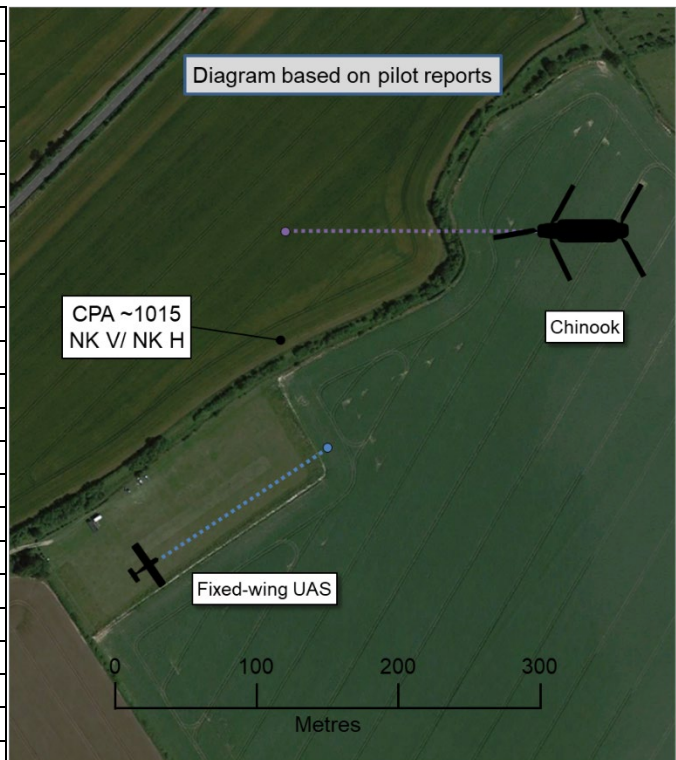


AIRPROX REPORT No 2023150

Date: 22 Jun 2023 Time: ~1015Z Position: 5056N 00201W Location: 6NM SE Compton Abbas

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Model aircraft	Chinook
Operator	Civ UAS	HQ JHC
Airspace	London FIR	London FIR
Class	G	G
Rules	VLOS	VFR
Service	None	Listening Out
Provider	N/A	Low Level Common
Altitude/FL	NK	NK
Transponder	None	NK
Reported		
Colours	NR	Green
Lighting	NR	None
Conditions	VMC	VMC
Visibility	NR	>10km
Altitude/FL	150-250ft	100ft
Altimeter	NR	NR
Heading	NR	NR
Speed	NR	120kt
ACAS/TAS	Not fitted	Other
Alert	N/A	None
Separation at CPA		
Reported	NR V/NR H	"200-300m"
Recorded	NK V/NK H	



THE MODEL AIRCRAFT PILOT reports that they were flying in the normal area of their club site when they heard a Chinook approaching. They recognised the rotor sound but, initially, couldn't tell from which direction it was coming. Then, it suddenly appeared to their left, flying east-to-west as it came up over the farmer's field, close to the NE corner of their flying field. It was lower than their model.

[The pilot of the Chinook] made no alteration of course and just continued behind them and was gone. They couldn't get any details of the Chinook as they were concentrating on their model. It was a very close encounter. They were flying at about 150-250ft at the time of the incident. It was the third flight of the day with that model. The weather was very good. Very light wind and slight cloud. Their model has a wingspan of approximately 1.2m.

THE CHINOOK PILOT reports that, whilst in a low-level transit westbound, the HP called a possible conflict in the 11 o' clock 2-300m away. As they began to manoeuvre away, it became apparent that the object was a reasonably large model aircraft and was passing well clear on the left-hand side of the helicopter. The area that the model aircraft had been operating from appeared to have been an established site but no NOTAM had been present on their [planning systems].

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

Factual Background

The entry for Blandford Model Aircraft Flying in the UK AIP provides the following information:

CASHMOOR, BLANDFORD MODEL AIRCRAFT FLYING, DORSET
 505532N 0020117W
 Upper limit: 1500 FT AGL
 Lower limit: SFC

Phone: 07909-022800.
Site elevation: 340 FT AMSL.
Hours: HJ

The weather at Bournemouth was recorded as follows:

METAR EGHH 221020Z VRB03KT 9999 FEW022 SCT030 23/15 Q1019

Analysis and Investigation

UKAB Secretariat

A NOTAM, for the flying of model aircraft at the location in question, had expired the evening before the Airprox occurred:

H1349/23 NOTAMN
Q) EGTT/QWULW/IV/BO /W /000/019/5056N00201W002
A) EGTT B) 2303310700 C) 2306212000
D) 0700-2000
E) FLYING OF MODEL ACFT WI 0.6NM RADIUS 505532N 0020117W (CASHMOOR, DORSET). FOR INFO CTC 07909 022800. 2023-03-0365/AS4.
F) SFC G) 1850FT AMSL

An analysis of the NATS radar replay was undertaken. Neither aircraft was observed on radar at the time of CPA. The diagram was constructed by an integration of the pilot's narrative reports. The separation at CPA could not be determined.

