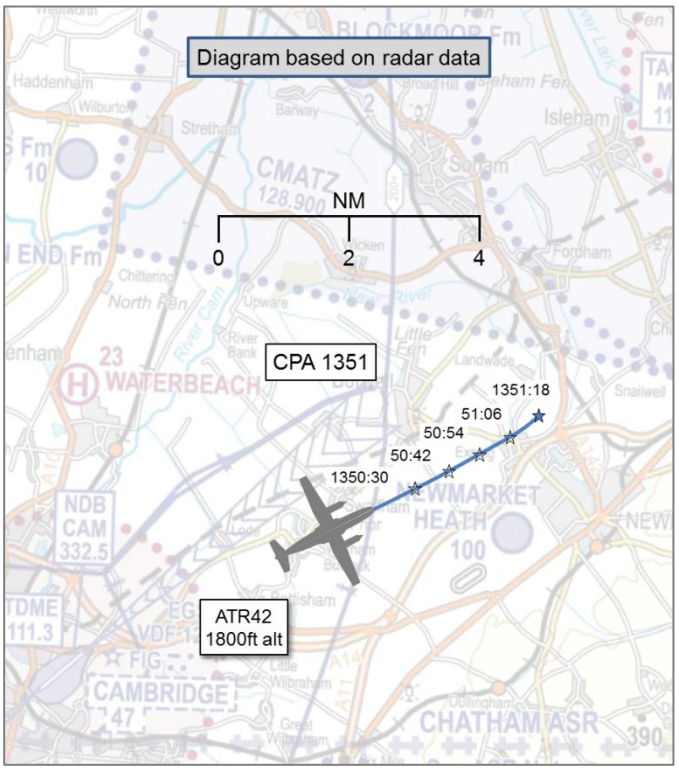
AIRPROX REPORT No 2014142

Date/Time:	9 Aug 2014 1351Z (Saturday)	
Position:	5216N 00023E (9.4nm NE Cambridge Airport)	
Airspace:	London FIR	(*Class*: G)
	Aircraft 1	*Aircraft 2*
Type:	ATR 42	Glider
Operator:	CAT	Unknown
Alt/FL:	1700ft QNH (1007hPa)	NK
Conditions:	VMC	NK
Visibility:	>10km	NK
Reported Separation:	0ft V/0.5nm H	NK
Recorded Separation:	NK	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE ATR 42 PILOT reports being inbound to Cambridge airport (CBG) under IFR/VMC. The aircraft was company coloured; strobes, navigation and landing lights were illuminated; SSR Modes C and S were selected. TCAS 2 was fitted. As they were in the procedure turn for the ILS RW23, turning inbound to intercept the course, the crew noticed a glider, same altitude, at about 0.5nm, heading towards them. They altered their course from 300° (they were in the turn) to heading 330° by turning right quickly to avoid it. The glider pilot was turning left and right, and they were not sure that they had been noticed. It was uncomfortable as they did not know the pilot's intentions. They reported the traffic to the Approach controller who had no radar return from the glider or radio contact with its pilot. They were eventually able to turn safely onto final, keeping the glider in sight at all times, to continue the approach. They informed ATC that an Airprox report would be filed.

She assessed the risk of collision as 'High'.

THE GLIDER PILOT could not be not traced.

THE CBG AERODROME CONTROLLER reports that the ATR42 pilot was transferred to the CBG Tower frequency on establishing on the localiser RW23. On coming onto frequency, he spotted a glider in close proximity to the aircraft which he called to the pilot. The pilot reported that they had come very close to another glider on completion of the base turn onto the localiser. Due to the workload at the time, and because he was screening a trainee controller, he asked the pilot to contact him on the ground if it was their intention to file an Airprox. The pilot telephoned and reported an Airprox at 1353 at 1700ft when avoiding action had been taken against a glider before re-establishing on the ILS. The pilot estimated the miss distance as less than 1nm. The weather at the time was good VMC. Two minutes earlier, an arriving Citation pilot had taken avoiding action in the CMB overhead against further gliders.

