

# GASIL

GENERAL AVIATION SAFETY INFORMATION LEAFLET

The CAA Accident Prevention Leaflet

2 of 2006 issued June

## Was this you?

The Directorate of Airspace Policy's Surveillance and Spectrum Section has recently been monitoring and recording transmissions made in UK airspace on a number of frequencies. The following are examples of transmissions recorded on 123.45MHz during the weekend of 17 and 18 September 2005 in the vicinity of Cambridge.

*'It's not a bad aeroplane I guess; at least I get a comfortable seat ... the one we had before was just awful'.*

*'Have you received my envelope with the money by the way?'*

*'I did, I think I did at least'*

We are not able to print some of the other transmissions. The recordings show that despite publicity in the past, there are still a small number of pilots using 123.45MHz as a chat channel, blatantly in some cases. The frequency is co-ordinated internationally for use over remote oceanic areas out of the range of VHF ground stations in order to facilitate the exchange of operational information only. In the UK, the frequency is allocated for operational control communications, that is communication between a company to which it is allocated and its aircraft. It is NOT to be used for social chit-chat such as the transmissions above or for arranging to meet your mates down the pub or, as in the case of one pilot, making critical comments about the poor take-off technique of other pilots.



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## Aerodrome Traffic Zones

The length of the main runway at Coventry aerodrome has recently increased. Since the notified runway length is now greater than 1850 metres, the Director of Airspace Policy increased the size of the aerodrome traffic zone (ATZ) on 11<sup>th</sup> May this year. The ATZ radius is now 2½ nautical miles.

We take this opportunity to remind everyone of the requirement contained in the Rules of the Air Regulations 1996, specifically that part of Rule 39 governing flight within an aerodrome traffic zone during the notified hours of its air traffic control unit (or in the case of a government aerodrome, within the

notified aerodrome operating hours, irrespective of the status of ATC). These 'notified hours' will

**an aircraft shall not fly, takeoff or land... unless**

normally be contained in the individual aerodrome's information contained in the aerodrome section of the AIP, which can be downloaded free from the [AIS](http://www.ais.org.uk) website [www.ais.org.uk](http://www.ais.org.uk), but may be amended by NOTAM. Information on the operating hours

for other ATZs is contained in the en-route section of the AIP, at ENR 2.2.

Rule 39 states, among its other requirements, that an aircraft shall not fly, takeoff or land within such an ATZ unless the commander has obtained the permission of the air traffic control unit at the aerodrome. If this permission has not been obtained, or worse, if ATC deny permission, the pilot is breaking the law if he flies inside the aerodrome traffic zone during the notified hours. This applies even if the pilot believes he has a special relationship with the aerodrome concerned – permission is still required.

## Aviate!

The AAIB's bulletin 2 of 2006 contains a report on an accident to a Thorp T-18. It seems the pilot noticed spots of oil on the windscreen and decided to land to investigate the problem. However, the aircraft appears to have stalled on the final approach and was damaged when it hit the ground short of the runway. The pilot's assessment of the cause was that he had allowed himself to become pre-occupied with the increasing amount of oil on the windscreen and the need to land immediately. He had not noticed that his airspeed had decayed until the left wing suddenly dropped at about 50 feet.

The report considers that when the pilot attempted to lift the dropping wing with aileron and apply power to accelerate, the resulting pitch and yaw forces

**he had allowed himself to become pre-occupied**

would have exacerbated the wing drop, causing the loss of control. Although we should all be aware of, and practise (with an instructor

perhaps), the standard stall recovery actions which include centralising the ailerons, it is difficult to remember to do it properly. We continue to advise that centralising the controls should recover most aeroplanes from an incipient spin such as the loss of control in this accident, however such a recovery is likely to require several hundred feet to effect. Losing control on the final approach must be avoided, so it is vital that the pilot concentrates on maintaining the correct airspeed at all times when close to the ground, no matter what other matters may be attempting to distract him.

## GASIL

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## PFA fly-out

We have been made aware of an incident which happened during a flight home from a previous PFA Rally. The weather on the particular day was not good – in fact the programmed flying display was delayed and eventually drastically truncated. However, it seemed that flights home in the late afternoon might be possible below the cloud, so a number of pilots attempted to do exactly that.

It is well known to those who have studied human factors in aviation that a group decision is usually notably less safe than those made by individuals. This may have been a significant factor in the number of pilots taking off for home, even those flying

towards the weather which had drifted downwind from the Rally site. In any case, it seems that at least one pilot realised shortly after departure that it had been

**a group decision is usually notably less safe**

inadvisable, and he decided to turn back. After all, turning back is a fairly popular and usually sensible fall-back plan in the event of poor weather.

However, listening to the radio calls being made on the departure frequency he realised that his fall-

back plan was not in this case likely to be particularly safe. The thought of flying towards a large number of other aircraft in poor weather filled him understandably with less than joy. However, fortunately he was able to take advantage of another fall-back plan, and made a precautionary landing in a suitable farmer's field.

We would hope that similar conditions do not affect this year's Rally, and that good flying weather prevails over the whole country at all times. However, because such luxury is extremely unlikely, we remind pilots not to risk flight in conditions which give any room for doubt unless they do indeed have more than one fall-back plan, and are ready to use it as soon as conditions start to look unsuitable.

## Single source of information

The Australian Transport Safety Bureau has recently published their report into an accident to a Piper PA-31 Cheyenne which collided with terrain during a non-precision instrument approach in IMC. All on board were fatally injured.

It seems that the aircraft had flown for a considerable period above cloud, and had been cleared by air traffic control (it was initially in controlled airspace) to track to the initial approach waypoint for the destination aerodrome. The pilot reported commencing a GPS non-precision approach as his qualifications and instruments equipped him to do.

When it was realised that the aircraft had not landed at the

destination, a search was conducted and the wreckage was found 34 kilometres away from the aerodrome. It seems that during the last leg of the flight towards the destination, the aircraft had

**the aircraft had diverged from the intended track**

followed a track which diverged by almost 4 degrees from that which would have taken it correctly to the northernmost approach waypoint for the GPS approach.

The report found that the possibility of an error within the aircraft's navigation equipment or incorrect manipulation of the

aircraft's navigation and automatic flight control systems could not be determined. Destruction of navigation and other components limited the usefulness of any testing and examination.

The investigation concluded that the pilot had not been aware that the aircraft had diverged from the intended track, which was not flown over any ground-based navigation aids. He had commenced the approach at an incorrect location, although it appeared that adequate satellite signals had been available to the aircraft receiver. It draws attention to the risk of relying on a single source of information and the need to pay careful attention to the use of automated flight systems, with which we concur completely.





## Please co-operate

In the UK Airprox Board's Analysis of Airprox in UK Airspace no 14, January 2005 – June 2005, we can read their reports of and conclusions from the incidents they considered which occurred over that period. We remind everyone that the Board's published findings are not an allocation of blame, merely their conclusion of the cause. For example, a finding of "late sighting of the other aircraft by the pilot of xxxxx" does not in any way imply that the pilot of xxxxx was to blame for that. It is merely a statement of fact. The Board do not have the resources nor the remit to investigate any deeper into the variety of possible

reasons why the sighting was late.

However, it may be difficult for the Board to even produce findings if pilots do not co-operate

**findings are not  
an allocation  
of blame**

with their investigation. Two incidents reported in the latest analysis apparently involved an aircraft flying into an ATZ without complying with the Rules of the Air. However, the Board report

that the pilot declined to co-operate with its investigation, and express their considerable disappointment.

Under normal circumstances, the Board takes on the responsibility for detailed investigation after initial information from the CAA, and the Board's conclusions would be regarded by the CAA as the end of the matter. However, if a pilot breaks the law, and then refuses to co-operate with an investigation which effectively allows him immunity from prosecution, it might be considered that he has only himself to blame when he finds himself in court.

## Credenhill Danger Area

The enclosed chart extract shows the danger area D215, known as Credenhill, and currently permanently active up to 2300 feet above sea level but activated up to 10,000 feet by NOTAM (the 1:250,000 chart still mentions the previous maximum of FL150). Changes in its use have increased the activity above

2300 feet, so the Director of Airspace Policy proposes to change its dimensions. Consultation is still in progress, but if the proposal takes effect the Danger Area will become permanently active up to 10,000 feet amsl with effect from 1 July this year.

Although the change will be promulgated by NOTAM if it does take effect as expected, the information will not be included on charts until the next issue. We suggest that pilots watch out for the NOTAM, and perhaps consider making an amendment to their charts accordingly.



## Farnborough 2006

We wish to remind pilots that the Farnborough Air Show will take place during the period 10-24 July. A Restriction of Flying Order will establish Temporary Restricted Airspace (TRA)

extending over different areas on different days. Pilots intending to fly in the vicinity of the show, or indeed anywhere to the Southwest of the London Control Zone, must familiarise themselves with the extent of the restricted

area and remain outside it unless complying with the requirements published in the AIC which establishes the TRA.

## How high?

A reader has expressed concern at some conversations he has overheard between pilots. He stated that it seemed that these pilots were involved in a contest to reach high altitudes in aircraft without oxygen equipment. While the Air Navigation Order 2005 currently only lays down a requirement for oxygen equipment to be carried and used for public transport flights, hopefully all readers will be aware of the hazard posed by hypoxia (shortage of oxygen), and will realise that flight at high altitudes without carrying and using a serviceable oxygen supply is not to be recommended. For that reason a future amendment to the ANO is expected to make it mandatory for private flights to carry such a serviceable system if flying above FL130, or if flying between FL100 and FL130 for more than 30 minutes, and for the

crew to use it in these circumstances.

However, as human factors textbooks testify, it has been known for pilots to be affected by hypoxia at quite low pressure altitudes, especially if the individual is particularly susceptible. Because the extent of the effects, and the actual symptoms, vary from individual to individual, we recommend study of these books before flying at any high altitude. If possible, attending a course using a pressure chamber can give pilots who intend flying at levels above or even approaching

10,000 feet knowledge and understanding of their own symptoms, which may alert them to the need to either switch on their oxygen system, or descend.



**be aware of the hazard posed by hypoxia**

## Flight over congested areas

Listening to conversations among groups of pilots, we have been reminded that some may not be fully conversant with the application of the Rules of the Air regarding flight over congested areas. While the Rules

any area which is substantially used for residential, industrial, commercial or recreational purposes. While most of that may be obvious, it is often forgotten that an area within the boundaries of any such city, town

might appear from above to be a possible suitable emergency landing field in the middle of a town will almost certainly be substantially used for recreational purposes, as will stretches of water such as the Lea valley to the North of London City Airport.



themselves are clear, the interpretation of the phrase "congested area" is perhaps not.

As defined in Article 155 of the Air Navigation Order 2005, the "congested area" in relation to a city, town or settlement, means

or settlement which is used for recreational purposes forms part of the congested area. The pilot of any aircraft (except helicopters which have their own rules) must be able to alight clear of the whole congested area in the event of failure of a power unit. What

We would also remind everyone that air traffic controllers do not know whether an aircraft is capable of alighting clear of the congested area in the event of the failure of a power unit, and may offer a pilot a routing which he cannot legally accept. It is the commander's responsibility to ensure that he remains legal and safe at all times, so if an air traffic clearance would contravene the Rules of the Air, the pilot should inform the controller that he is unable to accept it and request an alternative clearance.

