

AIRCRAFT OWNER

April 2015

& PILOT



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April 2015

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Chairman's Message

Changing Times

By George Done

In the February issue of *General Aviation* I was pleased to announce and welcome Ian Sheppard as the new editor of the AOPA UK house magazine. Ian has taken over from Pat Malone who held the reins for nearly thirteen years, and contributed hugely to the image and wellbeing of the association.

When Pat took over the opportunity was taken to move to bi-monthly publication from quarterly and change the title from *Light Aviation* to *General Aviation*.

In the same way, the opportunity has been taken with Ian's editorship to take stock and introduce a new look to the magazine that better represents the current interests of the membership bearing in mind that much has happened in general aviation over the past thirteen years. At the start of this period we were worried about how the newly proposed EASA would impact on our sector of aviation.

Well, we now know. Long standing members of AOPA will be aware from our magazine coverage over the past several years that a huge increase in administrative activity, starting with the over-complicated and disproportionate Part M for maintenance as applied to general aviation aircraft, has led to increased aircraft ownership costs without contributing anything to safety.

The impact has been massive for our membership, 53% of which own their own aircraft outright, a further 27% owning an aircraft share in a group, the remaining 20% being non-owner pilots, including many instructors. The majority of aircraft owned by AOPA members fall into the EASA category, the remainder



being non-EASA (Annex II) types, with most being used for private purposes, this definition covering use for business reasons and also for recreational and sporting use, as for a private car.

A significant proportion of owners are Corporate Members of AOPA, managing flying clubs and flight training organisations, with aerial work operations coming into the picture as well. Thus, it has been necessary for AOPA, together with our European country AOPAs as IAOPA Europe, to maintain a high level of involvement in EASA, Eurocontrol, SESAR and other European activities in order to protect and promote the future viability of GA in the UK and Europe, benefitting AOPA members and non-members alike.

Ian's arrival on the scene provides a moment of serendipity; a good opportunity to introduce a change which reflects these considerations. Hence the title change to *Aircraft Owner and Pilot*. Additionally, the content and balance will be better aligned to aircraft owners' interests. We hope you appreciate the reasons for the change and like the new format; comments and observations in the form of letters or emails will be welcome.

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AIRCRAFT OWNER & PILOT

Editorial

By Ian Sheppard

The general aviation sector shows much promise, which is why countries such as China are so excited about it. Against that backdrop it seems strange to me that the industry in Europe faces so many challenges to growth and prosperity.

This month we highlight an exception to the trend, with Lee-on-Solent (Daedalus) airfield opening its resurfaced main runway (page 21). This comes against a backdrop of airfields – now treated as ‘brown field’ sites – becoming housing estates (Manston is heading that way while some others, such as Old Sarum, have had to fight for years but has managed to keep going).

With the UK election due to take place in May there could be an opportunity for change in the next Parliament but there is much uncertainty. GA airfields are national infrastructure with no solid recognition or protection, whereas ministers constantly face pressure about the lack of affordable housing.

Just before we closed for press, the CAA held an event at Duxford to reveal the Government’s GA strategy (on Saturday 28th March). A summary of this appears on page 8.

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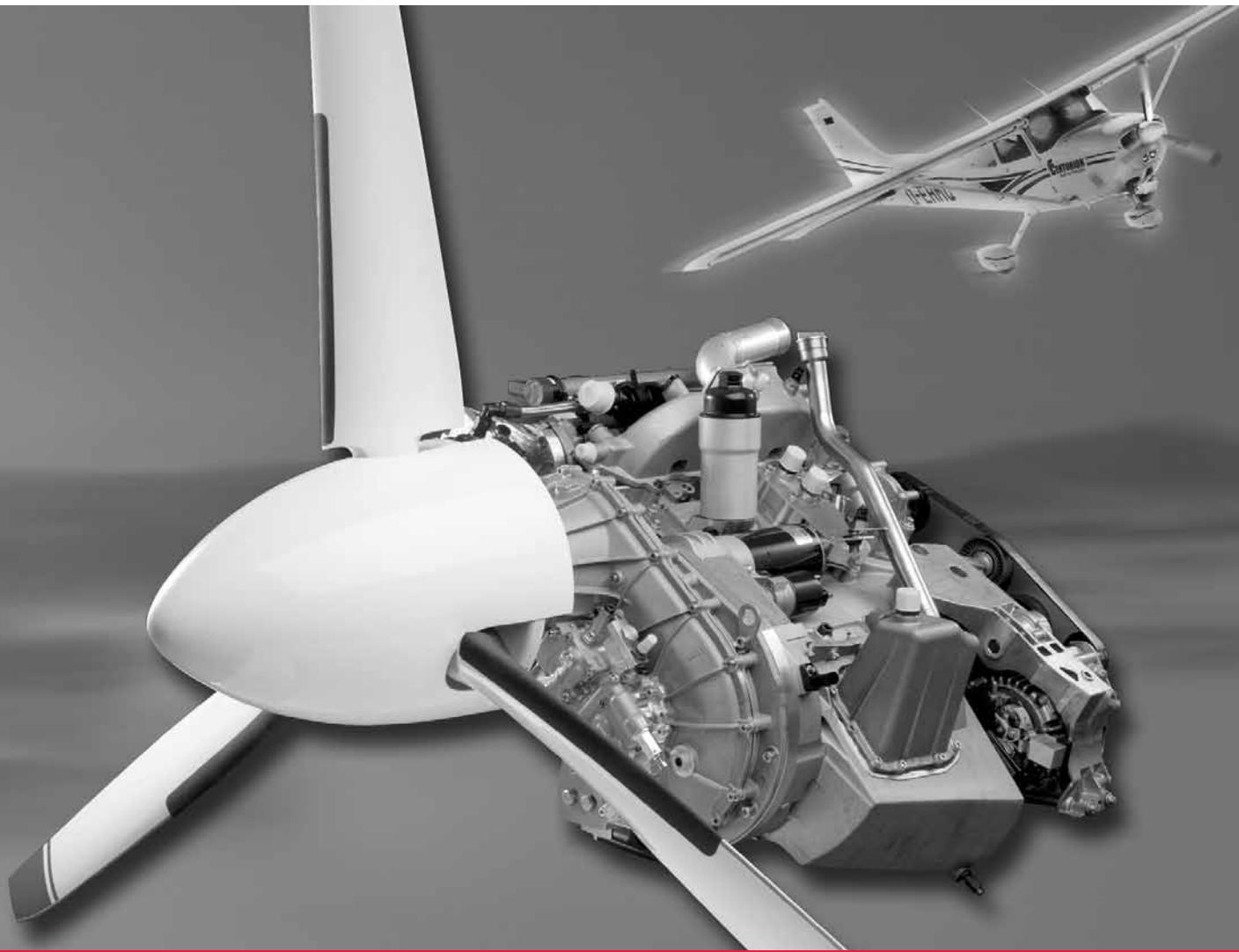
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Freedom of the airfield

By Martin Robinson

On 3rd February I attended the General Business Aviation Strategic Forum (GBASF), which meets several times a year and includes senior people from the CAA and DfT. It's a good meeting and so useful that Andrew Haines, Mark Swan and Kate Jennings gave their time to discuss GA across all sectors. This is a challenge given the scope of GA activity, which spans both the EU regulatory system and aspects that the CAA still retains within its scope.

Among other things we discussed the Red Tape Challenge, the ANO amendments and Gold Plating, which the CAA has committed itself to avoiding. However, one issue that still niggles is ground handling. According to the DfT its lawyers have implemented the EU Directive correctly, BUT when I asked specifically if it definitely included ability to self handle (Article 7 of the Directive), DfT simply repeated that it had been implemented correctly. Until I see evidence at airports that have handling that GA can self handle, I will continue to push for answers.

On 4th February I had a meeting with Helios. They are helping us to manage the SESAR work that we do with IAOPA. We spoke about the 833 issue, and what we need to do next with the Commission.

At the 6th Feb. Airspace Infringement Working Group (AIWG) the discussion was about the number of GA airspace infringements and the need to consistently remind GA pilots and instructors about paying attention to detailed preflight briefings and vigilance during flights. The CAA, in its attempt to avoid automatically taking pilots to court, have introduced an online training system which they ask pilots to do instead. I have been told that even though there is a training package to read through before taking the test, the number of pilots failing the test is very high!

The AOPA Executive Committee met on the 9th, and then I was in Brussels on the 10th and 11th. From 16-27 February I was in China, where I had meetings with the UK DTI, the Scottish Development Office, GAMA and AOPA CN.

On March 3rd I attended the GAP (General Aviation Partnership) meeting at the CAA, Gatwick. GAP is a forum for discussion and the fact that we have a more engaged GA department at the CAA is to be

welcomed. For those in the Partnership that fall under EASA, however, there is not much room for change via such a forum – although the CAA's Tony Rapson is flying the flag for UK general aviation in Europe, which is a good thing. But it remains to be seen what kind of changes EASA will bring forward and how quickly they will do it.

On 4th March I had a meeting with Roger Hopkins and Marc Bailey (BBGA) to discuss our speaking parts at the forthcoming meeting with the CAA board.

My main concern is in respect of the infrastructure. We all clap when we hear words about retaining a sustainable network of GA aerodromes, but when making changes you must think about unintended consequences – the more licensed aerodromes that get turned over to housing, the fewer places aircraft that are operating on an AOC will have to operate to/from, and this will impact future operations. We all need to care about the infrastructure regardless of what we fly and why.

From March 9th to 13th I was in the AOPA office in Victoria catching up with some admin tasks before heading for the SESAR SPP followed by the EBAA conference, March 16-17.

Much of the discussion at the SPP centered on the ATM Campaign and SESAR 2020. The ATM Campaign relates to the ATM Master Plan update, and IAOPA Europe has been making sure that GA's needs are taken into account. SESAR 2020 (or Phase 2) deals with SESAR work between 2016 and 2024.

With SESAR Phase 1 coming to a conclusion next year, some 200 projects will be closed down although many of the topics will remain. In future years, SESAR will deal with RPA's issues and will work more closely with GA as a result. The SESAR Joint Undertaking continues to work closely with FAA NextGen in the development of interoperability between the programs.

The EBAA conference, while dealing with some questions around NCC (new safety regulations for non-commercial complex aircraft), we were reminded that the Commission's focus for the next five years is on growth and competitiveness. Transport Commissioner Violeta Bulc (who heads up DG MOVE) has stated that the mobility of citizens is important to both jobs and competitiveness – another aviation consultation is coming out from the Commission in the next few months and we are all encouraged to respond to it.

Other issues touched on at the meeting included access to airports across the EU, as well as costs. Towards the end of the conference an MEP suggested that business aviation needs a low-cost model like the low-fares airlines. I do not think he understands the reasons why business aviation operates the way it does. As chairman of BBGA Marwan Khalek said recently, it's a tool for people for whom time has a value.

On 18th March I attended the CAA board meeting at Booker Airfield. The meeting started with a presentation from Sean Brown on how the business at Booker is run and the amount of investment that has been made. It was a good presentation and he dealt with some of the difficulties from a business perspective. I am sure that the CAA board appreciated his views as well as enjoying the tour of the facilities.

This was the annual opportunity for the CAA board to meet with the members of the GBASF (BBGA, GAAC and AOPA) and receive an update of the work of GBASF, a strategic body largely focused on the RTC and changes being proposed through EASA. It represents a good opportunity to speak with the CAA board members, a couple of whom have GA flying experience.

On 19 March I attended the BBGA conference. Marc Bailey and I got on very well and I thanked him for his supportive efforts. The BBGA conference deals mainly with the issues that affect its membership but we do have common issues (Border Force for example). It was a good event, held at Selsdon Park, near Biggin Hill, and my congratulations go to Marc and the BBGA staff for organizing it.

Between 23rd and 27th March I attended the ICAO conference in Dublin, where I presented some views on how flying GA aircraft may benefit pilots of CAT aircraft; there is growing concern that professional pilots are losing hand-flying skills and that this is becoming a safety issue that airlines need to address. The European Commission has issued amending legislation to include upset recovery training in both the CPL and MPL courses while the FAA is actively encouraging airlines to allow pilots, under certain operating conditions, to hand fly the aircraft. I spoke about the benefits of hand flying GA aircraft, including gliders, as well as the ability to really experience positive and negative G forces.

Finally on 28 March I attended the CAA conference at Duxford... a full report on this important meeting will appear in the next (June) issue.

UK Government launches new Strategy for GA



Above: Grant Shapps flew himself down from Manchester after the launch of The Conservative Party's election manifesto to deliver a speech at the CAA-organised event. He was also presented with AOPA's Lennox-Boyd Trophy, awarded in recognition of his support of the GA cause in Parliament.



Representatives of the CAA answer questions on airspace.

At a packed CAA-organised event on Saturday 28th March a new strategy was launched for the general aviation sector in the UK. Keynote speaker at the event was Patrick Ky, EASA's executive director, while CAA chief executive Andrew Haines played host.

Ky (who said he used to be a GA pilot, "A lousy one") stressed the impact and importance of GA. He reflected on how his reforms at EASA had taken feedback from the GA community into account in a way not done previously. "We decided to create a GA department so we can take account of the GA culture in every stage."

He added that EASA had just submitted an official Opinion to the European Commission "to prepare EASA for the next ten years... in the GA chapter we proposed to create a more proportionate and flexible approach. He said that EASA was committing to its six key objectives for the future of GA, as part of EASA Vision 2020 (these are listed on EASA's website).

The Strategy

Patricia Hayes, director of aviation in The UK Department for Transport, then made a presentation, starting by saying how productive the past two years had been. She then ran through the content of the new Strategy for GA, which has four overall aims. She recognised Grant Shapps' work in chairing the Star Chamber to push through the Red Tape Challenge across industry.

The 4 Aims and 20 Commitments (in brief) of the UK's General Aviation Strategy:

- 1. Thorough deregulation for GA so that it is policed only to the extent needed to comply with international obligations and to provide appropriate safety and security.**
- 2. Meaningful engagement with GA by all Government Departments on relevant future policies;**
- 3. Stimulating employment in GA in terms of how many people are involved and how much they participate.**
- 4. Supporting infrastructure that is appropriate in its extent, capability and location to deliver a mixed, modern fleet of aircraft flying between appropriately equipped aerodromes across well-defined airspace.**

1. Engaging more effectively with GA when developing, reviewing and modifying policies;
2. Support GA sector initiatives to engage more people in GA and to celebrate its achievements;
3. Promote apprenticeships in England and other GA training initiatives;
4. Consider whether to continue meetings of the GA Ministerial Star Chamber;
5. Offer financial support to the GA ANO Review
6. Legislate on the outcomes of the Review in 2016 and on other ...GA Red Tape Challenge matters process after consultation;
7. Introduce proportionate and flexible civil sanctions for Air Navigation Order offences;

8. Work with the EC and EASA to ensure the timely implementation of the GA Road Map;
9. Seek to resolve the issue of access to Belgian airspace;
10. Amend planning guidance on the National Planning Policy Framework for England so that it makes appropriate reference to GA aerodromes as part of a network;
11. Circulate more detailed GA sector guidance from the GAAC to planning authorities;
12. Encourage more proactive engagement between local aerodromes, local communities, Local Planning Authorities and LEPS;
13. Improve guidance to GA on the use of military aerodromes;
14. Look to introduce simpler, standard pre-notification periods for GA, simplify the GAR completion process, through an electronic submission option.;
15. Consult on the proposals for requiring advance notification after Royal Assent for the Counter Terrorism and Security Act.;
16. Work with the GA sector to encourage [additional] apprenticeships in England;
17. Following a recommendation made by the GA Red Tape Challenge Panel we are reducing the CAA's rate of return from 6% to 3.5%;
18. Ensure that the CAA has regard for the growth of GA and the rest of aviation sector;
19. Appoint a Small Business Appeals Champion to provide assurance to business that the CAA's appeals and complaints processes provide clear and effective routes;
20. Continue to engage actively with the GA community including on metrics for success, through the reports and work of the General and Business Aviation Strategic Forum.



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AOPA: Working for You

'See and Avoid' equipment trial

AOPA UK is calling for pilots and aircraft owners to become involved in project EVA ("Electronic Visibility via ADS-B"), which aims to test prototype, affordable ADS-B transponders for improving traffic awareness. Supported by the SESAR programme, the main partners in the winning EVA syndicate are NATS, Germany's Funke Avionics (FAV), TRiG Avionics of Edinburgh, Scotland and Eurocontrol. AOPA UK agreed to flight test the equipment with an estimated 180-200 hours of trials.

The first set of flight activities will be carried out using the prototype Low Power ADS-B Transceiver (LPAT) which has been developed by NATS with FAV. The equipment transmits and receives ADS-B signals and displays the relative position of other ADS-B transmitting aircraft on a small cockpit display.

AOPA UK has asked for pilot volunteers who can provide an aircraft for such flights, and says that some financial support will be available, at least for the cost of fuel and landing fees, although the details have not been finalized.

The UK activities will take place at a few airfields and en-route areas in the south-east of the UK initially. Flights are to be conducted with two pilots in each aircraft, one acting as an observer to record details of the flight.

There will be an introductory session and a Flying Day to help prepare, and to work out how to fit the equipment.

Any light aircraft can be used for the trial so as to represent as wide a possible range of aircraft sophistication as possible, including both EASA and non-EASA/permit aircraft.

Several airfields are to be selected, with small and larger/busier airfields being represented.

TRiG Avionics says that it has already achieved certification in the U.S. and is now close to obtaining STC approval from the FAA as part of the FAA's 2020 ADS-B mandate, for a software update to their existing TT31 and TT22 transponders. For those who already have these transponders, their path to ADS-B will cost comparatively little as it will involve only a software upgrade, although the aim of Eva is that new units in Europe will cost less than €1,000.

Eurocontrol hosts 8.33 kHz workshop

AOPA UK CEO Martin Robinson, who is also IAOPA senior vice president (Europe), attended a Eurocontrol workshop on 27th January which explored the potential impact of mandated 8.33 kHz radios on general aviation. The wording of the relevant legislation, article 14 of EU Implementing Regulation 1079/2012, was discussed – in particular the Commission's statement that there was no time limit on exemptions, which Eurocontrol accepted along with the fact that the temporary derogation would be open to individual negotiation with Member States.

At issue however is whether an exemption could have an impact on airspace; Martin asked whether G and E airspace could be considered as having little or no impact on the airspace "Network", pointing out that there was no requirement to use radio in these Classes of airspace. "A European-wide exemption from 8.33 [in Class G airspace] could be a useful solution," he suggested.

Martin also explained that it was the certification and installation costs that were the main financial burden on GA. As it stands, IAOPA/EAS is to be invited to take part in further discussion, with Jacky Pouzet from Eurocontrol leading this.

Meanwhile EASA, through its current efforts on CS STAN, intends to simplify the certification process using "some form of



The AOPA Members' Working Group met at White Waltham Airfield on 21st March. Key discussion points included aerodromes, Project Eva (ADS-B), raising the profile and changing the perception of GA – particularly among the public – and the planning for the next MWG at Sherburn-in-Elmet on Saturday 6th June. All AOPA members are welcome to attend the MWG meetings but 6th June will also be a members' fly-in, and lunch will be available (arrangements are being finalised and members will be notified shortly). Pictured above are Chris Wheeler (Brimpton), Chris Royle, Timothy Nathan (Biggin Hill), Nick Wilcock, Pauline Vahey (chair), John Walker (White Waltham), Kevin Fitzpatrick and George Done (AOPA UK chairman).

declaration process," noted Martin. "This is positive as it may help to reduce the cost of certification for EASA aircraft. However, this will leave Annex II aircraft under NAA procedures."

