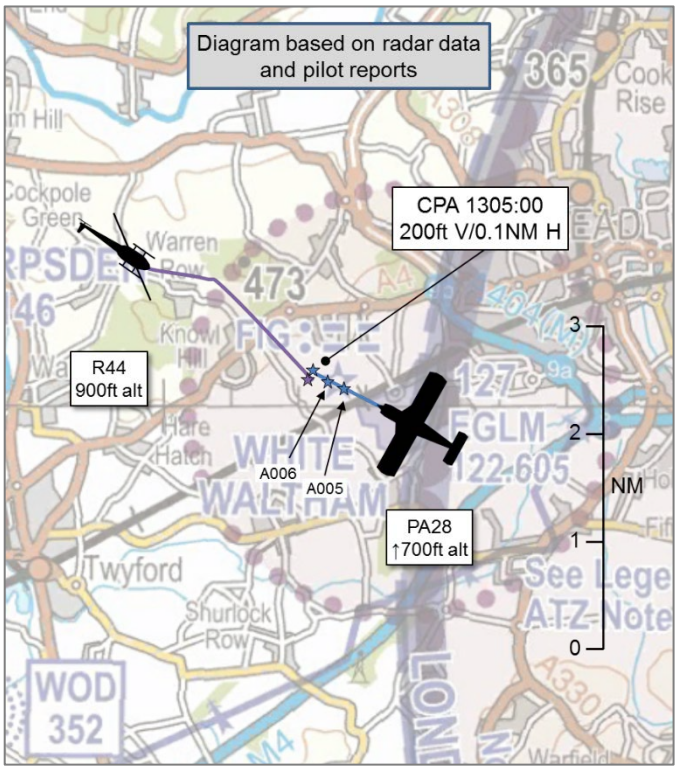
AIRPROX REPORT No 2020014

Date: 04 Feb 2020 Time: 1305Z Position: 5130N 00047W Location: White Waltham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	R44
Operator	Civ FW	Civ Helo
Airspace	White Waltham ATZ	White Waltham ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	White Waltham	White Waltham
Altitude/FL	700ft	900ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, Yellow, Blue	Blue, white
Lighting	Strobes, Landing	Strobe
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	700ft	500ft
Altimeter	NK (1016hPa)	NK
Heading	285°	200°
Speed	80kt	100kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	TA
Separation		
Reported	50ft V/50m H	NR V/25m H
Recorded	200ft V/0.1NM H	



THE PA28 INSTRUCTOR reports that the PA28 was being flown by a PPL holder undergoing a biennial instructional flight (combined with a WLAC club currency check). After completing some general handling and PFLs to the southwest of Reading, they returned to the White Waltham circuit and completed an overhead join followed by a touch-and-go on RW29. Whilst downwind for the touch-and-go, they heard a helicopter call on the frequency stating his wish to enter the ATZ and his intention to route to a point just south of the RW03 threshold. The PA28 pilot could not recall what the A/G operator replied, because he was busy instructing his student. However, he was certain nothing was said that indicated that the helicopter intended to fly down the reciprocal of the active runway at (approximately) 700ft because he was sure he would have both recognised and remembered anything that indicated a potential conflict. He completed an uneventful touch-and-go on RW29 and climbed out following the published circuit pattern. He was focussed on monitoring the PPL and pointing out the correct circuit turning points and noise abatement areas, however as they were climbing through 700ft and approaching 800ft QFE, he glanced across to check the altimeter and ASI and saw an R44 helicopter, very slightly left of their 12 o'clock, approaching them on a direct reciprocal track approximately 150-200 ft horizontally and 50ft vertically above them. The helicopter was white with large areas of pale blue and turquoise paint. He immediately took avoiding action by executing a steep turn to the right and pushed the nose down. There was no indication that the helicopter pilot had seen them or had taken any avoiding action. He estimated that at the closest point they were around 100-150 ft horizontally and 50ft vertically from the helicopter. Once clear of the threat and whilst flying downwind for the full stop landing, he heard the helicopter pilot say something like "[C/S] *at the 03 threshold and departing the circuit to the north*". The PA28 pilot replied asking him to confirm his callsign because he needed to report the occurrence. He confirmed his callsign and announced leaving the frequency to Wycombe (he recalled).

