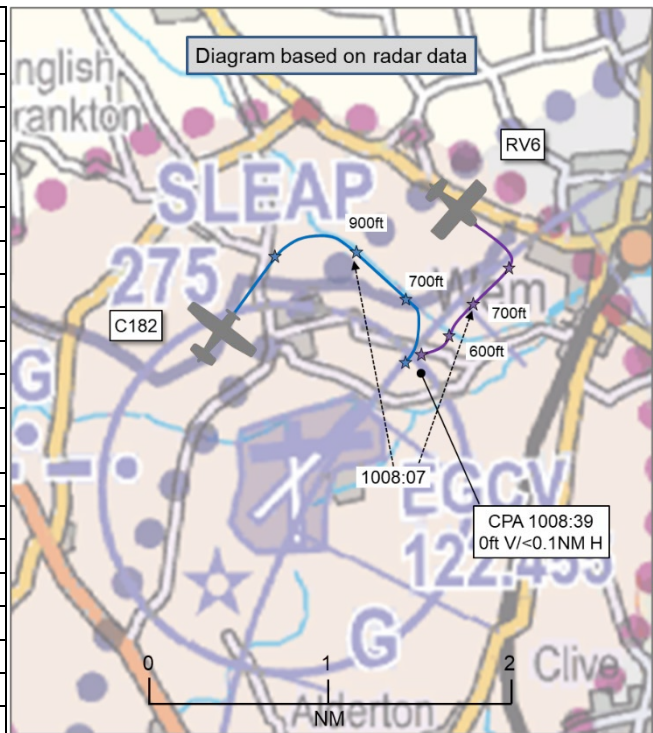


AIRPROX REPORT No 2024160

Date: 13 Jul 2024 Time: 1009Z Position: 5250N 00245W Location: Sleep Airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C182	RV6
Operator	Civ FW	Civ FW
Airspace	Sleep ATZ	Sleep ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Sleep Radio	Sleep Radio
Altitude/FL	500ft	500ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White and blue	White and blue
Lighting	Strobes	Navigation, landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	600ft	300ft
Altimeter	QFE (1005hPa)	QFE
Heading	140°	230°
Speed	75kt	65kt
ACAS/TAS	PilotAware	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	40ft V/150m H	0ft V/50m H
Recorded	0ft V/<0.1NM H	



THE C182 PILOT reports that they thought it unlikely that the prevailing weather was a factor in the occurrence. However, the winds were light westerly/south-westerly, generally favouring RW23 but not consistently so (on a later flight on the same day it had switched to RW05). The cloud was broken or overcast at a higher level with good visibility beneath the cloudbase and evidence of some showers or lower cloud to the north of the airfield. The intention of the flight was a short local trip with [three passengers] planned to coincide with the Sleepkosh fly-in and airshow weekend. Upon return to the airfield, RW23 was in use with a right-hand circuit (as opposed to the more typical left-hand circuit for RW23). Although the Sleepkosh pilot instructions had proposed a standard overhead join, the majority of the arriving traffic was joining downwind or on right base. The C182 pilot notes that they had made a downwind join. While on the downwind leg they had been aware that multiple aircraft were also joining the circuit from the Ellesmere Lakes VRP. Unsurprisingly, traffic levels were high, albeit the circuit itself was quiet, which might be expected given the nature of the Sleepkosh event taking place. Traffic joining from the direction of Ellesmere was ideally positioned to make a right-base join. Since the airspace was busy, the C182 pilot had briefed the passengers to keep a good lookout for any traffic and to call out any observations. In addition the aircraft [had been] equipped with an [electronic conspicuity] ADS-B transceiver paired with an iPad tablet device running SkyDemon, a solution that visually depicted other traffic provided that it had been broadcasting an ADS-B signal and also gave a colour coded visual warning and an aural warning (not easily heard) in cases where there is a threat of collision. Since they had been wearing a Garmin D2 Delta [wristwatch] during the flight they have [provided] a trace of the flight track. From that trace it was clear that the base leg was flown on a track almost directly overhead the River Roden to the north of the airfield and that they had completed the turn from the base leg onto final immediately to the north of the Ruewood Nature Reserve, a position on the extended centreline of RW23 and approximately 1056m from the end of the runway. For the whole of the downwind and base leg they had been aware of traffic joining from Ellesmere and had been looking for that traffic. Although they had been expecting that traffic to join on right-base, a long final approach was not out of the