He concluded from the meeting that "as the Regulation requires States to inform the Commission 12 months prior to 31st December 2017 if they intend to apply for a derogation or exemptions, we have some work to do through our national AOPAs."

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Airfields Update

Has our voice been heard at last?

By Stephen Slater

As regular readers of airfield and planning reports in recent editions of this magazine will know, one of our biggest challenges over the past years has been a lack of recognition of the fact that a network of GA aerodromes around the UK is vital to our future. As a result, most local planning authorities seem to have made decisions based on local issues.

Back in 2005, when GAAC and DfT researched the response of local councils to threats on airfields and other flying sites, scarily, it found that indicated that 41% of local planning authorities indicated they would offer no proactive protection or offer planning safeguards for flying sites. Just 30% indicated that, if asked, they might or would seek to protect flying sites, and only 7% of local authorities specifically said they would offer protection.

The Bad News

Recent evidence indicates that this philosophy has not significantly changed. When Grant Shapps MP initiated the General Aviation Challenge Panel, it reported in May 2014 that: "...local government and councils (for fiscal and housing delivery reasons) generally do not consider the potential economic value of aviation or unlicensed aerodromes."

Worse still, we are all aware of the threats to airfields from Plymouth to Panshanger, Manston to Wellesbourne and beyond, with site owners and local planning authorities prioritising housing and other development on the land that airfields occupy. This has resulted in a piecemeal set of closures, which have stretched Britain's strategic network of GA airfields to breaking point.

Late in 2014, there was a clear example of the effects of the disruption of this national network. The temporary closure of Blackpool airport had known effects on aircraft movements as far afield as Buckinghamshire, Gloucestershire, Hampshire and Oxfordshire as, without a convenient destination for planned business and social flights to the Fylde area, the flights were merely cancelled, with those involved resorting to less efficient, more time-consuming alternative means of travel.

The Good News

The results of a survey commissioned last year by the Department for Transport, were unveiled by the CAA at Duxford on 28th March. Among its findings the York Aviation report has put a fiscal value on GA as part of 'UK plc'.

The research suggests that the total value of UK based GA activity in 2013 is about £3 billion, supporting over 38,000 jobs. This total includes an economic footprint from GA flying operations of £1.1 billion; an export component of GA manufacturing of around £1.1 billion and additional wider benefits from the use of business aviation, of at least £0.8 billion. The report also noted benefits to associated industries such as tourism.

However this research also indicates that while business aviation and air taxis have experienced growth in movements of around 7% since 2005, there has been a significant decline in aero club and private flying in this period. While there are some signs that this market is recovering from the recession, if GA flying operations could be reinvigorated to levels similar to those of 2005, then the economic value of the sector could increase from £1.1 billion to £1.8 billion.

An extra £ 0.7 billion represents serious cash for any Chancellor of the Exchequer and better still, the report goes on to tell Government that a key part of developing GA is acknowledging "the strategic network of UK aerodromes as a national asset." and a need to "bring a consistent approach to decisions taken by local planning authorities and, thereby, to offer specific protection to the strategic network."

The Department for Communities and Local Government which controls planning strategy, has already responded with advice to planning officers that "Aviation makes a significant contribution to economic growth across the country, including in relation to small and medium sized airports and airfields (aerodromes). An aerodrome will form part of a larger network. Local planning authorities should have regard to the extent to which an aerodrome contributes to connectivity outside the authority's own boundaries, working together with other authorities and Local Enterprise Partnerships."

It adds: "A working or former aerodrome could be put forward for consideration as a site for mixed use development (National Planning Policy Framework paragraph 17) that includes continuing, adapting or restoring aviation services in addition to other uses."





A view from right base leg to Runway 29 at Panshanger, with (inset) the approach to runway 11.

Industry-Specific Advice

In addition to that advice, the Department for Transport approached the GA industry for sector-specific advice. Here we have a clear example of how, when the different groups within our industry work together, we *can* get results.

The General and Business Aviation Strategic Forum (GBASF) – which is chaired by Roger Hopkinson and made up of the CAA chief executive, the director of the CAA's Safety Airspace and Regulation Group, a representative of DfT, the chief operating officer of the British Business and General Aviation Association, and Martin Robinson of AOPA – requested the input of GAAC, which represents airfield planning interests for AOPA among a wide range of other member organisations.

Working with the DfT we have created a detailed set of planning recommendations which are now being forwarded direct from the Transport Minister to planning authorities. The full set of recommendations run to 12 pages so I am sure you'll be relieved to know I'm not planning to set them down here, but the six key points are:

1. National Airfield Infrastructure

Recognition that the network of GA aerodromes around the UK provides vital connectivity for business travellers and acts as an important and cost-sustainable part of the national transport infrastructure. Each site forms part of a larger national network and piecemeal closure without reference to their value as part of a strategic network can have far-reaching consequences.

2. Brownfield Site Status

The potential for aerodrome sites to be used for housing became more feasible following the deletion in 2003 of a guidance that airfields and hospital grounds should not be considered brownfield sites. Local Planning Authorities should be aware of the environmental credentials of the undeveloped areas of airfield sites as an important 'open green space' and evidence that airfields are increasingly important as low-insecticide, low-herbicide, sanctuaries for plants, insects and associated wildlife.

3. Airfields & Renewable Energy

Inappropriate applications for wind turbines in proximity to aerodromes, often inside safeguarded areas forcing objections on safety grounds, represent a significant cost and time issue for airfield operators. We refer to the Overarching National Policy Statement for Energy Infrastructure (EN-1) which states: *"It is essential that the safety of UK aerodromes, aircraft and airspace is not adversely affected by new energy infrastructure."*

4. Noise

There is widespread concern that the introduction of new noise sensitive development such as housing in close proximity to long-established noise generating sites such as flying sites may in future force the latter to alter their operations or even close down due to new (and foreseen) complaints. Planners need to be aware of the extent to which certain levels of noise may be unavoidable consequences of maintaining levels of commercial activity at aerodromes and that this may constrain options for nearby developments.

5. Safeguarding

There is a statutory obligation for Local Planning Authorities to refer planning applications in the vicinity of an aerodrome for CAA assessment for only 27 of the largest civilian aerodromes. All other civilian flying sites rely on voluntary or unofficial safeguarding. The response to this from local planning authorities has not always been consistent. Local Planning Authorities and aerodrome operators should work closely to understand the potential impact of local developments near to aerodromes, so that planners are aware of the risks to airfields and general aviation that inappropriate developments create.

6. Airfield Viability & Asset Disposals

Change of use from being an airfield should only be permitted after the planning authority has fully considered the extent the aerodrome has contributed to connectivity. Options such as mixed use and allowing aviation to be continued, developed or adapted alongside other land uses, should also be explored.

Planning authorities should be alert to how the sale of assets at an aerodrome could adversely affect the potential for bringing it back into operation. They could encourage owners of airports who are looking for closure to complete a full and proper consultation, with a cooling off or review period in which demolition, asset sale or other disposal of key airport equipment do not take place.

Will these 'green shoots' bear fruit during the coming spring? Well only time will tell, but at very least we have got the ear of people in Government and the Ministries, and we're making the most of it!

Laser surgery and the human eye

By Dr Chris King

Approximately 50% of pilots need some form of refractive correction to meet the EASA visual requirements for medical certification. Whilst glasses and contact lenses are the commonest means of correction, pilots often ask me about laser surgery.

A bit about refraction: this is the strength of the lens, specific to any individual, which allows light to optimally focus onto the back of the eye (the retina). Light hitting the retina triggers tiny electrical signals, which are sent to the brain, which in turn processes the signals to form visual perception. The normal eye is like a camera with the “focusing lens” and the light sensitive retina at the back. The focusing system consists of two parts, the cornea, which is the clear part of the eye over the coloured iris, and the lens, which is just behind the pupil.

To correct a refractive error, glasses or lenses are required, or the actual mechanics of the eye can be altered by laser surgery or LASIK (Laser in-situ keratomileusis).

There are four main types of refractive errors: myopia, hyperopia, astigmatism and presbyopia.

Myopia (or short sightedness) is a condition where distant objects are unclear and results from the image through the eye being focused in front of the retina.

Hyperopia (or long sightedness) is a condition where near objects are unclear and results from the image through the eye being focused behind the retina.

Astigmatism is a condition caused by an irregular curvature of the cornea, more in one direction than another. It is a bit like the difference between the shape of a football (normal) and a rugby ball (astigmatic). Objects are seen stretched out in the direction of the astigmatism as a result of light not being focused into a single image on the retina. Astigmatism can cause blurring of vision at any distance and may occur in addition to myopia and hyperopia in the same individual.

Presbyopia is a progressive aging condition of the eye as a result of the lens being unable to focus on near objects with age and is treated with reading glasses. Almost everybody will suffer from this as they get older. Presbyopia is not helped by laser surgery, and even with laser surgery you may still require reading glasses in older age.

Thus, when you look at your glasses prescription, you will see four columns with numbers. The “sphere” represents the degree



of myopia or hyperopia in dioptres (D); the “cylinder” represents the astigmatism in dioptres with the “axis” representing the axis of astigmatism in degrees. The “add or near” column represents the additional correction for near vision or reading.

Laser surgery can be carried out for myopia, hyperopia and astigmatism. It is not recommended that you have laser surgery just for the purposes of obtaining a medical certificate. The visual requirements for class 1 and class 2 medicals have been relaxed under EASA and are on the CAA website. If you are outside these limits it will be worth discussing this with the CAA optometrist, as there does now seem to be some flexibility under EASA.

Although laser surgery has a high success rate, it is important that pilots are aware of the risks and complications and that corrective lenses may still be required at some stage. Complications include delayed healing, night glare (halos, starbursts), under or over correction, corneal haze, corneal scarring, loss of best corrected visual acuity and corneal flap complications as well as others such as infection and increased pressure in the eye.

Therefore, in the flying environment, laser surgery should not be embarked upon lightly.

LASIK is performed using a microkeratome and excimer laser. During this

procedure the microkeratome slices a thin flap from the top of the cornea leaving it connected by a small hinge. The corneal flap is folded aside and the excimer laser is used to reshape the underlying cornea to correct the visual abnormality and the flap then returned to its original position.

Prior to undergoing any type of refractive surgery a proper evaluation of the eye should be undertaken by an ophthalmologist to check that there is no underlying eye disorder or other medical illness that could affect surgery.

Be warned that the aviation authorities do not approve laser surgery which gives near vision in one eye and far vision in the other.

If LASIK is undertaken the pilot is made unfit for up to a minimum of 3 months. Medical certification is considered at 6 months for LASEK and PRK, for other more novel procedures, it may be delayed up to 12 months. The pilot must provide a report from their surgeon, which includes pre and post operative refractions, details of the types and dates of surgery and confirmation that there are no complications from the surgery (see above). Class 1 holders require an assessment to be undertaken at the CAA medical department before a pilot can return to his flying duties.

Regulatory Update

New mindset sees light at the end of the tunnel for deregulation

By Nick Wilcock

More news from the wonderfully exciting world of licensing, EASA, the CAA – and that's not all!

It seems that it's not all doom and gloom as there is at least some light beginning to shine at the end of the tunnel, thanks to EASA and the CAAs' new mindsets concerning the undesirable impact of overregulation on General Aviation. In addition, UK adoption of Single European Rules of the Air is proceeding in a pragmatic manner as the CAA is very conscious of the need to avoid adverse impact on UK GA activity due to unintended consequences of blind bureaucracy. But here are a few updates:

Future of IMCR/IR(R)

The CAA has recently released Information Notice IN-2015/009 on this topic; this followed the CAA/ Industry working session we held at the AOPA offices back in January 2014. In order to comply with the Aircrew Regulation, some minor changes to current administrative practices have been introduced, mainly for instructors and examiners.

The requirements for 'new' IMCR / IR(R) instructors have also been clarified; these are pretty much the same as they were under JAR-FCL, but a suitable endorsement will now be required in the instructor's certificate. However, the IN will shortly be re-issued to take into account SERA harmonisation amendments for take-off and landing visibility and SVFR minima.



The first EASA monitoring board focusing on the En-route IFR Rating and Competency-based Modular IR(A) was held at EASA in Köln on 27 Jan 2015. The most significant points of concern were the lack of guidance for examiners in some Member States; Central Question Bank theoretical knowledge questions on topics outside the syllabus; and disproportionate requirements for the approval of synthetic training devices. On behalf of IAOPA (Europe), AOPA UK gave a brief PowerPoint presentation concerning the UK IMCR / IR(R); 'Easier access to an IFR rating' is a primary commitment of EASA's General Aviation Road Map and it is quite clear to EASA that the UK IR(R) already provides this for UK pilots. Perhaps other Member States will now press for the introduction of something similar in their own nations? Maybe we'll eventually see the IR(R) being adopted into the Aircrew Regulation so it's available for cross-border use.

There's a slight snag with this though; as you will no doubt be aware, the IMC rating is regulated by the UK ANO, whereas the IR(R) is an 'authorisation' under the terms of Article 4 Para 8 of the Aircrew Regulation. You were, weren't you? Which means that tweaking the authorisation to bring things into line with SERA can be achieved relatively quickly, whereas to do the same for the IMCR requires either a formal ANO amendment or a General Exemption from same, either of which would take longer.

Thanks to the Red Tape Challenge, the CAA is in the throes of an ANO review, hence it's by no means certain that a General Exemption will be forthcoming. So if you haven't already done so, perhaps now would be a good time to convert your old UK PPL with IMCR into a Part-FCL PPL with IR(R)?

8th April 2015

Hopefully, by the time you read this, the derogations agreed by the EASA Committee last October will finally have made their way into the Official



Nick Wilcock during his training days on Jet Provosts.

Journal of the European Journal and will have become law. These will be of benefit to pilots flying EASA aircraft on national UK licences, such as the NPPL/SSEA, as they will now be able to do so until Apr 2018. Also any existing PPL training organisation will be able to offer LAPL training without having to apply for approval. The simplified requirements for Registered Facilities to convert to non-complex Approved Training Organisations should also have been released by 8 Apr 2015, as should the CAA's revised template manual and Standards Document. Although there's actually less urgency for this now, as the requirement

for RFs to convert to non-complex ATOs will also have been derogated for any course currently offered by the RF.

NPA 2014-29

On behalf of IAOPA Europe, I have now uploaded some 35 comment responses concerning amendment of the Aircrew Regulation. These include such proposals as getting rid of PPL exam 'sittings', gaining acceptance of flight time in certain 3-axis microlight aircraft towards SEP class rating revalidation, accepting that a 150nm QX-C if

flown as part of a LAPL course will be credited for a later PPL, getting rid of 'ATO assessment' for SEP/TMG renewal refresher training prior to the proficiency check, restoring the '4:1' credit for instrument flight time / flight time under IFR towards FI/IRI instrument flying prerequisites, simplifying IRE requirements to include recognition for all previous IF instruction, clarifying certain regulations concerning the CbM IR...etc...etc. Most of these proposals have already been put to EASA during routine meetings we've had with the Agency, but the NPA comment response process has provided us with an opportunity to lump them all into one document. Don't expect immediate change though, as with a week to go before the original comment response deadline, EASA decided to extend it until 17 May 2015. EASA intends to publish its decision before the end of this year, but there is now some doubt in the Agency as to whether this will be achieved. But with any luck, EASA's GA Road Map initiative might provide some gentle encouragement.

ORS4 No.1087: 90-Day Rule

Despite considerable opposition from many GA Partnership Group members, the CAA has introduced a partial derogation from the '90-day recency' requirement which, for United Kingdom (non part-FCL / non JAR-FCL) private pilots only, will now allow them the option of flying with a so-called 'pilot-passenger' when regaining recency. Hitherto they could either fly solo to regain recency or do so with an authorised instructor and this remains the situation for Part-FCL and JAR-FCL licence holders. Since releasing the derogation, the CAA has now issued further guidance and more will probably have been released by the time you read this:



ORS4 No. 1085 is a recent derogation which exempts aircraft from needing to carry certain radio navigation systems for flights under IFR. In practical terms this means that the carriage of specific items such as VOR, DME or ADF will no longer be a requirement merely by virtue of the pilot wishing to fly under IFR, unless required by the planned route or instrument approach procedure at the destination or alternate aerodromes. So for example, if your flight doesn't plan to include any NDB work, you won't need to carry an ADF.

A UK (non Part-FCL / non JAR-FCL) licence holder wishing to use the ORS4 No.1087 derogation, in addition to using it on non-EASA aircraft, may also (until Apr 2018) do so on EASA aircraft of the same class. This is because the UK national licence is restricted to LAPL level aircraft, rather than actually being a Part-FCL licence as such.

Pilots who have converted to a Part-FCL licence, but who have also retained their legacy UK licence, may not use the derogation. It would seem that, for part-FCL licence holders, a UK licence is only required for aircraft which cannot be included in a Part-FCL licence (e.g. Jet Provost, Gnat); pilots may not mix n' match UK and Part-FCL licence privileges as the mood takes them.

The 'pilot-passenger' does not need to be within 90 day recency for passenger carrying, but must have a valid licence, rating (for the class) and medical.

Quite why the CAA has bothered with this derogation is a matter open to doubt. It has, shall we say, had a 'somewhat mixed reception'. Perhaps rather than flying with a 'pilot-passenger' providing "You-don't-wanna-do-it-like-that" comments in the style of Harry Enfield's "Only Me!" character, pilots who don't feel happy regaining 90-day recency on their own should consider doing so with an instructor? Another advantage of this option is that, under EASA's proposed revision of FCL.740.A, even a short 'regaining recency' flight with an instructor will count towards the hour of refresher training required for SEP Class Rating revalidation

So, quite a few changes are coming to this theatre soon. Of course we'll continue to keep you updated; in the next edition I hope to provide an update regarding the progress being made to update the PPL and LAPL syllabuses, including more relevant questions and the future introduction of online e-exams.

Trials are underway which could see Permit aircraft carrying out training and flying IFR and at night.





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GA News Roundup

Finnish GA fees increase five-fold

Finland's transport and communication ministry gave unwanted gift to the country's GA community just before Christmas, when it decided to raise the administrative fees for Air Training Organisations/Registered Facilities (ATOs/RFs) by an average of more than 500%, with a maximum increase of 900%. Thus, one training facility is being told it has to pay an annual fee of €1,000, course fees of €300, plus €200 for additional training sites, and €500 for continuation of training permits, for a total of €2,000 for 2015. This compares with fees totalling only €150 for 2014.

AOPA Finland said that it has responded to numerous calls and requests to start to negotiate with the ministry. The association is setting up a meeting as soon as it can.

"The reaction to the fee increase has been appalling, and about two thirds of training organisations are considering shutting down," said the association, which explained that "due to recent ATO developments there are only four ATO's in Finland while the rest of the PPL(A) training organisations are Registered Facilities. Training organisations which might continue operation in 2015 will face replanning/scheduling/budgeting problems if they have any future students left after this short-sighted decision."

New Director for AOPA Spain

José Manuel Pérez de la Cruz has been appointed as the new director of AOPA Spain, following board approval on 28th November last year.

