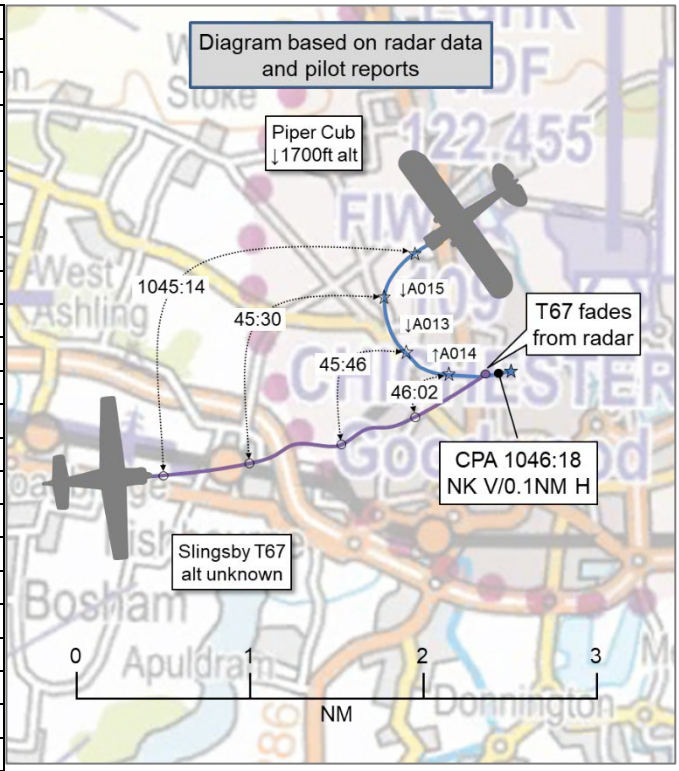
AIRPROX REPORT No 2021061

Date: 27 May 2021 Time: 1046Z Position: 5051N 00046W Location: Chichester/Goodwood circuit

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Piper L21 Cub	Slingsby T67
Operator	Civ FW	Civ FW
Airspace	Chichester/ Goodwood ATZ	Chichester/ Goodwood ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Goodwood Info	Goodwood Info
Altitude/FL	A014	NR
Transponder	A, C, S	None[1]
Reported		
Colours	Green, black/white	Yellow
Lighting	None	Strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1200ft	NK
Altimeter	QFE (1016hPa)	QFE
Heading	050°	NK
Speed	70kt	NK
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	30ft V/30m H	Not Seen
Recorded	NK V/0.1NM H	



THE PIPER CUB PILOT reports that they arrived at Goodwood at 2000ft QFE and carried out an overhead join for RW14 left-hand circuit, reporting "overhead 2000ft descending deadside" to Goodwood Information. When level at 1200ft on a heading of 050° towards the upwind end of RW14, and still on the deadside, the other aircraft passed just above them on the same heading and at a much higher speed. The other aircraft continued to join the circuit to land. They positioned behind a departing Piper Cub aircraft and followed it round the circuit to land. They spoke to the pilot on the ground who said that had not seen them at any time.

The pilot assessed the risk of collision as 'High'.

THE SLINGSBY T67 PILOT reports that they were informed via email that an Airprox had been filed; however, they did not see another conflicting aircraft or receive any ATC report via RT. They re-joined the Goodwood circuit via a crosswind join to land with a landing time of 1049Z. When changing to the Goodwood frequency, the information passed was that there were 3 in, which they took to mean established in the visual circuit. Two identical T67 aircraft were airborne at the reported time of the Airprox – their landing time was 1049Z and the other aircraft landed at 1039Z.

THE GOODWOOD AERO CLUB AVIATION OPERATIONS MANAGER reports having spoken to the two FISOs who were on duty and neither of them has any recollection of an Airprox incident. They listened to all VHF recordings between 1023Z and 1200Z which cover the time period from when [the Piper Cub pilot] first came on frequency, through to their various circuit calls (from an overhead join) and then their landing with taxi/parking instructions. At no point did the pilot of [the Piper Cub] make any comment or suggestion about the proximity of other traffic, nor did they advise the FISOs of any Airprox incident/loss of separation. There were two T67 aircraft operating during the time period that

[1] The Slingsby T67 pilot reported having transponder Modes A and C selected; these were not detected by the NATS radars.