question from that direction. At no point did they visually acquire the joining traffic. At that stage of the flight they had not been actively monitoring the traffic presentation on SkyDemon [and] had no recollection of an aural alert. None of the passengers called out contact with the aircraft and although [passengers] are not the most reliable, they did announce some other traffic enthusiastically. The C182 pilot had routinely made visual checks for traffic on the extended centreline during the base leg and had not seen any conflicting aircraft. As they had completed the descending turn from the base leg onto final and had been just about to make their own final call, [the pilot of] another aircraft called final. This call prompted them to check the final approach path again and, as they had done so, they were immediately aware of another aircraft on a potentially conflicting track that had presumably joined from a long final position. Although they remain uncertain of the exact type, they believed it to have been a Vans RV (maybe an RV7 or RV9). The colour of the conflicting aircraft was largely white. Upon completion of their turn the conflicting aircraft was positioned behind them and slightly to their port side at roughly their 7 o'clock position. Both [aircraft had] probably been flying at a broadly similar speed (roughly 75kts) and at a height of around 500-600ft. Since the conflicting aircraft was established on the final approach they had priority and the C182 pilot had immediately commenced a go-around and turned away from the other aircraft. Moments before the transmission of their own going around call they had been advised to go around by the Air/Ground operator. Since by this point they had been positioned on the live side of the runway, the remainder of the go-around was flown on the live side. Positioning to the deadside would have meant overflying the landing aircraft. Upon reaching circuit height, the C182 pilot had levelled off, rejoined the downwind leg and landed uneventfully. Immediately after the go-around call they believed the conflicting aircraft to have transmitted a garbled comment which seemed to imply that they had believed the C182 pilot had been at fault. The C182 pilot assumed that the RV6 pilot had seen their C182 no earlier than the C182 pilot had seen the RV6. If that had not been the case and they had been in visual contact for a longer period, the C182 pilot did wonder why they had not taken any avoiding action sooner or at the very least made an earlier final call to attract attention. Once on the ground the C182 pilot reports that they had attempted to trace the pilot and discuss it with them but they had failed to mention it in the airfield office or to the tower and the C182 pilot presumed they had no further interest. Since there were in excess of 100 aircraft on the ground and hundreds of visiting pilots and passengers it was not possible to identify the other aircraft or pilot upon landing

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

THE RV6 PILOT reports that after a briefing in their club room, 3 RV aircraft had left [departure airfield to the ESE of Sleaf] heading for Sleaf to attend and camp at Sleafkosh. They had headed to Ellesmere Lake as stated in the Sleaf brief and, upon contacting Sleaf radio on 122.455MHz they had been informed a right-base for RW23 had been a suitable join so had headed for that join. The RV6 pilot was in the lead with 2 other RVs and a Harvard had been ahead on long finals. They had all slowed down on extended right-base (for the Harvard and give some space to each other). The RV6 pilot had turned long-finals and had been visual with the just-about-to-land Harvard. The Harvard pilot was told "land long". The RV6 pilot had slowed down to give the Harvard pilot time to vacate the runway at Foxtrot. The RV6 pilot had then been on very short finals low/slow (65kt) with the Harvard just about to vacate and out-of-the-blue on their starboard wing they had glanced a Cessna heading towards them (at the same height). The Cessna (which none of the RV pilots had heard on the radio) had clearly seen them at that point and took avoiding action by turning right (the RV6 pilot noted that the underside of the Cessna wings had been visible) and had obviously been applying power to climb away had which solved the problem. The RV6 pilot reports that all the RV aircraft had "landed long" in close succession without any further issues. The other 2 RV pilots both witnessed the incident and wondered why the Cessna had not been making any radio calls [and opined that they probably hadn't been listening either!] especially as this had been an event so busy with traffic that all of the RV pilots had made many radio calls. The RV6 pilot notes that they had been happy that the Cessna pilot had made the right decision in the end.

