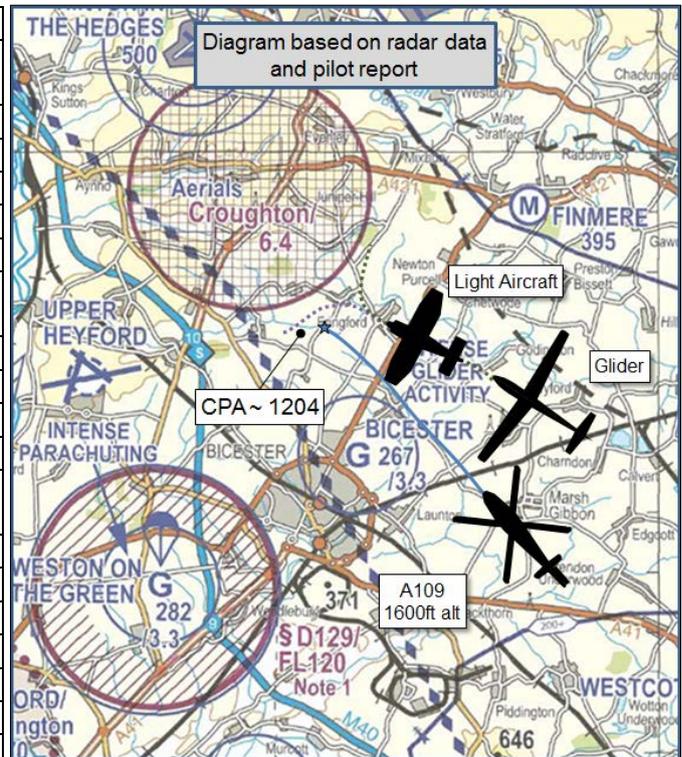


AIRPROX REPORT No 2016209

Date: 23 Sep 2016 Time: 1205Z Position: 5157N 00109W Location: NW of Bicester Airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A109	Light aircraft (glider tug)
Operator	Civ Comm	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	NK
Service	Basic	
Provider	London Information	
Altitude/FL	1600ft	
Transponder	On/C, S	
Reported		
Colours	Beige, Green	Red, White
Lighting	NAV, HISL, Strobe	NK
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1600ft	
Altimeter	NK (1019hPa)	
Heading	300°	
Speed	150kt	
ACAS/TAS	Unknown	
Alert	None	
Separation		
Reported	200ft V/100m H	NK
Recorded	NK	



THE A109 PILOT reports that as he was remaining clear of Bicester Glider site he was monitoring a Tug/Glider depart. He chose a path between the Tug/Glider combination and Bicester, with him behind and to the Port of the combination. He observed the Tug release from the Glider, roll left and enter a rapid descent across his path. He manoeuvred his aircraft right and up to remain clear of the Tug but was also cognisant of the Glider to his right. He then continued on task and reported the Airprox to London Information.

He assessed the risk of collision as 'Medium'.

THE LIGHT AIRCRAFT PILOT could not be traced due to initial inconsistencies in the reported timings of the Airprox. No tug or glider pilots reported an incident at that time, and so it is unlikely that they saw the A109.

Factual Background

The weather at Benson was recorded as follows:

METAR EGUB 231150Z 21007KT 9999 FEW042 18/08 Q1025 BLU NOSIG

Analysis and Investigation

CAA ATSI

At the time of the Airprox the Glider and tug combination were probably in communication with Bicester Radio and would have been in receipt of an Air Ground Communication Service (AGCS).

'Air Ground Communications Service (AGCS) is a service provided to pilots at specific UK at aerodromes. However, it is not viewed by the UK as an Air Traffic Service because it does not include an alerting service as part of its content'¹

Although several intermittent primary radar contacts were observed in the vicinity of Bicester leading up to the time of the Airprox, neither the Glider or the tug could be positively identified using the area surveillance recordings, therefore CPA could not be calculated.

