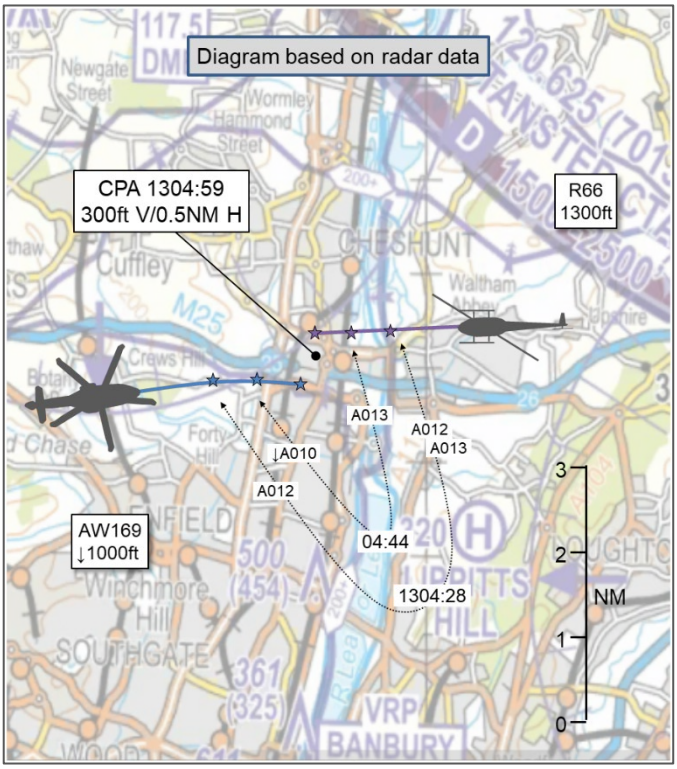
AIRPROX REPORT No 2020149

Date: 19 Oct 2020 Time: 1305Z Position: 5142N 00002W Location: 4NM SSE BPK VOR

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AW169	R66
Operator	HEMS	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider		Essex Radar
Altitude/FL	1000ft	1300ft
Transponder	A,C,S	A, C, S
Reported		
Colours	Yellow, Red	Silver, Blue
Lighting	Strobes, Landing	Strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1200ft	1500ft
Altimeter	QNH (1012hPa)	QNH (1015hPa)
Heading	085°	261°
Speed	125kt	113kt
ACAS/TAS	TCAS II	TAS
Alert	RA	Unknown
Separation		
Reported	300ft V/0.5NM H	300ft V/1000m H
Recorded	300ft V/0.6NM H	



THE AW169 PILOT reports that they were approaching 7nm west of North Weald and had changed frequency to North Weald Radio, but had not made an initial call. The P2 became visual with what they thought was another Helimed in their 1-2 o'clock. The P2 called out bearings to draw the pilot onto the contact, but they were not visual. The contact was displaying on TCAS and approaching 2.5NM, at the same altitude. As this contact came within 2NM, the P2 visually confirmed it was the Helimed as the aircraft type and colour scheme were identifiable. This also matched up with its approximate location on ACANS. This Helimed was passing on their right side, approximately 1NM away, which presented no conflict. There was an additional TCAS contact, the same level and conflicting on a reciprocal track, in their 11 o' clock and had passed through 2.5NM. Again the P2 became visual with this contact approximately 2NM away, and tried to draw the pilot onto it but they could not establish visual. When the contact was approximately 1NM away, the P2 identified it as rotary traffic, possibly an R44. Due to their proximity to the other Helimed (out to their right, approximately 2/3 o'clock) who were conducting an orbit overhead the HEMS scene and the unknown intentions of the rotary traffic, they elected not to turn to the right and instead maintained track. The Robinson did not alter course and nothing was heard on the North Weald frequency. The P2 called for the pilot to descend and maintain track, as the Robinson would pass down their left side and the Helimed was orbiting overhead the scene to their right. Due to being over a built up area with sets of large pylons ahead, they could only descend to around 700/800ft agl. An RA of 'monitor vertical speed' was generated, which 'redded' out any positive climb indications on the VSI, as the intruder aircraft passed down their left side, 300ft above. Once the traffic had passed behind, a 'clear of conflict' message was heard.

