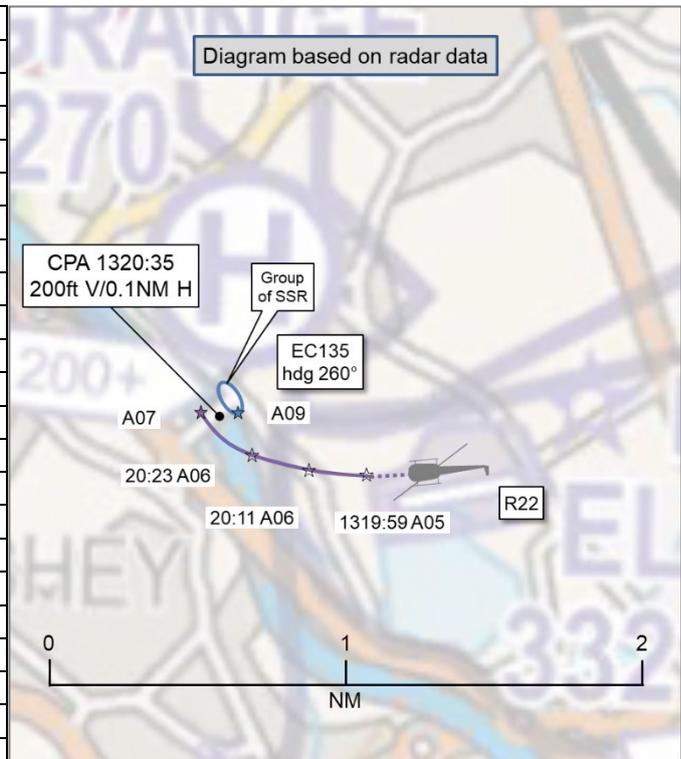


**AIRPROX REPORT No 2020114**

Date: 11 Sep 2020 Time: 1321Z Position: 5140N 00021W Location: Elstree ATZ

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	EC135	R22
Operator	NPAS	Civ Helo
Airspace	Elstree ATZ	Elstree ATZ
Class	G	G
Rules	VFR	VFR
Service	Basic	AFIS
Provider	Elstree AFISO	Elstree AFISO
Altitude/FL	900ft	700ft
Transponder	A, C, S	A, C, S
<b>Reported</b>		
Colours	Dark blue, yellow	NK
Lighting	Strobes, HISL	Strobe
Conditions	VMC	VMC
Visibility	>50km	>10km
Altitude/FL	700ft	400ft
Altimeter	Rad Alt	QFE (1007hPa)
Heading	260°	320°
Speed	0kt	70kt
ACAS/TAS	TCAS I	Not fitted
Alert	TA	N/A
<b>Separation</b>		
Reported	100ft V/0m H	250ft V/120m H
Recorded	200ft V/0.1NM H	



**THE EC135 PILOT** reports being tasked to an incident at a location within the Elstree ATZ. He contacted Elstree Information, operating on RW26 at the time, and informed them of the operating location. Take-offs were directed to climb on runway track or turn south to avoid them. Several aircraft turned to the north and were closer than the EC135 pilot would have liked, however, there was still reasonable separation. By this point they were in the hover above the M1 motorway. He heard a helicopter depart Elstree for a circuit and got a TCAS indication as he had with previous departures so was unconcerned as he was directed to avoid them. He then saw the R22 through the chin window, tracking the M1 northwards and approximately 100ft below. The pilot's clearance was 'with the police helicopter in sight take off your discretion'. With this in mind the EC135 pilot could only assume that the R22 pilot's actions were a deliberate act. The EC135 pilot noted that, given the dynamic nature of police operations, he could have easily transitioned into the R22.

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

**THE R22 INSTRUCTOR** reports conducting refresher training for the handling pilot to renew his R22 rating. They noted the position and radio calls of the EC135, to the northwest of the airfield, east of the M1 motorway, hovering in position on operational duty and remaining in two way communication with 'Elstree FIS'. The R22 Instructor's plan was to conduct some practice circuit emergencies in amongst some other circuit based manoeuvres. As they lifted, an R66 helicopter departed via Route Alpha, tracking northbound along the M1, along with other fixed wing departures, and appeared to have remained clear of the EC135. Noting that they were looking to follow the same route into the circuit which the R66 took and that no issues arose from the other traffic, they crossed the runway and announced their intention to conduct a northern circuit (in accordance with airfield operating procedures), adding "with the police helicopter in sight", for the benefit of the EC135 pilot's situational awareness. The R22 instructor noted that he was used to operating in quite a busy environment at Elstree as there could sometimes be up to 6 helicopters using the relatively small training area & circuit,