Prior to the Airprox, the A109 was transponding the general conspicuity code 7000, and contacted London Information at 1204:15. At this time the A109 was approximately 1nm north of Bicester Airfield. The London Flight Information Service Officer instructed the A109 pilot to select SSR code 1177, which is a conspicuity code allocated to aircraft in receipt of a Basic Service from London Information, a Basic Service was then agreed. The A109 pilot reported his altitude as being 1700ft on QNH 1025.

At 1204:55 (Figure 1), the A109 pilot reported having just seen a glider released from the towing aircraft. [Note that in Figure 1 the A109 is still squawking 7000 and has yet to change to 1177 as just agreed with the London FISO]. In his later written report, the A109 pilot described having remained clear of Bicester Airfield and that he viewed a tug and glider combination depart and chose to route between them and Bicester. He went on to state that the *"...tug released from glider and rolled left and entered rapid descent across my path. I manoeuvred my aircraft right and up to remain clear of the tug but was cogniscent (sic) of the glider to my right"*.

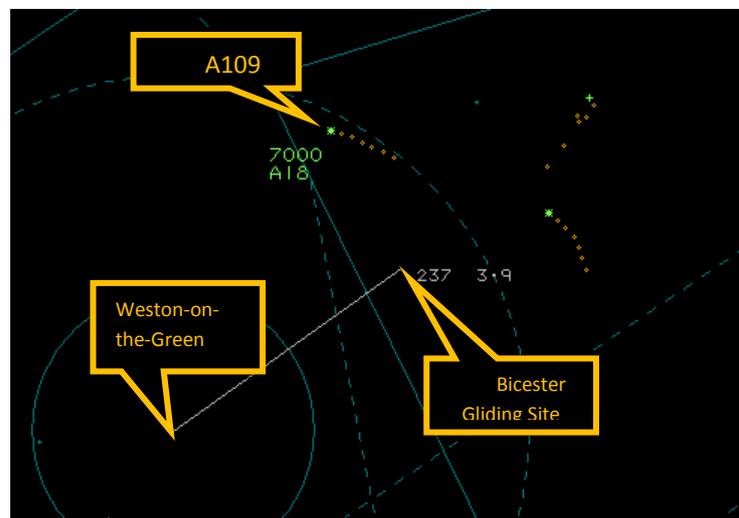


Figure 1 – 1204:55 UTC

Bicester Airfield is notified in the UK AIP as being a gliding site with an upper limit of 3300ft and is marked on the Southern England 1:500:000 aeronautical chart as being an area of intense glider activity. For illustrative purposes the area around Bicester Airfield is reproduced in Figure 2.

¹ CAP452 Ch. 4 page 24 para 1



Figure 2 – Southern England and Wales 1:500,000 Aeronautical Chart

The London Information Flight Information Service Officer was providing a Basic Service without reference to surveillance derived information to the A109 in Class G (uncontrolled) airspace. A Basic Service relies on the pilot avoiding other traffic, unaided by controllers/FISOs. The provider of a Basic Service is not required to monitor the flight (and) pilots should not expect any form of traffic information from a controller².

UKAB Secretariat

The Light Aircraft and A109 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard³. If the incident geometry is considered as converging then the A109 pilot was required to give way to the light aircraft⁴. If the incident geometry is considered as overtaking then the light aircraft pilot had right of way and the A109 pilot was required to keep out of the way of the other aircraft by altering course to the right⁵.

Summary

An Airprox was reported when an A109 and a light aircraft flew into proximity at 1204 on Friday 23rd September 2016. The A109 pilot was operating under VFR in VMC and in receipt of a Basic Service from London Information. The light aircraft pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilot of the A109, radar photographs/video recordings and reports from the appropriate ATC and operating authorities.

