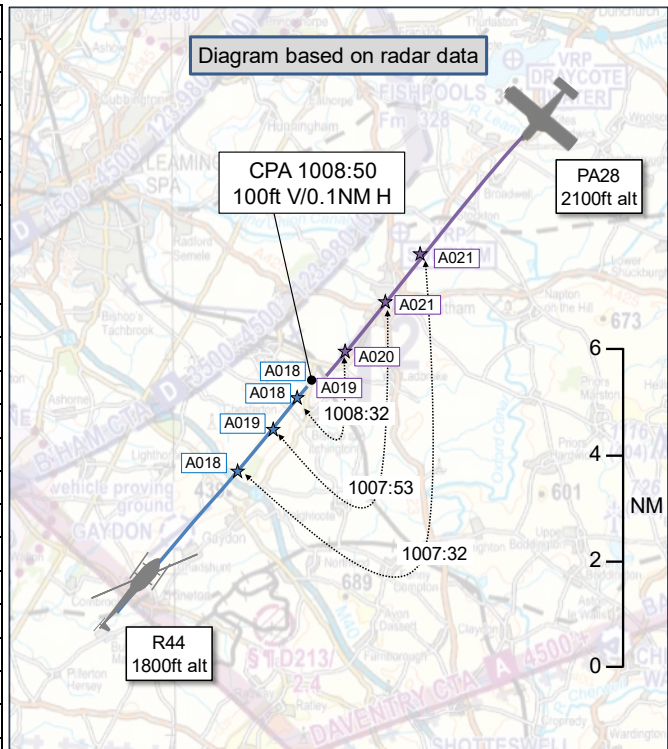


AIRPROX REPORT No 2023087

Date: 22 May 2023 Time: 1009Z Position: 5214N 00126W Location: 7NM ENE of Wellesbourne

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	R44	PA28
Operator	Civ Helo	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	AFIS
Provider	Wellesbourne Information	Wellesbourne Information
Altitude/FL	1800ft	1900ft
Transponder	A, C	A, C, S
Reported		
Colours	Black	White and red
Lighting	Yes	Strobe and nav.
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2000ft	2000ft
Altimeter	QFE (NK hPa)	QNH (NK hPa)
Heading	032°	NK
Speed	80kt	NK
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	40ft V/50ft H	100ft V/100ft H
Recorded	100ft V/0.1NM H	



THE R44 STUDENT PILOT reports that they were using a student callsign [while flying an R44] on a solo navigation exercise departing an airfield at 0957. The navigation waypoints had been planned as Ettington Park, Gaydon, J19 M1, Chipping Warden and Alscot, returning at 1056.

[The Airprox occurred] between the waypoints of Gaydon and junction 19 of the M1 at an altitude of 2000ft. After flying over Gaydon they encountered some turbulence, to which they [reacted by] slowing the helicopter down to 80kts to lessen the effects, which was maintained up to the point of a visual of, what was later identified as, [a PA28]. While flying north of Gaydon, at Bishop’s Itchington, they noticed ‘wings and a fuselage’ at roughly the same altitude, they could not see the tail or the underside of the aircraft, which was positioned to their right but located in the front right quarter of the windscreen. They immediately established that [the PA28] was flying towards them and had assumed that the [other pilot] would turn [the PA28] further towards their port side to run parallel to them. They reported that it had quickly become apparent that the [PA28] had not [been flown as expected] and was flying at roughly a 15° angle towards them.

They reduced [the R44’s] power to lower its altitude and gain time with [the PA28] passing in their right hand door window, top 1/4 at circa 50ft to their right and circa 40ft higher while [the PA28] had maintained the same angle of approach. As [the PA28] passed, their main focus had been to ensure that they had cleared each other, having taken no time to think about taking the registration number down, but it was clearly identifiable with a red top tail, red underside and the remaining aircraft white. It was a fixed-wing aircraft, with the wings on the underside of the fuselage and a single engine. After passing [the PA28], they levelled [the R44] and were around 1800ft at time 1012. Immediately afterwards there was a radio call from a [pilot] to Wellesbourne Information [stating] that they were on the east of the airfield for an approach to them. They [the reporter] assumed that this was [the PA28 pilot making the call] but their focus at the time had been on gaining a steady flight path. They continued their navigation exercise but cut it short and turned southeast once they were at the HS2 construction

site, which they followed until an original waypoint of Chipping Warden and returned back to their [departure airfield].