# Collision avoidance

In response to an Aircraft Accident & Investigation Branch (AAIB) recommendation in 2005 after an investigation into a fatal mid-air collision between a microlight and a helicopter, the CAA instigated a review of ongoing work into the use of visual and electronic measures to enhance the conspicuity of General Aviation aircraft. The working group reviewed statistical data, previous CAA studies and emerging technological developments related to General Aviation (GA) aircraft collision and avoidance within the UK and mainland Europe over the past 10 years.

Statistical data from UK CAA Mandatory Occurrence Reports (MORS) and BGA Accident data base records for the period 1995 – 2004 revealed that UK registered GA aircraft were involved in a total of 30 mid-air collisions, of which 14 were fatal with 27 fatalities. Within that total the 16 accidents each involving two gliders were the most numerous and 7 of these collisions resulted in fatalities. In contrast the second highest total by classification were 6 accidents involving only fixed wing civil registered powered aircraft, of which two resulted in the loss of 5 lives.

The review identified Eurocontrol, German CAA, French CAA, UK MOD and UK CAA studies addressing human factors in the avoidance of collisions. Commonly, effective see and avoid procedures were promoted as the most evident pilot remedy, with various aircraft colour schemes and lighting systems also being proposed.

‘Lookout’, or ‘see and avoid’ as it is often called, is an essential element of pilot operating skills and forms part of a pilot’s basic training. It is as critical for pilots’ safe control and navigation as it is for weather and collision avoidance. If lookout is inadequate for any reason then a potential threat will not be seen. However, it is equally significant that a pilot can be expected to take around three seconds after a potential threat has been detected to effect any control input to the aircraft, and that control input will take time to have an effect. It is therefore important to minimise the time a pilot spends with his eyes inside the cockpit environment. Bringing maps and

**minimise the time a pilot spends with his eyes inside the cockpit environment**

other information up to the pilot’s eye level can increase the time available for scanning outside.

For pilots to see and avoid other aircraft, studies have shown that contrast is the most important aspect of visual detection. For example, against a light sky background a dark colour is more detectable, an approach taken by the RAF whose training aircraft are currently painted black. Against a dark background, however, a light colour is likely to be more effective, and many police helicopters have adopted a two-tone scheme, generally black or very dark blue but painted yellow on the upper surfaces. The group considered that they could not advise owners on colour schemes

without further investigation into colour and contrast, which is being undertaken.

Pilots using a radar information service from a lower airspace radar service unit give themselves a considerable advantage in that the radar controller can draw their attention to the relative position of other aircraft which appear on the controller’s radar, on which the pilot can then take avoiding action. Unfortunately, not every aircraft in the air is visible to radar controllers; for example gliders and microlights may not show up even on a primary display. Continuous use of a transponder, especially with altitude reporting (Mode C) selected, produces excellent information to the controller and therefore to a participating pilot, but there is no guarantee of safety against aircraft which have not made themselves conspicuous in that fashion.

Nevertheless, carriage of transponders by every aircraft flying, as should be the case from 2008, will provide technology with the capability to assist pilots in collision avoidance. The transponder signal can be processed either directly in some form of collision avoidance system, or indirectly by being re-broadcast from a ground radar receiver to the cockpit. However, even once a suitable lightweight transponder becomes widely available, such technology may introduce further human factors, such as reliance and resource management for the pilots, and in the meantime lookout, even with all its limitations, must remain the primary means by which pilots should attempt to avoid collisions.

**LookOUT!**



## Night fog – suckered in?

The BFU (the German AAIB), have published a report concerning an accident to a light twin engined turboprop aeroplane which was returning to its base at night after completing its commercial operations for the day. Its two man crew had filed a flight plan for VFR flight but not in the UK (permissible in Germany), although it seems the investigation was unable to find any record of the crew or their operations room having obtained any written weather information since the early morning of that day.

In addition to standard instrumentation for IFR flight, it seems the aircraft was equipped with a flight management system with a GPS input, as well as an autopilot and an enhanced ground proximity warning system. The base aerodrome, which was listed as VFR only, was equipped with runway lights and a VHF direction finder, but no other navigation or approach aids. A flight information service was provided at the aerodrome.

Having called their base in flight, the crew were informed that

the weather to the North and West appeared to be getting worse, but that the FISO could see the nearby town to the South. It seems that at this stage the crew talked about possibly diverting, but apparently that option was not considered again. When the aircraft was actually over the aerodrome, the commander stated that the cloud tops were 3500 feet, and the FISO reported a visibility of 1500 metres, but that he could not determine the cloudbase. The commander called that he would try an approach to the southerly runway.

It seems that the crew loaded several waypoints into the flight management system with a final track in line with the runway. When the commander reported that the aircraft was 3.4 miles from the runway, the FISO estimated a visibility of 1500 metres in a southerly direction. The copilot had been instructed to keep his eyes outside, and when the radio altimeter warning sounded at 1000 feet above ground, he reported he could still see nothing. By the time the aircraft had come down to 500

feet, at which time the FISO advised that the QNH had reduced by 1 millibar, the copilot could see the surface below, but could not identify anything in front of the aircraft.

As the radio altimeter warned that the aircraft was at the height set as an approach minimum (200 feet), the copilot saw a road below, and the commander said “that’s probably the airfield slip road, but I can’t be sure”. Two seconds after the radio altimeter reported passing 100 feet, the aircraft seems to have hit the tops of a group of trees 450 metres short of the runway threshold. The aircraft was destroyed and both crew killed in the crash and the ensuing fire.

The investigation found that the weather forecast for the area suggested a cloudbase of between 200 and 500 feet above aerodrome elevation, with visibility less than 1500 metres. The automatic cloudbase recorder at the aerodrome registered a base of 100 feet. The fire crew who attended the crash reported that the top of their 80 foot turntable was in cloud.

### CAA Comment

This seems to be a case of a crew relying on their GPS to carry out an unapproved instrument approach in poor weather, a situation of whose dangers we continue to warn. However, as in many cases, the accident was not inevitable if the chain of circumstances had been broken. An up-to-date forecast, compared with actual reports, might have encouraged them to change their plans, and perhaps carry out the diversion they mentioned but subsequently ignored. The reports by the FISO could only be his estimation of what was happening in the darkness.

A professional crew briefs each other not only on the way the approach is to be flown, but on the actions to be taken at certain stages, including the height at which the approach will be abandoned if the necessary visual references to land are not available. This crew seems to have continued well below any normally recognised minimum descent height – they actually came below the minimum for a runway approach aid - without either of them initiating the go-around which should have saved their lives.

The human factors involved in that lack of decision may have been quite complex, but one can think of “get-home-it is” as an obvious possible factor. They were landing at their base after a long day. They may well also have carried out a similar approach, in better conditions, in the past and achieved a safe landing, so familiarity could have been another factor.

However, there is also a tendency for each member of a team to believe (probably unconsciously) that the others have a responsibility to stop a dangerous situation getting worse. When no other person says anything, each is led to believe everything must still be all right. This situation is found quite often in general aviation operations; even the presence of passenger can induce it, so we must all be on our guard against it.

## Which aerodrome is that?

The pilot of a PA28 was on a cross-country flight to a GA aerodrome with a single main runway orientated 03/21. Although air to ground visibility was not good, conditions were apparently adequate for VFR flight. Taking the visibility into account, the pilot was using his VHF Omnidirectional (VOR) equipment to assist with his navigation, and had pre-selected two frequencies, one at his destination and the other at a nearby larger aerodrome which operated commercial traffic.

Having obtained the aerodrome information, he apparently decided to follow his current VOR radial inbound to his destination. When

the aerodrome appeared in view, he set himself up to join on the downwind leg for runway 03. Another aircraft called "joining downwind" behind him, but as the PA28 turned final the following pilot expressed concern that he could not see it. Shortly afterwards, the PA28 pilot realised that the runway was marked '02'.

Having realised something was wrong, the pilot apparently decided that since the runway appeared clear, it would be perhaps safer to land and report to the tower rather than cause any further problems for others. He had in fact landed at the commercial aerodrome, and having realised that, was able to

see that he had flown towards the wrong navigation aid. Instead of flying inbound to his intended destination with the VOR at the commercial aerodrome available for cross-checks, he had in fact been flying direct to the commercial aerodrome.

The pilot was apparently mortified that he had not only made such an error with his VOR selections, but had made assumptions in his visual navigation which should have indicated his mistake much earlier. He adds: "This incident has shaken me up, and opened my eyes that it could happen to anyone, not just the people one reads about in magazines".

### CAA Comment

We are grateful to the pilot for his frank report. As he says, it can happen to anyone. However, while it may not have helped him (and certainly not with his original mistake) we note that he joined downwind, rather than overhead as he had apparently been originally instructed. That might have allowed him the opportunity to identify the aerodrome properly.

## Undercarriage failure to lower

Following an article we published in the last issue, we received the following letter from a pilot who admits to having experienced undercarriage failure on more than one occasion.

*"I read with interest the article entitled "Arrow Gear Indications". The final part of this article suggests that the information on lowering the undercarriage manually should be carried in the aircraft as part of the check list or the Flight Manual. Whilst this, of course, is correct, I would express the view that the last time one would want to have to read such information would be when one was in the air with an undercarriage that would not lower. Unfortunately, there are far too many retractable aircraft (of*

*all manufacturers) written off following a landing with the undercarriage retracted. Whilst we can all make mistakes in this regard, when one knows that the undercarriage has not come down, surely it is incumbent on the pilot also to know how to lower the undercarriage manually. This should be a part of fundamental training and study before undertaking a flight as Pilot in command of such an aircraft. Reading "How to do it" whilst also trying to control the aircraft in what might be demanding conditions would add an additional and unwanted burden at just the wrong time."*

We totally agree with the writer's view that proper differences training is essential.

However, many accidents have been caused by pilots taking actions precipitously and incorrectly. Seldom will an undercarriage problem be so pressing that there is no time to check one's actions with the manual, and checking is what we should be doing - hence the expression 'checklist'.

It should also be borne in mind that many of us fly a variety of different aircraft from time to time. The correct sequence of actions in one type may be totally incorrect in another. Therefore while we totally agree with the writer's sentiments, we continue to advise checking one's actions with the Flight Manual's advice in the air whenever possible.



## Robin brakes

In the AAIB's bulletin 2 of 2006, we read of a Robin HR100 which failed to stop during its landing roll and was damaged when it came into contact with a small bank covered with vegetation. It appears that there was virtually no friction material

remaining on the pads when they were removed after the accident.

The report concludes that the brake pads were not approved parts, and that they appeared to have been relined in an unapproved fashion some 30

hours before the accident. The type certificate holder has issued a revised standard of brake pads, but the report suggests that this information is not known by every relevant owner and maintenance organisation.

## The heat was on

In a report in their bulletin 2 of 2006, the AAIB describe a Cessna 152 which experienced an engine failure as the student pilot applied power during the intended go-around from a practice forced landing. The aircraft was damaged during the subsequent landing in the originally chosen field as the instructor attempted to stop on the downslope before colliding with trees at the far end.

