low number of GA aircraft being sold and the reduction in the number of pilots. Martin Robinson said last year the number one best seller was the Cessna 172, with a grand total of 147 aircraft. Next was the Currus with 142. The total was around 1,100. He noted that the average price had skyrocketed, which could be one reason why the FAA is not projecting pilot numbers to reach their historical peak again until 2030. The average pilot age is ever increasing also.

Timothy Nathan suggested that Facebook could be very effective. It was agreed that more needed to be done to promote flying in social media. Pauline Vahey said Andy Torkington had offered to help (he is involved in Get Into Flying and has published his flight videos on YouTube). Pauline said the British Women Pilots Association's FaceBook page had been very successful.

It was noted that Mick Elborn is redeveloping the AOPA website to improve the content and user experience.

It was agreed that Ian Sheppard (magazine editor), Mick Elborn (website), Dave Impey (advertising) should work together to propose a new digital strategy.

A short discussion took place relating to Brexit and the effect on EASA. Some airlines are apparently looking to base themselves in Paris or Ireland to maintain free access to the EU. David Davis's Government department is looking into this, and the DfT/CAA are part of that, said Martin Robinson. He added that he would support the UK/CAA remaining part of EASA.

Airfield closures were then discussed although John Walker was not present (he provided a report, see pages 12-13. Some were surprised to see Redhill on the threatened list now, and Blackpool back on the list. John Walker is now also a director of the General Aviation Awareness Council and will try to promote a private members bill on airfield closures in Parliament. Martin said a sustainable network of airfields was needed and ministerial reassurance was needed on not auto-designating airfields as Brownfield sites. The GAAC's John Gilder is meeting with a minister in mid-December on this issue.

Other topics discussed included licencing (see pages 14-15) and 8.33kHz radios (see page 23).

The next meeting of the AOPA Members Working Group will be held on Saturday 21st January at White Waltham. Members are free to attend.

MENTOR FLIGHTS

Please let us know if you have acted as a mentor or a mentee over one or several flights/meetings.
We would like to publish your account in a future issue of *Aircraft Owner & Pilot*.

PPL Corner

By Adam Winter

"For this PPL Corner I would like to share my experiences of landing and teaching students to land in a crosswind... "

"...I fly aircraft with tricycle undercarriage and have no tailwheel experience to talk about, except to say that when I tried landing one a few years ago it was the last time I heard the words "I have control" with urgency coming from the seat next to me (thanks Tony). The following therefore doesn't hold for taildraggers, which have a different centre of gravity and therefore a mind of their own!"

For students it can be a challenge to keep an aircraft in a straight line coming in on final. There is the speed and rate of descent to control – a fine balance between nose attitude and power to maintain a constant angle. And the aircraft has to be flown down the centre line. Hard enough when the wind is from straight ahead, but then add a crosswind into the equation and the capacity bucket fills up very quickly!

Let us assume you have mastered the normal approach landing. You can trim the aircraft for the speed you want, and select a power setting that gives you a sensible approach angle or rate of descent.

Now we put in a crosswind. In order to approach the runway down the centre line, you have to point the nose into wind. If the wind is from the left, in order to fly down the centre line you have to point the nose to the left. So if it is an approach to runway 26, your heading will be about 250 degrees.

For you in the cockpit and to an observer on the ground the aircraft appears to be approaching the runway slightly side-on. Some people call this crabbing, for obvious reasons. The aircraft is at this stage in perfectly balanced flight, the 'ball' is central and the 'crab angle' is caused by drift. In a perfect world this angle would remain constant all the way down the approach, but the wind velocity does change, so small changes to the approach angle will be required.

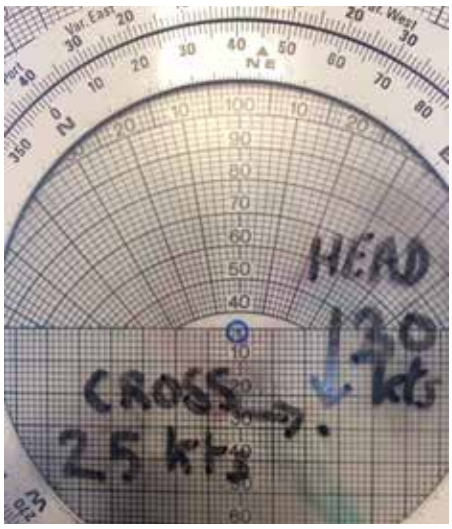
"As you approach the ground and prepare to 'hold off', keep the nose pointing into wind and the aircraft tracking down the centre line. Round out, and now the magic..."

Now the pilot is flying the aircraft down the centre line and is laying off for drift. When teaching this I like to make it a fairly long final. It can be useful (especially for inexperienced pilots) to try out, or rehearse, the rudder and aileron inputs they will need to straighten up before landing.

So the aircraft is heading 250 degrees and tracking down runway 26 (260 degrees). The maximum angle will be about 10 degrees; much more than that and you are probably going beyond the aircraft's crosswind limit (see calculating crosswinds).

At 300-500 feet, apply some right rudder and point the nose down the centre line. To stop the aircraft banking when applying right rudder, use left aileron. The aircraft is now no longer in balanced flight, but it is flying down the centre line. A look at the turn-and-slip indicator will show this as the ball will be off slightly to the left.

I let students experiment with rudder and aileron on final, but don't recommend they fly the whole approach like this for a couple of reasons: first, this is not balanced flight and in the sideslip you are creating extra drag which will make speed control quite difficult. Second, although it is a good way to 'rehearse' which controls you will be crossing when you need to straighten the aircraft, the wind gradient changes down the approach, backing and slowing down (in theory), so the input will be different. This experimenting on final can also be useful as it can be quite daunting approaching at an angle, and I have had countless instances of students correcting for drift using the wrong inputs simply because they have convinced themselves (nerves?) that they will get it wrong.



Calculating Crosswind Component

This is a nice and easy thing to do on your whizz wheel. In this example I have used a wind from the north at 40 knots. (Please don't fly if the wind is from the north at 40 knots). I have put the wind direction in at the top and marked the 40 knots down with a dot (Picture 1). The arrow shows that if you are on a northerly runway, there is a 40 knot headwind component and 0 knot crosswind. Picture 2 shows what happens to the 40 knot wind if the runway is 40 degrees off (i.e. runway 04). We now have a 30 knot headwind component and a 25 knot crosswind. Picture 3 shows that if you took off on runway 09 (to the east), there would be a 40 knot crosswind component and zero knots of headwind. Finally, much has been written about crosswind limits and debates around when or not one should fly. I will only add that you need to have a personal limit that lies within your personal ability, confidence and experience. If you are about to fly and are not sure, grab an instructor and fly some circuits. Happy flying, and happy crosswind landings. And keep applying the back pressure after landing!

Pilot Skill

As you approach the ground and prepare to 'hold off', keep the nose pointing into wind and the aircraft tracking down the centre line. Round out, and now the magic. Hold off (a fine balancing act), while straightening up with rudder. Use opposite aileron into wind to stop the left wing rising (with the right rudder input) which should also stop the aircraft drifting to the right of the runway. I won't write much about this as it just needs to be practiced. Over and over.

It is not easy but once you have mastered this, it can be very satisfying. When you have touched down, you still need to control the aircraft. With PA28s the rudder also controls the nose wheel steering, so after touch down you should maintain back pressure to allow for aerodynamic steering from the rudder.

If you touch down and release the back pressure, you put weight on the nose wheel and the right rudder you were using to straighten up becomes a right turn. This is accompanied by a short burst of screeching from the nosewheel tyre, so left input is needed, which gives left rudder, left nose wheel steering plus left turn from the weather cocking effect – with more screeching of the tyres, which is about to happen again because you now need to compensate to the right again. This can happen five or six times!

So, keep the back pressure and the weight off the nose wheel, and have the advantage of a bit of aerodynamic braking from the tailplane. Breath deeply…

Airfields Update...

Pictured: Redhill Aerodrome, the latest to join the 'threatened by housing' list.

JOHN WALKER provides the latest information relating to UK airfields (as of 8th November).

Andrewsfield

Braintree, Colchester and Tendring Councils are co-operating in developing a Local Plan for north-east Essex and have identified Andrewsfield airfield as one of three sites for potential housing in a new garden city with 10,000 homes. Public consultation on proposals completed in August 2016 with definitive Local Plan to be issued for further consultation later in 2016.

Blackpool

Balfour-Beatty initiated sale of their 95% interest in the airport on 3 October 2016. Enterprise Zone status granted for the land on the north side of the airport which area encompasses the domestic facilities of the old airport. Recent statements from the Zone proprietors indicate that they are relying on the airport to attract businesses. The emerging Local Plan for the area retains the airport's existing aviation facilities as they currently are.

Bourn

Site earmarked for 3,200 homes in current draft Local Plan by South Cambridgeshire District Council. The draft Plan is the subject of examination by a Planning Inspector with specific hearings on the proposals for Bourn airfield fixed for early 2017. Current site leases expire this year.

Deenethorpe

The latest Joint Core Strategy for north Northamptonshire has identified Deenethorpe Airfield as a potential exceptional opportunity for development as an exemplar garden village with around 1,250 homes. The Brudenhall Estate, the site owner, who has supported the development, now need to produce a master plan for the site in accordance with the Core Strategy, for approval.

Dunsfold

Site owner has applied to Waverley Borough Council for mixed use development with 1,800 homes on site which area is in planning Core Strategy for employment purposes. After an extended consultation, the Council expect to determine the application in November 2016.

Elvington

York City Council Local Plan Preferred Sites Consultation document issued in July 2016 includes a development of up to 3,330 dwellings partly occupying the middle section of the Elvington airfield runway. Consultation period ended in September and definitive, draft Local Plan due to be released in December for further consultation.

Halfpenny Green

(Wolverhampton Business Airport) Aerodrome sold to MCR Property Group, an investment and development company focused on commercial and residential real estate resulting in much speculation about the future of the site. MCR are in the early stages of planning for the future of the airport.

Kemble

Commercial Estates Group (CEG) proposal to build a 2,000 home sustainable village on this 'brownfield' site as an alternative to the draft Cotswold District Local Plan proposal for a greenfield site near Cirencester. The draft Local Plan has been issued for public consultation and full Planning Inquiry into Plan and alternatives to it scheduled for late 2016.

Long Marston

Planning permission for 400 homes on site granted in November 2015. Airfield is in Stratford-on-Avon adopted planning Core Strategy for housing with up to 2,100 homes by 2031. Developer is Cala Homes in conjunction with site owner. Refer to entry for Wellesbourne below.

Manston

River Oak has given notice of intent to apply for a Development Consent Order for the aerodrome as a Nationally Significant Infrastructure Project. The current site owners have submitted a planning application for a mixed use development with land earmarked as a park allowing occasional landings by Spitfire aircraft in conjunction with existing museums.

Thanet District Council has refused a different application by another party for change of use of airport buildings which will now be the subject of a full Planning Inquiry.

The Council commissioned a recent study into the future of the site as an airport in support of their Local Plan submission and this study concluded that an airport was not commercially viable.

Nottingham City (Tollerton)

With the support of the land owner, site earmarked for up to 4,000 homes in Local Plan Core Strategy adopted by Rushcliffe Borough Council after approval from Planning Inspector.

Old Sarum

Site owner's proposal for housing development and 10 additional hangars amongst other work, objected to by various parties as detrimental to the sites heritage and potentially limiting use of the airfield. After prolonged discussion with Wiltshire Council, the proposal has been amended to delete the on-airfield accommodation and the amended application is the subject of further consideration.

Panshanger

Site originally earmarked for housing by Welwyn Hatfield Borough Council but final draft Local Plan reduces housing element and allows the opportunity for a realigned grass runway on land to north of previous runway 11/29. Plan currently open for public consultation and Planning Inquiry to be held in early 2017.