Previously, José Manuel has held positions such as president of SENASA, and has worked for Acciona Airport, Aeromadrid and



Biggin Hill Airport may be able to extend its operating hours, which are generally 0730-2100 weekdays and 0900-2000 at weekends/bank holidays.

Corjet Maintenance. He is currently associate professor at UAB and is the UAM for the master of aviation management degree.

AOPA Spain said that he would strengthen the presence of the association in Madrid, and strengthen relations with the aeronautical institutions and public entities, and strengthen the name of AOPA Spain based on his extensive experience in general, commercial and executive aviation. The association added that José Manuel will help "increase our presence in these sectors in order to reinforce the partnership as a reference for the defence of the interests of general aviation and aerial work."

Biggin gets operating hours breakthrough

At the end of March the London Borough of Bromley approved, in principle, the request by Biggin Hill Airport to extend its operating hours. The decision follows a Council consultation which attracted an unprecedented 41,711 responses, the largest

single response to any Council consultation, in which 31,500 (76%) of residents registered their support for the proposals. Council officers confirmed that independent studies had shown that the extended hours were vital in attracting new businesses.

Will Curtis, Managing Director of Biggin Hill Airport, said: "We are delighted the Council has approved the Airport's request for slightly longer operating hours. This is essential if we are to grow the business and attract aviation engineering businesses to Biggin Hill."

Biggin Hill Airport and the Council will now negotiate a more detailed agreement to alter the operating hours for final approval by the Council later in the spring/early summer.

FAA and EASA

The draft annex to the U.S.-EU Agreement on Cooperation in the Regulation of Civil Aviation Safety that covers pilot licensing has been posted by the FAA on its website. The agreement is being developed jointly by the FAA and EASA.

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Brooklands Museum receives major Heritage Lottery boost

Brooklands Museum near Weybridge in Surrey has received confirmation that it would receive a grant of £4.681 million from the UK Heritage Lottery Fund. Museum director Allan Winn said, "As you can imagine we're to bits." The funding will go along way towards the 'Brooklands Aircraft Factory & Race Track Revival Project'.

The project aim is to transform the museum's Grade II listed Second World War Wellington Hangar into 'The Brooklands Aircraft Factory'; allow a new annex to be built (the 'Flight Shed') to house more of the museum's collection of historic aircraft; and restore the Finishing Straight of the race track (the banking of which can be seen pictured below) to its 1939 appearance.

The museum said that the project "aims to inspire future and current generations to embrace science, technology and engineering."

Work is due to start in the next couple of months with completion of the Aircraft Factory and Flight Shed due in the summer of 2016. The museum is now busy raising the other £775,000 for the project, the completion cost of which will be around £7 million.

The Brooklands Race Track opened in 1907 and within a year early experiments in aviation were taking place there too. There were many landmarks in its history and a visit there brings home the importance to aviation (Vickers Armstrong factory among other things), motorcycling and motor vehicle racing (first British Grand Prix in 1926) and development.

Meanwhile discussions continue with Mercedes-Benz World, adjacent to the museum, to bring the remaining airfield back into regular use for GA and historical pilots.



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Daedalus Rising



Ian Sheppard headed to the south coast on 10 March for the official opening of the new runway at Lee-on-Solent (“Daedalus”) Airfield.

The opening of the new improved runway at Daedalus – Lee-on-Solent Airfield, Fareham near Portsmouth on 10 March was a cause for celebration indeed. Dignitaries from both Fareham and Gosport Councils were present – the airfield is mainly on Fareham’s patch but Gosport accounts for the southern waterfront site. The success of this airfield is undoubtedly now with local people instrumental; the people of Fareham and Gosport apparently see it as “their” airfield and are unanimously against development for housing (one of the many ideas and schemes that have been dreamt up over the years).

We were running late – having failed to secure an aircraft for a flight down the trusty editorial team had to drive, and it really is a lot quicker to fly from our base at Redhill Aerodrome. One aircraft was off on delayed annual, the TB10 was coming anyway flown by its keen owner, who didn’t even appreciate he had booked the first slot to land on the new, broad surface of Runway 05, EGHF.

After a few wrong turns on the roads we parked at the tower only to be told we were supposed to be on a coach that was taking everyone from car park to runway. This was fortuitous as it allowed a few quick photos to be taken from the best vantage point for 05 and its approach.

A friendly airport employee ran us over to the runway just in time for the ribbon-cutting ceremony at around midday. At this point I spotted former Royal Aeronautical Society CEO Keith Mans, who in previous lives had been a Vulcan pilot and MP. Keith had been helping as Deputy Leader of Hampshire County Council to support the Enterprise Zone development.

He was able to explain the kind of opposition that had been faced over the years and pointed me in the direction of Councillor Seán Woodward, Leader of Fareham Borough Council, who had been “instrumental” in recent developments.

Seán proved somewhat elusive as he was in demand, and was climbing into a Cirrus to pilot the first official flight from the new tarmac. Our photographer Mark was busy negotiating a seat in the other aircraft that was heading out to christen the runway, an Eagle European Cessna 421 Golden Eagle light twin. It worked, he had the last seat and once the crowd had been cleared away to the Lee Flying Association’s hangar, the two aircraft were ready to go on 05 and joined by a Spitfire Mk26 reflecting some of Daedalus’ contributions in WW2.

Over at the LFA hangar the runway was hard to see but once the aircraft that had been taking aerial shots of the opening had landed, the TB10 from Redhill was cleared to and on runway 05. Soon after that the Cirrus and Golden Eagle came back and taxied over to LFA for a photo shoot and refreshments. Airfield manager Andy Walters explained the recent history whereby Fareham Borough Council had taken over ownership and Regional & City Airports had been running it from 1 April 2014.

Since then, he said, a Fareham Borough Council investment of approximately £1.5 million has been made to improve the aerodrome. This follows on from extensive good work already done before the change of ownership, for which Seán Woodward was awarded a ‘Friend of AOPA Award’ and LFA awarded the “Flyer Contribution to the

GA Community Award” both presented by AOPA chairman George Done.

Walters provided us with a useful Factsheet which gave all the pertinent information relating to the airfield and runway as it now stands:

Enterprise Zone

The airfield at Daedalus lies at the centre of a major development site. The original RN Station Daedalus had a large land holding of over 750 acres and acquired Enterprise Zone status in 2011. The whole site has been administered by the Homes and Communities Agency and has been divided into a number of development zones. At the centre is the airfield and the Development strategy was to retain the airfield and promote aviation and aviation related activity that could benefit from and use the runway.

The airfield itself had been little changed since the Royal Navy and MoD vacated the site in the 1990s and it was essential that work was carried out to the airfield pavements to protect and extend the life of the existing assets and to create a high quality airfield that would attract and support new businesses and operators.

During 2012 a detailed options analysis was completed for the airfield. This considered the condition of the airfield facilities, predominately the airfield pavements, potential improvement and capital investment works and developed a detailed business plan to determine the growth that would be required to make the airfield self funding. To attract new business to improve revenues, and to attract new revenues it was imperative to provide high quality facilities.



Staggerwing over the runway opening ceremony. Visiting Daedalus is straightforward and local landmarks the Spink Tower in Portsmouth (13nm east) and the Isle of Wight to the south aid VFR navigation. There is no ILS or runway lights yet, though the airfield plans GPS approaches.

Below left: Golden Eagle captain with LFA's John Butts, Cllr. Seán Woodward, the Mayor and Mayoress of Fareham and the aircraft's copilot.

It was concluded that the investment in the airfield would be carried out in a number of phases with the initial phase designed to improve the condition of the airfield pavements. Subsequent phases would be carried out as and when traffic volumes and revenues increase and additional investment in aircraft ground lighting and navigation aids could be justified.

The phase 1 works that were completed in December 2014: Resurfacing of main runway 05/23; Creation of a starter strip to Runway end 05; Remedial works to secondary runway 17/35; Widening of taxiway from SW runway end to western apron; surface reconditioning with slurry seal to ends of 05 and 23 and taxiways to western apron; and installation of ductwork for future provision of AGL.

Runway 05/23

After the Daedalus base was decommissioned by the Royal Navy, a new building – Ross House – was built at the SW end of the site. The location and height of this building

has restricted the capability of the runway. Runways are required to be safeguarded, that is to say flight surfaces to and from runways are to be clear of obstructions and structures that might penetrate into the flight surface. The location of Ross House meant that the 05 threshold had to be moved to the north east thereby shortening the runway.

Whilst the original runway was 45m in width, the resurfacing has been carried out over a 30m width. This is because the maximum sized aircraft that can operate from the runway with the reduced length is a Code 2C aircraft and this requires a runway width of 30m.

The runway dimensions are 1,178 x 30m. A 130m starter strip has been provided at the 05 end such that aircraft taking off in a NE direction can have a longer take off run.

The runway will be declared with a Pavement Classification Index of 11. The design aircraft for both the 05/23 runway length and PCN was an ATR42. Therefore the runway length and PCN are sufficient for

the foreseeable future aircraft that will use the airfield including GA, light business jets, air taxis and small commuter aircraft.

In addition a number of smaller passenger aircraft types could use the airfield (e.g. the Twin Otter, Islander, LET 410, ATR 42, Jetstream 31/32 and Dornier 328).

It is likely in the near future that these would be restricted to sub 19 seat aircraft although the airfield does have the capability to accept certain aircraft up to 42 seats.

Aerodrome to be Licenced

Parallel to the infrastructure improvement works has been the process for achieving an aerodrome licence. Daedalus has operated for many years as an unlicensed aerodrome. However, in order to attract new businesses, air taxi and charter work and for training on larger aircraft it was essential that an aerodrome licence be obtained. The process of application and proving systems, processes and management has been underway since mid 2014 and it is anticipated that Daedalus will become a licenced aerodrome during March 2015.

Runway 17/35

This runway was brought back into service in 2014 to enable the main runway to be closed for the resurfacing works. The runway will remain as an unlicensed strip for use in certain wind conditions.

Lighting and Navigation Aids

Daedalus runway lighting was condemned and removed in 2013 and currently operates under visual flying rules. However the first phase of the infrastructure works has included ductwork from the edge of the runway to the position that lights would be installed. This was to avoid the future disruption of having to install ductwork if a decision is taken to install AGL in the future. The position of the ducts will allow the runway to have a fully compliant AGL system – Approach Non precision Instrument Runway – consisting of edge lights and a “simple” approach bar and array.



aviation-images.com

Hangars Available

Jon Butts, chairman of the LFA, said that development work would continue. A hard taxiway is planned where the grass taxiway runs at present to the north-west of the new runway, making room for more hangars where the existing taxiway lies. In the near term on the eastern side some 1943 hangars have been demolished making way for new serviced plots which are being created. Fareham Borough Council is looking for companies to come and establish aviation operations there, and construct new buildings. This may be for aircraft maintenance, for example, but Butts said they would be aviation businesses, to maintain the aviation use of the land where there is airside access. Non-aviation but related and engineering businesses at the perimeter of the airfield. One such development is the advanced engineering £12m engineering College – CEMAST – recently opened with 900+ engineering students. A £5.5m Innovation Centre has just been completed by Fareham Borough Council and is offering flexible space and terms to businesses in the target sectors of aviation, aerospace, marine and advanced engineering. Financially, establishing a hub for industry at Daedalus was essential, he added, because it could not survive on landing fees alone.

Captain Matthew Scott, managing director of Eagle Aviation, who later took dignitaries and media for trips around the Isle of Wight and Portsmouth's iconic Spinnaker Tower in the Golden Eagle, said that his company were keen to operate from the airfield as well as its current base at Bournemouth.

Historic Area

So Lee-on-Solent has entered a new chapter in its interesting and varied history. To the south is the waters edge, and in between this and the tower are large, poorly maintained wartime hangars and the Hovercraft Museum, where there are the huge old car-carrying Hovercrafts that used to ply the English Channel. These days there is only such a service from Portsmouth to the Isle of Wight, with a smaller craft, but anyone wanting to fly in and have a look will be hugely impressed by the various shapes and sizes on display.

The overall impression of the area was one of space on the airfield site and future potential for revitalising or replacing old buildings for new businesses. It looks as if aviation will now continue to thrive and prosper at Daedalus, thanks to strong local support for General Aviation which is rarely seen in the UK. So many airfields are under threat, Lee-on-Solent is like a breath of fresh air.

Councillor Seán Woodward has supported the retention of aviation at Daedalus through his various roles. Previously as a member of Hampshire Police Authority (who based their spotter plane at the airfield for many years and needed to be persuaded not to shut the site to general aviation), Hampshire County



The view from the control tower ("Lee Radio") is excellent especially with it being adjacent to the runway 05 approach. Aircraft departing and arriving at the airfield need to be aware of the Local Airspace Agreement that Lee-on-Solent Airfield has with Fleetlands Heliport, only 1.5nm to the north-west.

Councillor and Leader of Fareham Borough Council. He told us "I am delighted that we have been able to bring huge investment to bear from the public and private sectors to the Enterprise Zone. It is critical that the unique offer of a licensed runway is retained at Daedalus to both attract and retain aviation businesses. It is also important for us to attract aerospace and marine advanced engineering to the site to benefit from the Enterprise Zone status which means there are no business rates to pay. Fareham Borough Council will be investing around £50m into the site over the life of the Enterprise Zone and is delighted to be able to be a real enabling council." pavements. Subsequent phases would be carried out as and when traffic volumes and revenues increase and additional investment in aircraft ground lighting and navigation aids could be justified.



Above: Eagle Aviation Cessna 421 Golden Eagle prepares to follow the scale Spitfire and Cirrus as the first aircraft to depart from the now formally opened runway.

Below: Aerial shot of the ribbon cutting: John Davies flew Hampshire Aeroplane Club's Cessna 172 G-OVFR as the air-to-ground camera-ship, with LFA photographer Rich Davies. On the runway posing for the cameras were Britten-Norman's BN-2 Islander G-JSAT; Eagle European's Cessna 421; Flat Six Aviation's Cirrus G-JOID; Dave Bishop's Spitfire Mk26 G-CEFC; Peter Bentley's Luscombe G-AKUJ and Malcolm Paul's T-6 Harvard G-RAIX.



Be Aware:

Accident statistics show that pilots making wrong decisions during a flight is a major factor. *Being unaware of controlled airspace is one example of a poor decision which could have dangerous (fatal) consequences.

A polite notice to all pilots...



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Airfield Profile



Leicester Airport

To launch our new series on GA airfields, former MP and keen pilot Lembit Öpik returns to Leicester Airport (where he gained his PPL).

I first flew in a powered light aircraft from Leicester Airport (EGBG). It was July 1988, and as the Cessna 150 soared into the air, I was instantly sold on flying. In the following month, I completed my PPL in what I now realise was a rather sprightly 21 days. Even now, each time I'm on final approach to Runway 10, I think of my first solo, landing East into a gentle, continental summer breeze a quarter of a century ago.

Since those early hours in my log book, Leicester has for me been a regular – and favourite – destination.

During my time in a Mooney syndicate in Welshpool, my flying buddy Dave 'Speedy' Tinsley and I frequently traversed the 77 nautical miles across the Great Shropshire Plain, entering Birmingham airspace for a proportion of the route. We'd arrive in time for lunch or a picnic with my mum, who lives near the airfield. She developed the disconcerting habit of asking me 'did YOU

do the landing?' - in rather the same way one might point at car with one wheel on the pavement and ask 'did YOU do the parking?'

So, what's it like to arrive at Leicester by air? On approach, it's important to be aware of East Midlands airspace to the north, and Birmingham to the West. Both are generous towards general aviation, as long your radio calls sound like you know what you're doing. Usually, barring someone else's mayday or massive commercial workload, you'll get the approvals you need to come the shortest way instead of having to go round. Visitors from the South and East have some air/ground airfields to deal with, but not major control zones nearby.

Having arrived within radio range of Leicester, the ADF helps you easily locate the airfield below, which has the added advantage of reducing reliance on GPS alone. On your first R/T call, you'll also get all the info you need without having to ask for it. Obviously,

in an air/ground environment, it's all advisory, but only a fool would ignore advice at a busy airport such as this.

Leicester is keen on overhead joins, for the simple reason that the circuit gets lively on good flying days. So, expect to be guided towards a 2,000 foot AGL join with a dead side let down. This is no burden, as the airfield's distinctive triangle of runways will keep you correctly orientated in VFR conditions, and there aren't any tricky hills or masts in the circuit. Dropping down to circuit height (1,000 feet), you'll also catch your first good glimpses of the extensive buildings at the heart of the aerodrome.

With a westerly wind, your final approach is likely going to be towards Runway 28, land on the numbers if you want to; and certainly don't take any chances. However, the slight uphill incline on 28 and its sheer size – at 810 metres long and a full 30 metres wide – has more in common with the proportions of an



Lembit Öpik

international airport than a GA aerodrome. This is why few frequent flyers to Leicester land on the threshold unless they're flying something huge, fast and heavy. A perfect spot landing means taxiing a great distance to vacate left, or backtracking to trundle the other way round. Regular visitors tend to land a couple of hundred metres further along, to avoid a grand taxi. Once you're clear of the 'active,' Leicester normally invites you to park on the apron behind the tower. There's always space, but you'll also probably have to shut down and roll your aircraft back onto hard slabs to keep things tidy and unobstructed for everyone.

Upon entering the clubhouse, you'll become aware of a sense of heritage. The Club's roots go back to its formation in 1909, though flying first came to Leicester even earlier: in 1895 a passenger balloon is reputed to have operated from Abbey Park in the heart of the city.

The current airport's own history includes a noble role in World War II, when it served as home to mighty Short Stirling bombers, the now disused expanse of runway a silent witness to those days of thundering piston engines. Today, the paintings pay tribute to the past, and there is a hint of nostalgia in the bricks – in the same way one gets a similar feeling in places like Duxford and Biggin Hill.

Paying the fees on the ground floor is quick and straightforward. The staff are efficient in a way that adds to the impression you're not so much in a flying club, as in a flying business which depends upon its professionalism to generate revenue. One feels one's landed in a commercial airport, but without the commercial fees.



Richard III Flights

Perhaps Leicester Airport's character is best summarised by a beautifully innovative aviation tour which they offer. Fully aware of the tourist potential arising from the discovery of Richard III's bones under a Leicester supermarket car park, here's what they came up with: 'After a full pre-flight brief and video you will fly King Richard's final battle route from The Blue Boar Inn in Leicester via Bow Bridge and out to Bosworth along the Old Roman Road to meet Henry's Army. Once at the Bosworth Heritage Centre your Instructor will orbit the area of the entire battlefield so you will be able to take videos or photos. There will be an audio commentary at selected sites on the route to help you imagine what the battle would have been like.

On the return leg you will fly back towards Bow Bridge and Richard's final resting place in Leicester Cathedral. After landing back at Leicester Airport you will be given a souvenir package of the flight including photographs, a certificate which counts towards a pilot's licence and a souvenir booklet from the Heritage Centre.' To the long gone King's direct descendants this may seem like financial opportunism. To every father in Leicestershire, this is a golden excuse for a flight of fancy disguised as a lesson in royal history.

