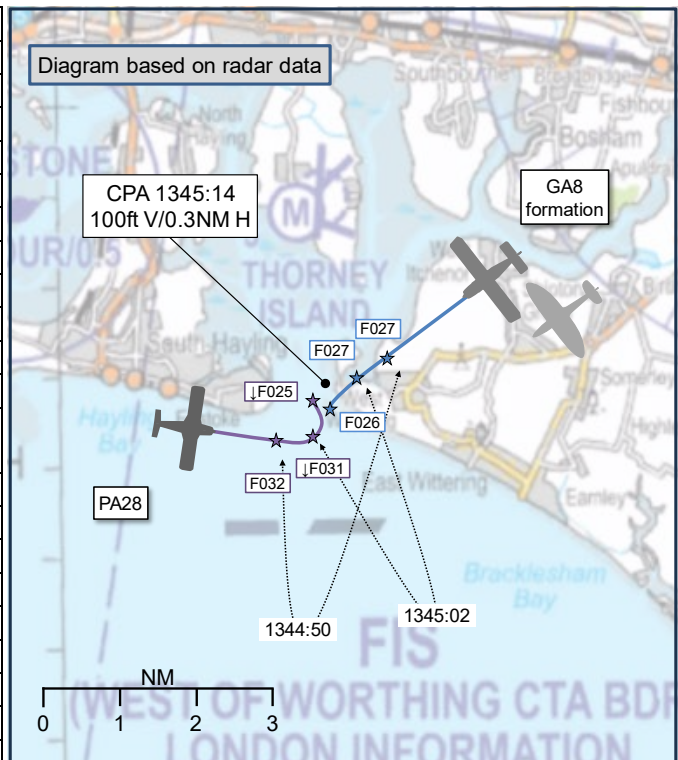


AIRPROX REPORT No 2023185

Date: 18 Aug 2023 Time: 1345Z Position: 5047N 00055W Location: East Head Beach, W Wittering

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	GA8 Airvan	PA28
Operator	Civ Comm	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Lee-on-Solent
Altitude/FL	FL026	FL025
Transponder	A, C, S	A, C, S
Reported		
Colours	White	White, Blue
Lighting	Nav, Strobe, Landing, Taxi	Anti-cols
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2700ft	NK
Altimeter	QNH (1019hPa)	QNH
Heading	230°	NK
Speed	120kt	95kt
ACAS/TAS	PilotAware	SkyEcho
Alert	None	None
Separation at CPA		
Reported	0ft V/400m H	Not Seen
Recorded	100ft V/0.3NM H	



THE GA8 PILOT reports that they were leading a formation with a Spitfire. The GA8 departed [departure airfield] from RW14 and tracked towards East Head Beach. The Spitfire departed shortly after and adopted the same track in order to formate with the GA8. The GA8 then entered a left-hand turn 1NM north of East Wittering to allow the Spitfire to join formation. After the two aircraft had joined formation, the GA8 pilot called to roll level and track to East Head Beach. On-track East Head Beach, the PA28 was spotted in their 2 o'clock, moving relative right-to-left to the formation. The PA28 then entered a slight left-hand turn, then tightened their turn and began a descent directly into the formation's path, coming very close to the formation aircraft. Once the PA28 had tightened the turn the formation made a sharp left-hand turn to avoid it. The formation then continued the turn to clear the area whilst monitoring [EC equipment] signals through SkyDemon. The PA28 then tracked, and continued to descend, to the north. The GA8 and Spitfire broke formation shortly afterwards.

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

THE PA28 OPERATOR reports that it was believed the flight in question was a PPL test with an examiner which was aborted due to weather conditions. The Airprox took place in an area where PFLs take place, but it was not known whether this was being undertaken at the time. The pilot did not recall seeing the other aircraft.

THE LEE-ON-SOLENT AFISO reports that the PA28 departed for a local flight at 1317. At 1324 the pilot reported leaving the ATZ, but remaining on frequency, which was acknowledged. The pilot did not transmit again until they called for the airfield information at 1400. No reports were made on the frequency about an Airprox and the AFISO had no knowledge of one taking place until notified by the UKAB.

