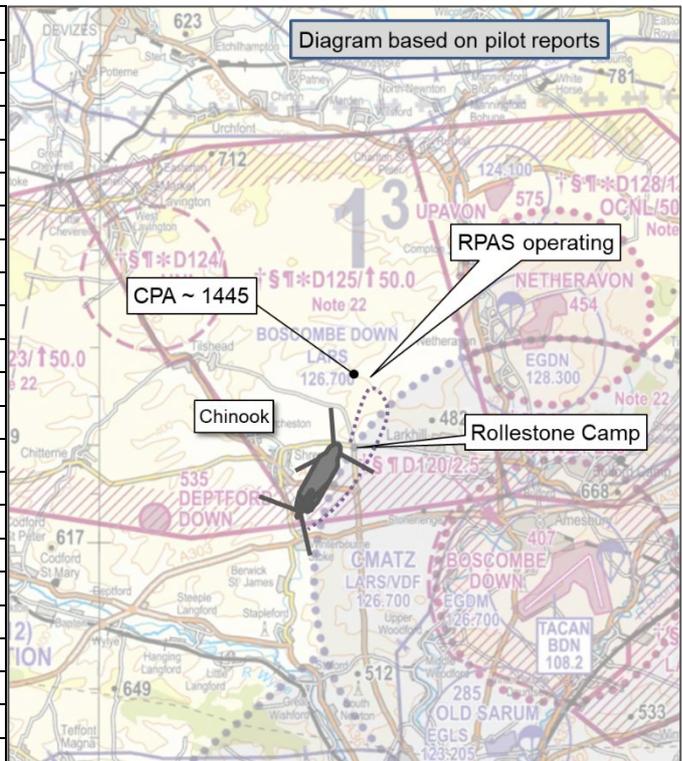


AIRPROX REPORT No 2021015

Date: 24 Mar 2021 Time: 1445Z Position: 5112N 00150W Location: D125 SPTA

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Instant Eye RPAS	Chinook
Operator	Mil UAS	HQ JHC
Airspace	SPTA	SPTA
Class	Danger Area	Danger Area
Rules	VFR	VFR
Service	None	Procedural
Provider		SPTA Ops
Altitude/FL		
Transponder	Not Fitted	A, C, S
Reported		
Colours	NR	Green
Lighting	NR	Nav, HISLs
Conditions	VMC	VMC
Visibility	NR	10km
Altitude/FL	100ft	100ft
Altimeter	agl	agl
Heading	090°	070°
Speed	NR	100kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	None
Separation		
Reported	120ft V/100m H	Not Seen
Recorded	NK	



THE RPAS REMOTE PILOT reports that during an Instant Eye Remote Pilot Course live flying activity, they were conducting a basic sortie with a trainee pilot at the northern edge of Horton’s Folly, in Area 13, Salisbury Plain Training Area (SPTA). Another RSA instructor was operating under the same flying practice with another trainee on the middle eastern edge of Horton’s Folly. They had been allocated Area 13 ‘Hot’ from surface to 400ft agl by SPTA Air Operations at approximately 1315hrs. They were operating under Visual Line Of Sight (VLOS) flight rules and conducting flights at VLOS limits. At approximately 1445hrs they both heard a Chinook leaving Rolleston Camp approximately 1500m west of their position, where they knew training sorties were being conducted. At the time, they had two Instant Eye 2 RPAS in the air. Upon the Chinook’s departure from Rolleston Camp it was noted that its flight path was leading directly into their allocated airspace at a height well below their 400ft ceiling. At this point they saw the other instructor’s RPAS land and they had to immediately instruct the trainee to reduce height from around 100ft agl. Within a short time, whilst their RPAS was still in flight at around 30ft agl the Chinook passed directly over the top of Horton’s Folly from West to East, no higher than 150ft agl. This flight path was directly over the other instructor’s position. They immediately reported the incident to SPTA Air Operations. It was stated, by Ops, that the Chinook pilot had been made aware that they were operating in the area. They were not informed prior to the Chinook entering their allocated airspace that it was about to do so. Following the incident, they conducted a ten-minute grounding period to ensure all other air users were clear of their allocated airspace as they could see the Chinook handrailing the eastern edge of SPTA Centre (D125), heading North.

The pilot assessed the risk of collision as ‘High’.