Peterborough / Sibson

Expression of Interest submitted to HCA by Huntingdonshire District Council in conjunction with Larkfleet Homes and landowner for a 2,500 home garden village on site. HCA to decide by end of year which 12 of all the potential garden village sites submitted will be supported for further detailed development and public consultation.

Plymouth

Central Government have commissioned a study into viability of reopening the airfield with a report now due sometime in 2016. FlyPlymouth, a local social enterprise aerodrome support group, plans to reopen the airfield by 2017 and start regional airliner services by 2018. Sutton Harbour Holdings, the site lease holder, have proposed a mixed use development of the site although the current draft Local Plan retains the site for aviation. The final draft Plymouth City / South West Devon Joint Local Plan will be submitted to a Planning Inspector in January 2017.

Redhill

Site land owner and Thakeham Homes, a local housing developer are discussing with local planning authorities (Tandridge Council, and Reigate and Banstead Council) a proposal for a 4,500 home garden community on the site. Tandridge draft Local Plan earmarks site for employment purposes and notes that it is in the Green Belt with a high risk of surface water flooding.

Rochester

Judicial Review into Medway Council approval of hard runway, 3 new hangars and new control tower postponed from November 2015 as Consent Order issued for Council to review decision at a special meeting yet to be held. Enterprise Zone status granted for commercial part of the proposed site development.

Wellesbourne Mountford

Gladman Developments in conjunction with the owner have proposed a housing development with 1,600 homes on the site although the Stratford-on-Avon Local Plan Core Strategy has earmarked Long Marston airfield as a preferred housing development site. The Core Strategy after approval by a Planning Inspector has been adopted by the Council and states that "The aviation related functions at Wellesbourne Airfield will have been retained and enhanced". Tenants notified by owner that flying activities will cease on 24 December 2016. The District Council has agreed to fund a feasibility appraisal of the site to try and secure the future viability of the airfield for local businesses.

Wycombe Air Park

Site lease holder (Helicopter Aircraft Holdings Ltd) after prolonged discussions with the land owner (Wycombe District Council) has agreed a new lease.

The Draft Local Plan provides for an industrial / warehousing complex on south-eastern part of the site potentially resulting in loss of a runway and relocation of gliding activities. Council expects to submit final plan after public consultation to Planning Inspector in March 2017.

'A Better Defence Estate'?

MoD document *A Better Defence Estate*, issued on 7 November 2016, lists the following aerodrome sites for disposal in the years indicated.

Abingdon 2029; Alconbury 2023; Arbroath, RMB Condor airfield 2020;

Chalgrove airfield occupied and operated by Martin-Baker Aircraft is being transferred to the Homes and Communities Agency (HCA) in 2016. The site is one of seven being considered for a 3,500 home development in the South Oxfordshire District draft Local Plan with a definitive Plan having been issued for consultation in November 2016;

RMB Chivenor 2027; Colerne 2018; Dishforth airfield 2031; RAF Halton airfield 2022; RAF Henlow 2020; Hullavington airfield 2016; Mildenhall 2022; Molesworth 2023; North Luffenham 2021;

Former RAF Wethersfield airfield is being transferred to the HCA in 2020.

In addition to the above, RAF Wyton airfield is being sold off - Defence Infrastructure Organisation and local property developer Crest Nicholson proposal for up to 4,500 homes on site with planning application expected to be lodged in early 2017.

The site has been earmarked in draft Huntingdonshire District Council Local Plan for mixed use development including housing.

AOPA: Working for You

Licensing Update

By Nick Wilcock

MORE 'MEDICAL MATTERS'!

Following AOPA's concern at the legality of the original announcement, CAA policy regarding 'pilot medical self-declarations' has now been resolved. The policy table CAP 1441 has been amended, as has the associated application form.

In summary:

- 'Self-declaration' may be used by holders of NPPLs and legacy national UK PPLs to fly non-EASA aircraft (or EASA aircraft within LAPL restrictions until April 2018).
- 'Self-declaration' may not be used by holders of Part-FCL licences to fly EASA aircraft.
- 'Self-declaration' may be used by holders of Part-FCL licences to fly non-EASA aircraft.
- 'Self declaration' may be used by pilots of aircraft of 2000kg MTOM or less, provided that they are not taking medication for any psychiatric illness.
- Currently, 'self declaration' may not be used outside UK airspace as no other EASA Member State has agreed to accept the UK concept.
- 'Self declaration' may not be used by pilots who have been prescribed medication for any psychiatric illness, or if flying an aircraft of 2001-5700kg MTOM and subject to any of the 'disqualifying medical conditions' listed in the October 2016 edition of *Aircraft Owner & Pilot*. Such pilots must consult an AME.

NPPL holders will note that the revised policy will no longer oblige them to hold an NPPL Medical Declaration.

OLD SARUM AIRFIELD LTD

New Year's Day Fly-in and Films – 1 January 2017

Join us to celebrate the first day of our centenary year!

The Airfield's Skies Cafe will have a selection of comforting food on offer, including hangover-busting breakfast rolls, chilli and soup. The bar will also be open for any passengers or pedestrians wanting a hair of the dog.

10:00 – Airfield opens
10:30 – The Great Waldo Pepper
12:45 – 633 Squadron
16:00 – Airfield closes

For those wishing to fly in, we will have a commemorative stamp available for logbooks.

The Airfield and the Skies Café will close at sunset.

The Airfield will also be open and showing a film on New Year's Eve. Anyone wanting to stay overnight may park for free.

For more information, please see www.oldsarumairfield.co.uk/new-year-2017 or email info@oldsarumairfield.co.uk

ANO Update

As many will know, the UK Air Navigation Order has recently been updated and has removed many of the anomalies which used to exist between various non-commercial pilot licences. In particular:

- The UK PPL and NPPL flight visibility VFR and SVFR limits have been aligned with those applicable to Part-FCL licences.
- Take-off and landing visibility minima for the IMCR have been aligned with the VFR/SVFR 1500m minimum; also an IMCR may now be used under IFR in Class B or C airspace as well as in Class D-G. This applies equally to the IR(R), of course.
- 3-axis microlight flight time is now acceptable towards revalidation of SEP/TMG/SLMG Class Ratings included in national UK pilot licences, but not in Part-FCL pilot licences. IAOPA (Europe) has already proposed an amendment in its response to NPA 2014-29 to include some 3-axis microlight flight time for this purpose; however, the CRD for this NPA has yet to be released. NPPL revalidation criteria remain unchanged.

THE 'BASIC INSTRUMENT RATING'

EASA has now released NPA 2016-14, which proposes the introduction of the Basic Instrument Rating.

This can be viewed at http://www.easa.europa.eu/system/files/dfu/NPA%202016-14.pdf .

The NPA has been developed by the RMT.0677 task force, within which I represented IAOPA (Europe).

It proposes the introduction of an IR with 'IMC rating'-level approach minima as well as access to the airways structure across Europe, but with substantially reduced theoretical knowledge and training requirements compared with even the CB IR.

For VFR pilots who simply want the privilege to fly through IMC in order to achieve VMC, such as climbing up through cloud to fly VFR on top, it is intended that a simple 'aeroplane cloud flying rating' will also be developed, but this will not include any approach privileges.

Although AOPA (UK) hasn't yet decided on its formal response to the NPA, one alarming note is that it proposes that BIR training may only be conducted at an ATO. This is particularly surprising, given that in our agreed draft version, it was stated that 'The Agency considered it important to the success of the BIR that training courses will be available from typical training organisations that GA pilots would be familiar with. This will assist with socialising the concept of GA flight under IFR, as well as increasing access to the rating in the GA community.'

Although originally receiving a typical «Non!» reaction, at our last meeting we thought we'd even convinced the French representative that, given appropriately proportionate oversight requirements, there should be no reason why a DTO should not conduct BIR training. So this volte-face is difficult to understand unless, dare I say it, there has been some behind-the-scenes lobbying of EASA by our near continental chums? Readers who wish to respond to the NPA are very welcome to do so, but should use the EASA Comment Response Tool as outlined in the NPA.

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GA News Roundup

Cirrus Jet Certificated

Cirrus Aircraft announced just before the NBAA show in Orlando, Florida in early October that its 300+ knot Vision single-engined personal jet had achieved FAA certification. "The Vision Jet ushers in a new category of aircraft that delivers an unrivaled pilot, passenger and operator experience, and certification paves the way for initial customer deliveries in 2016," said the company. More than 600 production positions have been reserved, added Cirrus.

Company co-founder Dale Klapmeier said, "Just as the SR series of high-performance piston aircraft has forever changed aviation, the impact of the Vision Jet on personal and regional transportation is going to be even more profound. Never before has a turbine aircraft solution come along that rewrites the rules in so many ways – iconic design, ease of operation, smart economics, simplified ownership and more."

"The Vision Jet defines the new single-engine Personal Jet category by its spacious, pilot and passenger-friendly cabin with expansive windows, reclining seats and comfortable legroom that can accommodate up to five adults and two children. The cabin is complemented by the proprietary Cirrus Perspective Touch by Garmin flight deck, which delivers a wide array of highly sophisticated, easy-to-use global navigation capabilities and safety features to the pilot at the touch of a finger. Powering the Flight-Into-Known-Ice (FIKI) approved Vision Jet is a single, smart FADEC-controlled Williams International FJ33-5A turbofan engine."

The aircraft incorporates the Cirrus Airframe Parachute System and Cirrus says 142 people have been "returned to their families" as a direct result of CAPS being a standard safety feature on all Cirrus aircraft.

The Vision Center in Knoxville, Tennessee will be the hub for "sales, delivery, training, maintenance, support, personalization, fixed base operations…". All Cirrus aircraft are made in the U.S. and the company is now owned by China Aviation Industry General Aircraft Co., Ltd (CAIGA).

There are now more than 6,500 Cirrus SR-series aircraft operating in over 60 countries.

Jeppesen's Diamond Data Deal

Jeppesen and Diamond Aircraft have signed an agreement to deliver pre-selected Jeppesen NavData and digital charts at the time of delivery, as part of the purchase process of new Diamond aircraft.

Starting in 2017, "Jeppesen flight information will be on board with the purchase of Diamond DA40, DA42, and DA62 models from Diamond Aircraft Austria and will be ready for immediate use in flight," said Diamond.

In addition to Jeppesen navigation data, Diamond aircraft equipped with Garmin G1000 avionics will receive a PilotPak data bundle that also includes supplemental databases, including obstacle, terrain, SafeTaxi and airport diagrams. Upgrades for existing DA40, DA42, and DA62 customers are available on request.

Air BP's New RocketRoute App

Air BP has launched a brand new way of buying fuel - the RocketRoute Fuel App. "It provides intuitive online access to an extensive global network of aviation fuel locations, convenient payment methods and, in a first for fuel apps, the opportunity to offset carbon emissions through the system interface," said Air BP. The app is designed for anyone with a fuel requirement, not just current Air BP customers. It is available immediately, free-of-charge, from the Apple store for iPads, or from the RocketRoute website for all devices.

Once a simple registration process has been completed users can then request, plan, and purchase fuel at any one of Air BP's 800 plus locations worldwide. A simplified payment process allows all customers to pay with either an Air BP Sterling Card, or a regular credit card. Existing Air BP customers can also access their own personal accounts.

Air BP's announced in April that it had acquired a stake in RocketRoute.