Factual Background

The weather at Goodwood was recorded as follows:

METAR EGHI 181320Z 11008KT 050V160 9999 SCT020 24/20 Q1011=

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radars was undertaken. Both the GA8 and Spitfire were squawking and they could be identified using Mode S data and could be seen flying in formation at approximately FL027. The PA28 could also be identified using Mode S data and could be seen at FL031, see Figure 1.

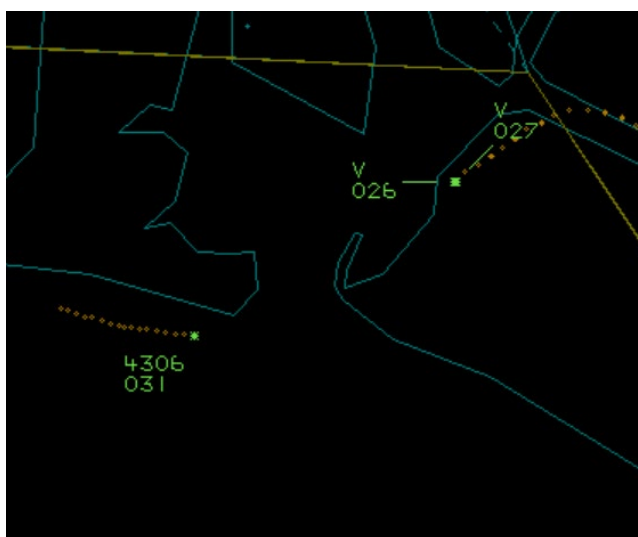


Figure 1 – 1344:22

The aircraft continued to converge, broadly maintaining their respective levels, with the PA28 crossing ahead of the GA8 formation at 1.6NM, see Figure 2.

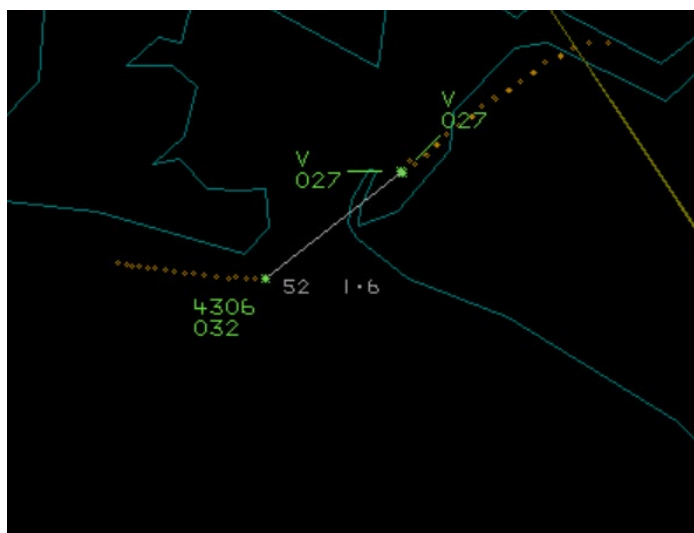


Figure 2 - 1344:46

At 1345:06 (Figure 3) the PA28 could be seen to make a left-turn and rapid descent.