Although it seems conditions were conducive to serious carburettor icing at descent power, both crew members were convinced that they had carried out regular carburettor heat checks and had correctly selected carburettor heat before commencing the descent towards the field. The investigation concluded that the hose along which warm air was led to the carburettor when hot air was

selected had suffered damage, and that cold air had probably been drawn into the carburettor along with the intended hot air, reducing the effect of the carburettor heat control.

The accident report should remind flight instructors and others that practice forced landings can turn into real ones. Do we all consider that possibility before commencing the exercise?

## Can you reach the controls?

A reader has reported an incident which occurred to him some years ago. The flight was to involve spin recovery training in

**the aeroplane continued spinning**

an aircraft type with which he was unfamiliar.

As normal, during the pre-flight checks he had ensured that no potential loose articles could interfere with the controls. The checks also included full, free and correct movement of all the flight controls before take-off. The takeoff and climb had been without incident, and before entering the first spin the HASELL (height, airframe, security, engine, location and lookout) checks had been carried out.

The entry to the spin was also without incident. In this type, as in most but not all others, the recommended recovery actions are to close the throttle, apply full rudder to oppose the spin

direction, and then to move the control column centrally forward until the spin stops. The reporter followed that recovery procedure, and, as he expected, the rotation speed initially appeared to increase. However, although he had moved the control column as far forward as he could, the aeroplane continued spinning. Fortunately, when his instructor took control, he was able to move the control column further forward and the aircraft recovered from the spin.

It appears that during the HASELL checks, the reporter had made a positive effort to tighten his seat harness, as many other pilots do. This had brought his shoulders further back than had been the case during the pre-take-off checks, and so when he

moved his arm and hand to the position which had given him full forward travel at that time, the control column had not yet reached its actual forward limit. It is tempting to give one's straps an extra pull before carrying out any manoeuvre or during the pre-landing checks for a forced landing, but it is important to have checked before take-off that any such 'extra pull' will not interfere with the pilot's control of the aircraft.



## Loose articles

We frequently remind pilots that everyone can make mistakes, and that includes maintenance organisations. Instances continue to be reported of tools being found in aircraft following maintenance, and we would continue to advise pilots intending to fly for the first time after their aircraft has returned

from the hangar to make an even more careful and thorough check 'A' than usual.

Recently we heard of an aeroplane whose owner discovered, not the screwdrivers which he had found on previous occasions, but a fully fuelled butane soldering iron in the

cockpit. He was less than impressed. Mechanics, check and check again. Engineers signing for the work, positively check. Pilots, make a careful check 'A' and always be ready for possible problems (for example, making the first flight after maintenance in poor weather might not be advisable!).

## DON'T assume!

The pilot of a PA28 was flying in France when apparently he was unable to contact the control authority for a particular Control Zone inside which he intended to land. There was no other traffic on the frequency, and having pressed the transmit button and passed his clearance request more than once without reply, he assumed that the aerodrome and its air traffic control unit had

closed. He continued, transmitting blind with no reply, and eventually landed at the aerodrome.

However, as we frequently remind readers, it is prohibited to enter Controlled Airspace without clearance, no matter where one may be. In this case, it appears that a wire in his transmitter circuit had broken, so his

transmissions were not going out. We understand the pilot experienced an embarrassing and very one-sided interview with the aerodrome authorities shortly after landing. He then had to explain his actions to an investigating officer from the CAA once he returned to the United Kingdom.

Radio failures are not always obvious, but as we say often, never assume!

## Newcastle Airspace Changes

Following a review of airspace arrangements in the Newcastle area, and consultation with all sections of the aviation community, revised Class D Control Zones (CTRs) and Control Areas (CTAs) will be introduced on 6 July 2006, as shown on the attached chart. New visual reference points (VRPs) will be established at:

Sunderland Harbour 545506N 0012130W

Derwent Reservoir 545200N 0015848W

In addition, the Class D element of airway P18 will be extended to the south of TILNI by means of an additional fillet rising from FL105 to FL125 and bounded by the co-ordinates 543406N 0020308W - 543135N 0013929W - 542344N 0014159W - 542615N 0020534W - 543406N 0020308W.

Newcastle ATC will continue to provide radar and non-radar services within their local area, both inside and outside Class D airspace, to all airspace users.

The changes and associated flight procedures will be notified in AIRAC 7/2006, and advance details of the changes can be found in AIC 62/2006 (Yellow 211), published on 25 May 2006.

The current editions of the CAA's VFR aeronautical charts do not incorporate these changes. However, details of all VFR chart amendments can be found on the website, [www.caa.co.uk/charts](http://www.caa.co.uk/charts). This includes hyperlinks to a version of the attached chart on both the 1:500000 and 1:250000 Chart Amendment pages.



## Why?

In the AAIB's bulletin 3 of 2006 we read of an accident to a Piper Cherokee which failed to successfully take-off and climb at Netherthorpe aerodrome. We have drawn attention to this licensed aerodrome in the past, reminding pilots that all runways are short and that failure to make proper performance calculations, or to use correct techniques, has resulted in take-off and landing overrun accidents on several occasions in the past.

The aerodrome operator is aware of the potential dangers to unwary visitors, and requires strict prior permission to be obtained by telephone. During the telephone conversation, the shortness of the runways is emphasised, and advice is offered. Before the accident flight, the pilot telephoned for permission. During the conversation he stated he was experienced in the use of short runways, but was advised not only

that the runways were short but that there had been an overrun the previous day.

Despite these warnings and his alleged experience, it is reported that the aircraft

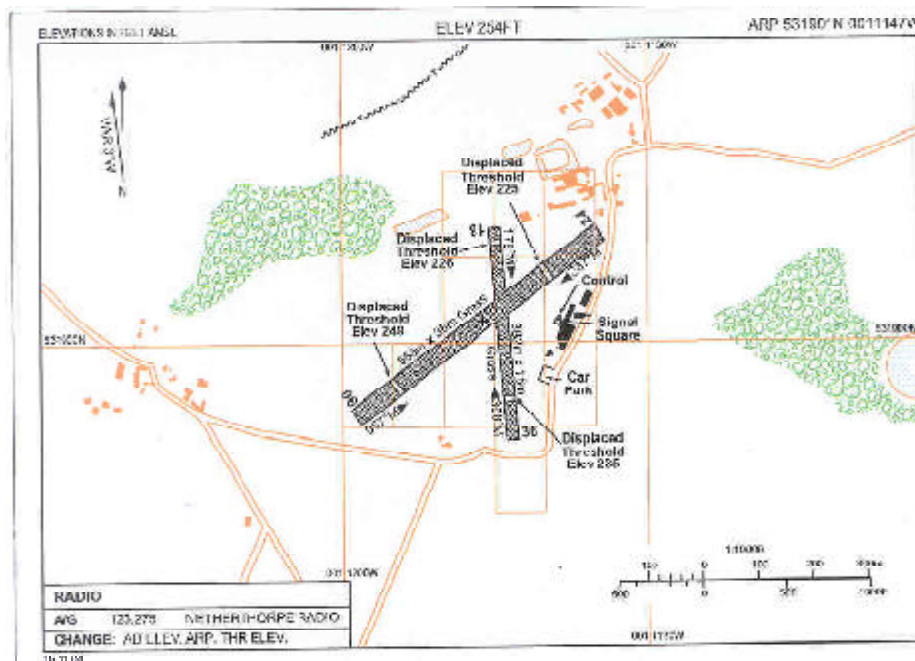
**did not carry out the necessary performance calculations**

commander did not carry out the necessary performance calculations before attempting to take off to return home. He apparently stated that he was relying on his less experienced (but qualified pilot) passenger to take care of performance issues.

The investigation calculated that in the conditions of the day, the aircraft would have required an available take-off distance of 856

metres. The take-off run available (TORA) for runway 06, which the pilot selected for take-off, is published in the AIP and commercial guides as being 476 metres, the same as the accelerate-stop distance available (ASDA) and the only figure to which the calculation of required distance could be compared, (although as can be seen the runway surface is 553 metres long). Those of us reading these figures will not be nearly as surprised as the pilot seems to have been when he was unable to achieve a safe take-off.

By the time the pilot decided to abandon the take-off, the aircraft was already approaching the end of the runway, and although the throttle was closed the aircraft passed through the perimeter fence and collided with a stone wall beyond. Both occupants were seriously injured and the aircraft destroyed.



## Oops!

The AAIB's bulletin 3 of 2006 contains a report into an incident to a Beech Sundowner. The aircraft was seen in flight with a car tyre dangling from its tail. The tyre, filled with concrete, had apparently been used to tie the aircraft down.

While it is easy to draw the obvious lesson about carrying out proper pre-flight checks, distractions can affect everybody and mistakes can be made. However, the fact that the aircraft's handling did not seem to be obviously affected, and that it had successfully taken off, may

cause one to wonder how effective such weights tied to the aircraft really would be at preventing aircraft movement and subsequent damage in the event of high winds. Ground anchor systems are likely to be much more effective (and are unlikely to be taken into the air!)



## Bright Spark?

Many aircraft nowadays are equipped with high intensity strobe lights as anti-collision beacons. Studies seem to suggest that although they are



often of considerable value, they provide little increased conspicuity in strong sunlight unless their

power output is very high.

One problem with a high power output is that the light emitted while the light is flashing can cause serious damage to eyesight if someone is looking directly into the flash at close range. For that reason, most Flight Manuals advise that the strobes are only switched on when the aircraft is just about to take-off,

well away from any workers, passengers or aircrew who may be on the apron, and switched off

again immediately after landing.

It is expected that a pilot will switch on an aircraft's anti-collision beacon whenever the engine is running. However, while a red or a low-powered white flashing beacon should indeed be switched on before starting engines, even if the Flight Manual does not call for it, leaving high powered strobes off until ready to take-off seems a good idea, which pilots ought to consider. Certainly one pilot would agree. He was admiring the wing tip of a new aeroplane being demonstrated at the London Air Show when some 'bright spark' inside the cockpit switched the strobes on without warning.

## Sting – possibly lethal!

An article in GASIL 4 of 2005 reminded a reader of an incident which occurred to him several years ago on an aerodrome in this country. He observed a pilot preparing to refuel a microlight aircraft using a jerri-can. The pilot asked our reader if he could assist by holding the funnel, which was apparently made of a

nylon type material. Our reader agreed to do so.

As he reached out his hand to take the funnel, his finger tip received a violent sting from a spark of static electricity. As he reported, the likely consequences of such a spark while the fuel was being poured from the can are

imaginable and not to be desired. If we have to refuel from containers, these and all other components used in the procedure must be of a material which can easily conduct static electricity, and they must be bonded together to minimise any risk of such a spark setting light to the fuel/air mixture generated while fuelling.

## Take-off performance

A report in AAIB's bulletin 12 of 2005 describes a fatal accident to an ARV which was taking off from a grass strip. The report notes that the pilot had previously made successful take-offs from the same strip in favourable wind conditions, but concludes that under the conditions prevailing at the time of the accident, the pilots operating handbook (POH) suggested that the aircraft would not achieve a safe take-off. In addition, they found that the aircraft brakes seemed to be binding slightly, which would have reduced the aircraft's acceleration and increased both the take off run and take off distance required.

We have in the past frequently

stressed the importance of making accurate performance calculations before attempting to take off. We are also aware that engine or airframe faults may result in decreased performance, so recommend that pilots select a suitable check feature along their take-off run at which they can make a decision whether to continue the take-off or abandon it. A suggested rule of thumb is to look for 2/3 of one's rotate speed before passing 1/3 of the take-off run, but allowances must also be made for obstacles at the end of the strip.

