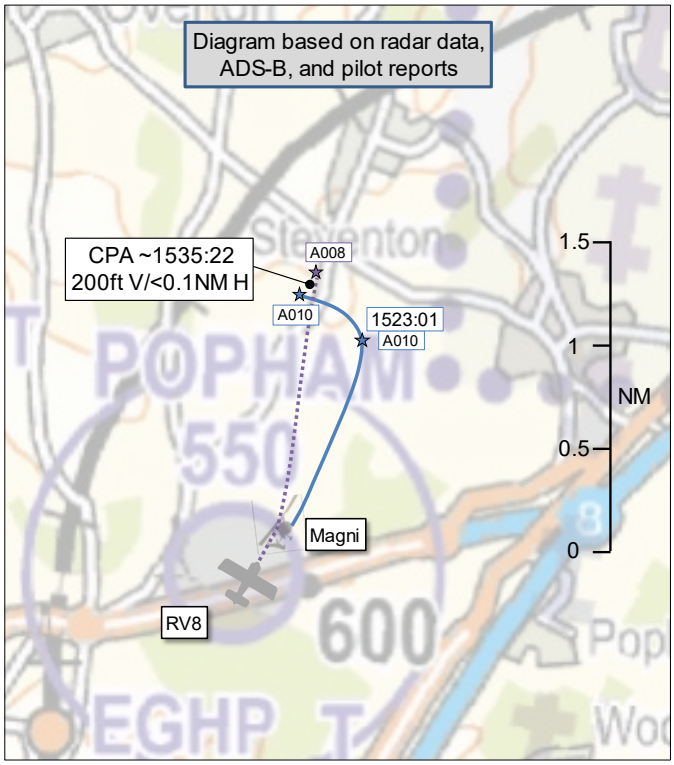
AIRPROX REPORT No 2024083

Date: 07 May 2024 Time: 1535Z Position: 5113N 00113W Location: 1.4NM N of Popham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Magni	RV8
Operator	Civ Helo (autogyro)	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Popham Radio	Popham Radio
Altitude/FL	1000ft	800ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White/Red	Purple/White
Lighting	Strobes, position and landing lights	HISL
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	800ft	1200ft
Altimeter	QFE	QNH (1023hPa)
Heading	~300°	360°
Speed	57kt	100kt
ACAS/TAS	PilotAware	Not fitted
Alert	None	None
Separation at CPA		
Reported	100ft V/0ft H	200ft V/200ft H
Recorded	200ft V/<0.1NM H	



THE MAGNI PILOT reports they were conducting a circuit detail at Popham airfield on RW03 when a visiting RV8 landed and was heard on the radio asking to jump the queue for fuel due to a flight-plan timing limitation. A few minutes later, as they were on a tight left base, the aeroplane was observed at the 03 hold, aligned with the runway direction and with their tail towards the final approach. Just as they were about to turn on to a short final [the RV8 pilot] announced that they were lining up on RW03. The radio operator advised [the RV8 pilot] that a gyroplane (the Magni) was about to turn on to short final and that further traffic (a Bristell NG5) was about to turn on to a longer final. [The RV8 pilot remained in] position while they conducted a touch-and-go and the aircraft behind them landed. As they were just over half way along the crosswind leg at about 800ft AAL they looked to the right to check for traffic joining the downwind leg. They then saw the RV8 come into view having passed directly underneath their aircraft and not very far below it. They reported the Airprox to the radio operator at Popham; the departing RV8 pilot confirmed the Airprox on the radio.

The pilot assessed the risk of collision as 'High'

THE RV8 PILOT reports that in the climb after take-off, passing approximately 1200ft, they saw the gyrocopter in their right 1 o'clock [position] crossing right-to-left approximately 300m ahead and 200ft above on a potential collision course. They levelled off to pass below it.

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

THE POPHAM AIR GROUND OPERATOR reports that [the RV8] arrived at Popham to uplift fuel. [The RV8 pilot] requested that they go before a PA28 that was already on the pumps as they were time constrained by a flight plan. The pilot of the PA28 allowed [the RV8 pilot] to refuel ahead of them. Once fuelled [the RV8 pilot] immediately taxied to the RW03 hold, having been given the runway in use and QNH. At the time, [the Magni] was on the runway powering up after landing as part of a touch-and-go

(they recalled). [The Magni] departed down RW03. [The RV8] then entered RW03 having been advised that there was no traffic on final and been given the prevailing surface wind conditions. [The RV8 pilot] announced that they were taking-off, and departed. [The RV8's] flight plan was opened at 1535 - the initial flight plan departure time had been entered as 1600. Within a minute or two of departure, the pilot of [the Magni] reported an Airprox and requested the callsign of the aircraft that had apparently flown underneath them. Before [the AGO] could answer the call the pilot [of the RV8] announced that they confirmed that an Airprox had taken place and passed, over the [radio], their callsign to the pilot of the Magni. Neither the end of the runway, nor the crosswind segment of the circuit, are visible to the tower.

Factual Background

The weather at Farnborough was recorded as follows:

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METAR EGLF 071520Z AUTO 05006KT 020V080 9999 NCD 18/09 Q1023
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Analysis and Investigation

UKAB Secretariat

A review of the NATS radar replay was undertaken and both aircraft were identified using Mode S data although, as the Airprox occurred shortly after the RV8's take-off, the RV8 Mode S was detected after the initial sweep, with its initial appearance on radar recorded as a separation of 200ft and 0.1NM from the Magni (Figure1).