Concorde Auction in Toulouse

In early November an auction of Concorde and other memorabilia took place in Toulouse, with some 1,000 lots selling for a total of almost €450,000. Over three days buyers connected through the internet for live bidding, from all over the world; the star lot was the wooden delta wings used for Concorde tests, which sold for €21,000 (over ten times the estimate). All lots linked to Concorde saw their prices raise in a few minutes, especially the machmeters, which were among the stars of the sale, reaching €20,500 and €14,500. A Concorde altimeter fetched €5,000, two horizontal situation indicators sold for €5,600 and €10,000, and an ASI sold for €6,800. A Concorde toilet seat went for €1,000 and Concorde menus sold for between €400 and €1,000, while a dining set designed for Air France by Andrée Putman was bought for €2,500. The Concorde anniversary wooden model, signed by André Turcat, will go to a buyer in Kazakhstan, having sold for €10,000. Finally, a pair of Concorde seats is off for a new life in Miami, a collector having acquired it for €4,700.

Pipistrel Goes East

Slovenian manufacturer Pipistrel has signed a £450 million deal with the Chinese Sino GA Group to build its Alpha Electro electric trainer and hybrid-powered four-seater Pantera in China. According to BMAA's *Microlight Flying* eNews, company founder Ivo Boscarol plans to spend the money on "beer, chocolate and building a 19-seater hybrid commuter aircraft."

CubCrafter 'Chutes

A new parachute system from BRS Aerospace is available for retrofitting to CubCrafters' fleet of LSA, kit and builder-assist aircraft. The Yakima, Washington-based manufacturer said the new airframe parachute system was first introduced in May 2016 on production Carbon Cubs. CubCrafters and its authorised service centres are able to perform the installation.

"The extraordinarily slow stall speed, fundamentally sound wing design and vortex generators assure low-speed stability and manoeuvrability in all CubCrafters aircraft," said company president Randy Lervold, who added that the parachure system would add "additional peace of mind for… pilots and passengers." The retrofits are available for production Sport Cub and Carbon Cub SS models, along with the Carbon Cub FX builder-assist model and the EX/EX-2 kits. Two kits are available and cost $11,990 installed, or $15,990 installed for the heavier aircraft. CubCrafters was founded in 1980 by current owner & CEO Jim Richmond. The company's newest product is the highly capable XCub.

Hangar Homes at Lee

Hangar Homes has switched its focus from Perranporth in Cornwall to Lee-on-Solent on the English south coast. A pre-application submission was lodged in November with Gosport Borough Council.

"Because Lee-on-Solent Airfield is zoned for business and employment use, these Hangar Homes have been modified slightly to become 'live/work' units with the ground floor entrance converted into a 45 square metre office, incorporating a toilet and office kitchen.

"The double garage adjacent to the office could be used as a small warehouse or storage area if required. The hangar and upstairs accommodation remains the same, with four ensuite bedrooms, a large 6m x 6m lounge and kitchen/dining area, with balcony access for all rooms.

MRO Update:
Self-Declared Maintenance Programme Introduced

By George Done

This applies to EASA aircraft. A CAA publication, CAP 1454 – '*Guidance for implementing Self-Declared Maintenance Programmes for use with ELA1 aircraft,*' was issued in October 2016. It applies only to aircraft not involved in commercial operations and, as it states, only to ELA1 aircraft.

An ELA1 aeroplane has a MTOM of 1200kg or less and is not classified as complex. There are equivalent definitions for sailplanes, balloons and airships. Reference is made to a template found on the CAA website that is completed for any particular aircraft.

It is likely that most owners will expect their maintainer, subject to mutual discussion, to complete the template, which effectively defines the Aircraft Maintenance Programme (AMP). The SDMP replaces the Light Aircraft Maintenance Programme (LAMP) for those aircraft being maintained under this programme.

The four-page guidance document on CAP 1454 (downloadable from the CAA website) is straightforward and informative, and owners especially need to be aware of its contents.

"The SDMP replaces the LAMP for those aircraft being maintained under this programme."

The SDMP must contain a signed statement declaring that the owner is responsible for the AMP. Basically, the SDMP can be designed to suit an owner's particular requirements, and the known pattern of use of the aircraft. Discussions between maintainers and their CAA surveyors will help ease the transition to the new system.

Further guidance for ELA2 aircraft (e.g. aeroplanes over 1200kg) is expected to follow soon. After this, and by Summer 2017, the so-called Part M Light (Part-ML) for continuing airworthiness requirements should have been adopted by the European Commission, having been previously agreed by the EU Parliament and Council.

The encouraging phrase adopted by EASA for the new regime is "Simpler, Lighter, Better rules for General Aviation," and – assuming this objective is ultimately satisfied – it will benefit all private owners of EASA aircraft in the future.

Pilots now have more autonomy in overseeing the maintenance of their aircraft, but also more responsibility.

Guidance for implementing
Self-Declared Maintenance Programmes
for use with ELA1 aircraft

Introduction

An amendment to the Part M Regulation introduced the Self-Declared Maintenance Programme (SDMP) that applies to ELA1 categorised aircraft not involved in Commercial Operations.

This transition to EC Regulations means that the generic UK Light Aircraft Maintenance Programme (LAMP) ended in September 2016. Owners using LAMP for their ELA 1 aircraft need to transfer to a SDMP by September 2017 and this leaflet explains how to establish an appropriate replacement maintenance programme.

An ELA1 aircraft is:

- an aeroplane with an MTOM of 1,200 kg or less that is not classified as a complex motor-powered aircraft;
- a sailplane or powered sailplane of 1,200 kg MTOM or less
- a balloon with a maximum design lifting gas or hot air volume of not more than 3,400 m^3 for hot air balloons, 1,050 m^3 for gas balloons, 300 m^3 for tethered gas balloons;
- an airship designed for not more than four occupants and a maximum design lifting gas or hot air volume of not more than 3,400 m^3 for hot air airships and 1,000 m^3 for gas airships.

The Aircraft Maintenance Programme

The continuing airworthiness and serviceability of the airframe, engine and propeller, plus both operational and emergency equipment, is ensured by compliance with an Aircraft Maintenance Programme (AMP). An aircraft can only be maintained to one approved programme at any time and the AMP details all of the scheduled maintenance tasks.

Development of the AMP

Under the revised regulation, an owner may develop an AMP for their aircraft that does not require an approval from the CAA. This is called a SDMP. The owner may decide to base the SDMP on the manufacturer's recommendations or the EASA published Minimum Inspection Programme (MIP). In all cases the SDMP must not be less restrictive than the MIP.

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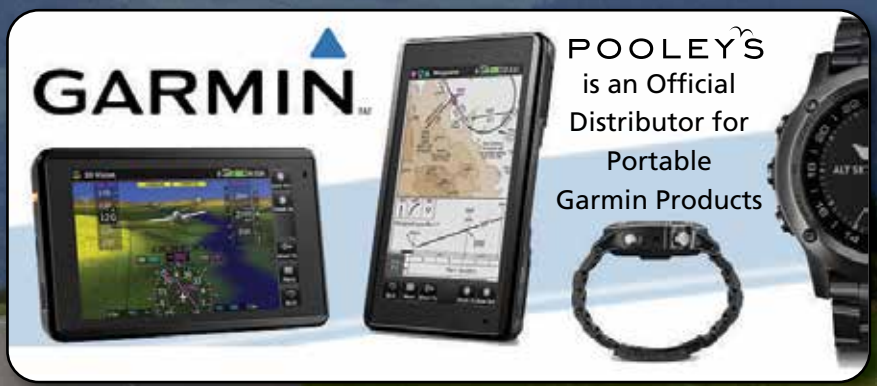

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Funding the Radio Gap

Thanks to AOPA, help is now available in funding the upgrading of your radios to offer 8.33 kHz channel spacing. All that we are waiting for now is for the CAA to announce the mechanism for aircraft owners to claim back 20 percent of the cost.

On 8th November, Bob Liddiard (CAA) gave a presentation on 8.33 kHz EU Co-funding with the Connecting Europe Facility of the EU (CEF).

The regulatory requirement under Regulation EC 1079/2012 is that the transition to 8.33 is made by 31st December 2017. Large aircraft (Tier 1, over 14,000kg) have already changed over. Tier 2 is 3,201-13,999kg, Tier3 is below 3,200kg (just over 7,000lbs).

Liddiard noted that the CAA is looking at some temporary exemptions to keep certain 25 kHz channels in use beyond 31st December next year.

In February 2016 the CAA's GA Unit delivered a submission for an EU grant from the CEF transport fund under SESAR. (The EU funding is through the INEA, the Innovation and Networks Executive Agency). The proposal was for "a collaborative approach building on the CAA's relationship with the UK GA community's recognised representative bodies." A central undertaking was that funding must get to the end-user, covering installed radios and handhelds. The CAA's total costs were projected as being €21.7 million such that the mazimum grant would be €4.3 million (20% of total costs).

According to Liddiard as of 8th November, the contractual agreement was with the CAA and was awaiting agreement of one clause. This was done by 18th November which only left the CAA to set up the rebate mechanism.

The aim is to encourage early adoption by three 'call period' dates (31 March, 30 September and 31 December 2017). GA representative bodies (including AOPA) are being asked to sign a 'Memorandum of Intent.' The CAA is expecting more than 7,000 claims, which must all be supported by receipts.

As of mid-November the CAA GA Unit had been 'brainstorming' and a draft was almost ready. 20-percent rebate claims will be capped at £3,000 each (i.e. £15,000 spend). Only G-Reg aircraft are elligible with 2 installed and 2 handhelds per claim being permitted (and only one handheld per RT licence). Ground stations are not included in this scheme and have an '8.33 date' one year later.

The CAA is aiming to have the claim process in place by the end of 2016. Meanwhile AOPA UK is also investigating whether the European Investment Bank could provide loans.

Eurocontrol Updates

As mentioned several times during this year, the Network Manager, through it's 8.33 Support to Implementation project, is engaging into increasing the awareness of the general aviation airspace users regarding the requirements deriving from the Voice Channel Spacing Regulation (EU IR 1079/2012) with respect to 8.33kHz radio equipment mandate. To do so we have put in place a special dedicated on-line platform (**https://833radio.com/)** with the aim to provide the GA community with:

- Specific targeted information regarding the mandate
- Potential exemptions and derogations in effect within the European airspace
- Information regarding funding opportunities for radio equipment

In order to have a clear channel of communication and to be able to target the right information to the appropriate audience, your registration on the website is required. Moreover, if you are specifically interested in a potential subvention, the registration is useful as it will provide us with necessary information in terms of aircraft population, radio equipment on board in order to be able to better investigate the possibilities for funding opportunities for retro-fit.

Therefore if you are part of the GA community, own an aircraft, you are associated in a GA organization or an aero-club please follow the link below and register:

https://833radio.com/

The website will evolve in the near future to provide also service in different languages as well as to feature a permanent news section.

Do not hesitate to contact me in case of any questions.

Please feel free to forward this information to all interested general aviation airspace users.

Thank you and kind regards,

Bogdan Petricel

Eurocontrol

Big Show Orlando...

...NBAA

The annual Convention & Exhibition of the US National Business Aviation Association (NBAA-BACE) is the world's biggest event for general and business aviation. The exhibition was held at the Orange County Convention Center, while the static aircraft park was at Orlando Executive Airport (KORL). Next year's event will be held in Las Vegas, 10-12 October.

Cirrus SF1 single-engine jet.

The NBAA show is the highlight of the business aviation calendar, although NBAA itself has a hand in Europe's EBACE show and several others that are run in partnership with other business aviation associations around the world. In Europe's case it's the EBAA (EBACE takes place every May in Geneva); and in China ASBAA (ABACE, in Shanghai).

It tends to be the upper end of general aviation where there is crossover with corporate aviation. The main GA highlight this year was the announcement that Cirrus's new single-engine jet (below L.) had been certificated by the U.S. FAA. Meanwhile the new Gulfstream G500 (right) and Cessna Citation Longitude (below) test aircraft made appearances, along with Nextant's new 'remanufactured' King Air with single-lever control for each engine.

Hosting the show was the Atlantic Aviation FBO at Orlando Executive Airport (bottom) - 20 minutes' drive from the Convention Centre (which also had a few aircraft on the show floor (e.g. the Eclipse, above right).