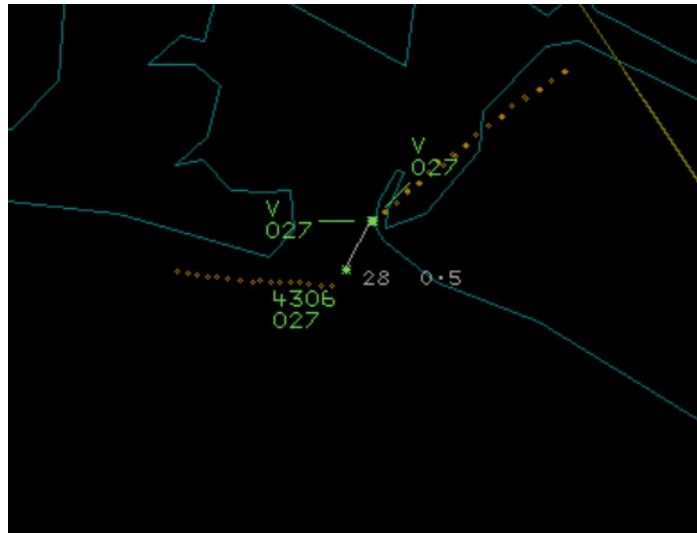


Figure 3 - 1345:06

Radar CPA occurred at 1345:14 when the PA28 appeared to have continued the left turn and the GA8 formation had also turned left, as described by the GA8 pilot. The Mode C on both aircraft indicated 100ft separation and the horizontal separation was 0.3NM.

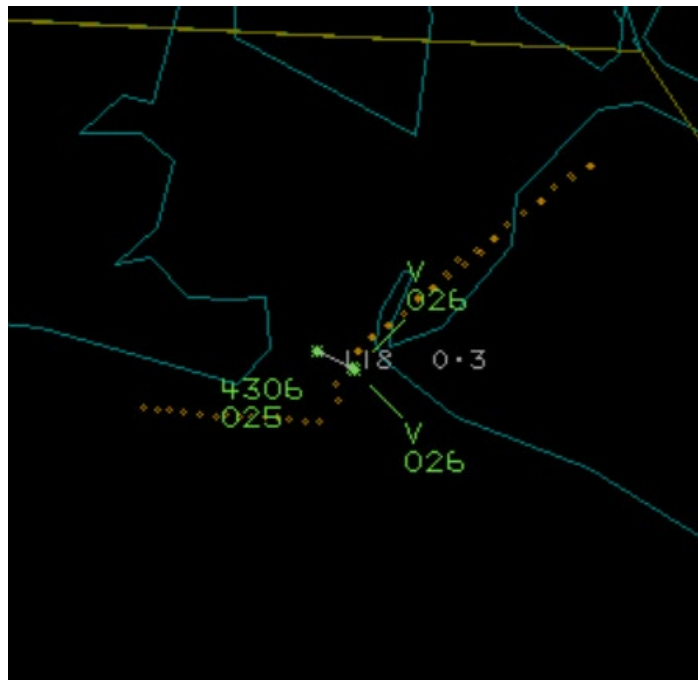


Figure 4 - CPA 1345:14

The GA8 and PA28 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.¹ If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.²

Summary

An Airprox was reported when a GA8 and a PA28 flew into proximity at East Head Beach, West Wittering at 1345Z on Friday 18th August 2023. Both pilots were operating under VFR in VMC, the PA28 pilot in receipt of a Basic Service from Lee-on-Solent and the GA8 pilot not in receipt of an ATS.

¹ UK Reg (EU) SERA.3205 Proximity.

² UK Reg (EU) SERA.3210 Right-of-way (c)(1) Approaching head-on.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs and a report from the AFISO 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 GA8 pilot. They had been operating with a Spitfire and, as such, may have felt that the formation had not been as manoeuvrable as a single aircraft on their own would have been, and therefore may have felt vulnerable. Some members noted that the formation had been operating a commercial service and wondered whether the pilots may have been better placed receiving a radar surveillance based ATS, which could have provided them with Traffic Information. However, other members countered that this particular area of the country did not have an obvious provider for a LARS, being just outside the coverage for Bournemouth and Farnborough, and Southampton is not a LARS provider. Whilst it was mentioned that a different area could have been chosen for the flight, members did acknowledge that this was often customer driven for particular ground features. The Board was heartened to see that the GA8 had been equipped with an EWS, however, although it would have been expected that it would have alerted to the PA28, none had been reported (**CF4**). The Board agreed that, without an ATS, or an alert from the EWS, the GA8 pilot had received no prior situational awareness that the PA28 had been in the vicinity (**CF2**), although once the GA8 pilot had seen the PA28 at range, they had initially not considered it to be a factor. However, the PA28 had then turned towards the formation and descended, which had concerned the GA8 pilot (**CF6**), at which point they had taken avoiding action to remain clear.