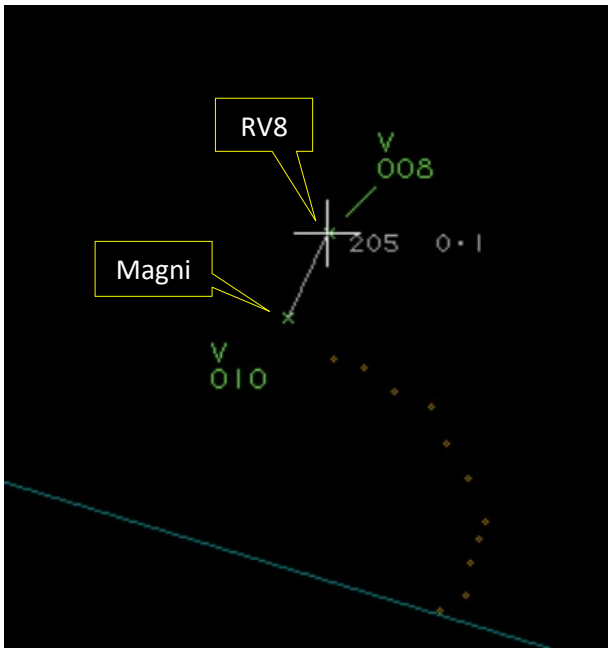

Figure 1- Time 1535:22 separation 200ft and 0.1NM

The Magni had first appeared on radar 11sec earlier and their track was also available on GPS and ADS-B. It was assessed that the CPA may have been a few seconds earlier as later radar sweeps displayed the two aircraft diverging. CPA was recorded as at approximately 1535:22 with 200ft vertical separation and <0.1NM.

The Magni and RV8 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] 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.[2]

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

Summary

An Airprox was reported when a Magni and an RV8 flew into proximity at Popham at 1535Z on Tuesday 7th May 2024. Both pilots were operating under VFR in VMC, and both pilots were in receipt of an Air Ground Communication Service from Popham Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, GPS tracks, radar photographs/video recordings, and a report from the air ground radio 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 first considered the actions of the Magni pilot and members were in agreement that they had operated correctly within the Popham circuit. Members had a brief discussion about the Magni pilot's awareness of the proximity of the RV8 and agreed that they had only had generic situational awareness of the RV8's presence (**CF5**) based on the RV8 pilot's earlier radio calls that had been made to Popham Radio. Members noted that the Magni pilot's EC device had not improved their situational awareness because it had not alerted them to the presence of the RV8 as would have been expected (**CF6**) and, because the RV8 had been approaching the Magni from below and behind, it had been obscured from the Magni pilot's view (**CF9**) leading to an effective non sighting of the RV8 by the Magni pilot (**CF8**).

The Board then turned their attention to the RV8 pilot's actions, noting firstly that they had put themselves under unnecessary pressure to rush their flight preparation and departure. Members wondered why the RV8 pilot had not delayed their flight plan and devoted a more suitable amount of time and consideration to their take-off and departure and, therefore, agreed that the RV8 pilot had not adapted their plan sufficiently to cater for the circumstances (**CF2**). Members agreed that the RV8 pilot had not communicated their intentions, to overtake the Magni in the circuit and climb-out, to the Magni pilot (**CF1**). The Board was concerned that the RV8 pilot had not given sufficient separation between themselves and the Magni after the Magni's 'touch and go' (**CF3**) and that they had, therefore, not integrated with the Magni despite having had full situational awareness of the Magni's flight profile (**CF4**).

Lastly, the Board considered the Popham Air Ground Operator's role in events and quickly agreed that they had passed appropriate information to both pilots at the appropriate time, and that there was little more that the AGO could have done to ameliorate matters.

Turning to the risk involved in this Airprox, members acknowledged that the startle effect to the Magni pilot, of the RV8's sudden appearance beneath them, had given the Magni pilot cause for concern regarding the RV8's proximity (**CF7**). The Board assessed that, although safety had been degraded, the RV8 pilot had been able to monitor the situation and avoid the Magni by manoeuvring below it during their climb-out, thereby removing any risk of collision; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024083			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
2	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption

3	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
	• Situational Awareness of the Conflicting Aircraft and Action			
4	Human Factors	• Incomplete Action	Events involving flight crew performing a task but then not fully completing that task or action that they were intending to carry out	Pilot did not sufficiently integrate with the other aircraft despite Situational Awareness
5	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
	• Electronic Warning System Operation and Compliance			
6	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
	• See and Avoid			
7	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern
8	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
9	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other

Degree of Risk: C.

Safety Barrier Assessment[3]

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 AGO was not required to sequence aircraft in the circuit.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the RV8 pilot had not adapted their plan to give sufficient separation when taking off behind the Magni in the circuit.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the RV8 pilot had not integrated with the Magni, despite having situational awareness that it had been in the visual circuit, and the Magni pilot had not expected that the RV8 would fly a departure profile that would conflict with their own circuit.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the CWS on the Magni would have been expected to alert to the presence of the RV8, but none was reported.

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

Airprox Barrier Assessment: 2024083 Outside Controlled Airspace