First flight of the Airlander

By Dr John McAdam

Simultaneously with those great British athletes who won 67 Gold, Silver and Bronze medals at the Rio de Janeiro Olympic Games, we have a fellow unsung 'Golden Medal' winner at Cardington, Bedfordshire, UK. This recipient is no super athlete of pool, track or field but a silent envelope of environmentally-friendly helium making an exit from her 'cradle of birth'.

The flight followed a comprehensive series of in-hanger tests which were completed successfully before EASA and the CAA (UK) would formally grant permission for Airlander 10 to exit the hanger to conduct its first series of flight tests. Technical director Mike Durham stated, "In the past few days we have successfully completed our final in-hanger tests which involved all engines, generators and complete systems. My team is now looking forward to the final series of tests outside the hanger before taking to the skies for her maiden flight.

"Being the largest aircraft in the world, exiting the hanger will be a very delicate operation as there is only a six metre clearance from the fin tip to the sides of the hanger door. Once clear of all obstacles we should have Airlander 10 secured to one of the two primary mast sites which have been specially prepared for her."

"If my memory serves me well that is much the same time as my first solo flight in a Rollason Condor at Fair Oaks Airfield for my PPL."

This exit was such a delicate operation that it only commenced once Alex Travell, HAV's ground operations chief, had been given clearance to proceed by both chief test pilot David Burns, and Mike Durham. All three gentlemen had to be absolutely sure that such a large number of safety, equipment and weather requirements were ticked off on the hanger exit checklist.

At 0400hrs on the 6th August 2016, this delicate operation began, involving less than a dozen personnel, but such was the enthusiasm it was witnessed by fifty employees who silently gathered outside the airfield boundary fence in the 'Wee small hours' to witness this historic event in aviation history.

Durham said, "It was a very smooth first journey for Airlander 10; she behaved beautifully and we're delighted to have reached this significant milestone. Now she is at her masting site."

The aircraft is free to 'weathervane' nose into wind as a result of being attached to the Towable Moving Mast (TMM) and resting on the Castering Ground Cradle (CGC), which supports the fuel tank and has its own set of wheels.

To minimise wear and environmental impact during this time, the landing skids are fitted with special 'shoes'. Airlander 10 can withstand wind speeds of up to 85 knots while on the mast, making her very resilient to most weather systems worldwide. While on the mast, there is a strong 24hr security presence as well as staff constantly monitoring.

As the sun was sinking slowly in the west at 1945hrs on Wednesday 17th August 2016, Airlander 10 was released from her tethered mast and 'Mother Earth' and began her maiden flight, which lasted only 20 minutes before darkness, but nevertheless is registered as a maiden flight.

If my memory serves me well that is much the same time as my first solo flight in a Rollason Condor at Fair Oaks Airfield (Now Fairoaks Airport) for my Private Pilot's Licence (PPL).

Both test pilots, David Burns and Simon Davies, were ecstatic about the flight and the overall performance of Airlander 10 during her short first flight.

Official First Flight

The following morning at 0900hrs a confirmatory pre-flight test began and once Mike Durham, chief test pilot David Burns and ground ops chief Alex Travell were in agreement, clearance was granted for the official first flight to commence. These three gentlemen have been working together for almost thirty years, which illustrates the depth of experience and knowledge within Hybrid Air Vehicles.

The four massive but almost silent engines were started approximately 30 minutes before take-off and, once the tether had been released, Airlander 10 was freed from Mother Earth, rising gently into the blue yonder on her official first flight. Burns and Davies flew Airlander 10 within a six-mile radius of Cardington's giant hangars, just to the south of Bedford town. She climbed to an altitude of 500 feet above ground level as she reached her maximum speed of 35 knots. Due to a later than anticipated take-off time Airlander 10 was limited to a 19-minute flight around her Cardington base so the pilots could land safely before darkness fell.

All test objectives were met during this flight, including a safe launch, flight and landing with some technical tests on her hull pressure at various altitudes. During the flight a series of gentle turns at varying speeds were also undertaken.

Airlander 10 is expected to be a showcase of UK innovation and is already being used in the UK Government's 'Great Britain' campaign to highlight the strength of the aerospace sector and the innovation in engineering that the country is capable of creating.

Customer interest has already increased, particularly in the defence and security sectors. Combining this with Government support, Airlander 10 should secure jobs as well as valuable export opportunities for the economy.

ENDNOTE: On its next flight, the Airlander experienced a heavy landing and the front of the flight deck sustained damage. HAV said it "runs a robust set of procedures for flight test activities and investigation of issues." HAV told *AO&P* in mid-November that "Airlander is due to have its repairs completed by the end of 2016 and will then go through a period of testing and further training of all flight test crews before taking to the skies again in early 2017. It is expected to be a common sight over Bedfordshire and the UK in 2017."

Liveryman Dr. John McAdam, PhD, MA, BA(Hons), FRGS is a Liveryman of The Honourable Company of Air Pilots and proprietor of Adam Media Limited.

Miles Aircraft Remembered

PETER AMOS, honorary general secretary of the Miles Aircraft Collection, recounts some of the illustrious history of one of Britain's best loved aircraft manufacturers.

It is impossible to say very much about Miles Aircraft in ten minutes so I can only suggest that, if you would like to read the whole story, then please consider purchasing the trilogy of the *Miles Aircraft Story* - they are all on sale here today!

However, I will tell you the story of how my interest in Miles aircraft came about but, for the record, my wife calls it an obsession!

I don't regret being born in 1930 as, by the time I was 16 years old, I had developed a keen interest in aircraft and I couldn't wait to get my copy of *The Aeroplane Spotter* every fortnight when it came out. However, it was while reading the forthcoming events in an issue in June 1947, that I noticed that Miles Aircraft Ltd at Woodley, were going to hold their annual 'At Home' day on Sunday, 20th July 1947.

I promptly contacted my two friends, who were also very interested in aircraft, and we decided that, whether we could get in or not, it was going to be worth cycling the 60 miles there from our homes near Redhill just to see the aircraft, if only from over the fence! We could also return home via Blackbushe, Heathrow and Northolt so the journey wouldn't have been wasted - we were very fit and keen long distance cyclists in those days!

It was a beautiful sunny day and we set off early, taking in Wisley and Fairoaks airfields on the way there, finally arriving at Woodley about lunch-time. Rather surprisingly we found that the gates were open to all comers so in we went. We could hardly believe our luck!

What a day it was and it was one day that is indelibly imprinted on my memory - my interest in Miles aircraft was born.

We were allowed to wonder between white lines through the factory and assembly line and outside was a large static aircraft park on the aerodrome. We then watched a truly remarkable flying display of no less than 12 different types of Miles Aircraft, varying in size from the 2-seat Miles Hawk Major through the tandem wing M.39B Libellula to the four engined Miles Marathon airliner!

How could we possibly have realised then, even in our wildest dreams, that, within a couple of months it would all be over and that Miles Aircraft would be no more? This, thanks to their one time trusted financial advisor to the company who

had, unbeknown to the directors of the company, been orchestrating its downfall since about May 1947.

I was dumbfounded upon reading the news in the aviation press that Miles Aircraft was under new management and I vowed then that, however long it took, I would get to the bottom of what really had happened in that dreadful September of 1947 as I felt that there was more to it than met the eye.

It took me a very long time to confirm my suspicions that this evil 'person' (for want of a better word) had been responsible for the so-called 'financial collapse' of Miles Aircraft in September 1947, 65 years in fact, but thanks to George Miles' daughter Karen and his son-in law Jim, who both very kindly gave me access to George Miles' archives, and Jeremy Miles, F G Miles's son, for all his help, I was finally able to confirm my suspicions.

However, before this ten-minute talk through my aviation life draws to a close, I would just like to say how lucky I consider myself to have been to have also flown in representative examples of many of the types that have flown in today, plus a few more!

"As we took off I recall the pilot saying: 'Would you like to see Heathrow Airport under construction?' Would we ever!"

My first flight was a 15-minute joyride in the Auster J/1N Autocrat G-AHCL, of the United Services Flying Club, from Elstree, on 20th July 1948, with Dave Freeman, one of my cycling friends. As we took off I recall the pilot saying: "Would you like to see Heathrow Airport under construction?" Would we ever!

We duly arrived overhead Heathrow, without radio, and orbited around the sea of mud and tents that was later to become LAP for a while, unmolested, before returning to Elstree, both of us somewhat elated by the experience of our first flight.

I consider, upon reflection, that was a

Redhill, 30th July 2016.

Dear Ian,

First of all I would like to thank you and all your colleagues for all the help that you gave us at Redhill on Saturday 30th July. After a slow start while we got ourselves organised. It slowly developed as people found us (through the maze of the Pilot's Hub tables!), into a great day with lots of visitors, all interested in our display and books on Miles Aircraft. The books also generated much interest and sold well. I also succeeded in losing my voice - a sure sign of a successful day!

Apart from the inclement weather in the morning, which caused a few potential Miles and Auster aircraft to have to turn back, the afternoon developed into a glorious day with, I understand, 40 visiting aircraft, making it reminiscent for me of the various Dawn, Breakfast, Lunch and Tea Patrols of the 1950s - happy memories of the time I worked for Tiltman Langley Laboratories Ltd in Hangar 9 and the Squash Court, from 1951 to 1959 - more happy memories!

Regarding the aircraft that had to turn back, I must mention that three vintage aircraft took off from Breighton in Yorkshire, en route to Redhill, as a 'three ship formation' and if they had arrived in the circuit I feel sure that they would have caused a sensation! They were the Miles Messenger G-AKBO, Miles Hawk Trainer III/ Magister G-AKAT and an Auster! They found the cloud base to be 900 feet and decided that it was just not safe to press on and so, reluctantly, they turned back. By the time the weather 'up north' cleared it was too late to set out again - what a great shame.

Unfortunately, due to our location in the hangar, it proved impossible to give the 10-minute planned talk on Miles Aircraft, so I have attached this should you like to include it in your magazine. Thanks also for the complimentary copies of your most interesting magazine that you gave me and which I have now distributed.

As I was, mistakenly as it turned out, originally under the impression that we would be having our display and giving our talks in the opposite end to the café in the Pilot's Hub, I put in some background information on the siting of The pilot's Hub, which I've left in!

Best regards,

Peter Amos,
Hon Gen Secretary,
The Miles Aircraft Collection;
Miles Aircraft historian and author.

pretty rare experience but it was certainly one that would never again be repeated!

In 1949, while doing my National Service in the R.E.M.E., I was very fortunate to have been posted to the S.R.D.E. (Signals Research & Development Establishment) at Christchurch. I was also fortunate in being able to continue in my chosen profession as a draughtsman, and it was there that I found myself working in the drawing office, a Nissen hut, on the edge of Christchurch Aerodrome! After the rigors of 27 Command Workshops at Warminster, this I thought was indeed a stroke of unbelievable luck!

At that time, Airspeeds had a factory on the aerodrome and they were engaged in flight testing their Ambassador prototypes and also using a Halifax A Mk.IX to tow refurbished Horsa gliders off for flight testing and delivery. However, it didn't take me long to also discover that there was a flying club on the airfield! After giving some considerable thought as to whether I could really afford it, on 28/- a week, I decided that I could and still eat, and so I began my flying training - happy days! How many seconds flying would that buy today?

My next flight was to be in an Auster precursor, the Taylorcraft Plus Model D, G-AHUM, on 22nd April 1950. This was being used by SHULAC - the South Hants Ultra Light Airplane Club for instruction and further flights followed in this and the Auster Mk.IV, G-ALYH, from 29th April 1950. I should mention that the weather in those days at this delightful place was near perfect but, although I didn't get too much instruction, I certainly enjoyed the experience! So much so in fact that, when demob time came I decided that I wanted to stay there and duly applied for a job with Airspeeds, almost forgetting that George Miles was also there at that time as assistant Chief Designer. Unfortunately, they had no vacancies at the time, so I joined de Havilland instead!

