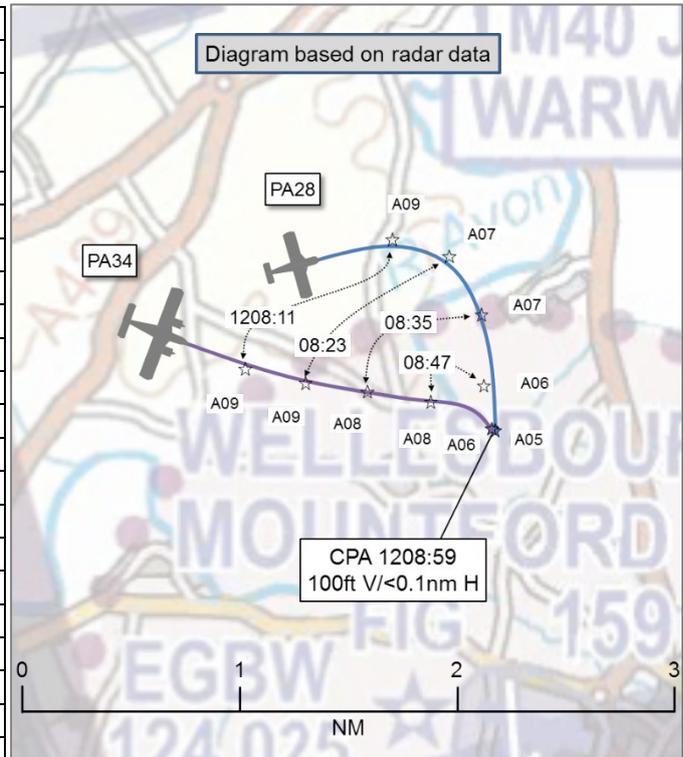


AIRPROX REPORT No 2019013

Date: 20 Jan 2019 Time: 1209Z Position: 5213N 00137W Location: Wellesbourne - elev 159ft

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	PA34
Operator	Civ FW	Civ FW
Airspace	Wellesbourne ATZ	Wellesbourne ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Wellesbourne	Wellesbourne
Altitude/FL	500ft	600ft
Transponder	A,C,S	A,C,S
Reported		
Colours	Blue/white	Blue/white
Lighting	Anti-col, landing	Strobes, beacon
Conditions	VMC	VMC
Visibility	3km	>5km
Altitude/FL	600ft	700ft
Altimeter	QFE (1013hPa)	QFE (1013hPa)
Heading	180°	180°
Speed	80ktt	90ktt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	0ft V/100m H	Not seen
Recorded	100ft V/<0.1m H	



THE PIPER PA28 PILOT reports that he had booked the aircraft for 6 circuits for practise. The visibility was around 3-4km with a cloud base of about 3000ft. He was on his 5th touch-and-go, No2 for RW18 behind a C152. He called to report on final and copied one ahead (the C152 was just about to touch down so he continued his approach). At about 578ft a PA34 appeared in his 2 o'clock in a tight right-hand turn to line up on RW18 at the same level as him and, he estimated, less than 100ft away. He immediately turned to the left onto a heading of about 160°. He informed the AFISO that he was going around because of the proximity of the PA34.

He assessed the risk of collision as 'Very High'.

THE PIPER PA34 PILOT reports that he was inbound VFR to Wellesbourne. The handing pilot, a high-hours rated PPL, was in the LH seat whilst he, an FI/FE, was in the RH seat as P1. They reported to the west for direct join, were given airfield information, and were told to report right-base giving way to circuit traffic, two in the circuit. At Stratford, about 3 miles out, they heard one pilot reporting final [a Grob], and another, the C152 [which the PA28 was following], downwind. When they reported joining right-base, in the correct circuit position, the Grob had landed, and the C152 was clearly seen on short final. Another pilot reported joining downwind. The Grob pilot was asked to expedite to clear for landing traffic. They turned final, and then heard another aircraft on the R/T say 'going around, that Seneca on the right is too close'. They looked for, but did not see, the reporting aircraft, so called final and were given "land at your discretion" which they then did. From a landing position on the runway they could see the go-around traffic upwind on the centreline. They did not see the reporting aircraft, and assumed him to have been shielded behind the engine on their up-going port wing. Their assessment was that they did not see the reporting aircraft in their base to final turn, and had considered the circuit to be now clear with the two aircraft ahead now landed, and the aircraft behind joining downwind. The pilot of the reporting aircraft had not called final they thought, and when they called final the AFISO gave

them landing clearance. Although they passed the aircraft to the right, they commented that they were wrong to have not given way to circuit traffic.

