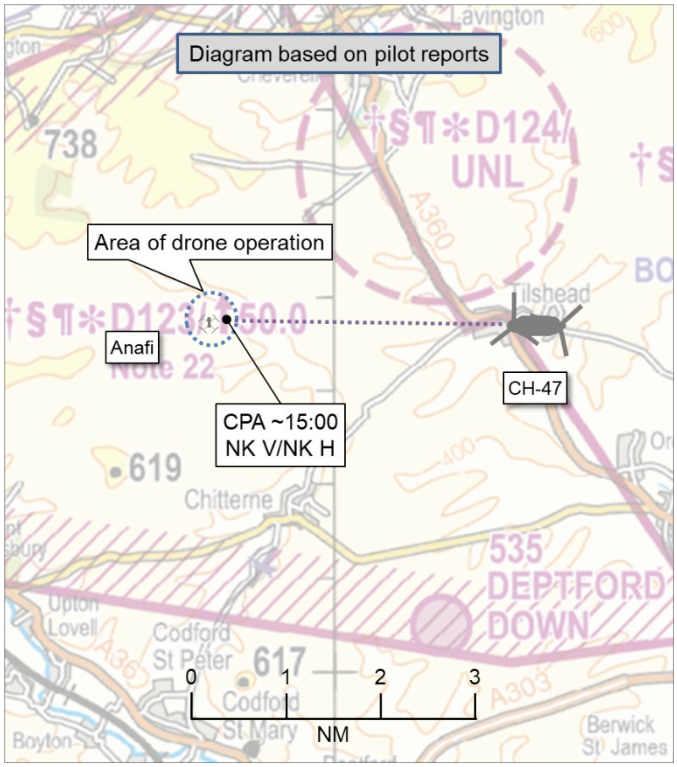
AIRPROX REPORT No 2024128

Date: 18 Jun 2024 Time: ~1500Z Position: 5114N 00202W Location: 2NM NNW of Chitterne

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Chinook	Anafi
Operator	HQ JAC	Mil UAS
Airspace	EGD123	EGD123
Class	Danger Area	Danger Area
Rules	VFR	VLOS
Service	Unknown	None
Provider	Salisbury Ops	N/A
Altitude/FL	NK	NK
Transponder	A, C, S	None
Reported		
Colours	Green	NR
Lighting	'bright day external'	NR
Conditions	VMC	NK
Visibility	>10km	NR
Altitude/FL	80ft	<150ft
Altimeter	NK	NK
Heading	270°	NR
Speed	100kt	NR
ACAS/TAS	Fitted	NR
Alert	None	N/A
Separation at CPA		
Reported	<80ft V/0ft H	'Low'
Recorded	NK V/NK H	



THE CHINOOK PILOT reports that, whilst conducting movements [for an operational exercise], they were routeing at low-level [to destination] for a passenger drop-off. Approaching Fore Down, the right-hand side handling pilot briefly observed a small quadcopter in the 12 o'clock low position before it passed under the nose of the aircraft. No impact was heard and the controls remained normal. The handling pilot made the crew aware of the sighting and continued routeing to the landing site while the non-handling pilot spoke with Salisbury Ops to confirm whether they were aware of drones operating in the area; they were not. The sighting was reported to Salisbury Ops, and they made an approach and landed at the landing site. An exterior inspection of the aircraft was made with no issues found. The decision was made to not fly over the area again, and curtail any further approaches to [that destination]. The departure from the landing site was flown away from the Airprox location and the sortie was continued with no further issues. They suspected that this was a military drone, operated by ground troops they observed in the vicinity. Salisbury Ops had previously made them aware of drones operating in that area, but had subsequently informed them that they had been grounded, and no further drone activity was reported.

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

THE ANAFI OPERATOR'S GROUND UNIT reports that as part of [an operational exercise] one of their Company group staff members was conducting a simulated opposed obstacle crossing nearby. At approximately 1600 [local time], the exercising troops conducting this tactical action launched a visual line-of-sight (VLOS) S-UAS to gain better understanding of 'opposing forces' locations. The airspace was booked, but they were instructed by Salisbury Plain Training Area (SPTA) Air Ops that they were not to conduct flying outside 0800-1045 due to airspace deconfliction, and this was communicated to the Company Battalion Headquarters (Bn HQ). Both the Company Bn HQ and the exercising troops were aware of manned aviation in the vicinity of exercising troops, and the Chinook could be heard from the Company's location. The S-UAS was noticed by the Electronic Combat Officer (ECO) at an

estimated altitude of 150ft and they instructed the nearest Platoon Commander to inform the operator over the radio that the S-UAS must be grounded. However, before this happened, there was a low-flying Chinook in the vicinity of the flying S-UAS. The operator subsequently grounded the S-UAS on realising there was manned aviation in the immediate vicinity.