[the Piper Cub pilot] was on frequency – [the Airprox T67] which landed at 1049Z and [a second T67] which landed at 1039Z. The landing time for [the Piper Cub] was 1053Z. Both [T67s] have identical paint schemes. The landing times are taken from the FPS held by Air Traffic.

Factual Background

The weather at Southampton and Shoreham Airports was recorded as follows:

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METAR EGHI 271050Z 20004KT 150V250 9999 SCT036 18/07 Q1021=
METAR EGKA 271050Z 20009KT 9999 FEW025 16/10 Q1021=
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Analysis and Investigation

CAA ATSI

The [Piper Cub] pilot was carrying out a standard overhead join, from the northeast of Goodwood, and was deadside descending, for a left-hand circuit RW14. The T67 pilot was re-joining from the west of Goodwood, for a left-hand circuit RW14, via the crosswind position.

The ATS Investigator had access to reports from the pilots of both aircraft. No initial or follow-up occurrence reports were received from Goodwood ATC. Screenshots contained within this report were taken from the Area Radar recording. The Goodwood RTF recordings were reviewed for the period leading up to the Airprox.

> **Important note**: There was no time stamp available on the RTF recording provided. The RTF file provided by the Transcription Unit was marked with a start time of 1038:18. However, when synchronising the RTF with the Area Radar picture, the RTF timing was proven to be approximately 3min 12sec in error i.e. the actual recording start time was approximately 1041:30. This report is based upon a start time of 1041:30.

In the lead up to the Airprox, the FISO was dealing with several aircraft moving around the airfield, as well as aircraft joining, transiting, and operating in the visual circuit. The RTF workload was very high throughout the period of the review.

At **1044:31** the [Piper Cub] pilot reported overhead, 2000ft, descending deadside. The FISO responded with "*report downwind left-hand RW14*." The pilot replied, "*downwind left-hand RW14 (callsign)*" (Figure 1). At **1045:22** the T67 pilot requested a visual recovery from the west. The FISO responded with, "*14 left-hand, QFE 1016, circuit active, with 3 in*". The pilot replied, "*14, 1016 and we'll be joining crosswind*". The FISO replied, "*roger*" (Figure 2).

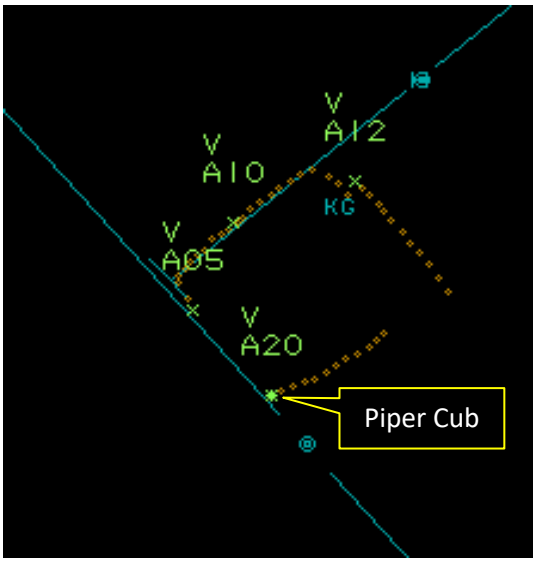


Figure 1 – 1044:31

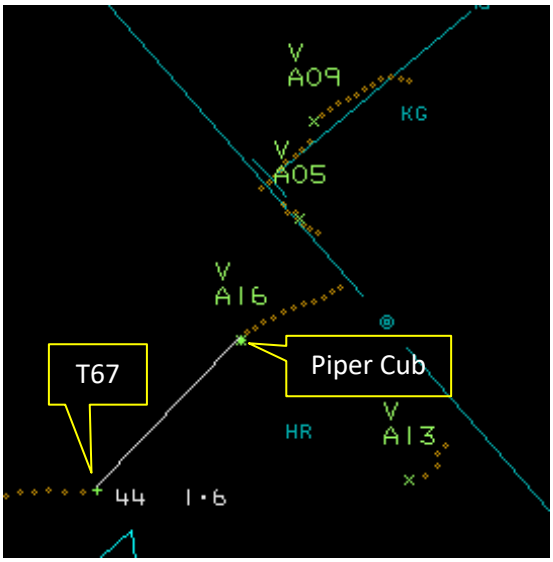


Figure 2 – 1045:22

At **1046:14** CPA occurred, with the two aircraft separated laterally by 0.1NM, the vertical distance reported by the [Piper Cub] pilot was estimated as less than 30m; however, this could not be measured or confirmed (Figure 3).

