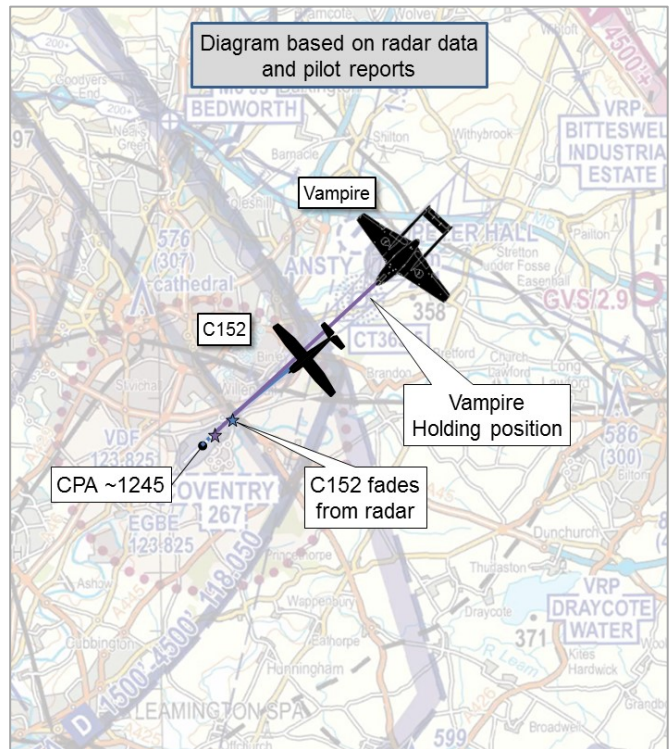


AIRPROX REPORT No 2018035

Date: 10 Mar 2018 Time: ~1245Z Position: 5222N 00128W Location: Coventry ATZ

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	Vampire
Operator	Civ Trg	Civ Pte
Airspace	Coventry ATZ	Coventry ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Coventry	Coventry
Altitude/FL	NK	NK
Transponder	A	A
Reported		
Colours	White, Blue	Silver, Yellow
Lighting	Nav, Beacon	Nav
Conditions	VMC	VMC
Visibility	7km	>10km
Altitude/FL	0ft	1000ft
Altimeter	QNH (992hPa)	NK
Heading	230°	050°
Speed	40kt	190kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	30-40ft V/0m H	Not reported
Recorded	NK	



THE C152 PILOT reports that he was at the end of a circuit following an earlier go-round from short-final due to the Vampire entering the runway and back tracking before it got airborne. He was No3 to land as the Vampire pilot announced (on Coventry A/G) that he was holding north east of the airfield (north of the final approach track). At this point the No1 aircraft had just touched down and the No2 aircraft was approximately midway between himself and the threshold. Coventry does not currently permit "land after", despite the relatively long runway and so he slowed his approach to minimum safe speed to allow time for the aircraft ahead to land and vacate the runway. During his final approach, he heard the Vampire pilot announce his intention to perform a "low approach and break", no further radio calls were heard. Before the No2 aircraft had vacated he found himself having to delay his touchdown, flying at approximately 20ft, or else initiate a further go-round. The No2 aircraft vacated the runway while still at a safe distance and he opted to land. Almost immediately after his aircraft's main wheels contacted the runway, he heard a very loud high-pitched whistle and then the Vampire passed above him, on the runway centreline, at what seemed like no more than 20ft or 30ft and at great speed, estimated by the A/G operator at well above 200kts. In his opinion safety was not assured. Had he not actually touched down and was still airborne he would have been at a very high risk of being caught in wake turbulence and/or jet blast. Had he elected to go-round at this point instead of touching down he believes there was a very high risk of an in-flight collision.

He assessed the risk of collision as 'High'.

THE VAMPIRE PILOT reports that Coventry Radio reported that the C152 was on the downwind leg, and was No2 following another aircraft. He passed the traffic wide downwind on the right-hand side and positioned onto a 3.5nm final to allow the slower aircraft to carry out their approaches and land. After the C152 landed he carried out a 'standard run-and-break'. He made standard and additional radio calls stating his intentions.

He assessed the risk of collision as 'None'.

THE AIR/GROUND OPERATOR reports that RW23LH was in use. When the Vampire departed there were 2 light-aircraft operating in the visual circuit and 3 light-aircraft inbound joining left-base from the south east. It was assumed from the Vampire book-out that the flight would be to the local area and back for re-join (VFR); the operations team were informed of the traffic situation at the time of booking out. The Vampire pilot was given the airfield information on his initial call, taxied for a RW23 departure, and was passed the current traffic information. The Vampire then entered the active runway for a full-length backtrack causing a C152 to go-around. After departing, the Vampire entered a low-level left-hand military-style circuit pattern inside the other circuit traffic, followed by a very low-level run-and-break. The Vampire pilot was informed the runway was occupied with a C152 to vacate, which was overflown at low-level. The Vampire then departed into the same style left-hand circuit pattern again. The Vampire pilot then positioned into what he believes to be approximately 3nm final and, observed from the tower, to be doing what looked like low-level orbits. On the second approach, another C152 went around due to the Vampire's speed and position. In his opinion, all approaches were at high speed and below the published circuit height, and the Vampire pilot did not conform to the established circuit pattern. Radio calls and position reports from the Vampire pilot were to a minimum considering the traffic levels at the time. Traffic information was passed as timely as possible but some transmissions were clipped and the frequency blocked due to the busy traffic period.

