



Air Pilot

OCT 2017 ISSUE 23





AIR PILOT

THE HONOURABLE
COMPANY OF
AIR PILOTS
incorporating
Air Navigators

PATRON:
His Royal Highness
The Prince Philip
Duke of Edinburgh KG KT

GRAND MASTER:
His Royal Highness
The Prince Andrew
Duke of York KG GCVO

MASTER:
Captain C J Spurrier

CLERK:
Paul J Tacon BA FCIS

Incorporated by Royal Charter.
A Livery Company of the City of London.

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Diary

OCTOBER 2017

11th	Pilot Aptitude Testing	RAFC Cranwell
12th	General Purposes & Finance Committee	Cobham House
26th	Trophies & Awards Banquet	Guildhall

NOVEMBER 2017

4th	Pilots Careers Live	Sofitel Heathrow
4th	Flying Club AGM	White Waltham
9th	Air Pilots Benevolent Fund Trustees	Cobham House
10th	Careers in Aerospace	RAeS
11th	Lord Mayor's Show	
16th	Scholarships Reception	Cutlers Hall
16th	General Purposes & Finance Committee	Cobham House
16th	Court	Cutlers Hall

DECEMBER 2017

6th	AST/APT meeting	Cobham House
14th	General Purposes & Finance Committee	Cobham House
14th	Carol Service	St. Michaels, Cornhill

VISITS PROGRAMME

Please see the flyers accompanying this issue of Air Pilot or contact Liveryman David Curgenvin at visits@airpilots.org.
These flyers can also be downloaded from the Company's website.
Please check on the Company website for visits that are to be confirmed.

GOLF CLUB EVENTS

Please check on Company website for latest information

Cover photo: A F-16AM of 31/349 Sqn the Belgian Air Component flown by Cdt. Tom de Moortel, at RIAT Fairford 2017. (Photo Vic Flintham)

A message from your Editor...

I asked the DAA to discuss the ramifications of Brexit, and you will find his ponderings in this issue; I hope you will find them stimulating reading. As with the UK in general, this is a topic which will loom large over the aviation sector for the next few years.

This year the Master's Grand Tour has been split in two – does that make them Tourettes?! The good news is this means we can learn of his escapades in North America somewhat earlier than usual.

Most of my aviating this summer has been under my own steam – it was strangely satisfying to watch BBC World in a foreign hotel advising viewers to turn up for their flights three hours before departure, when I knew 15 minutes would suffice for my pre-flight checks for my return from Austria. Whilst the British flag carrier continues to receive brickbats, I shall be interested to see how a foreign flag carrier performs after I have undergone the three hour check-in in a few weeks.

We list the winners of our annual awards in this issue, and I hope you are looking forward, as I am, to applauding their achievements at our Banquet this month.



Paul Smiddy - Editor

Contents

News Round Up	4
The Master's Message	5
From the desk of the DAA	7
Trophies and Awards, Gazette	10
Summer Supper at Tallow Chandlers Hall	11
Visit to Safran Landing Systems	12
Senior Flying Instructors Forum	15
Lithium Batteries - a rising risk in aviation	18
Book Reviews	19
Operation Hydra	22
Garden Party	26
Young Gliding Instructor Bursary Reporti	28



News Round Up

HENLOW 100

On the 21st of July at 2000hrs there was a flypast by 10 DHC-1 Chipmunks and 1 Bulldog over RAF Henlow to mark its centenary. The formation was led by retired Squadron Leader Robert ('Nitro') Miller, and included a number of Air Pilots .



INTER-LIVERY SKI CHAMPIONSHIPS

The Company will again be entering a team for this very entertaining event. Some expertise on two planks is to be preferred but is not mandatory. Racing experience would be a bonus. Little has changed from recent years. It will again be organised by the Ironmongers at Morzine. The dates are January 25-26th 2018. Expressions of interest to join the team are welcomed by Upper Freeman Sam Rutherford at sam@prepare2go.com. Entries are now open.

STRATEGIC PLAN

Members should by now have received through the post our new Strategic Plan. You are asked to note that the UK-specific list of stakeholders at para

16.1.1.b in the document is not exhaustive. However, one organisation which was inadvertently omitted from the list, and should be included, is the Aircraft Owners and Pilots Association (AOPA).

ONE FOR THE GRANDFATHERS

On the evenings of October 27 & 28th the RAF Museum is having an 'open cockpits' event. For the cost of special tickets, members of the public may sit in the cockpits of such hallowed machines as the Phantom, Vulcan, Lancaster and Spitfire. Perhaps ideal for the grandfathers in our membership to take along their grandchildren and say "I used to fly those!"

ELECTRIC AIRCRAFT

Lillium (see Space Invaders, June 2017 issue), the new Munich-based developer of electric aircraft for the commuting market, has recently received \$90m of further funding – from China.

8.33KHZ RADIOS

Re-equipping the UK's GA fleet is proceeding apace, perhaps only limited by the finite supply of avionics engineers. The Editor endured receiving the wrong 'box' from his supplier, but is pleased to say that he has now received his (minute) share of the €4.3m of funding that the CAA secured from the EU. There were over 2,000 applications for partial reimbursement in this initial round.

MEDICALS & RATINGS

The shift to self-declaration for pilot medicals is gaining some traction. More than 4000 such declarations, only suitable for LAPLs, have been received by the CAA since February. Meanwhile the GA sector eagerly awaits a tablet of stone to emerge from EASA. Its Notice of Proposed Amendment for the Basic Instrument Rating closed in February, with over 400 comments received. A 'Comment Response Document' is expected 'in due course'.

LAA RALLY

Showing how weather dependent is one sector of the UK's GA, the 3 day annual rally enjoyed 2 days of good weather, and a rather more dull Sunday. This was when your Editor visited, and it was all rather quiet, with little need for the self-stacking operation prior to the arrival at Sywell.



A Hawk from RNAS Culdrose does its best to go into space



The Master's Message

Captain Chris Spurrier

Welcome to this, the second half of my year as Master. It doesn't slow down. The first notable event since my last message was the 101 Sqn Centenary celebration at Brize Norton. Paula and I were honoured to be invited to the parade, where HRH The Princess Royal was taking the salute. 101 Sqn is one of our affiliated units; we also met Past Master Rick Peacock-Edwards, who is our liaison officer with this unit. After the post-parade reception we were treated to a spectacular display by the Drum Team of the Japanese Air Self Defence Force. If you've not encountered them, take a look online. It's worth five minutes of your time. 101 Sqn would like to forge closer links with us, especially socially, and so I will be trying to involve them in more of our events.

Moving on, Past Master Chris Ford arranged a superb informal summer supper at Tallow Chandler's Hall. This is another annual event which is well worth attending. Chris tries to visit a different livery hall each year, and this one was a good choice. We enjoyed a warm evening in the courtyard for pre-dinner drinks and then moved inside for an excellent meal. As ever, thanks go to Chris and to the staff at Tallow Chandlers.

Paula has decided that during this year she will visit all the churches in the City, so she was pleased to see a Church Walk organised by the Worshipful Company of

Plumbers and Constructors. Paula and I began at St Paul's and visited 11 churches, with an excellent lunch at St Lawrence Jewry, finishing with tea at All Hallows by the Tower. [Editor's note: they must have passed the most gruesomely named pub in the City – the Hung, Drawn and Quartered!]. We are told there are forty churches in the City and she's now managed twenty-five. I'm wondering about a similar scheme involving all the 107 pubs and inns in the City, but that plan is currently receiving a large thumbs-down. As an aside, Paula also asked me to join her on the first stage of walking the Thames Path, another of her projects. We left home on a sunny Sunday and Paula told me to take a sun hat. We caught a train at 0930, arrived at Waterloo, took another train to Charlton and a taxi to the Thames Barrier. Paula said "Where's your hat?" I replied "On the train at Waterloo". Five hours later we arrived at Tower Bridge, with me closely resembling a boiled lobster. We boarded a train at Waterloo, where I was pleased to find my hat still on the rack where I'd left it. It had been to Basingstoke and back five times in the interim.

I must also mention the Ray Jeffs Cup. This is an annual charity golf match to which all Livery Companies are invited. Ray was a member of the Company and a great philanthropist. This match donates the profits to London schools to enable students to take part in the Duke



of Edinburgh's award scheme. It is organised by Assistant Rick Thomas, aided by his wife Pam selling raffle tickets with menaces. This year they raised £3,000, an absolutely superb effort. Regrettably the Air Pilots Teams failed to win the cup but we shall keep trying.

As you all know, each year the Master tours our regions. This year it was decided to split the tour into two parts, so August saw Paula and I off to North America. Beginning in Washington DC, Liveryman John Cox flew up from his home in Florida to host me on a succession of visits, starting with the NTSB and ending with the Flight Safety Foundation, via the National Business Aviation Association. We had three very productive meetings, discussing lithium battery fires (there is an article elsewhere in this edition), commercial aviation safety, wake turbulence upsets, loss-of-control incidents, and the dilution of





experience which will occur when the forecast large number of new pilots coincides with a large number of more experienced pilots retiring. In Montreal Liveryman Charlie Simpson hosted me to ICAO where we discussed the international harmonisation of procedures and nomenclature, the projected new pilot experience gap (again), and the changing of heading information from Magnetic North to True. As a result of this meeting the Company has been invited to co-operate in producing a paper on this latter change, and also to assist in the harmonisation of procedures mentioned above. All these organisations are also concerned over the rise in unregistered drones, and the incidence of laser strikes against aircraft. ICAO would like to see harmonised world-wide legislation for both. On to Vancouver, where Upper Freeman Alistair Beaton drove first me, then, on day two, both Paula and I to Abbotsford. On day one I was attending the Aerospace, Defence and Security Expo where I met Lt Gen Mike Hood, Commander of the RCAF, and attended the famous twilight airshow. On day two Paula and I were guests of Liveryman Steve Stewart, who is Chair of the NA Region and also President of the Abbotsford Airshow.

Those were the business bits. I am very, very grateful for all the courtesy, hospitality and friendship I was shown throughout the visit. There was, of course, time for some sightseeing. In DC we walked to the Capitol and the White



House. Liveryman Bill Pinney had arranged a guide to take us round the Smithsonian Air and Space Museum – even Paula enjoyed it! The next day, whilst I was in meetings Paula spent the day wandering round Georgetown in the rain. In Montreal we met an old university friend, who took us under his wing, and in Vancouver Liveryman Peter Evans had organised us a floatplane flight across to Vancouver Island for a day. The tour was a very memorable experience. We arrived back just in time to launch into preparations for the garden party (reported elsewhere in this issue).

