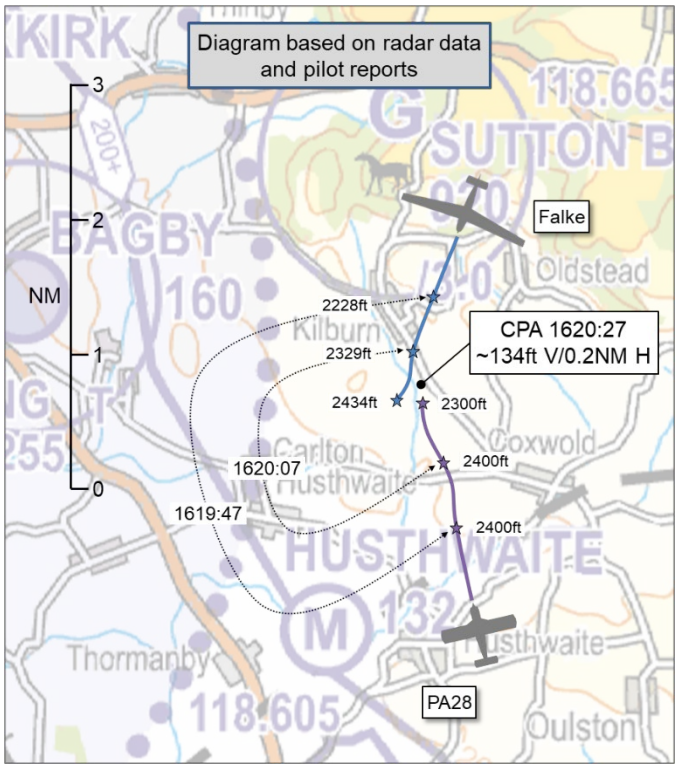
AIRPROX REPORT No 2024093

Date: 20 May 2024 Time: 1620Z Position: 5412N 00113W Location: 1.5NM S Sutton Bank

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Falke	PA28
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Unknown
Provider	Sutton Bank traffic	N/A
Altitude/FL	2434ft	2300ft
Transponder	A, C	A, C, S
Reported		
Colours	Green, white	White, green
Lighting	White strobe	Nav, anti-col, HISL, beacon
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	1500ft	2500ft
Altimeter	QFE	NR
Heading	170°	190°
Speed	80kt	90kt
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	0ft V/50m H	NR
Recorded	~134ft V/0.2NM H	



THE FALKE PILOT reports that, while climbing at start of a Navex, another aircraft was seen by their instructor in the half-past eleven position on a reciprocal heading. They believe both pilots initiated rapid right turns, passing abeam with 50-100m separation after the avoiding action. The PA28 seemed to have been heading to the Teesside area, avoiding the Topcliffe MATZ.

They telephoned Teesside ATC after landing, but the person who answered the telephone would not connect them with a controller, but gave them a local flying club contact instead.

[The pilot of the Falke commented that] they had been head-down with their map and their Instructor [the holder of an ATPL and FRTOL] had taken the emergency action.

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

THE PA28 PILOT reported [the details of an earlier flight through the area from north-to-south when] Leeming had informed them of traffic at 12 o'clock with no height information plus two other aircraft, one 400ft below left of track, and one 700ft below. The pilot of the PA28 opined that, if the traffic involved had been in radio contact with Leeming and operating with Mode C, it would have been easier to have identified them earlier.

THE LEEMING LARS CONTROLLER reported [the details of the earlier flight by the PA28 pilot through the area from north-to-south. Leeming was closed at the time of the PA28 pilot's northbound flight].

Factual Background

The weather at Leeming was recorded as follows:

METAR EGXE 201620Z AUTO 02009KT 9999 FEW025/// SCT032/// 16/10 Q1015

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The PA28 was positively identified from Mode S data. The Falke was identified by reference to the pilot's report (Figure 1). Both aircraft were depicted on the radar replay as having been at Flight Levels. The pilot of the Falke kindly supplied GPS track data for their flight. The diagram was constructed and the separation at CPA determined by combining the data sources.

