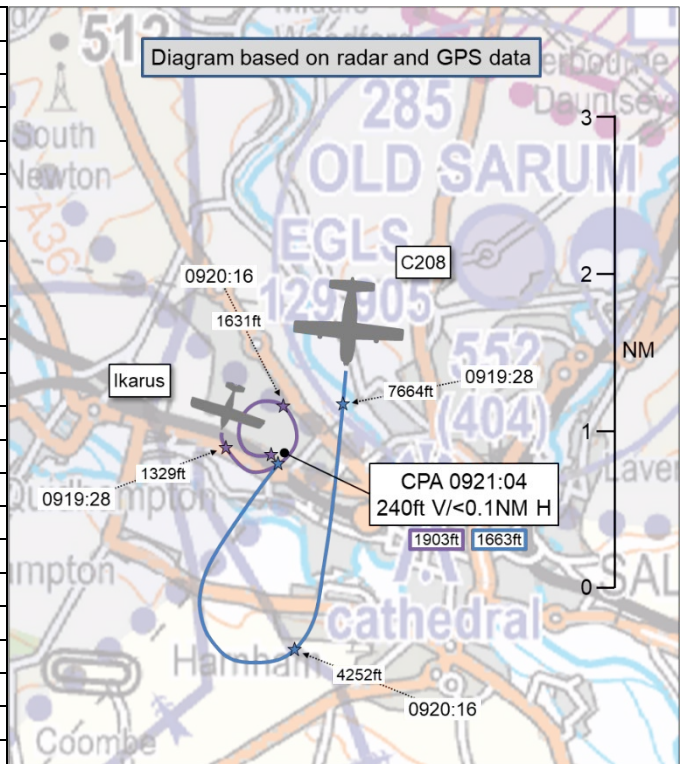


AIRPROX REPORT No 2023227

Date: 30 Sep 2023 Time: 0921Z Position: 5105N 00150W Location: 2NM SW Old Sarum

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C208	Ikarus
Operator	Civ Comm	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	Old Sarum drop-zone	Old Sarum drop-zone
Altitude/FL	1903ft	1663ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, blue	White
Lighting	Beacon	Strobe
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1500ft	1600ft
Altimeter	QFE (1016hPa)	QNH (1020hPa)
Heading	060°	"circling"
Speed	110kt	65kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	0ft V/20m H	150ft V/400m H
Recorded	240ft V/<0.1NM H	



THE C208 PILOT reports that, turning final for RW06 at Old Sarum after dropping parachutists, they saw movement at about their 10 o'clock. Looking, they saw a microlight very close, in what seemed to be an avoiding turn to the left. [The pilot of the C208] then avoided to the right. They saw the registration of the other aircraft under its left wing, and estimate it was 20m away, just below them when it was first sighted (the C208 pilot was descending, the other aircraft was level when they looked to the left).

They subsequently spoke to the pilot of the other aircraft who stated that they were clear of Old Sarum parachuting area and had been listening-out on the frequency. No blind calls were made by [the pilot of the C208] or the other pilot.

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

THE IKARUS PILOT reports that they were flying via Salisbury. The MATZ was not active. They flew west over Salisbury and descended to around 1600ft QNH to fly over Bemerton Heath. They were aware of [the C208] in the area as it drops skydivers but, as [the pilot of the Ikarus] flew over Salisbury, the C208 was around 9000ft after dropping the parachutists, and was therefore to their north. They did not have visual but, at that stage, they had 2NM and 7400ft between them. Cloudbase was around 10,000ft.

As they flew over Bemerton Heath, they circled anti-clockwise at around 65kt and around 30° bank. They checked for aeroplanes first, and could not see any in any direction. They also checked whilst circling. They did three circles, at constant height and bank, keeping lookout and, on their final circle, saw an aeroplane off their right wing, to the east, banking right. They would estimate 400-500m away, slightly above their altitude. They didn't need to take avoiding action as the other aeroplane was banking right and they were still circling left.

They then heard the [pilot of the C208] report to the drop controller that [the Ikarus] was in the area. They vacated the area to the east, then north, as they had planned to, and ascended to 3000ft. After the Airprox, and after landing, they received a call from the other pilot who [reportedly] said that they were tuning on to final for RW06 when they spotted [the Ikarus].