In 1951, I moved to Redhill Aerodrome to work for Tiltman Langley Laboratories Ltd, in whose managerial offices you are now sitting and, in 1952, I decided to join The Experimental Flying Group at Redhill to continue my interrupted flying training. They were operating out of a Nissen hut next to the Redhill Flying Club building and their chief flying instructor was Jean Bird, an ex A.T.A. ferry pilot, an excellent flying instructor and who was later to become the first woman pilot to be awarded RAF pilot's wings, at Redhill Aerodrome, on 20th September 1952.

This was a Saturday and, as a result, I failed to witness this unique event. However, Jean had two 90 hp DH Moth Minors, G-AFOZ and G-AFPR and it was in the latter that she sent off on my first solo flight, on 26th October 1952. What lovely little aeroplanes they were too - but I digress!

However, due to the problem of getting spares for them, she reluctantly decided to replace them with another type and for this she chose the Miles M.14A Hawk Trainer Mk.III - the famous ex RAF Maggie.

After the delicate Moth Minor the Maggie seemed a massive brute, with its control column seemingly tree like, compared with the dainty stick in the Moth Minor. I wasn't sure how I was going to take to these mighty 130 hp beasts but I shouldn't have worried as I soon became accustomed to, and thoroughly enjoyed, flying them.

The E.F.G. had two Maggies, G-AMBM, which I first flew on 15th February 1953 and G-ALIO 'Pongo', so named one Sunday morning by the late Rex Nicholls, in memory of his army service in the Royal Corps of Signals! I first flew 'Pongo' on 22nd March 1953 and soloed in it on 22nd April 1953. After this I flew them both as often as possible, mainly with Rex, who up to the time of his recent passing, had amassed a staggering 16,000 hours in light aircraft, all in his spare time and mainly on instruction.

But I will never forget the 'Grand Tour' of France and Switzerland that Rex and I undertook in G-AMBM in that

lovely summer of 1953. What a week in June that was, culminating in a visit to the Paris Salon display at Le Bourget and then back to Redhill via Lympne. Once again we were blessed with lovely weather and it left us with yet more happy memories.

I finished my aviation career with Hawker Siddeley Aviation in the Flight Development Department at Dunsfold, working on the Folland Gnat Trainer and HS Harrier development.

I have also flown in a modern aeroplane, a Pup 100, G-AVZN, no less! This was from Shoreham on 12th July 1969 with a friend and I remember the trouble I had in trying to stop it from climbing!

In March 1993, myself and with a few like-minded Miles Aircraft enthusiasts, decided that the time had finally come to form a Miles Aircraft 'club'. There were two main reasons for this: i) it was felt that the need for such an organisation was long overdue and ii) the 60th. Anniversary of the first flight of the first Miles monoplane, the Miles M.2 Hawk was drawing nigh. This first flight was made by its designer, F.G. Miles, from Woodley Aerodrome, Reading, Berkshire on 29th March 1933.

It was agreed that we should call ourselves The Miles Aircraft Collection and we set the start date for our new venture as the 29th March 1993, to mark the 60th anniversary of the Hawk's first flight. I became its Hon Gen Secretary for my sins and we are still going strong. We also now have an active website, run by George Burton, one of our members, so we like to think that we must be doing something right!

I have since also been privileged to have flown in three other Miles aeroplanes, Peter Holloway's Maggie, N3788, Shipping & Airlines Messenger Mk.4B. G-AKVZ, and Sir John Allison's Gemini G-AKKH.

This brief ramble through my life in aviation and my involvement with Miles monoplane aircraft, is over, so I won't mention the fun I've also had in Tiger Moths at Redhill, but it was all done without radio - and I had 'binders mouth' to prove it - those were the days!

If anyone has any questions, please don't hesitate to contact me via AOPA.

Peter Amos
(www.milesaircraftcollection.co.uk)

Take Your PPL Theory in London!

Following the popularity of the first series of courses, AOPA is pleased to advise that it is running more evening Ground School courses for ab-initio pilots. The PPL Ground School takes place at the AOPA offices at 50A Cambridge Street each Tuesday and Thursday evening, 7-9pm, on the dates shown below. The AOPA office is only five minutes' walk from Victoria Station. All nine subjects required for the PPL (Aeroplanes) taught over a period of approximately 70 hours. The lecturer is Adam Winter, a highly qualified and experienced flying instructor who works for the Flyers Flying School at Elstree. You can read more about the training and subject matter at www.flightgroundschool.co.uk

Course Dates 2017

Air Law	TBA
Operations and Procedures	TBA
Human Performance and Limitations	TBA
Revision	TBA
Exams	TBA
Navigation	TBA
Meteorology	TBA
Revision	TBA
Exams	TBA

Aircraft General Knowledge	January 5, 10, 12, 17, 19
Principles of Flight	January 24, 26, 31
Revision	February 2
Exams	February 7
Performance and Planning	February 9, 14, 16, 21
Communications	February 23, 28
Revision	March 2
Exams	March 7

It is not necessary to attend the full course and candidates can select the individual subjects they wish to study from the published dates. You do not have to be a member of AOPA to participate. Further details can be obtained from Mandy at the AOPA office on 0207 8345631 or mandy@aopa.co.uk

Rebuilding a Fox Moth

Restoring a DH83 Fox Moth was no easy task but this was the third to be completed by the Croydon Aircraft Company at Old Mandeville Airfield near Gore, on New Zealand's South Island. **MAEVA SMITH** tells the aircraft's story.

Croydon Aircraft Co. purchased ZK-AQB as a restoration project from the estate of the late Myles Robertson in April 1991. We were acquainted with Myles while he was working on aircraft in Auckland and his desire to replicate several DH83 Fox Moths, patterned from the salvaged remains of AQB. This Canadian built Fox Moth; Serial No FM49, was shipped to NZ and first registered to Auckland Aero Club on 25.11.07 as ZK-AQB.

It was registered 17.12.55 to Tauranga Aero Club, North Island; 17.4.59 to J. Paterson, Motiti Island; 1.1.61 to W Paterson, Motiti Island; but then crashed 28.6.1972. The crash occurred in the water approximately 4-500 metres offshore. Pilot was W. (Bill) Patterson, then owner of much of the western half of the island, from Panaturi Point to Huruhi Point. Ian McDonald, a passenger, recalled: "The crash occurred on my 25th birthday. Bill was picking me up from the island to return to Mt. Maunganui for my birthday celebration. Also a 'passenger' on the day was my two year-old Labrador dog.

"We ditched approx. half a mile offshore (with moderate E.S.E. wind), which washed the wreckage up on Taumaihi Island, known locally as the 'Knoll', during the night. Bill was still under medical observation, so Tauranga Aero Club flew me out the next morning, with the photographer who took photos, and I enlisted the help of the Ranapia boys from the northern end of the island. We launched the jet boat and went to retrieve the engine, which had just been overhauled.

Croydon Aircraft Company was founded in 1986 by Colin and Maeva Smith.

Owner John Eaton took great pleasure in trying out the new carefully-crafted pilot seat.

"We cut off a wing to put the engine on, then carried it across the rocky spit to the sheltered NW side, plonked it on the boat and then waited until the tide came in enough to float the boat. We took it up to the cattle loading bay and put it onto a local cray boat to be delivered to Tauranga. Anderson's transport then took it to Ardmore for inspection.

"On the island, I had a shouting match with the CAA accident inspector who arrived out of the blue and told me I needed permission to remove the motor. I said Bill had asked me to do so and when he got a bit stroppy, the Maori boys asked him if he wanted to 'swim' back to Tauranga!" The Ranapia family were fiercely loyal to Bill as he would fly them on and off the island, if he had room, and we used the cattle barge also for much of their equipment and bulk supplies. Their elderly Kaumatua, Hawiki Ranapia, had also taught Bill to speak Maori. (As an aside, when Bill first got AQB, old Hawiki used to make him take off and do a circuit of the island before he would get into it to go to town).

New Owners

The wreckage was eventually purchased by Myles Robertson, who was going to restore it somewhere near Dairy Flat, north of Auckland. The aircraft was salvaged from the beach on Motiti Island and Myles and his wife planned to restore the aircraft themselves. Sadly, Myles died suddenly a short time later.

The project was purchased by Colin Smith of Croydon Aircraft Company with the intention to make it an exhibit in the de Havilland collection of the Croydon Aviation Heritage Centre at Mandeville, until the opportunity arose for the trustees of the collection to have the original West Coast Airways

ZK-AQB at Auckland Aero Club.

Fox Moth, ZK-ADI that Bert Mercer purchased and used to obtain the very first Air Operators Licence in New Zealand. The Fox Moth ZK-ADI was at that time domiciled in the UK having been shipped there via the USA by no other than Myles Robertson.

John Eaton from Auckland approached Croydon Aircraft Co. hoping to acquire the project and have the company restore the Fox Moth to represent the very best of its type. The only departure relating to the Canadian built aircraft was that he required the wings to fold, as was the norm with the British-built machines.

The restoration was undertaken over an extended period of time due to other priorities John had, but he never failed in his determination to see the aircraft completed as he first envisaged, and he never deviated throughout the restoration from that stance.

The Croydon Aircraft Company, which has been restoring vintage aircraft for the past 30 or more years, has built an enviable reputation for restoring de Havilland types in particular.

The DH83C Fox Moth is the 3rd that has been completely restored at Mandeville, while the company also maintains and flies the historically significant NZ Fox Moth, ZK-ADI.

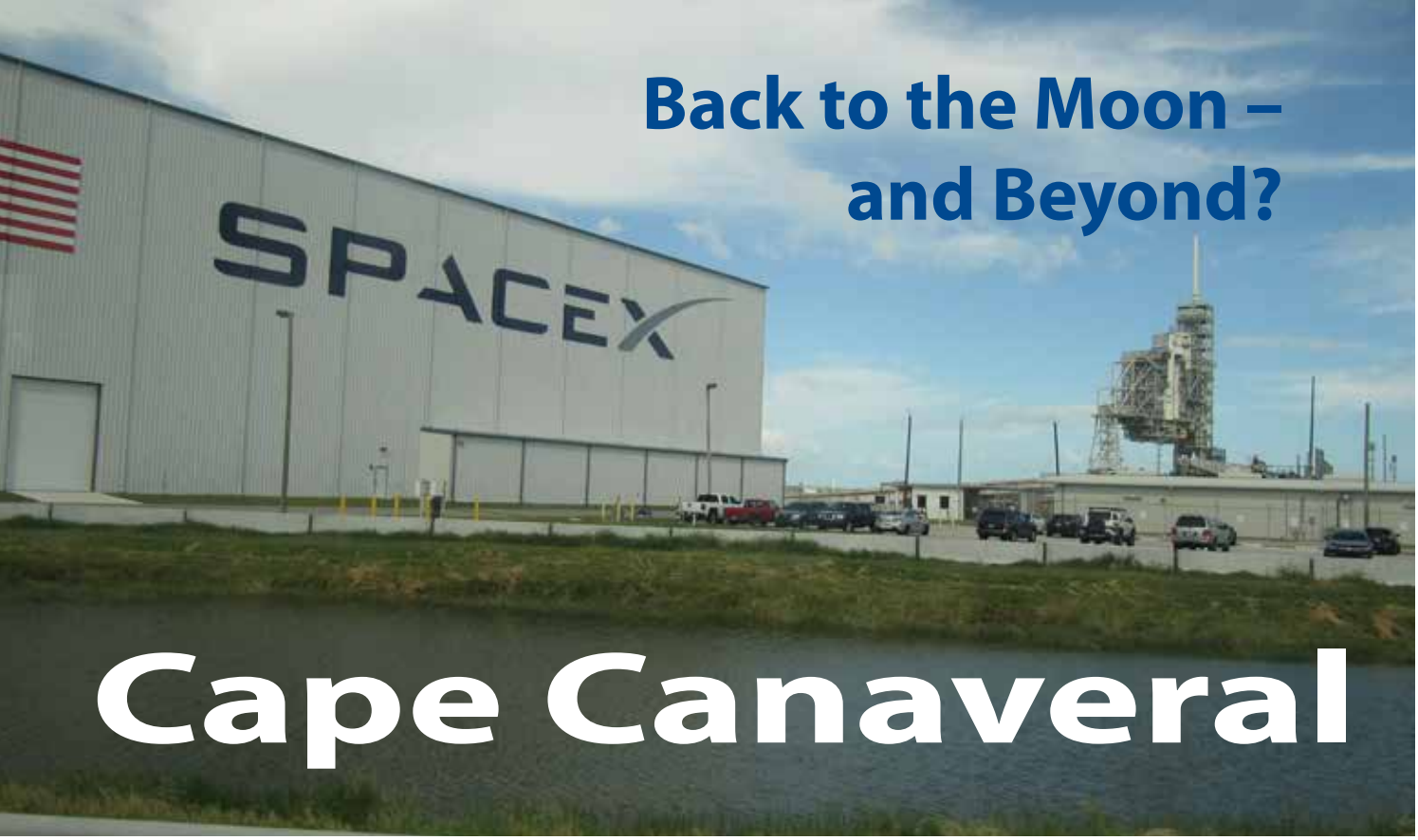
Although the company's focus is de Havilland types, other recently completed restoration projects include a Proctor Series I and two Beechcraft Staggerwings. The first, "The Red Rockette", was seen in the UK at Goodwood where it was awarded the "Freddy March" trophy. This aircraft is continuing its journey home to the USA, at present flying around Europe. The second Staggerwing, VH-UXP, flew from Mandeville to Wanaka where it currently resides.

