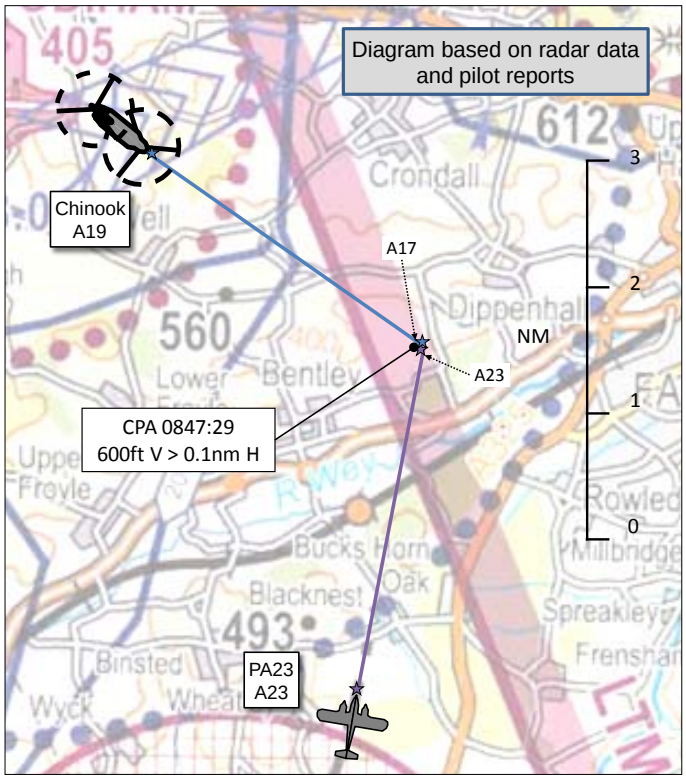
AIRPROX REPORT No 2013104

Date/Time:	9 Aug 2013 0847Z	
Position:	51 12N 000 51W (3.8nm ESE of Odiham Elev 405ft)	
Airspace:	Odiham MATZ	(*Class*: G)
	Reporting Ac	*Reported Ac*
Type:	Chinook	PA23
Operator:	HQ Air (Ops)	Civ Pte
Alt/FL:	1600 QFE(1003 hPa)	2300 QNH(1018 hPa)
Weather:	VMC CLBL	VMC CLBL
Visibility:	10km	NR
Reported Separation:	300ft V/50m H	300ft V/0ft H
Recorded Separation:	600ft V/>0.1nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE CHINOOK PILOT reports flying a green helicopter with the top and bottom strobe lights selected to white, navigation lights on, and transponder Modes 3/A, C and S selected. The crew were flying at 1600ft (QFE 1003hPa), heading 130° at 120kt, in the Odiham instrument pattern, 'in and out' of Scattered cloud (which had a base of around 1300ft) under a Traffic Service from Odiham Approach. The pilot reports receiving Traffic Information on the PA23, in their right 1 o'clock, 'left to right' [sic] he recalls, 300ft above them. Subsequently, the Odiham Approach controller updated the Traffic Information giving 'at a range of 2 miles on the same bearing'. The Chinook crew elected to descend to the 'base of cloud' at around 1100ft QFE to 'maintain VMC'; they then saw the PA23 around 0.75nm away before it passed 400-500ft overhead their helicopter.

He assessed the risk of collision as 'High'.

THE PA23 PILOT reports that he flies this route regularly and that, as he was compiling his report 'a few weeks' after the incident, he was conscious that some of his recollection was incomplete. He was flying a predominantly white aircraft with strobe and navigation lights turned on, squawking transponder Modes 3/A and C. He was heading about 010°, cruising at 170kt, level at 2300ft QNH he recalled, as he passed the South-eastern edge of the Odiham MATZ receiving a Traffic Service from Farnborough ATC. The Farnborough controller had passed Traffic Information on the Chinook, and the PA23 pilot recalls that the controller asked him to remain 'not below 2300ft'. The weather was 'poor', with scattered cloud giving IMC above him but patchy VMC at his level. The PA23 pilot wanted to descend to improve visibility but Farnborough updated the Traffic Information on the Chinook at '2000ft' and '1nm away'; he realised that, whilst he had less chance of seeing it at his altitude of 2300ft, a descent would have put him in to the path of the helicopter. He recalls being concerned that, with the scattered cloud and no TCAS, his ability to take avoiding action was limited. The pilot saw the Chinook around 300m away and realised he would pass clear about 300ft overhead it, and so did not take any further avoiding action. Once the Chinook had passed, the PA23 pilot descended for 'better weather'.