However, as in many cases, the pilot seems to have managed to achieve an initial flying speed,

but lost control of the aeroplane shortly afterwards. The investigation concluded it was likely the aircraft stalled shortly before contacting power cables, and had hit the ground in a bank angle of approximately 90 degrees. Again, we remind pilots

**managed to achieve an initial flying speed**

that while making a late decision to abandon a take-off may well result in damage, losing control in flight is frequently fatal.



## Are you sure that's what he said?

In a report from the BFU (the German AAIB), we read of an accident to what seems to have been a Russian Falcon 20 which suffered a fire in the cabin during the cruise over Germany. The crew requested a diversion to the nearest aerodrome, and were advised that the nearest was Kiel. The controller advised them that Kiel's runway length was 1260 metres, and asked if that was suitable. The crew replied in the affirmative, and the controller gave them radar vectors towards Kiel,

towards which they started a descent.

Control was handed over to a different controller, and again the crew were advised that the runway length at Kiel was 1260 metres, and asked to confirm they wanted to land there, which they did. The smoke from the cabin fire, which seemed to have originated from the water boiler area, was causing problems in the cockpit, and the captain apparently decided to open the side window.

Although the first approach had to be broken off, the aircraft landed from a second attempt.

Unfortunately, the aircraft overran the end of the runway at the end of its landing run. This caused serious damage to the aircraft, serious injury to one of the crew, and minor injuries to all other occupants. It transpired that the pilots both believed that the runway length advised to them had been 2600 metres.

### CAA Comment

It seems that neither the crew nor the controllers had English as their first language. The crew were also considerably distracted by the fire, so it is perhaps understandable that the confusion occurred. However, if a pilot has prepared himself for problems, he will be able to request exactly what he needs when asking for assistance. Those of us who fly in other countries' airspace must also take extreme care that we understand what is being said, and be ready to ask for clarification. Even if it is English, the speaker's accent may be difficult to understand and it is always possible that he will make a mistake in his words!

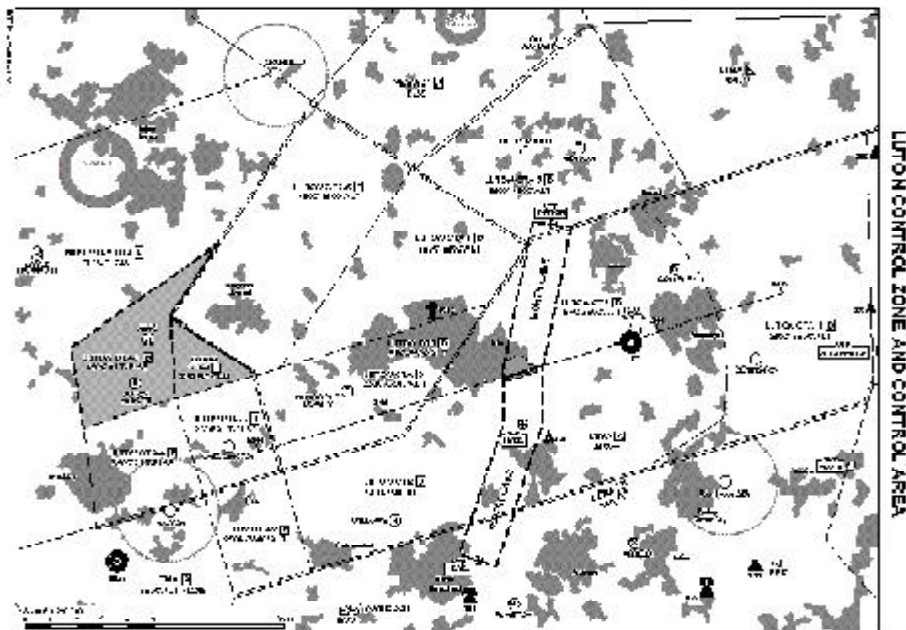
## Luton Control Area

The CAA has agreed that 2 additional Class D Control Areas (CTAs) to the northwest of London Luton Airport will be established on 11 May 2006, as illustrated below.

Existing Letters of Agreement between NATS and the gliding

clubs at Dunstable and Halton have been modified to take into account the revised airspace arrangements. Additionally, NATS will continue its policy of providing access to Class D airspace, when it is applicable, for those aircraft requiring to transit through or operate within the area.

***It is important to note that the 1:500000 Aeronautical Chart 'Southern England' and 1:250,000 Aeronautical Chart 'England South' (Sheet 8) will not be updated to incorporate these changes until February 2007 at the earliest.***



## Air to air photography - beware

6 years ago, the CAA produced a leaflet on the subject of aerial photography, and advised pilots wishing to carry out air to ground photography to read it. The leaflet is available in LASORS and for free download from CAA's web site [www.caa.co.uk/publications](http://www.caa.co.uk/publications), through "general aviation" and "safety sense". However, hazards exist in air to air photography also.

A recently reported fatal accident in the United States involved two Shorts 360 freighters

during an air to air photography flight. It appears that the pilot of one aircraft announced he was turning in front of the other, but it seems that the turn may have been too close to the following aircraft and the two collided, killing all three people on board the turning aircraft. It is essential that any manoeuvres which are to be carried out by aircraft in formation are carefully thought out and briefed beforehand, so that safety margins are calculated and applied.

Other hazards exist during photographic flights. It seems to be common practice to fly one aeroplane (the 'target') out of balance in order for the photographer in the other aeroplane to obtain head on photographs of it. Such out of balance flight may be normal during a sideslip approach, but very few aircraft are designed to be flown with full rudder deflection at cruising speeds or higher. Stresses induced by such flight may cause serious damage to the aircraft structure.

## Are your qualifications current?

Last year we reminded pilots that licences issued since 2000 were only valid for 5 years, and that some would need renewal during 2005. The same is likely to apply this year. However, other necessary qualifications have different periods of validity. All of these, such as medical certificates, class ratings, instructor ratings, and IMC ratings must be kept valid in order to

exercise their privileges.

There have been instances of pilots forgetting to revalidate particular qualifications, and even Flight Examiners finding they could not use their privileges because the validity period had expired. While many pilots can use computer technology to remind them of all their expiry dates in plenty of time, it is

probably a good idea to try to align as many of the various validity dates as possible. Since many ratings have different validity periods this will not always be practicable, but it is an offence to attempt to exercise the privileges of a licence or rating whose validity has expired, and it is probable that such an offence may have a bearing on other matters such as insurance.

## Fuel selector

During the pre-landing checks on the downwind leg of a visual circuit, the pilot of a PA-28 on a type familiarisation flight moved the fuel tank selector from left to right in order to maintain balance in the fuel usage. The aircraft was set up for a practice flapless approach, but when he applied power at about 300 feet for a go-around, the engine surged and the aircraft lost height. The instructor who was also on board took control, and prepared the aircraft for a forced landing

The original pilot offered to assist and while checking for possible causes moved the fuel selector back to the left tank. Shortly afterwards full engine power returned and the aircraft was landed without further incident. On investigation, it appeared that the shaped plastic plate behind the selector lever which normally prevented the selector moving beyond the RIGHT position had been damaged. When the pilot moved the fuel selector to the right tank during the downwind checks, the lever had moved further than intended and reduced the available fuel flow.

The instructor commented that the selector was not visible from the right hand seat, so he was not able to check the position of the lever.



## Rockets

A few years ago we drew attention to the hazards associated with rocket launching, which takes place from time to time from various sites around the country. The activity from these launching sites is made available to pilots from navigation warnings issued by NOTAM. The UK Rocketry Association has safety rules to ensure that such rocket launching takes place in clear skies, and care is taken to ensure that the planned trajectory avoids any passing aircraft.

However, the rockets are recovered by a parachute system. They have been known occasionally to reach altitudes in excess of 8000 feet, and the descending rocket takes time to return to earth. Even though the main parachute may not open until a few hundred feet above the ground, the initial descent is controlled by a stabilising system, which may on a windy day allow the returning rocket to cover some distance downwind of its original launch site. There is also the possibility that the rocket may develop a fault which causes the main parachute to open at the highest point of the trajectory, which would keep the descending rocket in the air for longer than it would take a light aircraft to appear over the site.



Picture courtesy of John Wheatley



While the Rocketry Association procedures reduce the likelihood that a passing aircraft would be hit by a rocket fired from the ground, it is a pilot's duty to ensure that his aircraft and the people in it are not put into danger. Pilots must check NOTAMS for any potential hazards, and take steps to avoid them. Evidence indicates that, in many cases last year, rocket launching sites were actually overflowed by pilots of light aircraft after they had been notified as active. These pilots were almost certainly hazarding their aircraft, themselves and their passengers. Read and understand the NOTAMS, and avoid rocket launching sites by the published safe margin. If the site is recognised at a late stage, we suggest they should be avoided by passing on the upwind side of the site (the opposite side to glider and parachute sites).



## Charts

In previous issues we have encouraged pilots to use the current ICAO charts for the country in whose airspace they intended flying. In the September 2005 issue we mentioned an incident in which a pilot entered a Danger Area in this country inadvertently, and described differences in the navigation information printed on the charts published by some commercial suppliers and the CAA charts.

The UK Airprox Board have described in their Analysis of Airprox in UK Airspace for the first half of 2005 another incident in which information routinely available on CAA charts may not be printed on other commercial charts. In this case a pilot flew over the very busy gliding site at Lasham, but because his chart did not provide an obvious indication of glider flying from the airfield, he was unaware of

the hazardous situation in which he was placing himself and his aircraft.

While we would not wish to remove an individual's freedom of choice in the map they use, we would remind pilots that despite its faults, only the official chart is kept up-to-date by the relevant authority. Those who prefer a commercial chart would be advised to cross-refer to the ICAO chart as part of pre-flight planning.



## South Yorkshire radar services

GASIL readers will be aware that the former RAF Finningley reopened as Robin Hood Airport Doncaster Sheffield in January 2005 and commercial operations commenced on 28 April 2005 (see GASIL 4/2004). During the remainder of 2005 the airport handled nearly 700 airliner movements a month and 601,000 passengers passed through its

terminal building. In addition to its established Boeing 737 and 757-based services, long-haul Boeing 767 schedules are planned to begin during 2006.

Doncaster Air Traffic Control have been able to provide air traffic services to military and civil traffic in the local area since the aerodrome opened. Radar

Services are provided by 'Doncaster Radar' between 0600-2200 local with a combined aerodrome and approach service operating outside these times. Pilots of aircraft operating within 15nm of Doncaster Sheffield Airport are encouraged to contact Doncaster Radar/Approach for a service if not already receiving one from another agency.

## NOTAMS on the AIS web site

Several pilots seem to have experienced problems accessing the AIS web site for information. It is possible that when their computers are asked to connect

to [www.ais.org.uk](http://www.ais.org.uk), they may automatically be looking for the address [www.ais.org.uk/index](http://www.ais.org.uk/index) which, although it was the original 'way in' to the site, seems to be

no longer supported by NATS. Changing the address to [www.ais.org.uk/aes](http://www.ais.org.uk/aes) seems to produce normal access to the site.