It appears this incident happened because there was a breakdown in communications between both Exercise Controller – the Bn HQ staff officer who controls the employment of S-UAS – and the drone operators. The operators did not understand that S-UAS flight was not permitted at that time of day, and also failed to request permission to fly from Bn HQ. As well as reminding Commanders to brief operators of the no-fly windows, their Standard Operating Procedures (SOPs) for employment of S-UAS have been adjusted. Drone operators must request permission from Bn HQ to fly a drone. When this happens, Bn HQ will request permission from SPTA Air Ops and await approval before issuing approval to the operator, who will only then be able to fly their S-UAS. This incident would also likely have been avoided if the Company Group was operating with a Joint Terminal Attack Controller (JTAC), or Tactical Air Control Party (TACP) at Bn HQ level.

Their SOP for operating in the vicinity of crewed assets is nascent as they build their experience. The SPTA SOPs require all S-UAS to be grounded for crewed asset priority, so a system to allow safe training in proximity with crewed assets would enable a closer working relationship and building experience. S-UAS would typically be deployed at very short notice for a short flight in a tactical scenario such as an 'advance to contact' so the time taken to request each short S-UAS flight is often too long to add tactical value.

THE SALISBURY OPS CONTROLLER reports that [the Chinook] was operating in D123 working [on an operational exercise]. [The Chinook] was routeing towards [their destination] when they sighted a drone below them. [The Chinook] pilot contacted them on frequency to report the drone flying below them and check if they were aware of any drones in the area. At the current time they were not aware of drones flying. Drone users are to call SPTA Air Ops to request to fly drones and again when they recover.

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

THE SALISBURY OPS SUPERVISOR reports that the [Chinook] had arrived on station approximately 60 minutes before their scheduled booking. SPTA Air Ops immediately requested over airwave ground radio to [operator] flying BVLOS UAS in support of [the operational exercise] to land their UAS and also requested how long would it take them to land. [The operator] reported about 5 minutes was required. This was more than enough time as [the Chinook] was not in the SPTA. The Company drone operator reported approximately 5 minutes later their UAS had been landed.

[The Chinook pilot] was permitted to proceed by SPTA Air Ops as per their booking in support of [an operational exercise] and were advised that there was no traffic to affect them and no UAS in the allocated airspace. Approximately 30 minutes later [the Chinook pilot] asked SPTA Air Ops if they were aware of any UAS flying in the area as a UAS was observed close to the nose of the aircraft. SPTA Air Ops was not aware of any UAS still flying as the only UAS that had been requested and booked to fly in the area was that of [another unit] and they had confirmed their UAS had landed before [the Chinook] entered the SPTA ADA.

SPTA Air Ops immediately tasked, through Range Control, [an individual] to visit the [operational] location, as at the time of the UAS sighting by [the Chinook crew] it would have been in [the operational unit's] exercise area.

Factual Background

The weather at Boscombe Down was recorded as follows:

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METAR EGDM 181450Z 36009KT 9999 SCT044 19/10 Q1014 NOSIG RMK BLU
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Analysis and Investigation

Battalion HQ Staff

The RPAS operator grounded the Anafi immediately on seeing the Chinook. The incident was reported [to them] by the ECO. An Airprox DASOR was submitted by the Chinook aircrew, and [the operational unit] contributed by investigating the incident and providing a written response. [Bn HQ] spoke to the ECO, Company Commander and RPAS Detachment Command involved to understand the incident. It appears there was a failing in passage of information to RPAS operators at unit level. The details of the no-fly windows were passed over the Tactical Radio Net on Battlegroup Command frequency to BG TAC HQ and Company Signallers. Although the message was acknowledged, it appears that this message was not passed to the operators so they were not aware of the no-fly restrictions.

Additionally, the Company involved did not request approval to fly from [Bn HQ] via the Battlegroup Command Net. If they had done, they would have been informed of the no-fly restrictions. [Bn HQ] was of the understanding at the time of the incident that no Company was flying RPAS. The RPAS operator was conducting a tactical level situational awareness flight near an obstacle crossing point. SOPs for flight authorisation will be codified to include verbal approval from BG HQ before tactical flights.

