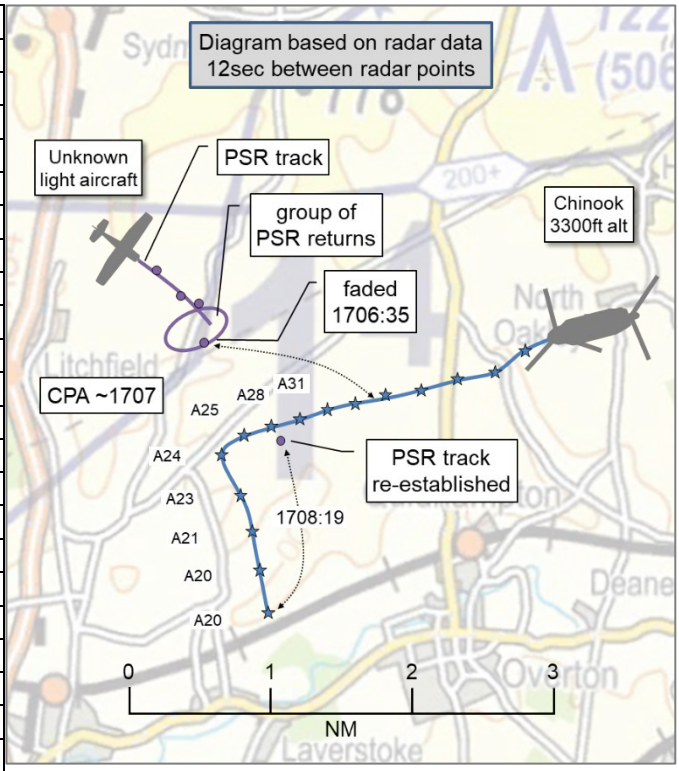
AIRPROX REPORT No 2022221

Date: 21 Sep 2022 Time: 1707Z Position: 5116N 00118W Location: 5NM NNW Popham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Chinook	Unk Light-aircraft
Operator	HQ JHC	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	NK
Service	Basic	NK
Provider	Odiham	NK
Altitude/FL	~2500ft	NK
Transponder	A, C	PSR only
Reported		Not reported
Colours	Green	
Lighting	Nav, HISL, search	
Conditions	VMC	
Visibility	NR	
Altitude/FL	3000ft	
Altimeter	QNH (NK hPa)	
Heading	NK	
Speed	90kt	
ACAS/TAS	TAS	
Alert	None	
Separation at CPA		
Reported	0ft V/0.5NM H	NK
Recorded	NK	



THE CHINOOK PILOT reports that, whilst conducting an air test, the Handling Pilot (HP) observed and warned the crew of a civilian light-aircraft travelling in the opposite direction at a range of about 2NM, at a similar altitude, and which was not displayed on the TAS. There was no confliction but, as the call was made, the other aircraft was seen to turn on to a converging track. As the light-aircraft closed to within 1NM, the HP descended and turned away as the No 2 crewman continued to report that it had followed the avoiding turn and appeared to be purposefully holding a converging course. The Chinook was accelerated, which created separation. After around 30sec, the following aircraft turned away towards Popham aerodrome. The air test was completed without further incident.

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

THE LIGHT-AIRCRAFT PILOT could not be traced.

THE ODIHAM APPROACH CONTROLLER reports working the Chinook, which had departed VFR West from Odiham. Popham appeared to have at least one track that was operating in its circuit so Traffic Information was provided to aid situational awareness because the Chinook was tracking in that direction. Nothing significant appeared to happen during the sortie as nothing was notified on frequency.

THE ODIHAM SUPERVISOR reports that they witnessed the occurrence and were aware that the controller had called traffic. They were not aware that an Airprox had been filed until the DASOR was raised.

