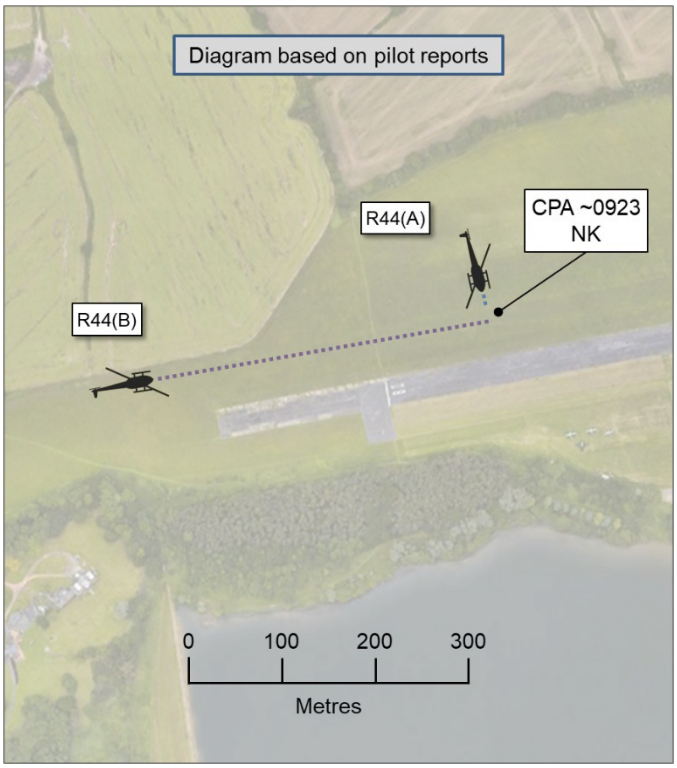
AIRPROX REPORT No 2024253

Date: 05 Oct 2023 Time: ~0923Z Position: 5139N 00020W Location: Elstree ATZ

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	R44(A)	R44(B)
Operator	Civ Helo	Civ Helo
Airspace	Elstree ATZ	Elstree ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Elstree Information	Elstree Information
Altitude/FL	NK	NK
Transponder	A, C, S	A, S[1]
Reported		
Colours	Blue	Red
Lighting	"*Yes*"	Nav, landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	0ft	30ft
Altimeter	QFE (1006hPa)	NK
Heading	180°	080°
Speed	"*Hovering*"	20kt
ACAS/TAS	PilotAware	PilotAware
Alert	Information	Unknown
Separation at CPA		
Reported	0ft V/10m H	0ft V/20m H
Recorded	NK	



THE R44(A) PILOT reports that they were at the end of a trial lesson, hovering at the western end of the north-side grass. Their student was having their go at the controls, trying to hover and, needless to say, was unstable and the aircraft was moving around as one would expect during a trial lesson.

The [instructor in the other helicopter] was with a student on final approach to the north-side grass but decided to fly low, right in front of them and close to the runway in use. [The pilot of R44(A)] had to immediately take control to avoid a collision as they were moving slowly towards the [R44(B)] as it passed in front of them. They have video evidence from their on-board camera.

[The pilot of R44(A) opined that] safety was compromised due to the other instructor exercising poor airmanship/TEM as there was no need for them to get so close. There were no other helicopters on the north-side grass at the time.

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

THE R44(B) PILOT reports that this was a PPL(H) instructional flight and they were approaching the north-side grass at Elstree. RW08 was in use, so they approached from the north-west. [R44(A)] was in a stationary hover on the grass, facing the runway (south). [The pilot of R44(B)] elected to pass to the south of [R44(A)], i.e. between [R44(A)] and the runway, so the pilot of [R44(A)] could see them. They had previously called final on the radio.

[1] The pilot of R44(B) reported that their aircraft was fitted with an A, C, S transponder, however, only Modes A and S were observed on the NATS radar replay.

When they passed in front of [R44(A)] (at approximately 20kt and approximately 10-20ft AGL) the pilot of [R44(A)] appeared to lose to control of the aircraft and lurched forwards towards them. They did not need to take avoiding action as they were already passing [R44(A)].