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

THE SLEAP AGO reports that during the Sleapkosh fly in, RW23RH circuit had been in use, as per the join procedures for that day.^{1,2} Aircraft were to join into the downwind and overhead from the Montford Bridge VRP and Ellesmere Lake VRP respectively, which had been spaced well. The C182 had taken off earlier in the day and returned, joining the circuit flying inside other aircraft. The C182 pilot turned early into the final approach, well inside the established circuit traffic, which included the RV6 which had already been on final. The A/G operator suggested a go-around to the C182 pilot which they had then flown and rejoined the circuit.

Factual Background

The weather at Shawbury was recorded as follows:

METAR EGOS 130950Z AUTO 27007KT 9999 SCT017/// SCT056/// BKN082/// 16/11 Q1014=

Analysis and Investigation

UKAB Secretariat

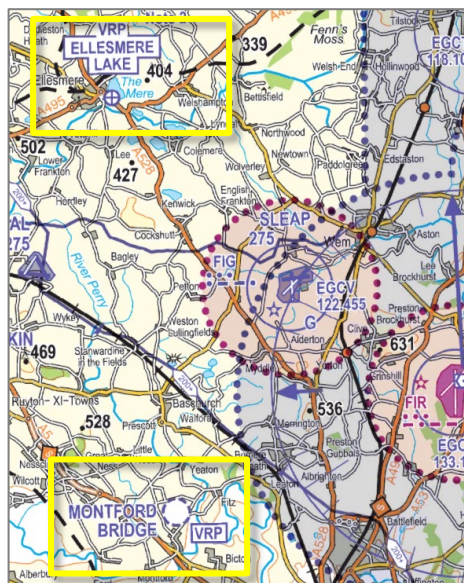


Figure 1: Local area 1:250,000 chart showing designated VRPs

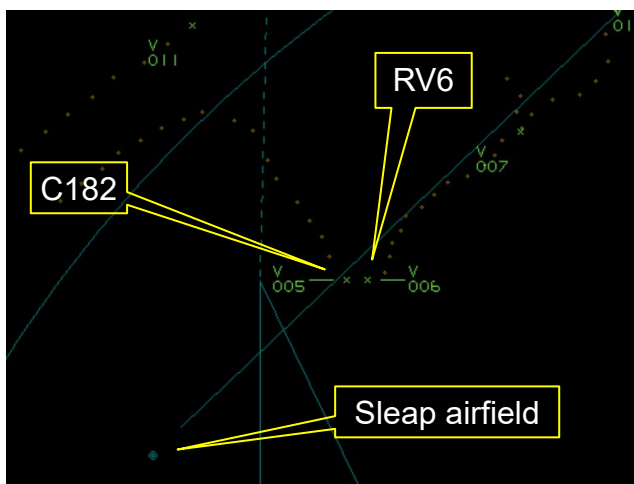


Figure 2: 1008:31 - 100ft V/0.1NM H

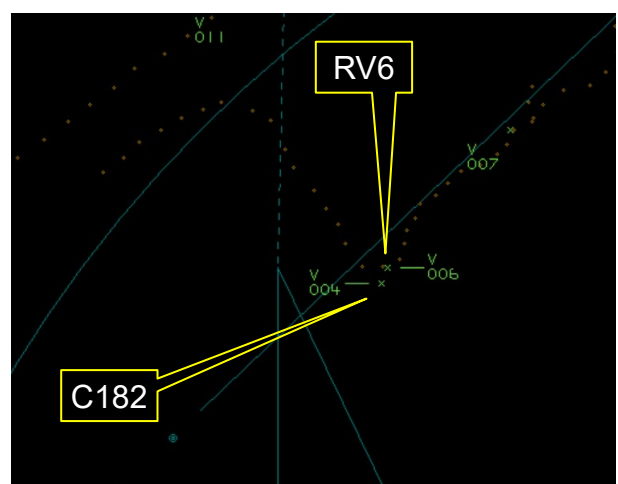


Figure 3: 1008:35 – 200ft V/0.1NM H