[Reviewing FlightRadar24 data after the flight], it was clear that [the pilot of the C208] flew over Old Sarum for the drop, headed south, then did a descending right-turn on to final at 110/120kt, descending at around 4000ft/min, presumably in order to land before the parachutists. [The pilot of the Ikarus] believes the reason for this Airprox was the other pilot's steep descending right-turn onto final where full visibility below would have been difficult. [The pilot of the Ikarus] was outside the drop-zone, and also the (inactive) MATZ. They were not in any airspace. After hearing the other pilot's radio call, which appeared to have blamed them, they took a screenshot of the their own route on SkyDemon (guessing it may be too low for the transponder).

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

THE OLD SARUM AIRFIELD OPERATOR was contacted but declined to submit a report.

Factual Background

The weather at Boscombe Down was recorded as follows:

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METAR EGDM 300920Z AUTO 15005KT 9999 OVC110/// 14/12 Q1025
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data (Figure 1). Both aircraft were depicted on the radar replay as flying at Flight Levels. An appropriate conversion factor was used to calculate their altitudes. Both pilots kindly supplied GPS track data for their respective flights.

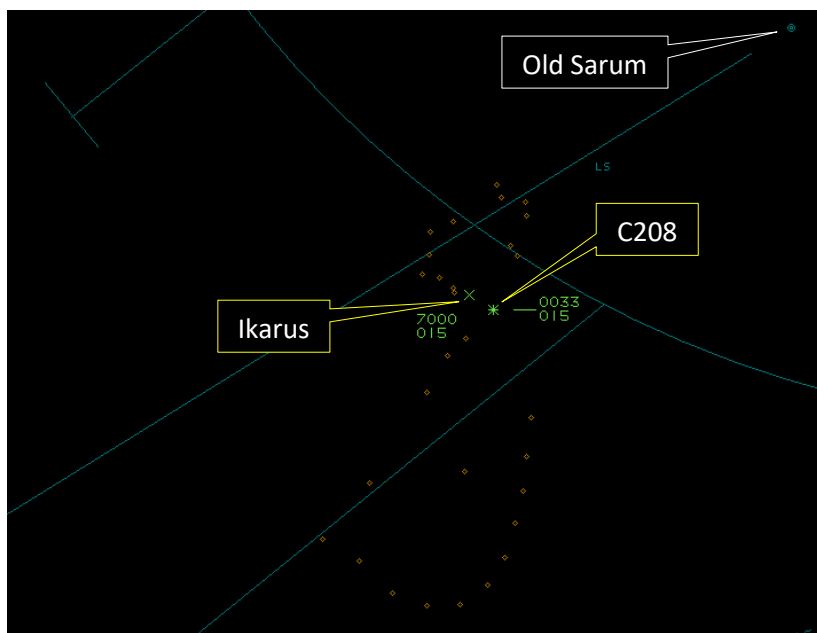


Figure 1 – CPA at 0921:04

In the moments leading up to CPA, the C208 had been descending and the Ikarus had been climbing. Due to the rapid change of the separation between the aircraft and, given the known delay between successive radar sweeps and the tolerance in the accuracy of the Mode C readouts, the

separation at CPA was determined from the GPS data. The diagram was constructed by combining the different sources.

The C208 and Ikarus 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 converging then the Ikarus pilot was required to give way to the C208.² 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 C208 and an Ikarus flew into proximity 2NM south-west of Old Sarum at 0921Z on Saturday 30th September 2023. Both pilots were operating under VFR in VMC, listening-out on the Old Sarum drop-zone frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and GPS track data. 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 C208. A member with particular knowledge of parachute-dropping operations explained that it would be typical for the pilot of the drop-aircraft to descend rapidly after the parachutists have left the aircraft in order to remain clear of the drop zone.