After the admin, it's time to go upstairs, where the catering is situated. The food is, quite simply, outstanding. This is more than a cafeteria, if not quite a restaurant. It's worth flying there just for their fayre. The bar is also licenced to oblige for the large number of visitors who aren't flying or driving. They even

“Leicester is a ‘Big Personality’ airport with a small-fees outlook, making it particularly attractive to those who like a combination of comprehensive flying activities, family-friendly facilities and a welcoming atmosphere.”

have a curry night every Thursday evening, with a licenced bar till 20.00. Back in the day, I had many a pleasant evening shooting the breeze with pilots in the comfortable ambiance of the clubhouse, as the sun set beyond the 10 threshold. This airport stays awake after the aircraft have been put to bed.

Turning to the aircraft themselves, this is a meeting point for a vast array of flying machines. There's a fair bit of rotary activity, and, if you're patient, the odds are that one of Britain's increasingly rare light twins could call through. The volume of activity is impressive too. On a summer's weekend, Leicester is essentially like a general aviation

hub. Afternoon movements become intense, with take-offs and landing in quick succession – like a small scale version of Heathrow, but without the wake turbulence.

One reason I myself choose to learn in Leicester was for its outstanding mix of basic training and exposure to more complicated airspace only 10 minutes' flight from base. My primary instructor back in 1988, Gort Measey, made a point of ensuring I got used to entering controlled airspace, on the basis that avoiding the apparently 'scary bits' on an aviation map amounts to conjuring up demons where there aren't any. Furthermore, while landing fees at international airports have skyrocketed for light aircraft, 'just passing through' is, for now at least, still gratis.

I've no doubt the familiarisation I received back then is responsible for my positive liking of controlled airspace. I've even been a willing light aviation volunteer for training exercises involving Air Traffic Control, particularly in the Birmingham area.

While the grass strip is the shortest on the field, the most diminutive hard runway, number 04/22 at 428 metres, can cause those piloting heavily loaded or lightly powered aircraft some concern. However, a competent short field procedure will lead to a safe departure – and what's the point of all that training if you can never use it? All the same, thanks to the ample width and length of 10/28, those who prefer a side wind to a short field take off will always be given that option – though it's worth noting that if the headwind is strong, that effectively 'lengthens' the shortest runway anyway.

Family Flying

Leicester Airport is a popular destination for families, thanks in part to the outstanding views from the large conservatory overlooking the whole airfield. It combines a family-friendly atmosphere with a 'big feel' set of facilities for pilots, so it's a good day out for aviators, friends and kids. They've even got a picnic area where you can see all take-offs and landings on all the runways. Regular weekend visitors will often observe a manic



Mac Clarke is airport manager, the Leicestershire Aero Club Ltd, and is usually the first person a visiting pilot meets.



Pitts aerobatic aircraft go through its paces, overhead and for free. 'It's just how we do things here,' remarked one Piper pilot to an enthralled and gawping family. 'Physics with wings.'

Some years ago this airport was threatened with closure, to make room for a new 'eco-friendly' property development. This was doubly ironic since Leicester City Council itself paid for the resurfacing of the main runway back in 1958, on the occasion of a visit by the Queen and Prince Phillip. Thankfully, allies of the aerodrome – including me as it happens, and energetic local MP Edward Garnier – successfully repelled this most recent threat to the airfield's future. Yet it's salutary warning: however excellent an airport, without vigilance by the general aviation community, such national treasures can be bulldozed out of existence by unappreciative local politicians and those seeking juicy development sites.

Leicester Airport combines elements of World War II history, innovative promotion of General Aviation, and the kind of active engagement which causes kids to leave their X-Boxes on the table in favour of the alluring and magical attraction of watching heavier-than-air machines take to the skies. This is a 'can-do' airport which has made itself a true ambassador for general aviation. Others perform the same role, but few do it better than Leicester.

Airfield Information for EGBG

EGBG Airport Runways

Runway 04/22
1403 ft x 59 ft (428 m x 18 m)
Surface: Asphalt

Runway 05/23
1005 ft x 125 ft (306 m x 38 m)
Surface: Turf/Grass

Runway 10/28
2657 ft x 98 ft (810 m x 30 m)
Surface: Asphalt

Runway 15/33
1423 ft x 59 ft (434 m x 18 m)
Surface: Asphalt

Runway 15L/33R
1207 ft x 98 ft (368 m x 30 m)
Surface: Turf/Grass

Location/Navigation
N5236.25 W00101.83
4nm ESE Leicester
Elevation 469ft AMSL
HON VOR (113.65) 062° 27.6 DME
DTY VOR (116.40) 010° 25.8 DME
'LE' NDB 383.50 on A/D range 10nm

Leicester Radio (Air/Ground): 122.125

Avgas Price (March 2015):
Members, £1.95 per litre
Visitors £2.05 per litre

Landing fees

Single Engine Aeroplane (2-4 seat) – £12.00
Single Engine Aeroplane (5-6 seats) – £18.00
Single Engine Aeroplane (6+ seats) – £25.00
Twin Piston Engine Aeroplane – £35.00
Twin Piston Engine Aeroplane (6+ seats) – £45.00
Single Turbine Aeroplane (4 seats) – £15.00
Single Turbine Engine (5-6 seats) – £25.00
Single Turbine Engine (6+ seats) – £50.00
Twin Turbine Engine (4 seats) – £30.00
Twin Turbine Engine (5-6 seats) – £40.00
Twin Turbine Engine (6+ seats) – £60.00

Operational Hours (UTC)

Winter: 0900 – 1700 and by arrangement
Summer: 0800 – 1600 and by arrangement
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Mike Dempsey (camera/gimbal operator) and Brian Tutty (pilot) show the basic set-up for flying drones commercially.



Drones for Hire! ...but are you legal?

Ian Sheppard spoke to iSkyUAV about what it took to obtain licences to fly small drones for commercial gain.

Drones have become big business in recent years in direct competition to full-sized helicopters. Martin Benetar of Charter-A Limited (an aviation charter company) saw a business opportunity but didn't have to look far for a business partner. Brian Tutty, hangar manager at Hangar 9, Redhill Aerodrome, was just down the flight line and had extensive experience in UAVs (the big ones!)

Martin formed iSkyUAV as a commercial venture but the first step, apart from buying equipment, was to gain pilot licences as part of wider approval for commercial use.

The whole process took 9 months from filling in a Form 10 with the BNUC to gaining pilot's licences for two pilots (Brian Tutty and Steve Humell) to fly drones of up to 20kg commercially anywhere in Europe.

The course is run by EuroUSC on behalf of the CAA. It starts with a two-day theory

course, 'Visual Line of Sight Operations', followed by a theory test which was carried out at Heathrow Airport. The theory consists of a wide range of topics including air law, human factors, meteorology, map reading and navigation and an introduction to the whole process that leads to licence issue, which includes compiling a detailed operations manual. iSkyUAV's Operations Manual is 67 pages and took a couple of revisions before the CAA approved it.



Left: For flying the smaller drones, the pilot controls the camera as well, with the second person acting as observer. In all cases (large or small drone flying) the two members are required to operate the craft.

Right: The F550 is better suited, as a sub-7kg drone, to urban environments, with 4K video transmission. The white aerial on top is the GPS antenna, and the one on the bottom is for video transmission to the portable ground station. So the pilot can see live video as he flies.

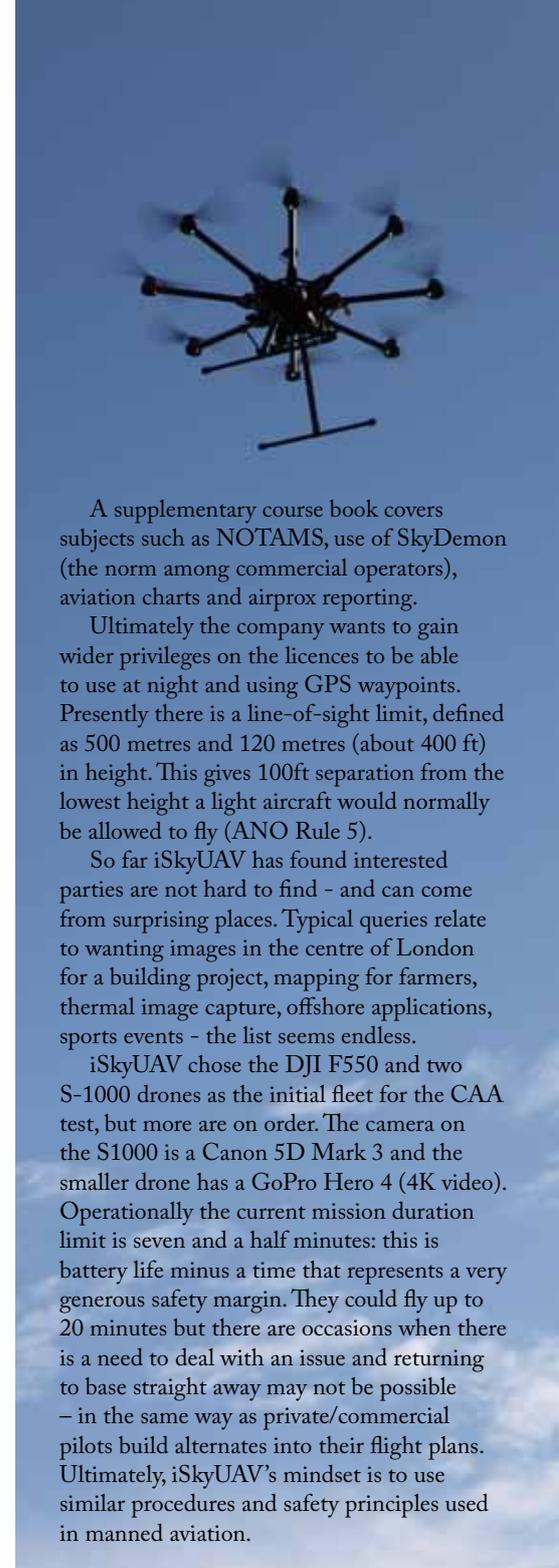




A DJI S1000 fully kitted out costs around £8,000. These larger drones are flown by the pilot with one controller and a separate video control unit for the cameraman/look-out.

iSkyUAV
Aerial Imaging Services
www.iskyuav.com

Limitation	
Limitation DJI F550	“Aircraft Name” (Huey) Blue.
Operational Ceiling	5000ft Above Mean Sea Level (AMSL)
Operational Endurance	12 Minutes 5000mAh
Maximum Permissible Airspeed	25 Knots Airspeed
Maximum Outside Air Temperature	40°C
Minimum Outside Air Temperature	-5°C
Maximum Permissible Wind Speed	20Kts @ 0ft Above Ground Level (AGL)
Maximum Permissible Wind Gusts	5Kts @ 0ft Above Ground Level (AGL)
Broadcast Frequency Signal Strength	5.8Ghz @ 25mw
Aircraft Balance Limitations	10mm ‘fore or aft’ of balance point
Limitation DJI S1000	“Aircraft Name” (Dewey) Orange.
Operational Ceiling	5000ft Above Mean Sea Level (AMSL)
Operational Endurance	18 Minutes @ 20800mAh
Maximum Permissible Airspeed	30 Knots Airspeed
Maximum Outside Air Temperature	40°C
Minimum Outside Air Temperature	-5 °C
Maximum Permissible Wind Speed	20Kts @ 0ft Above Ground Level (AGL)
Maximum Permissible Wind Gusts	5Kts @ 0ft Above Ground Level (AGL)
Broadcast Frequency Signal Strength	2.4GHz @ 25mW
Aircraft Balance Limitations	10mm ‘fore or aft’ of balance point
Limitation DJI S1000	“Aircraft Name” (Dewey) Green.
Operational Ceiling	5000ft Above Mean Sea Level (AMSL)
Operational Endurance	18 Minutes @ 20800mAh
Maximum Permissible Airspeed	30 Knots Airspeed
Maximum Outside Air Temperature	40°C
Minimum Outside Air Temperature	-5°C
Maximum Permissible Wind Speed	20Kts @ 0ft Above Ground Level (AGL)
Maximum Permissible Wind Gusts	5Kts @ 0ft Above Ground Level (AGL)
Broadcast Frequency Signal Strength	2.4GHz @ 25mW
Aircraft Balance Limitations	10mm ‘fore or aft’ of balance point



A supplementary course book covers subjects such as NOTAMS, use of SkyDemon (the norm among commercial operators), aviation charts and airprox reporting.

Ultimately the company wants to gain wider privileges on the licences to be able to use at night and using GPS waypoints. Presently there is a line-of-sight limit, defined as 500 metres and 120 metres (about 400 ft) in height. This gives 100ft separation from the lowest height a light aircraft would normally be allowed to fly (ANO Rule 5).

So far iSkyUAV has found interested parties are not hard to find - and can come from surprising places. Typical queries relate to wanting images in the centre of London for a building project, mapping for farmers, thermal image capture, offshore applications, sports events - the list seems endless.

iSkyUAV chose the DJI F550 and two S-1000 drones as the initial fleet for the CAA test, but more are on order. The camera on the S1000 is a Canon 5D Mark 3 and the smaller drone has a GoPro Hero 4 (4K video). Operationally the current mission duration limit is seven and a half minutes: this is battery life minus a time that represents a very generous safety margin. They could fly up to 20 minutes but there are occasions when there is a need to deal with an issue and returning to base straight away may not be possible - in the same way as private/commercial pilots build alternates into their flight plans. Ultimately, iSkyUAV’s mindset is to use similar procedures and safety principles used in manned aviation.



The Law...

Getting a British National UAV Certificate for small UAVs (BNUC-s) is a complex process but, without it, it is illegal to fly drones commercially. A small UAV is defined as sub-20kg and there is a 7kg limit in urban environments (termed 'congested areas').

The primary UK legislation is the Civil Aviation Act 1949 (2006) with CAP 393 and CAP 722 as the main secondary legislation.

As far as the Air Navigation Order (UK ANO) is concerned the commercial use of Small Unmanned Aircraft (commonly referred to as 'drones') is incorporated into the ANO as Sections 166 and 167:

The Small Print!

Article 166: A person shall not cause or permit any article or animal (whether or not attached to a parachute) to be dropped from a small aircraft so as to endanger persons or property. The person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made. The person in charge of a small unmanned aircraft must maintain direct, unaided visual contact with the aircraft sufficient to monitor its flight path in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions. The person in charge of a small unmanned aircraft which has a mass of more than 7 kg excluding its fuel but including any articles installed in or attached to the aircraft at the commencement of its flight, must not fly such an aircraft: a) in Class A, C, D or E airspace unless the permission of the appropriate air traffic control unit has been obtained; b) within an aerodrome traffic zone during the notified hours of watch of the air traffic unit (if any) at that aerodrome unless the permission of any such air traffic control unit has been obtained; or c) at a height of more than 400 feet above the surface unless it is flying in airspace described in sub-paragraph (a) or (b) above and in accordance with the requirements for that airspace. The person in charge of a small unmanned aircraft must not fly such an aircraft for the purposes of aerial work except in accordance with a permission granted by the CAA.

Article 167: The person in charge of a small unmanned surveillance aircraft must not fly the aircraft in any of the circumstances described in paragraph (2) except in accordance with a permission issued by the CAA. The circumstances referred to in paragraph (1) are: a) over or within 150 metres of any congested area; b) over or within 150 metres of an organised open-air assembly of more than 1,000 persons; c) within 50 metres of any vessel, vehicle or structure which is not under the control of the person in charge of the aircraft; or d) subject to paragraphs (3) and (4), within 50 metres of any person. Subject to paragraph (4), during take-off or landing, a small unmanned surveillance aircraft must not be flown within 30 metres of any person. Paragraphs (2)(d) and (3) do not apply to the person in charge of the small unmanned surveillance aircraft or a person under the control of the person in charge of the aircraft. In this article 'a small unmanned surveillance aircraft' means a small unmanned aircraft which is equipped to undertake any form of surveillance or data acquisition.

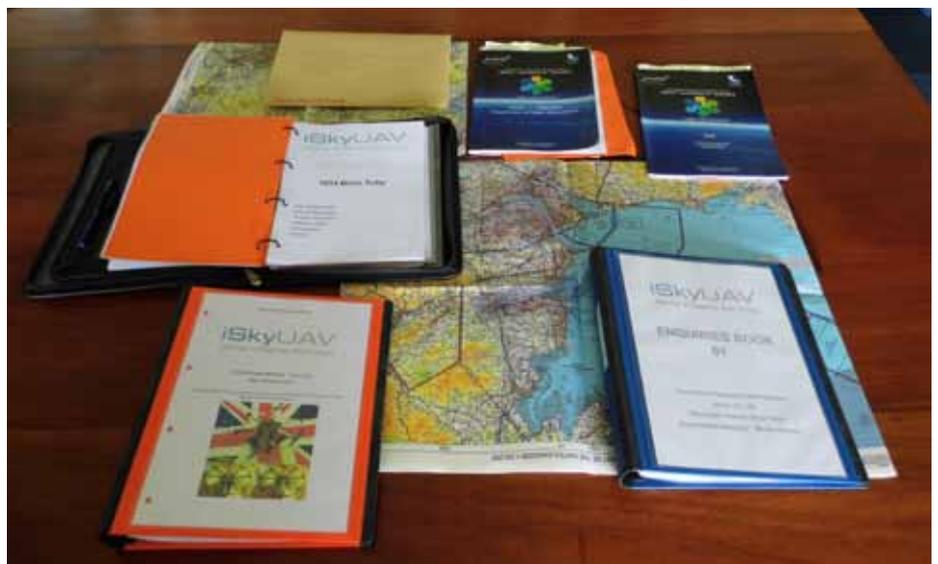


The current iSkyUAV fleet consists of Huey (F550), plus the larger Louie and Dewey (pictured) S1000 models. The company also has specialist drones and has the engineering skills to tailor drones for particular missions.

Reference	Full Title	Issue Number & Date of Issue
CAP 382	Mandatory Occurrence Reporting Scheme	Ninth Edition – 18 th March 2011
CAP 393	Air Navigation: <i>The Order and Regulations</i>	Fourth edition 10 January 2015 Update 23 June 2014
CAP 403	Flying Displays and Special Events	Twelfth edition including amendment 2012/01, 29 June 2012
CAP 722	Unmanned Aircraft System Operations - <i>Guidance</i>	Fifth Edition – 10 August 2012
Civil Aviation Authority	INFORMATION NOTICE Number: IN-2014/081	Issued: 25 April 2014
DJI S1000	Spreading Wings S1000 User Manual V1.08	V1.08 2014.4.21
DJI F550	Flamewheel 550 User Manual	V1.9 2013.03.13 Revision
A2 Flight Control	A2 flight Control System User Manual V 1.14	February 11th 2014 Revision For Firmware V2.1 Assistant Software V1.2 and DJI Assistant App V1.1.14
Naza-M (V2)	Quick Start Guide V 1.24	Firmware V4.02 or above and Assistant Software V2.20 or above
JR DSX11	JR DSX11 Transmitter 2.4Ghz	NEM- B32A September 2010
JR XG11MV	JR XG11MV Transmitter 2.4Ghz	NEM-B75A 2014

Above: A list of the main reference documents, extracted from iSkyUAV Operations Manual.

Below: When the paperwork equals the weight of the drone (11kg)...you can go! But in all seriousness there is a great deal of paperwork to be done to get your licence and CAA Permission for Aerial Work. At the time of writing iSkyUAV's pilots had passed the test (14th March at the CAA drone test range in Gloucestershire) and was waiting for the BNUC-s pilot licences and aerial work permission sheet (cost £400). The team will also have to maintain battery logbooks and pilot hours logbooks, both legal requirements. These are reviewed once a year along with a revalidation flight test. Initial application is £750 per person and the same for the test, so it's not cheap.



