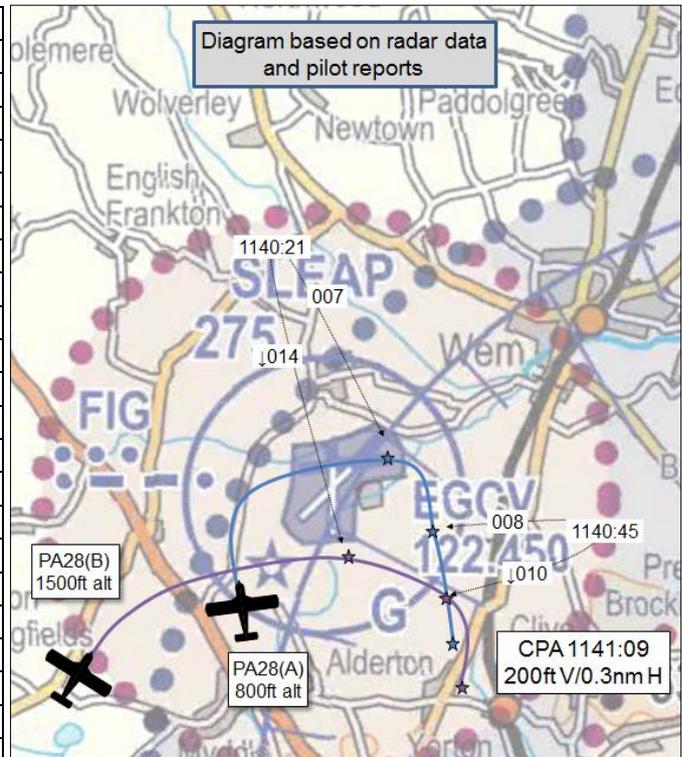


AIRPROX REPORT No 2017049

Date: 04 Apr 2017 Time: 1141Z Position: 5248N 00244W Location: Sleaf

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28(A)	PA28(B)
Operator	Civ Pte	Civ Pte
Airspace	Sleaf ATZ	Sleaf ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Sleaf	Sleaf
Altitude/FL	800ft	1000ft
Transponder	A, C, S	A, C
Reported		
Colours	White, Black	White, Blue
Lighting	Strobes, Nav	Strobes, Beacon
Conditions	VMC	VMC
Visibility	5km	7km
Altitude/FL	1100ft	1000ft
Altimeter	QFE (1019hPa)	QFE (1017hPa)
Heading	180°	090°
Speed	90kt	85kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	200ft V/0.5nm H	0ft V/4-500m H
Recorded	200ft V/0.3nm H	



THE PA28(A) PILOT reports that after approaching Sleaf from the Ellesmere direction, he contacted Sleaf Radio to confirm his intention of joining via the overhead. Once overhead the airfield at about 2100ft he made a continued right turn to line up with the airfield. He descended deadside, parallel to RW36RH, and called 'descending deadside'. He made a crosswind turn at the end of the runway and continued into the active circuit at 1100ft. At this point he was aware of another aircraft joining via the overhead, the other pilot also announced his intention was to join downwind directly from the overhead. On hearing this the he made his position clear by radioing his own position on the downwind leg. The other pilot said that he was also on the downwind leg. He then became visual with the other PA28 approx 200-300ft above and less than 0.5nm in front of his position. He did not believe that the other pilot had made visual contact with him before joining the circuit. The closure between the two aircraft was such that he felt he had to either slow-down, or make an early base-leg turn, he chose the latter and the other pilot announced that he would extend downwind.

He assessed the risk of collision as 'High'.

THE PA28(B) PILOT reports that he flew in from another airfield, and was told that the active runway was RW36 and that it should be an overhead join into a right-hand circuit. He had difficulty in sighting the airfield at first due to hazy conditions, but he positioned to the west of the airfield at 2000ft, turned onto a heading of 090° and reported overhead. He made a poor arrival overhead and lost sight of the runway; he had not allowed for the NNW wind so was near the southern end of RW36 as he came overhead. He had not heard any other aircraft report overhead, but as he descended to circuit height and turned onto the downwind leg he saw another PA28 well to his left, also descending to join downwind. He estimated the separation to be 400m or more; because it seemed to be a safe separation, he continued onto the downwind leg. The other aircraft remained in sight until he had completed the turn downwind when it was behind him at the same level. When he was about to turn base leg, the passenger noticed that the other aircraft had turned in on a base-leg behind him to commence a short final approach. He extended his downwind leg to improve separation and then

also turned base-leg. The other aircraft had landed as he began his approach and was off the runway before he reached the threshold. He did not consider the other aircraft to be too close, if he had thought so at the time he would have completed a right turn to go dead-side and begin another approach. However, he noted that in view of his poor arrival he intended to arrange refresher training with an instructor.

He assessed the risk of collision as 'None'.

Factual Background

The weather at Shawbury was recorded as follows:

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METAR EGOS 041050Z 33018KT 9999 FEW030 11/04 Q1028 BLU NOSIG=
METAR EGOS 041250Z 32017KT 9999 FEW035 SCT300 11/02 Q1029 BLU NOSIG=
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UKAB Secretariat

The PA28(A) and PA28(B) pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. 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 operation².

Summary

An Airprox was reported when a PA28(A) and a PA28(B) flew into proximity at 1141 on Tuesday 4th April 2017. Both pilots were operating under VFR in VMC, both were in the visual circuit at Sleaf and listening out on the Sleaf frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings.