so it usually did not present an issue operating in close proximity to other aircraft providing necessary R/T calls & precautions were made. They made a normal transition to take-off but remained lower than normal for the climb-out and slightly west of the M1 so that they could be kept in sight by the EC135 pilot, as well as the R22 handling pilot remaining visual, visually keeping clear by what was judged as approximately 400-500ft. They did not attempt to try and climb above the EC135 due to climb performance or route behind in case the EC135 pilot could not maintain visual with the R22. After passing the other aircraft and turning downwind into the circuit they heard the police helicopter pilot inform Elstree that an R22 had passed straight underneath them by 100ft. The R22 Instructor and the pilot under training were slightly confused by the comment but continued with the planned practice and elected not to carry out another circuit. Shortly after landing a fixed wing aircraft departed Elstree and turned northbound well to the west of the M1 and clear of the helicopter, to which the EC135 pilot transmitted to the Elstree FISO, "if another aircraft does that, I will have you shut down.". 'Elstree FIS' then put a hold on departures and restricted movements to the east of the midpoint. Shortly thereafter the R22 crew terminated their sortie and returned to the helipad. The R22 instructor commented that, judging from the tone and content of the R/T messages after the alleged incident, he felt that their departure may have caused some discomfort to the pilot of the police helicopter, so he visited Elstree tower afterwards where he was informed of the Airprox report. The R22 Instructor also commented that, whilst Elstree based helicopters may be comfortable operating with other airfield traffic close-by, non-based aircraft on operational tasking in an unfamiliar area may be more sensitive and that further consideration should have been made in respect of conducting circuit operations.

The pilot assessed the risk of collision as 'None'.

**THE ELSTREE AFISO** reports that the R22 helicopter pilot called Elstree Information and was given RW26 in use and the QFE. A few minutes earlier, a police helicopter pilot had advised that they were entering the ATZ on an operational duty and were operating close to the airfield, just to the north of the RWY 26/08 centreline, alongside the M1. Appropriate Traffic Information was given by the FISO to alert circuit and departing traffic to the position of the police helicopter. For example, an AS355 helicopter inbound from the north was advised to route to the south of the airfield and enter via reporting point Charlie to avoid the police helicopter. After having crossed the runway and positioned to the helicopter training area on the grass to the north of the runway, the R22 pilot stated his intention to circuit north "with the police helicopter in sight". The AFISO replied "With the police helicopter in sight, circuit north at your discretion". The R22 lifted into the circuit at about 1319UTC. At 1321UTC the police helicopter pilot transmitted that an R22 helicopter had flown straight underneath him, only about 100ft below, contouring north up the M1. The AFISO replied that the R22 had reported having him visual before lifting. After this incident, to further protect the police helicopter, the AFISO and his colleague decided to suspend all departures and direct all arrivals to a reporting point 4NM to the east from where they could carry out a straight in approach without conflicting with the police helicopter. The R22 was also requested to operate "No further west than midfield". Shortly afterwards, the R22 pilot decided to conclude his training detail and land. One training aircraft at the hold intending to go into the circuit was directed back to the parking stand to shut down. A little while afterwards, the police helicopter pilot reported that his operation was complete and that he was re-positioning to a new site on the edge of the ATZ. Traffic advisories continued to be passed to all traffic whilst he was operating in the new position. Before leaving frequency, the police helicopter pilot announced his intention to file an MOR about the incident and requested the registration of the R22 helicopter.

## Factual Background

The weather at Northolt was recorded as follows:

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METAR EGWU 111320Z NIL=
METAR EGWU 111250Z 26013KT 9999 FEW036 BKN250 19/10 Q1016 NOSIG RMK BLU BLU=
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## Analysis and Investigation

### UKAB Secretariat

The EC135 and R22 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.<sup>1</sup> 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.<sup>2</sup>

In subsequent discussion with the NPAS pilot it was established that they had been operating under flight priority category B at the time of the Airprox and that the NPAS pilot had been advised by one of the crew that assuming flight priority category A (an Alpha callsign) would stop further activity at the airfield. CAA AAA confirmed that this was not the case. In a Class G ATZ where an ATC unit is resident, movement of the priority flight can be afforded priority over the movement of other flights, but in the en-route phase of flight in Class G airspace, or within Class G airspace where aerodrome FIS is provided (such as at Elstree) then flight priority only affords priority handling of RTF communications (accepting that some ATS units may request other airspace users to manoeuvre in such a way that affords the priority flight a direct track). In the circumstances of this Airprox, use of flight priority category A by the NPAS pilot would not have caused Elstree to close; only the aerodrome operator has that privilege.