Factual Background

The CBG weather was:

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METAR EGSC 091350Z 23014KT 150V280 9999 SCT048 22/11 Q1007=
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CAP774[1], UK Flight Information Services, defines a Procedural Service:

'A Procedural Service is an ATS where, in addition to the provisions of a Basic Service, the controller provides restrictions, instructions, and approach clearances, which if complied with, shall achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic.'

Analysis and Investigation

CAA ATSI

ATSI had access to CBG RTF and area radar recordings, together with the written report from the controller and the ATR 42 pilot.

The Airprox occurred at 1351:20, 9.4nm northeast of CBG within Class G uncontrolled airspace between an ATR 42 and a glider.

The AT42 was operating an IFR flight inbound to CBG and was in receipt of a Procedural Service from CBG Approach on frequency 123.6MHz.

CBG ATC believed that the glider may have been operating from Gransden Lodge. The CBG Manual of Air Traffic Services (MATS) Part 2[2] states:

'Gliding takes place at Gransden Lodge 10nm SW of Cambridge. Gliders can be launched up to 3000 feet altitude by cable winch, or launched by glider-tug.

Gransden shall be considered always active although details are usually faxed to ATC when gliding events are scheduled. The site is marked on situational displays. A/C should be warned where it is suspected that gliding may be occurring.

A/C being vectored should be vectored to avoid the site if any doubt exists.

Gransden Lodge occasionally host gliding competitions. Prior to launch a member of the club should telephone ATC will details of numbers, routing etc. Information is also available online. If doubt exists, or for traffic updates, ATC will contact the club.

Information on known intense gliding activity will be displayed on a temporary basis at each operational position, and updated as required by the ATCO I/C.'

CBG ATC were providing a split Aerodrome and Approach Control service on a Saturday, without the aid of surveillance equipment. Controller training was in progress in both positions and workload was assessed as light to medium. The UK AIP[3] states for Radar: 'Available intermittently Mon-Fri during normal working hours and by arrangement only'. Radar would not have shown gliders operating in the overhead.

At 1345:52 the ATR42 pilot contacted CBG Approach descending to 4000ft on QNH 1007hPa. The controller replied advising a non-radar Procedural Service. The ATR42 pilot was instructed to continue towards the Cambridge (CAM) NDB in the descent to 3000ft on QNH 1007hPa. This was acknowledged correctly and the ATR42 pilot reported passing 3900ft. The controller cleared the ATR42 pilot for the ILS approach RW23 with no delay to report beacon outbound.

At 1347:00 the Stansted single-source radar replay showed the ATR42 4.3nm southwest of CBG at 3100ft. Also shown are a number of intermittent glider contacts - Figure 1.

[1] Chapter 5, Paragraph 5.1.
[2] Page 29, Paragraph 10.2.
[3] Page AD 2.EGSC-9 (29 May2014).

