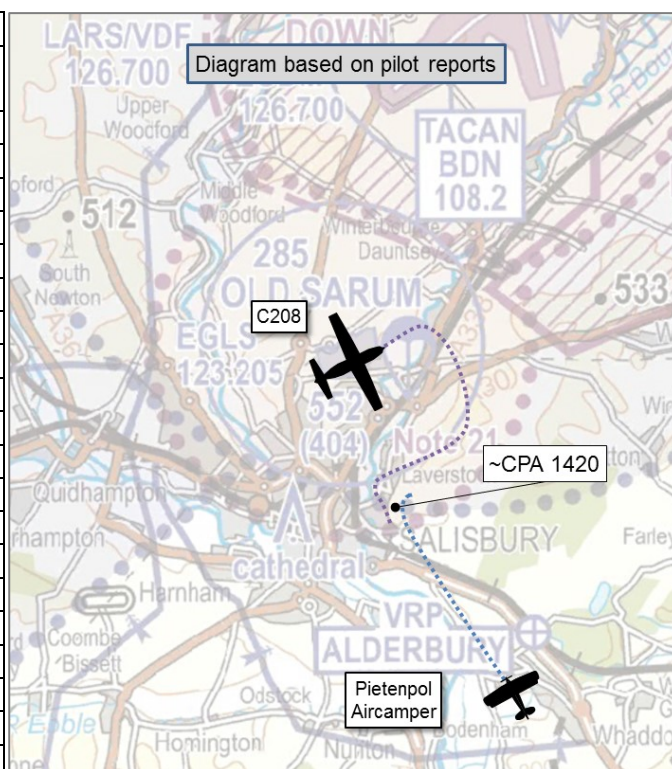


AIRPROX REPORT No 2019221

Date: 02 Aug 2019 Time: ~1420Z Position: 5105N 00147W Location: Old Sarum

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|-------------------|---------------------|----------------|
| Aircraft | Pietenpol Aircamper | C208 Caravan |
| Operator | Civ FW | Civ FW |
| Airspace | Old Sarum | Old Sarum |
| Class | G | G |
| Rules | VFR | VFR |
| Service | AGCS | AGCS |
| Provider | Old Sarum | Old Sarum |
| Altitude/FL | NK | NK |
| Transponder | Not fitted | A, C, S |
| Reported | | |
| Colours | Blue, Cream | Yellow |
| Lighting | Not reported | Beacon, Nav |
| Conditions | VMC | VMC |
| Visibility | >10km | 10km |
| Altitude/FL | 800ft | 1100ft |
| Altimeter | QFE (1010hPa) | NK |
| Heading | 335° | 230° |
| Speed | 60kt | 120kt |
| ACAS/TAS | Not fitted | Not fitted |
| Separation | | |
| Reported | 100ft V/0.25nm H | 200ft V/300m H |
| Recorded | NK | |



THE PIETENPOL AIRCAMPER PILOT reports that he was joining right-base [for Old Sarum RW06RH] from the Alderbury VRP. He spotted traffic which appeared to be downwind in the RW06 circuit and the same height at about 1nm. There was traffic on his right, travelling much faster than him, so he turned to the right to position behind the other aircraft in the circuit pattern. As he turned the other aircraft turned towards him and he had to execute a very steep turn to the right to avoid the other aircraft, at which point the other aircraft's pilot then seemed to spot his aircraft and turned away. As the other aircraft passed down his left side its pilot said he was passing Alderbury VRP and was changing frequency. On landing he discussed the Airprox with the A/G operator and he said the traffic was departing for Dunkeswell and had reported leaving the ATZ at Alderbury VRP at the time of the incident but the A/G operator had not seen the aircraft departing to the south west. The Aircamper pilot knew of the departing traffic and was looking for it as he passed just west of Alderbury VRP inbound to Old Sarum but did not see him. It would appear the departing aircraft's pilot had failed to follow the standard departure procedure and had cut across any incoming traffic from the Alderbury VRP and had simply turned right after departure and set course direct to Dunkeswell.