Turning to the PA28 pilot, the Board was not clear on whether the pilot had been conducting a PFL, or simply abandoning the exam and returning to base. The EWS in the PA28 could not have detected that on the GA8 (**CF3**) and so would not have provided the PA28 pilot with any information. Noting that the AFISO at Lee-on-Solent had not been required to monitor the flight (**CF1**), had not been equipped with radar and so had not had any knowledge of any other traffic operating in the area, members questioned the utility of remaining on the frequency as the AFISO could not have provided any additional information. It therefore appeared to the Board that the PA28 pilot had not been aware of the formation operating in their area (**CF2**), and members thought it probable that the pilot had not seen it prior to turning either (**CF5**).

When determining the risk of the Airprox, the Board considered the reports from both pilots together with that of the AFISO and the radar screenshots. They noted that, although the PA28 pilot had not seen the GA8 formation, the GA8 pilot had seen the PA28 in plenty of time to have been able to take avoiding action, and that whilst the GA8 pilot may have wished for more separation, their action had ensured that there had been no risk of collision; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023185			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Situational Awareness and Action				
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
2	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance				

3	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
4	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
• See and Avoid				
5	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
6	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C.

Safety Barrier Assessment³

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

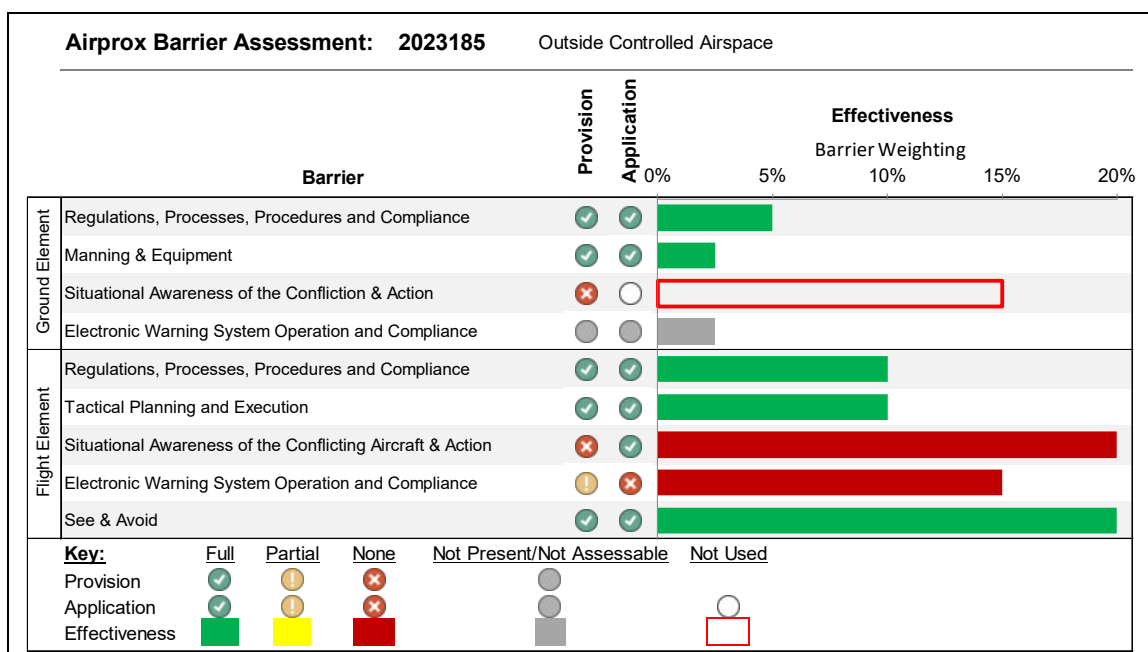
Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **not used** because the AFISO was not required to monitor the flight of the PA28.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any prior situational awareness about the other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the CWS on the PA28 could not detect the GA8 and although the CWS on the GA8 would have been expected to alert, none was reported.



³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).