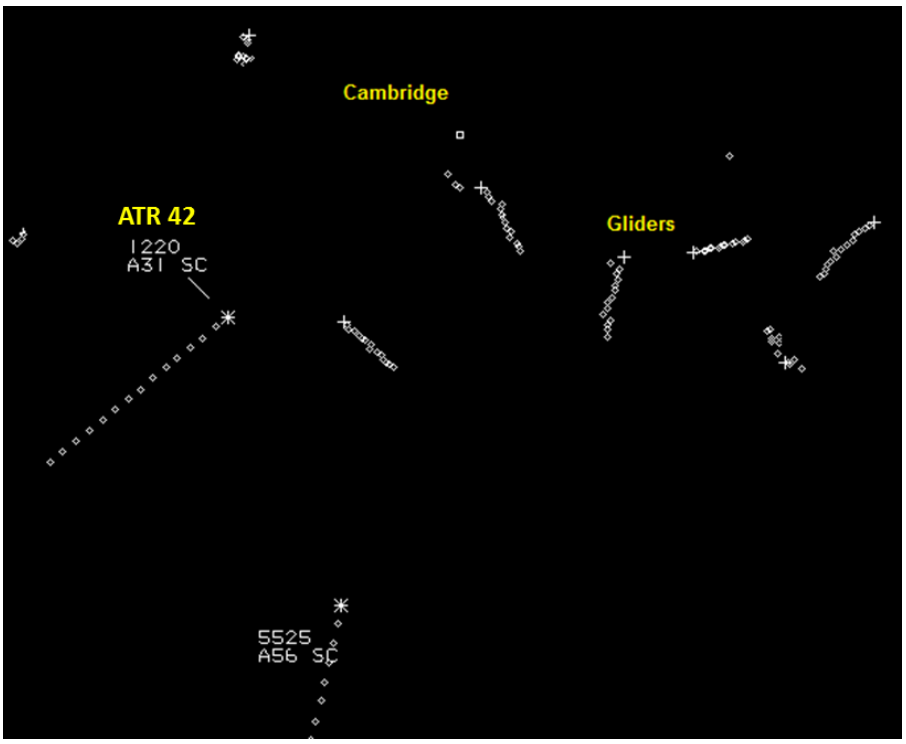

Figure 1 – Stansted single source radar at 1347:00

At 1349:20 the ATR42 pilot reported beacon outbound and the controller instructed them to report when localiser established.

At 1351:20 the ATR42 pilot reported "and (ATR42 C/S) we have a glider just er er on our right si- on the left side". The controller replied "(ATR42 C/S) roger understood roger it's unknown to us we are non-radar".

At 1351:37 radar reply showed the ATR42 commencing the base turn with an unknown contact (glider) 0.9nm to the west-southwest of the ATR42. It was not known if this was the glider involved in the Airprox– Figure 2.

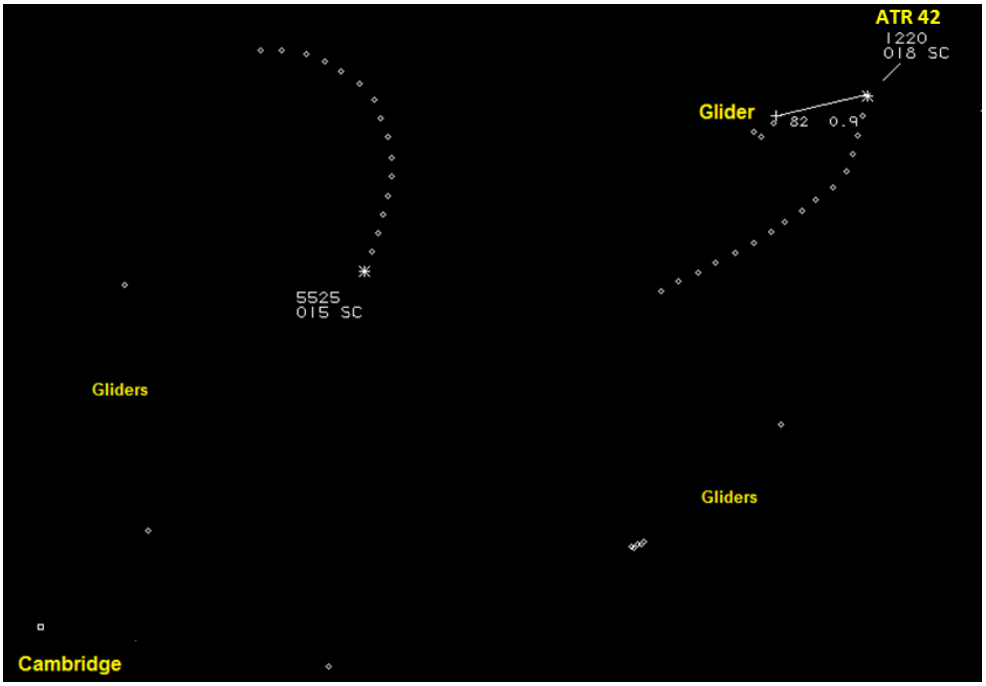

Figure 2 – Stansted single source radar at 1351:37

At 1351:40 the ATR42 pilot reported "(ATR42 C/S) he's at the exact er same altitude as us" and the controller responded "(ATR42 C/S) roger keep a good lookout we non radar so I'm unable to assist in any traffic information" which was acknowledged.

