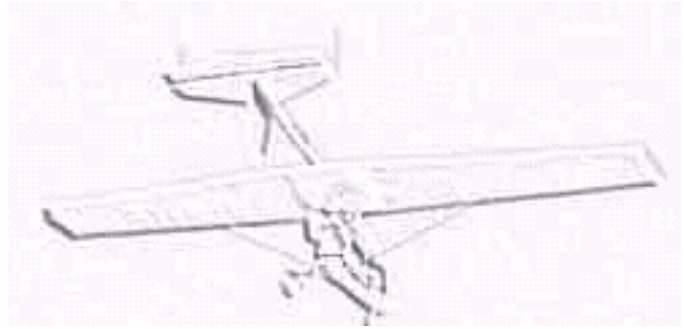




A member of the General Aviation  
Awareness Council



# Shadow Owners' Club Newsletter Summer 2006

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### **New Members**

There haven't been any new members in the last 3 months.

Membership currently stands at 46.

### **News from David Cook**

No news received.

I have received a request for information regarding fitting floats to Shadows. I can remember seeing pictures of the demonstrator, G-BONP, with floats fitted, so I have written to David, to ask for any details.

*D. G. Cook,  
Hillcrest,  
Aldeburgh Road,  
Aldringham,  
Leiston,  
Suffolk,  
IP16 4QL.*

cookshadownewbit@aol.com



No further information has been received regarding Bella.

### **News from the Shadow Flight Centre**

No news received, but there is an advert for SFC at the end of the newsletter. Raymond is now able to conduct biennial flights for revalidation of JAR/PPL SEP ratings.

I'm planning an article about the Shadow Flight Centre, for the next newsletter.

*Shadow Flight Centre,  
Hangar 3,  
Old Sarum Airfield,  
Salisbury,  
Wiltshire.*

*Tel. 01722 410567*

*Fax. 01722 410678*

### **More from Danny**

Nothing to do with Shadows this time, but Danny's latest venture involves solar roof panels. They were originally intended for his own roof, but he has supplied panels to other people. There is a black surface, over which is a transparent surface, with a gap of a couple of inches. Air is passed between the two surfaces with the aid of a fan. On an overcast day a month or so ago I saw the panel in operation. The difference in temperature between the air entering the panel and that coming out was 50°F. Danny has calculated that each panel will be able to supply more than 1kW.

*D & J Crosbie Engineering,  
'Mere',  
Bures Rd,  
Lt. Cornard,  
Sudbury,  
Suffolk.*

*CO10 0NW*

### **Registration changes**

I'm not aware of any Shadow registration changes in the last 3 months.

The PFA reports that a Shadow has been cleared for flight. G-CBGI, a bright yellow Streak, is from the Bath area.

### **Mode S Transponders**

The CAA, bless their cotton socks, have started a consultation exercise on the mandatory carriage of Mode S transponders in all aircraft flying in all airspace by 31st March 2008. There is a deadline of 29th August this year for responses to the consultation.

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The CAA say that they want to introduce Mode S so that they can increase usage of regional airports, without having to increase the size of Class D controlled airspace to achieve the desired levels of separation.

They also point out that the International Civil Aviation Organisation (ICAO) specifies that all aeroplanes (which they define as 'a power driven heavier than air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight') and helicopters, irrespective of the airspace in which they operate, must carry pressure altitude reporting SSR transponders. At the moment the CAA has filed a 'difference' with these regulations.

They also want to make it safer to allow the use of unmanned aerial vehicles (UAVs) in uncontrolled airspace. *Would you like to trust your safety against an aircraft that might be being controlled by Microsoft Windows?*

Another point raised is the impact of wind turbines on aviation. A number of wind turbine projects have been objected to by local airports, on the grounds that the wind turbine blades will mask radar signals. This is a real problem (*My day job is as an electronic engineer for a radar manufacturer, which incidentally has been working on a project for the government to mitigate these radar effects*).

It's not just the CAA who have had an oar in this topic. It also includes the Department for Transport (DfT), the UK Spectrum Strategy Committee (UK SSC), the Department of Trade and Industry (DTI), the Cabinet Office Better Regulation Executive (*no comment!*) and the Ministry of Defence (MoD).

The current type of transponder always responds to the interrogation signal from

the ground station. If every aircraft carried a Mode A/C transponder then the system would become overloaded. Equipment is available at the ground station to filter out the signals from the aircraft furthest away, but that negates the whole purpose of everyone transponding.

