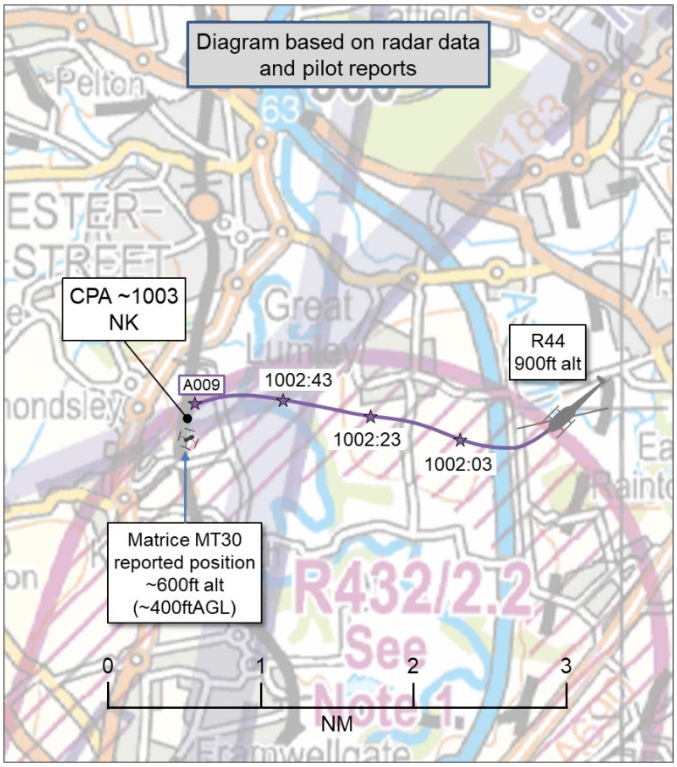
AIRPROX REPORT No 2025039

Date: 26 Mar 2025 Time: ~1003Z Position: 5450N 00135W Location: north of Kimblesworth

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Matrice M30T	R44
Operator	Civ UAS	Civ Comm
Airspace	EG R432[1]	EG R432
Class	G	G
Rules	VLOS	VFR
Service	None	Basic
Provider	N/A	Newcastle Radar
Altitude/FL	NK	900ft
Transponder	Not fitted	A, C, S
Reported		
Colours	Grey	Blue/white
Lighting	Standard	Nav, anti-colls, HISL
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	395ft	500ft
Altimeter	NK	QNH
Heading	090°	180°
Speed	0kt	100kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	None
Separation at CPA		
Reported	0ft V/0.25NM H	Not seen
Recorded	Not known	



THE MATRICE M30T PILOT reports that they were operating from a training area used on a very regular basis to deliver both drone and other unmanned flight training. The area was within Class G Airspace and was just within the northwest corner of restricted airspace EGR432. The site had an elevation of 252ft. In line with current Standard Operating Procedures, the instructor contacted NPAS control on their channel to inform them of the commencement of operations along with the local area dispatcher. The purpose of the training was to conduct currency training with a new drone pilot and this was being delivered on the [Matrice] M30T drone. This drone is a medium-sized drone and the pilot was conducting their second flight of the day, getting airborne at 0950.

During this flight the pilot was practising operating at the maximum permitted altitude of 400ft and at a distance of around 340m from the Take-Off and Landing Point (TOLP). They conducted some general handling and camera work under the direction of the Chief Pilot acting as the Instructor. The weather conditions were a bright clear day with light winds and excellent visibility.

At 1002 hours the remote pilot and instructor heard the noise of an approaching helicopter coming from the east of the operating area. They and their instructor immediately began to scan for the aircraft. From the noise signature it [seemed that] the aircraft was low and directly approaching the operating area. The instructor called *"aircraft incursion descend to the horizon*". The remote pilot immediately began to descend the drone to just above the horizon as per training and immediate action drills. They were able to descend to a height of 85ft AGL.

The approaching aircraft was identified visually at around 2NM from the operating area and was seen to be a light blue and white single-engine helicopter. Visually, the helicopter was level with the horizon and had a front landing light illuminated; it was initially estimated that the helicopter appeared to be at a height of below 500ft and passed around 0.25NM north of the UAV on a direct east-to-west track. The

[1] EGR432 applies only to helicopters UK AIP ENR 5.1.

helicopter was observed leaving the operating area. There was no deviation made to the course from the manned aircraft. The instructor was able to identify the other aircraft using FlightRadar24. This showed the helicopter to indicate 600ft but it was unclear how accurate it would be based on the topography of the land and the accuracy of this data. A call was made to Newcastle ATC who confirmed that the pilot had been speaking to them prior to passing through the operating area. Owing to the immediate actions carried out by the UAV crew they perceived the risk of collision as low and [opined that] the pilot of the manned aircraft was unlikely to be able to see the drone at the time of the incident.