Actions:

1. Default condition for RPAS operations will be 'no-fly' unless requested and positively authorised.

2. RPAS-Operator at Company level are to request via BG Comd Net authority to launch.

3. Company Signaller to inform BG HQ via command net when RPAS launched and recovered.

4. If EMCON (Emission Control) prevents voice or data transmissions, default condition will be 'no-fly'.

SPTA Senior Air Ops Training Safety Officer

Statements were taken from members of SPTA Air Ops staff who were on duty on the SPTA Air Ops desk at the time of the event and the [operational unit] Air Cell emailed a narrative of the event from their perspective.

A sequence of events was formulated from the statements, SPTA Air Ops was not aware of the VLOS UAS sighted by [the Chinook crew] in the same airspace. The ground unit on the exercise had been briefed by SPTA Air Ops on the procedure for requesting and flying UAS on SPTA, as per SPTA RSO Pt4. There was a breakdown in communication at the exercising unit between the UAS operators, the forward Sub Units, the Unit HQ and Exercise Control which resulted in the UAS flying when it had not been requested and allocated.

[There was a] loss of safe separation between the UAS and a rotary wing aircraft. The crew of the [Chinook] sighted a UAS, and was able to continue on task by avoiding the area of the last confirmed sighting of the UAS.

An S-UAS was launched during a no-fly window, without notification to the relevant coordinating authorities.

[As a result] the Exercising Unit was re-briefed on the correct procedure in requesting to fly UAS on SPTA airspace as per SPTA RSO Pt 4 Management of SPTA Airspace and actions on sighting of other low-flying aircraft in the vicinity of UAS. The Exercising Unit was advised to re-brief UAS operators and Sub Units on the correct procedure in requesting to fly UAS on SPTA airspace and

actions on sighting of other low-flying aircraft in the vicinity of UAS. [Furthermore], procedures and potential risks have been re-iterated to the UAS operators at all levels. Bn HQ and Company SOPs have been revisited to mitigate any possible reoccurrence and these are being disseminated to the wider military UAS community to increase awareness.

Information on no-fly windows was not received by the UAS operators, so they were unaware of restrictions. Additionally, the Company involved did not request approval to fly from Bn HQ via the Battlegroup Command Net.

Bn HQ has reviewed their procedures and comms flow. Messaging the importance of No-Fly restrictions to Company Commanders and Signallers to ensure that radio messages make it to the RPAS operators. Reiteration that the default condition of 'no-fly until authorised' is the only condition to ensure safe operation when other manned aircraft are in the area of operation. A 'one pager' as annex to [the operational unit] RPAS Flight Operations SOP to be carried by RPAS operators outlining set operating procedures and requests to fly.

[There had been] a failure at UAS Operator and Sub Unit level to follow process with regard to requesting to fly UAS as per SPTA RSO Pt 4 Management of SPTA Air Space. The [Chinook] was able to continue on task, avoiding the last known location of the UAS. There was no collision/damage to either party, but this near-miss is a timely reminder of the risks of increasingly congested airspace.

UKAB Secretariat

The NATS radar replay was viewed for a period of approximately one hour either side of the reported Airprox time and the Chinook was only identified when at 900ft on another sortie to the north of the area about an hour afterwards. Neither the drone nor the Chinook could be identified at the time of the Airprox.

The Chinook pilot and Anafi operator shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[1] RPAS operating in the Open A3 sub-category shall be operated in a manner that minimizes risks and hazards to other airspace users or any other person, vessel, vehicle or structure near where the RPAS is being flown.[2]

Comments

Joint Aviation Command HQ

From an ATC perspective, it would seem that Salisbury Ops did everything that they could have been expected to do with regards to promulgating No-Fly windows and also facilitating the grounding of BVLOS UAS activity prior to the [Chinook] entering the SPTA ADA.

The circumstances leading up to the Airprox appear to arise from a breakdown in communication and procedures meaning that the S-UAS operator was unaware of the No-Fly window, nor did they correctly request permission to fly, as per procedures. It is likely that if either of these things had happened, the S-UAS wouldn’t have launched and there would not have been an Airprox.

The Airprox report does highlight an issue with the time delays caused by seeking permissions, through the Bn HQ and then Salisbury Ops, that renders any tactical advantage of such action to be lost. This is something that is currently being working on (Crewed Vs Uncrewed operations).