FLY A SPITFIRE!



The Heritage Hangar at Biggin Hill is offering flights in its two-seat Spitfire after it received CAA approval to charge for sorties.

The Heritage Hangar at London Biggin Hill Airport has become a key centre for the restoration of Supermarine Spitfires. It also offers flights now having received CAA approval for the two-seat Mk IX aircraft) at the beginning of 2015. Costing £2,750 for half an hour chocks-to-chocks (20 mins airborne at minimum guaranteed) it isn't cheap, but that has not stopped bookings coming in fast.

So how did it come about? *Aircraft Owner & Pilot* visited Biggin Hill to speak with Heritage Hangar founder Peter Monk. He said that during a 20-year career as an airline pilot ("starting with flying newspapers out of Southend at night, and ending up with Ryanair at Gatwick"), he had started to collect Spitfire parts. "I purchased my first Spitfire project in 1996 – having first flown a Spitfire in 1994, belonging to the Royal Netherlands Air Force" (ferrying it to UK airshows).

"After I started another project, a Mk I, I realised there was a need for a Spitfire maintenance and restoration hangar at Biggin Hill. So we started four years ago, in 2011."

He said that it has "two functions," first for maintenance and restoration, and also as a "museum/attraction." The Spitfire Company Biggin Hill Ltd. covers the former role, being

the sole tenant of the Heritage Hangar.

"I had collected a number of other projects over the years," said Monk. "So far we have completed a Mk 1, a Mk XVI and a Mk IX and another, a Mk V, is almost ready to fly." All together the company has seven Spitfires (all ex RAF aircraft restored from originals) and a Hawker Hurricane, which was parked outside (while his pristine '68 Lotus Cortina was in the very well organised hangar along with a Harvard and a Piper Cub).

So the scene is set for the two-seater's first season. It joins the other Spitfires, with the Mk IX "Spirit of Kent" (pictured above and right), being the first that the team used for airshows and other events around the UK. Monk said that the two-seater has an interesting history. Built as a single-seater in 1944 it saw combat "and had a dogfight with an Me109 and shot it down in Operation Market Garden (17-25 September '44).

After the war Vickers Armstrong took the aircraft back and converted it into a two-seater for the Irish Air Corps. "So it's very original and has never been rebuilt," said Monk. "Now the CAA has taken a view on the operation of two-seat Spits for the purpose of experience flights - so we're now an operator of a two-seat Spitfire."



The Heritage Hangar is a fascinating place to visit, and those paying to visit make it viable to acquire and display more memorabilia.

While the two-seater is relatively new, overall bookings for 2015 are looking strong. "We have a number of airshows and flights in the two-seat Spit booked already," said Monk.

He says he has "enough spare parts to keep building aircraft for years and years" and admits to being "surprised" at the success and high interest in Spitfires. But he intends to take a cautious approach to business, in case the market bursts (a Spitfire can reach up to £3 million at present). There are up to 50 Spitfires in the world that are airworthy. "It is the worldwide icon," said Monk. "There isn't another aircraft like it."

The Kent Spitfire

Spitfire TA805, a Mk IX, (pictured left) was rolled out of the Castle Bromwich factory in the autumn of 1944. On 24th June 1945 it joined No.183 Squadron based at Chilbolton and in August it was transferred to No. 234 Squadron at Bentwaters.

On 15th September 1945, TA805 took part in the mass fly-past over London commemorating the Battle of Britain and it was subsequently placed in storage until being sold to the South African Air Force. In April 1949 the aircraft sailed to South Africa and served with the SAAF until the mid 1950s when it was sold for scrap.

In 1989 the remains were returned to the UK and stored before being moved to Airframe Assemblies at Sandown on the Isle of Wight in 1992. Four years later, in 1996, work was started on a restoration to flying condition. By 2003, the fuselage and wings were ready for the move to the ARCO hangar at Duxford for engine fitting and final assembly. On 5th December 2005, 10 years after the restoration began, TA805 finally took to the air at Duxford on its first flight.

Soon afterwards TA805 was flown to Biggin Hill. It was decided to name the aircraft 'Spirit of Kent' in memory of No.131 (County of Kent) Fighter Squadron which was a squadron of Spitfires purchased with donations sent in by the people of Kent. Kent was the first county in Great Britain to raise money for an entire squadron. In recognition of this, the Air Ministry allowed the name of a Kent town or city to be emblazoned on the fuselage of each aircraft, just below the cockpit together with the 'prancing horse' symbol of Kent. The Commanding Officer's aircraft carried the marking "Spirit of Kent".

This Mk1a Spitfire was built in Castle Bromwich. In December 1940 during training Howard Squire of 54 Squadron, RAF Catterick, collided with the Spitfire of Alan Deere, a Battle of Britain legend from New Zealand, over North Yorkshire. Deere was giving Squire a lesson in how to keep close to an enemy aircraft when Squire got too close and hit Deere's tail with his propeller at 12,000ft, causing them both to ditch, unhurt. Sgt Squire visited the restored aircraft when he was 89. It had been discovered in 1976 in a river (the RAF salvage team had dumped it there after salvaging spares). Peter Monk and his team led the restoration with the first flight taking place on 9th March 2012, flown by Paul Bonhomme. It is now in 1940, 54 Sqn markings and remains at the Heritage Hangar although it has American owners.

Also in the hangar was another single-seat Mk IX that is used for airshows. RW382 was built in 1945. Used as a static Spitfire for the filming of 'Battle of Britain' in 1967/68), the aircraft later became a gate guardian at RAF Uxbridge (1973 to 1988). Collected by Historic Flying of Cambridge, it was restored in California but crashed during an airshow appearance. In 2005 it was returned to the UK and was restored at Biggin Hill Heritage Hangar before eventually flying again on 18 September 2013.



To ride in this Spitfire visit www.flyaspitfire.co.uk or call 01959 576 767

The Duchess of Iceland



Martin Cundey and Richard Berliand flew Martin's Beech Duchess from Redhill to Iceland for the journey of a lifetime.

In October 2013 I was invited on the first stage of a BN2 ferry flight from Cumbernauld to Cape Cod, alighting at Iceland whilst my friend continued his journey. The experience made a big impact and I resolved that one day I would return. So, last year I discussed the idea with my hangar companion and Cirrus SR22 owner Richard Berliand, and we both agreed that it would make an ideal break and a real flying challenge.

Between us we could only manage a few days and, as I was already booked to leave for Oshkosh the following week, we arranged to leave Redhill on Tuesday 22nd July, returning the following Saturday. We planned our first stop at Wick. The ever-efficient and friendly Andrew Bruce at Far North Aviation promised us bed and breakfast with no difficulty over out-of-hours operations.

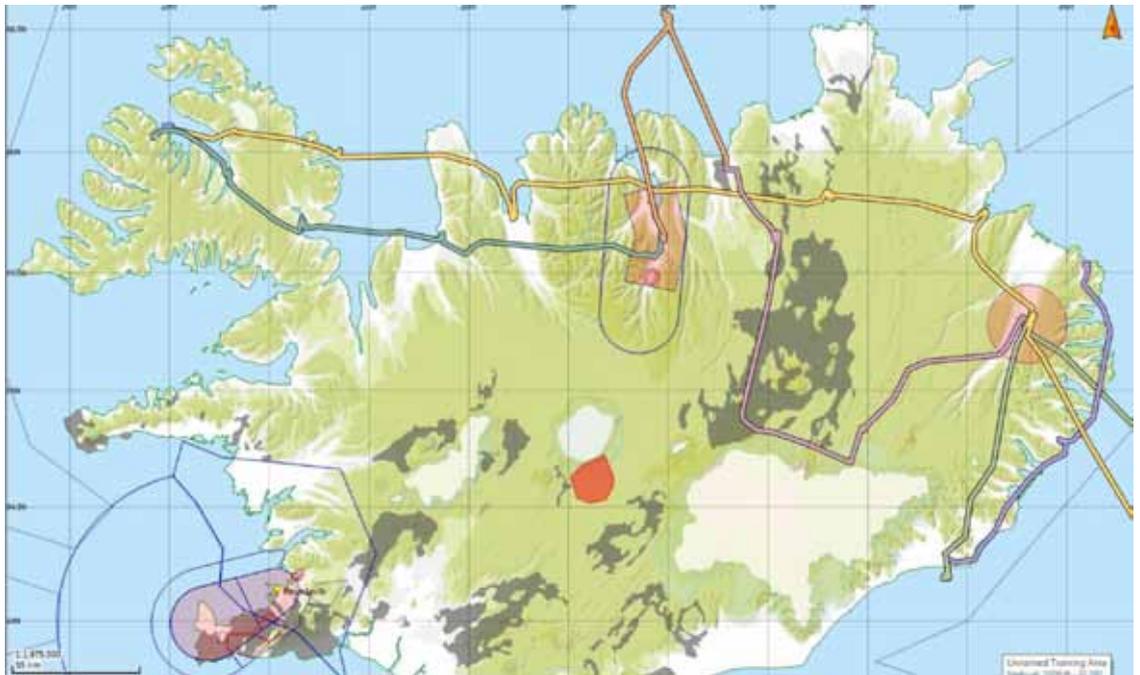
What he could not negotiate was the

Scottish haar, which clung stubbornly to the north east coastline. A call to Inverness revealed that they were open but were expecting the weather to deteriorate shortly. With possibilities limited, calls were made to the west coast which was CAVOK and the best option was H24 Prestwick, where the flying club would meet us, although call out/landing/parking charges amounted to £100 and Avgas was a crippling £2.40 per litre.

Top: The apron at Husavik Airport; Below: the approach to the spectacularly-situated Isafjordur in the far north-west of the island.



SkyDemon very usefully recorded the route taken by Richard and Martin. In total they flew 22hrs 10, and in Iceland they carried out 16 landings or touch & gos at 14 airfields (with only 24 euros in parking fees!)



To compensate, bed and breakfast was very reasonable and a nearby restaurant was having half price steak night. Thus we set forth in the early evening for an uneventful 2hr 20 journey in the Beech 76 Duchess, which has a much more leisurely pace than the Cirrus but with the planned long sea crossings two engines provided reassurance. We passed the elegant buildings of the Three Graces in Liverpool and flew onwards to Blackpool, little knowing that the future of their airport would shortly hang in the balance.

Prestwick fulfilled its welcome and the following morning, refreshed, we were airborne at just before 8.00 UTC. As we made our way up the west coast we were treated to some spectacular views which reminded us of why Scotland is so rewarding for aviating. We continued past Loch Fyne reflecting on their wonderful rope-grown mussels and before long we were having a chat with a friendly controller at Stornoway. After that we headed out into the vast expanse of the Atlantic Ocean, having occasional words with Scottish Control and some background music to keep us company.

We enjoyed the benefit of a healthy tailwind and, with an economy cruise setting of 22/2200, a TAS of 140kts translated into a groundspeed of 170kts+. The journey was interrupted by the revelation that a 3G signal was being received on Richard's iPad so he was able to catch up on his morning newspaper. We concluded that the Faroes have a particularly powerful transmitter.

After a little over three hours, Iceland was clearly visible and the snow-capped mountains were not far away. Now we were talking to Reykjavik who were friendly and helpful, although there was little other traffic on the frequency.

The journey involved flying up to Prestwick from Redhill Aerodrome, as the weather at Wick was not suitable, before making the crossing to the east side of Iceland and landing at Egilsstadir.



Our destination is Egilsstadir, an international airport on the eastern side of Iceland and, at 663 nautical miles, the nearest from our departure point. We made landfall on the south east corner of Iceland and immediately realised this would be a trip to remember. The mountains rose majestically from the shoreline still swathed in snow on the peaks, while further to the west the permanent ice cap of Vatnajökull (which covers more than 8% of the country) was clearly visible.

Still enjoying the favourable tailwind, we were soon being welcomed by Egilsstadir Radio who invited us to land on Runway 22.

The airfield sits in a valley next to a long inland lake. The approach is easy in VFR conditions and presently we were crossing the threshold only to make course corrections just before touchdown as a family of ducklings taking priority were being led across the runway by their mother. With 1850 metres there was plenty of room for all of us and, after a flight time of 4hrs 20m, we taxied to

the pumps to receive 247 litres of fuel and meet a friendly lady Customs officer who was equally welcoming.

Apart from a PA28 we were the only light aircraft in evidence, although two business jets were parked on the apron whose wealthy owners had flown from Spain for some unsuccessful salmon fishing. I visited the tower to pay the landing fee and Richard went to hire a car. No landing fee if you are under two metric tons, and only 12 euros a night parking. Fuel was around £1.80 per litre but the cost of the car was more expensive than the UK, but this was made up for by a very helpful young assistant.

It transpired that our new 17 year-old contact holds a PPL and flies a Jodel that is kept in a hangar on the field. We asked about local procedures and they seemed straightforward, so we enquired if he would like to be our guide for a flight after he finished work that evening. Meanwhile we checked into our hotel and headed to a local restaurant for lunch.



Flying past Grimsey, an island 38 miles off the north coast of Iceland.

Afterwards we took ourselves on an exploratory drive over the mountains to Seydisfjörður, a fjord on the east coast, passing some spectacular waterfalls enroute – confirming we were in a very special country.

Back at the airfield we set off at 19.15 (Iceland is on GMT) and headed south, soaring over the rugged mountains to the unpronounceable Hofn Hornafjörður – “just say HH” prompted our guide, who was wise for his years – and 45 minutes later we were crossing the town with the airfield in sight, guided to finals by strobe lead-ins.

Our objective was to visit as many airfields as practical in the time available and therefore, after pulling onto the ramp as the air ambulance King Air departed, we requested a departure without shutting down which was gladly granted.

There are no railways on Iceland and the roads largely skirt around the perimeter of the Island with relatively few providing direct routes. Therefore many of the towns and villages have their own airstrips which can be gravel in remoter locations or tarmac for larger townships. Our Plan after HH was to follow the coastline anti-clockwise to the somewhat remote Nordfjörður, where we carried out a touch and go before continuing to Bourgarfjörður, a larger village with the distinction of hosting a music festival (which they were busy preparing for).

We landed at the gravel strip after 55 minutes total; thankfully our guide had arranged for a girlfriend to lend him her car so we could dine at a fish restaurant nearby. We returned to Egilsstaðir, arriving in good daylight still at 22.20; nightfall eventually took place around midnight.

On day 2, after some early sightseeing, we departed at noon for a flight over the Vatnajökull icecap which is rather spectacular after a recent eruption. All was quiet on our brief visit, however. In one of the remotest areas we were amazed to see the layout of a gravel airstrip with three runways which is presumably for those adventurers who want to spend time in the harsh frozen conditions.

We turned to the northwest passing the highest peak on the island and gazed at the nose of a wide glacier almost beneath us. Then, gradually, the terrain became less hostile giving way to fertile plains and a lake with the community of Reykjahlid and its airfield which beckoned a T&G. Next a short flight towards the coast landing at Husavik.

In glorious sunshine we stopped next to the same Piper PA28 that we had parked next to at Egilsstaðir, and we introduced ourselves to a friendly gentleman in the small terminal building. He turned out to be the controller as well as being responsible for all other duties. We went for a stroll nearby and enjoyed some sandwiches left over from the previous day’s flying rations, before returning and preparing for the final leg of the day.

We had wanted to land at Grimsey, a small Island 38 miles away, and the only part of Iceland within the Arctic Circle. Sadly it was closed for runway maintenance but we orbited Grimsey, which looked delightful, and verified that we had crossed the imaginary line at 66:44:22. Then on to our destination at

Richard (left) and Martin at Isafjörður.



Akureyri, the northern international airport, approaching via a wide fjord guarded by steep mountains. Our arrival was rather wet with the rain becoming progressively harder until shortly after landing, and having travelled 2hrs 15mins, we re-fuelled with 251 litres. The welcome by a local flying instructor was warm and friendly, with the apron being a few steps from a GA centre that boasted a club room and immaculate hangar.

Having collected our car we drove to the accommodation a few miles north of town, with beautiful views across the water, and then made our way back for an evening meal. This is the largest populated district outside the capital area and the town is well worth a visit, with its colourful shops and plenty of pedestrian areas. It was bustling with locals and visitors alike so we found an attractive restaurant and enjoyed good food and a glass of wine. The following day we visited the aviation museum which has many interesting exhibits, and it was good to see that there were plenty of visitors – enthusiasm for aviation is alive in Iceland, even if there are not many light aircraft or private pilots.

On day 3 our plan was to fly to Isafjordur in the far north-west corner which had been recommended as a must. Enroute we continued the flying equivalent of “Munro bagging” by carrying out T&Gs at Blonduos,

airfield and head east again.

Initially flying at low level across the sea we climbed as we reached the coastline, skirting the northern ice field at Drangajökull. Then T&Gs at Gjojur and Sandarkrokur, the latter previously being an international airfield before the aviation infrastructure at Akureyri was developed. The journey continued over Akureyri with sightseeing orbits of the spectacular waterfall at Dettfoss, before our final T&G at Vopnafjordur. Then 20 minutes across the mountains from the north east corner back to Egilsstadir to complete 3hrs 30 and refuel with 226 litres.

All hotel accommodation was full due to the funeral of a local dignitary but we had been able to book into a farm at the far end of the lake some 20 miles away with a part self-catering complex. We were well looked after with clean and comfortable accommodation and dining room where we enjoyed homemade cooking. There was even a pack left for us in the fridge as an inflight meal for our return flight!

We left early on day 4 (Saturday) to drive on deserted roads back to the airport where we departed at 07.30 without formalities for our homeward journey, this time with Wick as our UK destination. Our route was to take us over the Faroes, where we caught sight of the mountain peaks emerging through the



A volcanic eruption.

Runway 13 which was conveniently favoured by the prevailing wind.

After a flight of exactly 4 hours we received a warm welcome from Andrew Bruce and his refueller, who provided us with 265 litres as well as coffee and chocolate biscuits to prepare us for our final leg. After our recent traffic-free flying, it was back to the normal busy flow of R/T as we continued on our way, largely over the North Sea until Durham, after which we threaded our way towards our home – arriving at Redhill at 17.20, a leg of 3hrs 30.

In all we flew 22hrs 10mins and consumed around 1340 litres of fuel at economy cruise of 60 litres per hour. While in Iceland we made 16 landings or T&Gs at 14 airfields with only 24 euros in parking fees.

We had intended to visit Reykjavik on our last day but the combination of high handling charges, late opening time of 08.00, combined with an added extra hour flying to return meant that Egilsstadir was the preferable departure option.

Iceland is an aviator's paradise having spectacular scenery and minimal controlled airspace, except in the south west area around the capital. Avgas was cheaper than in the UK although car hire and dining was more expensive. There are scores of airfields around the edge of the country but many have loose surfaces, so a high-wing fixed-gear aircraft would be better for regular use there. Simple flight plans are required for each journey but these can be filed over R/T or by chatting to the controller in the tower. Everywhere we were met by friendly faces who were interested in our mission and went out of their way to guide and assist.

Wouldn't private flying be wonderful if it could be like that everywhere?



Town Centre of Akureyri - the capital of North Iceland.