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

THE R66 P2 reported that they saw the other aircraft at the same time as the Captain, it was in their 10 o'clock and slightly below, at a range of 2NM. It maintained a slowly changing bearing, travelling down their port side. They deemed it to be no confliction because they had sufficient separation both

horizontally and vertically. They maintained a separation, shown on FlightRadar, of 350ft vertically and almost 1km horizontally at the closest point. They recognised the helicopter as a Helimed due to its distinctive colouring, which could be seen even taking into account that it was below them and so potentially could have blended into the background of the built up area. They opined that they would have been easier to spot against the clear sky behind them, were surprised it had been reported as an Airprox and wondered why the other pilot didn't turn right if they were unhappy with the separation.

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

THE STANSTED INT CONTROLLER reports that they were providing a Basic Service to the R66 pilot. The controller noted that when workload allows they always pass Traffic Information if they see something in close proximity. On this occasion they gave Traffic Information to the R66 pilot on traffic they believed to be the AW169, and the R66 pilot reported visual.

Factual Background

The weather at Stansted was recorded as follows:

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METAR EGSS 191250Z AUTO 18014KT 9999 FEW030 14/07 Q1015=
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Analysis and Investigation

NATS Investigation

The Stansted Intermediate Director (SS INT) position was operating combined with the Final Director position. The pilot of the Robinson R66 helicopter, reported onto the SS INT frequency at 1250:56 (all times UTC) stating they were 5NM north-east of Chelmsford and the SS INT controller instructed the pilot to remain outside Controlled Airspace and display Mode-A 7042. The SS INT controller agreed a Basic Service with the pilot.

An AW169 helicopter departed North Weald tracking west at an indicated altitude of 1200ft. The SS INT controller passed generic Traffic Information to the pilot of [R66 C/S] reference activity at North Weald at 1253:22 and again at 1258:20. [R66 C/S] continued to track west passing overhead North Weald and transited the Stansted TMZ at an indicated altitude of 1100-1300ft.

The [AW169 C/S] subsequently turned east, appearing to be on task approximately 11NM west of North Weald. At 1303:57 the SS INT controller passed Traffic Information reference the AW169 to the pilot of [R66 C/S], stating "*is a Basic service, so you've got traffic in your twelve o'clock , range three miles, helimed, altitude one thousand two hundred feet indicating*," see Figure 1 for relative positions of the aircraft. The pilot of the R66 replied "{R66 C/S]?" The SS INT controller reiterated the Traffic Information with the addition of "*opposite direction*" to which the pilot of [R66 C/S] replied "*Basic Service and visual with traffic*."

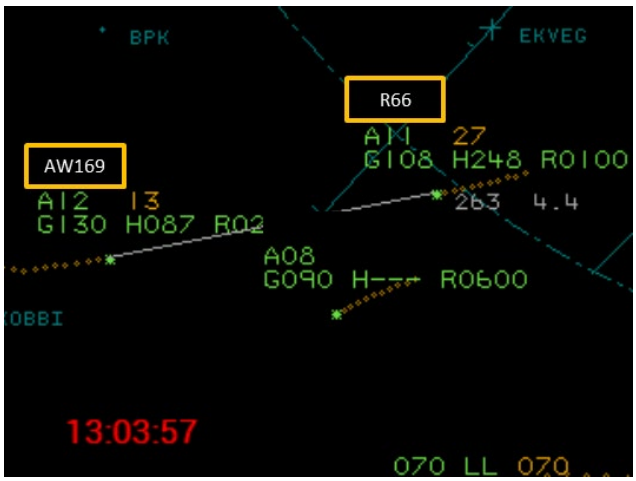


Figure 1

The point of closest approach occurred at 1304:59 and was recorded on the LTCC Multi-Track Radar as 0.6NM and 300ft, see Figure 2.

