

AIRPROX REPORT No 2019011

Date: 20 Jan 2019 Time: 1320Z Position: 5118N 00001W Location: Biggin Hill

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C560	Paragliders
Operator	Civ Comm	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	
Service	ACS	
Provider	Biggin Hill	
Altitude/FL	1700ft	NK
Transponder	A, C, S	
Reported		
Colours	NK	
Lighting	NK	
Conditions	NK	
Visibility		
Altitude/FL	1300ft	
Altimeter	NK	
Heading		
Speed	140kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	0ft V/2-400m H	
Recorded		NK



THE C560 PILOT reports that he was circling for RW03 at Biggin Hill¹ following an ILS approach to RW21. As he started the base turn for RW03, he spotted two paragliders. They were very difficult to see. To avoid them, he had to increase the bank angle to the point where he had a bank angle warning, although both pilots agreed that the bank angle was necessary to avoid a collision. Speed was stable during the manoeuvre and there was no altitude loss. He informed Biggin Hill ATC over the radio and telephoned them once on the ground to discuss the severity of the incident.

He perceived the severity of the incident as 'High'.

THE PARAGLIDER PILOTS could not be traced.

THE BIGGIN HILL CONTROLLER reports that the C560 was visually circling from an ILS on RW21 to land on RW03. On turning final south of the airfield, the pilot reported seeing 2 paragliders. He subsequently rang the tower to inform them that he would be filing an Airprox.

Factual Background

The weather at Biggin Hill was recorded as follows:

METAR EGKB 201320Z 01006KT 320V040 9999 FEW018 04/M01 Q1018=

¹ There is no circling approach for RW03. The C560 pilot was flying a visual app to RW03.

Analysis and Investigation

UKAB Secretariat

The C560 and Paraglider pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard². If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right³. If the incident geometry is considered as converging then the C560 pilot was required to give way to the paragliders⁴.

Comments

BHPA

Following extensive enquiries with the CFI of a nearby BHPA school & club, he confirmed that his school log showed no paragliding or paramotoring activity from his premises on that day. Furthermore, the CFI explained that he has robust SOP's in place regarding his school & club's activities due to the close proximity of Biggin Hill airfield which all members have to read and sign. He did state that he often saw paramotors flying in the area but didn't know who they were or where they took off from. The BHPA suggests that it is likely that the two pilots involved in this incident were paramotorists and may not have been BHPA members.

The BHPA notices that a left-hand approach for runway 03 does put Biggin Hill circuit traffic much nearer to Kenley gliding club and the BHPA school (shown by the gliding symbol on the CAA chart just beside the left hand edge of Biggin Hill's ATZ) than a right-hand approach would. The BHPA asks whether there are any specific reasons why Biggin Hill has a left-hand approach rather than a right-hand approach for 03? A right-hand approach would seem to keep traffic further away from both gliding & paragliding activities which occur very close to the western edge of Biggin Hill airfield's ATZ.

Summary

An Airprox was reported when a C560 and a pair of paragliders flew into proximity near Biggin Hill at 1320hrs on Sunday 20th January 2019. The C560 pilot was operating under IFR in VMC, circling to land in the Biggin Hill visual circuit and in receipt of an Aerodrome Control Service. The Paragliders could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the C560 pilot, radar photographs/video recordings and a report from the air traffic controller involved. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first looked at the actions of the C560 pilot. He was circling from an ILS on RW21 to land on RW03 when he saw the paramotors just outside the ATZ. ATC had no knowledge of the paramotors and the TCAS could not detect them (**CF2**), so the pilot had no situational awareness about them prior to visual acquiring them (**CF1**). Members commented that he had done well to see them, as they would have been difficult to spot against the backdrop of the ground, nevertheless it was probably later than he would have liked (**CF3**). Having seen them as he turned, the C560 pilot tightened the turn causing a bank angle warning within the cockpit. Some members wondered whether he could have climbed to avoid instead, but the airline pilot members advised that a climb would have made the approach unstable, meaning that he would have had to go around, so a tightened turn to avoid would ensure that

² SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

³ SERA.3210 Right-of-way (c)(1) Approaching head-on. MAA RA 2307 paragraph 13.

⁴ SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

he could still make the approach to land. Members also discussed whether the C560 could have remained within the ATZ as he turned final and therefore been protected by the airspace, but again those with large aircraft experience stated that this would have been extremely difficult for the C560 crew, and they felt he had done well to keep the circuit as tight as it was.

Turning to the paramotor pilots, the BHPA member noted that because there were no paragliders launched from Kenley that day, and there is no other suitable launch site close by, they must have been paramotors, rather than paragliders. They were operating outside the Biggin Hill ATZ and also would not have had any situational awareness about the C560 (CF1) because they were extremely unlikely to have had a radio. He further explained that the main risk to the paramotor pilots was collapse of the canopy from the turbulence caused by the C560.

Finally, the Board discussed the BHPA's suggestion regarding the circling direction at Biggin Hill. Not being aware of operating and noise restrictions that might be in place, it was not for the Board to make specific recommendations but, if there was the possibility of circling right-hand without causing problems with the visual circuit pattern and the avoidance of Tatsfield then the Board thought that there may be value in Biggin Hill reviewing the circling direction in order to take the paragliding school's location into account. [UKAB Secretariat note: Since the UKAB meeting, Biggin Hill has responded to confirm that a right-hand circuit direction is not possible due to noise restrictions, the Gatwick CTA and the Tatsfield mast, but also because the majority of the traffic joins deadside from the east and so a circling manoeuvre to the east would conflict.]

Notwithstanding the turbulence risk to the paramotors, when assessing the risk the Board thought that although safety had been degraded, once the C560 pilot had made his turn there was no risk of collision; risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

C F	Factor	Description	Amplification
	Flight Elements		
	• Situational Awareness of the Conflicting Aircraft and Action		
1	Contextual	• Situational Awareness and Sensory Events	Pilot had no, or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance		
2	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
	• See and Avoid		
3	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: C.

Safety Barrier Assessment⁵

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Situational Awareness and Action were assessed as **ineffective** because the C560 pilot had no knowledge about the paragliders prior to the Airprox.

Warning System Operation and Compliance were assessed as **ineffective** because the C560's TCAS could not detect the paragliders.

See and Avoid were assessed as **partially effective** because the C560 pilot had had to take later than desirable avoiding action.