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

THE PA28 PILOT reports they were routing to [destination] from [departure], using Gaydon as a reporting point before joining overhead. They received instructions to join overhead for RW36L at Wellesbourne and used Gaydon as a point to orbit and assess where to join [the Wellesbourne circuit] to complete an overhead manoeuvre correctly. When they were completing their orbit a helicopter flew under and to the right of them. They had not received any information regarding that traffic.

THE WELLESBOURNE AFISO reports the [R44] had departed Wellesbourne at 0958 for a solo navigation exercise to the east and was on a Basic Service. RW36 was in use with a left-hand circuit, 1000ft for fixed wing and 600ft for rotary traffic. A PA28 [pilot] requested joining information from the east at approximately 1005 in the vicinity of Gaydon. The airfield information was passed with no reported circuit traffic. A few minutes later [the PA28 pilot] reported overhead and they asked them to report downwind. The R44 [pilot] then reported approaching from the east for joining information, which they passed along with information of the fixed-wing circuit being active. The [PA28] pilot landed normally at 1021. The [R44] appeared to pass south of the airfield by approximately 2.5NM on a westerly heading and then turned right to approach RW05 and land at Heli Point 'W' at 1026 and then taxied to the parking area. At no point were they aware of the two aircraft being in close proximity and there was no report to the tower of an Airprox.

Factual Background

The weather at Birmingham was recorded as follows:

METAR EGBB 231020Z VRB04KT 9999 BKN045 15/05 Q1028=

Analysis and Investigation

CAA ATSI

After reviewing the reports, it was noted that Wellesbourne does not record its [radio calls]. ATSI had therefore been unable to conduct a full investigation. However, they had also noted from the information in the reports that the [R44] pilot did not appear to have called Wellesbourne until after the Airprox had occurred some 6NM east-northeast of the airfield and had made no mention of having called for join, and the Wellesbourne Flight Information Service Officer's report seemed to bear that out.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data. The closest point of approach was determined as 1008:50 and the diagram constructed from the radar data. The R44 was on a north-easterly heading and the PA28 was opposite direction traffic on a south-westerly heading (Figure 1).

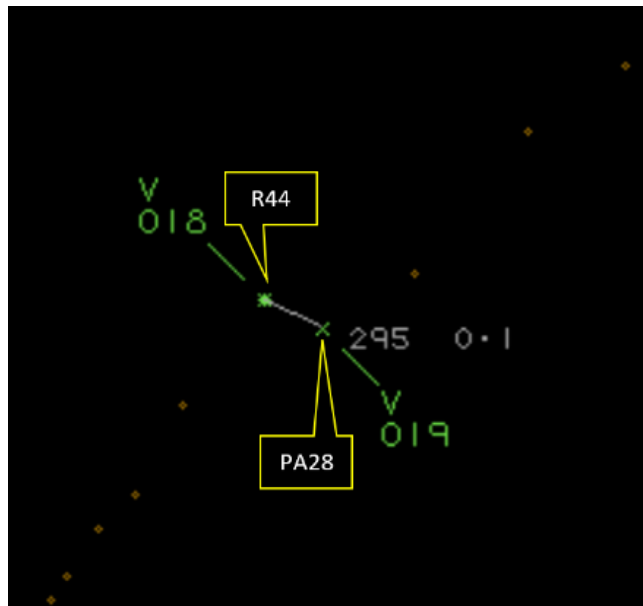


Figure 1 – CPA 1008:50 separation was 100ft and 0.1NM

The R44 and PA28 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.¹ If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.²

Summary

An Airprox was reported when an R44 and a PA28 flew into proximity 7NM east-northeast of Wellesbourne Mountford at 1008Z on Monday 22nd May 2023. Both pilots were operating under VFR in VMC. The R44 pilot was in receipt of a Basic Service and the PA28 pilot was in receipt of an Airfield Flight Information Service, both from Wellesbourne.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the AFISO involved and a report from the appropriate operating authority. 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 noted that the pilot of the PA28 had called for joining instructions on the Wellesbourne frequency. The position report that they had provided was considered by members and it was agreed that it had not been sufficiently accurate to have assisted the R44 pilot's situational awareness (**CF2**). Nevertheless, the pilot of the R44 had visually acquired the PA28, albeit somewhat late (**CF3**), and members noted that avoiding action had been taken to increase separation between the aircraft.