¹ Issued Join Procedures (V2) stated: RW23LH/05RH. Joins from the south via the Montford Bridge VRP for an Overhead Join at 2000ft QFE. Joins from the north west via the Ellesmere Lake VRP for a Crosswind Join 1000ft QFE on 05RH or 23LH.

² Join procedures for the event were [originally] for a LH circuit, but with the volume of traffic, and that Shawbury's ATZ [had been] busy on [the] Friday, the decision was made during the event by the A/G Team to use 23RH circuit.

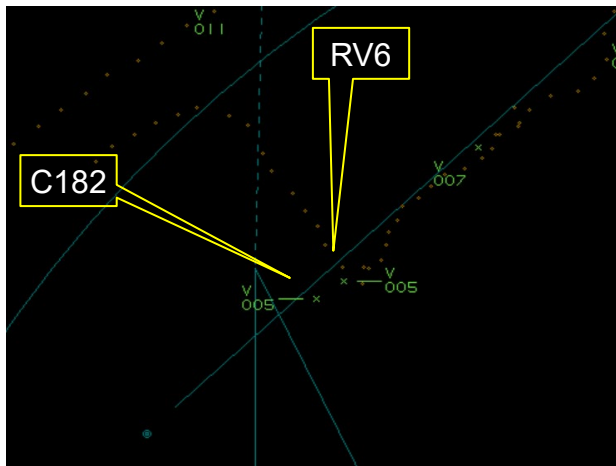


Figure 4: CPA - 1008:39 – 0ft V/0.1NM H

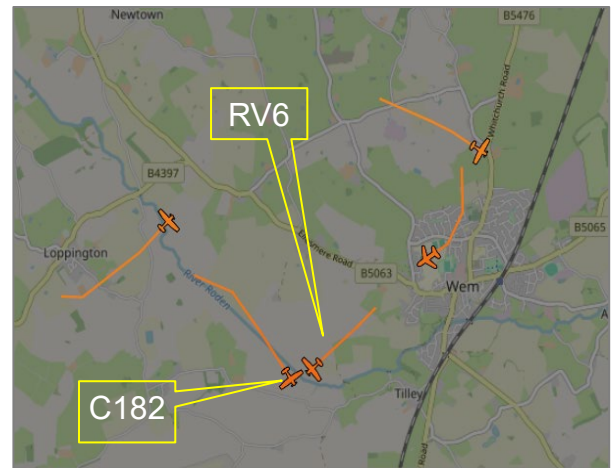


Figure 5: ADS-B Exchange screenshot at CPA minus 10sec - 1008:20. The RV6 track ceased to update after this time.

Figures 2 and 3 above show the closure geometry ahead of CPA with the closest radar-derived separation not reducing below 0.1NM. Figure 4 captures the point after the C182 pilot has initiated avoiding action and at which CPA is recorded – 0ft V/<0.1NM H. Figure 5 shows the ADS-B trace of the C182 and RV6, with other traffic in the circuit; this picture is approximately 19sec ahead of CPA and is the last point at which the RV6 track is updated on this system.