The company is a small family business employing seven people based in Southland, New Zealand. More than 75% of its restorations are for overseas clients, which explains the world-wide reputation for this work.

The first Fox Moth restoration was the "Royal Fox" G-ACDD, which was restored for an English owner and travelled back to the UK via USA where it was awarded a Reserve Champion at Oshkosh. It completed the journey home on the Queen Mary, which was a fitting arrival for a one-time aircraft of the Royal Flight! After passing through two owners it now flies in Canada as (C-FYPM). The second restoration was VH-USJ for John Markham from Perth, Australia. This aircraft was the first operated by the Flying Doctor Service in Western Australia.

John Eaton's ZK-AQB is thus the most recent in a long line of historically significant aircraft to have been brought back to life at Mandeville.

Back to the Moon – and Beyond?



Cape Canaveral

Many pilots around the world have spent some time flight training in Florida, or just on a flying holiday with providers such as Pilots Paradise in Sebastian. Squeezing in a visit to Kennedy Space Center, just an hour's drive east of Orlando, is more than worth doing and it's also worth revisiting. Or, if you get the chance, fly down the Shuttle Landing Facility's 15,000ft runway. Imagine gliding the Space Shuttle in there!

KSC is of course best known for being the place the Apollo missions launched to the Moon, with the enormous Saturn V rocket. Arriving at the KSC Visitor's Center it is worth doing everything else there later, and heading to catch the bus tour that stops at the Saturn V rocket building after seeing the assembly building and launch pads.

The drivers on the bus tours are very knowledgeable on the history of the various facilities, giving amazing statistics on the buildings and rockets along with updates on missions planned in the future.

Launch Pads

Space X now has a major facility for its Falcon rockets that are being used to resupply the International Space Station, and use Pad 40.

Pad 41 is used for Atlas V rockets while Pad 39A and 39B, which were used for Apollo and the Space Transportation System (STS, aka Space Shuttle), will be used for NASA's new Space Launch System, which could support return missions to the Moon and missions to Mars.

The Space Shuttle Atlantis is now housed in a Shuttle Visitor Center. This is the entrance. Below is one of two crawlers that were built for moving Saturn Vs, and were later used to move the Shuttle. They are still in service.

Shuttle Atlantis.

KSC has one of three Saturn V rockets that were left unused at the end of the programme in the 1970s (the other two are at Houston and Huntsville). The three stages of the Saturn V are clearly visible, along with the Lunar Module, Service Module a re-entry capsule from Apollo 14. Below is Mission Control.

Flying in Wine Country

Stellenbosch Flying Club is one of the biggest in Africa with over 600 members,160 aircraft on the airfield and a Flight Training School that includes commercial licences. **IAN SHEPPARD** visited and took a flight around the local area in a Cessna 172, before flying to Namibia.

After a business aviation conference in Cape Town, I visited Stellenbosch Airfield and met with AOPA South Africa treasurer Peter Blaine, who is the proud owner of a Bonanza and a C172.

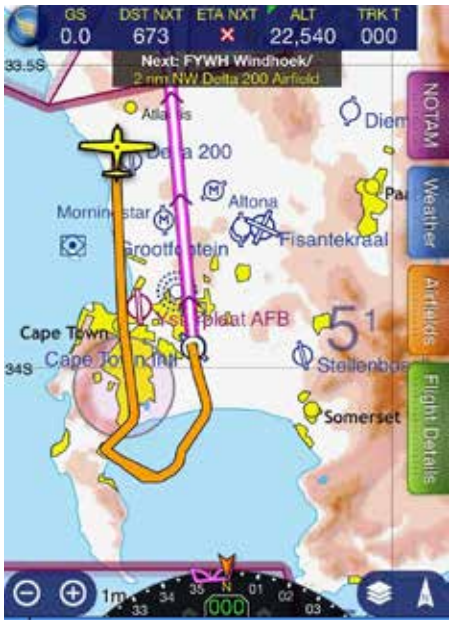
The Club was founded in 1973 and has grown streadily since. Members pay an annual fee that covers all their parking and landing fees, and use of the clubhouse. It has a single, hard runway 01-19 that is only around 2,400ft long.

Jonathen Stols, general manager of Stellenbosch Flight Academy, showed me their FNPTII simulator. The field also has its own MRO operation.

Note in the runway picture below left, you can see the bank the club is building along the runway to apease owners of new houses complaining about noise, or "aircraft sound" as Blaine prefers to call it. SFC had a long lease on the airfield but that is coming to an end over the next few years, so the club is negotiating a new lease.

Flight instructor Terry Voorbij.


The Club's pet Vampire.



Blaine said that there shouldn't be any problem renewing as it is designated as an airfield in local plans still.

There were fires raging on the hills while I was there, making it a little hazy. Four aircraft from the fire department are based there (see below - a Huey, a Thrush and two Cessna 172s), being used for dropping water and as a spotter aircraft.

Fly AOPA's Simulator!

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Carry on Instructing!

Flight instructors are in short supply and many are being snapped up by airlines and corporate flight departments - but we still need ever more pilots, and need standards to be maintained. Flight Instructor Refresher Seminars, such as those run by AOPA, play a central part.

AOPA held one of its Flight Instructor Refresher Seminars at its headquarters at 50a Cambridge Street in London. The seminar attracted 20 instructors from all over the UK and included several nationalities. The success of the two-day seminar, which was audited by a CAA inspector attending on the second day, has led AOPA to decide that two of the four seminars in 2017 will also be held there. The other two will be held in Abingdon.

David Scouller leads the seminars working closely with John Pett. Both are on the AOPA Instructor Committee and David is head of training at Western Air at Thruxton.

A quick poll of those in the room indicated that surprisingly only one was a full-time instructor, three were also airline pilots and a couple were corporate pilots. Four had lapsed and hoped to return to instructing. Half of the 20 were PPLs and the rest had CPLs, four also instructed IR/IR(R) and a couple also instructed multi. Scouller was surprised to find that none were examiners but pointed out that the seminar was designed to be suitable for all, and that three in the room would be selected to do a presentation on their chosen topic on the second day.

"The purpose is the enhancement of flight instructor techniques," Scouller said. "There is now clear evidence of the erosion of basic skills [among pilots]" – especially among professional pilots who "sometimes [hand] fly as little as a few minutes per sortie."

"With EASA the PPL became the first module of the ATPL so handlings skills have to be inculcated at that point," added Scouller.

The seminar then started with Charlie Brown, former Tornado pilot and long-time military and civil instructor, and for a few years CFI at Cranwell Flying Club, recounting core instructional techniques (IT). "It all started with the CFS Staff & Standards No.1 Course at Upavon in 1912," he said. "This was formed to look at 'flying' to see if it had any military application. It was there that Lt. Smith-Barney gave us 'demonstrate-teach-practice'."

The aim of such seminars, he continued, is to revise basic IT. And of course a CAA-approved seminar is required within the past three years for any instructor to remain current, unless they have done 50 or more hours of instructing and had a test with an instructor rating examiner. Those without the 50 hours must do the seminar and the flight test.

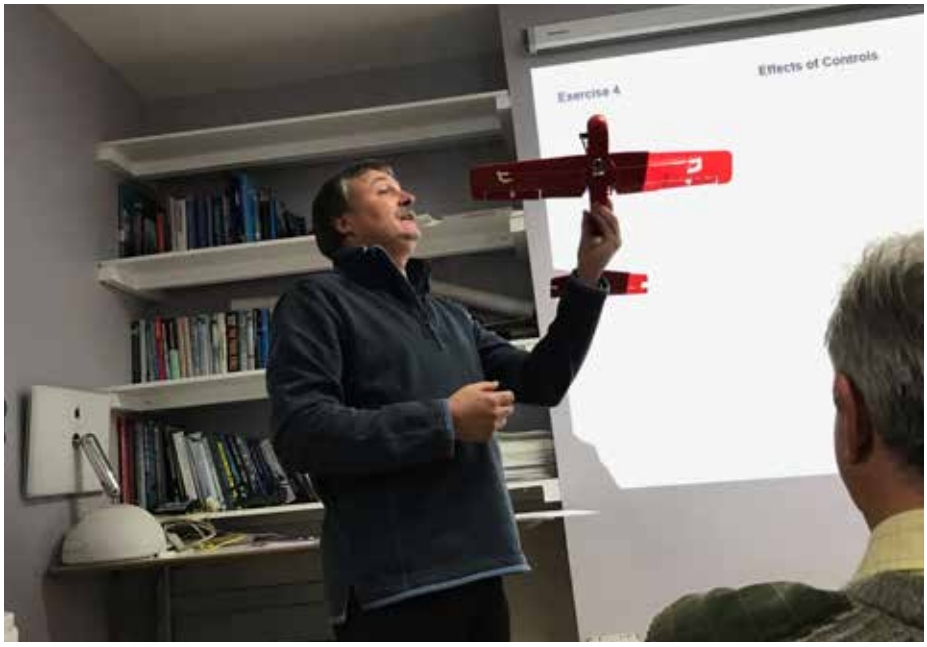
"If you ask 20 different instructors on 20 different topics, you'll get 20 different answers – so what you need is the integrity to distinguish between fact and opinion. And if another instructor has taught in a different way, you can often learn from that [rather than dismissing it]."

The building blocks Brown highlights are the "Big Five": SHT, PAT, LOI, LAI and PAAT. These are Select-Hold-Trim, Power-Attitude-Trim, Limitation-Operation-Indication, Lookout-Attitude-Instruments, finally, and Progressively Adjusting Attitude & Trim (especially with aircraft that have a wider speed range than light aircraft).

David Scouller gives delegates the benefit of his many years of experience in flight training.