Members then considered the actions of the PA28 pilot and wondered if it had been possible for them to have made an earlier call stating the direction from which they had been approaching, although it was felt that this may have made little difference to the subsequent Airprox. The Board determined that, as the PA28 pilot had not been passed Traffic information about the R44, they had had no situational awareness of that traffic (**CF2**). Furthermore, members noted that the low wing of the PA28 and the slightly lower position of the R44 may have influenced the PA28 pilot's ability to gain visual contact with the R44, noting that they had not seen the R44 until after it had passed beneath them (**CF4**).

The Board spent some time deliberating whether the FISO could have passed Traffic Information to the PA28 pilot, particularly under a duty of care to the R44 student pilot or as best practice to both pilots. There was some discussion about how much the FISO could have reasonably known about the relative

¹ (UK) SERA.3205 Proximity..

² (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on..

positions of the R44 and PA28, therefore it could not be determined whether the 'duty of care' clause had been pertinent on this occasion and, as both aircraft had been outside the Wellesbourne ATZ, there had been no requirement for the FISO to have monitored either flight (**CF1**).

Members noted that neither aircraft had been fitted with any additional electronic conspicuity equipment, which on this occasion may have provided some additional information to the pilots to aid visual acquisition. It was for pilots to decide on their own requirements for additional equipment according to their needs, and the Board wished to highlight to pilots that additional funding has been made available for electronic conspicuity devices through the CAA's Electronic Conspicuity Rebate Scheme, which has been extended until 31st March 2024.³

When determining the risk, the Board assessed the reports from both pilots and the FISO together with the radar. The members agreed that it had been the effective non-sighting of the R44 by the PA28 pilot that had reduced safety much below the norm, but the last minute avoiding action by the R44 pilot had increased the separation between the aircraft sufficiently that the risk of collision had been reduced but not fully averted (**CF5**); Risk Category B.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2023087				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Situational Awareness and Action				
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
2	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
• See and Avoid				
3	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
4	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				
5	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 Assessment⁴

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **not used** because the FISO had not been required to monitor the flights.

³ [Electronic conspicuity devices | Civil Aviation Authority \(caa.co.uk\)](https://www.caa.co.uk)

⁴ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](https://www.ukab.co.uk).

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the R44 pilot only had generic situational awareness of the presence of the PA28 and the PA28 pilot had no situational awareness regarding the R44.

See and Avoid were assessed as **partially effective** because the R44 pilot saw the PA28 at a later than optimum stage, and the PA28 pilot saw the R44 after CPA.

Airprox Barrier Assessment: 2023087		Outside Controlled Airspace		Effectiveness				
Barrier		Provision	Application	Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	<div style="width: 50%; background-color: green;"></div>				
	Manning & Equipment	✓	✓	<div style="width: 25%; background-color: green;"></div>				
	Situational Awareness of the Conflication & Action	⚠	○	<div style="width: 15%; background-color: red; border: 2px solid red;"></div>				
	Electronic Warning System Operation and Compliance	⊘	⊘	<div style="width: 10%; background-color: grey;"></div>				
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	<div style="width: 10%; background-color: green;"></div>				
	Tactical Planning and Execution	✓	✓	<div style="width: 10%; background-color: green;"></div>				
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓	<div style="width: 20%; background-color: red;"></div>				
	Electronic Warning System Operation and Compliance	⊘	⊘	<div style="width: 15%; background-color: grey;"></div>				
	See & Avoid	⚠	⚠	<div style="width: 20%; background-color: yellow;"></div>				
Key:		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	⊘				
Application	✓	⚠	✗	⊘	○			
Effectiveness	■	■	■	■	□			