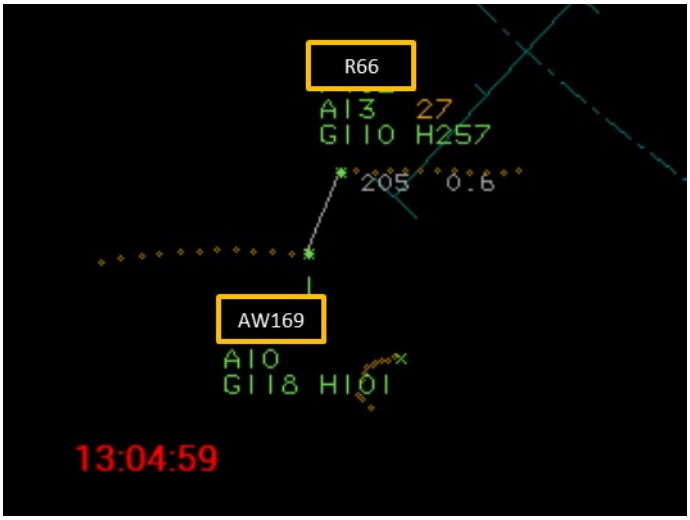


Figure 2

The pilot of [R66 C/S] made no further reference on the R/T to the potential confliction with the AW169. The UKAB notified Safety Investigations of this event on the 26th October and a historical report was requested from the SS INT controller. The report from the SS INT controller stated *'[R66 C/S] was on a BS outside controlled airspace. When aircraft are similar levels and close proximity I still pass traffic information if workload allows so I passed traffic information regarding what I think was the [AW169 C/S] to which the pilot reported visual. After the event I was made aware that an Airprox had been reported.'*

CAP774 Basic Service, Traffic Avoidance 2.9 states

> *'Whether traffic information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.'*

UKAB Secretariat

The AW169 and R66 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 AW169 and an R66 flew into proximity in the vicinity of Brookmans Park VOR at 1305Z on Monday 19th October 2020. Both pilots were operating under VFR in VMC, the AW169 pilot was not in receipt of an ATS and the R66 pilot in receipt of a Basic Service from Swanwick.

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.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(1) Approaching head-on.

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.

The Board first looked at the actions of the AW169 pilot, having received a TCAS TA on both the R66 and the other Helimed, the pilot was concerned by the proximity of the approaching traffic (**CF1**). Members with helicopter experience opined that the pilot did have a little bit more leeway to descend further if they had been concerned about the R66 and wondered whether they could have taken action earlier to increase the separation. That being said, it was recognised that the airspace where the Airprox occurred was extremely busy, both congested with traffic and restricted by surrounding CAS. Some members wondered whether being on the North Weald frequency was the optimal frequency to be on, given that North Weald would be unlikely to have any information on traffic transiting the area. But those with experience of using North Weald countered that it was a very busy airfield and an early call to get a clear picture of the traffic situation there was advantageous. Ultimately, members thought that in the busy airspace they could understand why the pilot was concerned by the traffic as they felt their aircraft was sandwiched between the two on either side. However they noted that the combination of the TCAS warning and a good look-out had meant that the pilot had time to deconflict and some opined that it was the sort of incident that could be encountered every day in that area. As the AW169 approached the opposing traffic the pilot received a TCAS RA (**CF2**) to monitor vertical speed and they saw the traffic pass down their left-hand side (**CF4**).

The R66 pilot was receiving a Basic Service from the Stansted controller, but had received Traffic Information and was visual with it. Members noted that the base level of the TMA was 2500ft in that area and wondered whether the pilot could have climbed slightly as the two aircraft approached at the same level, prior to the AW169's descent, but ultimately the pilot did not perceive that there was a conflict as the aircraft passed 0.6NM apart (**CF3**). Briefly turning to the Stansted controller's actions, they commended the controller for giving Traffic Information to the pilot, who was only receiving a Basic Service and thought that once the pilot had reported visual, the controller would not be expected to update that information.