## Wires

Normally we find ourselves warning about wirestrike hazards in the helicopter section of GASIL. However, as reported in the AAIB's bulletin 3 of 2006, such accidents can happen to aeroplanes too!

Apparently a flight instructor was demonstrating a practice forced landing procedure to his student in open countryside. As part of the demonstration he chose to continue the approach to about 20 feet before initiating a go-around. However, as the aircraft started to climb, the fin contacted some power cables which had previously not been visible to the crew. Fortunately the aircraft was able to continue its climb and return to its nearby

base without further damage.

Power and telephone cables are difficult to see. Often only the poles are discernible, and even these may be hidden by trees or buildings. Environmental concerns often encourage companies to make them even more difficult to see, and although it may be justifiable to seek to override environmental concerns where cables can be seen to be an obvious hazard to aviation, few companies would expect a cable stretched 20 feet above the ground to be such a hazard to aviation.

Only those obstacles which extend to more than 300 feet above ground are marked on

aviation charts. In most other countries there is a minimum height laid down for VFR flight of 500 feet above the ground. This is not the case in United Kingdom airspace, provided a pilot maintains a distance of 500 feet from any person, vessel, vehicle or structure. Any pilot who chooses to fly closer to the ground than 500 feet outside the safeguarded area of a licensed aerodrome must understand that he is likely to encounter hazards which do not exist at greater heights, and be prepared to avoid them. If there is any doubt that the flight path may be obstructed, for example if trees may be hiding cable poles, avoid the area of doubt by a safe margin.

## Don't just read the forecast – study it

The AAIB's bulletin 2 of 2006 acknowledges the frankness of a pilot's report on an accident during a cross country flight. The pilot assessed the cause as being his late decision to turn back when the weather deteriorated.

It seems that he was not expecting serious deterioration, and when cloudbase lowered in front of him he attempted to descend below it. However, visibility also deteriorated, and he became lost and disorientated. During an attempted turn back to his departure aerodrome the aircraft hit the ground, causing extensive aircraft damage but fortunately only minor injuries to

himself.

It is important that pilots look out for and are able to recognise deteriorations in the weather in enough time to avoid them safely. Any descent to go underneath a lowering cloudbase must be carried out early enough to allow time to not only assess the weather ahead but also to complete a turn back into known good conditions without losing visual references. A flight visibility of 3000 metres gives barely enough room for a light aeroplane pilot to initiate and make the necessary turning manoeuvre, and leaving the initial descent until the aircraft is nearly

entering cloud is likely to place the aircraft in a dangerous situation similar to that described above.

However, the pilot also admits that he had not sufficiently studied the complete weather forecast which he had obtained. The area forecast (F215) contained the information that low cloudbases and poor visibility could be expected occasionally especially near the coast. We must always be ready to meet and cope with every 'occasional' or even 'isolated' weather phenomenon, and remember that conditions may become even worse than forecast.

## Sea breezes

Last summer, a professional balloon pilot had just taken off on a cloudless evening from a site in Kent. When the balloon approached about 800 feet in the climb, the pilot manoeuvred it to set up a souvenir photograph for his passengers. As he did so he realised that the castle which was his intended backdrop had suddenly become hidden by low cloud. It also became obvious that the balloon was travelling across the ground at a considerable speed, rather more than he considered safe for landing. Fortunately, as the balloon climbed the groundspeed increased until the aircraft was travelling faster than the cloud, and eventually the pilot was able to reach an area where the wind speed close to the surface was safe to land.

Those living close to the coast are well aware of the sea breeze phenomenon, and pilots learn about them during study for Meteorology examinations. The main hazard to pilots described in most books is the change in surface wind direction as the sea breeze sets in. Indeed, GASIL

has frequently mentioned the effect when reminding pilots to check the surface wind carefully before every approach. However, sea breezes are difficult to forecast, and may approach from unexpected directions, for example in the above case the

**check the surface wind carefully before every approach**

pilot was used to the breeze arriving from the South, but in this case the breeze had moved in from the North.

A less commonly noticed part of the sea breeze effect occurs at the air mass boundary where the colder sea air pushes the warmer land air upwards. Many years ago it was common for glider pilots in the UK to look for and attempt to use the upcurrents at this "sea breeze front" to fly across country into the evening. Other effects such as orographic uplift may cause a rapid increase in the strength of the upcurrents

or the speed of the front's movement.

The cold sea air is much moister than the air it displaces. Any movement of the sea air upwards, as at the 'sea breeze front' will cool that air further and may form cloud. The base of any such cloud will be lower than that existing earlier in the day in the warmer drier air. Hence the low cloud experienced by the balloon pilot. However, ANY upwards movement may cause condensation, and very low cloud is quite frequently encountered over cliffs and rising ground inland of the coast. Even mechanical turbulence can cause condensation in moist airmasses, and sea breezes have been known to push sea fog onto the coast and inland, as illustrated in the photograph of the Cornish coast kindly sent in by a microlight pilot a few years ago. For this reason, coastal aerodromes, including many in France, list warnings of possible sudden weather deterioration and advice to be prepared to fly to diversion aerodromes.



## Silence is not always golden

The AAIB's bulletin 4 of 2006 includes a report into a collision between two light aeroplanes on the ground after each had landed at different ends of the same runway at the aerodrome at which they were apparently based. Both were tailwheel aeroplanes, so once having landed they suffered from reduced forward visibility. However, the information

contained in the report might suggest that the accident was completely avoidable.

The aerodrome had been allocated its own discrete VHF communications frequency for safety reasons some time previously. Although there was no operator manning an air to ground radio station, pilots were able to

make normal transmissions to other aerodrome traffic in accordance with CAP 413 procedures. It appears that although both aircraft involved were equipped with radio, neither pilot had made any transmissions on the aerodrome frequency. There is no point in an aerodrome owner providing a service if pilots choose not to use it.

# Military/Civil Air Safety Day

On 10<sup>th</sup> May, the Defence Aviation Safety Centre (DASC) hosted a military/civil air safety day (MCASD) at Royal Air Force Linton on Ouse. 18 aircraft, ranging from touring motor gliders to an ex-military jet, were able to fly in to the aerodrome on the day, where their crews joined those who had travelled by road to be given briefings on the role of the station and several safety related topics, including a full met brief before departure. The emphasis was on increasing safety for all by improving awareness and use of the military facilities by GA pilots. For that reason, the main topics were related to collision avoidance. Air

Traffic Control officers explained the work of the Distress and Diversion Cell at West Drayton, as well as the provision and use of Lower Airspace Radar Service.

After the RAF presentations, the Director of the UK Airspace Board, Mr Peter Hunt, explained the work of his Board in identifying the cause or causes of each incident, and making any appropriate recommendations in order to reduce similar risks in the future. Mr Andrew Greenwood, a consultant employed by the CAA's Directorate of Airspace Policy, then gave a presentation on the rationale and requirement for, as well as the future

employment of, Mode S transponders.

It is intended to continue to hold further military/civil safety days with a similar format in the future, and the next is expected to be hosted by Royal Naval Air Station Yeovilton in September. Advertisements will appear in the aviation press and on the CAA web site [www.caa.co.uk/ga](http://www.caa.co.uk/ga) through "information", where application forms will also be available. Alternatively, a form may be requested from Flight Operations Inspectorate (General Aviation), Aviation House 1W, Gatwick Airport South, RH6 0YR, telephone 01293 573517, fax



## Aircraft towing

**exercise care when manoeuvring aircraft on the ground**

The AAIB investigation into a recent accident to a Cessna Caravan has concluded that fatigue damage to the nose gear assembly may well have originated from shock loads transmitted by the hand operated tug used for routine ground handling by the operator. In the case of the particular tug, as many similar pieces of equipment, there was no facility available in the linkage to absorb any such shock loads.

There are at present no manufacturer's published limits on the loads to which the Caravan's nose gear assembly may be safely subjected. However, we have in the past advised owners and operators to exercise care when manoeuvring aircraft on the ground. We reiterate that advice, and suggest that particular care be taken when using powered towing or pushing equipment. It goes without saying that if any load limits are published by the manufacturer, that operators make every effort to

stay within these limits, and have the aircraft inspected if they suspect these limits may have been exceeded. At the risk of appearing patronising, we suggest it is also important to ensure that the aircraft brakes have been released before any ground movement, as attempting to move a braked aircraft is one way of originating such shock loads.





## Fuel – or is it?

We recently received this letter from a flight instructor.

“Recently, one of our student pilots who was carrying out a pre-flight inspection on a PA28 drew my attention to the fact that the liquid in the fuel strainer appeared ‘less volatile than normal’. There was a good reason for this - it was 100% water! Although what we British describe as ‘summer’ has resulted in only around 83% of normal August rainfall in our area, on those occasions when it has rained, it has often been heavy. Hence the water probably entered the tank through a leaky seal when the aeroplane had to be left outside during heavy rain.

Only after some considerable draining was the water removed. But, rather worryingly, it had been flown between the rain period and the time the student found the water. Which means that some other pilot must have failed to check the fuel properly.....

I was always taught:

1. Drain fuel to the tip of the indicator in the fuel sampler.
2. Sniff it - does it smell like fuel?
3. Look at it. Hold the sampler against the white back of the checklist, check for pale blue colouration (Avgas 100LL) - and no bubbles of water at the bottom of the sampler.
4. Throw the liquid on the concrete and check that it evaporates rapidly. However, these days to protect the environment the common solution is to pour whatever was in the sampler back into the tank **provided, of course, that it was 100% fuel.**

**Always** check the tanks for water before the first flight of the day. Looking after the environment is all very well, but you probably want to be around to enjoy it!”



### CAA Comment

Not everyone has a concrete apron (tarmac is adversely affected by fuel). Other suggestions include spitting into the sample and checking the bubble does not dissolve, as shown in the picture. More specific checks however can be made with water test capsules and paste.

However, we would also recommend checking the fuel for contamination after every refuelling. In addition, while it is perhaps a common practice, we would not normally recommend returning the fuel to the tank after checking it.

## Cardigan Bay Danger Areas

Changes in controlled airspace to the West of Wales have resulted in some alterations to the Cardigan Bay Danger Areas (D201 series). As explained in NOTAMs, edition 32 of the CAA's Southern England and Wales

1:500,000 chart does not contain the latest information on D210A, one of the Danger Areas which lies to the West and South of the marked D201. The Chart amendment page of the CAA's web site includes the co-ordinates

of the danger area, which is permanently active from the surface up to an unlimited altitude with the exception of the controlled airspace contained within its boundaries.



## GNSS Approach trials

As many readers will be aware, although the RNav approach trials which were announced in the last issue have officially started, some GPS database upgrades may not yet have been completed. Pilots

must ensure that the aeronautical database and software version in use in their receiver is valid for the time of flight. The intended procedure must be available for loading from the receiver database, correctly represented

and unalterable by the pilot.

Manually entered and overlay procedures must not be used as the primary reference on any approach, at any time.

## Flying displays and restrictions of flying

We have been made aware of the following events which will be the subject of Temporary Restriction of Flying Regulations during the summer. The details will be promulgated by Mauve AIC and NOTAM. There will undoubtedly be others which do not appear on this list so it is important that pilots check the NOTAMS prior to flight.