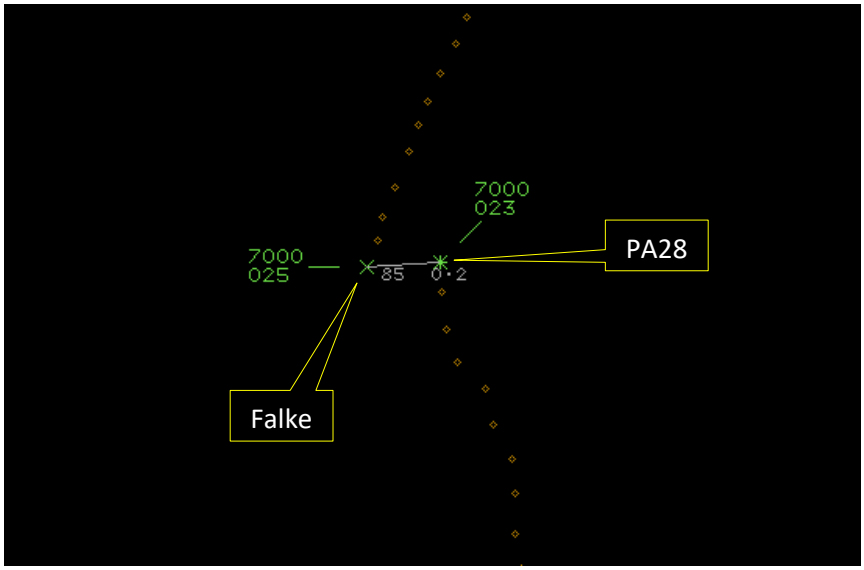


Figure 1 – CPA at 1620:27

Both pilots appeared to have altered course to the right, as shown on the radar replay after CPA (Figure 2).

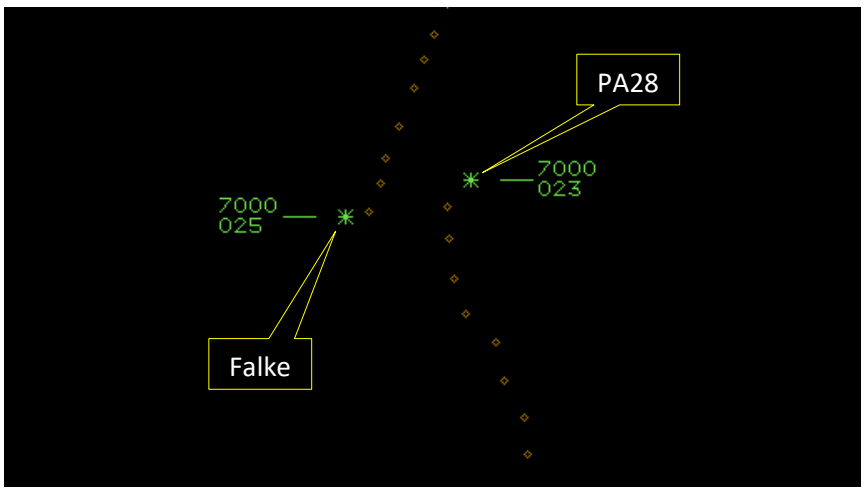


Figure 2 – After CPA

The Falke 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]

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

Comments

AOPA

Until a common format of Electronic Conspicuity is mandated and fitted to aircraft, a radar-based surveillance service, such as a Traffic Service, should be taken by pilots. This would assist them with awareness and notification of other airspace users. Unfortunately, the nearest unit was closed at the time of this particular Airprox. Ultimately, lookout is the final mid-air collision avoidance tool, which worked in this case.

BGA

UK glider launch sites (including Sutton Bank) are listed in UK AIP ENR 5.5 and labelled on CAA VFR charts with a "G" symbol, as shown in the chart segment in Part A. A greater density of gliders, tow-planes and motor gliders may be expected nearby at any time during daylight hours. Sutton Bank airfield operates 364 days per year (weather permitting). There were 15,216 aircraft movements there in 2023, including winch launches with a maximum permitted height of 2000ft AAL (2920ft AMSL), as indicated on CAA charts and in AIP ENR 5.5.