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

THE C208 CARAVAN PILOT reports that he was departing Old Sarum; the initial call to Old Sarum Radio was to depart via Alderbury but, on initial climb out, he decided to depart downwind. Circuit height is not above 1100ft QNH, so he departed downwind at 1100ft at the end of the downwind leg. Just prior to leaving the circuit he saw the blue high-wing aircraft pass down the left side below him. No radio call was made on his part that he was departing downwind and he does not remember hearing a call from the other aircraft saying he was joining on base leg. Old Sarum radio was informed he was leaving the ATZ and the frequency. No call was heard from the other pilot and he continued on track to his destination. He believes the local procedures ensure that arriving aircraft must join from Alderbury and departing aircraft do not have this restriction IAW EGLS AIP entry. He fully accepts that a radio call

stating his new intentions would have alerted any circuit joining traffic. He did not see the aircraft on his left side until it passed down the left side and below him.

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

THE OLD SARUM AIR GROUND OPERATOR reports that the C208 departed at 1420 from RW06RH. The correct procedure is to depart the circuit from the crosswind leg routing to east abeam the Alderbury VRP. A few minutes earlier the pilot of the Aircamper had reported inbound and was passed the relevant airfield information. The procedure for the inbound aircraft is to pass to the west of the Alderbury VRP routing direct to join the circuit on right base at circuit height, 800ft QFE. At 14:23 he initiated "Parachute procedures" which means 5mins to canopies in the overhead. His attention was drawn to ensuring there was nothing to affect the parachute drop. The pilot of the C208 reported departing the circuit and changing to en-route frequency. At this point he was not aware anything had happened. The Aircamper landed at 14:26 and, after parking the aircraft, the pilot came to the tower to report the incident. At the time of the event his attention was drawn away by other aircraft movements and the impending Para drop and so he did not witness the Airprox between the two aircraft. On speaking to the pilot of the C208 later on the phone he said he had departed the circuit from the downwind leg instead of crosswind. He said his intention was to depart as per procedure, but he had departed from downwind on an earlier sortie when on Para drop as a check pilot. The Para drop aircraft does sometimes depart from downwind but in a climb all the way with permission from Boscombe Down. He understands that the C208 pilot departed the circuit from the downwind leg at circuit height to head south-west coming close to the Aircamper joining right base at circuit height forcing the Aircamper pilot to take avoiding action.

Factual Background

The weather at Boscombe Down was recorded as follows:

METAR EGDM 021250Z 36006KT CAVOK 23/13 Q1020 NOSIG

Analysis and Investigation

UKAB Secretariat

The Pietenpol Aircamper and C208 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.

Neither aircraft is visible on the radar recording therefore the diagram is based only on the pilot reports. Old Sarum AIP entry does not provide specific instructions for departing aircraft, these can be found via the Old Sarum website, as below:

Joining and departure information: Our ATZ is within the Boscombe Down & Middle Wallop CMATZ. Contact 'Boscombe Zone' on 126.700.

Arrive by positioning to the south of Alderbury at 800 ft QFE / 1100 ft QNH. Join using an extended base leg join.

Overhead joins are only possible with Boscombe's permission.

Give way to circuit traffic.

Depart via crosswind leg to Alderbury.

- If the '06 right' is in use, Alderbury must be on your right - leaving or joining.
- If '24 left' is in use, Alderbury must be on your left - leaving or joining.

When the Boscombe Down & Middle Wallop CMATZ is inactive, straight-ahead departures are possible.

¹ SERA.3205 Proximity.

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

Summary

An Airprox was reported when an Aircamper and a C208 flew into proximity at Old Sarum Airfield at about 1420hrs on Friday 2nd of August 2019. Both pilots were operating under VFR in VMC and in receipt of an AGCS from Old Sarum.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots 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 began by looking at the actions of the Pietenpol Aircamper pilot. He had flown the correct route to re-join the visual circuit as described on the Old Sarum website. He expected the C208 pilot to depart in accordance with the same guidance. Members surmised that, having seen the C208 downwind, the Pietenpol pilot may have thought this aircraft was departing from downwind and not routing to the Alderbury VRP (**CF7**). The Pietenpol pilot was positioning himself to integrate behind the C208 downwind, when the departing C208 unexpectedly turned away from the Old Sarum visual circuit and towards the Pietenpol, whereby the Pietenpol pilot felt it necessary to turn steeply away to the right (**CF8**).