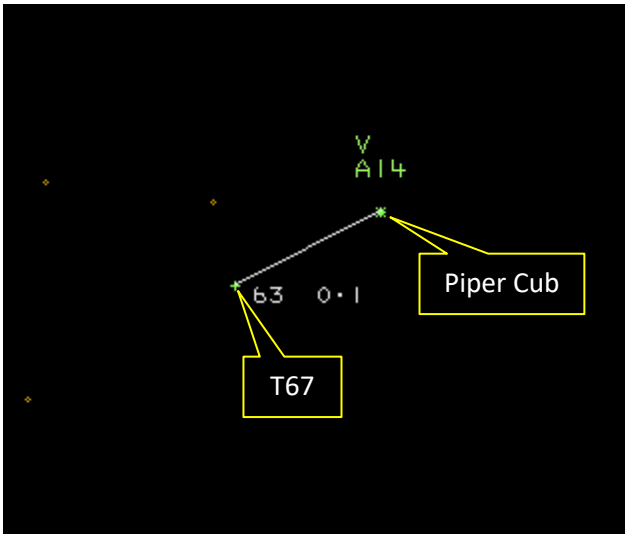


Figure 3 – 1046:14 – CPA

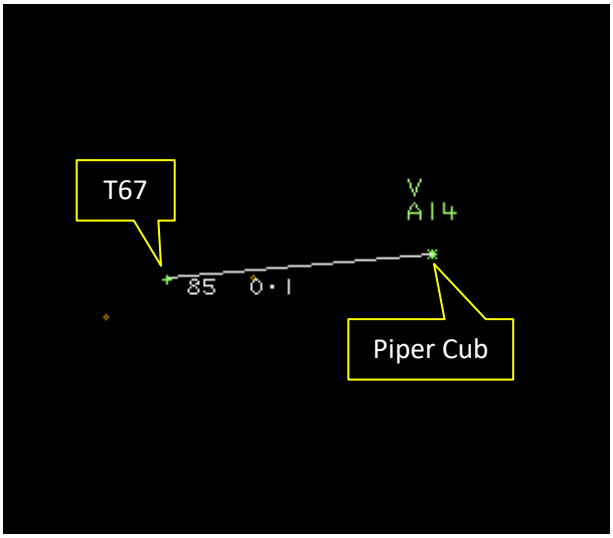


Figure 4 – 1046:18

The [Piper Cub] pilot advised the FISO that they were descending deadside. Fifty-one seconds later, the T67 pilot reported re-joining from the west, for a crosswind join. The tracks flown by the pilots resulted in the two aircraft coming into confliction. Generic Traffic Information was passed to the T67 pilot, advising them that there were 3 aircraft in the visual circuit; however, no mention was made of the [Piper Cub] descending deadside, and no Traffic Information was passed on the intentions of the T67 pilot to the [Piper Cub] pilot.

CAP 797 Flight Information Service Officers Manual (relevant extracts)

Traffic information

8.15 *Whilst generic traffic information provided to a pilot may be useful to indicate how busy the aerodrome environment is, as the pilot gets closer to the aerodrome and is required to integrate with other traffic, specific traffic information is needed in order to achieve a safe, orderly and expeditious flow of air traffic and to assist pilots in preventing collisions.*

8.18 *Traffic information to traffic operating in the vicinity of an aerodrome, and specifically within the ATZ and to flights conducting Instrument Approach Procedures (IAP) shall be issued in a timely manner when, in the judgement of the AFISO, such information is necessary in the interests of safety, or when requested by the aircraft. When a pilot report indicates, or an AFISO considers, that there may be a collision risk, specific traffic information shall be passed to each pilot concerned.*

8.101 *To facilitate the integration of arriving aircraft with existing circuit traffic, in addition to the provision of traffic information, AFISOs may provide advice on the published aerodrome joining procedures and/or a suggested course of action to the traffic situation.*

The [Piper Cub] pilot did not receive any Traffic Information on the T67 aircraft joining the circuit. The Traffic Information passed to the T67 pilot contained only generic information, advising them of the number of aircraft operating in the visual circuit. Having been advised by the T67 pilot of their intention to join crosswind, and with the [Piper Cub] pilot having advised that they were descending on the deadside, it would have been prudent for the FISO to have passed specific Traffic Information to both pilots. This may have assisted the T67 pilot to integrate themselves safely into the circuit pattern.