## Comments

### NPAS

Although both pilots were responsible for collision avoidance it seems poor judgement for the R22 pilot to choose to fly beneath a police aircraft with minimal vertical separation, when he knew that the EC135 was on an active task and likely to manoeuvre suddenly. Elstree has some very detailed noise restrictions, routes and reporting points and it may have been that this contributed to a perceived necessity to follow a track that passed beneath the EC 135.

## Summary

An Airprox was reported when a EC135 and an R22 flew into proximity near Elstree aerodrome at 1321Z on Friday 11th September 2020. Both pilots were operating under VFR in VMC, the EC135 pilot in receipt of a Basic Service and the R22 pilot in receipt of an AFIS, both from the Elstree AFISO.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities. 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.

Board members first discussed the actions of the NPAS pilot and agreed that they had been operating under the assumption that the R22 pilot was aware of their intentions and possible requirement to transition away from his position with no notice. Members commented that there was no reason why the R22 pilot should know this and that he had acted in his perception of the best interests of the NPAS crew. Contrary to the NPAS Comment, radar replay confirmed the R22 pilot's report that he had avoided the EC135 under VFR by opting to pass in front of and below the level of the EC135 so that the EC135 pilot could more easily discharge his mutual and equal obligation to remain clear under VFR. Members

<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3225 Operation on and in the Vicinity of an Aerodrome.

also noted that the NPAS pilot was required to integrate with the pattern of traffic at Elstree (**CF1**) and that there was no provision for prioritisation of emergency services routing or tasking position in Class G, other than that provided by a Temporary Danger Area (TDA). Members wondered whether a degree of task prioritisation had led to a misunderstanding of SERA regulation. Members also discussed the NPAS pilot's subsequent message to the Elstree AFISO that 'if another aircraft did that' he would have to 'shut down' the airfield. Although this occurred after the Airprox, members felt that it was contributory in that it indicated a level of operational tension which adversely influenced the mindset for the task. Members received a briefing from the CAA advisor which confirmed that such action was not within the privileges afforded to an NPAS operation, and was in fact only afforded to the aerodrome operator. It transpired that the NPAS pilot had been incorrectly advised by one of the crew that assumption of an Alpha callsign afforded priority of routeing, whereas such action simply affords priority of handling of RTF communications. The Board were heartened to be informed by the CAA advisor that, as a result of this Airprox, the CAA plans to communicate further clarification of flight priority categorisation to emergency services pilots.

The Board also commented that it was clearly important that NPAS crews, and emergency services in general, were allowed to accomplish their dynamic and sometimes highly hazardous taskings in safety. Establishment of a TDA might not be possible within the timing constraints of a short notice tasking and was in any case only as effective as those other pilots who had received notification of its existence. In short, it often fell to the communication with and consideration of other airspace users to afford an emergency service helicopter the time and room required, which could only realistically be achieved by informing other airspace users of the situation. In that regard, members felt that the NPAS pilot would have been well served by explaining his intentions and requirements to the Elstree AFISO more fully (**CF2**) and then operated in the understanding that he was doing so not due to a priority of routeing or position but because of the help afforded by other pilots, most of whom would be unaware of the considerations specific to an NPAS task. Members commented that as such, the privileges of priority of routeing were very much less for an NPAS helicopter than for a police car. Members also reiterated their previous advice that, in the UK FIR in general, pilots should remain well clear of a hovering or circling helicopter, on the basis that it may be an emergency services helicopter on task.