Because Mode S transponders have a unique code, as opposed to Mode A/C where the code is set to one of 4096 values (4 digits of 0 to 7) by the pilot, it allows the transponder to be interrogated individually, thus allowing a reduction in the load on the ground station.

The European requirement (*you didn't suppose Europe didn't have a hand in all this, did you?*) is as yet undefined, and it looks likely that the CAA's implementation date of 31st March 2008 will be before the European requirement has been finalised. The statistical argument for all this stems from the European assumption that air traffic in Europe will double by 2022. (*Personally, I believe that this is a false assumption. I don't see how we can hope to achieve the planned reduction in carbon emissions with the existing level of commercial air travel, let alone with doubling it. Sooner or later common sense must prevail and we will stop the upward spiral*). The CAA are claiming that the increase in commercial air travel is fundamental to the success of the UK economy.

The en-route system already requires commercial aircraft to carry Mode S transponders, so there is less chance of the likes of us swamping the SSR (Secondary Surveillance Radar) system if we have Mode A/C.

There will be no change to the risks of us meeting military aircraft, as there is no requirement for military aircraft to carry ACAS.

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At the moment a Mode S transponder is likely to cost you in excess of £2000. Unlike with C of A aircraft, fitting of them to Shadows will be simpler and cheaper, but I have no space in my cockpit for one, and I presume many people will be in a similar position. In addition to this, they seem to require a significant amount of power, which may be a problem to us, but which will be significantly worse for owners of aircraft with no electrical supply; gliders, for example.

Many of you will have seen the pictures in the flying press showing the newly developed portable transponder. It appears to be about the size of a shoe box. Very little detail was given in the article I saw, but I certainly didn't see the words 'low cost' associated with it.

The PFA has also mentioned the possibility of danger from the transmissions. The transponder is likely to put out more power than the normal radio (the low power versions are supposed to be between 20W and 30W, with the normal ones around 80W), and is doing it for much more of the time (If you've ever flown in an aircraft which is transponding, you will have seen the flashing light on the front panel which shows when it is being interrogated). It may not be a problem for owners of metal aeroplanes, but we are not protected from that radiation in ours.

There are a number of options mentioned in the document.

**Option 1** is to do nothing.

**Option 2** is to require SSR Transponder carriage on all aeroplanes and helicopters.

**Option 2(a)** is to require SSR Transponders with an ADS-B capability on all aeroplanes and helicopters.

**Option 3** is to require SSR Transponders on all aircraft.

**Options 3(a)** is to require SSR Transponders with an ADS-B capability on all aircraft.

ADS-B is Automatic Dependent Surveillance - Broadcast, and is a system which relies on aircraft automatically transmitting unsolicited 'radar-like data' at regular intervals. The information is then received by other similarly equipped aircraft and ground systems, and the position of the aircraft is displayed to pilots and controllers. The information for the position would be derived from a GPS receiver, but the receiver would have to be approved under Technical Standard Order (TSO) 129, C145a/C146a, or European TSO (ETSO) C145a/C146a, which set out the minimum certification standards for GPS. (*That sounds expensive!*)

The consultation document runs to 65 pages, including appendices (I refuse to use the word annex, since a: the word 'annex' is a verb, and b: an annexe is an extension to a building). It can be found by going to the PFA web site ([www.pfa.org.uk](http://www.pfa.org.uk)) and clicking on the Lobbying link on the left hand side.

The PFA are urging pilots to take an interest in this subject, since it could cost us all a great deal of money, with little if any benefit.

I have heard allegations that the introduction of mandatory transponders is so that the CAA can tell where we all are, and where we go, so that they can levy further charges, in a similar vein to the 'road charging' ideas being put forward for cars.

<b>News of Sky Watch</b>
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Sky Watch has signed a Memorandum of Understanding with the Maritime and

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Coastguard Agency, which will endorse Sky Watch as a resource recognised by the MCA. This is the first real official recognition of Sky Watch's work. Those pilots who base their aircraft within range of the Coastguard bases are invited to sign up to the scheme, allowing the Coastguard to call upon the services of the Sky Watch pilot in the event that a search is needed.