Members assessed the rate of descent of the C208 in this particular instance and determined that a very thorough lookout would have been necessary, not only to ensure that they remained clear of the parachutists, but to have ensured that there had been no traffic below them as they had descended. It occurred to some members that there may have been an expectation, or even assumption, on the part of the C208 pilot that there would be no other traffic in the area given the markings on VFR navigational charts of parachuting activity. Members were keen to emphasise that the pilot of the C208 had been operating in Class G airspace, open to many types of airspace users, and wished to stress the imperative of maintaining a thorough and effective lookout. Further, members noted that the C208 had not been equipped with an additional EC device and suggested that it may have been prudent to have installed such a device for the benefit of their own situational awareness and that of other pilots in the vicinity. Indeed, members noted that the pilot of the C208 had not had situational awareness of the presence of the Ikarus (**CF2**). In a similar vein, members next considered the frequency to which the pilot of the C208 had tuned their radio and noted that no blind-calls had been made. Again, for the benefit of other pilots in the area, members suggested that it may have been prudent to have made routine position calls. Members noted that the Ikarus had been sighted at the moment of CPA and agreed that to not have acquired the Ikarus earlier effectively constituted a non-sighting (**CF4**).

Turning their attention to the actions of the pilot of the Ikarus, members pondered the area in which they had been operating. Whilst it was acknowledged that the pilot of the Ikarus had been flying in Class G airspace, and that the Boscombe CMATZ had not been active, members wished to point out that they had maintained a position 2NM from Old Sarum, at a location and altitude where it would have been reasonable to have expected to have encountered traffic approaching the runway in use (as clearly demonstrated in this particular case). Members noted that the pilot of the Ikarus had tuned their radio to the drop-zone frequency, and had held generic situational awareness on the parachute-dropping activity (**CF2**), but had not transmitted their intentions on the frequency. Members further noted that the Ikarus had not been equipped with additional EC equipment and wondered why there had been no apparent mitigation to the risk of encountering conflicting traffic. Some members suggested that, if the pilot of the Ikarus had wished to observe the parachute-dropping operation, it may have been

¹ (UK) SERA.3205 Proximity.

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

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

prudent to have relayed their intentions on the drop-zone frequency (**CF1**) and to have manoeuvred away from the approach to Old Sarum.

Members pondered the moment that the pilot of the Ikarus had visually acquired the C208. Some members suggested that the Ikarus pilot's narrative report suggested that they had sighted the C208 earlier during its 'teardrop' turn for the approach and, whilst in a left-turn away from the C208, had lost sight of it until the moment of CPA. Other members countered that the separation between the aircraft, as reported by the Ikarus pilot, suggested that they had been aware of the C208 as it had been banking to the right towards them, and that they had assessed that the separation had not presented any risk. Notwithstanding the different opinions, members agreed that the pilot of the Ikarus had flown close enough to the C208 to have caused its pilot concern (**CF3**).

Concluding their discussion, members were in agreement that the absence of additional EC equipment fitted to each aircraft, and a lack of communication by either pilot on the drop-zone frequency, had hampered the ability for either pilot to have acquired specific situational awareness of other traffic in the vicinity. Members agreed that safety margins had been reduced by the pilot of the Ikarus maintaining their position on the approach to Old Sarum and the pilot of the C208 not visually acquiring the Ikarus until CPA. Some members assessed that safety margins had been reduced further by the pilot of the Ikarus having lost sight of the C208 until moments before the point of CPA and that there had been a risk of collision. A vote was conducted and the view that the pilot of the Ikarus had sighted the C208 in time to have assessed that no risk of collision had existed prevailed. As such, the Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023227			
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
• See and Avoid				
3	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern
4	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

Degree of Risk: C.

Safety Barrier Assessment⁴

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

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

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because it may have been prudent for the pilot of the Ikarus to have relayed their intentions on the Old Sarum drop-zone frequency.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the C208 had not had situational awareness of the presence of the Ikarus.

Airprox Barrier Assessment: 2023227		Outside Controlled Airspace						
Barrier	Provision	Application	Effectiveness Barrier Weighting					
			0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	○	○					
	Manning & Equipment	○	○					
	Situational Awareness of the Conflicting Aircraft & Action	○	○					
	Electronic Warning System Operation and Compliance	○	○					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Tactical Planning and Execution	✓	⚠					
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓					
	Electronic Warning System Operation and Compliance	○	○					
	See & Avoid	✓	✓					
Key:								
	Full	Partial	None	Not Present/Not Assessable	Not Used			
Provision	✓	⚠	✗	○				
Application	✓	⚠	✗	○	○			
Effectiveness	■	■	■	■	□			