THE WELLESBOURNE AFISO reports that the runway in use was RW18, with a right-hand circuit. Three aircraft were in the circuit; a C152, a Grob 115 and the PA28. The PA34 pilot was on a local navigation exercise and called to rejoin to land. He was given all relevant airfield information to join the airfield, including runway in use, QFE and Traffic Information about the aircraft in the circuit. The PA34 pilot advised that he would join the circuit on a right-base join for RW18. The pilot was again advised of all circuit traffic and advised to give way to the circuit traffic, a right-base-leg join was at their discretion, and to report right base for RW18. The PA28 pilot was in the circuit for RW18 right hand along with two other aircraft. The PA34 pilot reported right base and was advised of circuit traffic ahead and asked to report on final for RW18. When the PA34 pilot reported turning final for RW18, upon visual inspection from the Tower he saw the PA34 on final and the PA28 starting to commence a standard missed approach for RW18 right hand, breaking off to the deadside of the airfield. The PA28 then advised of the 'go-around'.

Factual Background

The weather at Birmingham was recorded as follows:

METAR EGBB 201150Z 15003KT 9999 OVC027 03/01 Q1018

The Wellesbourne airfield web site states that the fixed-wing circuit is 1000ft QFE. 'Standard overhead join at 2000ft, joining crosswind above the upwind end of the runway or direct join if traffic permits, giving way to traffic in the circuit'.

UKAB Secretariat

The PA28 and PA34 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. When two or more heavier-than-air aircraft are approaching an aerodrome or an operating site for the purpose of landing, aircraft at the higher level shall give way to aircraft at the lower level, but the latter shall not take advantage of this rule to cut in front of another which is in the final stages of an approach to land, or to overtake that aircraft³. The Skyway Code states:

'As a general rule, joining traffic must always give way to traffic already established in the circuit³.

Summary

An Airprox was reported when a PA28 and a PA34 flew into proximity in the Wellesbourne Mountford visual circuit at 1209hrs on Sunday 20th January 2019. Both pilots were operating under VFR in VMC and were in receipt of a Flight Information Service from the Wellesbourne AFISO.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar recordings and a report from the AFISO 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.

Members first discussed the actions of the PA34 pilot and noted that he had been inbound to Wellesbourne from the West and had requested a direct join for right-base. The AFISO reported that

¹ SERA.3205 Proximity.

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

³ CAP1535S, The Skyway Code, Aerodrome Operations, Arrival and Departure procedures, General circuit guidance, page 92.

he passed Traffic Information about 3 aircraft in the circuit to RW18RH and had agreed for the PA34 to join right-base at his discretion, to give way to circuit traffic. When the PA34 pilot subsequently reported right-base, he was advised of the circuit traffic ahead and to call on final. It was clear to the Board that the PA34 pilot had mis-assimilated the FISO's traffic information and had thought that he was No2 rather than No3 in the sequence. With this flawed situational awareness (**CF4**), he therefore believed that he was following a C152, which he could see on short final, rather than the PA28 which was turning base-leg to final further out, of which he was not aware (**CF5**). GA members commented that, as the PA34 pilot himself had stated, it was likely that the PA28 was hidden to the PA34 pilots by their left wing as they turned right-base, but that this highlighted the need for a positive confirmatory check 'up' the approach path before turning final in any circuit. The PA34 pilot commented after the Board meeting that, from the respect of his situational awareness, the PA28 pilot had reported downwind as the PA34 was joining on right base but it would appear that the radar recording showed that the pilot was actually turning from base onto final outside the ATZ. Consequently, he expected to see the PA28 on his right rather than his left.

Wellesbourne do not record their R/T frequency, and so there was no clarification of what was actually transmitted at the time. As a result, the Board could not comment on the PA34 pilot's assertion that the PA28 pilot had not called final but members noted that the PA28 had turned final outside the ATZ. Although this in itself was not an issue *per se*, the Board surmised that this might explain why the PA34 pilot had not seen the PA28 (because his concentration was focused towards the airfield) and why he may have 'missed' the PA28 pilot's final call because it might not yet have been made as the PA34 pilot initially positioned for right-base. GA members commented that this served to highlight the risks involved in joining busy airfields from other than the overhead; although such joins were perfectly acceptable if pilots could ensure that they had sufficient situational awareness to integrate successfully, the primary advantage of an overhead join was that it gave time to assimilate other circuit traffic without the self-induced pressure of joining whilst simultaneously assessing the circuit for traffic, configuring the aircraft for landing and ensuring a stable approach. In this respect, members also discussed the Wellesbourne website information and commented that whilst the airfield AIP entry stipulated that overhead joins were preferred (EGBW AD 2.22 1a), this was not reflected on the airfield website. This matter had also been noted during a previous discussion that month about Airprox 2019002, where an associated recommendation had been made about Wellesbourne join procedures.