I must end on a sad note. Those of you with long memories may recall that in my first Master's Message I mentioned our future at Cobham House was in doubt. The problem is basically that the building is expensive to maintain and, to be viable, the ground floor needs to be let as offices. The lack of facilities – no lift, no disabled access, no proper ground floor lavatory – makes it difficult to find tenants. It has now been empty for some months. There are other problems too, including the fact that the rear of the building looks over the Family Court and we are prevented from erecting scaffolding there, so any repointing or

similar work has to be done by abseiling. The IPM worked hard to find a satisfactory solution during his year and I have been continuing the discussions. It has now been agreed that the best solution is for the building to be sold. The current intention is that we shall leave Cobham House at some point in the New Year and camp in serviced offices until we can find a suitable property to purchase. Many of us will be sad to leave. It has been our home since 1999 and Lady Cobham is particularly sorry that we shall no longer be in the home which Sir Michael so generously supported. Regrettably we can find no other solution.

Summer is drawing to a close. Regrettably I've not had time to make my usual supply of damson vodka this year – one of the disadvantages of being Master. I've always thought that when Keats wrote about the season of mists and mellow fruitfulness he should have been more considerate of us pilots trying to land in reduced visibility. Fly safely until my next message.

From the Desk of the Director Aviation Affairs

Liveryman John Turner

BREXIT - BRitain's EXIT from the European Union

The word 'Brexit' appeared in 2012, hard on the heels of 'Grexit,' that was coined by a Citigroup economist covering the Greek financial crisis.

THE ENGLISH LANGUAGE

375 million people¹ (of whom 250 million live in the United States of America) speak English as their first language and in total there are 1,500 million English speakers, making it the most spoken language in the world. However, English comes in many forms. At the macro level, US English is different from UK English; at the micro level, there can be many local-area dialects within a single country. There is also the English official working language used by the European Union (EU).

EU English is influenced by grammatical constructions from its other members' other languages. Over time it has developed its own terminology as existing English words or compounds (communication, green paper) took on new EU-specific meanings and terms were either adopted from other languages (subsidiarity) or newly created (comitology). That leaves some inherent traps for the 'natural' English-speaker:

- In French, German and Spanish (and EU English), the word 'actual' means 'current' but in English it means 'real.'
- The phrase, "Both Member States² opposed the *eventual* imposition of anti-dumping measures," suggests that those measures were already planned whereas in EU English the phrase actually means, "Both opposed the *possibility* of imposing anti-dumping measures."

When using EU written material, English speakers should be careful to interpret EU English, whether in press releases or actual regulation, in the way it was intended.

The future of EU English is now the subject of debate. It is a vital relay language for interpreters who use it to link between less commonly used languages such as Hungarian and Gaelic but, out of all the EU Member States, only the UK (which is now leaving)

nominated English as an EU working language. By way of clarification, an "official statement on behalf of the European Commission Representation in Ireland³" in June 2016 said, "We note the media reports stating that in the event of a UK withdrawal from the EU, English would cease to be an official language of the EU. This is incorrect. The Council of Ministers, acting unanimously, decide on the rules governing the use of languages by the European institutions. In other words, any change to the EU Institutions' language regime is subject to a unanimous vote of the Council⁴, including Ireland." For now, that seems to settle things, though we might expect the media to raise the issue again as the UK's departure becomes more imminent.

TIMETABLE

It is now more than a year since the UK held a referendum on EU membership; it is almost half a year since 29 March 2017 when the UK formally announced its intent to leave, by triggering "Treaty on European Union Article 50: Withdrawal of a Member State from the EU".

As a European Parliament Briefing⁵ explains, Article 50 "does not set down any substantive conditions for a Member State to be able to exercise its right to withdraw, rather it includes only procedural requirements." However, Article 50 does limit the time available for the procedural requirements. The full text of Article 50, in EU English, is as follows:

Article 50

Treaty on European Union (TEU)

1. Any Member State may decide to withdraw from the Union in accordance with its own constitutional requirements.
2. A Member State which decides to withdraw shall notify the European Council of its intention. In the light of the guidelines provided by the European Council, the Union shall negotiate and conclude an agreement with that State, setting out the arrangements for its withdrawal, taking account of the framework for its future relationship with the Union. That agreement shall be negotiated in accordance with Article 218(3) of the Treaty on the Functioning of the European Union. It shall be concluded on behalf of

the Union by the Council, acting by a qualified majority, after obtaining the consent of the European Parliament.

3. The Treaties shall cease to apply to the State in question from the date of entry into force of the withdrawal agreement or, failing that, two years after the notification referred to in paragraph 2, unless the European Council, in agreement with the Member State concerned, unanimously decides to extend this period.

4. For the purposes of paragraphs 2 and 3, the member of the European Council or of the Council representing the withdrawing Member State shall not participate in the discussions of the European Council or Council or in decisions concerning it.

A qualified majority shall be defined in accordance with Article 238(3)(b) of the Treaty on the Functioning of the European Union.

5. If a State which has withdrawn from the Union asks to rejoin, its request shall be subject to the procedure referred to in Article 49.

The UK is the first Member State to seek withdrawal⁶ from the EU and, short of a currently unimaginable political about-face, BREXIT will happen no later than March 2019.

Post-BREXIT changes are for the two negotiating parties to agree (or not). With no agreement, international trade can default to World Trade Organisation (WTO) conditions but there are no globally signed-up equivalents for many other areas, including aviation.

From the aviation perspective, the two aspects that will be particularly important to the EU and the UK post-BREXIT are 'regulation' and 'access', as discussed below.

REGULATION

Shortly after the referendum result was known, the UK government asked the aviation community to suggest how the UK should best position itself for a post-BREXIT world. The views then expressed appeared to fall into two distinct camps:

- Airlines and business aviation were unanimous in wishing to remain under European Aviation Safety Agency (EASA) regulation with minimum change.
- The General Aviation (GA) leisure community was split:
 - Some want the same as the airlines, to maintain commonality with, and

access to, mainland Europe

- Some saw BREXIT as an opportunity to return to UK Civil Aviation Authority (CAA) rules that better reflected the nature and needs of UK GA, and would prevent any further spread of EASA influence into areas currently reserved for individual Member States.

We should not forget that these issues affect engineering support services, airfields and aviation support infrastructure as well as aviators. Commercial operators of all kinds in UK have been required to move progressively from CAA to EASA rules. Change is always uncomfortable and, when those changes include significant re-jigging of governance, approval measures and paperwork, it can be expensive. (Before the referendum, one engineering organisation estimated that just switching from CAA to EASA regulation had cost it £1.5 million in otherwise nugatory work.)

The Air Pilots believe that **the regulation of international aviation should be as international as the aviation activity it regulates**. It is important to appreciate there are Non-EU members of EASA, such as Iceland, Norway and Switzerland, and that they have members sitting on the EASA Management Board. Currently, there are 32 'EASA Member-States' (including UK) but only 28 EU Member-States (including UK). In truth, it is probably inevitable that the UK will keep its commercial air transport and engineering operations under EASA. As EASA took on more and more responsibility from UK CAA, the latter underwent such significant contraction in personnel and experience that it would be extremely difficult, if not impossible, for CAA to re-establish its previous role.

In contrast, the CAA GA Unit has had to expand in response to the air display accident at Shoreham, so it would be easier to retain CAA responsibility for those GA areas it currently covers.

CAA and EASA have built a productive relationship as EASA progressively expanded. The CAA has supported and worked hard to assist the development of EASA capabilities. EASA has taken up CAA-developed approaches to regulation too, such as risk-based oversight and light touch regulation of GA. Arguably, the CAA has been one of

the most actively involved national authorities within EASA, and that relationship should facilitate a UK application to remain within EASA.

Our two Position Papers covering BREXIT also discuss regulation issues. There are published on our website and are accessible by everyone, including non-members, at:

www.airpilots.org/aviation-matters/policy-and-comment/position-papers/

ACCESS

At present, the Single European Sky construct provides relatively unfettered movement of aircraft between EU Member States. However, the Court of Justice of the European Union (CJEU) "open skies"⁷ judgments of 5 November 2002 marked the start of an EU external aviation policy. This case law clarified the distribution of powers between the EU and its Member States in the regulation of international air services. Traditionally, international air services have always been governed by bilateral agreements between states but the 2002 judgments meant that EU Member States could no longer negotiate international air services agreements, with that authority passing to the EU. With no WTO arrangements in aviation and the UK's previous bilateral agreements largely obsolete/irrelevant to modern aviation arrangements, many fear that on BREXIT the UK airspace would be closed to any non-UK airline and the UK's airlines would lose access to everywhere outside the UK.

If UK remains an EASA member, there may be little practical opposition to UK cross-border aviation also remaining under Single European Sky arrangements. Analysis of current aviation activity suggests any move to prevent UK access to EU airspace and airports (and vice versa) would disadvantage EU airlines too, not least those of Ireland that are accustomed to travelling into and transiting UK airspace. Latest (2015) figures on Eurostat⁸, the European Commission's statistics website, reveal that the UK's contribution to EU air passenger activity was as follows:

- The UK was in five of the top 10 country-pairs for passenger traffic within the EU, one of which was with Ireland, and accounted for:

- 33% of passengers travelling within the EU.
- 20.9% of passengers leaving the EU for other countries.
- Within the EU, passenger traffic was split as follows:
 - 45% between EU Member States.
 - 37% international between EU and other countries.
 - 18% domestic within a single EU Member State.
- However, **UK passenger traffic** was split as follows:
 - **59% within the EU**
 - 31% to non-EU countries
 - 10% domestic

The European Common Aviation Area, formed in 2006 by Multilateral Agreement⁹ between EU member and other states, including Macedonia, Norway and Iceland, recognised "that the relations between the Community and the EC Member States and Norway and Iceland must continue to be governed by the European Economic Area Agreement." Multiple agreement and relationship strands are possible for non-EU members with the EU.