Holmavik and Reykjanes, each gravel strip serving their villages, before we found ourselves at the mouth of the fjord serving our destination. It is truly a wonderful approach, flying along the north side of the valley with the mountains towering above and passing over the town; next a continuous left turn avoiding the mountains, ahead to position onto finals with the runway nestling against the mountains on the south side. Several videos displayed on YouTube are worth exploring to show how picturesque it is.

We were welcomed yet again by staff wanting to have a look at the Beech and then we were directed to an unassuming local restaurant, which excelled itself with the most delicious seafood. After a constitutional around town it was time to return to the

layer of clouds below – and we could identify the runway at Vagar Airport as we flew over. We would have liked to visit Vagar but the high landing fees, lack of available time and distance from the main centre Torshavn deterred us.

After another hour we were approaching the Orkneys, deviating slightly to pass over Scapa Flow and Hoy. A quick call to Andrew on his frequency revealed a fog bank lying on the edge of Wick which was coming and going, but he said that most of the airfield was clear. We pressed on, passing by Dunnet Head, Scotland's most northerly mainland point (although John O'Groats is the longest distance from Land's End). Soon we could see Wick in the distance with the fog bank fortunately lying just beyond the far end of



Dettfoss waterfall, NE Iceland

Live to Fly Another Day

William Cortazzi flies to Iceland but no further, as an attempt to negotiate the Atlantic turns into a good lesson in how to stay alive, rather than press on regardless.



Land ho! – the volcanoes of south-east Iceland protrude above cloud. What a relief!

It was February and I received an email from Sam Rutherford at Prepare2go. “Fancy one last adventure – a trip in DKNY across the Atlantic?” Even I get a bit shaky about long sea crossings so I had a long pause to think. Was it even possible – Sam assured me it was if we went north in May or June. I have always wanted to fly across the US, so perhaps this was my chance. You don’t get many second chances in life, so I threw caution to the wind.

Preparations started right away. It was not a simple expedition. I downloaded the Foreflight app and began to pore over charts of the North Atlantic. Sam’s plan was to set off from Wick and head straight north. We were going to make the sea crossings as short as possible, but first had to go via Vagar in the Faeroes to Egilstadir in eastern Iceland. In order to minimise the crossing of the Denmark Strait between Iceland and Greenland we got special permission to leave Iceland at Issafjordur, missing out Reykjavik. From there we were planning to go around Greenland (it’s a bit hairy going over the top as you need to get to 10,000 feet) and then

over the Davis Straits to Baffin Island. Then we were to track down to New York, followed by the easy bit across to Los Angeles.

We were planning no sea crossing longer than 250 nm – less than I have done many times over the Med. In the back of the R44 I mounted a 250-litre TurtlePac which, together with my trusty hand pump, gave me a theoretical eight-hour endurance without severely upsetting the weight and balance calculations at either end of the flight. My fuel endurance was such that I calculated that I would never have to contemplate a point of no return on a sea leg – if necessary I could get to my destination and back without having to refuel. It was also mid-summer, with 24 hour daylight, so we had plenty of time to find the right weather windows, I thought.

Paperwork for the trip was complex. We had to get a US customs sticker to enter the US and permission (called an international waiver) from the US Transportation Security Administration for each and every flight within the US. We also needed visas to enter the US, as the visa waiver scheme does not

apply to entry in a private aircraft. All my safety equipment was overhauled – immersion suit checked, raft serviced and PLB updated. I even purchased some hand flares – useful in the event we landed away from an airfield in Greenland and had to discourage a ravenous polar bear!

I drew up a very careful weight and balance schedule to minimise our weight on takeoff with full fuel. HQ Aviation at Denham gave the helicopter a real careful check – there are not many plan Bs if the engine fails on the North Atlantic. Finally I found an app called Marine Traffic – this shows where shipping is at any time across the Atlantic. I planned to update it each day, in case I had time to find a ship to ditch near should we encounter unexpected problems.

One fine morning in early May we were ready to leave. The flight from Denham to Wick was gorgeous – hardly a cloud in the sky. To test our fuel system we flew non-stop, making it in just over 4.5 hours. There we met the two aeroplanes that were making the crossing with us. It was all starting to look straightforward.



Somewhere down there is the North Atlantic – with no holes in the cloud

Next morning we looked at the weather forecast. Our plan was to fly to Egilstadir (550 nm over the sea) with a brief stop for fuel in Vagar in the Faeroes. Egilstadir was CAVOK, but Vagar had fog. In fact the longer-term weather forecast suggested almost permanent fog in Vagar. We adjourned to a coffee bar and contemplated the delights of Wick – probably not very exciting for a long stay. The next weather update came through – Vagar was clearing. A quick call to the tower and the Danish controller felt we would probably be all right to land later in the day. We needed no more encouragement to leave Wick.

The first part of the flight was uneventful. We soon lost radio contact with Shetland and settled down to a long sea crossing. Our only contact with the outside world was a yellow brick satellite communications system, on which Sam was having the Metars texted to us from Vagar as they were published. About 100 miles north of the Scottish coast we got the first signs of a problem. Rather than issuing Metars as normal every 30 minutes, Vagar started publishing 10-minute updates. Each Metar was getting progressively worse. It was as if they were trying to get us a message to stay away.

“Eventually, to our great relief, up ahead in the distance we saw the volcanoes of Iceland poking above the cloud layer”

The Faeroes are a lonely outcrop of islands stuck in the middle of the North Atlantic approximately equidistant from Denmark, Iceland and Scotland. Vagar is a small town situated in the north of the archipelago on a rocky island dominated by fjords and soaring cliffs. As we got closer we made radio contact and asked for a weather update. The controllers response was unorthodox – “I don’t know what its like, I am in the cloud,” he said from the tower. “Nevertheless the village at the other end of the runway says they are in the sunshine”.

Soon out ahead we saw our first sight of land for 200 miles. It looked like a mountain sticking out of the sea. A layer of cloud surrounded the top of the mountain and looked as if its base was around 500 feet. As we approached the cloud seemed to creep lower and lower. It wasn’t long before we were getting hemmed in, doing 50 knots at 50 feet above an unfriendly sea. We thought of turning back but the visibility was looking bad everywhere – it seemed like the mist was forming all around us. Above we could make out a glimmer of sunshine. In the hope the cloud layer was thin we put on some speed, looked up and climbed towards the sunshine. With great relief we soon popped out of the cloud into clear blue sky, with the large island of Vagar up ahead. The airport itself was bizarre – the southern half of the runway was bathed in sunshine while the northern half was blocked by fog. We managed to hover to the fuel pumps and landed with much relief.



Ready to tackle the North Atlantic, William (left) and Sam in their immersion suits

The weather in Egilstadir was still good, so we assumed the fog was a local Faeroes phenomenon and decided to press on. As we left Vagar we climbed above the clouds which were swirling around the northern cliffs. “We will be able to get down underneath the clouds as soon as we get away from the Faeroes effect and it will be beautiful all the way to Iceland,” I thought. Unfortunately I was wrong. We spent almost three hours stuck above the clouds in bright blue sunshine, hoping that up ahead there was not going to be a higher cloud layer that would gradually surround and consume us. Every time we looked at a small hole we decided we could not chance going down – holes were very few and far between, and we had no idea what conditions were like under the cloud. Eventually, to our great relief, up ahead in the distance we saw the volcanoes of Iceland poking above the cloud layer. At least now if the weather forecast for Egilstadir was wrong we could camp of the top of a volcano – not comfortable, but better than being dead.



Leaving Vagar and climbing above the clouds, heading for Iceland

Once we’d passed the first volcanoes the cloud cleared and we landed at Egilstadir in bright sunshine, after perhaps one of the most difficult and frightening helicopter flights I have ever done.

After a fairly sleepless night I was starting to have second thoughts as to whether this trip was a sound idea. Nevertheless the weather was beautiful, we were 1000 miles away from London, and a lovely flight across the north of Iceland was on the agenda. The scenery was stunning as we flew low over volcanic icefields and the rift valley dividing Europe from America before arriving at the remote fishing port of Isafjordur.

We woke up the next morning to the familiar foggy scene. As it gradually cleared the aircraft were keen to go. While there might be some low cloud en route, it was difficult to get a clear forecast and Greenland, while marginal, looked flyable. They planned to go direct, 350 nm over the desolate Denmark Strait. It was by now dawning on me that while over land the helicopter has the advantage that if the weather gets bad you can land and wait, over the sea the inability to cope with low cloud and fog

On final approach to Vagar, with thick fog covering half the airfield.





in the clear and approaching to land at Egilstadir in southern Iceland.

can rapidly become fatal. After the hairy crossing to Iceland, we decided that we would fly a dogleg route north to the Greenland coast, cutting out about 150 miles of sea but adding 150 nm to the overall route. With an occluded front stuck along the east coast of Greenland we did not know what to expect, but resolved to turn back if we were unable to maintain 1000 feet over the sea out of cloud.

Nervously we took the air to execute the plan. The Denmark Strait was very calm and devoid of shipping. Soon we were spotting whales in the sea below. The first hour went well, but suddenly things changed. About 50 miles from the Greenland coast, fog started forming rapidly below and in front of us.

We had no choice but to turn back. We were almost too late – as we flew back towards Iceland, the fog that was forming ahead of us had also started to form behind us. It took twenty nervous minutes before we were clear.

Changing course for the south partly to avoid some poor weather that was gathering around the Icelandic cliffs, we decided to head for Reykjavik. Here at least we would have more options as to what to do next. It was becoming clear to me that it was now time to make a decision.

That evening I made up my mind. The fixed wing aircraft had made it to Greenland. After two hairy days, this for me really was a trip too far. I felt like a horse standing in front of a fence, transfixed and refusing to jump. Our enthusiasm and inexperience in flying a helicopter in this sort of terrain had exposed us twice to what I felt were unacceptable risks. It felt terrible to give up the dream of flying to LA, but in the end I knew I could not push

“About 50 miles from the Greenland coast fog started forming rapidly... we had no choice but to turn back.”

on without exposing Sam or myself to risks I was not prepared to take. We just had to stop. I said a sad farewell to Sam, who had to leave to join the fixed wing aircraft in Greenland, and spent a lonely few days trying to figure out how on earth I was going to get DKNY safely back to the UK.

I called the only person who could possibly have the experience and knowledge to help me out of this pickle – Q Smith at HQ Aviation. We first explored a plan to ship the machine on the deck of a ferry down to Immingham, but as we considered issues such as how we could get the machine onto the vessel, things started to look complicated. Q asked an old friend of his, Martin Duggan, to fly up to Reykjavik to help me out. Martin, a very experienced professional pilot who has made the journey from Scotland to Iceland many times, suggested he fly the machine back to the UK for me. We talked about the practicalities and flew together to Egilstadir to wait for a weather window. Fortunately the next day Martin was happy with the weather and I waved him off and returned to London on easyJet. I gratefully collected DKNY from a field near Belfast that weekend and returned to London, defeated but still alive.

So what have I learned? Oddly enough, it is more difficult to stop than to continue. You feel like a prat, and have to explain to the world why you took on something so silly in the first place. The more you get into a trip, the more difficult it is to stop, as sometimes going back is every bit as challenging as going on. But if you push the boundaries of something, you know you must have the courage to stop when you push things too far. The only alternative is to end up on the obituaries page.

Fly safe...

It's a long way to go – William gets his bearings in the north of Scotland



The Garden Route

Chinese pilots train in South Africa



While visiting George in South Africa, Ian Sheppard found two very different flight training schools.

In many countries there is no culture of general aviation flying, where pilots get their PPL at a local flying club, perhaps become an instructor and then work towards CPL/IR, or obtain these qualifications before instructing and building hours until they find a commercial flying job.

In short, the “self-improver” route is very rare, so commercial pilots need to be trained in integrated schemes over 18 months or so. Many countries have relied on expat pilots from Europe and North America to make up the shortfall in local pilots, and this has generally been the case in Asia. In China, however, there has been a particular emphasis on the need to train more nationals as pilots and to keep these ultimately lucrative career opportunities at home.

To provide trained pilots ready for type rating training, China’s aerospace giant AVIC in 2011 set up a joint venture in George, South Africa called AVIC International Flight Training Academy (AIFA).

AO&P visited George in early March and spoke with CEO Willem Marais about the scope of the venture and how it came about.

“We started about four years ago but we’d been working with China for about ten years training pilots [at Cape Flying Services],” said Marais. “We were in flight testing through TFASA (the Test Flying Academy of South Africa) working with AVIC for a number of years before we started to discuss China’s need for 2,500 pilots a year. With capacity to train only 1,500 in China, the country had tried outsourcing to the U.S. and Australia for the rest. Then the Chinese government came up with a rule saying that they wouldn’t appoint any more foreign flight schools unless the majority shareholder was Chinese.

“So AVIC International acquired 70% of Cape Flying Services, and TFASA now holds the other 30%,” said Marais. “Chinese CAAC certification was obtained one week later,” he added. “The first cadets came to George in 2011 via an agreement with Nanjing University of Aeronautics and Astronautics

Top: Training sorties often see the Seminole going on deployment, for example to Kimberley, to train as the weather is “unpredictable” in George. The new bases at Oudtshoorn and Beaufort West help too, as they are in the Little/ Great Karoo deserts.

Right: Corey Ge and Barry Xiong have been at AIFA in George for three years, and are both now instructors. They were among the first group of Chinese cadets to become instructors (there are 12 in total).

(NUAA), where we now go to interview and select cadets three times a year. We then offered [NUAA] a share in the business, so soon AVIC will hold 67%, TFASA 22% and NUAA 11%.”

Since then the business has built up considerably and this is clearly continuing. “We are in the build-up phase and have about 225 cadets between the three bases, aiming to reach 400 cadets per year by 2016.” Marais said that a second training location had been established at Oudtshoorn “and we just acquired the airfield at Beaufort West” where AIFA has resurfaced the runway and put in a new control tower and hangar (as it did at Oudtshoorn). The company also employs its own air traffic controllers, which Marais described as “pretty unique.”





Advanced instructor Michael Haasbroek is qualified to teach cadets to fly the King Air C90. One of AIFA's King Airs (pictured) has modern Garmin G600 avionics and a Blackhawk PT-6 engine performance upgrade, while the other two "may be getting a full avionics upgrade."

Right: Willem Marais, CEO of AIFA.



The training fleet is now made up of 31 brand new single-engined aircraft (19 Cessna 172s and 12 Piper Warriors), 7 brand new Piper Seminoles and 3 Beech King Air C90s. "Each base also has two flight simulators, one FNPT I and one FNPT II," said Marais.

Back in 2011 the school started with 29 cadets, who qualified in the 14 months allocated. "Now we have 225 Chinese students between the three bases. We have flown 54,000 flying hours without incident or accident and now just the 2015 budget is for 54,000 flying hours – with around 85% of the pilots being from China, [destined for] nine different airlines."

Marais added that AIFA is now also "the preferred training provider for KQ [Kenya Airways]" – the first group of 10 pilots have just finished their training. "Now we have groups of six and 12 and we are negotiating to expand our relationship with KQ."

Since 2012 AIFA's turnover increased by about 32% annually, and "now it has \$22 million of capital assets invested in South Africa." The number of personnel has increased from 77 to 141, with 46 flying instructors "from all over the world – 27 are Grade 3, 21 Grade 2 and 6 high performance instructors, instructing on the King Airs, and we have seven full-time ground instructors." In addition, each team has a full-time English teacher and a psychologist.

AIFA, said Marais, is "the only flight school in Africa certified by both the SACAA and CAAC." Chinese cadets need a normal student visa for South Africa.

Marais admits that everyone in South Africa is now looking to tap into the foreign pilot training market more, but says it isn't easy when it comes to China: "The process took us close to three years to compete," but he admits having AVIC as a partner is "quite an advantage for us." He also said he is "pretty pleased which HNA group," which has several airlines taking pilots from AIFA.

The course itself is 60 weeks in duration, consisting of 233 flying hours (the minimum required in China, rather than 200 elsewhere). "We do the normal modular training route, PPL 45 hours then night rating as part of 20-odd additional training hours, then the cadet does hour-building with very structured cross-country navigation exercises. Then they do a single-engine instrument rating, multi conversion and ME IR. At 233 hours a South African CPL/IR (with multi-engine rating) – a frozen ATPL – is issued.

Finally cadets do 20 hours on top of that in the King Airs, 10 hours as PF [pilot flying] and 10 as NPF [pilot not flying] – "but we don't issue a rating for this," said Marais. ATP ground school is all done at AIFA "but in future [for the Chinese] we will do the ground school in China at the university."

Cadets, average age 22-23, do a three-year aviation degree at NUAU as well as the flight training, said Marais. "The whole thing is tightly structured, and we bring them in [class] groups of 25 to avoid bottlenecks in the circuit. "So we can accept 75 at once, across three airfields."

Asked about moves to establish the EASA system in South Africa, Marais said that the "theoretical system has already been aligned with EASA since the beginning of 2014, which 13 months downstream is going much better. The rest will move over to a system mirroring the new EASA Part FCL but Marais said "I'm not sure when we are going over yet."

As for 2015 Marais said, "One of our primary objectives is to increase our footprint in Africa – we have individuals from Air Mauritius and quite a few private individuals. The course costs 650,000 Rand (less than £40,000 at the current, very good exchange rate to the pound). With that comes first-rate training and organization and "all aircraft have Garmin glass cockpits." AIFA also has its own authorized maintenance operations at George and Oudtshoorn "and we're going to set one up in Beaufort West also." For major overhauls every 2000 hours the engine goes to a Lycoming approved service facility (at Wonderboom Airport near Pretoria, or to a facility at Richard's Bay) for zero-timing.



Flight Training College



Looking to the future, AIFA and Marais have big ambitions. “We are already the biggest flight school in Africa and our vision is to become the biggest in the world.” Doing this means drumming up business and to this end he plans to travel to the UK later this year. At the same time, Marais said that the South African government puts “a huge emphasis on the ‘previously disadvantaged’” so developing pilots locally is also a priority for the likes of South African Airways and the low-cost carriers that are spreading so fast in the country. This includes in the maintenance organization where AIFA sponsors and trains technicians from the local community. “We’ve trained four and will train another 2-3 a year.

Marais himself is ex South African Air Force C-130 navigator. He started his own flying school in South Africa and gained a pilot’s licence in 2000, followed by an instructor rating. Eventually he sold the flying school to Babcock, before heading to the UAE to set up the DAE flight school in Ras Al Khaimah. In 2010 this academy “was stopped due to the economic down-turn,” said Marais, “and so in 2010 I joined this company – and I must say I haven’t looked back since.”

Flight Training College

For a different but no less professional training experience, Flight Training College (FTC) is located at George next door to AIFA. Walter Waldeck, the CEO and designated examiner, is also a South African Airways training captain flying the Airbus A340.

Waldeck started FTC in 1999 with his business partner, with the simple aim of “keeping current in GA”. How little he knew then how topical that would become! HE had already been an instructor since the age of 20, however.

FTC has always been a family business with Waldeck’s wife helping out and also his son Jason as CFI. That was at the time of this visit, early March, when he was about to head off to take up a flying contract. Waldeck’s brother was also CFI for a while and his nephew instructed there too – so it’s very much a flying family.

“It’s grown a lot over the years,” said Waldeck, “to the point where we could extend and add a second hangar. So a hobby turned into a nice business.” He added that “it’s really interesting to see where all our students end up,” pointing to a board in the reception area.