As a side issue, GA members noted that the PA34 pilot had reported that he had been 'cleared' to land and wondered whether the PA34 pilot fully understood the role of the AFISO. An AFISO is not empowered to offer a 'clearance' because they are not permitted to issue instructions to airborne pilots. Their responsibilities only include issuing pertinent Traffic Information on circuit traffic, initially generically and then specifically as the aircraft approaches closer to the circuit; it is for the pilots to ensure that they are suitably sequenced for landing 'at their discretion' as opposed to any specific 'clearance' to do so. Since the meeting the PA34 pilot clarified that he did not believe that he had been cleared to land, but rather in his Airprox report had said that he had reported final and been given the instruction "land at your discretion" which he rather loosely described as a clearance. He had been aware of the service being provided by Wellesbourne.

For his part, the PA28 pilot reported that, when on final, he suddenly observed the PA34 turning onto final in his 2 o'clock less than 100ft away. It was apparent that the PA34 pilot had not integrated during his join because he was not aware of the PA28 (**CF2/CF3**), but members noted the somewhat extended circuit pattern of the PA28, which was outside the ATZ, and wondered whether this was the 'standard' pattern or whether the PA28 was wider than would normally be expected. The Board also noted that the PA28 pilot had not reported hearing the PA34 call joining right-base, and therefore was surprised when it suddenly appeared on his right. Although he was No2 to the C152 ahead and was no doubt focused on that aircraft, GA members commented that this once again highlighted the need for a robust lookout at all times, even within the visual circuit; the PA34 was there to be seen and, although its pilot was required to give way to the PA28, the PA28 pilot may have been able to resolve the conflict as well if he had been aware of the PA34 as it joined.

The AFISO had not seen the conflict develop between the two aircraft and was first aware of the situation shortly before the PA28 pilot reported going around; consequently, he could not inform the

pilots of their proximity. In this respect, the Board noted that there was no responsibility for the AFISO to closely monitor the approach of the PA34 or the PA28; he had issued what he believed had been accurate and timely information to the PA34 pilot for him to integrate into the circuit, which he had not carried out (**CF1**).

Turning to the risk, the Board quickly agreed that the PA34 pilot had not seen the PA28 at all and that the PA28 pilot had only seen the PA34 at a very late stage, after it passed on the right (**CF6**). Accordingly, they determined that it had only been by providence that there was not a collision between the two aircraft; although the PA28 pilot did carry out a go-around after CPA, the two aircraft had arrived into very close proximity (100ft vertically and <0.1nm horizontally) before any effective action had been taken. Consequently, the Board considered that there had been a serious risk of collision and assessed the risk as Category A.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

CF	Factor	Description	Amplification
Ground Elements			
• Situational Awareness and Action			
1	Human Factors	• Conflict Detection - Not Detected	
Flight Elements			
• Regulations, Processes, Procedures and Compliance			
2	Human Factors	• Flight Crew ATM Procedure Deviation	Regulations/procedures not complied with
• Tactical Planning and Execution			
3	Human Factors	• Aircraft Navigation	Did not avoid/conform with the pattern of traffic already formed
• Situational Awareness of the Conflicting Aircraft and Action			
4	Contextual	• Situational Awareness and Sensory Events	Pilot had no, or only generic, Situational Awareness
5	Human Factors	• Understanding/Comprehension	Pilot did not assimilate conflict information
• See and Avoid			
6	Human Factors	• Monitoring of Other Aircraft	Non-sighting by one or both pilots

Degree of Risk: A.

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 Element:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the PA34 pilot did not give way to circuit traffic after joining the circuit on right base.

Tactical Planning was assessed as **ineffective** because the PA34 pilot did not integrate into the circuit.

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

Situational Awareness and Action were assessed as **ineffective** because the PA34 pilot was not aware of the presence of the PA28.

See and Avoid were assessed as **partially effective** because the PA28 pilot only saw the PA34 late and the PA34 pilot did not see the PA28.

Airprox Barrier Assessment: 2019013		Outside Controlled Airspace					
Barrier	Provision	Application	Effectiveness				
			Barrier Weighting				
			0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 5%]			
	Manning & Equipment	✓	✓	[Green bar to 2.5%]			
	Situational Awareness of the Confliction & Action	✓	✓	[Green bar to 15%]			
	Electronic Warning System Operation and Compliance	●	●	[Grey bar to 2.5%]			
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✗	[Red bar to 10%]			
	Tactical Planning and Execution	✓	✗	[Red bar to 10%]			
	Situational Awareness of the Conflicting Aircraft & Action	✓	✗	[Red bar to 20%]			
	Electronic Warning System Operation and Compliance	●	●	[Grey bar to 15%]			
	See & Avoid	✓	⚠	[Yellow bar to 20%]			
Key:							
	Full	Partial	None	Not Present	Not Used		
Provision	✓	⚠	✗	●	○		
Application	✓	⚠	✗	●	○		
Effectiveness	■	■	■	■	■		