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

THE ELSTREE AFISO reports that two instructors were engaged in training details over the grass helicopter training area to the north of RW08/26. At the time of the incident, [the pilot of R44(A)] was hovering at low-level whilst [the pilot of R44(B)] took-off from the grass training area to carry out a circuit to the north to then land again on the grass training area. As [the pilot of R44(B)] transmitted their intentions to circuit to the north, they reported that they were visual with the other helicopter ([R44(A)]).

When [the pilot of R44(B)] later reported on final for the north-side grass, [the Elstree AFISO] had expected to give them Traffic Information on the other helicopter still hovering low-level, but this was pre-empted by reporting that they had the other helicopter in sight. [The Elstree AFISO] therefore responded with "*north-side grass, land at your discretion*" and gave the instant wind. No report was made over the RT at the time in respect of a possible Airprox, nor was a report made to the 'Tower' after the aircraft had landed. The first [the Elstree AFISO] knew that an Airprox had been reported was when they received an email from UKAB when they were next on duty. They were able to refresh their memory of the incident by checking the RT recordings from the reported time.

Factual Background

The weather at Northolt was recorded as follows:

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METAR EGWU 050920Z 14007KT 9999 FEW042 14/11 Q1016 NOSIG RMK BLU BLU
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data. However, neither aircraft appeared on the replay at the reported time of the Airprox and were assessed to have been below radar cover at CPA. The diagram was constructed by reference to the pilot's narrative reports. The aircraft tracks are shown as dotted lines to indicate their approximate positions. The separation at CPA could not be determined.

Figure 1 – A frame taken from the in-cockpit camera fitted to R44(A)

The R44(A) and R44(B) pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[2] If the incident geometry is considered as converging then the R44(A) pilot was required to give way to the R44(B).[3] An aircraft in flight, or operating on the ground or water, shall give way to aircraft landing or in the final stages of an approach to land.[4]

Summary

An Airprox was reported when R44(A) and R44(B) flew into proximity in the Elstree ATZ at approximately 0923Z on Saturday 5th October 2024. Both pilots were operating under VFR in VMC and in receipt of an AFIS from Elstree Information.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and in-cockpit video from the pilot of R44(A). 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 pilot of R44(A). Members noted that they had been engaged in an instructional sortie and had offered their student an attempt to hover the helicopter. Members appreciated that it would have been expected that the position of the helicopter would have been unstable and that it would have inevitably drifted forwards or sideways. A member with particular knowledge of helicopter pilot training explained that the instructor would likely intervene to resist the helicopter moving backwards. Members agreed that the pilot of R44(A) had had generic, rather than specific, situational awareness of the presence of R44(B) (**CF3**), and noted that they had been surprised at the proximity of R44(B) as it had passed in front of them. Members agreed that the proximity had caused them concern (**CF6**).

In consideration of the aspect of electronic conspicuity (EC), members agreed that the EC equipment fitted to R44(A) had provided an alert to the presence of R44(B) (**CF4**). However, members agreed that, effectively, the safety barrier of EC interactions had been 'Not Used' due to the encounter having occurred in an environment where the pilots would not have been expected to have referred to their EC devices.

Members next considered the actions of the pilot of R44(B) and noted that, during their approach to the training area on the grass to the north of the runway, they had reported on the radio that they had been in visual contact with R44(A). Members agreed that it may have been prudent for the pilot of R44(B) to have transmitted their intention to land at the western end of the grass training area (where R44(A) had been hovering) (**CF1**). It was agreed that such a call may have prompted the pilot of R44(A) to have taken control from their student and steady the position of the helicopter. Notwithstanding, members were surprised that the pilot of R44(B) had elected to pass directly in front of R44(A) when it may have been safer to have passed behind or to have amended their approach altogether to position to the grass much further to the east. Whilst it was acknowledged by members that the SERA regulation concerning 'Right of way' had placed a responsibility on the pilot of R44(A) to 'give way to aircraft landing or in the final stages of an approach to land', members agreed that both pilot's had shared equal responsibility for 'collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard'. Members agreed that the pilot of R44(B) had not made a sufficiently detailed plan to have achieved the most prudent and safe outcome (**CF2**).

Concluding their discussion, members agreed that the pilot of R44(B) had flown close enough to R44(A) to have caused its pilot concern (**CF5**). Finally, members agreed that, although safety margins had been eroded, there had not been a risk of collision. The Board assigned Risk Category C to this event.