He stressed (referring to LAI) that the lookout should take into account that the central vision angle is only 2 degrees and it is therefore essential to teach the lookout properly, as beyond that is peripheral vision which will only detect movement. "So just thin about that physiology," he said, referring to teaching "The Rolls-Royce lookout" with two figures of eight looking high, low, near & far. The usual in the civil world is to keep moving the eyes to different places to scan so the military technique is more structured. The key is not to look down for too long, however.

Brown also reminded the instructors to "teach from the known to the unknown", and to remember the importance not only of pre-flight



An attendee who drives Airbus aircraft for a living goes back to basics to renew his instructor ticket.

"Often when doing 4-5 sorties a day, there is little time – apart from for flying – but you could debrief in the aeroplane when taxiing back..."

briefings but also of thorough post-flight briefings. "Often doing 4-5 sorties a day there is little time apart from for flying but you could debrief in the aeroplane when taxiing back (if you take control, just allowing the student to do the shut down)…and make sure you summarise the sortie with key points."

"You could also [pre-]brief students together if you can." Electronic briefings can also be effective, he added, while admitting white board and pens are more effective if you have time. "Remember it's the cheap bit!"

He then underlined the need for instructors to be clear from the start about the hand over routine, so someone always has control. "You want a relaxed but professional cockpit." And when demonstrating he said that instructors should "aim for perfection" but admit when they'd got it wrong, and demo again – "Admit your mistakes, as the student will often have noticed anyway… Also, use simple, concise words, and appropriate praise…and fly the techniques you teach. You're always on show!"

Scouller recounted a case of a Harrier where neither pilot had control, and it had a very heavy landing "bending the aeroplane – but they didn't use the exploding furniture."

In response to a question from the delegates, Brown said students often learned more and faster if the instructor said nothing and just let the try, only interjecting if something was unsafe. "You must break any dependence on voice control."

However he warned against coming to the circuit too soon, before the basics were mastered. This was a common mistake among new instructors; they should complete Exercises 1-10 properly first – one delegate suggested doing a pretend circuit then away from the airfield, before trying the real thing.

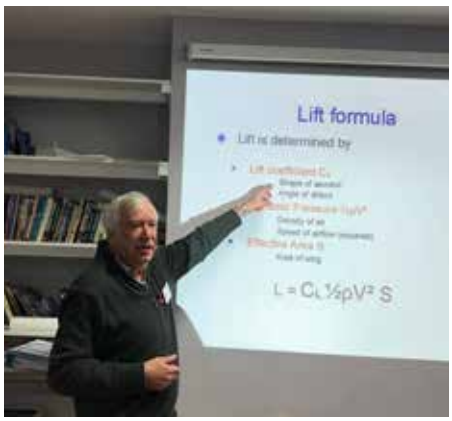
Brown then talked about teaching students to land, or checking experienced pilots later who tended to have started to land flatter. This leads to what is a common accident, as pitch oscillations as the aircraft bounces down the runway eventually breaks the nosegear (he showed a video of a Warrior doing this and the 'bounces' looked quite benign, until the gear went).

Also he noted with lining up, "People are often 15 degrees off the centerline, because they are looking at the runway threshold. You need to think of the centerline, extending it into the undershoot. He added that students need to be clear about the two types of approach/landing – 'point and power' where the elevator controls the flightpath and power controls airspeed (used for short field and instrument approaches in particular); and the second where elevator is used to control attitude/airspeed and power is used to control the rate of decent.

"The coordination of pitch, attitude and power is the important thing in every case at low speed…when the angle of attack is 12-14 degrees - compared to a very low angle in the cruise" – so drag is easily increased. "The changeover speed is about 10 knots above the threshold speed," he said, referring to where you go to a point slower than minimum drag speed and drag increases as speed decreases.

"You often find that a student on approach will change power, then attitude, and never coordinate, and never stabilize – and they're probably fiddling with trim and flaps at the same time."

Another delegate gets the chance to give a lesson on a topic of his choosing.



Brown continued, "Stress the need to keep an eye on runway perspective and control speed with attitude and rate-of-decent with power." On runway perspective, one delegate commented on the need to ensure the student had a good view, so to use cushions where required. A point was also made about sideslipping, and the need to give students a visual reference and "practicing at a safe height first." Scouller advised against continuing a sideslip below 50ft or so and noted that some aircraft, such as 172s, might 'flick' if sideslipped with flaps down and slowed. "So stop before you slow to the threshold." [And always check the POH as sideslipping with flap may be prohibited]. Sideslipping is part of the PPL course, in Ex. 8, he added.

On the roundout and landing, said Scouller, students should be told to "look well ahead and widely (your peripheral vision will help you ensure you're not too high) at 30-50ft with attitude and speed OK, and numbers in the right place. The sightline is changing and you see the runway begin to flatten – so the nose can be raised to match the rate of flattening. And take account of the wind gradient too – remember the airfield anemometer is on a long pole, but at the surface the wind is zero!" With wind, he advised that if the headwind is greater than 10 knots, 25% of the headwind should be added to the threshold speed. So a little power may be required and then you approach slightly faster with a lower angle of attack."

With cross-wind landings Scouller said crabbing was best for low-wing aircraft. Wing-down is easier but more suited to high-wing aircraft as they have more ground clearance.

With crabbing, you need to use some wing-down to avoid drifting across the runway as you straighten up during the flare. "It's hard to judge when to 'de-crab' though" – something he referred to as "the magic."

Scouller advised teaching one method during the course, "but you've got to teach the other as well at some point." He also noted that airlines tended to crab as most airliners are low-wing, apart from

turboprops such as Dash 8s and ATRs.

He also advised on go-arounds adding full power first in all circumstances, and not rushing even to get the drag flap up unless the particular aircraft is really known not to be capable of a positive climb rate and there is some height to deal with any slight sink. "Most aircraft will climb with full flap. There is a risk that bringing a stage of flap up will cause someone to sink to the runway again due to the trim change.

Instrument Flying

The next session was on instrument flying and specifically the IF training in the PPL course. Brown noted that there was no minimum requirement but it is "highly desirable to know why you shouldn't be in cloud and to know how to do a 180 [degree turn]."

He said that after his 'Big 5', "the sixth is the Selective Radial Scan [of the instruments]." It effectively replaces "LAI" when on instruments, using the artificial horizon. Brown said the RAF started late in the day with IF, in 1928, "and had to play catch up. The acid test then was needle and ball and airspeed, to fly a circuit," but they hadn't got round to landings. This is was in aircraft such as the Hawker Fury.

So things to underline with students include always making the AI the first thing they look at after looking away. The lesson always starts with a "disorientation demo" though, with a steep turn and a roll-out before seeing if, when the student shuts their eyes, they can fly straight and level. They are then told to open their eyes and see how they've lost it. [Ed: The other demonstration is asking the student to close their eyes, the instructor allows a gradual turn to develop which the student cannot detect, then turn more quickly to straight and level. The student of course says the aircraft has then banked but when they are asked to open their eyes, it is S&L].

Brown noted that the F4 Phantom had an instrument first developed for the Apollo programme, that also had heading on the AI.

He concluded with his IF "Top Tips" – 1. Trust your instruments; 2. Tap into previously learned skills and techniques; and 3. Smoothness – students need to learn to anticipate and stay ahead of the aircraft.

There's ample time in the breaks to share flying stories and discuss the finer points of flying.

A couple of other tips were to anticipate levelling-off using 10% of the rate, so for 500ft/min you should start 50ft before the target altitude (this also works for a 737 doing 15,000ft/min, anticipating by 1500ft. "And it works," said Brown."

With more advanced instrument flying students must learn to fly in IMC with no vacuum instruments (so-called "partial panel") with the AI and DI covered up, and recover from unusual attitudes. Brown said in this case the turn coordinator could be used to achieve wings-level but advised against using the rate-of-climb/descent indicator to level off. Instead, "just stop the altimeter!," he said, by increasing or decreasing power as appropriate and levelling off.

For those going further and doing instrument training including approaches, he said "remember the basics, don't chase the needles [of the ILS], and use Mental Dead Reckoning for headings and rate of descent."

Brown added that the air force had stopped teaching limited panel. "But I'm going to try to get it back as it's a skill you may need to fall back on when you do GA flying."

Scouller talked about advanced instrument flying too, saying "The assumption with the IR/IR(R) is a reasonably competent instrument pilot. He also underlined the point that pilots should be encouraged to have a good feel for rates and speeds. "For example it's well worth people to land without the ASI." He also made a comment about teaching with glass panel cockpits as the "scan is much smaller…and you have the whole horizon line. People coming from 'steam gauges' were overwhelmed but they adapted very quickly." But he also said "People seem more likely to chase as they can see so [values] so accurately."

Also with EFIS-type displays Scouller suggested that it's best to get pitch and bank information in one look at the middle, which is "quicker and more efficient" – adding that some manufacturers (e.g. Russian) have symbology in different places, which can really "topple the mental gyros."

In a general comment, Scouller said that when instructors meet new students they should "paint the big picture first – for example tell them where the loos are! They need a comfort zone that can allow them then to better assimilate information." Then keep thinking of the big picture – so for an instrument flight, "outline the flight in 3D – SID, route, STAR, hold and approach. Get a mental picture of the plate, and also of the approximate speed, distance and time it will take. Once you have a mental ground plot, do proper plan with PLOG, estimate max drift, sequence navaid use, and make minimal notes. And for IR training always train generic – remember even some GA aircraft are very fast [so percentages are better than absolutes for dead reckoning, for example].

Some other pointers from Scouller included, "All too often the instructor

takes over the R/T" so the student doesn't have time or sufficient opportunity to get a good grasp.

He also said that doing approaches, on the glideslope pilots are usually encouraged to use 5 times groundspeed (i.e. IAS corrected for wind) to give the number for descent rate. But "if the aircraft is configured and in trim, it may be better to pitch down precisely 3 degrees using the AI, power back and trim."

On another go around point, he said often the student has pitch attitude too low and doesn't climb, and often does the R/T call first. "Make sure they configure and clean up before they do the R/T call. It's ANC [Aviate, Navigate Communicate] again."

Navigation

The last session of the first day was navigation. The lecture was led by Charlie Brown, who started by saying infringements were treated in such a way now that it's worth having a GPS map such as SkyDemon to maintain situational awareness, to ensure you don't even put "a wingtip in" to controlled airspace. "SkyDemon or similar tools are so useful as they let you file flight plans, check Notams and check weather. But I use it more for planning than flying - I put [the plan] on paper and use the stopwatch - you'll lose the skills otherwise." He added that SkyDemon was also good for debriefing the track.

"You need a simple and robust plan and don't [plan to] go right up close to controlled airspace." He said instructors should "engage" with students in planning. "I'd have a still air plan and then have a dead reckoning heading so they revisit the skill - so when you get airborne if the wind is different they can do the dead reckoning."

Brown noted that pilots are "positively encouraged" to request a Traffic Service now but this can make for quite disjointed training exercises while dealing with R/T all the time. "So it's refreshing sometimes to go to a quiet frequency and squawk 7000 for training."

The rest of Navigation, and Day 2, will be covered in the February issue of AO&P, including Stalling and Spinning, Human Performance & Limitations, and Threat & Error Management.

Letters

Good afternoon,
I thought this might be something AOPA would be interested in as a possible item for the magazine. I'm a firm believer in anything that could attract more young people to aviation! Airbus has launched a new programme to get more kids into aviation.