The C182 and RV6 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.³ 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.⁴

Summary

An Airprox was reported when a C182 and an RV6 flew into proximity at Sleep Airfield at 1009Z on Saturday 13th July 2024. Both pilots were operating under VFR in VMC and both pilots were in receipt of an Air/Ground Communication Service from Sleep Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, ADS-B data and a report from the air ground operator 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 firstly considered the actions of the C182 pilot. They noted the nature of their flight, their familiarity with Sleep and their awareness of the volume and variety of joining traffic. The Board noted that the C182 pilot had made a downwind join for a right-hand circuit for RW23 and had maintained a vigorous lookout to both the base leg and long final for other traffic. They had expected any traffic which had been entering through the northerly VRP (Ellesmere Lake) to have then joined the circuit at the recognised base leg. Their lookout had not identified any such traffic and their continued turn onto the base leg and then final had been reasonable in the Board members' view. Members felt that the actions of the C182 pilot, on acquiring late visual contact with the RV6 (**CF5**) as a result of RT calls had been correct and had averted a more serious incident. Members again praised the carriage and use of electronic conspicuity equipment which, even within circuit confines, can act as a significant situational awareness contributor and had been disappointed that this had not registered any electronic emissions

³ (UK) SERA.3205 Proximity.

⁴ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

from the RV6 (CF4). The Board felt that both the C182 and RV6 pilots had had, at best, only generic situational awareness of each other's presence (CF3).

Members secondly considered the actions of the RV6 pilot. They noted the nature of the flight and the thorough pre-planning and brief. They accepted that the change from the pre-published joining procedures at Sleaf and the actual situation on arrival had had the potential for confusion but felt that although the RV6 (and others in that group) had routed via the prescribed VRP, their approach had been through a wide base leg, making visual acquisition for established circuit traffic more difficult than normal and had resulted in the RV6 pilot not having conformed with the pattern established (CF2). Members noted that the RV6 pilot had not carried electronic conspicuity equipment and this had denied them an important contributor to the situational awareness barrier which, having effectively achieved a non-sighting of the C182 (CF6), had contributed to the Airprox.

Board members then reviewed the contribution from the Sleaf AGO noting the nature and authority of that role. Members felt that the suggestion to the C182 pilot to 'go-around' had been appropriate and timely. Unfortunately, with no transcript of circuit communications at the time, the Board had been unable to determine which calls had been made and by whom, making consideration of the full contribution by the AGO and pilots impossible.

Members felt that a significant element that had contributed to this Airprox had been the joining instructions for Sleaf on this occasion. Version 2 of the Visiting Pilot's Brief had been issued in advance and had declared that joins would be through a northerly and a southerly VRP to a crosswind or overhead join respectively onto RW23LH or RW05RH (i.e. 'circuits to the east side' and in conformity with the relevant UK AIP entry). This instruction had been amended on the day to 'RW23RH' (i.e. circuit to the west/north). The Board felt that this had added an element of uncertainty and potential confusion for arriving pilots (CF1). Sleaf Airfield Management noted that the reasoning for that change (eased traffic integration and improved visibility of circuit traffic from the tower) had been logical and will promulgate as such for future events.

Finally, the Board discussed the risk, and in doing so the reports from both pilots and the AGO were considered. Members agreed that safety margins had been much reduced below the norm and that the actions of the C182 pilot once they had visually acquired the RV6 had materially increased separation at the last minute but those actions had not removed the collision risk entirely (CF7). As such, the Board assigned a Risk Category B to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024160			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Ground Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Organisational	• Aeronautical Information Services	An event involving the provision of Aeronautical Information	The Ground entity's regulations or procedures were inadequate
	Flight Elements			
	• Tactical Planning and Execution			
2	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			
3	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			
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	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
6	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				
7	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 Assessment⁵

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 **ineffective** because the joining instructions issued ahead of the event had only specified arrivals to a south-easterly circuit pattern, whereas the aerodrome had elected to operate with a north-westerly circuit on the day of operation.

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because the RV6 pilot did not conform with the circuit pattern as established.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because both the C182 and the RV6 pilots had only generic situational awareness of the presence of the other.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the equipment carried by the C182 pilot had not registered the electronic emissions from the RV6.

See and Avoid were assessed as **partially effective** because the C182 pilot had achieved only a late-sighting of the RV6, and the RV6 pilot had not sighted the C182 until at or around CPA.

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

Airprox Barrier Assessment: 2024160		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 Conflicion & 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:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>			
Provision	✔	⚠	✘	○					
Application	✔	⚠	✘	○					
Effectiveness									