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

THE R44 PILOT reports that they were following a normal pipeline route and procedure at 500ft. The NOTAMs were checked with no PINS notifications of drone activity, CADS was completed with no conflicts shown. They had been unsighted on the drone.

The pilot further reported that the company holds an exemption and procedures for operating in EGR432.

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

THE NEWCASTLE APPROACH CONTROLLER reports that there was no mention of a UAS from the pilot at any time, and no involvement from ATC.

Factual Background

The weather at Newcastle Airport was recorded as follows:

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METAR EGNT 260950Z 28012KT 230V310 9999 FEW017 10/05 Q1023
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Analysis and Investigation

Newcastle ATC

An Airprox report was received relating to an event [involving] a UAS and R44 3NM north of Durham.

The SATCO spoke to the [UAS operator] who was operating the Matrice M30T to a maximum of 400ft and had descended it when they heard the helicopter in the vicinity. They checked on ADS-B which indicated the R44 to be at 600ft.

The R44 was operating within class G airspace and the Matrice M30T was operating outside the FRZ up to 400ft in line with expected procedures.

There is a regular training location for UAS 500m radius up to 400ft. No NOTAM is required as this is below 400ft and not notified on any flying charts.

The investigation noted that [R44 C/S] was prenoted to Newcastle Radar at 0950. Details were given as [routeing, followed by] Durham then south again on a pipeline inspection.

At 0952:35 [R44 C/S] contacted Newcastle Radar. At this point they were showing as A012. They were given a Basic Service and instructed to remain outside CAS. They were to report their level on the QNH 1023hPa and reported this as A010 (radar showed at A011 before showing A010 shortly afterwards).

The [R44] routed to [waypoint] where the lowest level observed was A009, it was then observed to route south from [waypoint] where it climbed to A012 south of Durham. It then routed north of Durham and was observed at A009 before it routed [to waypoint]. That was the next time that two-way contact was made with [R44 C/S] when the ATCO asked for an update on the routeing and queried if they were intending on transiting through EG R432.

For the period of observation on [their radar screen] the helicopter remained outside controlled airspace and the lowest altitude seen was A008. There was no mention of an Airprox from the pilot at any time, and no involvement from ATC.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and the R44 was positively identified using Mode S data. The reported position of the drone was indicated on the radar picture to determine the lateral separation between the R44 and the Matrice M30T. The UKAB Secretariat requested the flight data download from the Matrice M30T operator, but this was not forthcoming. Therefore, the point of CPA was assessed to have been at approximately 1003 with 0.2NM lateral and 300ft vertical separation, based only on the reported position of the Matrice M30T (Figure 1).This could not be verified.

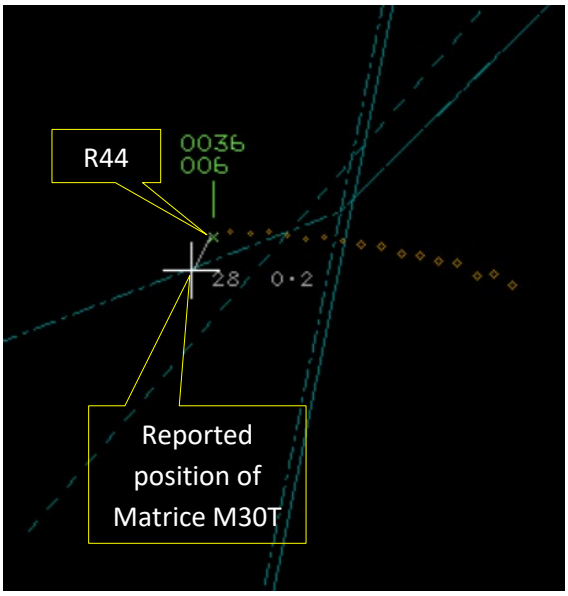

Figure 1 Time 1003:03

Figure 1 shows the relative positions of the Matrice M30T (reported) and the R44 (recorded) at 1003.03. The R44 was seen to have passed to the north of the reported position of the drone 4sec later at 1003:07 (Figure 2), after which it diverged away from the drone's area of operation.

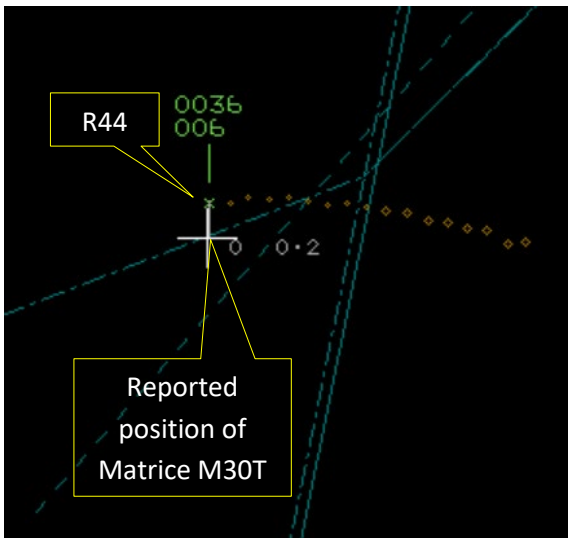

Figure 2 Time 1003:07 R44 passed to the north of the drone operation.