Until BREXIT negotiations are complete (or the UK leaves the EU without a negotiated agreement), the future looks extremely uncertain and all business abhors uncertainty. This August, Sky News reported that uncertainty had prompted Heathrow, Gatwick, Stansted and Manchester airports (normally business rivals) jointly to sponsor an evaluation and report by WPI Economics. This suggests in the year from March 2018 leading up to Brexit there will be a dramatic (up to 41%) reduction in passenger demand, equating to a loss of 16.2 m passenger journeys; it stresses that early agreement with the EU is necessary because the closer industry gets to the end of the Article 50 withdrawal process without a deal, "*the greater the negative economic consequences will be*". The report is also quoted as saying, "*With airlines, passengers, and airports having to plan months if not years in advance, this has potentially detrimental consequences for UK competitiveness, trade, growth and living standards, which all become more significant the longer that UK and EU negotiators fail to deliver a new trading relationship or transitional deal.*"

In the Air Pilots' 2013 Position Paper on UK Airport Policy¹⁰ we described at some length the important role aviation plays in supporting the UK (and by

extension every nation's) economy not only through direct employment but also through facilitating business and tourism; although the paper was published four years ago, our position is unchanged!

A transitional period, with the terms for aviation during and at the end of that transition, agreed in good time to meet airline, airport, and other supporting businesses (in the UK and EU) would appear to be attainable. Iceland, Norway and Switzerland provide an existing model for a workable goal.

NEGOTIATION

EU treaties require that a withdrawing nation must conclude exit negotiations within two years, but they do not preclude agreement of transitional arrangements. However, since all EU member states are prohibited from engaging in bilateral discussions with other nations on issues such as trade (and aviation access), transitional arrangements would have to include relaxation of that restriction to allow the withdrawing state to position itself effectively with the rest of the world.

To the layman, it seems logical that the negotiating aims of both the EU and UK would be to achieve a mutually beneficial outcome. You would expect the UK to want the EU market, to which it currently exports annually some €230 billion¹¹ in goods, to remain prosperous. Similarly, you would expect the EU, that currently exports annually some €348 billion of goods into the UK, to wish to sustain that market. Economics and business opportunity will certainly be a strong driver for the British government's negotiators but EU internal political imperatives, such as dissuading other Member States from withdrawal, might be a higher priority for the EU negotiators, even at the risk of a damaging economic outcome for both sides. Arguably, there is a case that the more difficulty the UK experiences after Brexit, the more stable the EU will feel in the future.

This is perhaps reflected in the current negotiations where at present (rounds of talks in Brussels started 28 August) the EU refuses to discuss matters other than 'its 3 priority issues, namely:

- Citizens – (the rights of EU citizens that remain in UK after Brexit and which court will have primacy over those matters);

- Money – (an expectation that the UK, which currently pays about £9 billion each year to the EU will make a divorce payment of about £40 billion to cover 'projects already endorsed'); and
- Ireland – (the only EU Member State with which the UK will have a land border after Brexit).

In contrast, the UK sees all the issues – including the scale of any eventual divorce settlement – as linked intrinsically to the eventual terms of divorce. The UK government is putting substance into those negotiations; in July and August (up to 29th) it set out its position in 11 papers:

- Continuity in the availability of goods for the EU and the UK – position paper
- Confidentiality and access to documents – position paper
- Northern Ireland and Ireland – position paper
- Ongoing Union judicial and administrative proceedings – position paper
- Nuclear materials and safeguards issues – position paper
- Privileges and immunities – position paper
- Safeguarding the position of EU citizens in the UK and UK nationals in the EU
- The exchange and protection of personal data – a future partnership paper
- Enforcement and dispute resolution – a future partnership paper
- Providing a cross-border civil judicial cooperation framework – a future partnership paper
- Future customs arrangements – a future partnership paper

None of these covers aviation specifically, though '*Future customs arrangements – a future partnership paper*' does at least mention the movement of goods through airports. Hopefully, a paper of aviation issues will appear shortly.

Of course, the negotiation on matters that will be critical to the future livelihoods of millions of people in Europe is being played out in the full glare of today's media, with its voracious appetite for 24/7 news coverage and a predilection for exaggerating political difficulties. Perhaps that explains Prime Minister May's opening stance of, "*no*

deal is better than a bad deal." It will be extremely difficult to conclude such sensitive negotiations with everyone second-guessing what might be 'given away' or 'gained' by either side.

CONCLUSION

In concluding post-BREXIT arrangements, there is clear common ground and common interest in commercial and economic aspects, but the potential (or possibly actual), for divergence in political aspirations. At the start of the Brexit process, the UK government listened to those involved in aviation. The UK has played a major and constructive part in assisting EASA to develop into an effective and large-scale regulatory body (notwithstanding the Air Pilots' serious doubts about the implementation of new rules on flight crew fatigue) and has good standing within the EU aviation community. The models for the inclusion of a non-EU Member State in European and International aviation already exist.

What is needed now is a degree of flexibility from the masters of the UK and EU negotiating teams, and an appreciation that, as Albert Einstein said, "*We cannot solve our problems with the same thinking that we used when we created them.*"

¹ Weltsprachen.net Chinese is in second place with 1,100 million speakers. Spanish, the most spoken of the other languages within the European Union (EU), is in fourth place.

² Member State is the EU term for its constituent nations. (The EU idea of a Union of States would not be a new one.)

³ https://ec.europa.eu/ireland/news/statement-on-behalf-of-the-European-Commission-Representation_en 23 Aug 17

⁴ These provisions are contained in Article 342 of the Treaty on the Functioning of the European Union.

⁵ [http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/577971/EPRS_BRI\(2016\)577971_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/577971/EPRS_BRI(2016)577971_EN.pdf) 22 Aug 17

⁶ The EU does not consider Greenland's 1985 exit as 'withdrawal' because Greenland was a part of an EU Member State, Denmark. That change was therefore a reduction of the territorial jurisdiction of the Treaties through a Treaty change ratified by all the (then 10) Member States

⁷ <http://eur-lex.europa.eu/collection/eu-law/eu-case-law.html>

⁸ http://ec.europa.eu/eurostat/statistics-explained/index.php/Air_transport_statistics

⁹ 22006A1016(01) Multilateral Agreement between the European Community and its Member States, the Republic of Albania, Bosnia and Herzegovina, the Republic of Bulgaria, the Republic of Croatia, the former Yugoslav Republic of Macedonia, the Republic of Iceland, the Republic of Montenegro, the Kingdom of Norway, Romania, the Republic of Serbia and the United Nations Interim Administration Mission in Kosovo on the establishment of a European Common Aviation Area Official Journal L 285 , 16/10/2006 P. 0003 - 0046

¹⁰ <https://www.airpilots.org/aviation-matters/policy-and-comment/position-papers/>

¹¹ 2015 figure. UK is second only to Germany (which exported in the amount of goods exported with the EU. http://ec.europa.eu/eurostat/statistics-explained/index.php/Intra-EU_trade_in_goods_-_recent_trends but is the largest net importer of goods from EU. France is the second highest net importer at about €84 billion.

Trophies and Awards 2016-2017

The following are the awards approved by the Court for the 2016-2017 year. Presentations will take place at the Company's Trophies and Awards Banquet to be held at the Guildhall in the City of London on October 26th.

Lifetime Contribution to the Aerospace Industry

The Award of Honour

ACM Sir Patrick Hine GCB GBE FRAeS

The Award of Honour

Mr John Tribe BSc(Eng)

For Outstanding Courage or Devotion to Duty in the Air

The Grand Master's Commendation

Commander Bertie W Vigrass OBE VRD RNR

The Master's Medal

Flight Sergeant Mike Rowlands

The Master's Medal

Commander Matthew Grindon RN

The Hugh Gordon-Burge Memorial Award

Flight Lieutenant Karl A Kinsler RAF

The Prince Philip Helicopter Rescue Award

HM Coastguard Search and Rescue

Helicopter R 951 Inverness

The Prince Philip Helicopter Rescue Award

HM Coastguard Search and Rescue

Helicopter R 912 Humberside

Flight Operations

The Grand Master's Medal

Captain Matthew A Shipp USAF

The Master's Commendation

Captain Rosella Bjornson

The Master's Commendation

Lieutenant Colonel Kevin M Hall USAF

The Brackley Memorial Trophy

40 Sqn Royal New Zealand Air Force

The Johnston Memorial Trophy

British Antarctic Survey Air Unit

The Sword of Honour

Stephen Grey

The Sword of Honour

National Police Air Service

The Hanna Trophy

Brian Smith

The Myles Bickerton Trophy

Donatella Ricci

Flight Test

The Derry and Richards Memorial Medal

Andrew Strachan Safety and Survival

The Sir James Martin Award

SkyDemon

The Cumberbatch Trophy

Commander Ian S Fitter RN

Training

The Glover Trophy

SAC Aaron A Garcha

The Central Flying School Trophy

Wing Commander Harry Palmer

The Pike Trophy

Mr Piers Hugh Smerdon

John Landymore Trophy

To be announced in September

For Services to the Company

The Sir Alan Cobham Memorial Award

David C Curgenven

The Sir Alan Cobham Memorial Award

Peter Adrian Bird BA

Regional Awards

The Grand Master's Australian Medal

Royal Australian Air Force Roulettes

The Australian Bi-Centennial Award

Mr Bastiaan Scheffers

Aviation Media

The Award for Aviation Journalism

Captain Elfan Dyfed Ap Rees

ADMISSIONS

As Upper Freeman

Julian Mark FIRTH

Andrew Lyle ROBERTS

Prospero Alexie UYBARRETA (NZ)

Paul John BRADY (AUS)

Christopher Roger EATON (AUS)

As Freeman

Jonathan Roger MARSHALL

Alexander David Lansdowne QUESSY

As Associate

Louis James Liberty BENMAX

Andrew David QUESSY

David STREIF (OS)

REINSTATEMENTS

As Freeman

Gary BICKERTON

Antony Francis CRILLY

Nominated Admission

Darcy E MOLSTAD

ACKNOWLEDGED BY THE COURT

14 SEPTEMBER 2017

REGRADE

To Livery

Dr Samantha Jane WALLER

Captain Michael Richard CRAFT

Paul TRETHEWEY

David John HAWKINS

To Freeman

Patricia Irene BOYCE (AUS)

Alexander George BRAITHWAITE

GAZETTE

APPROVED BY THE COURT 14 SEPTEMBER 2017

Jennifer Marie DODMAN

David Barry FULLER (AUS)

Jason LAWLEY (OS)

Jonathan PATTERSON

Susan Jane TUDDENHAM

To Upper Freeman

Hannah DEHNEL

James Hayden LAMBERT

Thomas Charles MENOGUE (HK)

Andrew Frazer MILNE

Jaspreet SINGH

Michael Neil SIERENS

William John Torrance STURT

Adam Manfred WALICZEK (HK)

DECEASED

Jeremy BUTLER

Maurice HAMMOND

John KESSEY (AUS)

Earnest SEEMANN

RESIGNATIONS

John ARSCOTT

Sarah BARRY

Colin BECHTEL (NA)