He assessed the risk of collision as 'None'.

THE FARNBOROUGH LARS[1] WEST CONTROLLER reports operating as OJTI[2] to a medium-to-high hours trainee on the bandboxed LARS West and Approach position; he described the workload as 'low/medium'. They were providing a Traffic Service to the PA23 pilot who was tracking North at 2400ft (QNH 1018hPa). Realising that the Chinook was on a converging heading with the PA23, LARS West contacted Odiham Approach and gave them Traffic Information on the PA23 at 2400ft QNH; LARS West agreed to pass Traffic Information on the Chinook to the PA23 pilot. The PA23 pilot informed LARS West of his intention to descend to 2000ft; the Controller replied with Traffic Information on the Chinook, and the pilot responded that he would remain at 2400ft. As the PA23's track indicated that it was passing 300ft over the Chinook's track, the PA23 pilot reported visual with the helicopter and requested further descent.

THE ODIHAM APPROACH CONTROLLER reports operating on the bandboxed Approach and Director position. He was providing a Traffic Service to the Chinook, which was in the radar pattern, heading 130°, level at 1600ft QFE. Farnborough LARS called with Traffic Information on the PA23, and both controllers agreed to pass Traffic Information to their respective pilots. Once the Chinook was established downwind, the Traffic Information was passed, indicating '300ft above' (on Mode C), to the helicopter crew. Approach updated the Traffic Information until the Chinook crew reported visual with the PA23 1nm away. Shortly afterwards the Chinook pilot reported descending to 1300ft QFE to maintain VMC and estimated that the PA23 had been at 1600ft QFE.

He perceived the severity of the incident as 'Low'.

THE ODIHAM SUPERVISOR reports operating as the ATCO i/c[3] and Talkdown controller and assessed the Approach Controller's and the Unit's workload as low with less than 3 station-based aircraft airborne. In preparation for carrying out the Chinook's talkdown, the Supervisor was monitoring the Approach frequency and supported the Approach Controller's recollection of events.

Factual Background

The Farnborough weather was:

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METAR EGLF 090850Z 27009KT 9999 FEW018 SCT031 19/15 Q1018=
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The Odiham weather was:

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METAR EGVO 090850Z 26010KT 9999 SCT016 SCT020 19/15 Q1018 WHT BECMG SCT025 BLU=
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Analysis and Investigation

CAA ATSI

ATSI had access to the reports of both pilots and the Farnborough LARS controller, recorded area surveillance and transcription of the Farnborough LARS frequency.

Factual History

The PA23 had been pre-noted to Farnborough LARS West by Solent Radar and called Farnborough LARS West at 0839:35. Details were passed and a Traffic Service agreed on QNH 1018hPa. The PA23 pilot stated that he was routing to ROVUS.

At 0842:20 Farnborough informed the PA23, "*caution as you pass abeam Lasham possible late warning of traffic due to gliding also the pattern at Odiham is active with a Chinook."* This was acknowledged by the PA23.

[1] Lower Airspace Radar Service
[2] On the Job Training Instructor
[3] Air Traffic Controller In Charge

At 0843:30 Farnborough called Odiham ATC and agreed that traffic information would be passed, by Farnborough, to the PA23 on the Chinook 'in the pattern'.

At 0845:10 the PA23 notified Farnborough, "*I'd like to continue descent to* [altitude] *2000."* Farnborough replied, "*Roger there is a Chinook in your 11 o'clock range* [0845:20] *of 8 miles altitude 2000 feet will be int- in the pattern at Odiham."* The PA23 responded, "*Copy that… I'll stay at 2400 in that case."* The PA23 was 8.5nm South of Odiham on a northerly track at altitude 2500ft and the Chinook was at 2000ft 1.7nm northwest of Odiham on a south-easterly track.

At 0847:30 the PA23 asked Farnborough, "*is the er Chinook the one that just passed beneath me.*" See Figure 1 below. The Farnborough controller confirmed that it was, after which the PA23 reported commencing descent to 2000ft. The PA23 then continued to the north before being transferred to Farnborough LARS North.