Figures 1 and 2 depict the R44 at FL006, which equated to 900ft AMSL on the day of the Airprox, and 700ft AGL at the point of CPA. The Matrice M30T was reported to have been operating at 400ft AGL.

The Matrice M30T 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.[2] During the flight, the remote pilot shall keep the unmanned aircraft in VLOS and maintain a thorough visual scan of the airspace surrounding the unmanned aircraft in order to avoid any risk of collision with any manned aircraft. The remote pilot shall discontinue the flight if the operation poses a risk to other aircraft, people, animals, environment or property.[3]

Summary

An Airprox was reported when a Matrice M30T and an R44 flew into proximity to the north of Kimblesworth at approximately 1003Z on Wednesday 26th March 2025. The Matrice M30T pilot was operating in the Open Category, under VLOS in VMC, and the R44 pilot was operating under VFR in VMC in receipt of a Basic Service from Newcastle Radar.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the Newcastle Approach controller and a report from the appropriate operating authority. 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 Matrice M30T pilot and noted that they had been undertaking a drone training exercise which had included operating their drone at the maximum permissible height of 400ft AGL (Open category) and that the pilot had not been required to notify their flight through the NOTAM system. The Board noted that the pilot had heard a helicopter approaching and members agreed that this had provided the pilot with generic situational awareness of the presence of the R44 and had further led them to be concerned initially by its lateral proximity, as it approached, and latterly by its perceived vertical proximity. Members felt it was a shame that it had not been possible to determine the actual distances between the Matrice M30T and R44. Members noted that the Matrice M30T pilot had followed the correct procedure by descending the Matrice M30T to have avoided any potential conflict.

The Board then turned their attention to the actions of the R44 pilot and noted that they had completed adequate preparation for their pipeline survey which had legitimately routed the R44 into EGR432 where the Matrice M30T had been operating. The Board noted that the R44 pilot had flown most of that sector at 900ft AMSL and had been at approximately 700ft AGL as it had passed the area of the drone operation. However, members noted that, because the drone operation had not needed to have been NOTAM'd, there had been no information pertaining to the drone operation available to the pilot of the R44. Furthermore members agreed that the TAS fitted to the R44 had not been able to detect the Matrice M30T and that, therefore, the R44 pilot had had no situational awareness of its presence. The Board agreed that, with a potential vertical separation of 300ft or greater at a lateral distance of approximately 0.2NM, it was unsurprising that the R44 pilot had been unsighted on the Matrice M30T.

The Board noted that the R44 pilot had been in receipt of a Basic Service from Newcastle Approach and members agreed that the Approach controller had not been required to have monitored the R44 under the terms of a Basic Service, but also that the controller had not known about the drone operation in any case.

In drawing their discussion to a close, the Board concluded that the R44 pilot had followed their standard procedures in their duties of surveying pipelines and that the Matrice M30T pilot had correctly descended their drone once they had become aware of the presence of the helicopter. Members agreed

[2] (UK) SERA.3205 Proximity.
[3] Assimilated Regulation (EU) 2019/947- UAS.OPEN.060 Responsibilities of the remote pilot (2)(b)

that normal safety standards and parameters had pertained and, as such, the Board assigned Risk Category E to this event.

CF1: The Newcastle Approach controller was not required to monitor the R44 under the terms of a Basic Service.

CF2: The Matrice M30T pilot had only generic situational awareness of the R44 on hearing it approaching, and the R44 pilot had no situational awareness of the presence of the Matrice M30T.

CF3: On becoming aware of the R44, the Matrice M30T pilot was concerned by its proximity.

CF4: The TAS fitted to the R44 was unable to detect the Matrice M30T.

CF5: The R44 pilot had not seen the Matrice M30T.

CF6: On visual acquisition of the R44, the Matrice M30T pilot was concerned by its altitude.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025039			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
2	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
3	Human Factors	• Unnecessary Action	~~Events involving flight crew performing an action that was not required~~	Pilot was concerned by the proximity of the other aircraft
	• Electronic Warning System Operation and Compliance			
4	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
	• See and Avoid			
5	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
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: E.

Safety Barrier Assessment[4]

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

Ground Elements:

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

Situational Awareness of the Confliction and Action were assessed as **not used** because the Newcastle Approach controller was not required to monitor the R44 under the terms of a Basic Service.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the R44 pilot had no situational awareness of the presence of the Matrice M30T.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TAS fitted to the R44 was unable to detect the Matrice M30T.