John CAROLAN (AUS)

Richard COVLIN (NA)

Carol DURKIN (AUS)

David DAVIES

Luke EVANS

Sally EVANS

David GODWIN (AUS)

John GRIFFITHS

Jemma HEATLEY (AUS)

Raymond HORTON (NA)

Garry HUNT

Rod HUTCHINSON (AUS)

Michael JACKSON

Donald KINCH

John McGHIE (AUS)

Robert MITCHELL (AUS)

Paul NICHOLAS (AUS)

Michael NIXON

Nina POWAR

John SHERRINGTON (AUS)

Walter STEWARD

Jonathan SWIFT (AUS)

Rudy TOERING (NA)

Jeff TRAPPETT (AUS)

Travis WILLIS (NA)

Daniel WHITROW Richard HEAD

Timothy HEWLETT

Jan LEEMING

Esther LISOWSKI

Gregory LOUGHLIN-SIMS

Ian MILNE

David RICHARDS (NA)

Gordon TESSIER (NA)

FORFEIT ALL BENEFITS

Jeffrey KILMER (NA)

Peter William NORRIS

Roger PIERCE (NA)

William THORNTON (NA)

Summer Supper at Tallow Chandlers Hall

By Warden John Towell

Following the format of the previous six years Past Master Chris Ford organised the Air Pilots summer supper this year at Tallow Chandlers Hall. The Tallow Chandlers have been based on Dowgate Hill since 1476, and resident in their magnificent hall since 1672. There was some minor bomb damage in WW II but fortunately the hall survived largely unscathed. The Air Pilots summer suppers are a great way of visiting splendid and historic halls to experience other aspects of London Livery companies. Previous suppers have been at Innholders, Fishmongers, Bakers, Cutlers and HQS Wellington. On a fine evening in July around 85 Air Pilots and their guests assembled in the courtyard for drinks and canapés. We then moved into the hall where Past Master Dorothy Saul-Pooley said grace in an original, topical and amusing style (see right).

During the evening Anthony the excellent pianist entertained us with lovely music. All too soon supper was over and it was time to give thanks to PM Chris Ford and his team of helpers for another memorable supper. Past Master Chris Ford is planning the 2018 Summer Supper at Watermen's Hall, the home of the Watermen and Lightermen. This will certainly be an evening to look forward to!

*It's Summer! Air Pilots do gather to dine
In Livery Halls, oh! So very fine;
To Innkeepers, Cutlers who make swords and knives,
We've hastened with friends and husbands and wives;
To Fishers, Master Mariners, even the Bakers,
But this time's the turn of the Tallow Candle Makers.
We've come here tonight to share together
The joys of flight as birds of a feather.
All assembled tonight in this seventh year,
To enjoy good food and plenty of cheer.
Let's give thanks for what we're about to receive-
And please don't wipe your mouth on your sleeve!
Show proper decorum for this place
And use your napkin to wipe your face!
But before we ask for blessing from God our Lord,
We should also thank Past Master Chris Ford-
Whose efforts again are truly great,
As he's chosen the food that goes on our plate.
His careful selection of our wine
Will ensure that each sip is truly divine!
So please will you all join with me now,
Before we tuck into this yummy chow
And thank our Lord for food, drink and fun,
Plus the Master, the Court each and everyone!
Amen*



Visit to Safran Landing Systems, Monday 24th July 2017

by Upper Freeman David Collett

Twenty-five Air Pilots and their guests were welcomed to Safran's UK premises at Staverton, Gloucester, by an efficient and friendly team headed by Peter Hall, Safran's public relations manager. Very welcome refreshments were provided before we sat down to an introductory presentation.

Graham Powell introduced Darren Waite, VP Customer Services, and presented him with the Company's plaque. Darren gave us a brief outline of Safran and the tour to come, before handing over to Peter Hall.

The company has evolved from its creation in the Thirties by Sir George Dowty, morphing over the years through Dowty Rotol, Dowty Aerospace, Messier-Dowty, to name but a few, to its latest incarnation as Safran Landing Systems in 2016.

Safran is a French multinational aerospace engine, rocket engine, aircraft equipment and defence company. It was formed in 2005 by a merger between the aircraft, rocket engine manufacturer and aerospace propulsion group SNECMA, and the defence and security company SAGEM. Its headquarters are located in Paris. The Gloucester facility is solely concerned with landing gear design, testing, and manufacture.

Safran has traditionally built landing gear for Airbus commercial aircraft at this site. Recently it won the contract to build landing gear for the Boeing 787. Although over 70% of production at the site is for commercial aviation, 10% is for the military. The Eurofighter Typhoon takes a good chunk of this. The Business Jet, Regional Aircraft and Helicopter segments account for the rest.

The tour then started in earnest, and we

split into three groups to visit the Large Landing Gear Machining (Number 2) Shop, having first attired ourselves in the thoughtfully provided safety shoes and goggles.

\$45m has been invested here in the last few years – easy to see as we surveyed the array of modern computer controlled machines, which were quietly and accurately producing the finished landing gear components.

Here raw titanium forgings, which are mostly supplied by Russian companies, are transformed into finished landing gear. A completed Airbus 320 single aisle (i.e. one row of wheels) landing gear takes 44 hours to build. The A350 and A330 gear are also manufactured here, but take considerably longer.

A feather in Safran's cap is the addition of a Boeing contract in the form of the 787



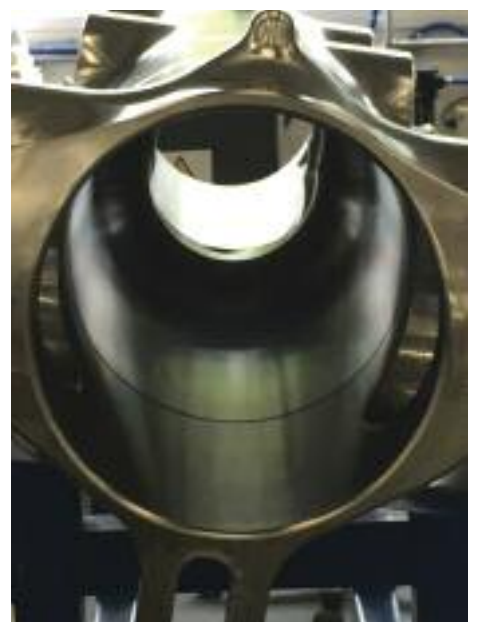
TOP LEFT - SIFCO nickel plating robot

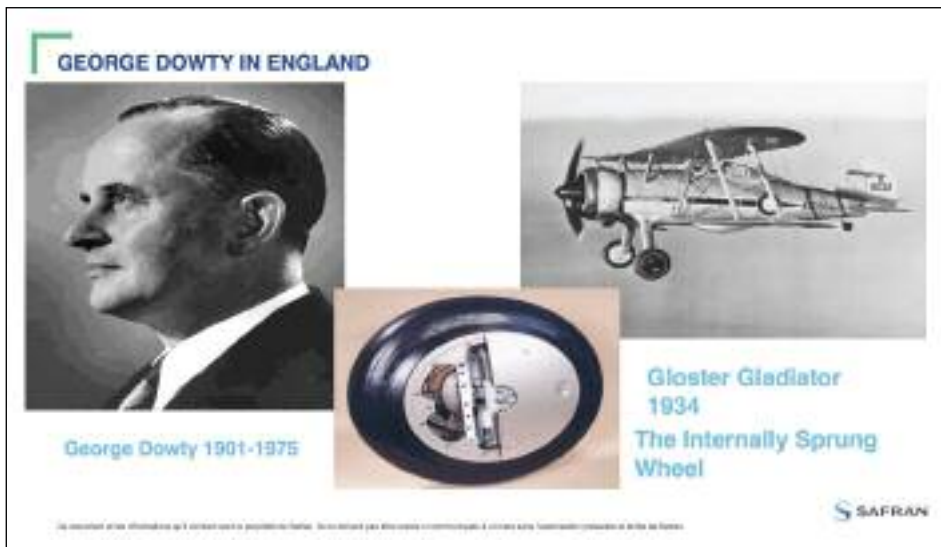
BOTTOM LEFT - A very old LM33 6 spindle milling machine.

TOP MIDDLE - The very new WMF Mill Turn Lathe

BOTTOM MIDDLE - Titanium forging

BOTTOM RIGHT - A bored forging





8/9/10 landing gear manufacture. In addition to supplying the main and nose landing gear, Safran's responsibilities also extend to the integration of all the system components. This includes wheels, tyres, brakes actuators and electrical dressings.

The latest equipment includes a brand new advanced WMF Mill Turn Lathe.

This machines titanium landing gear bogie units for Boeing 787 and Airbus 350 and 330 main landing gear.

Slightly different production lines for Airbus and Boeing consist of various processes. These take the raw forgings through to the finished article. Processes include mill-turning machines, followed by deep hole boring. It was fascinating

to see all this machinery in operation and the various stages along the production line. All machined waste materials are recycled, avoiding waste and reducing costs.

After a much needed and appreciated lunch, we split into our previous 3 groups, each having a guide. A bus was provided to take us to the Test Engineering Department. This building is located across the road from the main plant. It was completely rebuilt in 2002, having had a shell built around the original building, during which testing was still in full operation.

Development and qualification testing is carried out here to certify landing gear for use in service. Safran boast it to be one of the most comprehensive in the world. Development and qualification testing is performed here to enable landing gear to be used in service. The building is fully equipped with a range of test equipment for all sizes of landing gear and their ancillaries, such as retraction actuators, locks, steering systems and so on.

We saw Fatigue, Systems and Seal test rigs here - a total of 15 rigs. Each rig sits in a large steel frame, which contains all the hydraulics and electrics required for the specific test. In strength and load tests the landing gear is subjected to loads that that are representative of what is likely to be experienced in real aircraft service. The landing gear under test is suspended from the upper bedplate of the test rig. Dedicated fixtures simulate aircraft attachment points.

Landing gear structures destined for testing can have a photo-elastic coating applied which is actually moulded on to the part to be tested. Changes to the material can then be recorded using a special photo-elastic lamp. Through polarisation the colour pattern changes. This indicates where stresses are concentrated. Up to 600 strain gauges are mounted on a typical landing gear test model.

The test cycles are designed to test how well the gear stands up to the strains of

regular use at landing, take off, retraction/extension, and taxiing. Sideways forces replicate pressure on main wheel bogies as aircraft turn during ground operations.

To ensure a high safety factor, all new landing gear developments are tested to forces five times greater than they will encounter in their service lives.