UKAB Secretariat

The Piper Cub and Slingsby T67 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[2] An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.[3]

Summary

An Airprox was reported when a Piper L21 Cub and a Slingsby T67 flew into proximity in the Chichester/Goodwood circuit at 1046Z on Thursday 27th May 2021. Both pilots were operating under VFR in VMC and both pilots were in receipt of an Aerodrome Flight Information Service from Goodwood Information.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the aero club aviation operations manager and reports from the appropriate operating authorities. 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first considered the actions of the Piper Cub pilot and heard from a GA pilot member that the preferred join for Chichester/Goodwood is an overhead join, which the Piper Cub pilot had been carrying out. Members agreed that the Piper Cub pilot had had the opportunity to hear the joining call of the Slingsby T67 pilot but had probably not assimilated that their aircraft was likely to come into conflict with the T67 on or around the crosswind leg, and that they had therefore not requested additional information to better understand the geometry between the 2 aircraft (**CF7**, **CF9**). In the event, the Piper Cub pilot had only had, at best, generic situational awareness of the joining T67 (**CF8**) and had probably continued with their standard overhead join in the knowledge that other circuit traffic would have been integrating with them. However, their opportunity to sight the faster T67 had been reduced due to the T67 approaching them from behind (**CF11**), meaning that they did not see the other aircraft until it had overtaken them (**CF10**).

The Board then considered the actions of the Slingsby T67 pilot and noted that they had been conducting a crosswind join in lieu of the preferred overhead join. Whilst members acknowledged that this would have been a more efficient profile for an aircraft joining the circuit from the west, they nevertheless felt that the T67 pilot's decision not to conduct the preferred join at Goodwood had been contributory to the Airprox (**CF5**). Furthermore, the Board considered that, although the crosswind join at Goodwood is not specifically prohibited, since it is not the preferred type of join this had placed more onus on the T67 pilot to integrate with the Piper Cub which was also establishing in the visual circuit at the time (**CF6**). Members agreed that the information passed to the T67 pilot by the AFISO had provided only generic situational awareness of circuit traffic (**CF8**) but also that the T67 pilot had not requested any further information to enable them to integrate safely into the circuit (**CF7**). The Board agreed that, ultimately, the T67 pilot had been relying on their lookout to detect the presence of other circuit traffic and that they had not seen the Piper Cub at the start of the crosswind leg (**CF10**).

Turning to the actions of the Goodwood AFISO, the Board heard from a controller member that, in a busy circuit such as this was, the AFISO may have been better served by at least passing the positions of the 3 other aircraft in the circuit to the T67 pilot, rather than just the number of aircraft in the circuit. Furthermore, members felt that sufficient information had been provided by the pilots of the Piper Cub and T67 to enable the AFISO to understand that the 2 aircraft were likely to be a factor to each other in

[2] (UK) SERA.3205 Proximity.
[3] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

the region of the crosswind leg. The Board agreed that the AFISO's situational awareness had, therefore, only been generic (**CF4**) and that this had led to the AFISO not detecting the conflict between the 2 aircraft (**CF3**). This, in turn, had led to the AFISO not deeming it necessary to pass specific Traffic Information to the T67 pilot on the Piper Cub and *vice versa* (**CF1**, **CF2**).

Finally, the Board considered the risk involved in this event. Members noted that, although the T67 pilot had reported transponding modes A, C and S, these had not been detected by the NATS radars and this had led to an unstable primary-only radar track of the T67. The Board took into account the measured CPA – noting the instability of the T67's recorded position – and the Piper Cub pilot's estimate of the separation and assessment of collision risk. The Board also noted the geometry of the encounter had meant that the Piper Cub pilot had not seen the T67 until after CPA and also that the T67 pilot had not seen the Piper Cub at all. Members therefore concluded that providence had played a major part in events and that a serious risk of collision had existed (**CF12**). Consequently, the Board assigned a Risk Category A to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021061			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Human Factors	• ATM Regulatory Deviation	An event involving a deviation from an Air Traffic Management Regulation.	Regulations and/or procedures not fully complied with
	• Situational Awareness and Action			
2	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
3	Human Factors	• Conflict Detection - Not Detected	An event involving Air Navigation Services conflict not being detected.	
4	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late or no Situational Awareness
	Flight Elements			
	• Tactical Planning and Execution			
5	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
6	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
	• Situational Awareness of the Conflicting Aircraft and Action			
7	Human Factors	• Lack of Communication	Events involving flight crew that did not communicate enough - not enough communication	Pilot did not request additional information
8	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
9	Human Factors	• Understanding/Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information
	• See and Avoid			
10	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
11	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other
	• Outcome Events			
12	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: A

Safety Barrier Assessment[4]

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

Ground Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Goodwood AFISO did not pass specific Traffic Information on the Slingsby T67 to the Piper Cub pilot and *vice versa*.