THE CHINOOK PILOT reports that they were the No2 Chinook in a formation tasked with moving passengers from Poole HLS to Rolleston Camp (SPTA). The task was originally to be completed as a pair, however due to an unserviceability on start, the task was completed as a singleton. Bookings for the formation were administered by 27 Sqn Ops. At the point of booking the use of SPTA, no information

regarding UAS activity ivo Rollestone Camp was passed to 27 Sqn Ops. The pilot checked the SPTA Range Allocation sheet in the 18 Sqn Ops room, which also had no UAS activity briefed to be operating ivo Rollestone Camp. The Air Liaison Officer for the exercising troops had briefed 27 Sqn to utilise a clockwise flow around Rollestone Camp to deconflict air movements and a frequency on which to deconflict from any other traffic operating in the area (in addition to the SPTA Ops frequency). They made use of this frequency and were informed that there was no other known traffic in the area to affect. Following a period of transiting through poor weather and showers immediately south of SPTA, they made comms with SPTA Ops and called for entry to the Plain. They were informed by SPTA Ops that there was UAS activity in D123/D125 and that they should have been pre-briefed of the UAS activity prior to lift. Rollestone Camp is located within D125; as such they assumed that the surrounding area must be clear as they were cleared to the landing site. They were unaware of the proximity of the UAS activity in Area 13, immediately NE of Rollestone Camp. For an expeditious exit of the operating area; the pilot intended to route briefly to the NE of the camp until clear then directly east (through Area 13) on to the standard transit routes at Crossing C for a departure to the north at Rushal, instead of routing south about Durrington. They requested this routing via SPTA Ops in the north-easterly bound transition from the landing site which was denied. They had asked for this clearance after lift as they did not think they would reach SPTA Ops on the ground. The transmission asking them to route south also contained a warning that "*We will probably be DASOR'd against*", which was their first indication that this potential near miss had occurred. They immediately turned south upon hearing of the exact location of the UAS activity in Area 13. From reading the Airprox report, this south-bound turn appears to have taken them within close proximity of the UAS operator.

They discussed as a crew immediately following departure from SPTA, during the crew debrief and subsequently since the event and none of the crew can remember being passed any specifics about the UAS activity. However, if this information was passed during a 'high workload' period of flight following poor weather and whilst configuring the aircraft for approach to the landing site whilst working and switching between Middle Wallop Approach, Low Level Common, SPTA Ops and Rollestone Safety frequencies, it is possible that it was missed. Had they known in advance of the activity in Area 13 they would not have considered this course of action for departure and would have headed south to exit the area. None of the crew saw UAS or operators at any point.

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

THE SPTA OPS OFFICER reports that at approximately 1430(Local) the Chinook, (who was participating in priority 1 exercise on SPTA) lifted from Rollestone Camp initially in a northerly direction before turning right to take up a southerly heading to pick up the helicopter low level route from Airman's Cross to route to Keevil. The aircraft took off from Rollestone Camp and at approximately 200ft agl and half way through the turn on to a southerly heading, routed over into Area 13 which was active with MUAS activity.

When RSA, or any MUAS unit, checks in to start or confirm activity, they get adjacent activity information brief and any restriction which may apply for that day. Hence they were informed that Rollestone camp was being used as a forward operating base for a priority 1 exercise and so may encounter aircraft departing or arriving throughout. When rotary aircraft book in to operate on SPTA the pre-requisite for acquiring a booking number is that they are briefed on adjacent activities and any restrictions which may apply for the period.

The Chinook pilot called to lift from Rollestone Camp to route as indicated above, and on lifting was reminded of the MUAS activity in Area 13 and told to next call clearing going on route to the north. Shortly after the Chinook got airborne, RSA called on airwave radio quite infuriated that a Chinook had just flown over two of their flying positions. On confirmation that they were still operating VLOS rules it appeared to be a very late acquisition of the MUAS observer, if at all, that may be the issue. Both operating units were aware of adjacent activities and should have been flying accordingly.

The controller perceived the severity of the incident as 'Medium'.

THE SPTA SENIOR OPS OFFICER reports that when the RPAS operators are operating under VLOS rules, they do not have exclusive use of the operating area in order to allow other operators to continue to use the SPTA, exclusive use is only reserved for those operating under BVLOS. In this case, both operators were informed about each other. The RPAS operators were informed about Rolleston Camp being active, and it was incumbent on them to avoid the manned aircraft. That said, having been given information about UAV activity, it would have been expected that the Chinook pilot would remain clear.

Factual Background

The weather at Boscombe Down was recorded as follows:

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METAR EGDM 241420Z 24009KT 9999 FEW012 BKN016 10/07 Q1020 BECMG FEW016 BKN025 RMK
WHT BECMG BLU=
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Analysis and Investigation

UKAB Secretariat

The Instant Eye RPAS and Chinook 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

Occurrence Investigation

Unit Investigation

A Odiham Unit Investigation found that SPTA Airspace Allocation emails are disseminated by SPTA Ops daily covering the day period and then the out of hours period via a separate email. The Chinook sqn received the out of hours notification but due to an email address error did not receive the daily email. This has now been rectified. A robust system is now in place on all sqns to alert crews to late notice changes that are notified. Pertinent information is also passed to crews on check in with Salisbury Ops.