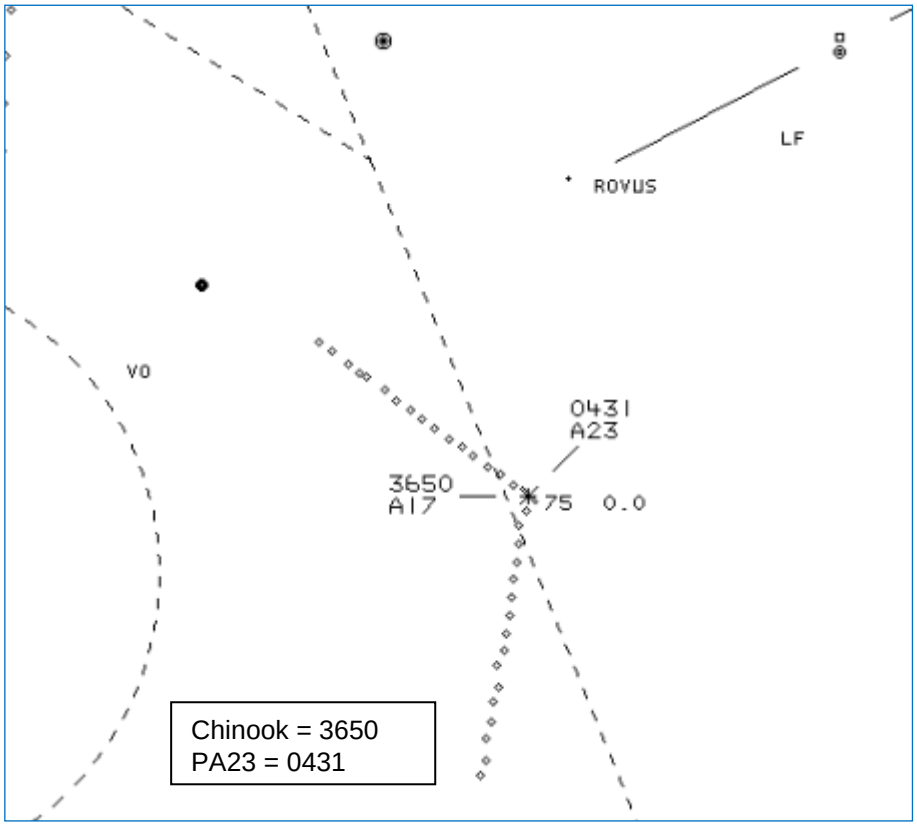

Figure 1: Heathrow 10cm – 0847:30 UTC.
Note: the base of controlled airspace at the point of the two aircraft's tracks crossing is altitude 3500ft.

The Chinook pilot subsequently reported that Odiham ATC had passed traffic information twice on the PA23 and that he elected to descend to the base of cloud in order to maintain VMC. The Chinook pilot reported acquiring the PA23 visually.

Military ATM

All heights/altitudes quoted are based upon SSR Mode C from the radar replay unless otherwise stated. At the time of the BM SPA investigation, the Unit had not yet recorded the findings of an incident investigation in accordance with MAA RA1410.

The Chinook pilot reported VMC but would have been intermittent IMC as they reported flying 'in and out of scattered cloud with a base of approx 1300ft'. The Guidance Material to CAP 774 Chapter 3 Para 3 advises pilots to be 'aware that a Traffic Service might not be appropriate for flight in IMC when other services are available'

The incident sequence commenced at 0843:32 as Farnborough LARS contacted Odiham Approach to pass Traffic Information on the PA23; however, no formal co-ordination was agreed between the 2 controllers, and the exchange was completed at 0843:56. Odiham Approach subsequently reported that they were aware that Farnborough LARS 'would call the RTC[4] traffic to their aircraft'. During this exchange, the Chinook had reported level at 1600ft Odiham QFE 1003 hPa (equating to 2050ft Farnborough QNH 1018hPa) and had been instructed to "*turn right, long way round heading 1-3-0 degrees*."

At 0846:10, Odiham Approach passed Traffic Information on the PA23 to the Chinook crew, advising them of "*traffic right one o'clock, 4 miles, crossing right-left, indicating 300ft above, believed to be a PA23*" which was acknowledged.

CAP 413 Chapter 5 Para 20 states that the relative movement of the conflicting aircraft should be described as 'converging' where 'there appears to be no change in relative bearing between the conflicting traffic's flight path and that of the aircraft under service'. Assessment of the radar replay demonstrated that, from the time at which the Chinook steadied on hdg 130° at 0845:15, there was only a 1-2° change in the relative bearing between the 2 aircraft until very late in the incident sequence, as lateral separation closed.