[2] (UK) SERA.3205 Proximity.
[3] (UK) SERA.3210 Right-of-way (c)(2) Converging.
[4] (UK) SERA.3210 Right-of-way (4) Landing.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025253			
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
	• Situational Awareness of the Conflicting Aircraft and Action			
3	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			
4	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
	• See and Avoid			
5	Human Factors	• Incorrect Action Selection	Events involving flight crew performing or choosing the wrong course of action	Pilot flew close enough to cause concern
6	Human Factors	• Perception of Visual Information	~~Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement~~	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C.

Safety Barrier Assessment[5]

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

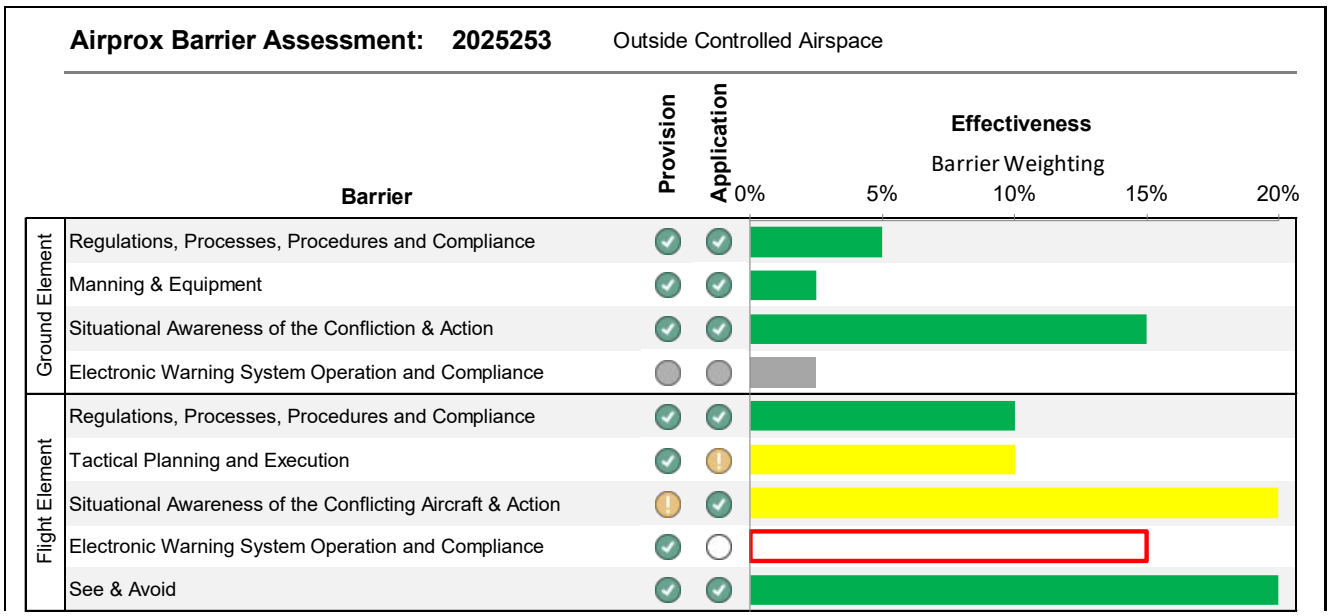
Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because it may have been prudent for the pilot of R44(B) to have provided greater separation from R44(A) during their approach and landing.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the pilot of R44(A) had generic situational awareness of the presence of R44(B).

Electronic Warning System Operation and Compliance were assessed as **not used** because the R44(A) and R44(B) pilots had conducted their respective manoeuvres without the aid of electronic conspicuity equipment.

[5] 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: 2025253
Outside Controlled Airspace
Barrier
Provision
Application
Effectiveness
Barrier Weighting
0%
5%
10%
15%
20%
Ground Element
Regulations, Processes, Procedures and Compliance
Manning & Equipment
Situational Awareness of the Confliction & Action
Electronic Warning System Operation and Compliance
Flight Element
Regulations, Processes, Procedures and Compliance
Tactical Planning and Execution
Situational Awareness of the Conflicting Aircraft & Action
Electronic Warning System Operation and Compliance
See & Avoid