The ATR42 pilot's written report indicated that when in the procedure turn the crew sighted a glider at the same altitude at a range of about half a mile heading towards them. The ATR42 pilot reported turning right to avoid from a heading of 300° to 330°. The ATR42 pilot kept the glider in sight and continued the base turn onto final approach.

At 1352:50 the ATR42 pilot reported, "(ATR42 C/S) localiser established keeping an eye on the er gliders ?????". The controller advised "(ATR42 C/S) roger just be advised traffic has gliders have been reported overhead the field so keep a very good lookout descend on the glidepath QNH one zero zero seven". The ATR42 pilot was transferred to the Tower at 1353:14.

When asked the CBG controller confirmed that he had been aware of gliders to the north but not in the immediate vicinity. He thought that arriving aircraft were being advised to look out for gliders but could not recall if this had been broadcast on the ATIS prior to the incident. He explained that when CBG were aware of gliding activity the ATIS would be updated together with the local ATC webpage.

The ATR42 pilot had reported beacon outbound at 3000ft but had not mentioned sighting any gliders. It was only when a following aircraft reported taking avoiding action in the overhead that the controller became aware of the intense glider activity overhead the airfield.

In order to try and address concerns about aircraft routeing close to gliders a meeting occurred earlier in 2014 between CBG, the CBG Airlines safety representative and a Gransden Lodge gliding club representative. As a result of the meeting, and in order to mitigate against IFR traffic coming into proximity with gliders, CBG ATSU asked the CAA to update the CBG UK AIP approach charts, to show the intense glider activity at Gransden Lodge.

Additionally CBG ATSU issued a MATS Part 2 Supplementary Instruction (SI-02/14) to controllers – effective 24 July 2014:

> *'Gransden Lodge is a notified gliding site making up to 15,000 winch launches per year. Winch launching can take place with a maximum release altitude of 3300 feet AMSL and aerotow to any altitude outside of CAS. Intense gliding activity can be expected within 1nm from the airfield with further activity in the local area. The site should be considered active seven days a week during daylight hours. Even when weather conditions are poor there may be winch launching in progress (practising aborted launches or cable breaks etc).*
>
> *Following a number of encounters with traffic routing close to Gransden Lodge gliding site it is necessary to introduce measures to mitigate against traffic routing IFR to Cambridge to ensure that Gransden Lodge is avoided by a sensible margin to remove the possibility of an encounter with an IFR aircraft and a glider/winch cable combination.'*

The Supplementary Instruction outlines procedures to be implemented to ensure that arriving IFR aircraft are routed clear of Gransden Lodge not below 4000ft.

The radar replay only showed gliders intermittently and it was therefore not possible to identify the glider involved or to show the specific geometry of the occurrence. The ATR42 pilot sighted the Glider as they commenced the base turn and took avoiding action by reversing the turn from a heading of 300° to 330°.

CBG is situated close to Gransden Lodge in a busy Class G airspace environment. The issues regarding gliders is complex and gliders are often intermittent on radar and will not be seen in the overhead. Gliders may call CBG but this is often dependant on whether they carry a radio or hold

an RT licence. The ATSU have been pro-active in trying to reduce risk and mitigate against encounters between IFR aircraft and gliders. CBG have updated the appropriate charts in the UK AIP and have introduced procedures to avoid Gransden Lodge.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision[4]. If the incident geometry was converging then the ATR42 pilot was required to give way to the glider[5]. If the aspect was head-on both pilots were required to alter course to the right[6]. The ATR42 pilot turned right to avoid the glider.