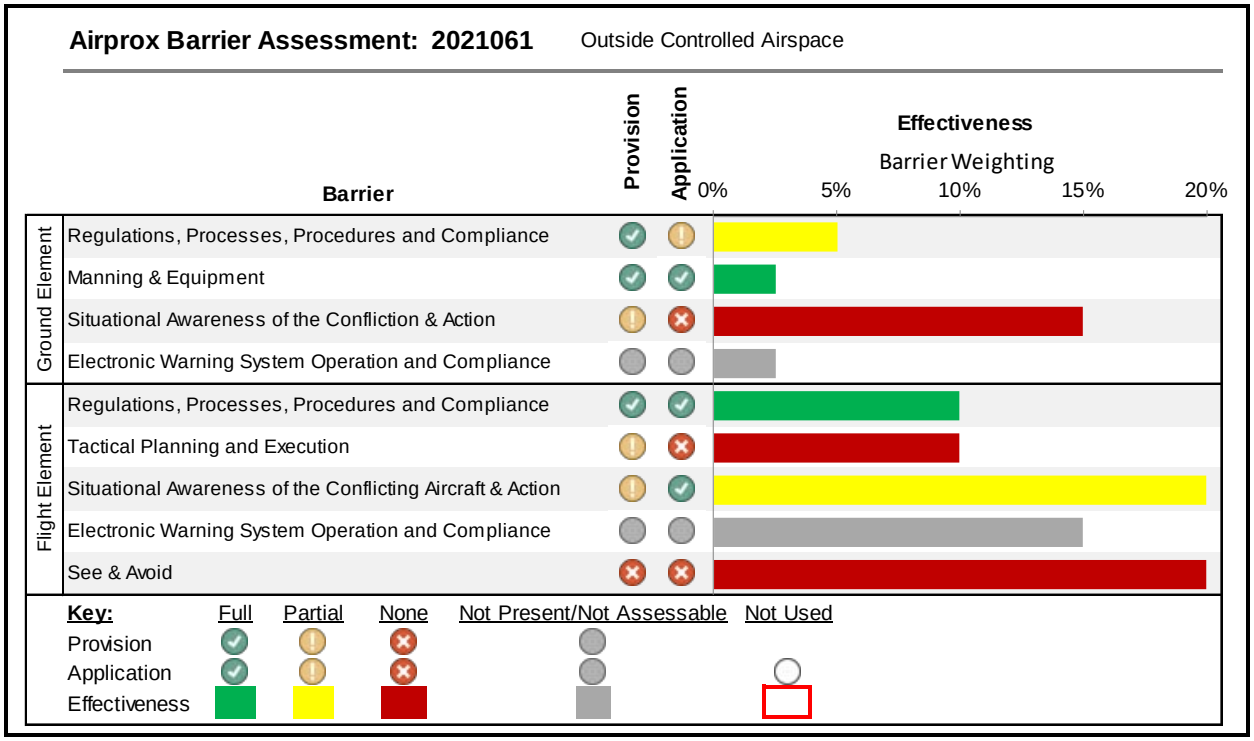
Situational Awareness of the Confliction and Action were assessed as **ineffective** because the Goodwood AFISO, having received the Piper Cub and Slingsby T67 pilots' reports of "downwind" and "joining crosswind" respectively, did not assimilate that the 2 aircraft would be a factor to each other.

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because neither pilot integrated into the Goodwood circuit effectively.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because both pilots only had generic situational awareness of the other aircraft in or joining the Goodwood circuit and neither pilot requested additional information from the Goodwood AFISO to assist them with their circuit integration.

See and Avoid were assessed as **ineffective** because the Piper Cub pilot did not see the Slingsby T67 until it had already passed them on their crosswind leg, and the Slingsby T67 pilot did not see the Piper Cub at all.



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