Biggin Hill	3/4 June
Silverstone	9-11 June
HMQ 80th Birthday Flypast Rehearsals	12-16 June
Dover & the English Channel	16 June
HMQ 80th Birthday Flypast	17 June
Margate	17/18 June
Kemble	18 June
Stonehenge	20/21 June
Wycombe Air Park	23-25 June
Waddington	29 June - 2 July
Duxford	8/9 July
West Wales Airport	8 July - 31 December
Farnborough	10-24 July
RIAT (Fairford)	12-17 July
Wales & S. England (UAV Flight)	12 July
Brize Norton (UAV Flights)	14-16 July
Duxford	22 July
Weston-Super-Mare	26-30 July
Lowestoft	27/28 July
Sunderland	29/30 July
Eastbourne	17-20 Aug
Weston Park	18-21 Aug
PFA Rally Kemble	18-20 Aug
Elvington	19/20 Aug
Plymouth	24-28 Aug
Dunsfold	27 Aug

### Word for the summer

**“Turning back when you’ve got an engine problem is like feeling lucky looking into the barrel of Dirty Harry’s gun.**

**Think before trying it - are you that keen on Russian roulette?”**

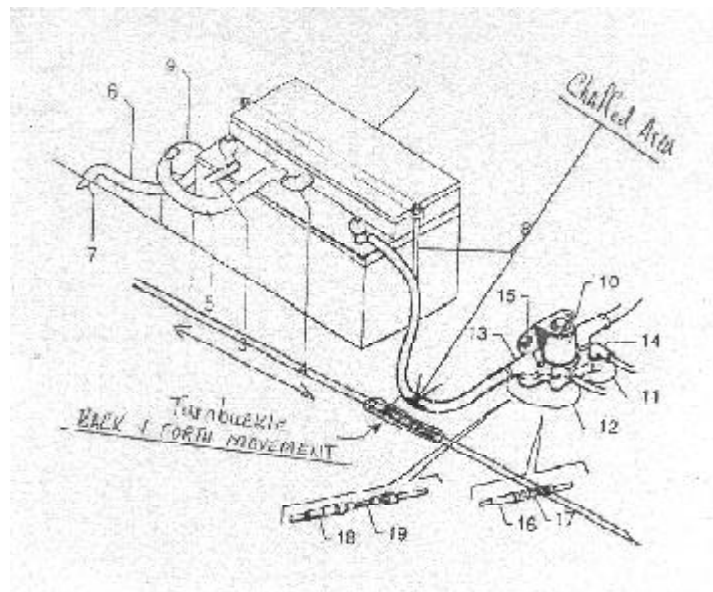


# ENGINEERING SECTION

## Clearance again

In the last issue we advised of a FAA Maintenance Alert concerning a CL-600 wiring conduit which had been sawn through by the elevator control cable, causing a short circuit fault.

In the FAA's Maintenance Alerts published in December, another incident is reported concerning cable chafing. In this case, the turnbuckle of a control cable (not specified) in a PA-28-181 was the culprit. It was found during routine maintenance to be rubbing against the positive battery cable, as illustrated below. The report indicates that the problem had been identified during the previous inspection, but although the battery cable had then been repositioned to provide clearance, it had worked its way back to its original position, where its insulation had been chafed almost through.



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## Bolts

We occasionally read about instances of engine bolts being found incorrectly torqued after maintenance. We would remind engineers that a pilot is not

permitted to carry out maintenance to that part of his aircraft, so if an engine is handed over to a pilot with loose bolts, the last engineer who signed for the

work is the final line of defence against a possible catastrophic failure. Workload may be high, but the safety of the pilot and passengers is in your hands!

## EASA changes

The CAA's Survey Department is involved in a series of regional workshops around the country to brief engineers on the changes following EASA's publication of Part-M, the regulation concerning the management of aircraft continued airworthiness.

These changes will involve the owners of all aircraft which fall under EASA regulations, the "Annex I" aircraft. Under EASA, such owners are responsible for the continued airworthiness of

their aircraft, and with effect from September 2008 all maintenance management must be carried out in accordance with Part-M. While the regulation in its current form is available from the EU web site, it is possible that further changes may be made before it comes into effect finally, so the Survey Department will be issuing advice to owners closer to the implementation date. Up until then, owners should continue to take responsibility for their aircraft

as they are already doing.

Owners of Annex II aircraft, such as microlights, homebuilts, and certain ex-military aircraft, will not be affected by the EASA regulations, and there will be no immediate change in the regulations currently affecting their aircraft, although it would be logical to align UK procedures more closely with those of EASA in the long term.

## Airworthiness Directives

CAP 747 - "Mandatory Requirements for Airworthiness" - is the primary UK reference for Airworthiness Directives (ADs) and other mandatory airworthiness information applicable to aircraft registered in the UK. CAP 747 contains, in full, all new ADs for UK products as approved by the European Aviation Safety Agency (EASA), together with ADs issued by EASA for products designed outside the EU. CAP 747 also contains the UK Airworthiness Directives and import requirements that continue to be required for UK registered aircraft in addition to EASA standards. These measures have been notified under Article 10.1 of Regulation (EC) No. 1592/2002.

The final issue of CAP 474 provides the lists of foreign ADs issued up to 28 September 2004 for reference. The final issue of CAP 476 remains applicable as it specifies UK mandatory requirements for UK products issued before 28th September 2004 and adopted by EASA as the European standard. Any deletions from CAP 476 are notified in CAP 747. CAPs 474, 476 and 747 are all available on the CAA Web Site: <http://www.caa.co.uk/publications/search.asp>.

Note that any modifications or replacement equipment required under UK AADs and ARIs that have now been withdrawn, must not be removed without reference to the amended relevant publications.

ADs approved by EASA for EU products must still be obtained for the time being from the authorities of the States of Design of those products, their addresses including web sites are in CAP 747. For UK products the sources are CAP 747 as amended, and CAP 476 at final issue.

We are aware that the following ADs have been recently issued by foreign authorities, however this list is NOT exhaustive and must not be relied on.

<u>AD Number</u>	<u>Applicability</u>	<u>Description</u>
TC CF-2006-05	Bombardier DHC-8 models 400, 401, 402	Outboard brake control cable
TC CF-2006-04	Bombardier CL-600-2B19	Aileron backlash check
EASA 2006-0105-E	Techno 240-B parachutes	Temporary grounding of reserve parachute
TC CF-2006-02	Bombardier DHC-3 Otter (turbine powered)	Elevator servo-tab
TC CF-2006-01	Bombardier BD-100-1A10	Window anti-ice connections
EASA 2006-0118R1-E	Bombardier CL-600-2B19	Air conditioning
TC CF-2006-06	Bombardier DHC-8-400, 401, 402	Exhaust duct shroud clamps

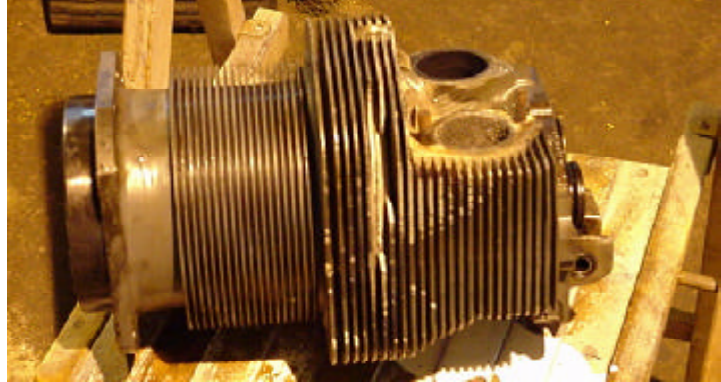
# Light Aircraft Piston Engine Overhaul Periods

As a result of comments made by aircraft owners and maintenance organisations it appears that a degree of confusion seems to exist with respect to operation beyond piston engine manufacturer's recommended overhaul periods. Airworthiness Notice 35 (AN35) originally addressed Light Aircraft Piston Engine Overhaul Periods. As a consequence of changes within Europe and the establishment of the European Aviation Safety Agency (EASA), CAA moved many documents and mandatory requirements into CAP 747. AN35 was transferred into CAP 747 as Generic Requirement (GR) No.24.

inspections and usage limitations that then become mandatory if an operator wishes to continue using an engine beyond the manufacturer's specified limit

periods beyond a manufacturer's recommended intervals and these are listed in the GR.

This note is to remind those



The CAA continues to view any extension to manufacturer's recommended overhaul periods (in terms of either operating hours or calendar life) as a conditional maintenance element based upon agreed additional inspections and limitations on the use of the aircraft. It is these additional

without a full overhaul, hence the inclusion of the requirements and policy within CAP 747 as mandatory actions. The CAA considers it important to remind industry that certain piston engine types are excluded from the agreement to extend overhaul

effected that GR No.24 has replaced AN35 and is still very much a requirement of CAA. The CAA has no plan at this time to move GR No. 24 to another location, but is planning to make minor text changes in the near future to bring it up to date with current developments.

## Letters to Owners/Operators

The following Letter to Owners/Operators (LTOs) has recently been issued by the CAA. An LTO does not in itself contain any mandatory requirements, but is intended to pass information. It may contain, for example, an item of significant airworthiness information received from a foreign Aviation Authority. They are listed with Airworthiness Directives on the CAA website [www.caa.co.uk/srg/airworthiness](http://www.caa.co.uk/srg/airworthiness)

LTO 2882

Hartzell propellers fitted to Lycoming 360 series

Propeller hub

## FAA Bi-Weekly Lists

Since the last publication date, the following have appeared in the FAA Bi-weekly listings of Airworthiness Directives. FAA ADs, including the Bi-weekly listings for small aircraft, are available on the internet through [www.faa.gov](http://www.faa.gov) under "Aircraft" select "Advisories and Guidance", "Aircraft Safety Alerts" and "Airworthiness Directives".

<u>Biweekly</u>	<u>AD</u>	<u>Aircraft/equipment type</u>	<u>Item</u>
2006-04	2006-03-08	Aero Advantage ADV 200 series vacuum pump	Replace with different item
2006-06	2006-01-11R1	Cessna 208, 208B	De-icing
2006-08	2006-06-06	Cessna 208, 208B	Icing limitations
2006-07	2006-06-16	Textron Lycoming 360 series engines	Crankshaft
2006-07	2006-07-06	Cirrus SR20, SR22	Fuel line and wire harness

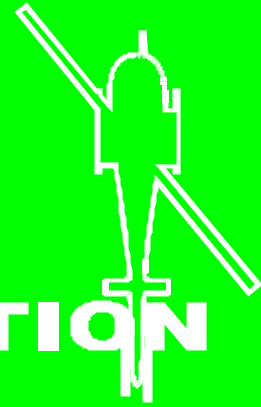


## FAA Maintenance Alerts

Since the last issue, the following maintenance alerts have been published by the FAA. The full text of each is available on the internet on their web site [www.faa.gov](http://www.faa.gov). Under "Aircraft" select "Advisories and Guidance", and "Aircraft Safety Alerts" and "Aircraft Maintenance Alerts", which are divided into monthly bulletins. Those without access to the internet can have a copy of the item which interests them by sending a stamped, self-addressed, envelope to: Flight Operations Inspectorate (General Aviation), Admin Section, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.

