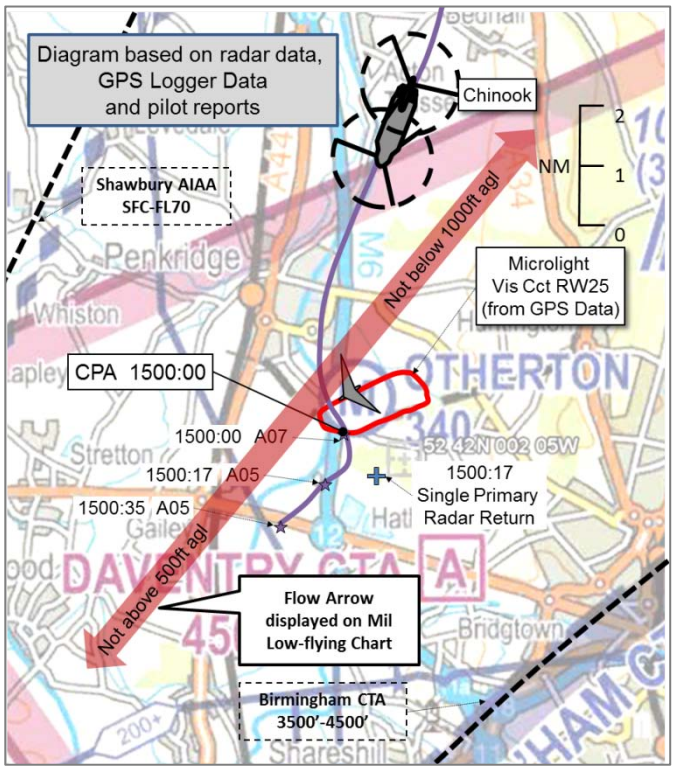
AIRPROX REPORT No 2013172

Date/Time: 3 Dec 2013 1500Z

Position: 5242N 00205W (Otherton Microlight site)

Airspace: London FIR (*Class*: G)

	Aircraft 1	*Aircraft 2*
Type:	Flex-wing Microlight	Chinook
Operator:	Civ Pte	HQ JHC
Alt/FL:	400ft agl	300ft agl
Conditions:	VMC	VMC
Visibility:	10nm	10KM
Reported Separation:	100ft V/200m H	NR V/50m H
Recorded Separation:	NK V/NK H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE MICROLIGHT PILOT reports flying a flex-wing microlight with a white top wing-surface and a predominantly blue bottom wing-surface; the aircraft was not equipped with lights or a transponder. The pilot was aware of only one other microlight, which was operating in the local area and visual circuit. Having taken-off from RW25 at Otherton and achieved 200ft on the climb out, the pilot became aware of a helicopter heading towards the airfield from the northwest at a range of 2-3nm. He turned his aircraft cross-wind, following the standard left-hand circuit pattern for RW25, and could see the Chinook around 1nm to the north-northwest of him. As he focussed his attention on the approaching helicopter, he inadvertently descended to around 400ft agl and saw the Chinook pass to his right, around 200m away and around 100ft above him (approx 500ft agl). Unable to turn left due to the presence of another microlight, and concerned about the rotor turbulence from the helicopter, the pilot climbed his aircraft to 600ft agl in the hope of being above the worst of it; as he did so he encountered 'powerful turbulence' which 'jolted' his aircraft and 'threw it around' for a few seconds. It was unclear to him if the Chinook crew had seen his microlight or the other microlight, which was joining via the overhead. The pilot reported that Otherton is frequently busy with student pilots and numerous microlights, and questioned the wisdom of flying a large helicopter straight through a notified microlight flying site. Whilst the microlight pilot assessed the risk of actual collision as 'low' he was very concerned that, had he not climbed, the 'violent' rotor-wash that he experienced could have been worse and resulted in serious damage.

He assessed the risk of collision as 'Low'.