The department consists of around thirty people. They encompass engineers, and multi- role technicians. These are split into three teams who look after Airbus, Boeing and military projects.

The Production Test process, NDT (Non Destructive Testing) is the byword and aim of Safran here. The testing uses highly technical systems. Magnetic Particle Inspection detects any slight sub-surface defects using ultra violet light – but can only be used on magnetic materials. Ultrasound (yes, the same system used on mums-to-be etc!) is used to detect internal defects. X-ray inspection is used for castings, welds and brazed pipes. Titanium Etch is used in the detection of thermal abuse in titanium alloys. Nital Etch is used for steel: dark areas show evidence of softening and light areas show re-hardening and thus prone to becoming brittle. These form some of the group of extensive tests conducted in the building.

Next came a brief visit to the Plating Shop. An exciting new development here



Test engineering department

is the new robot nickel plater, manufactured by SIFCO. This takes up a fraction of the space of the original equipment. Now fully operational, it provides the company with a precise and highly traceable, repeatable and accurate process.

The integrated computer logs all of the relevant information including the parameters plated, the batch numbers for the solution, current densities and solution levels.

The fully automated system also adheres to the company's health and safety policy, as it minimizes human contact with

harmful chemicals. It currently processes 30 bogie beams per month.

After this we were bussed back to the reception area for a short debrief and much appreciated tea and buns. Twenty-five tired, but happy, and infinitely more knowledgeable Honourable members and their guests headed home by air and road. Thanks go to Peter Hall and all at Safran, and Liveryman Graham Powell for organising such an interesting and instructive day.

HCAP Members



A350 main landing gear



Senior Flying Instructors Forum - 4th April 2017

By Freeman Dr Helen Vosper

Tuesday 4th April 2017 saw the latest in the series of Senior Flying Instructors Forums held at College Hall Officers Mess, RAF Cranwell. This event is hosted jointly by the Honourable Company and the Central Flying School (CFS) at RAF Cranwell, itself an affiliated unit of the Company. The organisation of the event is undertaken by the Instructor Working Group (formerly a sub-committee of the old Education and Training Committee). The new Warden, Nick Goodwyn, acting as MC for this year's event, opened proceedings by reminiscing briefly about the 2010 event when, as Chair of the Instructor Sub-Committee, he felt personally responsible for the volcanic ash-related airspace lockdown that prevented delegates who had flown in from leaving by air! He continued by expressing the gratitude to the Commandant of the College (Air Commodore Peter Squires), and also Commandant CFS (Group Captain Fin Monahan) for supporting this opportunity to gather Senior Flying Instructors together in this manner. Such a forum allows instructors to explore:

- What is happening now?

- What do we want to happen in the future?
- Sharing of best practice

Nick reflected on how this last point perhaps summed up the relationship between CFS and the Company: from the outset, the Company (or Guild as it would have been at the time) worked at sharing best practice, becoming aware of a need to enhance flight training. The response to this need saw the establishment of the Instructor Certificate scheme in 1931, award of which was determined by members of the Examining Panel, which was run by CFS. The link between the two organisations is thus rooted in inspiring excellent instructor practice. The Forum itself was first held in 2002, and was the brainchild of Past Master Dorothy Saul-Pooley, then Chair of the Instructor sub-committee, who was keen to allow civilian instructors the opportunity to learn from their defence counterparts and to cross-fertilise ideas between civil and military, fixed wing and rotary instructors.

Nick then 'set out the stall' for this Forum. He explained that the Instructor

Working Group members, acting on feedback from previous events, were keen to encourage a more interactive approach to this forum, and so sessions had been designed with plenty of time for discussion 'from the floor.' In this way, it was hoped that most questions would be answered throughout the day, and rather than the usual final 'Q&A' session, there would be an opportunity to consider the emerging key issues and the actions to take in developing these.

Duncan 'Dunc' Mason (ex-Red Arrows and Battle of Britain Memorial Flight, now Officer Commanding Advanced Squadron, CFS) then welcomed the delegates on behalf of Commandant CFS. He asked for a show of hands from those with a forces background, and was interested to see that this accounted for about 25% of the audience. He then went on to explain that CFS was going through a period of change and has become much smaller, and therefore less able to directly oversee instructor standards, but instead will work to identify best practice from both military and civil aviation, and share this with the instructor community. The underlying principles, however, have not changed:



ensuring that instructor and examiner standards remain at a world-beating level. Following this, Air Commodore Squires, as the Commandant RAF College Cranwell, added his own welcome, reminiscing on his earliest interaction with the (then) Guild. He was tasked with taking the Master and the Warden flying, and he remembered it as 'taking a couple of old boys flying in a Harrier!' 28 years later, his experience has taught him that there is a strong common bond between aviators, who all hold the reputation of aviation in the UK dear. "[The] Shoreham [disaster] did us no favours" he reminded us, and that it will be 'hard to bounce back from that.' Consequently, relationships with Government and the public have never been more important, and CFS and the Honourable Company both have a role to play in this.

The first keynote session was from Past Master Dorothy Saul-Pooley who used her legal expertise to help guide us through the EASA regulatory minefield. She began by talking about the complexity of the new legislation, and the additional problems resulting from 'decades' of transitional arrangements, all of which have made non-compliance much more likely. As an example, Dorothy asked delegates if they knew how many different types of licence there are issued by the UK CAA that could still be valid. Dorothy said she had counted thirteen, not counting the ten types of helicopter licence! While it would take 'weeks' to sort through this complexity, Dorothy provided an overview of what she considered to be the key issues. Firstly, EASA differs from JAA in that it has legal regulatory authority within the EU, while JAA provided 'harmonised codes of practice.' The basic EASA regulation sets out the objectives required to ensure a high level of safety, and covers all aspects of civil aviation. Individual elements, such as 'Initial Airworthiness' and 'Air Crew' then have their own specific set of regulations and related annexes. Dorothy highlighted this as a potential source of trouble: material covered within the regulations is not repeated elsewhere, and these primary documents must be consulted if you are

to ensure you remain on the right side of the legislation. This 'hard law' is supported by 'soft law' that includes 'acceptable means of compliance.' This is another potentially risky area: for example, in the UK, CAP804 covers acceptable means of compliance for Flight Crew Licensing, but this is out of date and, given the loss of expertise at the UK CAA, it seems unlikely that this will be remedied anytime soon, and the document remains 'for reference only.' Other issues touched on by Dorothy included revalidation and renewal of ratings, the requirement for flying schools to check-out instructors on unfamiliar aircraft types and the need for ATOs to have safety management systems.

The second session of the morning saw Anthony Mollison, Chair of the Independent Flight Examiners' Association (IFEA) introduce the organisation as the body representing the interests of all examiners. He pointed out that examining expertise has largely moved to industry: there are now only 2/3 CAA Staff Examiners (down from 20-30 previously), compared with approximately 70 industry-based examiners. The IFEA provides examiners with a forum to share best practise to ensure that standards are maintained. Anthony expressed that this was one of the group's major concerns – Commercial Pilots Licence and Instrument Rating skill test 1st Series pass rates have been increasing over time, and the fear is that the test has possibly become easier, or that perhaps instructors were 'teaching to test.' Following this assertion, there was vigorous discussion, with some delegates suggesting that improvements in pass rates possibly result from improvements in training. Others suggested that, actually, the pass rate should be very high, if correct decisions are made regarding competence prior to test entry. Whatever the reality behind the statistics, it is certainly clear that this is something that needs to be considered, and very much within the remit of the Honourable Company with their interest in maintaining training standards.

Anthony then went on to give the second part of his presentation, which concerned Threat and Error

Management (TEM). Teaching TEM skills is mandated by EASA and therefore flight instructors need to be aware of TEM and have a strategy for teaching it. Similarly, examiners need to be able to recognise TEM competencies in students presenting for test. There are 3 elements to TEM: Threats and Errors, which if not (M)anaged appropriately, can lead to undesired aircraft states. Undesired Aircraft States (UAS) are generally considered under 3 categories: aircraft handling, ground navigation or incorrect aircraft configuration, but the key feature in all cases is that they lead to a reduced safety margin. Threat and error management is essentially an extension of airmanship – it is about taking the time to actively think about factors that affect this pilot, with this level of training, undertaking this specific flight, in this aircraft under these particular conditions. Pilots need to have some sort of framework for considering this, prioritising risk and coming up with some sort of 'risk management plan.' This can be difficult to assess, because light aircraft operations are primarily operated 'single crew' and often aspects of TEM will be 'inside the pilot's head.' As Syd Utting pointed out, an instructor or examiner has to have some sort of mechanism for allowing the student or candidate to explicitly articulate their TEM activity. Nick Goodwyn also raised a really valuable point: much of the existing TEM focus is very narrow, focussing primarily on the aircraft and pilot. Many flight safety threats fall outwith these considerations – for example, there may be external threats that arise from organisational pressures. Nick gave an excellent example of this that he had seen at RAF Cranwell. As part of their own safety management, ATC had identified a potential hazard as being mixed aircraft types in the circuit, which increased the risk of collision. To reduce the risk, they only allowed similar types in the circuit at any one time. Consequently, students lost the opportunity to be exposed to an environment that would inevitably be common later in their training and/or when operational. A broader Human Factors approach to TEM would allow these sorts of unintended consequences

to be explored, and design of a suitable practical TEM framework might be something the Instructor Working Group might like to consider.

In the afternoon, Lt David-John Gibbs RN picked up on the previous sessions and talked about Upset Recovery Training, talking about how to deal with those undesired aircraft states that had slipped past the TEM activity! David-John began by defining an Unusual Position as being 'any attitude that is different from the one the pilot expected.' He then went on to talk about why it is important to teach UP recovery – not only is it important in recovering from mishandled aerobatics, incipient spins and gross aircraft mishandling, but also in developing the ability to handle the aircraft in any attitude and to 'expand the personal flight envelope.' The rest of the presentation described a simple and effective drill that can be used to recover from any UP, based on 4 basic UP classifications related to position of the nose relative to the horizon combined with aircraft speed. As well as providing theory and reasoning behind the approach, David-John also gave a brief overview for delegates concerning the practicalities of teaching these skills. Later in the afternoon, during a brief gap between sessions, Syd Utting returned to this matter and talked about upset recovery training from the perspective of the airlines: many of the pilots who start off on PPL training courses will end up as ATPL holders and it makes sense that at all levels of training, there is alignment with possible future directions.