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

THE R44 PILOT reports that he was following his normal route on a pipeline survey at 500ft agl, through White Waltham using his GPS pipeline system. He called White Waltham radio 5nm to the north-west with his position to gain airfield information to enter the ATZ and was given runway in use, RW29RH, and the QFE, and he broadcast his intentions to track his line through the airfield. As he entered the ATZ he broadcast entering the zone and his intentions to track the line to the south. Neither the pilot nor the observer had seen or heard any other traffic and the only radio transmissions made were by him. As he crossed the RW29 climb out he suddenly saw a single-engine aircraft climbing towards them which then turned behind and into the circuit. The TAS in his aircraft only then gave any warning, after the aircraft had passed behind. He continued on the line and the aeroplane continued into the circuit.

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

THE WHITE WALTHAM A/G OPERATOR reports that the R44 called up for information and he responded with the runway in use for the fixed wing (29RH) and the QNH. The pilot gave a brief description of his intentions, which the A/GO misheard as survey work along the M4 remaining south of the RW03 threshold. This may have been influenced by his recollection that helicopters with the same callsign had previously carried out similar work. In any case, he did not expect the helicopter to come north of the RW03 threshold, and he was almost certain that the pilot did not ask whether or not the circuit was active. He noted that, even if he had been aware of the R44 pilot's intentions, he would not necessarily have stopped him from transiting south to north across RW29RH. As an Air/Ground radio operator, he was not accustomed to giving clearances or instructions since it is not within his remit to do so. Rotary traffic are, for the most part, exceptionally diligent at holding short of a runway to check that it is clear before crossing. He believed that the only difference he could have made would have been to warn the pilot that the circuit was active, which may have made him hold short before crossing. Nevertheless, the pilot must have heard the PA28 call final, which should have alerted him. By the time he realised what the helicopter was doing it was too late to prevent the Airprox, which was probably within 100ft although it was hard to judge the distance from his perspective on the ground.

Factual Background

The weather at Heathrow was recorded as follows:

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METAR COR EGLL 041250Z AUTO 29012KT 9999 OVC032 09/02 Q1023 NOSIG=
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Analysis and Investigation

UKAB Secretariat

The PA28 and R44 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] 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 operation.[3]

CAA CAP452, Aeronautical Radio Station Operators Guide states that:

> AGCS radio station operators provide traffic and weather information to pilots operating on and in the vicinity of the aerodrome. Such traffic information is based primarily on reports made by other pilots.[4]

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(1) Approaching head-on.
[3] SERA.3225 Operation on and in the Vicinity of an Aerodrome.
[4] CAP 452 Chapter 4 Air Ground Communications Service.

Summary

An Airprox was reported when a PA28 and an R44 flew into proximity in the White Waltham ATZ at 1305z on Tuesday 4th February 2020. Both pilots were operating under VFR in VMC, both were receiving a AGCS from White Waltham.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings and a report from the A/G 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments. Although not all Board members were present for the entirety of the meeting and, as a result, the usual wide-ranging discussions involving all Board members were more limited, sufficient engagement was achieved to enable a formal assessment to be agreed along with the following associated comments.