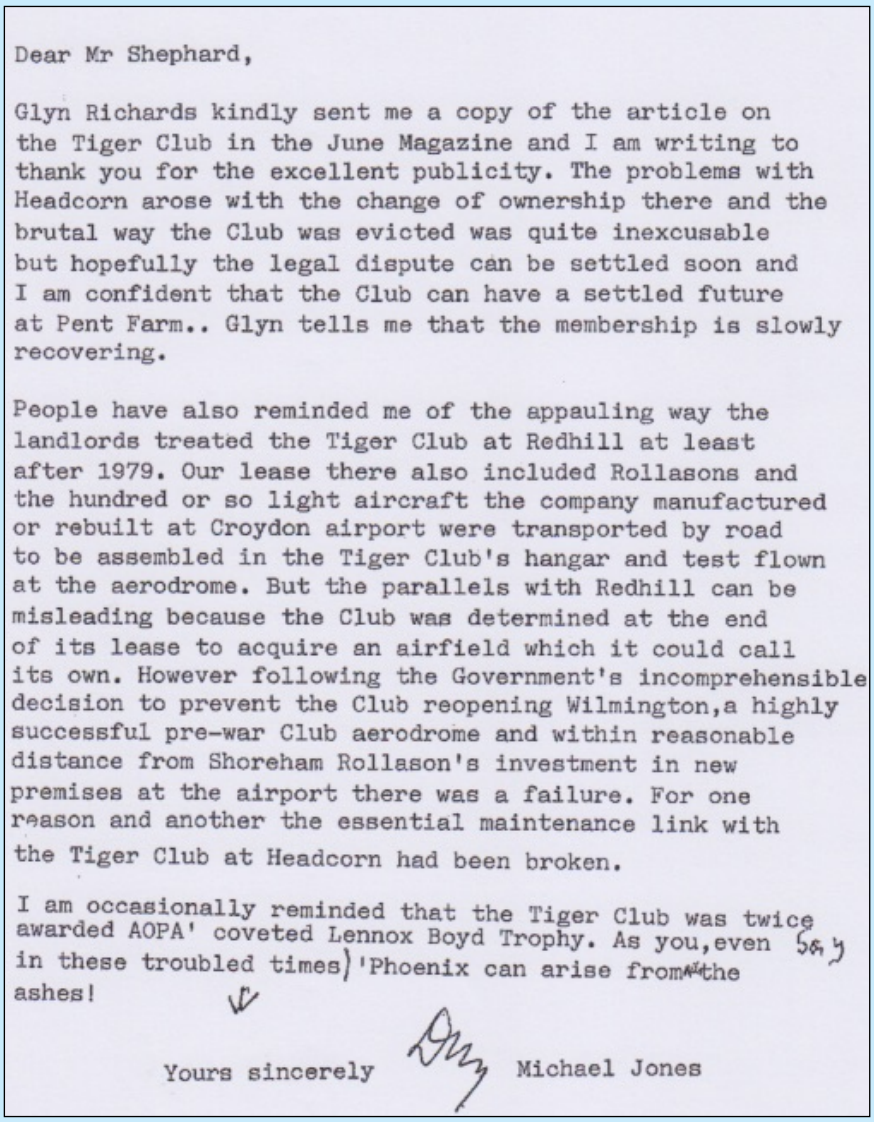
Here's a taster. Bristol, 14 September 2016 – At the launch of the UK's first Flying Challenge programme, 30 young people from Bristol Metropolitan Academy in Fishponds met Olympian Kriss Akabusi and French Astronaut Claudie Haigneré. The programme sees the 13 and 14 year old students embark on a unique and potentially life-changing opportunity to work with Airbus employees. During the year-long programme they will learn about flight, careers in aviation, develop new skills, and gain practical experience. I've attached the full release and a snap. We'll keep you in the loop as the programme progresses.

Best Regards,

Ben Griffiths

Sir,
In the October issue of your magazine, under the Aviation Artists headline, you state that the largest ever formation of aircraft flew to celebrate the Queen's 90th birthday. I hope you took into account the Coronation Review Flypast in July 1953 in which 641 aircraft took part. I had the honour to take part in a Vampire as part of the Training Command formation, No. 25.

J G Stuart



Dear Mr Shephard,

Glyn Richards kindly sent me a copy of the article on the Tiger Club in the June Magazine and I am writing to thank you for the excellent publicity. The problems with Headcorn arose with the change of ownership there and the brutal way the Club was evicted was quite inexcusable but hopefully the legal dispute can be settled soon and I am confident that the Club can have a settled future at Pent Farm.. Glyn tells me that the membership is slowly recovering.

People have also reminded me of the appauling way the landlords treated the Tiger Club at Redhill at least after 1979. Our lease there also included Rollasons and the hundred or so light aircraft the company manufactured or rebuilt at Croydon airport were transported by road to be assembled in the Tiger Club's hangar and test flown at the aerodrome. But the parallels with Redhill can be misleading because the Club was determined at the end of its lease to acquire an airfield which it could call its own. However following the Government's incomprehensible decision to prevent the Club reopening Wilmington,a highly successful pre-war Club aerodrome and within reasonable distance from Shoreham Rollason's investment in new premises at the airport there was a failure. For one reason and another the essential maintenance link with the Tiger Club at Headcorn had been broken.

I am occasionally reminded that the Tiger Club was twice awarded AOPA' coveted Lennox Boyd Trophy. As you,even say in these troubled times) 'Phoenix can arise from the ashes!

Yours sincerely Michael Jones

Book Review

Sir Geoffrey de Havilland

A Life of Innovation and Leadership

Photo: Ian Sheppard

Legendary aviation journalist, editor and 'Total Aviation Person' Mike Ramsden (aka JMR), FRAeS, accepts a Lifetime Achievement Award at the 2016 Aerospace Media Dinner.

By J M Ramsden

Hylands Publishing, 2 Wendover Court, Welwyn, AL6 9HR.
ISBN Print 978 0 9931679-0-4.
£25.00 + £5 p&p UK. Please send cheque (with order) payable to A M Ramsden.
Hard Cover: 239 pages – 130 illustrations.

For many years aviation people have wondered why a person of such significance as Sir Geoffrey de Havilland had not received the credit that he deserved in the form of a biography. Now at last, more than 50 years after his death, that gap has been filled by possibly the most suitable living person: Mike Ramsden, who has had active connections with the DH Organisation and Flight Magazine and who created the once well-known handle of Total Aviation Person for anyone who deserved such an accolade.

GdeH, as he was known in some quarters, is described in the foreword by the Duke of Edinburgh as 'an engineer and innovator in the mould of Brunel, the Stephensons, Trenethick and the other great British engineering pioneers.' His calmness, courtesy and good humour helped to make him so highly regarded by people at all levels of society or in the workplace. In his earlier years he survived three crashes as a test pilot and much later he lost two sons fulfilling the same role.

It would be difficult - if not impossible - to discover any person so actively involved in direction, design and production who was directly associated with so many aircraft of much significance, from as early as the No.2 de Havilland (not the later DH2) that flew successfully in September 1910, the DH4 high-speed bomber of WW1, the large Moth family including the pioneering Gipsy Moth and its military successor, the Tiger Moth, the Comet racer of 1934, the smooth all-wood Albatross airliner of two years later, the versatile Mosquito and the Comet first jet airliner (perhaps in their own ways the two most significant of them all), the Hornet as the world's fastest piston-powered fighter, the Sea Vampire as the first jet to land on an aircraft carrier and even Europe's first heavy space rocket – Blue Streak. There are many others that justify mention because of their special qualities or achievements, but the brief list above should suffice to show the wide range of machines in which Sir Geoffrey was a key person.

Although the book illustrates the Mosquito as Sir Geoffrey's masterpiece, which few, if any people, would dispute, still there is an acute shortage of information on the type's handling qualities, missing almost entirely from three books relating to the machine published as far back as 1959, 1960 and 1967.

In this latest publication, the captions to a picture showing a machine with its port propeller feathered states 'engine cuts at circuit speeds required very quick, well-practised handling but the Mosquito's loss of temper was rare, thanks significantly to the dependable war-winning Rolls-Royce Merlin.' True, but nowhere is there any detailed wording about its overall flying characteristics. However, readers may find this gap filled in the near future. David Ogilvy is writing a book 'The de Havilland mosquito – a pilot's view' that should be published by the middle of 2017. Ed.

Despite this, the book contains a host of information, ancient and modern, that covers almost all activities in which GdeH played his significant roles. Whilst not readily available through all usual sources, it can be bought by post from the address above and over the counter at the de Havilland Aircraft Museum, Salisbury Hall, London Colney, St Albans (01727 826400). It could make a worthy combined opportunity to visit Salisbury Hall, where the three prototype Mosquitos were built and where the first, W4050, and many other DH products are on view – a good day out with the bonus of an equally good book. Try it.

David Ogilvy

Letters, continued...

Windshear and the Myth of the Downwind Turn

Dear Sir,

In your October issue Bob Gilchrist cites "three industry experts" in support of his claim "that the inertia of an aircraft is a factor when making a turn downwind...is unequivocally false."

Barry Schiff dismisses 'the myth' without explaining why in his opinion it is a myth. Peter Garrison makes the indisputable point that stalling when turning downwind may be for other reasons than the 'myth' but similarly he doesn't attempt to explain why he thinks it is a myth. Rick Durden believes those "most insistent on the myth get the concept confused with the effects of wind shear..."

This may be true but it doesn't follow from this that the so-called myth is not a physical phenomenon. Moreover, because they are experienced pilots it doesn't necessarily follow that they are right. Although I am a pilot and was trained as an aeronautical engineer, I do not claim that it therefore follows that my arguments are valid – I leave readers to make their own judgment on whether my reasoning is fallacious or sound.

A mathematical analysis is the only sure way of predicting the behaviour of moving objects but for the average pilot mathematics gives little insight into the forces acting on an aircraft in flight. However, the fundamental physical principle is that moving objects continue at constant velocity (i.e. direction and speed) until a force acts upon them (Newton's First Law of Motion).

Thus, an aircraft in a turn has its velocity (but not necessarily its speed) altered by the tilting of the lift vector towards the inside of the turn. Therefore (ignoring the increase of drag in a turn) an aircraft turning in still air will emerge from the turn with a change in velocity but the same speed over the ground as it had when entering the turn.

Consider the case of a fish swimming directly upstream in a river flowing at the same rate as the fish is swimming, say 4 knots. With reference to the ground the fish will be stationary. The fish now turns downstream and in due course will be travelling over the river bed at 8 knots. The fish is still swimming through the water at 4 knots so the force required to accelerate the fish from standing still to 8 knots must in part be due to the force applied to the fish by the stream.

This is closely analogous to a glider, slope soaring, in a strong wind. Heading directly into wind the glider's speed over the ground is small, possibly negligible. Let us assume for the sake of simplicity that the glider's airspeed and the wind speed are both 30 knots. If the glider maintains an airspeed of 30 knots after turning down wind its speed over the ground becomes 60 knots. Its acceleration from 30 knots over the ground (which after turning would have been its ground speed in still air) to 60 knots can only be due to the acceleration provided by the push of what is now a tailwind therefore the airspeed falls until the glider has accelerated to 60 knots ground speed.*

I have deliberately chosen simple, and arguably extreme examples, to assist understanding but of course the same principles apply in the case of an aircraft with an airspeed of, say, 90 knots heading into a wind of 20 knots and then turning onto a reciprocal course, or any other numbers you choose, although of course the outcomes will be different.

In the case of light powered aircraft it is possible that a not dissimilar situation may arise to the glider case instanced above but in general the speeds and inertias of powered aircraft will be substantially different. That in most cases the pilots of powered aircraft do not notice the phenomenon does not mean that it doesn't exist.

Incidentally, given that loss of speed will occur in a turn, unless compensated for, and the steeper the turn the greater the loss of speed, how do the sceptics disentangle this effect from the loss of speed caused by the so-called myth?

Roger Bunbury

** Note that this is different to the steady state situation where an aircraft is circling either in still air or in a wind. In this case, if the wind is steady, the aircraft's airspeed will be independent of heading because it is circling a point moving at constant velocity. This is analogous to a boat circling in a bowl of water in a train moving at constant velocity. Thus the only acceleration the aircraft will experience is towards the centre of the circle, the 'g' associated with a turn.*

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