FTC’s fleet consists of Cessna 152s and 172s, a Piper Cherokee Arrow complex single and a Piper Seneca for twin training. “We can train all the way to the ATP,” Waldeck said. “We also have a Seneca III simulator, an FNPT II, so we can do IR reveals too and the visuals are as good as a Level D sim.” He said that in mid-March the simulator, which is built by Pretoria-based Simufite, would be upgraded to new software (which is done remotely by the vendor) and some new hardware – due to new requirements, not doing so would mean the device being downgraded to FNPT I.

On the move over the EASA training Waldeck said “It’s going so fast. There are 180 flight schools in South Africa and it’s incredibly difficult to administer for little one-man band operations.” Waldeck is very involved with SACAA on this and various other issues, due to his long experience in the sector which proves invaluable to the authority.

He wasn’t enthusiastic about the prospects for the recreational GA market in South Africa, as most people can’t afford to fly. The talk soon got on to upset recovery training for professional pilots, however, and how the GA sector can help. “It all starts in GA,” he said. Referring to the Air France AF447 A330



Walter Waldeck started FTC in 1999 as a way to keep current in general aviation. He is a training captain for SAA and long-time flight instructor.

loss over the South Atlantic, he said: “That accident started on the ground – seeing what the weather is – you don’t want to plan to go through that! The guys mis-set the radar and didn’t see the weather. The gain was set wrong so they flew straight into it. The startle effect played a large role. It all comes back to basic training and flying the attitude. You can’t just power out of a stall.”

He was scathing about the quality of candidates coming for flying training, of all nationalities, saying there is a lack of self-discipline, which is “sorely lacking... and the quality of education has gone down. It’s shocking – in South Africa you can take ‘maths literacy’” which is just simple arithmetic – so, he said, “the failure rate [of would-be pilots in South Africa] is quite high.” He also said that in commercial flying he’d seen many logbooks that were “untidy and inaccurate, and with so many errors.” Finally he mentioned the MPL, which he said had “fallen flat in South Africa – we realized it was not the way to go.” He said someone had referred to professional flying as “driving a kiddy cart along a cliff,” in that it’s really easy until something, very occasionally, goes wrong. King Air

A classroom at FTC in George.



Can Plymouth come back?

Plymouth Airport was closed in 2013 and nobody expected that it might come back, despite it making sense for the city. Now, however, there may be a glimmer of hope for local GA pilots and travellers.

Three years after the last aircraft departed from Plymouth, the city's mothballed airport has been thrown a significant lifeline that will likely see it escape the bulldozers and eventually welcoming passengers once more. In December 2014, the City Council published the draft [Plymouth Plan](#) setting out its intention to reserve the airport for aviation use under planning until 2031. As it can no longer be built on, the land the airport sits on is now barred from redevelopment and the way lies open for an aviation business to secure the site and resume flight operations

So why did it close?

A number of regional airports in the UK, Plymouth included, have suffered in recent years by being squeezed out of the major hubs at Heathrow and Gatwick where competition has grown from more lucrative international traffic. Even with the loss of routes to Heathrow and Gatwick, Plymouth would remain a modestly profitable airport as its costs are lower than many airports and it has benefited from steady passenger numbers together with important military and marine engineering related business. Operated by a locally-minded aviation company - as it was for most of its 85 years - the airport would never have closed.

However, Plymouth's closure was not about planes but much more to do with the impact of the financial crisis on the property market. The airport's former operator is subsidiary to a debt-laden property company with activist shareholders. An 'armageddon' clause in its 100 year airport lease provided the option to close the airport and sell the site for development if aviation proved unviable. And, when in 2008 the credit crunch hit and property development came to a standstill and book values plummeted, the airport's shareholders naturally pushed for its closure to release the tens of millions of pounds in underlying land values.

Similar stories have been seen across the UK where airports have long been regarded as soft brownfield development targets and ownership has concentrated in the hands of developers.

Why does this matter?

Plymouth is Britain's 15th largest city - the largest on the south coast of Britain - and the largest conurbation south west of Bristol. It is home to the largest naval base in western Europe and a growing university of more than 30,000 students. Yet it is linked to the rest of the country by dual carriageway A-roads vulnerable to closure through accidents and low-speed meandering rail lines where per capita transport spending is the lowest in the country. Despite the proximity of Newquay and Exeter, Bristol is now Plymouth's local





airport based on usage.

For cities closer to the south east or with stronger rail and motorway connections loss of a regional airport would matter less. But for cities such as Plymouth and Inverness where peripherality is a significant challenge the consequences are much more substantial and long lasting. Transport and connectivity is the number one concern of business and local government in Plymouth. The fragility of the South West's transport links were highlighted last year when winter storms severed the main rail line to London at Dawlish.

Since the loss of direct flights into Heathrow, 14 large employers have closed their operations at Plymouth. Loss of airlinks altogether have caused local manufacturers to become concerned for their own futures in the city.

Productivity and employment are also real challenges for the far south west and the closure of the airport means Plymouth is less able to compete with other better connected cities for investment. It was not long ago that business people would board a plane anywhere in the world and enjoy quality connections to Plymouth with one stop over at London. In December 2011, Plymouth disappeared from that map.

Step up Viable

Despite this, the closure of the airport by a seemingly powerful public limited company seemed to many to spell the end of aviation at Plymouth. And matters would have ended there were it not for the efforts of local people and businesses who regarded the closure of the airport with a mix of scepticism and concern. The story goes that a handful of individuals over a curry one night resolved that unless someone did something the moment would be lost. The decision was taken to 'run up a flag' and see who rallied to it. The organisation would be called 'Viable' to challenge head on the grounds of non-viability on which the airport had been closed.

A week or so later, a meeting was held at one of the businesses' ground floor offices in Plymouth's Barbican - the same street

where Francis Drake once had his Plymouth residence. A small notice was put in the local paper and 20 chairs were set out. As it turned out, the room was overwhelmed by some 120 people who included city councillors, business leaders and many of the people employed by the airport or by businesses that used the airport. A number of people had to participate from the street outside by passing notes through the window.

Within a month or two the project had picked up momentum and was making powerful arguments as the former airline and airport directors added their voices to the cause. A year later in summer 2012, Viable made real political impact by compiling and delivering a petition to the City Council. Some 37,000 people put their signatures to the demand that the airport should be re-acquired by the local authority. In a city of 250,000 people, this was by far the largest ever single democratic expression and it gave the airport campaign a significantly larger mandate than any of the local political groups or MPs. A full Council debate prompted by the petition delivered unanimous support for protection of the asset. From now on Plymouth airport was the hot potato in local politics.

From campaigning to business

Having demonstrated and delivered on public support for protection of the airport from redevelopment, Viable moved into business mode. Led largely by members of the business community Viable recognised that without an airport and airline operator ready with a plan and funding, protecting the airport would not necessarily lead to its reopening. Viable Plymouth Ltd was duly formed with the mission of acquiring and reopening Plymouth airport and maximising its commercial potential. A study commissioned from York Aviation provided encouraging evidence of passenger demand, economic value and job creation that a reopened airport would deliver.

For its part, Plymouth City Council consulted on future options for the airport

site. The outcome was that as a scarce and irreplaceable piece of strategic transport infrastructure, the airport should be reserved for aviation uses only through to 2031 under the forthcoming Plymouth Plan. Both the Leader and Chief Executive of Plymouth City Council have been vocal in supporting this policy.

So what next?

The airport's lease requires that the facility be maintained together with its core aviation infrastructure. It also requires that on execution of the armageddon clause, the land be sold for best value without undue delay. This means that one way or another the airport must be sold allocated as a piece of aviation infrastructure.

Viable's objective is to acquire a lease on the airport and through a staged plan, reintroduce aviation services keeping costs in step with revenue growth. This includes the reintroduction of scheduled 30/40 seater air services to key destinations through the start of a new base airline - the model that served Plymouth well for decades.

In time infrastructural improvements will enable the airport to handle larger aircraft and with the trend of shortfield planes towards ever greater fuel economy and quieter operations, the potential is there for 100 seater jets eventually connecting Plymouth to key European destinations while emitting less noise than ever.

A fine heritage; a fine future

It has taken three years so far and there is a good way to go before flying resumes at Plymouth airport but the possibility will become a reality and there are talented people working on delivering that outcome.

It may surprise many but Plymouth airport has a distinguished heritage in aviation. The airport was Britain's first municipal airport originally opened in the 1920s by the then Prince of Wales to fly transatlantic mail from incoming ocean liners to the capital via Croydon. The military has always had a strong presence through the Navy and RAF and the airport was busy during the wars years and supported military flying training for many years after. In the post-war period flights to the Channel Islands London and Paris were the main routes served. Plymouth's Bill Bryson operated Brymon Airways for many years and was this airline was itself instrumental in the opening of London City Airport.

As to the future, the people of Viable aim to see Plymouth reconnected with the world. These connections will redefine Plymouth's future economic potential and support its objective of becoming one of Europe's most vibrant waterfront cities. Through steady growth they aim to build a network of connections into alternative hubs such as Manchester, Dublin, Paris and Amsterdam that in time will enable Plymouth to rediscover its identity as one of Britain's gateway cities.

Patty



Wagstaff

One of the world's top aerobatics pilots is changing course to offer flight training to anyone bold enough to try it, writes Liz Moscrop.

It's a freezing cold January day in St Augustine, northeast Florida and my bones are icicles. In a city ill-equipped for such weather there are few options to heat up anywhere. My hotel is sparsely equipped with single glazing, gaping shutters and no heaters and I'm thoroughly miserable. What I'm not expecting is the cheery burst of effusive warmth and kindness from my interviewee. She happens to be one of the top aerobatics pilots in the world, and incredibly concerned about my comfort, and apologetic she cannot offer me a room for the night herself. Instead she takes the trouble to direct me to a better hotel, and she and our mutual friend pilot and writer James Wynbrandt treat me to a hearty dinner in one of the town's many fun restaurants.

Patty Wagstaff is so down to earth that at several points during my time with her, I have to pinch myself to remind me that she is famed for flying high as one of the world's foremost airshow pilots, with a pedigree that has earned her top honours in aviation's hall of fame. A six-time member of the US Aerobatic Team, she has won the gold, silver and bronze medals in Olympic-level international aerobatic competition, is the first woman to earn the title of US National Aerobatic champion, and one of the few people to take it three times.

She flies electrifying, low-level aerobatic demonstrations before millions of people,

giving spectators an unparalleled view of the precision and complexity of modern, hard-core aerobatics. Indeed, her smooth aggressive style sets the standard for performers the world over.

And now the 2004 inductee in the US National Aviation Hall of Fame is offering training in both the Extra 300L and the American Champion Super Decathlon via her new venture Patty Wagstaff Aviation Synergy. Devastatingly (for me) the weather was so rotten during the short window of time I was there we didn't get to go flying. But both she and the school are so appealing that I promise myself I'll return during a better weather season.

For now, she and her team are showing me round an office stuffed with trophies, pictures, and fabulous training tools, that backs onto a hangar packed with aerobatic aircraft. Instructor Shiloh Dudley kindly shows me around.

So what's on offer? As you would expect from someone who personifies the word 'excellence' there is plenty. However, I suspect that the school is what's most likely to appeal to most readers of this magazine. Several courses are already attracting students from all over the world, drawn from both professional and amateur pilot pools. One of the main temptations is the course in precision aerobatics to competition level. The tuition involves spin and upset training,

unusual attitude recognition and recovery, plus precision aerobatics, and tailwheel endorsements. Several graduates have already flown competitively and are edging up the US aerobatic rankings. Shiloh explains, "It's about my favourite part of the job, watching someone perform and do well at competition level and realise they can actually do it."

PWAS also offers one-day confidence building courses. Flown in the 8KCAB Super Decathlon, students gain assurance and ability by understanding techniques that will help give them greater control of their aircraft, plus improve their levels of airmanship. The day involves an introduction to deep stalls, cross-controlled stalls, spins and spin avoidance, unusual attitudes and recovery and basic aerobatics, such as aileron rolls and loops.

For those who dare, there are also five and ten-hour airmanship and basic aerobatics courses in the Super Decathlon, and even time spent with Patty (subject to her availability) in the Extra 300L. In addition to the skills offered in the one-day course, the longer programme offers thrilling sounding sportsman level aerobatics, such as: aileron rolls, slow rolls, barrel rolls, loops, half Cuban eights, and half reverse Cuban eights; the Immelman (based on World War 1 dogfighting techniques), hammerhead and Humpty Bump; as well as linking manoeuvres together and learning energy management. Shiloh explains, "Each course is tailored

to the student, but we generally start with deep stalls to give the student a feel for the airplane.”

The school is also offering unusual attitude and upset training for commercial pilots, as well as 30-minute introductory flights for those who want a taste of aerobatics. Patty also offers evaluations for airshow pilots who need to obtain a Statement of Aerobatic Competency as well as coaching for competition and airshow pilots, demo piloting and consulting services, formation trailing and photoship services.

On the day I was there she was effortlessly busy with a thousand jobs, supervising painting the office, unpacking a parachute to check for tears, arranging a course for an incoming student, planning her next fire fighting training (of which more later) and trying to find homes for new-born puppies.

This ability to slice tasks calmly into individual components and execute them precisely is evident in her attitude to flying. She eschews modern day conventional flight training, preferring to use good old fashioned piloting skills instead. She explains, “I do not teach primary flying used for crop dusting, pipeline patrol flying, bush flying, helicopter medical evacuation flying etc, using instruments inside the aircraft as the primary situational awareness tool. Rather I teach Dutch rolls, slow flight and stalls over the runway, energy management turns, use of ground effect on all takeoffs, and low level low power flying using sights, sounds, smells, and kinetics.”

She adds, “Aerobatics shouldn’t be scary. They are simply an extension of unusual attitudes and I want to teach people how to handle these situations. Because if you understand aerobatics...there are no unusual attitudes.”

She points out that this kind of training has not changed intrinsically since World War 1, the advent of aerobatic flying. Essentially airframe shapes have not changed a great deal since that time. She continues, “Sight is used 99.9% of the time looking at the ground. Airspeed, nor any other instrument is used in takeoff or landing.”



She has gradually eased off the airshow circuit, although still very much a vital presence on the scene when she does appear (she will fly several shows this year). “I wanted to try something different,” she says, adding that although she could continue flying airshows *ad infinitum*, she wants to push herself in different directions. So in 2010 she started flying for Cal Fire as an Air Attack pilot in the OV-10 Bronco during the California fire season. “It was a natural move for me,” she explains. “It offers the same kind of adrenaline as airshow flying, thinking about a dozen different possibilities as the fire spreads, and making split-second decisions.” The adrenaline is still present, as the skill required to perform the work involves circling well above the flames, so an air controller in the back seat can see what is happening with the wind beating the fire forwards, and offer the best routes for the tankers following that will extinguish the raging infernos. Her next aim is to learn to fly the tanker. She explains, “When I went for the job, the interviewing team were suspicious of my history as a performer.” Essentially they feared she might pull some maverick stunts. She countered, “Wait a minute! My flying has to be especially disciplined in an airshow because I do some manoeuvres that can hurt me if I am not disciplined.”

Even her flying training history is impressive. She learned to fly in Alaska in the early 1980’s in extreme weather, through mountains and glaciers. By 1984 she was flying aerobatic competitions and six years later had risen to become the first woman to win the overall US National Aerobatic Championship title, a trophy she took for three consecutive years. She stopped competing in 2002, but has continued performing in an Extra 300S. She also spent nine years flying as a demonstrator pilot for Raytheon, piloting a turbine-powered Raytheon T-6A Texan II. But aerial fire fighting has got under her skin, and she is continuing training in order to fly one of the S-2T air tankers that pour retardant liquid over the furious flames.

She is also an avid animal lover, and applies her razor sharp pursuit of excellence to animal charities both at home and internationally. For ten years every other winter she volunteered as an instructor to the pilots of Kenya Wildlife Service, an organization devoted to animal conservation. The day before we met we’d hoped to do a rescue flight for the charity “Pilots n Paws,” the charity she supports, which helps rehome animals due to be euthanised, alas the weather put paid to that, too.

A couple of days spent with Patty Wagstaff are a genuine breath of fresh air. She is a living embodiment of how to do life to the full, and a trip to her St Augustine base is well worth the effort to add some inspiration to your life. In the wise words of Helen Keller, “Security is mostly a superstition. It does not exist in nature, nor do the children of men as a whole experience it. Avoiding danger is no safer in the long run than outright exposure. Life is either a daring adventure or nothing.”

Check out PWAS at
www.pattywagstaff.com
or call +1 904-806-5778

Patty is performing this April at the MCAS Beaufort Airshow and Sun 'n' Fun 2015, as well as EAA's AirVenture Oshkosh in July and Embry Riddle's Prescott airshow in October.





"Follow your bliss, and doors will open for you that you never knew existed. Follow your bliss and the universe will open doors for you where there were only walls."

– Joseph Campbell.

Patty Wagstaff

Awards and Honours

2013, Wings Club, Outstanding Aviator Award
2007 Inductee, International Aerospace Hall of Fame
2006 Inductee, Air Show Hall of Fame
2006 Aviation Week & Space Technology Laureate, Philip J. Klass Award for Lifetime Achievement
2005 Recipient, Air Force Association Lifetime Achievement Award
2005 Inductee, International Aerobatic Club Hall of Fame
2005 Katherine Wright Award
2002 Katherine and Marjorie Stinson Award
1998 Bill Barber Award for Showmanship
1997 Recipient, NAA Paul Tissier Diploma
1997 Inductee, Women in Aviation International Hall of Fame
1997 Inductee, Arizona Aviation Hall of Fame
1996 Recipient, Charlie Hillard Trophy
1996 GAN & Flyers Readers Choice Award, Favourite Female Performer
1996 Top Scoring US Pilot at World Aerobatic Championships
1985-1996 Member, US Aerobatic Team
1995 Recipient, ICAS Sword of Excellence Award
1988-1994 Winner Betty Skelton "First Lady of Aerobatics" Trophy
1994 National Air and Space Museum Award for Current Achievement
1994 NAA Certificate of Honour
1993 International Aerobatic Club Champion
US National Aerobatic Champion 1991, 1992, 1993
US National Aerobatic Championships
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Cessna 172	2
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PA28-181 Archer	1

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PA28R Arrow	1
Cessna 152	2
Cessna 172	2
Grob 115	2

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PA28	5
Cessna 152	4
Cessna 172	1
Robin 200	2
PA44	1
C172 Amphibian	1
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PA28 161 Warrior III	2

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PA28	3
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Book Reviews

The Last British Dambuster

By George 'Johnny' Johnson

ISBN: 9780091959742

Ebury Press Hardback

£18.99

If you wish to read one man's honest and frank telling of a very unusual life, this is the book for you. After a more than difficult upbringing on a Lincolnshire farm, in extreme poverty, with his mother dying before he was even three years old and a very hard man for a father, 'Johnny' (real name George) relied on his sister; she was only seven years his senior. He was isolated from civilisation and his best friend was a farm pig.

However, his fortunes changed when, initially without his father's knowledge, he gained a place at Lord Wandsworth Agricultural College in Hampshire. This boarding establishment existed for the children of agricultural families – either orphans or those who had lost one parent; it was run by military men – 2 retired colonels and a captain – and clearly the discipline, coupled with an understanding of each boy's needs and shortcomings, helped 'Johnny' to

shed his shell and emerge into the real world. The story of this alone makes worthwhile reading.