Andy Miller delivered the second session of the afternoon, where he talked about the 'Declared Training Organisation.' Currently, training in the UK is either carried out at an Approved Training Organisation (ATO) or at a Registered Training Facility (RTF). The difference between these is the level of oversight required and the scope of the training offered. Recognition as an ATO is required for flight schools to offer commercial training. Under EASA, the original requirement was going to be for all training organisations to convert to ATOs, and the requirements for this (in terms of producing manuals etc.) are

demanding and compliance by smaller organisations may well have been a risk to the viability of some. Consequently, EASA has developed an alternative route for organisations who wish to provide training for non-commercial licenses, and this is known as the 'Declared Training Organisation.' The idea is that the organisation simply 'declares' its training activity to the relevant competent authority, and the organisational and the oversight requirements are significantly less than those required for ATOs. Andy talked briefly about the impact of the regulatory framework, including the 'acceptable means of compliance' recommendations. He also described the scope of the DTO, which includes training for PPL, LAPL, theory and flight instruction. Ratings covered include SEP, TMG, Night, Aeros, Mountain and Towing. This prompted a question from the floor regarding authority to teach IMC (or IR(R) as it is now called). Andy answered that DTOs can indeed deliver this training, but it does not fall within the DTO declaration, because it is a National Qualification. There then followed an invigorating discussion about costs, compliance and the responsibilities of the CAA in assessing that compliance! The final session of the forum was delivered by David Cockburn who, in response to a request from delegates at the previous Flight Instructor Forum, talked about integrating GPS (SatNav) with visual navigation training. Partly this has arisen from a recognition that SatNav can be very valuable in preventing airspace infringements: a recent survey suggested that pilots involved in such incidents either did not have a SatNav or did not know how to use it correctly. This was a highly interactive session, with David asking delegates to share their reasons for buying a GPS. These were many and varied, but included avoiding airspace infringements; reducing pilot workload; to ensure that they could teach their students to use them; to support flight de-briefing; being directly targeted by CAA. David suggested a few others that students might offer: helping to find final destination; to look back on flights; 'I like gadgets!' and 'I can't remember how to plan properly!'

David then suggested that the key issues around using GPS included ensuring that the pilot knows how to use it and that it works properly. Crucially, the pilot must also (as part of their TEM!) have a back-up plan in the event of failure. It is also important that pilots don't 'fiddle' with the GPS during flight – this undermines much of the focus of PPL training, which is all about flying visually and maintaining good lookout. David talked about encouraging students to plan in the normal way as well as using the GPS, and about building it into the normal en route checks. He then discussed its ability to 'add value', including support for entering controlled airspace, terrain clearance and awareness, and the use of the 'go to' function when things are starting to get difficult.

David's presentation was followed by a busy question and answer session from the floor. One delegate suggested that perhaps GPS should be the primary planning/navigating method, rather than being a back up. David felt that the system was still too prone to malfunction (including jamming) for it to be used in this way. Another delegate suggested that it could be built into the normal selective radial scan, but David felt that reference to the GPS should be just like 'picking up the map.' Another question arose concerning whether or not examiners would ask students to demonstrate competency on test. David said that there was a problem in that there is no formal CAA guidance, and he proposed that this was something the industry should agree on, and develop appropriate recommendations and support for training, with a view to incorporating GPS training within the PPL syllabus and examining its use accordingly. Consensus was achieved on this and David agreed to write a paper outlining the proposals.

This session concluded the forum, and Nick closed the day by reflecting on the fact that this had been a very lively event, with a number of practical proposals for the Company to take forward. Thanks were extended to CFS for hosting such an excellent day, and Nick also thanked all the speakers for their contributions.

Lithium batteries - a rising risk in aviation



By Liveryman John M. Cox (North American Region)

We have done an incredible job in improving safety in aviation. From 1903, when the Wright flyer was virtually destroyed after its fourth flight (one major accident every four flights) to 2015 when we flew 3.5 billion (with a B) passengers without a single fatality in schedule airline jets. Remarkable!

Today we fly modern aircraft of proven design, with state of the art avionics and capabilities. Our training has never been better; consequently the accident rates continue to decrease. There are, however, two rising risks in aviation. Two risks which pose an increasing likelihood of causing an accident. These are unmanned aerial vehicles (drones) and lithium battery fires. This article will concentrate on lithium battery fires and what flight crew members, regulators, and operators can do to mitigate the risk to an acceptable level.

Lithium batteries saturate modern society. Watches, laptops, tablets, phones and nearly every other electronic device get its power from lithium batteries. These provide more energy storage, are lighter in weight and can be recharged many times with none of the “memory” problems of nickel cadmium. These features make them the battery of choice. There is just one problem - they can explode and cause intense fires.

Explosions and fires from lithium batteries have many causes but most often heat or damage to the battery is the initiating event. Once the battery reaches an internal temperature of 95c a thermal runaway may occur. When this chemical process begins the only two ways to terminate it are to cool the battery below the threshold temperature or to exhaust all of the fuel. Unlike traditional fires, Halon, carbon dioxide, or dry chemical extinguishers are of very limited use. Traditional fire extinguishers

may extinguish open flames, but the thermal runaway process continues, causing re-ignition. During this thermal runaway process the battery cells will often violently eject their contents, which may include a sticky gel, molten copper wire, and parts of the steel casing. The risk of serious injury to people nearby can be unacceptably high.

The FAA in their guidance (SAFO 09013 supplement and AC 20-42D) recommends not moving an electronic device that is in thermal runaway due to the risk of serious injury. Too often crewmembers are either unaware of this guidance or do not follow it, moving the device and exposing themselves to an unacceptable risk of injury. Some airlines have begun to carry “Burn Bags”, which are marketed as a low-cost containment device for these incidents. The guidance specifically recommends against using these “burn bags” due to risk of injury whilst attempting to place a device in thermal runaway into the bag. Any useful containment device must also offer protection to the crew member who is using it.

The FAA guidance also fails to consider the location of a device in thermal runaway. If it is located in the flight deck, does the recommendation not to move it still apply? The FAA remains silent on this question.

The next problem is that crew members often fight the fire as a traditional fire using onboard Halon extinguishers. This is the result of inadequate training for the different techniques and extinguishing agents needed to combat a lithium battery fire. We have a challenge to improve this training. Crew members need the best information to make critical decisions on how to fight a lithium battery fire without becoming a casualty themselves.

Are pilots capable of flying the aircraft during a lithium battery fire? Can they see during the “smoke” discharge? This “smoke” is an organic vapor that is a mucus membrane irritant, causing coughing and impacting vision. Have crews been trained in operating in reduced visibility conditions?

We can safely and fully contain a device in thermal runaway. It is possible to protect the crew member adequately and put the offending object into a containment device which stops the “smoke” completely, whilst providing the needed cooling. The technology for such a container exists but we don’t require it in our aircraft.

Lithium battery fires present a complex set of challenges. They can be reduced to an acceptable level by addressing the four underlying issues:

Guidance – the aviation industry needs better, more up to date guidance from the regulators (e.g. FAA and EASA). There is overwhelming evidence that crews facing a lithium battery fire today are not following the existing guidance, which is itself out of date. Regulators have access to expertise to improve and modernize the guidance.

Training – crew members receive a diversity of training on combating lithium battery fires. Some is good; some is not. Training on how to differentiate a lithium battery fire from a traditional fire is essential, as the fire fighting techniques are very different. Working groups to standardize training for all operators would be a good step forward.

Aircraft control – maintaining aircraft control during an onboard fire/smoke event is always challenging. Are the pilots ready for such an event? Do they have the necessary emergency

equipment and training? Can they maintain control in a continuous smoke condition? Technical solutions are available.

Capture/containment – the safe capture and full containment of an electronic device in thermal runaway is essential. It is possible to protect the crewmember adequately while moving the electronic item in thermal runaway into a full containment device. Protecting crew members from injury

while getting the device fully contained are essential elements of the solution.

So far in 2017 we have seen several lithium battery fires in aircraft. The response has been varied and thankfully none have resulted in an accident, although there are suspicions that one recent hull loss may have been due to such a fire. We see more of these events each year due to the increasing number of lithium batteries in our society and the

trend will continue.

We must address this rising risk. The evidence is overwhelming: there will be lithium battery fires on board aircraft in the future. How we deal with them is less clear. By addressing the four elements: Guidance, Training, Aircraft Control and Capture/Containment, we can continue the trend of improving aviation safety. If we do not, the future is less certain.

Book Reviews

The Women Who Flew for Hitler

The true story of Hitler's Valkyries

Clare Mulley Macmillan 29 June 2017 - Reviewed by the Editor



The book deserves better than its risible sub-title! It is an absorbing profile of two very talented test pilots – Hanna Reitsch and Melitta von Stauffenburg (née Schiller). But absorbing in showing how two senior and ostensibly intelligent figures coped with the stresses of, and exploited the opportunities presented by, the Third Reich.

Whilst both were highly skilled pilots, they were very different in nature: Reitsch was an ardent racist and Nazi (although she claimed never to have been a member of the party); she was not well educated. Schiller, in contrast, had an intellectual curiosity from a young age, which was crowned with a PhD, becoming a highly qualified aeronautical engineer. One surmises that she was therefore much more useful as a test pilot. Melitta evolved into a rounded personality, deeply in love with her husband Alexander. The family is of course well known through Alexander's brother Claus. As Claus was 6' 3" tall, it is something of a surprise that the diminutive Cruise was cast to play him in the film, Operation Valkyrie! Reitsch

never seemed to develop – retaining her racist, opportunist bitchiness to the end. It is to the reader's sadness that Schiller died first!

The book is very well researched, so there are some colourful asides. For example, the father of the German gliding movement, Wolf Hirth (taking Lillenthal as the grandfather), had a cigarette holder carved from the fibula of his leg that he lost in a motorcycle accident!

The major fault in this book derives from that fact that the author clearly knows little about aircraft or aviating. One therefore suspects that she may have missed useful aspects of her source material. Firstly she commits the cardinal solecism of referring to aircraft as carpenter's tools. A Grunau Baby glider has "cabin windows" (I don't think so). We are told Melitta's work in 1934 produced "pioneering design solutions which became standard for commercial airlines" – without being told what they are. On a record-breaking glider flight in 1937, "wind was drumming on the

fuselage" – not the serenity of most gliders then. That year Melitta was seconded to the Luftwaffe's Technical Academy at Gatow to develop "bomb-aiming devices and dive-sights for Stukas, the planes in which Udet had invested all his hopes for the Luftwaffe"; a contentious statement, at the least. When very astute aerial photo interpretation revealed that Peenemunde was the research (and manufacturing) centre for the V weapon programme, the resulting RAF raids were large –scale. According to Mulley the 597 aircraft on the raid in August 1943 "was almost the entire bombing fleet" – this is surprising given the RAF's ability to mount its vaunted 1000 bomber raids the previous year. "Once fed and briefed, the RAF pilots had been sworn to secrecy and locked in their hangars" – Mulley is misleading the reader here since this was standard practice in Bomber Command. Other errors should have been spotted by even a non-specialist editor. After these successful raids "some testing moved west – out of reach of Allied bombers". Er no – if they made Peenemunde, they would

make a location further West! And so on.