Factual Background

The weather at Odiham was recorded as follows:

```
METAR EGVO 211720Z 18005KT CAVOK 17/09 Q1024 NOSIG RMK BLU BLU=
```

METAR EGVO 211650Z 20007KT CAVOK 18/09 Q1024 NOSIG RMK BLU BLU=

Analysis and Investigation

Military ATM

The Odiham Approach controller was providing a Basic Service to the Chinook, departing from RAF Odiham, VFR to the west. Popham appeared to have at least one aircraft operating in the visual circuit. Traffic Information on this aircraft was provided to the Chinook pilot for situational awareness. Additional Traffic Information was provided as the Chinook transited northwest.

The Odiham Supervisor witnessed the occurrence and was aware of the Traffic Information passed to the Chinook pilot.

Figures 1-2 show the positions of the Chinook and unknown aircraft at relevant times during the Airprox. The screenshots are taken from a replay using the NATS radars which are not available to the Odiham controller and therefore may not be entirely representative of the picture available.

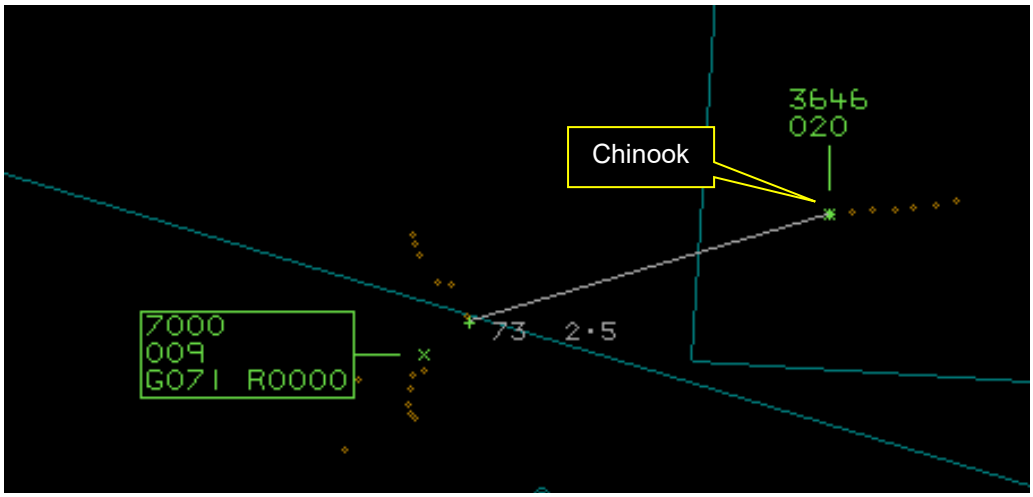


Figure 1: 1658:31 Traffic information provided to the Chinook (3646 Squawk).

The Chinook departed Odiham airfield and requested a Basic Service at 1655:41. The Odiham Approach controller provided Traffic Information at 1658:31, “two tracks, west 2 miles tracking west and correction, east and southeast no height information” (see Figure 1). The Odiham Approach controller reported a hot-air balloon previously reported in the vicinity. The Chinook pilot reported the hot-air balloon in sight along with another track. Further transmissions by the pilot were broken unreadable. The separation was measured at 2.5NM with no height information on the non-squawking aircraft and 2.8NM with 1100ft height separation on the 7000 squawk.