At the outbreak of war in 1939, the author applied to join the Royal Air Force. He failed a pilot's course and openly admitted that he was not up to the mark, so he remustered as an air gunner; he was determined to oppose Hitler and this path would be the quickest route to operational service. Starting as a rear gunner, the author describes the innards and workings of the Lancaster and adds an important appreciation of the sound and smells of the four Merlins – often described lovingly by many as Merlin music. His time in this role was limited and soon he swapped ends to become the bomb aimer in the seven-man crew.

Soon some air crew were invited to volunteer to take part in a very special, highly secret and dangerous operation. The 133 men selected were to join a new squadron – the now famous 617 – that was formed especially for the purpose. The participants were not given any idea of what the mission would be, except that it would be carried out at very low level. Many weeks of training at little more than rooftop height, by day and, later, at night, enabled the crews to master the art of such procedure which were wholly foreign to a heavy bomber's normal practices.

The targets, as the title of the book reveals, were three German dams deep in the heart of the Ruhr Valley. Much of the story that followed has been the subject of extensive publicity, including through the film *The Dam Busters*; however 'Johnny', as the only British survivor today (there are two others – a Canadian and an Australian) gives a unique and very personal insight into the whole operation. Although 'Johnny' provided the truth of his life, we must extend credit to his son, Morgan, who assembled the details and has presented the story in a very easily readable package. In doing so he tells us much about many people, from fellow crew members to some very senior officers.

With a post-war permanent commission, 'Johnny' Johnson remained in the RAF for 22 years, but in 1962 decided, as did many others, that it was not the service that he had joined. How many times have we heard this

factual statement? He decided to try his skills at teaching and this sequence of events adds further spark to the overall picture of his life, completing his working days handling the education of mentally handicapped adults. Throughout this and his previous activities, his much expanded family played – and continues to play – a very key part. What a sound change from the days of his early childhood. My advice? Read it!

David Ogilvy

Decision Height

By Jonathan Hilton

Available as a Kindle Edition from Amazon, from £4.99.

Also available in print paperback format from the author.

Jon Hilton is a man addicted to high-risk adventure, but he does not know it. Nor does he realize this even after completing successfully and barely surviving his 17 day dash from UK to Canada over Iceland, Greenland and back in a small, carbon-fibre micro aircraft with a single small petrol engine.

Decision Height is aptly titled. The tension and suspense whether the Aviator and Author will or will not survive while flying through the horrendous weather systems over the Northern Atlantic and volcanic terrain



THE ULTIMATE EXPERIENCE



of Iceland and the ice-berg laden waters off Greenland comes through on every page of this unputdownable book.

The writing style is unusual but extremely readable for this genre of true aviation adventures. Each paragraph is a staccato description of the dangers of flying such a small and fragile aircraft over the cold ocean, with no chance of survival or rescue in case of a ditching in the water.

The words are in English, but the tension-riven story is of a "Northerner" taking refuge, from the very real dangers to his life and aircraft, by mocking everyone he meets and most of all his own failings. The reasons for making this flight could be as vapid as a bet made while under the influence or simply to do something dangerous for the sake of it, without realizing how much more danger there is than ever imagined or planned for.

Jon's motivation is personal and also public spirited as he has raised more than £13,000 for a Cancer Charity by doing this flight. He was also awarded the Britannia Trophy in 2014 by HRH Prince Andrew for becoming the first person to fly from Britain to Canada and back in a microlight aircraft.

The courage of character comes through despite the fears that boil through Jon's mind as his engine oil is cooled rapidly and ice forms on his airframe as he battles west bound through the Arctic Air. The flight sometimes comes close to "hitting the fisherman standing up in his boat" as he flies very low, out of range of radio contact and out of sight of land for much of the journey.

The Author (with whom this Reviewer is personally acquainted and has flown together) has a very posh accent on the radio in flight, but writes like a right lad with expletives where necessary. His maximum ire is reserved for those invisible bureaucrats who try to impede his progress with paper chases and for those who say they would assist but actually create more problems.

I read "Decision Height" on my tablet computer as a Kindle version and was pleased to see the photographs of good quality showing the rugged and inhospitable terrain of Iceland and Greenland as well as the icebergs at sea and in the fjords where many of the airports along this route are built in sheltered area snuggled in steep valleys.

The route has been well travelled by small and large aircraft over many decades and it is a well known fact that there are quite a few that have not survived the journey, in either direction, due to atrocious weather conditions, with wind speeds reaching more than 100 miles per hour and freezing rain, with clouds extending from the sea surface to well over 15,000 feet above.

Jonathan was very lucky on this 5,500 mile journey, to find a way through some testing weather conditions, which caused the flight and engine instruments to fail due to the cold and water ingestion. He was constantly required to make decisions about which level to fly at, whether to stay below freezing layers of clouds and skim the waves of the cold

blue sea or to climb within a clear patch of sky to fly over the layers of cloud in freezing cold air with temperatures well below zero, accumulating ice on the wings, destroying lift. The modern CT microlight with a not very powerful engine, continued to work faultlessly. The lack of an autopilot meant the Author had to be alert during every moment of the flight, without the opportunity to reduce his work load of piloting or decision making on this pioneering flight.

His journey was not made any easier by the terrible hostels and food he had to endure on the journey nor was there any safety net as he could not find any insurance company to cover his aircraft for this journey. Some of the people he met, went out of their way to help him, as strangers are sometimes keen to help

eccentric adventurers of all sorts.

Jon describes his innermost thoughts about the fragility of life, both his own and of his father. He also talks with love and sharp-toothed humour what he has in store in his last will and testament for his dying father as well as his ex-girlfriend, the mother of his child.

The book is an honest tale of a complex character, who seems to have chewed off far more than he could have imagined and how he copes with it, without any self aggrandizing intent. I could not put it down once I started reading it, sometimes brushing off tears and at other times cheering the silly sod onwards. Thoroughly recommended read for anyone who likes a racy adventure yarn, told with no punches pulled.

Deepak Mahajan



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Letters

"The drone invasion"

As the erstwhile editor Pat Malone made my letter about UAV operations the subject of an article in the February issue (*The drone invasion, p.8*), in the same spirit of constructive debate I'd be grateful for the right of reply. As it happens, I gained my PPL(H) in 1985 and have Brantly, Enstrom and Robinson R44 flying hours but I certainly wouldn't claim special rights over the airspace below 400', as his piece seemed to do on behalf of helicopter pilots. The fact is that all disciplines of aviation share this space when taking off and landing and some (e.g. the military) use it at other times.

It's also a fact that, in the UK at least, commercial UAVs are far from 'blind' as they are required by law to fly within Line of Sight of the operator. As they are virtually silent their operators will be aware of, and able to avoid, any helicopter in the vicinity well before the pilot of that helicopter is even aware of their exact location (whether or not he has consulted the 'figleaf' NOTAMS)

. One of our quad-copters weighs no more than an eagle but is more expensive than a second-hand R22, so we aren't going to be flying it carelessly. In any case, the Aerial Work regulations are pretty rigorous - all our pilots have UAV and RT licences and a number have flying experience in other disciplines including paramotors and, guess what, helicopters.

I've never considered 'profit' a pejorative term - I'm very proud that one of the businesses I run has put over 250,000 bums on seats for trial lessons in light aircraft of all disciplines over the last 25 years. We all have to earn the money to pay for our flying somehow and even flying clubs must at least wash their faces in this commercial world. The likelihood that UAVs will put commercial helicopters out of business is vanishingly small. To their credit, Network Rail can see that the two disciplines are complementary - when did you last see a helicopter legally hovering *underneath* a railway arch, for instance? Other infrastructure companies are drawing the same conclusion.

Pat would have been wiser to concentrate his fire on the real problem, which is the proliferation of unregulated drones that now cost next to nothing and are operated by amateur 'pilots' with little or no knowledge of air law or safety regulation. But he needs to be careful what he wishes for - it is not inconceivable that, to counter this threat, one future regulatory response might be to make



filing a NOTAM a requirement for every private flight into and out of an unlicensed site - and none of us wants that sort of extra imposition on our precious freedom to fly.

Andrew Dent

"Old dogs, new tricks"

Dear Sir,

I didn't think the February "General Aviation" article on GPS (Old dogs, new tricks) was very balanced. It doesn't make the distinction between IFR-approved/approach approved GPS units and handhelds sufficiently clear. Yes, there are problem areas with using GPS and training is a must, but with proper training and currency on IFR-capable units, then the problems mentioned in the article don't exist.

More importantly, I think the author's view about the Resolute Bay accident is completely misleading. He says:

"A very interesting but shocking of an example of an accident (not caused by a series W-GPS unit) but resulted in a number of fatalities can be found on the web (gives search details)" and the goes on to say:

"In my opinion, all pilots who intend to fly R/NAV approaches should read this accident report. What is particularly interesting is that it involved a public transport aircraft with two qualified crew on board. It demonstrates clearly how a very-easy-to-make mistake can have a disastrous result."

This accident and the report have very little to do with GPS. In summary, what happened was:

The B737 planned an ILS approach to runway 35 at Resolute Bay in northern Canada. In IMC, the aircraft hit a hill well to the right of the runway centreline, abeam of the runway.

Resolute Bay is so far north that

directions are defined in degrees True. Headings are then flown using normal DIs or HSI's which have been set to true north. DI gyros are prone to a variety of errors due to precession, latitude and movement across the Earth. So the aircraft was flying an ILS to runway 35 T using an intercept to the localiser also in degrees T. The captain was pilot flying and he set up an intercept course to the localiser and programmed the autopilot to fly the 737 so as to capture the localiser. The autopilot began to capture the localiser and turned the aircraft towards it.

Unfortunately, the captain moved the control column with the effect that the autopilot mode changed from localiser capture armed mode to heading mode and the crew did not notice this.

The aircraft flew through the localiser and began to fly a course roughly parallel to the localiser, but slightly divergent. The captain realised that the localiser had not been captured. However, his DI had a substantial error and showed a heading which should nicely re-capture the localiser with a 17 degree intercept. So he was happy. The P2's DI was correct and he realised that they were slowly diverging from the localiser. He also realised from the GPS (which was set up for the 35 T GPS approach, with the same final approach track as the ILS) that the aircraft was right of track and not correcting.

The P2 made several efforts to point out to the captain that they were not capturing the localiser, but the captain disregarded this because his DI showed a reasonable intercept.

There were a number of other problems - excessive speed and late configuration for landing which distracted the captain. The approach was unstable, a mandatory go-around below 1000ft aal.

The ILS display eventually showed full fly-left. Also a mandatory go around, which was ignored and the aircraft crashed.

All of the time, the GPS was showing the correct picture, that the aircraft was right of the final approach course; P2 informed the captain, but was ignored.



Proper training on IFR-capable and approved GPS units can go a long way to making sure pilots don't get into trouble through over-reliance.

There were many causes to the accident and many failures of procedure which could have prevented it, but they included:

- The captain's DI error not picked up.
- The wrong autopilot mode.
- The unstable approach.
- Failure to follow SOPs.
- Poor CRM between the two pilots.

GPS was not mentioned in the 18 findings as to cause. It was not a cause at all and it is misleading to highlight the accident in the GPS article. The GPS system was used to navigate to 10nm final fix, and this procedure was successful. The author of the article draws an unfair conclusion that this accident was about an "easy to make [GPS] mistake." This is a great shame, because his other points about training and database currency are valid.

Alan Evans (IRI)
Duxford

Chris Martin's replies:

There was no intention on my part to make out that "GPS is the devil." This is why I said in my article; "Please do not interpret my observations and comments wrongly. Pilots should embrace this existing technology, but with caution. Get trained, and exercise caution when using it."

However, I accept Alan's criticism, because clearly I failed, in part anyway, to make my point clear to readers, and the Resolute Bay incident was possibly a poor example to use in the article. However, what I do know, and only too well, is that where and when an incident does occur (here I am not just referring to aviation), in most cases, it often occurs not just as a result of one hazardous event happening i.e. a chain of events.

The point that I was attempting to

highlight was, that in situations where things are already going wrong, or, not going according to plan /normal / as expected, for whatever reason, and in aviation there could be many causes, such as ATC problems, very bad weather, systems failures etc. A pilot who is possibly more familiar with using ground based aids over a number of years, can, given the circumstances of a complex and pressurising sequence of events occurring one after the other, as seems to me to have been the case in Resolute Bay, reach a state of confusion between the information the ground based aids are telling or supplying them with and that which the GPS is furnishing them with, possibly leading to an unintentional human factors error occurring.

In the Resolute Bay incident the GPS was in fact doing what it had been programmed to do. However, even after reading the report again I still personally feel, rightly or wrongly, that confusion occurred for a short period, and vital time might therefore have been lost.

As a qualified Occupational Safety and Health Adviser, as well as a FI / CFI of 35 years, I am mainly concerned with the 'big picture here' which to me is safety, and not to re-write an air accident report on one incident.

Yours sincerely,

Chris Martin

Saving Old Sarum?

I'm contacting you with regarding to your article in this months General Aviation [Feb. p11] regarding saving Old Sarum. I wanted just to clarify a few points you have raised in your piece. I'm an active member of the Facebook group and also a local resident.

I have lived for 25 years in the hamlet of

Ford close by OSAF, and bought my home knowing that it was an active airfield and have always enjoyed the busyness and sight of the planes, particularly at the weekends. In fact, my son is currently training to obtain his ATPL because growing up under and in close proximity to it, inspired his fascination with flight and aviation in general.

Firstly, there are three areas up for development, not two. Our group is not anti at all, far from it. We believe that many people have been misled by some of the statements issued by the developer in order to get a sympathetic press from people who are not local. It is also worth bearing in mind, It's not ALL about preserving the flying; it's about also saving a one hundred year old airfield including all its surrounding buildings in the conservation area. It's also about preserving the green space and keeping the perimeter intact which is the only one of its kind in the whole country.

You refer to building being 'close to the perimeter' but the proposal is actually INSIDE the perimeter, which will destroy 65% of it. Which is one of the principle reasons that the Conservation Area was granted in the first place. Your suspicion that the people claiming to save Old Sarum are the same people who have complained about alleged noise for the last decade is also unfounded. We have no issue with the planes at all. Remember we live here through choice and the airfield has been here much longer than we have. The owner of the airfield refers to complaints some of which we know are from individuals who moved away more than ten years ago!

Requests to see the complaint logs have been ignored, which may make one wonder if they are 'building a case' for eventual closure anyway. Area C, the site that you mention, IS directly in front of residential homes and you may not be aware that a large proportion of this includes land owned by a separate individual, so will NOT be contributing directly to the sustainability of the airfield. The owners of OS are stating that this will ensure flying for another 100 years. A very bold statement. No one can make an commitment like that.

Under Wiltshire Council policy, 40% of new homes will have to be affordable housing so many people will be housed next to an active airfield through need not choice. Therefore, more noise complaints are inevitable which will further contribute to the demise of flying.

The owners are very reticent to disclose how much is actually needed to maintain the site and have not shown that they have actively explored other areas of fundraising.

This is massive over development. Once the building starts, the future of this historic site is doomed.

Thank you for taking your time to read this and please feel free to come back to me with any points you wish to raise.

Regards,
Sarah Champion

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My Flight...

Pauline Vahey

Pauline gave up a high-flying sales career in the IT industry to be closer to aviation. Her new day job (and they are long shifts!) is at White Waltham Airfield ("Waltham Radio").



I'm often asked why I have an interest in flying, indeed why I'm passionate about it and can't live without it. Every time I meet old friends they always ask, "Are you still flying?"

My father was a Wellington Bomber Captain in World War II, operational in northern Italy, bombing the Germans. In particular I recall from his stories the marshalling yards at Verona, and dropping supplies to the Partisans in the area that became Yugoslavia. His tales of 'derring do' meant that I had three ambitions in life: to fly, to explore the Amazon jungle, and to speak French. I've put the Amazon jungle on hold and did French at school so that was OK.

After university I was introduced to gliding and after my first winch launch at RAF Bicester I was completely hooked. It was affordable, which power flying wasn't at that age. I glid (note, glider pilots say glid as the past participle of glide) for ten years, becoming an assistant flying instructor and owning shares in a number of gliders. I flew in regional competitions and had the most amazing experiences, for example flying in a wave at Aboyne, 17,500 feet above the coast of Scotland at minus 20. Simply breathtaking! It was really challenging flying too.

I converted my gliding qualifications to a PPL in 14 hours in March 1987 and have flown power ever since. In 'those' days I didn't have to do a QXC, so my first cross country after gaining my licence was to the Alderney fly-in (via Bournemouth on the way there and Southampton on the way back). I only wish I could afford the landing and handling fees now! That November I went to Florida and also flew a C172 from Rochester International, New York state, across Lake Ontario and Niagara Falls. Then I came home and completed my IMC rating.

I forgot to say that at 21 I went for my Class 1 medical and failed on eyesight, so British Airways was out, and I moved on.

Since then my flying has been about touring. Following on from my days owning shares in gliders, I've had a share in and run two C182 syndicates. The latest one had the Garmin 1000 full glass cockpit.

I've flown around Europe, as far as Marrakech and Albania. This period was interrupted by a year spent in Las Vegas, from where I flew a C182 around the south-western deserts. I've flown across all the five manmade lakes on the Colorado and actually completed a sea plane rating in a Super Cub on Lake Havasu.

I joined the British Women Pilots' Association (BWPA) in 1981 as a glider pilot and have been a member ever since, being elected to the Executive Committee during the 1980s. I rejoined the Committee in 2006 and took on the role of public relations, with a specific objective being to nurture relations between BWPA and other like-minded organisations such as AOPA. The BWPA now has strong relations with AOPA, RIN, RAeS, HCAP, BGA, BMAA and GASCo, although I don't take credit for all of these.

During my association with the AOPA Members Working Group (MWG) it has changed from me being one of two women attendees, to me being the only woman and chairing the committee. The MWG meets regularly through the year and takes the concerns of our grass roots, our members, and does something about them – for example

keeping the IMC rating, now the IR(R), and improving GAR submission with online GAR. I'm now a member of the AOPA Executive Committee and am also a board member of the British Light Aviation Centre Ltd, which trades as AOPA in the UK.

I've also been elected as the chairman of the BWPA, which this year celebrates the 60th (Diamond) anniversary of the founding of the association. This took place on the 30th May 1955 at White Waltham Airfield. It was established by female ex-Air Transport Auxiliary pilots who found that trying to fly after the war was still a challenge, women still being in a world of entrenched views of what they should or shouldn't be doing.

For those who don't know, notable women members have included; Freydis Sharland, first female winner of the Kings Air Racing Cup (and our first chairman in 1955); Yvonne Sintes, the first woman to captain a passenger jet; Lettice Curtis, the first woman in the world to ever fly a four engined military aeroplane; Anne Burns, the first British woman to get a Gliding Gold C; Sheila Scott, with her world breaking solo flight around the world; Brenda Horsfield, a past chairman who contributed to the Equality Act; Lynne Barton, the first female British Airways Captain; Barbara Harmer, the only female Concorde pilot; Kirsty Murphy, who was awarded our scholarship and went on to become the first female Red Arrows pilot... and the list goes on. Lord Brabazon of Tara (Britain's first licensed pilot) was the first honorary member of the association, and he was a great supporter.



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