The model aircraft 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 The remote pilot of a model aircraft must maintain VLOS as per the definition given in UK Regulation (EU) No. 2019/947, Article 2(7).²

Comments

JHC

The HP spotted this confliction in good time, but due to the varying sizes of UAS it can often be confusing as to their distance. However, as the Chinook transited closer, it was clear that the conflictor was not a factor and would pass safely down the LH side. The issue of Model Flying Clubs not appearing on Military Low Flying mapping is being addressed by No.1 AIDU and 78 Sqn. The ambition is to ensure that any Model Flying Club which operates above 400ft will appear on the 1:250,000 and 1:500,000 [military VFR] charts going forward. This issue has similarities with Airprox 2023116 and will be used as further evidence to address the underlying problem with the Low Level charting.

Summary

An Airprox was reported when a model aircraft and a Chinook flew into proximity 6NM southeast of Compton Abbas at approximately 1015Z on Thursday 22nd June 2023. The model aircraft pilot had been operating under VLOS in VMC, not in receipt of an ATS. The Chinook pilot had been operating under VFR in VMC, listening-out on the Low Level Common frequency.

¹ (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

² BMFA Article 16 Authorisation section 3.8.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and 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 pilot of the model aircraft. It was noted that the model aircraft had been flown at the site of an established club affiliated to the BMFA. It was further noted that, although a recent NOTAM that had highlighted the model-flying activities at the site had recently expired, the Cashmoor site had been listed in the UK AIP.

Members agreed that, upon hearing the distinctive sound of a Chinook, the pilot of the model aircraft had garnered some situational awareness of nearby traffic, albeit somewhat generic in nature. Nevertheless, it was appreciated that it had been startling to have subsequently visually acquired the Chinook at close proximity. Notwithstanding, members commended the pilot of the model aircraft to have maintained control of their aircraft and to have remained clear of conflict.

Members next turned their attention to the actions of the pilot of the Chinook. A member with particular knowledge of military flight planning explained that military pilots conduct their flight planning for operations below 2000ft AGL by reference to military aeronautical charts and in accordance with the UK Military Low Flying Handbook, and not by reference to the UK AIP. As the Cashmoor site was not present in either of those military documents, it was agreed that the pilot of the Chinook had not been aware that their flight had taken them in close proximity to the model aircraft operating at the Cashmoor site. Recalling the circumstances of Airprox 2023116, with which this case shared many similarities, members were keen to re-iterate their previously made recommendations with regard to the flight planning sources used by military pilots.

Members noted that the EC equipment fitted to the Chinook would not have been expected to have detected the presence of the model aircraft. It was further noted that, when the pilot of the Chinook had visually acquired the model aircraft, they had judged that no avoiding action had been necessary.

Summarising their discussion, members agreed that the pilot of the Chinook had not had situational awareness of the presence of the model aircraft, nor indeed of the model aircraft operating site. Members were satisfied that the recommendations that they had made previously (regarding the pre-flight planning sources used by military pilots) were already under careful consideration and that no further recommendations pertaining to the circumstances of this particular incident had been necessary.

Members were in agreement that both pilots had visually acquired the other in sufficient time to have considered the safest course of action. It was concluded that no risk of collision had existed and, as such, assigned Risk Category E to this event. Members agreed on the following contributory factors:

- CF1.** The pre-flight planning material used by the pilot of the Chinook had not included an entry for the model flying site at Cashmoor.
- CF2.** The pilot of the model aircraft had had generic situational awareness of the presence of the Chinook. The pilot of the Chinook had not had situational awareness of the presence of the model aircraft until it had been visually acquired.
- CF3.** The EC equipment fitted to the Chinook would not have been expected to have detected the presence of the model aircraft.
- CF4.** The pilot of the model aircraft had been concerned by the proximity of the Chinook.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**Contributory Factors:**

2023150				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Tactical Planning and Execution				
1	Organisational	• Flight Planning Information Sources	An event involving incorrect flight planning sources during the preparation for a flight.	
• 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
• Electronic Warning System Operation and Compliance				
3	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				
4	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 Assessment³

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

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the pilot of the Chinook had not been aware of the entry in the UK AIP for model aircraft operating at the Cashmoor site.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the Chinook had not had situational awareness of the presence of the model aircraft until it had been visually acquired.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC equipment fitted to the Chinook would not have been expected to have detected the presence of the model aircraft.

³ 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: 2023150		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 Confliction & 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:		Full	Partial	None	Not Present/Not Assessable	Not Used	
Provision	✓	!	✗	○			
Application	✓	!	✗	○	○		
Effectiveness							