Factual Background

The unofficial weather at Coventry was recorded as follows:

180/120kts 9999 FEW008 BKN012 QNH992

Analysis and Investigation

CAA ATSI

Due to the low altitude of the event, the Airprox was not seen on the area radar; however, the pilot reports are consistent with the R/T recordings, a short video and two still photographs that were reviewed after the event. Coventry have no run-and-break procedures in their aerodrome manual and do not have an exemption for the 500ft rule for aircraft not landing or taking off from Coventry.

Figures 1 and 2 are photographs of the aircraft just prior to and after the overflight.



Figure 1



Figure 2

ATSI reviewed the booking-out telephone call and established that the Vampire pilot had made the call. The Air/Ground operator was busy providing the AGCS while dealing with the call and the conversation was interrupted by R/T calls on several occasions. The pilot advised the Air/Ground operator that the Vampire aircraft would be starting in 15mins and that once the aircraft started moving it would not stop, because to do so would rip up the runway. The pilot requested one large visual circuit followed by a missed approach. It was made clear to the pilot that they would receive an Air/Ground service only, and that this entailed traffic information only with no control instructions available. Information on the expected circuit traffic was not included in the conversation. It could not be established whether the Air/Ground operator accepting the booking out telephone call was the same operator who provided the service to the C152 pilot and the Vampire pilot.

There was an average of 4 aircraft in the visual circuit and two aircraft joining the visual circuit throughout the period of the Vampire flight. The Air/Ground operator was very busy throughout this period. Traffic Information passed by the Air/Ground operator to all aircraft throughout the period was comprehensive, i.e. every aircraft was passed relevant traffic information.

Standard R/T calls that would enable other pilots, in and joining the visual circuit to be aware of the position of the Vampire aircraft were not received. The Vampire pilot made a total of three "final" calls. There was no response from the Air/Ground operator to the first call, on the second call the Vampire pilot was advised that there was a C152 to vacate, and on the third call the response was that there was no traffic.

The Air/Ground Operator expected the Vampire aircraft to depart into the local area after departure and this may have resulted in the circuit becoming overloaded when the Vampire subsequently joined the visual circuit. This situation may have been compounded by the speed and tight circuit pattern flown by the Vampire when compared to the speed and circuit patterns of the other aircraft in, and joining the circuit. The absence of standard calls resulted in other aircraft having difficulties in establishing the position of the Vampire to enable appropriate integration into the circuit pattern.

Notwithstanding that the responses from the Air/Ground operator to the Vampire pilot's "final" calls may have caused some confusion (a warning of the C152 to vacate, followed by "no traffic"), the Vampire pilot reported having the C152 in sight throughout his final approach and initial landing roll.

UKAB Secretariat

The C152 and Vampire 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.

At the point that the C152 fades from radar, the Vampire is turning onto long final and the aircraft are separated by 2.6nm.

Coventry does not have any information in their aerodrome manual regarding run-and-breaks. They comply with the standard SERA 5005(f) Visual Flight Rules which states that:

Except when necessary for take-off or landing, or except by permission from the competent authority, a VFR flight shall not be flown:

(1) over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 300 m (1 000 ft) above the highest obstacle within a radius of 600 m from the aircraft;

(2) elsewhere than as specified in (1), at a height less than 150 m (500 ft) above the ground or water, or 150 m (500 ft) above the highest obstacle within a radius of 150 m (500 ft) from the aircraft.

¹ SERA.3205 Proximity.

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

Summary

An Airprox was reported when a C152 and a Vampire came into proximity at Coventry Airport at about 1245hrs on Saturday 10th March 2018. Both pilots were operating under VFR in VMC and in receipt of an Air/Ground Service from Coventry.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air/ground operators involved and reports from the appropriate ATC and operating authorities.

The Board began by looking first at the actions of the C152 pilot. Members noted that he had slowed to his minimum safe speed to allow the aircraft ahead to land and was flying at about 20ft agl until the aircraft ahead vacated the runway. Although no doubt frustrated at having had to go around previously, GA members wondered whether this was a sensible course of action given that there was clearly insufficient distance between his aircraft and the one ahead. An earlier decision to go around would have likely meant that he would have either been at circuit height or climbing as the Vampire pilot commenced his run in, which may have caused the Vampire pilot to abort the run-and-break. As it was, the Vampire pilot likely concluded that the C152 was on the runway and therefore not a threat to his run in. Had the C152 pilot decided to go around at a late stage in his approach whilst flying at 20ft then there would have been a significant risk of collision given that the Vampire pilot was committed to his run-in at that point.