Sutton Bank airfield's western boundary is 0.9NM from the edge of the RAF Topcliffe MATZ. There have been other recent Airprox (e.g. 2023009 on Sun 29th Jan 2023, 2023236 on Sat 7th Oct 2023) where civilian traffic transiting the area close to the MATZ's eastern lateral boundary has encountered Sutton Bank-based aircraft operating nearby. Possible funnelling of transit traffic around the MATZ's lateral boundary (and therefore through the Sutton Bank area) is an ongoing cause for concern. The Sutton Bank aerodrome VHF channel is shown on CAA VFR charts and in ENR 5.5, and is typically monitored by Sutton Bank-based aircraft operating in the area. If transiting nearby below 3000ft AMSL, a brief broadcast call on this channel using "Unattended Aerodrome" phraseology (CAP 413 §4.162 et seq) could help avoid conflicts and increase everyone's situational awareness.

Summary

An Airprox was reported when a Falke and a PA28 flew into proximity 1.5NM south of Sutton Bank at 1620Z on Monday 20th May 2024. Both pilots were operating under VFR in VMC. The Falke pilot had been listening-out on the Sutton Bank traffic frequency. It could not be determined if the PA28 pilot had been in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data for the flight of the Falke 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 considered the actions of the pilot of the Falke. Members agreed that the EC equipment fitted to the Falke would not have been expected to have detected the presence of the PA28 (**CF3**). As such, and given that there had not been a common frequency in use between the pilots, members agreed that the pilot of the Falke had not had situational awareness of the presence of the PA28 until it had been visually acquired (**CF2**). Members noted that the pilot of the Falke had commented that they had been 'heads-down' and that it had been their Instructor that had taken what was described as 'emergency action'. Consequently, members agreed that the PA28 had been sighted late (**CF4**).

Turning their attention to the actions of the pilot of the PA28, members noted from their narrative report that they had recalled the southbound leg of their journey through the area rather than the northbound leg which had occurred approximately an hour later. Members surmised that the PA28 pilot had either not been aware of the encounter with Falke on their northbound leg, or that they had not considered the encounter with the Falke as having been particularly noteworthy. Members noted from the radar replay that the track of the PA28 appeared to have deviated to the right at the moment that the Falke

had passed left-abeam the PA28 at the moment of CPA. Therefore, members agreed that the pilot of the PA28 had not sighted the Falke until CPA and agreed that that effectively constituted a non-sighting (**CF5**).

Members pondered the track of the PA28 on the southbound and northbound legs through this particular area. Noting that the pilot of the PA28 had been passed Traffic Information by the Leeming controller on multiple contacts whilst on the southbound leg, members agreed that they would have gathered generic situational awareness of an area busy with traffic (**CF2**). Therefore, as the pilot of the PA28 had transited northbound, this time without the benefit of an ATS from the Leeming controller, members agreed that it would have been prudent to have tuned their radio to the Sutton Bank frequency to gather updated information on the traffic situation. Members also agreed that it would have been wise for the pilot of the PA28 to have relayed their intentions on the Sutton Bank Traffic frequency (**CF1**) for the benefit of the Falke pilot and for any other pilots in the area on that frequency. Further, members agreed that it would have been particularly prudent to have done so given that the PA28 had been heading towards the overhead of Sutton Bank gliding site at an altitude that had been significantly lower than the maximum altitude at which a high-tensile steel winch cable might have been encountered.

Concluding the discussion, members agreed that, although the radar replay had indicated that the horizontal separation at CPA had been 0.2NM, the actual separation may have been notably less given the accepted limitations of the radar system. Indeed, members noted that the pilot of the Falke had estimated the separation to have been 50m. Although the exact measurement of horizontal separation at CPA could not be resolved by members as having been 50m or 0.2NM, members agreed that safety margins had reduced much below the norm and were satisfied that there had been a risk of collision (**CF6**). It was further agreed that it had been the emergency action taken by the Instructor in the Falke that had increased separation at the last minute. As such, the Board assigned Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024093			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
	• 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
	• See and Avoid			
4	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
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
	• Outcome Events			
6	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: B.