Although there was no report from the tug or glider pilots, the Board began by discussing the actions of the tug pilot as described by the A109 pilot. A gliding member explained that, on release of the glider, tug pilots are often keen to descend quickly and turn inbound to the launch site both to position expeditiously for the next tug launch and to enable their aircraft's engine to cool in the descent due to being operated for a prolonged period at maximum power during the tow. Notwithstanding, the Board opined that it still remained incumbent on the tug pilot to clear his flight path before he turned, and that it was evident that he had not done so sufficiently in this case.

² CAP774, Chapter 2, Para 2.1 & 2.5

³ SERA.3205 Proximity.

⁴ SERA.3210 Right-of-way (c)(2) Converging.

⁵ SERA.3210 Right-of-way (c)(3) Overtaking.

Turning next to the actions of the A109 pilot, and mindful that he was visual with the tug/glider combination throughout as it departed Bicester, members were surprised that he had then chosen to overtake the combination on the left and, bearing in mind the nature of tug operations, had flown between the tug/glider combination and Bicester gliding site. Glider members commented that other pilots would do well to bear in mind that a tug and glider might separate at any time, and that the tug would then likely make a sharp descending turn towards the launch site for the reasons mentioned previously. Some members wondered whether it would have been prudent for the A109 pilot to have called Bicester as he flew past because he may then have gained situational awareness himself, and might also have increased the situational awareness of glider and tug pilots that were operating on that frequency. Other members cautioned that although this was a sound proposition, it may not always be of benefit because the frequency may not always be monitored; however, blind calls might still be of use. The Board then looked at the actions that the A109 pilot had carried out to avoid the tug as it turned, and opined that whilst these had undoubtedly been beneficial in increasing separation, their very necessity was an indication that the A109 pilot was probably too close to the tug/glider combination as he overtook, regardless of the tug pilot's actions, and should in any case have overtaken on the right, mindful that the glider might also separate from the tug at any time.

The Board then looked at the safety barriers that were relevant to this Airprox and decided that the following were the key factors:

- **Flight Crew Situational Awareness** was considered to be only **partially effective** because the A109 pilot did not appear to be aware of the potential for the tug and glider to separate, he had flown too close to the combination, and he was on the wrong side for overtaking. That the tug pilot did not sufficiently clear his flight path before turning, and was therefore not aware of the A109, was also considered contributory to the degradation of this barrier.
- **See and Avoid** was also considered to be only **partially effective** because although the A109 pilot was visual with the tug and glider at all times, he did not avoid them by a sufficient margin.

The Board then considered the cause and risk of the incident and members quickly agreed that the A109 pilot had not allowed an adequate amount of room between himself and the tug/glider combination when overtaking. Notwithstanding, the Board also agreed that a contributory factor was the tug pilot not clearing his flight path prior to turning when he had released the glider. Turning to the risk, members agreed that safety had been much reduced because emergency avoiding action had had to be taken by the A109 pilot; accordingly, the Board assessed the risk as Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The A109 pilot overtook the tug/glider combination too close.

Contributory Factor(s): The tug pilot did not clear his flight path prior to turning.

Degree of Risk: B.

Barrier Assessment⁶:

Modern safety management processes employ the concept of safety barriers that prevent contributory factors or human errors from developing into accidents. Based on work by EASA, CAA, MAA and UKAB, the following table depicts the barriers associated with preventing mid-air-collisions. The length of each bar represents the barrier's weighting or importance (out of a total of 100%) for the type of airspace in which the Airprox occurred (i.e. Controlled Airspace or Uncontrolled Airspace).⁷ The colour of each bar represents the Board's assessment of the effectiveness of the associated

⁶ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#)

⁷ Barrier weighting is subjective and is based on the judgement of a subject matter expert panel of aviators and air traffic controllers who conducted a workshop for the UKAB and CAA on barrier weighting in each designation of airspace.

barrier in this incident (either Fully Effective, Partially Effective, Ineffective, or Unassessable/Absent). The chart thus illustrates which barriers were effective and how important they were in contributing to collision avoidance in this incident.