The Board first considered the actions of the PA28(A) pilot. Members agreed that he was conducting a normal overhead join at Sleaf and had made the correct joining calls. Somewhat surprised to see PA28(B) descending ahead of him in the circuit, the Board agreed that in the circumstances his options were limited although they did note that even though the PA28(B) pilot had descended in front of him, turning in on finals ahead of PA28(B) had the potential to cause further problems if the other pilot had not realised he had done so. A better option may have been to have gone around for another circuit from downwind, or perhaps to have orbited downwind.

Looking at the actions of PA28(B) pilot, the Board determined that he had not performed a standard overhead join, which requires the descent from the overhead to be conducted deadside such that the aircraft is at circuit height as it crosses the upwind end of the runway. Instead, PA28(B) pilot had conducted a continuous descent onto the downwind track, which was fraught with danger in that this will result in aircraft descending from above onto aircraft already established in the visual circuit. In this instance, the Board noted that PA28(B) pilot saw the other aircraft as he descended in front of it, but there had been significant potential for PA28(A) to have been in a blind spot below his aircraft as he descended on top of it. GA members commented that, if PA28(B) pilot was unsure of the airfield's position then in such circumstances he would have been better placed to remain in the overhead and take some time to assimilate the position of the airfield and any other traffic in the visual circuit before descending. The Board frequently sees conflicts in the visual circuit caused by pilots incorrectly joining via the overhead, and wished to recommend that pilots re-familiarise themselves with the CAA standard overhead join (A poster outlining the standard overhead join can be viewed on the CAA publications website³). Noting that he had made a mistake rather than intentionally cutting up the

¹ SERA.3205 Proximity.

² SERA.3225 Operation on and in the Vicinity of an Aerodrome.

³ <http://publicapps.caa.co.uk/modalapplication.aspx?catid=1&pagetype=65&appid=11&mode=detail&id=2166>

other pilot, the Board were heartened to hear that PA28(B) pilot intended to arrange some refresher training on airfield joins and hoped that he carried out this undertaking.

In looking at the cause and risk of the Airprox, the Board very quickly agreed that the PA28(B) pilot had not flown a correct overhead join and had descended into conflict with PA28(A). However, noting that, between them, PA28(A) and PA28(B) pilots were variously visual with each other throughout the encounter (PA28(B) pilot was visual with PA28(A) during his initial descent, and then PA28(A) pilot was visual with PA28(B) as it descended in front and ahead of him), the Board assessed the risk to be Category C; safety had been degraded but there was no risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA28(B) pilot did not fly a correct overhead join and descended into conflict with PA28(A).

Degree of Risk: C.

Safety Barrier Assessment⁴:

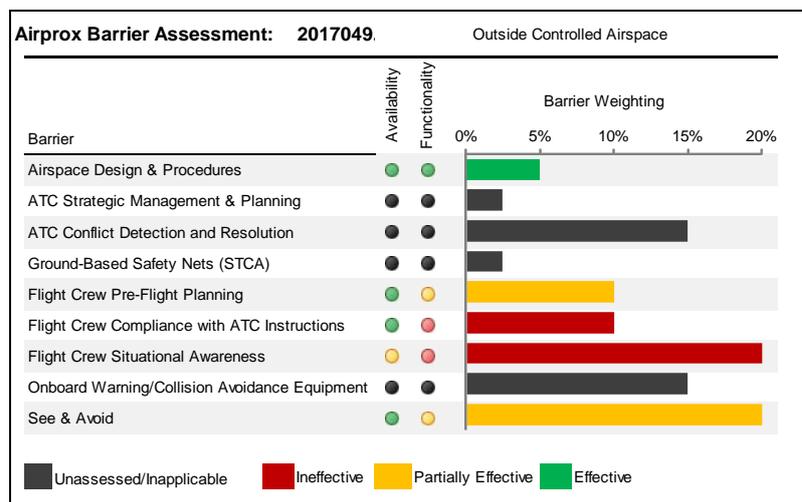
The Board decided that the following key safety barriers were contributory in this Airprox:

Flight Crew Pre-Flight Planning was only **partially effective** because PA28(B) pilot was not sufficiently familiar with Slep or the overhead join procedure.

Flight Crew Compliance with ATC Instructions (and Procedures) was **ineffective**, due to the non-standard overhead join flown by PA28(B) pilot.

Flight Crew Situational Awareness was **ineffective** because PA28(B) pilot was not aware of PA28(A) until after he commenced his descent downwind.

See and Avoid was **partially effective** because both pilot's were only visual with the other's aircraft at separate stages in the encounter.



⁴ Modern safety management processes employ the concept of safety barriers that prevent contributory factors or human errors from developing into accidents. Based on work by EASA, CAA, MAA and UKAB, the table depicts the barriers associated with preventing mid-air-collisions. The length of each bar represents the barrier's weighting or importance (out of a total of 100%) for the type of airspace in which the Airprox occurred (i.e. Controlled Airspace or Uncontrolled Airspace). The colour of each bar represents the Board's assessment of the effectiveness of the associated barrier in this incident (either Fully Effective, Partially Effective, Ineffective, or Unassessable/Inapplicable). The chart thus illustrates which barriers were effective and how important they were in contributing to collision avoidance in this incident. The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).