With the looking glass of the actions of Reitsch, Mulley underscores the strategic futility of the V1 and V2 programme, and rightly affirms that Werner von Braun was completely aware that his weapons were manufactured using extensive slave labour. Given the recent furore about gender pay disparity (in the BBC and across the corporate world) it is ironical that the two heroines were at the forefront of fighting for equal pay (and against endemic misogyny) eighty years ago.

Perhaps the most worthwhile part of the book to me was the highlighting of the personal trauma that the failure of Operation Valkyrie (Stauffenburg's attempted assassination of Hitler) caused to his extended family. If only his briefcase had been planted a few feet to one side, world history would have been

very, very different. Melitta's struggle to sustain the life of her husband (and other relatives) is very moving.

In the book's final chapters, underlining their skill, both heroines managed to make flights into Berlin in conditions when it is surprising any Axis aircraft could survive a minute in those hostile skies. The final chapters and epilogue make very valid points but are somewhat laboured.

So overall a great human interest story, but one where one cannot help but feel that opportunities have been missed in explaining the technical and piloting skill of these two remarkable ladies.

Editor's note

On my return route from a summer visit to Austria, I deviated only 5 miles from my direct route to fly over Strasskirche, the (then) little village outside Straubing where Melitta met her maker. There was no geographical cover for her to escape the P47 Thunderbolt that was pursuing her. If she had only been 15 miles to the East, woods and small mountains would have given her hope.

Editor's photo of Strasskirche below



V Force Boys

Tony Blackman & Anthony Wright

Grub Street, July 2017 - Reviewed by the Editor

Given that the three British V bombers have had their own *Boys* volume, one might be permitted to be a bit sceptical that there was enough material left to reap for another volume. But not so. Tony Blackman, the former Avro test pilot, is an established author in this series. Anthony Wright was a nav radar in the V Force, and eventually OC a nuclear training squadron.

The book has a rather dry and dull start with early chapters focussing on training and navigation methods. Bear in mind that these leading edge jet bombers, often with nuclear bombs (or inert versions thereof) aboard, were navigated with equipment and techniques that had barely evolved from those used over the Ruhr in 1944. The resultant techniques are described in some detail, and may

lose the lay reader. I thought I knew a little about aerial navigation but, for example, sandwich fixes anyone?!

As with other books of this ilk published recently, there are plenty of stories of aircrew trying to outwit the customs men at their home bases after they have been to away to such cardinal sources of cheap booze such as Akrotiri .

In my view this book lightens up, and warms up from about page 90, and reaches the pace with which we are accustomed with this series. Any bomber boy of the time would agree that the epic episode of the whole RAF V-bomber era was the infamous 1 Gp. Dining-In Night.

V Force Boys has a very good retelling of this extremely rowdy evening. However it is as well to be fully aware of the

context, particularly with regard to Air Chief Marshal Sir Harry Broadhurst (CinC of Bomber Command at the time), and his accident at Heathrow, to learn the full reasons why the dining-in night descended into anarchy.

Vulcans in particular were used to spread the message of British military strength around the world, and were sometimes sent to display on the US circuit. Although the authors do not explain the well-known fatal Vulcan crash at Chicago, Tony Thornthwaite describes a hair-raising near-miss at another North American display at the same time.

Overall it is not a classic of the genre, but worth ploughing on from an unpromising start.



Out Of The Blue : The Final Landing

YET MORE SCARY AND OFTEN FUNNY TALES FROM THE ROYAL AIR FORCE AND FRIENDS

Reviewed by Liveryman Tom Eeles



This is the third book in the 'Out of the Blues' series compiled by the triumvirate of Dim Jones, Ian Cowie and Chris Long. Unsurprisingly, it follows the already successful format of the first two volumes, the sales of these have already raised more than £60,000 for Service Charities. As before, there is an alphabetical list of the contributors, but no specific authorship is attributed to the majority of the stories, but an intelligent guess will often lead the reader to work out who wrote which piece. There is a foreword by Past Master Air Marshal Cliff Spink, whose name also appears in the list of contributors. This time the range of the 110 stories is hugely impressive, ranging from the Second World War right through the years up to

relatively recent times. Some are serious, many are hilarious, and all are fascinating. Their subjects cover the widest imaginable range of military flying activities, social misdemeanors and ground activities associated with military aviation; there is even a civil input in the form of a most sobering story of rotary wing disaster. To whet your appetite, here are just some of the story titles: Bagotville Beat Up, The Night London Airport Was Mine, A Cock-Up in the Bullpen, Sorry?...I Thought You Said Warsaw!, Out of the Jaws of Defeat, Never Drink on the Forecast, The Jetstream Handbrake, Carry a Map! Junior Pilots Aren't Always Wrong, The Met Balloon, You Go Left, I'll Go Right. No fewer than 41 different aircraft feature. With 76 contributors the literary style varies from story to story, very occasionally an error of fact creeps in – I think Vampires only had 20mm cannon not 30mm, (Night

Fright RAF Jever 1952), but one must forgive the effect of the passage of time on some contributors' memories. My only worry is that there are no stories from today's military aviators. Surely those flying Typhoons, Chinooks and Globemasters in our much smaller RAF must have stories to tell, but then, perhaps, nothing unusual or naughty happens nowadays. Dim Jones, Ian Cowie and Chris Long have done a magnificent job bullying their friends to recall their experiences, then collecting these wonderful stories and organizing the publication of the book. It is priced at £9.99, an absolute bargain and a 'must have' Christmas present for any aviator, military or civil, or anyone remotely interested in aviation. I recommend it in the highest possible terms - and remember - all sales profits go to the Service Charities, the RAF Benevolent Fund, the Royal Navy and Royal Marines Charity and the Army Benevolent Fund.

Copies can be obtained by contacting the RAF Benevolent Fund website at www.shop.rafbf.org

Operation Hydra Revisited - Peenemunde, August 2017

By Liveryman Tom Eeles, Photos by the Editor

In the summer of 1943 the War Cabinet finally realized that something potentially very alarming was going on at the remote Nazi base at Peenemunde, on the Baltic coast close to the Polish border, which of course did not exist then. A combination of intelligence data, comprising aerial photo reconnaissance by lone Spitfires, agent information and inputs from neutral Sweden convinced all but Professor Lindemann, Churchill's chief scientific advisor, that strange rocket propelled aircraft and missiles were being rapidly developed into operational weapons systems. At the time this was the stuff of science fiction, but it was now turning into unpleasant fact. It was decided that Bomber Command would attack the site as soon as possible. Peenemunde was some 600 miles away, out of range of Bomber Command's land based navigation aids, but as it was a coastal site the Lancaster's ground mapping radar, H2S, which was just coming into service, might prove useful. The night of 17/18 August was chosen and a full moon was forecast. The whole of Bomber Command's effort that night was directed at Peenemunde, apart from a

diversionary raid on Berlin by Mosquitos that was designed to draw off the Luftwaffe's night fighters. Led by Master Bomber Group Captain John Searby, three waves of heavy bombers attacked Peenemunde. Losses were heavy; forty aircraft were shot down, 215 aircrew killed or made POWs. Two key scientists and very many of the slave labour work force were killed but damage to the infrastructure was not great. Testing and production of V1 and V2 missiles was estimated to have been delayed by about six weeks, a figure arrived at also by the Germans. One result, however, was that the Germans realized how vulnerable Peenemunde was to air attack so V1 and V2 production was moved to the underground tunnels at Mittelwerk in the Harz mountains where it was completely safe. Ultimately, testing and production of the V1 and V2 accounted for far more lives lost, estimated to be over 60,000, than these weapons actually killed in action.

Peenemunde can justifiably claim to be the birthplace of both military and civil missile technology, unmanned aircraft and even space exploration, so it was

with alacrity that I accepted an invitation from the esteemed editor of Air Pilot to accompany him in his Glastar on a visit to see what there was now at Peenemunde. We would also take in the museum at Nordholz, where in World War One Zeppelin attacks were launched against England. The plan was to fly across the North Sea from Tibenham airfield in Norfolk, where Paul keeps his Glastar, first stopping at Emden for lunch. The weather was fine but to someone who was used to crossing the North Sea at 450kts in an aircraft with an ejection seat and a dinghy pack and two engines, this was a new experience. However, all went well, apart from a little hassle with Dutch Mil about range activity on the Dutch coast, and we arrived at Emden in good order for lunch after 2 hours airborne. We then set off for Peenemunde, skirting to the north of the Hamburg TMA and tracking along the Baltic coast. The first impression one gets of Germany from the air is that it is covered with very tall wind turbines in huge numbers, with many more being erected. As you proceed eastward into the former GDR the countryside becomes

The author before departure from the UK



The author by a Kelt





The German archipelago

V2 (replica)



less populated and more rural in character. Rostock, a large naval port, still had many barrack like blocks of flats in evidence from the Communist era. After another 2 hours flying the Peenemunde peninsula came in sight and communication was established, eventually, with the airfield. On arrival it seemed like the airfield was frozen in time from some twenty-seven years ago. Apart from a deer's carcass on the edge of the weed-grown runway, being savaged by birds of prey, there were Warsaw Pact era hardened aircraft shelters all around. The old soft and hard ATC towers from the same era were still standing, there were buildings covered in peeling lozenge style camouflage paint and even a very dead Il29 'Beagle' bomber, a two seat Mig 21 still in GDR markings and a 'Kelt' air to surface anti ship missile. It was almost as if the Russians had only just left and very atmospheric for the writer, a long retired Cold War warrior. We put the Glaxo to bed, picketed to a couple of old tyres filled with concrete, and finally managed to get a taxi at an

exorbitant price to our hotel some 4 miles away in a coastal resort. Taxis seem to be a rarity in this part of Germany, as after walking some distance to a fish restaurant that evening and being unable to pay by card, we had to walk all the way back again.