The Board then turned to the actions of the Vampire pilot. Members reviewed a video of the event and concluded that from this it was difficult to assess the Vampire's track relative to the runway but that it appeared to be offset by only a minor amount at best³. Using the C152 as a reference, it also appeared to the Board that the Vampire pilot was at about 75-100ft agl estimated as he flew past the C152. A member with knowledge of the Vampire opined that as the Vampire ran in at that height then its pilot would likely have had difficulty in seeing the C152 ahead or on the runway in the latter stages due to the position of the Vampire cockpit in relation to the nose, which restricts lookout in-front and below the pilot's line of sight. However, the Vampire pilot subsequently reported that he had been seated in the left-hand seat and could see the C152 at all times. He also reported that the pilot in the right-hand seat could see the C152 for the majority of the time, and only lost sight of the C152 in the latter stages of the approach. The Vampire pilot also commented that, in his opinion, the C152 could not have manoeuvred into a conflict position during the latter stages of his run in due to its poor climb gradient and so there was no risk associated with his run-and-break at that height. Board members disagreed and felt that, had the C152 pilot gone around in the latter stages of the Vampire pilot's run in then there would have been a serious risk of collision; in their opinion the Vampire pilot should not have flown so close to the C152. Members with military experience commented that, notwithstanding the low height of the Vampire's run-in, a standard military run-in-and-break was always conducted well offset to the runway for the very reason that this was the only way that aircraft on or approaching the runway could be reliably observed and avoided.

The board then considered the cause and risk of the Airprox. Members quickly agreed that the cause had been that the Vampire pilot had flown into conflict with the C152. Turning to the risk, some members thought that because the C152 was on the runway at the time that the Vampire flew past then, although this incident met the criteria that safety had been reduced, there had not been an actual risk of collision. Others countered that although the Vampire pilot felt that there was no risk because he could see the C152 and judged that its potential climb rate would mean it was not a factor, his propinquity to the C152 was such that if the C152 pilot had gone around then there would have been a real risk of collision. In the end, after much discussion, the Board agreed that it was not for them to consider what might have happened but what had actually happened; accordingly, they judged that

³ Using the Vampire length (9.37m) compared to the C152 length (7.3m), if the aircraft were equidistant from the observer then the Vampire would be 1.28 times the length of the C152. Although not able to take exact measurements, and within the bounds of slight error, the video stills depict the Vampire as being 1.3 times the length of the C152, which indicates that it was pretty much equidistant from the observer and therefore near to overhead the C152.

safety had been much reduced below the norm because the Vampire pilot had flown too close to the C152 and so the incident was assessed as risk Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Vampire pilot flew into conflict with the C152.

Degree of Risk: B.

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:

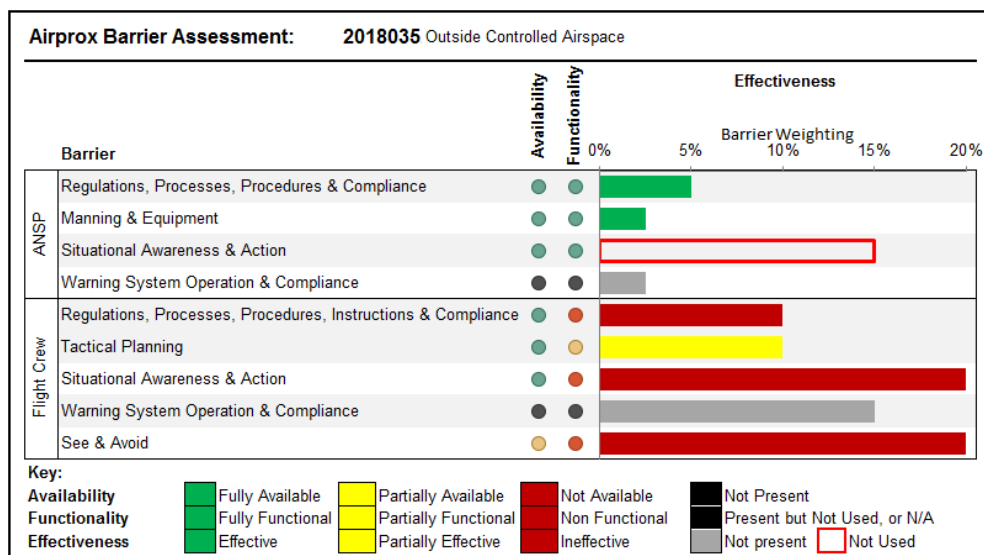
Flight Crew

Regulations, Processes, Procedures, Instructions & Compliance was assessed as ineffective because the Vampire pilot did not sufficiently separate himself from the aircraft landing ahead, and the run-and-break was not in accordance with the procedures in place at Coventry.

Tactical Planning was assessed as partially effective because the Vampire pilot did not ensure he was sufficiently offset from the runway so as not to conflict with the C152 on the runway.

Situational Awareness & Action was assessed as ineffective because although the Vampire pilot had sufficient SA to make an informed decision prior to the conflict but didn't act on the SA he had.

See and Avoid was assessed as ineffective because the C152 pilot was not able to see the Vampire prior to CPA, and the Vampire pilot did not sufficiently act to avoid the C152 that he could see as he ran in.



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