<u>Aircraft/equipment type</u>	<u>Item</u>
Aviat S-1T	Aileron spade-plate front attach point broke in flight
Beech 77	Cracked motor mount
Cessna 310J	Corroded wing attach fitting
Dassault Falcon 20-F5	Defective P3 pressurisation valve
Dassault Falcon 20-5	Anti-skid transmitter failed despite unit testing serviceable
Gulfstream G100	Broken crew seat frame
Gulfstream G200	Cracked thrust-reverser angle
Piper PA 24-260	Fuel filter and injectors contaminated by dirt following maintenance
Piper PA 32-301	Cracked rudder bar allowed play in pedals
Raytheon Beech A-36	Cracked bulkhead frames found on four aircraft
Beech 200 King Air	Windscreen heat connectors arcing
Cessna 172S	Aileron cable wearing against rib abrasion strip (3 cases)
Cessna 402C	Aileron cable wearing at pulley
Piper PA28-181	Aileron cables wearing at pulleys
Piper PA28-181	Rudder cable worn at fairlead passing through wing spar
Raytheon Beech 1900C	Horizontal stabilizer corroded
Raytheon Beech 1900	Fuselage skin corrosion
Raytheon Beech 1900C	Door frame cracked
Lycoming LTIO 540-J2 engine	Loose exhaust stud caused oil loss from pushrod housing
Sonera 2 LT	Canopy latch mechanism inadequate, canopy loss in flight
Beech F33A	Vertical stabilizer forward fitting cracked
Cessna 182/T182	Battery support cracked
Cessna 182J	Aft fuselage bulkhead cracked
Cessna T337G	Turbocharger/exhaust pipe clamp failed, loss of pipe on take-off
Kitfox IV	Brake system locked up
Raytheon Beech A-36	Rear fuselage bulkhead cracked
American Champion Super Decathlon	Elevator and rudder hinge damage (2 aircraft)
Beech 1900C	Elevator bellcrank supports damaged
Cessna single engine aeroplanes	Incorrectly marked fuel strainers
Cessna 172P	Wing trailing edge skin support bracket cracked
Cessna 172 series, 175	Engine mount attach bracket cracked
Cessna 180	Serious wing structure corrosion
Cessna 421B	Heater fuel pump overheat & failure
Piper PA23-250	Main landing gear link bolt snapped on landing
Piper PA23-250	Mixture control cable parted on shut-down
Piper PA28R-200	Main landing gear nutplates cracked
Piper PA31-350	Incorrectly bored nose gear cylinder assemblies
Raytheon 390 Premier 1	Possibly missing fuel drain holes in main landing gear bays
Raytheon 400A	Hydraulic brake line chafing on floorboard screw
Raytheon 400A	Bare wire at pitch trim switch in control wheel
Raytheon 800XP	Loose wiring connectors in engine start system
Raytheon 800XP	Battery power select switch failed

# HELICOPTER SECTION



## Check your landing site

In a report from the BFU (German AAIB) we read of a rescue helicopter which had set off for an industrial site to collect a patient. They had selected a large clear lorry loading area for the landing, but abandoned the approach when it became obvious they were not expected there.

There was however a group of people gathered around another flat area within the complex, who

were apparently attracting the pilot's attention, so he set up for a landing there. There seemed to be a clear approach and sufficient space between a building on one side and a fence on the other to land.

As the helicopter touched down and the medical team disembarked, there was apparently a bang and the aircraft tipped onto its tail. Parts of the

rotor blades flew across the landing area causing damage to vehicles parked nearby, and injury to three people. It seems that as the helicopter descended past the building, the downwash had dislodged two pieces of metal cladding from the building and these had flown into the main rotor disc, breaking the rotor blades and causing the subsequent damage.

### CAA Comment

While a rescue helicopter may of necessity have to make landing decisions without being able to check the area carefully, this accident should remind the rest of us of the importance of carrying out a proper reconnaissance of all aspects of a proposed landing site before attempting to use it.



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## Runaway trim

As part of the air test required for the renewal of its Certificate of Airworthiness, the test pilot of a Hughes 369/500 was carrying out 30 degree bank turns at maximum continuous cruise speed with another pilot sitting beside him. A left turn was initiated using the cyclic trim actuator, but the cyclic stick forces became progressively

greater until it required both pilots' hands on the cyclic in an attempt to maintain level flight. As no-one had control of the collective lever, it moved slightly and the aircraft started to descend. A forced landing was eventually carried out with each pilot handling a different control.

The trim remained hard left

until after the aircraft was shut down, but when power was re-applied the fault seemed to have disappeared. Engineering investigation was unable to replicate the fault, but the 4-way trim switch was replaced and the aircraft has flown several times since with no recurrence of the problem.

### CAA Comment

Runaway electrical trims on any aircraft are not unknown, and can have serious consequences. While it may not have been relevant in this particular case, we remind pilots of the need to be able to remove power from electric trims rapidly. That would include being able to identify and quickly pull the circuit breaker for their trim system without wasting time looking for it.



## Locked doors

In a GASIL article some years ago we drew attention to the fact that Cessna doors which had been locked from inside could not be subsequently opened from outside. We suggested that pilots should ensure that the manufacturer's Flight Manual recommendations for precautionary landings should be known and followed.

The AAIB have recently published a report into the ditching of a Robinson R22. The investigation noticed that the pilot had unlatched the doors before ditching, and considered that such action had made it easier for

the occupants to escape from the cockpit after the aircraft hit the water. Since that action does not form part of the Flight Manual drills, the AAIB recommended to Robinson and the FAA that it be

added. We would suggest that although it does not form part of the Flight Manual drill, pilots should consider unlatching the doors if they believe they are about to ditch their R22.





## Fuel planning

In the main section we have an article on fuel use. The AAIB have recently published a report on an accident to a Hughes 369 which seems to have run out of fuel just short of its landing area. While the investigation concentrated on the lack of accurate fuel consumption information available from the manufacturer, they also noted that the fuel LOW caption had illuminated some minutes prior to the engine failing.

The Flight manual includes the following guidance when the fuel LOW caption has illuminated: "Land as soon as possible" The Flight Manual also defines "land as soon as possible" as "execute a power-on approach and landing to the nearest safe landing area that does not further jeopardise the aircraft or occupants". This was backed up by a reminder that the light illuminates when approximately 35 pounds of fuel remains, which even at the

(incorrect) fuel burn calculated by the pilot equated to less than 10 minutes flying time with the usable fuel remaining.

Incidents of helicopters running short of fuel are not uncommon. The difficulty highlighted by the AAIB in calculating fuel consumption in light helicopters makes it imperative that pilots understand their fuel systems and warning indications, and take timely and appropriate action.



## Knowns and unknowns

In the AAIB's bulletin 2 of 2006 we can read a report into a helicopter accident which occurred to a pilot with 150 hours who was taking friends to a landing site which was unknown to him. The pilot overflowed the site before attempting to land, but the report indicates that the site was

on sloping ground, surrounded by tall trees. During the actual landing the pilot states that he lost control, and although the occupants were uninjured the helicopter was destroyed in the subsequent fire.

Apparently the pilot returned

to the site later with an instructor, and successfully landed there. However, the instructor apparently considered that the site presented numerous problems, one of which was the considerable slope over much of its area. He considered it presented a challenging landing site for any pilot.

### CAA Comment

It appears that the pilot involved in the accident had carried out sloping ground landing during his training, but that had been some time previously. One gains ability through experience, and operating at new sites is one way of gaining that experience. However, it is often difficult to obtain full information on private landing sites, with no way of knowing exactly what challenges they are likely to pose. It is prudent for anyone, but especially when one is at the start of the experience gaining process, to avoid unknown situations, especially if one has the added pressure of having promised to take friends to, or even just attend, a meeting. Imprecise or incomplete information, especially if from an unqualified person, does not turn an 'unknown' situation into a 'known' one.

SafetySense leaflet 17 'Helicopter Airmanship', available in LASORS and on the CAA's web site [www.caa.co.uk/publications](http://www.caa.co.uk/publications), contains appropriate reminders to pilots. The British Helicopter Advisory Board ([www.bhab.flyer.co.uk](http://www.bhab.flyer.co.uk)) publish guidelines to those who wish to set up an unlicensed helicopter landing site.

## FAA Bi-Weekly Lists

Since the last publication date, the following rotary wing Airworthiness Directives have appeared in the FAA Bi-weekly listings. FAA ADs, including the Bi-weekly listings for small aircraft, are available on the internet through [www.faa.gov](http://www.faa.gov) under "Aircraft" select "Advisories and Guidance", "Aircraft Safety Alerts" and "Airworthiness Directives".

<u>Biweekly</u>	<u>AD</u>	<u>Aircraft/equipment type</u>	<u>Item</u>
2006-09	2006-06-51	GEAE CT7-8A engines	No 3 bearing
2006-09	2006-08-07	Brantly B-2, B-2A, B-2B	Tail rotor shaft
2006-09	2006-08-12	MD 600N	Tailboom

## Airworthiness Directives

CAP 747 - "Mandatory Requirements for Airworthiness" - is now the primary UK reference for Airworthiness Directives (ADs) and other mandatory airworthiness information applicable to aircraft registered in the UK. CAP 747 contains, in full, all new ADs for UK products as approved by the European Aviation Safety Agency (EASA), together with ADs issued by EASA for products designed outside the EU. CAP 747 also contains the UK Airworthiness Directives and import requirements that continue to be required for UK registered aircraft in addition to EASA standards.

CAP 747, with CAPs 474 and 476, is available on the CAA Web Site, <http://www.caa.co.uk/publications/search.asp>.

We are aware that the following ADs have been recently issued by foreign authorities, however this list must not be relied on and is NOT exhaustive.

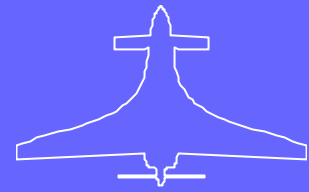
<u>AD Number</u>	<u>Applicability</u>	<u>Affecting</u>
EASA 2006 – 0052E	Eurocopter EC155 B, B1	Cabin sliding doors
EASA 2006-0055E	Eurocopter AS350, 355	Main rotor servo controls
EASA 2006-0056E	Eurocopter EC225 LP	Vibrations at low density altitude
EASA 2006-0060E	Eurocopter AS350	Stabilizers – upper and lower fins
EASA 2006-0084E	Eurocopter SA365C, AS365N	Main rotor hub to mast bolted attachment
TC CF-2005-27R1	Bell 222, 230, 430	Tail rotor counterweight bellcrank
EASA 2006-0102-E	Eurocopter EC 225 LP	Main gear box attachment
EASA 2006-0103-E	Eurocopter AS 332 L2	Main gear box attachment
EASA 2006-0120-E	Agusta A109S	Tail rotor trunnion flange assembly

## FAA Maintenance Alerts

Since the last issue, the following rotary wing maintenance alerts have been published by the FAA. The full text of each is available on the internet on their web site [www.faa.gov](http://www.faa.gov). Under "Aircraft" select "Advisories and Guidance", and "Aircraft Safety Alerts" and "Aircraft Maintenance Alerts", which are divided into monthly bulletins. Those without access to the internet can have a copy of the item which interests them by sending a stamped, self-addressed, envelope to: Flight Operations Inspectorate (General Aviation), Admin Section, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.