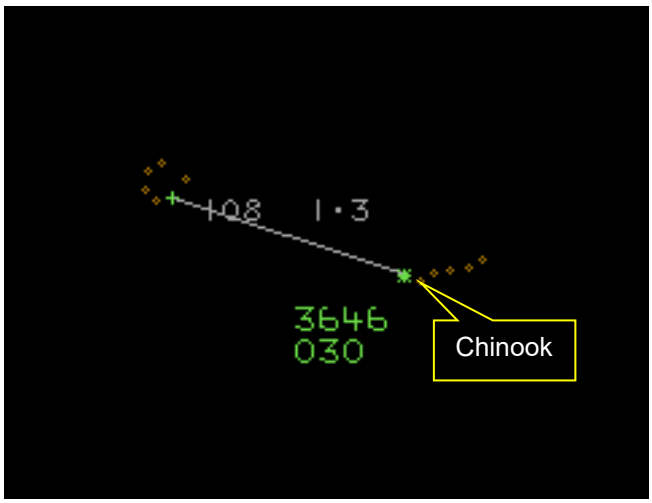


Figure 2: 1706:32 CPA

Figure 2 shows a primary track that transited southeast, before tracking west and then conducting a left-hand orbit, prior to continuing southeast. The primary track displayed intermittently throughout its transit, with Figure 2 displaying the CPA laterally at 1.3NM. The primary track disappeared on the next radar sweep and reappeared 1NM further southeast. The Odiham Approach controller provided the Chinook pilot with Traffic Information at 1706:53, "west 1 mile manoeuvring no height information, slow moving". The Chinook pilot reported the aircraft in sight.

The Odiham Approach controller provided timely and effective information to the Chinook pilot whilst in receipt of a Basic Service. Providing Traffic Information on two separate occasions, with additional information on the sighting of a hot-air balloon. This allowed the Chinook pilot and crew to become visual with traffic not displayed on TAS and ultimately take effective avoiding action to increase separation.

UKAB Secretariat

The Chinook and unknown light-aircraft 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] If the incident geometry is considered as converging then the Chinook pilot was required to give way to the light aircraft.[3] Aircraft shall not be flown in formation except by pre-arrangement among the pilots-in-command of the aircraft taking part in the flight.[4]

The unknown light-aircraft appeared on radar replay as a primary surveillance response (PSR) only. The PSR track after the Airprox was towards Popham aerodrome but there was no record of an aircraft landing at Popham after 1700 on that date.

Comments

JHC

The conflicting traffic was spotted due to good lookout by the HP and, despite being under a Basic Service with Odiham, Traffic Information was still passed. This aided the situational awareness for the crew as the unknown aircraft wasn't showing on TAS. It appears to be a worrying trend for JHC that GA traffic seem to be turning towards JHC aircraft in a manner which may compromise safety of the aircrew. Continued engagement between Odiham and surrounding aerodromes will help alleviate some of these concerns.

Summary

An Airprox was reported when a Chinook and an unknown light aircraft flew into proximity 5NM north-northwest of Popham aerodrome at about 1707Z on Wednesday 21st September 2022. Both pilots were operating in VMC, the Chinook pilot under VFR and in receipt of a Basic Service from Odiham Approach, the unknown light-aircraft pilot most likely not in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the Chinook pilot, radar photographs/video recordings, a report from the air traffic controller involved and a report from the appropriate operating authority. Relevant contributory factors mentioned during the Board's discussions are highlighted below the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

[1] (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.
[2] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on. MAA RA 2307 paragraph 13.
[3] (UK) SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.
[4] (UK) SERA.3135 Formation flights. MAA RA 2307 paragraph 3 states, 'Aircraft should not be flown in Formation, except in an emergency or under operational tasking, unless the Aircraft Commanders have agreed to do so and have been authorized for that activity.'

The Board first discussed the Odiham controller's actions and agreed that they had provided accurate and timely Traffic Information, even though only a Basic Service had been agreed. Unfortunately, the unknown light aircraft was not emitting an SSR response and, given that there was no altitude indication, the Odiham controller's Traffic Information could only be generic in nature (**CF1**). The Odiham controller's Traffic Information call occurred while the unknown light-aircraft appeared to be conducting a left-hand orbit and, despite only affording the Chinook pilot generic situational awareness (**CF2**), they reported visual. The Board agreed that the Chinook TAS could not alert on the PSR-only unknown light-aircraft (**CF3**), but that the Chinook pilot was visual in any case. The Board discussed at length the Chinook pilot's assertion that the pilot of the unknown light-aircraft had been attempting to fly into formation with the Chinook. Members agreed that this was possible but that it was also possible that the unknown light-aircraft pilot's orbit to the north of the Chinook's track was made to afford spacing to allow the Chinook to pass. Members noted that the unknown light-aircraft also continued on much the same track after the PSRs re-appeared on radar at 1708:19, and which the Chinook pilot had also turned on to, thereby appearing to be shadowing the Chinook. Members agreed that the Chinook pilot was undoubtedly concerned by the proximity of the unknown light-aircraft (**CF4**) although without a report from the unknown light-aircraft pilot, their intentions could never be resolved definitively. In the event, from the Chinook pilot's narrative, separation at CPA appeared to be of the order of 1NM and members agreed that there had been no risk of collision.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022221			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	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			
	• 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.