Safety Barrier Assessment[3]

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

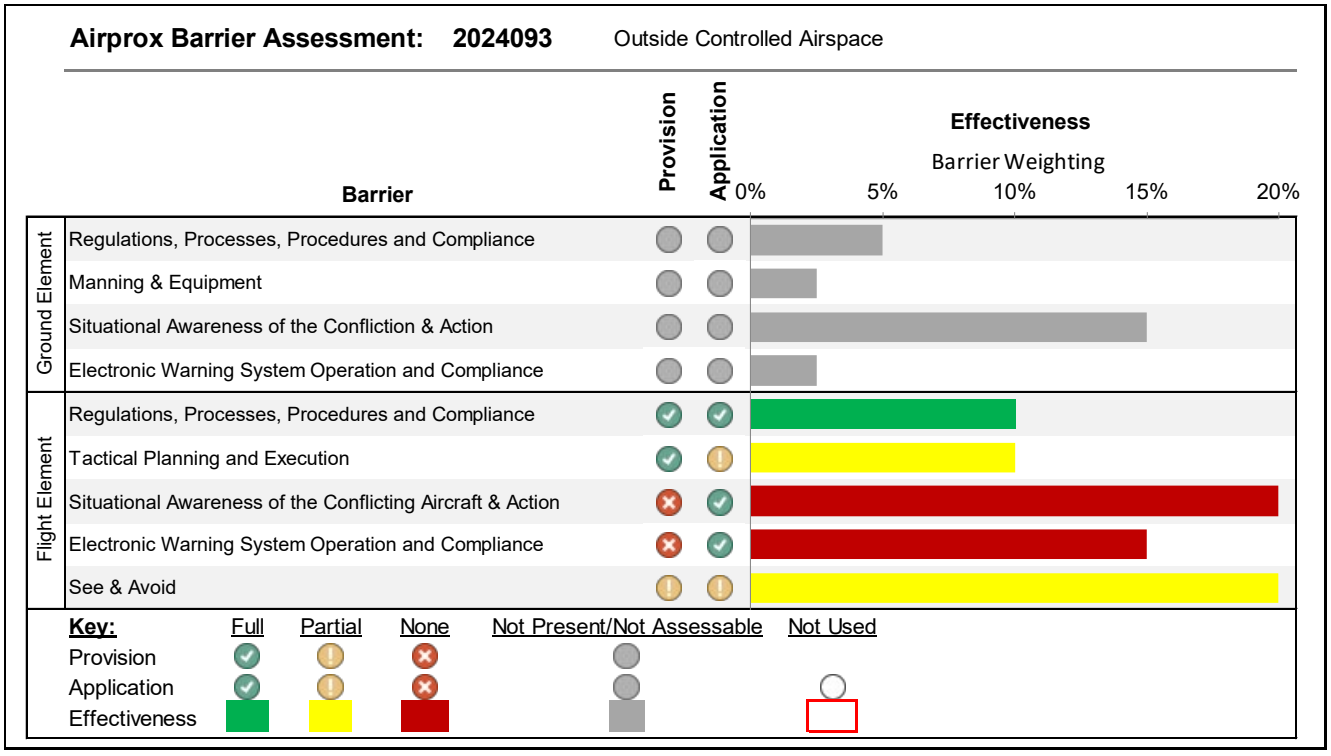
Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because it would have been prudent for the pilot of the PA28 to have transmitted their intentions on the Sutton Bank frequency.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the Falke had not had situational awareness of the presence of the PA28 until it had been visually acquired.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC equipment fitted to the Falke would not have been expected to have detected the presence of the PA28.

See and Avoid were assessed as **partially effective** because the pilot of the Falke had sighted the PA28 late.



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