Comments

JHC

Flights within the Training area are well briefed and managed by SPTA Ops. In this instance a late notification of drone activity wasn't received by the aircrew due to an incorrect email address. The RPAS were safely grounded iaw two-man drone operations until the aircraft was clear. This Airprox is another timely reminder to all operators of both manned and unmanned platforms of good communication and airmanship within congested training areas.

Summary

An Airprox was reported when an Instant Eye RPAS and a Chinook flew into proximity in D125, SPTA at approximately 1445Z on Wednesday 24th March 2021. Both pilots were operating under VFR in VMC, the Instant Eye remote pilot was not in receipt of an ATS and the Chinook pilot was in receipt of a Procedural Service from SPTA Ops.

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 MAA RA 2307 paragraphs 1 and 2.

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 RPAS operator. They were operating in Area 13 on SPTA with another RPAS operator and believed they had sole use of the area. Whilst they did have use of Area 13, it was clear from the reports from the SPTA Ops personnel that use of the area did not mean that aircraft would not overfly, and in fact by being told about the Chinook activity at Rolleston Camp, the expectation was that the RPAS operators knew of the likelihood of aircraft in the vicinity (CF5). Nevertheless, although they were given this generic information, they did not expect the Chinook to come so close to their operating area (CF6). However, once they realised that the Chinook was likely to overfly their position, they took action to descend the RPAS to remove the risk of collision.

Turning to the Chinook pilot, their squadron ops had not received the email detailing the activity on SPTA (CF3), which meant that they were not aware of the drones when briefing for the sortie. The pilot noted that the circumstances around their approach to Rolleston Camp, with the multiple frequencies and poor weather conditions, were such that, if they were told about the drone activity they did not assimilate the information and therefore the pilot did not expect to encounter the activity on departure (CF6, CF7). Concerned that they would not be able to raise SPTA Ops on frequency whilst on the ground, the pilot lifted before requesting the clearance to route northbound over the area that the drones were operating in. By the time they were told that they could not route as requested, their routing had already taken them overhead the drones (CF4). The TAS on the Chinook was not able to detect the RPAS (CF8) and the pilot did not see the drone that was still airborne (CF9), although the action taken by the RPAS operator meant that it was probably very low level by the time the Chinook passed overhead.

The Board thought that a key aspect of the incident was that the procedure to provide the Chinook squadron with the appropriate briefing sheet did not function as expected due to the incorrect email (CF1), and the Board were heartened to hear that this had now been addressed. The SPTA Ops controller believed that the Chinook pilot was already aware of the drone activity and expected that the Chinook would depart appropriately. By the time the Chinook pilot contacted them for departure clearance through the range, they were already airborne, leaving the Ops controller with little opportunity to prevent the transit through Area 13 (CF2).

When determining the risk of the Airprox, the Board discussed the reports from both the RPAS operator and the Chinook pilot. Although the RPAS operator had assessed the risk of collision as 'high', the Board noted that they had already descended the drone out of the way of the Chinook as soon as they had heard it approaching and it was at around 30ft by the time the Chinook flew overhead. Therefore, they agreed that this timely avoiding action had ensured that there had been no risk of collision. However, they thought that the breakdown in communication with the lack of briefing sheet and then the Chinook lifting without the knowledge that Area 13 had RPAS activity meant that safety had been degraded; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021015			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Ground Elements			
x	• Regulations, Processes, Procedures and Compliance			
1	Human Factors	• ATM Regulatory Deviation	An event involving a deviation from an Air Traffic Management Regulation.	Regulations and/or procedures not fully complied with
x	• Situational Awareness and Action			
2	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late or no Situational Awareness

Flight Elements				
x	• Tactical Planning and Execution			
3	Organisational	• Flight Planning Information Sources	An event involving incorrect flight planning sources during the preparation for a flight.	
4	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
5	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
x	• Situational Awareness of the Conflicting Aircraft and Action			
6	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
7	Human Factors	• Understanding/Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information
x	• Electronic Warning System Operation and Compliance			
8	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
x	• See and Avoid			
9	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

Degree of Risk: C.

Safety Barrier Assessment²

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

Ground Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the Chinook squadron did not receive the SPTA daily activity briefing sheet.

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because the Chinook crew were not aware of the activity of Area 13 before they lifted from Rolleston Camp and the drone operators were not aware that they did not have exclusive use of the area.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the Chinook pilot did not have any situational awareness about the drone activity and the drone operators only had generic situational awareness that helicopters were operating out of Rolleston Camp.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TAS in the Chinook could not detect the drone.

² 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: 2021015		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 Conflication & 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	✓	✓					
Key:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	✓	⚠	✗	○				
Application	✓	⚠	✗	○				
Effectiveness								