The typical scenarios are envisaged as being similar to the air observation task carried out by Yorkshire Sky Watch aircraft when they mounted standing air patrols over the Scarborough coast when over a hundred volunteer searchers scoured the cliffs, coast and beaches in the area, some in rubber dinghies. The Yorkshire aircraft were able to keep a constant safety check on the searchers as there was a natural element of danger to the people involved. Other roles are missing person searches in conjunction with Coastguard and Mountain Rescue teams.

Following a presentation, given to the Somerset County Emergency Planning Unit by Neil Holt and Eddie Bishop of No: 14 CASU, the Sky Watch unit is now formally recognised as an emergency resource. Neil has been invited to represent Sky Watch on the Emergency Planning Unit's Volunteer Advisory Panel.

There has been communication between Sky Watch and Farm Watch, with a view to Sky Watch helping the farming community with security matters.

Sky Watch has now achieved Charity status. It had previously come under the umbrella of another charity organisation, which has since closed. Its charity number is 1113079, and the objects of the charity are:-

"To promote for the benefit of the public, the preservation and protection of people and property, by the use of aerial

observation over land and water, in order to identify situations where people and/or property is at risk and by working with and reporting such incidents to the statutory Emergency Services and such bodies as deemed appropriate."

Sky Watch are holding their first national fly-in and AGM combined, on Sunday 23rd July, at Fenland Aero Club, Holbeach St. Johns, Lincolnshire.

*Sky Watch Auxiliary Air Service,  
Central Office,  
4, Whitehorse Close,  
Lower Wick,  
Worcester.  
WR2 4EB  
Tel./Fax. 01905 429694  
Email: skywatch21casu@tiscali.co.uk  
www.skywatch.org.uk*



The GAAC's AGM was held on Friday 21st April. They had managed to persuade the Parliamentary Aviation Group to attend.

There isn't much in the way of news on the GAAC web site.

### **Fly-ins 2006**

The following destinations are planned for 2006

#### **My own strip, in Norfolk. (Sunday 23rd April)**

Unfortunately the weather was not kind to us, with the visibility less than I would have liked for a local flight, and as a result no-one felt able to make the trip to Norfolk.

I did have one phone call from a member who said that he had hoped to fly in. I may try again later in the year.

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### **Tibenham (Sunday 18th June)**

The weather was hot, as it usually is for this event, but I was working that day, so was unfortunately unable to attend. I was actually working at the strip where I keep my aeroplane, so it was a little frustrating.

Another pilot from my strip went, in a Kitfox, and he told me that the air was very bumpy.

The Breckland strut's barbecue and cake stall is legendary, and they've been blessed with sunny weather for as long as I can remember.

[www.brecklandstrut.co.uk](http://www.brecklandstrut.co.uk)

### **Henstridge (Sunday 16th July)**

Members Paul Mogg and John Porter are organising a fly-in to this airfield in Somerset. There will be food available to buy. The airfield manager will be donating the landing fees to the Air Ambulance, which is based at Henstridge.

### **PFA Rally - Kemble (18th - 20th August)**

At least this year the rally doesn't clash with what in my view is the best airshow of the year, the Flying Legends Airshow at Duxford (8th and 9th July).

<b>Contributions</b>
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Once again I'm short of material.

Someone else must have some interesting trip, picture, or story to share with us. It doesn't have to be in matchless prose, or even provided electronically, although it makes it easier to deal with if I haven't got to type it in. Some scribblings will do, as long as I can read them. (Please!)

If you'd like to organise a fly-in at your local airfield I'd be delighted.

<b>Adverts</b>
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Apologies to those of you who are familiar with the web site, as these adverts are copied from there.

If any of these adverts are no longer valid, please let me know so that I can remove them. I have decided that, rather than leave the adverts on indefinitely, I will remove them if I've heard nothing for six months. If the advert is still valid then I will put it back on request. That way we will reduce stale adverts, which do no favours to any of us.

### **WANTED**

**(16/02/06)**

Tony Halsall is looking for an approved ferry tank. He's also looking for a prop. for a 912 installation. Tony Halsall 07789 171553

<b>Autumn 2006 Newsletter</b>
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The Autumn 2006 newsletter is due out in the last week of September.

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THE  
**SHADOW**

FLIGHT CENTRE

CFM Shadow & Streak Shadow **servicing & repairs**

**Inspections** & check/ test flights, both **PFA & BMAA**

**Rotax** engine servicing

Microlight **pilot's licence** on the school, or your own,  
aircraft

**CAA Microlight Instructor ratings** and tests

**Biennial flights** for revalidation of JAR/ PPL SEP  
licences



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