The next day dawned bright and clear again so we hired two bicycles and set off to explore what was left of wartime Peenemunde. After seventy-four years Nature has overgrown much of the extensive site but relics of the railway system, some of which is still in use, were evident, as were ruins of various buildings. The museum, located in the enormous building that once was the site's electricity generating facility, was truly impressive. In the open were full size facsimiles of a V1 on its launch ramp, and a V2, together with a memorial that commemorated a dozen Russian prisoners who were slave labourers. In 1945 they succeeded in stealing a Heinkel 111 from the airfield and flying it back across the front line into Russian territory. Inside the building were

numerous displays covering the build up to the Second World War in Eastern Europe, the war itself, what went on at Peenemunde and at the Mittelwerke site, the bombing raid, post war history up to the present day, and the story of space flight and exploration. Certainly there were no holds barred or excuses made for the atrocities committed by the Nazis and the Third Reich. It was interesting to see many young people visiting the museum.

The power station was very close to an inlet of the Baltic, and was supplied by coal direct from ships. We cycled down to the quayside for lunch, and saw a very decrepit Soviet ballistic missile submarine, now a museum ship, and over the other side of the inlet a Komar class missile armed corvette, also a museum, once one of our prime targets in the maritime Buccaneer squadrons. We cycled back through a nature reserve area, spotting the occasional ruined weapon storage bunkers used to store V1 and V2 missiles. It was a very hot day so we joined the throng of locals on the



*V1 on ramp
(acquired from the UK)*



*Werner von Braun,
rocket supremo*

*A German Gannet -
the fruits of Winkle's work*



beach and swam in the tideless and salty waters of the Baltic, over which those V1s and V2s were launched all those years ago.

The plan the next day was to fly back westward, stopping this time for the night at Nordholz, currently a German Navy airbase with a co-located flying club grass strip alongside, separated from the main runway by a fence. Nordholz was used extensively in the First World War as a Zeppelin base for raids on England, and there was a very good museum to visit. This day the weather was against us, with an active frontal system slowly moving across Germany with the possibility of embedded Cu-Nims. This was not an attractive option for our little Glstar so we delayed departure until the TAFs for our destination improved. Getting out of Peenemunde airfield was nearly as hard as getting in, but we did get refueled and on our way. We were over full cloud cover most of the way, in between layers at

5000ft, but met no Cu-Nims and saw no other aircraft, the airspace seemingly quite empty, even around Hamburg. It was a slow flight against the wind. Arrival at Nordholz was straightforward although the runway was quite hard to identify amongst all the military stuff. There was time to visit the museum which again proved quite fascinating with some very good displays covering not only the First World War but also airship flying in the '20s and '30s, the Second World War, with a huge model of Hitler's projected aircraft carrier, launched but never commissioned. The story was also brought right up to date with current Marineflieger activity. Outside was an extensive display of aircraft, including British aircraft used by the Marineflieger on its reformation in the 1950s such as the Gannet, Sea Hawk, Sea Prince and Sycamore helicopter. Evidently Captain Winkle Brown was Naval Attaché in Bonn at the time, hence

the proliferation of British products.

After bed and breakfast in a very 'kitsch' establishment – again no credit card facility to pay for it, we launched in fine weather to route across Holland south of Leeuwarden airbase, avoiding the active danger areas, to land at the airfield at Texel to clear customs, and set up for a return to Tibenham. Texel was bathed in brilliant sunshine and the staff were particularly helpful. It is a very active parachuting centre, and whilst having a bite of lunch it seemed there was a non-stop procession of parachutists swooping down in front of us. The flight home across the North Sea was remarkable in that there was not a breath of wind on the surface, nor up at 5000ft. The sea was flat calm, there were many towering Cumulus sitting stationary with their reflections mirrored exactly on the sea surface, something I have never seen before. On crossing the FIR boundary and changing to London, the poor

controller was working like a one-armed paper-hanger, dealing with aircraft from Land's End to Dover to way up in the Midlands. It was almost impossible to get a word in edgeways so it was with some relief when we coasted in near Yarmouth to change to the quiet of Tibenham's frequency. As we approached the westerly runway to land I was glad to see my Morris Minor still parked by the hangar after four days away. Our total flying hours were 9hrs 5mins, we visited two fascinating places and learnt much. My great thanks go to the Editor for asking me along.



Lurking Russian sub



A busy Texel

Editor's note

In the excellent Peenemunde Museum were several displays that hinted at what might have been. The Germans' effort was squarely on the V1 and V2, but they had designed a surface-to-air missile, the project being named Wasserfall. This was essentially a smaller version of the V2 – smaller because it did not need to reach as high a trajectory, needing only to reach the height of the bomber stream. It would have used some of the ground radio control systems of the V2. Given this would have been line of sight, daytime use would have been possible, nighttime use more problematic. But our minds boggled at the outcome had all the V1 and V2 resources been diverted into this project – Allied daytime bombing losses would have been catastrophic.

*Ancient HASs at
Pennemunde visible on
departure*



*Wilhelmshafen,
an early Bomber
Command target*



Approach into Nordholz (civil field to the right)

Garden Party

By the Master

This year's garden party was held on 19th August at Charlton Park, near Malmesbury in Wiltshire, the home of the Earl of Suffolk and Berkshire. It is a truly magnificent house, begun in the 1560s. It has been this family's seat since 1603, although the house was converted into apartments in 1975 and the current Earl and Countess live in a house in the grounds. The estate has its own airstrip, a definite advantage for the Honourable Company and one of the reasons why I chose this location. The other reason was that Paula and I lived in a hamlet called Milbourne, just the other side of Charlton Park, until 1983. In those days there was an annual event in the grounds of the House where the Red Arrows, then based at Kemble, would provide impromptu entertainment. I recall a couple of Gnats no more than fifty feet over our roof – happy days!

As always, this year's party began several months before the event with Liveryman David Curgenvin beginning to organise marquees, catering, lavatories and all the other facilities which, when the event goes well, no-one notices. Liveryman John Davy took charge of the airfield, providing friends to operate air traffic



The Earl of Suffolk's seat

communications and marshalling. On the day prior to the event David, Past Master Chris Ford and I were there to ensure that the marquees and ancillary bits were all in the correct positions. My garden gazebo acted as shelter for the band – there was much entertainment to be had erecting this lightweight structure.

After heavy overnight rain and strong winds the day dawned. First on the scene was David Curgenvin, who found that the gazebo had taken exception to the high winds and lay in a tangled mass of bent poles. Ah well, the band would have to sit in the open.

By noon people were arriving. The winds had abated and the clouds were beginning to disperse, leaving a breezy but pleasant afternoon. Some twenty aircraft took the opportunity to fly in, and John Davy arranged for the more interesting aircraft to park in front of the marquee. Past Assistant Professor Michael Joy was persuaded to place his 1929 4½ litre vintage Bentley beside the Tiger Moth which had been flown in by Past Master Wally Epton and Master Elect Colin Cox, making for some excellent photo opportunities.

In all, there were just under a hundred in the Marquee, including the Earl and Countess. The Cirencester Brass Band

The Cox Moth



An unrestrained Master



entertained us throughout the meal with a selection of well-known tunes, and happily there were no showers to dampen their spirits or to tarnish their brass. The caterers provided a splendid buffet of hog roast followed by a spectacular pudding and finally a selection of cakes to accompany coffee and tea. It was a very convivial lunch, enlivened by the presence of Martyn Rowland, a table magician. In earlier times this chap would have been burned at the stake, so spectacular and unbelievable were his tricks. As ever at our parties, because so many people were either flying or driving everyone was invited to bring their own wines or soft drinks, but that hadn't deterred guests from supplying sufficient for their needs. Or, possibly, slightly more than their needs...

Before leaving, Lady Suffolk kindly invited anyone interested to view the hall and public rooms of the house, a kindness

which was much appreciated. The hall is quite spectacular. I remember when the house was first converted into apartments, I had organised a cheese and wine party there, for the local Conservative Association. One guest spilt red wine onto the newly renovated marble floor, a mishap which was less than happy-making.

It was unfortunate that we had been unable to arrange for any interesting aeroplanes to fly over and, post-Shoreham, there was no possibility of a display, but the assembled company seemed quite happy to wander round the static aeroplanes and just enjoy the warm afternoon, the afterglow of good food and the company of friends. As ever, we must thank John Davy for his work on the flying side of the event and David Curgenven for his splendid organisational talents. This party gave him a lot of sleepless nights and I hope he's now caught up. Thanks are also due

to Sid Michelmore, our peripatetic Air Traffic Controller, and Liveryman Mark Green (Assistant Manager at White Waltham), both of whom contributed greatly to the success of the event.

The gathering



Tiger Moth and Bentley



Charlton Park

A vintage line-up



Done yakking



Young Gliding Instructor Bursary Report

By Dinant Riks

I have just completed the training to become an Assistant Category Gliding Instructor, for which I was supported by your Young Gliding Instructor Bursary. After attending two weekend learning seminars, a full week residential course, many days of training at my home club (Windrushers Gliding Club, based at Bicester Airfield) and finally the Flight Test by a Regional Examiner, I have now just submitted all the paperwork to the British Gliding Association so they can issue my instructing license.

In terms of my personal development, the training has made me not just a better handling pilot, but also more aware of which aspects of gliding carry most risk and how these risks can be mitigated. I have also learned 'soft skills' about how best to adapt my teaching to different pupils, and how to strike a balance

between fun whilst also pointing out safety critical aspects. I have enjoyed the course tremendously, and along the way have qualified as a Basic Instructor; I have now started instructing in that capacity. One of my most enjoyable experiences as a Basic Instructor has been flying with a group of 8 Air Scouts, aged between 12 and 16 years. These youngsters were very interested in aviation, and I had the privilege to take them up in a two-seater for what for most of them was their first time flying a glider. All of them had a go at the controls and flew the first flight exercises, and I was impressed by how quickly most of them were learning to fly. They all had a great time, and it was very rewarding for me as well.

Now soon to be qualified to also teach take-offs, landings and safety critical exercises such as stalling, spinning and

launch failures, I can teach glider pilots of all ages, from 14 year old cadets to 80 year old retirees. But I will be spending a lot of my time flying with students at the Oxford University Gliding Club (of which I was also elected as President last April). I look forward to take ab-initios from their first flight through the syllabus to their solo flight and beyond, to become fully licensed gliding pilots.

I want to thank you again for supporting me in my training. Without your support I simply would not have been able to afford the training to become an instructor. I hope to be spending many hours in the backseat of gliders for the rest of my life, teaching many boys and girls how to become glider pilots, and how to have a lot of fun along the way.