The Board first looked at the actions of the R44 pilot. He had been conducting a pipeline inspection, and reported calling on the White Waltham frequency prior to entering the ATZ. The Board could not be sure exactly what had been said, because the White Waltham frequency was not recorded, but neither the A/GO, nor the other pilot in the circuit were aware that he intended to route in the opposite direction to the climb-out lane (**CF5**). Members considered this to be an unwise choice of routing. The R44 pilot reported that he was not aware that the circuit was active (**CF6**) and the Board had a long discussion about whether the passing of a runway in use also indicates an active circuit. Many members considered that this was indeed the case, nevertheless, even if the R44 pilot had not anticipated that the passing of the runway in use indicated the circuit was active, it was for him to conform with, or avoid, the pattern of traffic formed by the circuit (**CF2**, **CF4, CF9**). Some members went further still and suggested that his routing alone should have made him more cautious and that, during pre-flight planning, he should have telephoned White Waltham to make them aware of his intended routing (**CF3**). At the very least he should have clarified on the RT whether the circuit was active or not (**CF7**) to ensure that he could comply with Rules of the Air and obtain information from the A/GO to enable his flight within the ATZ to be conducted safely. The pilot reported that the TAS in the helicopter had alerted after the PA28 had passed behind (**CF10**,**CF11**) and members thought that this was probably due to the relatively high rate of climb at which the PA28 was climbing up towards the R44 as it climbed out from the runway. The combination of events resulted in a late-sighting of the PA28 (**CF13**).

Turning to the PA28 pilot, the Board noted that he hadn't assimilated that the R44's routing would affect him and they wondered whether he had been distracted by instructing his student (**CF8**). That being said, he understandably had not expected to meet with traffic transiting in the opposite direction on climb-out and although he spotted the R44 late (**CF13**), he had time to take some avoiding action.

For his part, the A/GO reported that he had expected the R44 pilot to follow the same route that previous pipeline inspections had taken and route along the M4 to the south of the airfield; he did not assimilate that the R44 pilot's routing would affect the PA28 (**CF1**). The Board discussed at some length whether the A/GO should have given information on circuit traffic to the R44 pilot on his initial call. A CAA advisor told the Board that A/GOs are not permitted to provide clearances, or required to sequence traffic, however, CAP452 states that A/GOs should pass Traffic Information based upon pilots reports, and CAP413 gives examples of how to pass such information[5], and states that for pilots overflying the ATZ, Traffic Information and aerodrome information should be passed, leading some members to opine that this had been an opportunity missed.

[5] CAP413: Radiotelephony Manual, Chapter 4: Aerodrome Phraseology.

Finally, when assessing the risk, the Board agreed that although the PA28 pilot had taken avoiding action, the separation between the two aircraft had been such that safety had been degraded (**CF12**); Risk Category B.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2020014		
CF	**Factor**	**Description**	**Amplification**
	Ground Elements		
	• Situational Awareness and Action		
1	Contextual	• Situational Awareness and Sensory Events	The controller had only generic, late or no Situational Awareness
	Flight Elements		
	• Regulations, Processes, Procedures and Compliance		
2	Human Factors	• Flight Operations Documentation and Publications	Regulations and/or procedures not complied with
	• Tactical Planning and Execution		
3	Human Factors	• Pre-flight briefing and flight preparation	
4	Human Factors	• Monitoring of Other Aircraft	Did not avoid/conform with the pattern of traffic already formed
5	Human Factors	• Accuracy of Communication	Ineffective communication of intentions
	• Situational Awareness of the Conflicting Aircraft and Action		
6	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
7	Human Factors	• Lack of Communication	Pilot did not request additional information
8	Human Factors	• Distraction - Job Related	Pilot engaged in other tasks
9	Human Factors	• Monitoring of Other Aircraft	Pilot did not sufficiently integrate with the other aircraft
	• Electronic Warning System Operation and Compliance		
10	Contextual	• ACAS/TCAS TA	
11	Technical	• ACAS/TCAS System Failure	CWS did not alert as expected
	• See and Avoid		
12	Contextual	• Near Airborne Collision with Aircraft, Balloon, Dirigible or Other Piloted Air Vehicle	Piloted air vehicle
13	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

Safety Barrier Assessment[6]

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 A/G Operator was not required to sequence the traffic.

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

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the R44 pilot did not confirm with, or avoid the pattern of traffic at White Waltham.

Tactical Planning and Execution was assessed as **partially effective** because the R44 did not adjust his plan to remain clear of the PA28 in the visual circuit.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the R44 pilot was not given the circuit traffic information by the A/G Operator, but also did not request further information when it was not forthcoming.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the CWS in the R44 did not alert until after the PA28 had passed behind.

See and Avoid were assessed as **partially effective** because it was a late sighting by both pilots.