When assessing the risk, members agreed that the Airprox met all the criteria for reporting and provided some valuable lessons for all concerned. Taking into consideration that both pilots had been visual with one another and that the AW169 pilot had descended to deconflict, members agreed that there had been no risk of collision and that normal safety standards had pertained; Risk Category E.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

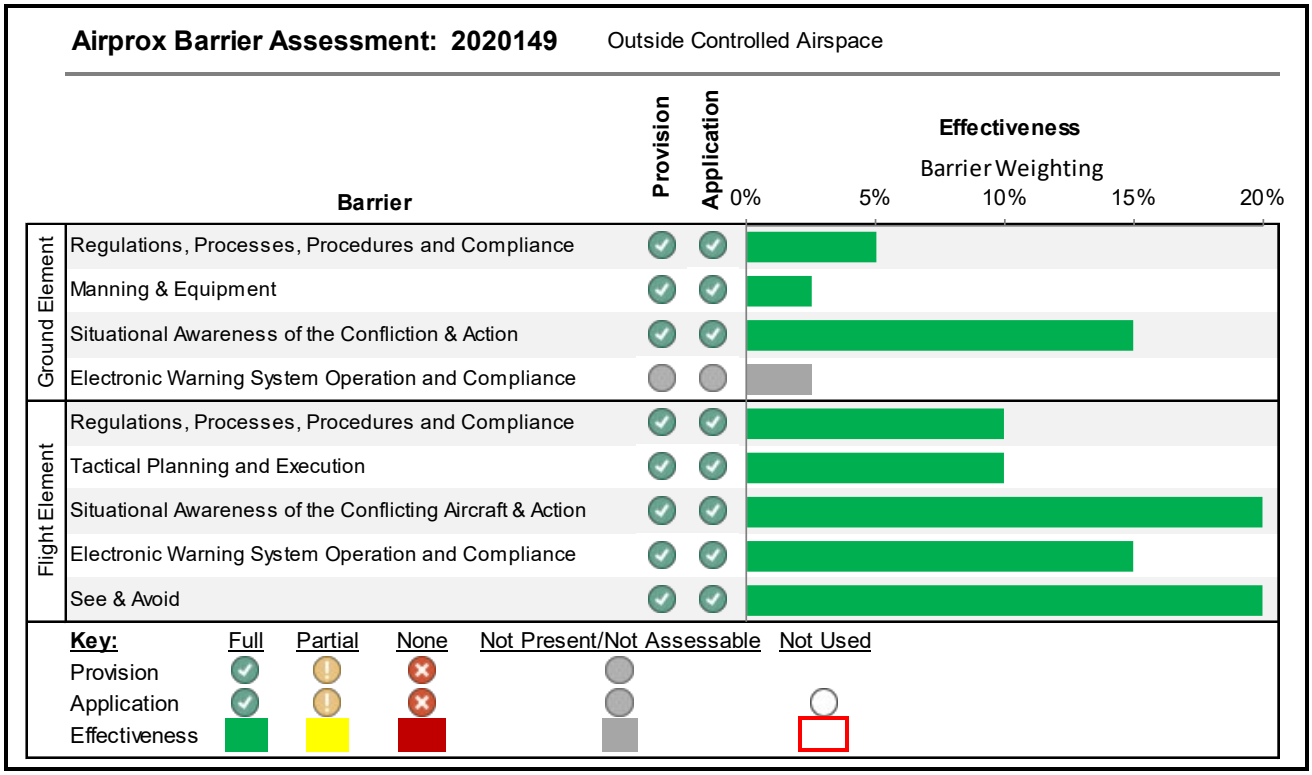
Contributory Factors:

	2020149		
CF	**Factor**	**Description**	**Amplification**
	Flight Elements		
x	**• Situational Awareness of the Conflicting Aircraft and Action**		
1	Human Factors	• Interpretation of Automation or Flight Deck Information	Pilot was concerned by the proximity of the other aircraft
x	**• Electronic Warning System Operation and Compliance**		
2	Contextual	• ACAS/TCAS RA	
x	**• See and Avoid**		
3	Human Factors	• Perception of Visual Information	Pilot perceived there was no conflict
4	Human Factors	• Perception of Visual Information	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: E.

Safety Barrier Assessment[3]

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the safety barriers had all been effective.



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