<u>Aircraft/equipment type</u>	<u>Item</u>
Agusta A109K2	Tail rotor trunnion overheating
Aerospatiale AS 350B2	Air conditioning belt failed
Bell 47-G3B2	Tail rotor blades cracked
Bell 206B	Ground crew's hat blew in to & dented main rotor blade
Schweizer 269C-1	Door hinge pin failure
Agusta A109C	Tail rotor retention strap pin cracked
Agusta A109K2	Repeated tail rotor trunnion overheating (2 aircraft)
Agusta A109K2	Tail rotor trunnion overheating
Eurocopter EC130	Oil vent tubes cracking at welds

# CAA NEWS



## CAA SRG restructure

The CAA's Safety Regulation Group has completed the re-organisation started last December. All Airworthiness matters are now the responsibility of the new Airworthiness Division, and aircraft operating matters are the responsibility of the Flight Operations Division whilst the Licensing Standards Division retains responsibility for licensing matters

The Flight Operations Division will now address issues that affect

the operation of General Aviation aircraft. The Flight Operations Division is composed of two Departments, Flight Operations Policy and Flight Operations Inspectorate. Previously the General Aviation Department was made up of two Sections, Operations and Policy. The former General Aviation Policy Section is now part of the Flight Operations Policy Department, under the name Flight Operations Policy (General Aviation). The section previously known as

General Aviation Operations is now part of the Flight Operations Inspectorate, under the name Flight Operations Inspectorate (General Aviation).

GA Safety Promotion is now part of the General Aviation Inspectorate's responsibilities.

Despite the many structural changes most of the former sections' contact names and telephone numbers remain the same.

## GA Safety Awards 2006

As announced in the aviation press, on 4 May this year Sir Colin Terry, President of the Royal Aeronautical Society, presented the CAA's General Aviation Safety awards at the Royal Air Force Club in London. The three award winners are shown in the picture.

The awards recognise people within the UK general aviation

community whose outstanding airmanship, practical skills, quick thinking and common sense have

averted a serious or possibly fatal incident during the year in question. If you know of any person who you think might qualify for one of this year's awards, please nominate them. Send details of the event together with the name, address and ideally telephone number of the nominee (and your own) to General Aviation Safety Promotion at the



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# CAA VFR Charts

The publication dates of recently issued CAA charts, and those to be issued in the near future, is as follows

## ICAO 1:500,000 scale

Southern England and Wales	Edition 32	16 <sup>th</sup> March 2006
Northern England and Northern Ireland	Edition 29	11 <sup>th</sup> May 2006
Scotland	Edition 24	6 <sup>th</sup> July 2006

## ICAO 1:250,000 scale

Sheet 1	Northern Scotland West	Edition 4	31 <sup>st</sup> August 2006
Sheet 2	Northern Scotland East	Edition 4	6 <sup>th</sup> July 2006
Sheet 4	The Borders	Edition 5	13 <sup>th</sup> April 2006
Sheet 6	England East	Edition 7	8 <sup>th</sup> June 2006
Sheet 8	England South	Edition 10	13 <sup>th</sup> April 2006

The VFR charts “updates” pages on [www.caa.co.uk/charts](http://www.caa.co.uk/charts) contain the latest amendments to each CAA chart since its publication date, and are updated every 28 days, coinciding with the AIRAC cycle. Pilots are encouraged to check charts and also the updates; if any errors are noticed there is a feedback form on the web site, which can be used to inform the Aeronautical Charts and Data section.

In addition, the charts “updates” pages also include the latest versions of the frequency cards normally provided with new charts. Pilots are advised to download these latest versions for their own use.

## Aeronautical Information Circulars

Recent AICs of interest to General Aviation pilots are listed below. They, like all AICs, are available on the AIS website [www.ais.org.uk](http://www.ais.org.uk) or by contacting Tangent Marketing Services Ltd at 37 Windsor Street, Cheltenham GL52 2DG, telephone 01242 235151, fax 01242 283131

### PINK

AIC 26/2006	Pink 96	Airprox reporting – UK and foreign airspace
AIC 31/2006	Pink 98	Differences training - single pilot piston aeroplanes with single power lever controls
AIC 32/2006	Pink 99	Differences training in single pilot aircraft with electronic (“glass”) flight instruments
AIC 41/2006	Pink 100	Malicious interference to VHF communications services

### WHITE

AIC 29/2006	White 120	Aeronautical information service customer satisfaction questionnaire
AIC 34/2006	White 122	Exemptions from bearing nationality & registration marks on UK registered aircraft
AIC 36/2006	White 124	Aircraft owners: Registration information
AIC 48/2006	White 125	Exemptions for flying training in aircraft complying only with airworthiness provisions applicable to private flights

### YELLOW

AIC 18/2006	Yellow 193	Restriction of Flying regulations – Southern North Sea 1 April –14 Aug 2006
AIC 19/2006	Yellow 194	Establishment of Class D Control Area in the vicinity of London/City Airport
AIC 21/2006	Yellow 196	Terrain Clearance
AIC 22/2006	Yellow 197	Introduction of changes to meteorological forecast charts – 14 March 2006
AIC 23/2006	Yellow 198	Shuttleworth Old Warden aerodrome and special events
AIC 38/2006	Yellow 200	Changes to communications procedures – VHF channels
AIC 40/2006	Yellow 202	Duxford special events for 2006
AIC 41/2006	Yellow 203	Extension of Class D airspace in the vicinity of London Luton Airport
AIC 49/2006	Yellow 204	Trial at selected UK aerodromes – Use of SSR in the aerodrome traffic pattern
AIC 50/2006	Yellow 205	UK CAA trial of RNAV (GNSS) approaches – 2006
AIC 52/2006	Yellow 207	CAP 413 Radiotelephony Manual – edition 16
AIC 53/2006	Yellow 208	Commercial air traffic operations at Robin Hood Airport Doncaster Sheffield

### GREEN

AIC 46/2006	Green 73	Aeronautical charts for civil aviation
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### MAUVE

AIC 17/2006	Mauve 177	Restriction of Flying regulations – Southern North Sea 1 April –14 Aug 2006
AIC 43/2006	Mauve 179	Restriction of Flying regulations – Duxford 21 May, 8/9 July, 2/3 Sept, 8 Oct
AIC 45/2006	Mauve 181	Restriction of Flying regulations – West Wales (Aberporth) 10 Apr –7 July
AIC 55/2006	Mauve 183	Restriction of Flying regulations – Jet formation display sites June – July 2006

In addition to the information in AICs, airspace users still need to check the Pre-flight Information Bulletins (PIB) through the same AIS website [www.ais.org.uk](http://www.ais.org.uk) for airspace arrangements at individual events. For example, temporary ATZs may be established by NOTAM. For Temporary Restricted Airspace and other last minute information, call freephone 0500 354802

## Creased CAA VFR Charts

**Edition 10, England South, 1:250,000, valid from 13th April 2006**

The CAA has become aware that a number of the above mentioned charts were creased during the lamination process. In some cases this creasing has led to a small amount of chart data being hidden and this may impact on the charts usability.

Anyone who has purchased one of these creased charts may return it to their supplier and obtain a replacement.

The CAA apologises for the inconvenience caused.

## CAA Safety Evenings – Winter 2006-7

The first confirmed venues for the CAA Safety Evenings which it is intended will take place during the next winter season are listed below. There are only a limited number every year, so each is effectively a 'regional' evening. Every GA pilot, flight instructor, engineer, or indeed anyone associated with GA operations, in the area is strongly encouraged to attend one of these evenings. Although the emphasis of the evening may be slanted towards the host organisation, the evenings are intended to be relevant to all forms of general aviation.

Any aviation organisation which would like to host one of these evenings should contact David Cockburn, either by e-mail at [david.cockburn@srg.caa.co.uk](mailto:david.cockburn@srg.caa.co.uk) or by letter to him at Flight Operations Inspectorate (General Aviation), Aviation House, Gatwick Airport South, West Sussex RH6 0YR.

Most events are free, although a small charge is sometimes necessary at the door to cover the cost of hiring the venue or providing refreshments. In addition, everyone has the opportunity to win prizes donated by generous sponsors. It is usually appreciated if those attending let the organiser know of their intention to attend, to give an idea of probable numbers.

The events start at 7.30 pm unless otherwise advertised, to last approximately 2¾ hours including a short break. The main speaker from Flight Operations is normally accompanied by a guest, usually from another CAA department, and discussion and questions are encouraged.

The programme is also available on the CAA's web site at [www.caa.co.uk/srg/general\\_aviation](http://www.caa.co.uk/srg/general_aviation), and any changes or added events will appear there as they are arranged.

<u>Date</u>	<u>Area/airfield</u>	<u>Location</u>	<u>Organiser</u>	<u>phone</u>
09/10/2006	North Coates	Clubhouse	Mike Speakman	01652618808
10/10/2006	Hucknall	Derwent Room, Rolls Royce	Colin Anthony	07901574173
11/10/2006	NW Microlights (Bolton)	tbd	Nick Hayes	01254 830851
31/10/2006	Caernarvon	tbd	Sam Betley	01286 830800
02/11/2006	Leicester	Control Tower	Roger Partis	0116 2592360
06/11/2006	Winchester	IBM Hursley Clubhouse	James Mason	07775 691439
08/11/2006	Manston	TG Aviation	Mark Girdler	01843 823656
09/11/2006	Headcorn	tbd	Mary Pearson	01622 891539
05/12/2006	Goodwood	tbd	Sally Elliott	01243 755066
17/01/2007	Crowfield	tbd	Dave Trowse	01473 644027
18/01/2007	Andrewsfield	Clubhouse	Carol Cooper	01371856744
07/03/2007	Bodmin	Clubhouse	Mark Pearson	01208 821419
08/03/2007	Bristol/Filton	BAe Welfare Association	Graham Clark	01454618216
12/03/2007	Carlisle	tbd	Brain Peacock	01228 573490
13/03/2007	Glenrothes	Tipsy Nipper Restaurant	Julia Grant	01592 753792
14/03/2007	Inverness	tbd	Peter McLennan	01667462226

# CHANGES

## FREQUENCY & AIRSPACE

Information supplied by  
Aeronautical Information  
Service (AIS).

Refer to NOTAM, Bulletins  
or AIP etc. for full  
information.

AIS website -  
<http://www.ais.org.uk>

Temporary changes not listed below may be deleted from those at GASIL 1 of 2006

### Aerodrome Availability & Communications

AERODROME	SERVICE	FREQUENCY	REMARKS
Alderney	AD		<b>Til 01 Dec</b> , Restriction on some Lithuanian and Russian reg acft. (C4430/06).
• Belfast City	AD		Til 17 Jul, Avgas not avbl (A0894/06)
• Enniskillen	AD		Til 31 Aug, All night flying suspended (L0779/06)
Guernsey	AD		<b>Til 01 Dec</b> , Restriction on some Lithuanian and Russian reg acft. (C4429/05).
Plymouth	AD		<b>Til 9 Jun</b> Rwy 06/24 lights u/s (C4634/05).
Wickenby	AD		<b>Til 28 Jun</b> : AD unlicensed on Tuesdays (L3431/05).

### NAVAIDS

• Redhill	NDB	343.0	Til 31 Aug NDB out of service (L1178/06)
Northampton/Sywell	NDB	378.5	Til 30 Aug u/s. (L1365/06)

### Airspace & RADAR Services