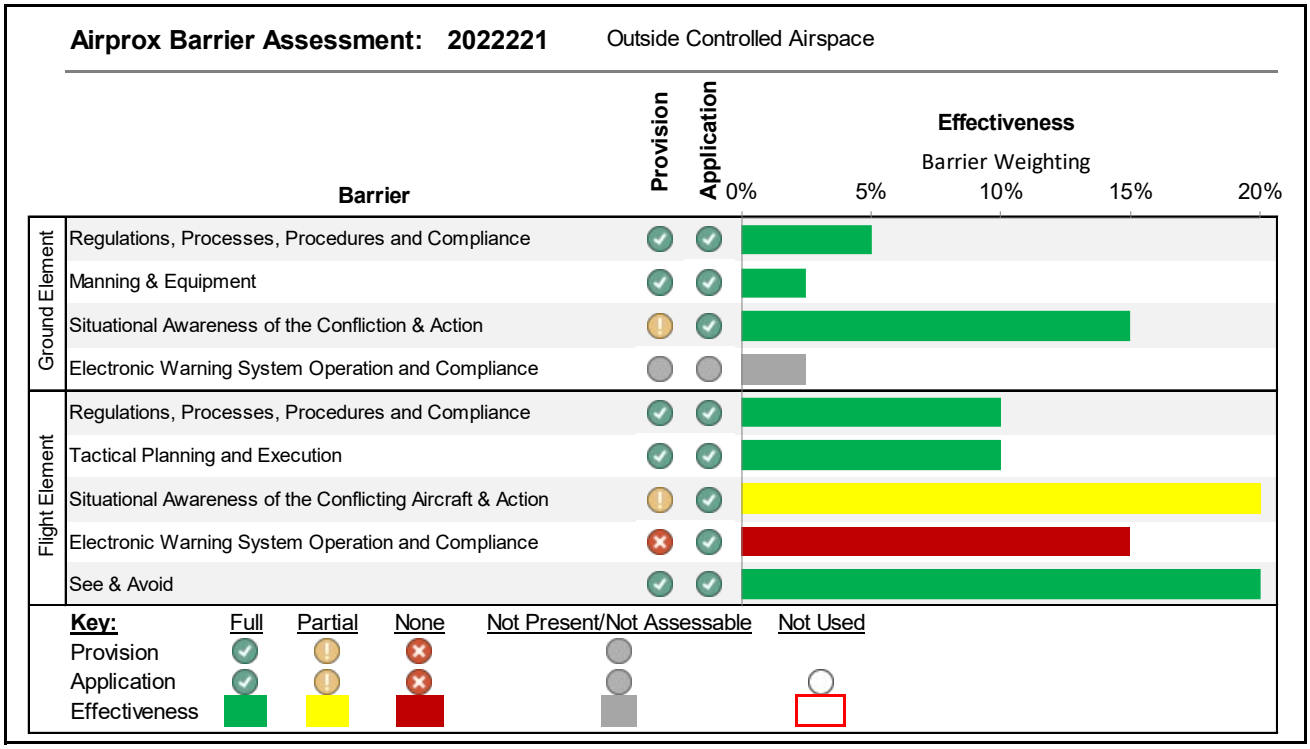
Safety Barrier Assessment[5]

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the Odiham controller could only pass generic Traffic Information on the PSR track.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the Chinook TAS did not or could not alert on the other aircraft.



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