[1] MAA RA 2307 paragraphs 1 and 2.
[2] MAA RA 1603(4).

Summary

An Airprox was reported when a Chinook and an Anafi drone flew into proximity at Fore Down, 2NM north-northwest of Chitterne at around 1500Z on Tuesday 18th June 2024. The Chinook pilot was operating under VFR in VMC and in receipt of a FIS from Salisbury Ops. The Anafi drone operator was operating under VLOS, without an ATS but under the control of an operational unit in contact with Salisbury Ops.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the Chinook and the drone operator's unit, a report from the SPTA Air Ops controller 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.

The Board first looked at the actions of the ground elements involved and heard from an Advisor familiar with the Salisbury Plain Air Ops structure. The Board learned that plans had been put in place for more formalised Air Ops procedures, including additional training of the Air Ops staff to FISO standard. Members noted that the standards of the service there were consistently improving but agreed that, in this case, there had been little that the Salisbury Air Ops controller could have done to deconflict the RPAS and Chinook activity. The Board agreed that the published and briefed processes and procedures had not been complied with on this occasion because the drone chain of command had not ensured that the drone operator knew of the 'No Fly' restriction (**CF1**) and that Salisbury Ops had been unaware of the drone operation at the same time as the Chinook had been present in the area (**CF2**).

Turning their attention to the Anafi operator, the Board had shown some concern that the unit involved had found the procedures prohibitive to their particular tactical operations and wondered how this might be addressed. Members were heartened to learn that a working group had been formed to discuss the integration of RPAS with other air users, and that this work was ongoing. However, there were procedures in place and the Board agreed that the Anafi operator's unit had not followed those procedures when the drone had been launched without permission from SPTA Air Ops (**CF3**), and that the Anafi operator had not ensured that SPTA Air Ops had been made aware of their intentions to launch the RPAS (**CF4**). Members agreed that the Anafi operator's preparation for the flight had been ineffective as they had not been aware that their flight should not have gone ahead due to a 'No-Fly' restriction (**CF5**). Members further agreed that, on first hearing the Chinook, the Anafi operator had had late situational awareness of its presence (**CF6**) and had reacted accordingly, but that this had therefore led to a late sighting of the helicopter (**CF8**).

The Board then looked at the actions of the Chinook crew and noted that the EC equipment on board had not been able to detect the Anafi (**CF7**), and that the combination of that and the lack of information from Salisbury Ops had led to the pilot having had no situational awareness of the Anafi being operated in the vicinity of their planned landing area (**CF6**). Members agreed that, although one crew member had seen the drone pass underneath them, the pilot had not had any time to react to the presence of the RPAS and that this had effectively constituted a non-sighting of the Anafi drone (**CF9**).

When considering the risk involved in this event, members agreed that the Anafi operator's late situational awareness on hearing the Chinook had alerted them to return the drone back to them and out of the Chinook's way. The Board agreed that this action had reduced the risk of collision, but not removed it entirely, and that safety had been reduced much below the norm (**CF10**). Consequently, the Board assigned a Risk Category B to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024128			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			

	• 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
	• Situational Awareness and Action			
2	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
3	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with
	• Tactical Planning and Execution			
4	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
5	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
	• 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, inaccurate or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance			
7	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			
8	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
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
	• Outcome Events			
10	Contextual	• Near Airborne Collision with RPAS	An event involving a near collision with a remotely piloted air vehicle	

Degree of Risk: B.

Safety Barrier Assessment[3]

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 **partially effective** because the drone chain of command had not ensured that the Anafi operator had been aware of the 'no fly' restriction at the time of the Airprox.

Situational Awareness of the Confliction and Action were assessed as **ineffective** because SPTA had been unaware of the drone operations.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the drone operation launched without permission from SPTA Air Ops.

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

Tactical Planning and Execution was assessed as **ineffective** because the Anafi operator did not ensure that SPTA Air Ops was aware of their intentions, and they had been unaware that the flight could not go-ahead.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the Chinook pilot had had no situational awareness of the drone operations and the Anafi operator had only had late situational awareness of the Chinook on hearing it approaching.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the Chinook' TAS equipment had been unable to detect the Anafi drone.

See and Avoid were assessed as **ineffective** because Anafi operator had not seen the Chinook until late, and the Chinook pilot had had an effective non-sighting of the Anafi.