Comments

BGA

It is not known whether the glider pilot concerned was operating from Gransden. In August, at the middle of the day, this glider could have come from as far away as 100nm or more and from any of the clubs engaged in a cross-country flight on that day. Cambridge is very much on the way for gliders carrying out tasks into East Anglia. It has been confirmed with Gransden that all pilots based there are aware of the shape of the instrument pattern at Cambridge and do call Cambridge whenever possible. Gransden commented that they have had some incidents when gliders have passed above and clear of Cambridge traffic but the controller at Cambridge had no height read out and assumed they were conflicting. It would appear that Gransden are aware of the Cambridge procedures, however, it is considered that more needs to be done to publicise instrument patterns to all gliding clubs and to request pilots to call ATC when passing these areas.

Summary

The Airprox occurred when the ATR42 and a glider came into proximity whilst the ATR42 pilot was making a base turn on the procedural ILS approach to RW23 at CBG. The aircraft were operating in Class G airspace where pilots were ultimately responsible for their own collision avoidance. The CBG controller was aware of some earlier glider activity to the north of CBG, but was unaware of gliders operating in the vicinity of CBG until after the ATR42 pilot had commenced the procedure. Because the CBG controller was not using surveillance equipment and the glider pilot was not in contact, he was unable to pass specific Traffic Information about the gliders to the ATR42 pilot. The ATR42 pilot reported the minimum separation as 0ft vertical and 0.5nm horizontal. The glider pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the AT42 pilot and the controller concerned, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

The Board noted that this Airprox occurred 2min after Airprox 2014141, which had taken place overhead Cambridge airport between an inbound IFR flight and an untraced glider. This Airprox occurred 9.4nm to the northeast of the airport, again with an unknown glider and an aircraft inbound under IFR. Cambridge ATC thought that the glider concerned might have been operating from Gransden Lodge as others from there were known to be operating in the area. However, the BGA member commented that without establishing positive identity of the glider it would not be possible to be certain where the pilot had departed from. He stressed that gliders operate over a wide area, and that the vicinity of Cambridge was popular airspace to route through. He added that he had had a lengthy discussion with the gliding club at Gransden Lodge, and he was satisfied that pilots operating

[4] Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).
[5] Ibid., Rule 9 (Converging).
[6] Ibid., Rule 10 (Approaching head-on).

from there were well aware of the airspace used by Cambridge ATC, especially for inbound IFR aircraft.

Similar to Airprox 2014141, the glider pilots were operating in Class G airspace in accordance with the privileges afforded them within that airspace; however, members were of the opinion that soaring in the overhead of an established commercial airport at a reported altitude of 5000ft should be avoided if possible and, if necessary, would be conducted much more safely with associated RT contact with the aerodrome concerned if possible. Members were aware that many glider pilots were not in possession of an RT license and consequently could not make such a call; although in that case it was felt appropriate that such glider pilots should include the position of a likely IFR hold in their assessment of desired track and avoid it. Members noted that the presence of the 'feathers' symbol on the CAA VFR 1:500000 scale chart indicated aerodromes with instrument procedures outside CAS, and should also serve as an indication that the airfield may have an IFR holding pattern in or near the overhead. Members recalled that, as a result of Airprox 2014097 and 2014126, the CAA had been recommended to consider producing a chart of UK airfield IFR holding pattern positions and that such a chart could have provided valuable deconfliction information in this case. With this in mind, members were also of the opinion that more could be done, in particular to inform other airspace users of glider competition or daily task tracks, and resolved that Director UKAB would continue his contact with the BGA with a view to understanding how this might best be achieved.

In the absence of a report from any of the glider pilots, it was not possible to ascertain their perspective of the event or whether a system such as PowerFLARM was fitted and of use. However, the Board were content that sufficient information existed to determine that the cause of the Airprox was a conflict in Class G airspace, and that the ATR42 pilot had resolved it by taking effective and timely avoiding action.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in Class G resolved by the ATR42 pilot.

Degree of Risk: C.

ERC Score[7]: 102.

[7] Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.