THE CHINOOK PILOT reports flying a green helicopter southbound from Stafford with HISLs, navigation and landing lights illuminated, and transponder Modes A, C and S selected; TCAS[1] was not fitted and the pilots were listening-out on the 'Low-level Common' UHF frequency. Flying VFR in VMC, in haze, into sun, 2000ft below cloud, the crew were aware that the airspace was 'funnelled' due to the 'Birmingham controlled airspace, flow-arrows, minor aerodromes and Shawbury DUA.[2]' When they were 5nm south of Stafford, the crew saw a 'dark colour' microlight ahead of them and to their left, on a 'conflicting course' and slightly below them. They made a right turn to avoid the aircraft

[1] Traffic Alerting and Collision Avoidance System
[2] Dedicated User Area

and then saw another microlight 'at much closer range'; the Chinook crew reversed their turn to the left and descended, passing between the two microlights. The Chinook pilot reports that the minimum separation was 50m.

He assessed the risk of collision as 'Low'.

Factual Background

The weather at Birmingham Airport at 1450 was recorded as:

METAR EGBB 031450Z 21006KT 190V250 9999 BKN028 07/03 Q1027

Analysis and Investigation

UKAB Secretariat

The Chinook pilot was flying in the vicinity of a published microlight site and was required to conform to the pattern of traffic formed by other aircraft intending to land at that aerodrome or keep clear of the airspace in which the pattern was formed.[3]

Comments

JHC

This was a see-and-avoid Class G airspace event. As described in the Chinook pilot's report, there is an element of funnelling in this area due to local airspace proximity. The crew had not planned to fly directly over the microlight site, however, the flow arrow and proximity of the built-up area meant that they were slightly off their planned track. The Chinook crew saw both microlights and took the required action, albeit late, to prevent collision.

Summary

An Airprox was reported between a Chinook and a microlight in Class G airspace, in the visual circuit of Otherton microlight site.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both aircraft, radar photographs/video recordings, the microlight pilot's GPS logger files, and reports from the appropriate operating authorities.

The Board was informed that the Chinook pilots had planned to avoid the microlight site but, having misidentified a navigation feature, were flying around 2nm further east than they had planned to. Some members opined that, given the plethora of avoids and airspace in the area, the Chinook crew would have been better served if they had elected to fly at a higher altitude to avoid conflict with traffic using the microlight site. Military members commented that the training value to helicopter crews is much reduced at higher altitudes, and so they would normally try to remain at low-level if possible in order to maximise their training. The Board noted that the Chinook pilot had recognised that the airspace was tightly funnelled in the area. Nonetheless, the crew was required to avoid the microlight site and, given that the Shawbury AIAA is only an advisory area, not an avoidance, the Board opined that the crew could have contacted Shawbury ATC for assistance in routing through that area and away from the microlight site if they had wished to remain at low-level for training purposes.

[3] Rules of the Air 2007, Rule 12, Flight in the vicinity of an aerodrome, and Regulatory Article 2307(1) Para 16

Turning to the microlight pilot's actions, members with microlight experience informed the Board that the microlight pilot was right to be concerned about the rotor-wash from such a powerful helicopter; whilst a microlight's frame is surprisingly strong when encountering forces in the manner it was designed to, strong turbulence can cause catastrophic damage to the airframe. The Board commended him for his good lookout in sighting the Chinook, and also for his actions in trying to avoid both a collision and the effects of rotor downwash.

The Board agreed that the cause of the Airprox was that the Chinook pilot flew through the visual circuit of a promulgated and active microlight site and into conflict with the microlight. Members agreed that, in accordance with their mandate, they had to assess this event based on the risk of mid-air collision and, consequently, assessed the Degree of Risk as C because effective and timely actions had been taken to avoid collision. However, in this case, it was agreed that the risk of a serious accident caused by rotor-wash was very real, and likely much higher than the collision risk grading of C indicates.

Subsequent to the Board's discussions, the UKAB Secretariat established that, although the charts in use by the Chinook crew at the time of this Airprox were correct, the direction of the flow arrow displayed in the 'Cosford Gap' on the recently updated Military Low Flying Charts had been inadvertently reversed on the edition published on 3rd April 2014. This error has been reported through No 1 AIDU's quality reporting system and action will be taken to correct the chart and notify users.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Chinook pilot flew through the visual circuit of a promulgated and active microlight site and into conflict with a microlight.

Degree of Risk: C

ERC Score[4]: 2

[4] Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.