Turning to the actions of the C208 pilot, members noted that the UK AIP entry for Old Sarum departure and arrival procedures is not unified with the Old Sarum website and other aviation publications (**CF1**). This, combined with the C208 pilot having flown previously on a para-dropping sortie that would have departed downwind in the climb, probably resulted in the C208 pilot having an incorrect impression of the correct departure procedure for Old Sarum. The Board therefore resolved to recommend that Old Sarum review their AIP entry to ensure coherence with the Old Sarum website and proprietary flight guide information. Regardless, the C208 pilot had originally intended to depart with a right turn and had informed everyone of that; when he decided to alter his planned departure route and depart from downwind, the Board were clear that he should then have updated the A/G operator, and therefore the other aircraft on frequency. Had he done so, this would have ensured the Pietenpol pilot did not misidentify the departing aircraft as circuit traffic (**CF5&6**). Notwithstanding that the UK AIP does not have the full information for departing aircraft, the information was available on the website and in other pilot planning publications that the C208 pilot should have had access to (**CF4**) as part of his pre-flight planning and it was his non-standard and non-communicated departure from these procedures that had set the conditions for the incident to occur (**CF3**).

The Board then looked at the actions of the A/G operator. Members noted that the Aircraft were outside the ATZ when CPA occurred and therefore it would have been difficult for him to see the incident occurring. He was also busy with impending para-drop sorties, was not required to monitor the aircraft under the terms of his activities and can only pass information based on aircraft reports. The fact that the C208 pilot did not update his departure intentions meant that the A/G operator could not be expected to foresee the aircraft's route (**CF2**).

Turning to the risk, members agreed that the C208 pilot did not see the Pietenpol until it passed him (or perhaps just before), but the Pietenpol pilot had seen the C208 well ahead in the downwind position and it was only when it turned towards him unannounced that he had to turn to avoid. Given that the Pietenpol pilot was continuously visual with the C208 and had achieved a reported 300-500m separation after his turn, the Board agreed that there had been no risk of collision, albeit the aircraft came closer than desirable due to the C208 pilot's non-standard routing and unexpected turn. Accordingly, the Board assessed the risk as Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTOR(S) AND RISKContributory Factor(s):

| | 2019221 | | |
|----|---|---|---|
| CF | Factor | Description | Amplification |
| | Ground Elements | | |
| | • Regulations, Processes, Procedures and Compliance | | |
| 1 | Organisational | • Organisational Documentation and Publications | Inadequate regulations or procedures |
| | • Situational Awareness and Action | | |
| 2 | Contextual | • Situational Awareness and Sensory Events | Not required to monitor the aircraft under the agreed service |
| | Flight Elements | | |
| | • Regulations, Processes, Procedures and Compliance | | |
| 3 | Human Factors | • Flight Crew ATM Procedure Deviation | Regulations/procedures not complied with |
| | • Tactical Planning and Execution | | |
| 4 | Organisational | • Flight Planning Information Sources | Inadequate planning material |
| 5 | Human Factors | • Action Performed Incorrectly | Incorrect or ineffective execution |
| 6 | Human Factors | • Accuracy of Communication | Ineffective communication of intentions |
| | • Situational Awareness of the Conflicting Aircraft and Action | | |
| 7 | Contextual | • Situational Awareness and Sensory Events | Generic, late, no or incorrect Situational Awareness |
| | • See and Avoid | | |
| 8 | Human Factors | • Perception of Visual Information | Pilot was concerned by the proximity of the other aircraft |

Degree of Risk: C.

Recommendation:

Old Sarum to review their AIP entry to ensure coherence with the Old Sarum website and proprietary flight guide information.

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:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Old Sarum UKAIP entry is not aligned with proprietary flight guides or the Old Sarum website for aircraft arrival and departing procedures.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the C208 pilot did not follow the Old Sarum local procedures or inform the A/G operator that he was departing from downwind.

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

Tactical Planning and Execution was assessed as **ineffective** because the C208 pilot did not fly the standard departure route or transmit an update to his departure plan.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the Pietenpol pilot had flawed SA regarding the departure route of the C208.

| Airprox Barrier Assessment: 2019221 | | 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 | ■ | ■ | ■ | ■ | □ | | | |