Returning to the Airprox itself, the Board agreed that the NPAS pilot had clearly felt that safety had been compromised. He had seen the R22 at a late stage (**CF4**), without being aware that the R22 pilot had kept the EC135 continuously in sight, and his perception of undue proximity was no doubt reinforced by the TCAS alert (**CF3**). The Board agreed that the NPAS pilot had been concerned by the proximity of the R22 (**CF5**) and the associated collision risk if he had had to transition away but that in the event he had not and normal safety standards had applied.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

2020114			
CF	Factor	Description	Amplification
<b>Flight Elements</b>			
<b>• Tactical Planning and Execution</b>			
1	Human Factors	• Monitoring of Other Aircraft	Did not avoid/conform with the pattern of traffic already formed
2	Human Factors	• Accuracy of Communication	Ineffective communication of intentions
<b>• Electronic Warning System Operation and Compliance</b>			
3	Contextual	• ACAS/TCAS TA	
<b>• See and Avoid</b>			
4	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots
5	Human Factors	• Perception of Visual Information	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: E.

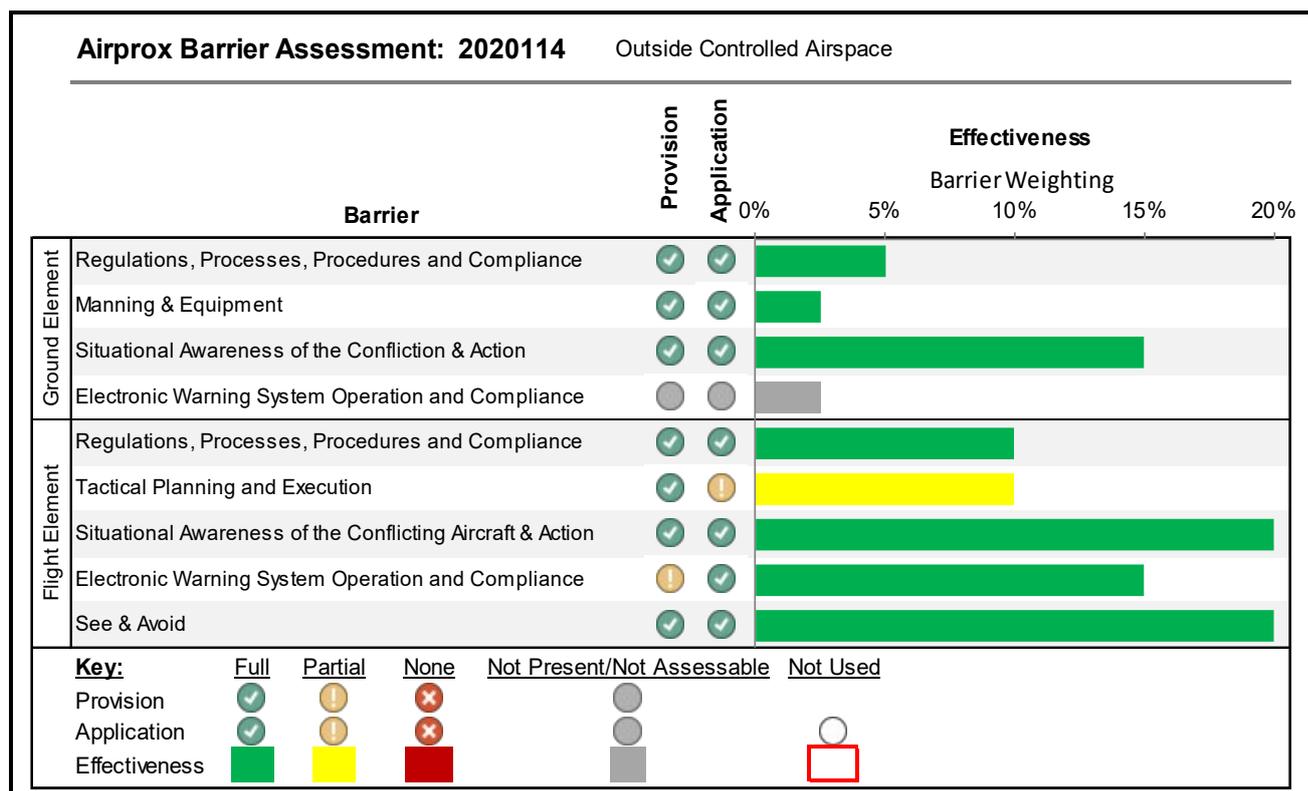
Recommendation: Nil.

### Safety Barrier Assessment<sup>3</sup>

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that all the barriers had functioned as intended.

#### Flight Elements:

**Tactical Planning and Execution** was assessed as **partially effective** because the EC135 pilot did not conform with the pattern of traffic of other aircraft in operation at Elstree and did not provide sufficient information on his planned operation to the Elstree AFISO to enable them to advise pilots appropriately.



<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).