CAP 413 Chapter 5 Para 22 states that when describing the level of conflicting traffic with verified SSR Mode C information, the phrase 'at level' should be used. That said, BM SPA is cognisant that this element of CAP 413 was not particularly clear at the time of the Airprox and was subject to review with a significant amendment to be released in Nov 13.

At 0846:49, Odiham Approach updated the Traffic Information on the PA23 to the Chinook crew, advising them "*previously reported traffic now right one o'clock, 2 miles, crossing right-left, 300 feet above*". The crew acknowledged the Traffic Information, advising Odiham Approach that they were "*still not visual*." Figure 2 depicts the incident geometry at this point.

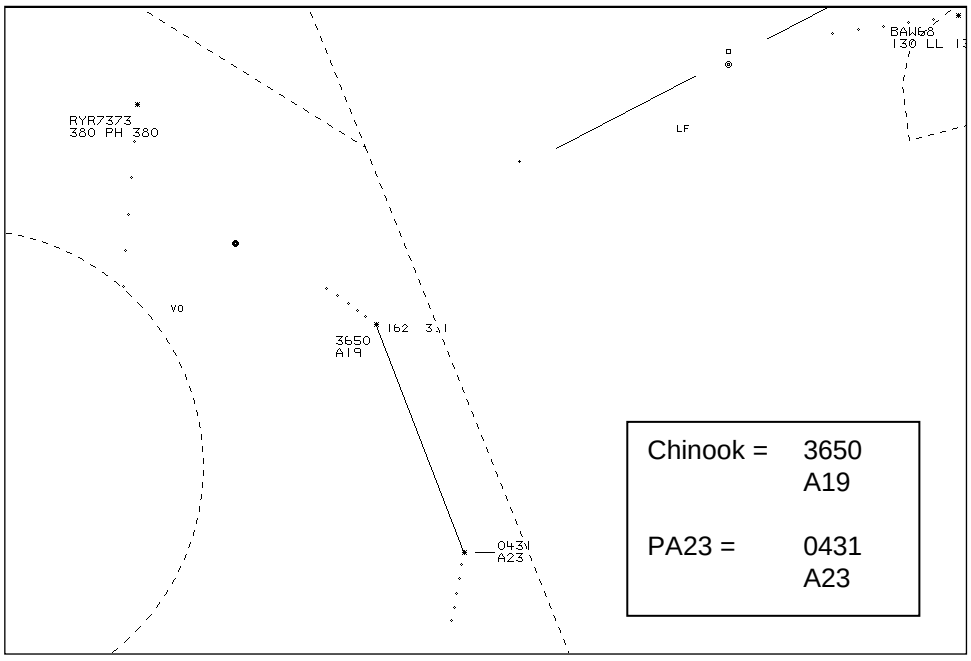

Figure 2.

CAP 774 Chapter 3 Para 6 states that 'If after receiving traffic information, a pilot requires deconfliction advice, an upgrade to Deconfliction Service shall be requested'. The Guidance Material to this paragraph states that 'When providing headings/levels for the purpose of positioning and/or sequencing or as navigational assistance, the controller should take into account traffic in the immediate vicinity, so that a risk of collision is not knowingly introduced by

[4] Radar Training Circuit

the instructions passed. However, the controller is not required to achieve defined deconfliction minima'.

At 0847:13, the Chinook crew reported to Odiham Approach that they were visual with the PA23. At this point, 1.1nm lateral separation existed between the Chinook and the PA23, with the aircraft indicating 1900ft and 2300ft respectively on the radar replay. At 0847:26, the Chinook's SSR Mode C indicated that the aircraft had commenced a descent.

The CPA occurred between sweeps of the radar at approx 0847:29, as the PA23 crossed >0.1 nm ahead of the Chinook, indicating 2300ft, 600ft above the Chinook as it descended through 1600ft.

From an ATM perspective, notwithstanding the technical inaccuracies within the Traffic Information passed by Odiham Approach to the crew of the Chinook, the Traffic Information was timely and painted an accurate enough picture to the Chinook crew to enable them to visually acquire the PA23. The Chinook crew visually acquired the PA23 in sufficient time to permit them to assess the situation and to take action to break the conflict.

Comments

JHC

The incident appears to be one of perception of risk of collision, one aircraft rates it high, and the other considers there was none. Whilst the controller at Odiham should have used the term 'Converging' rather than 'Crossing' when describing the other traffic, which may have increased the awareness of the Chinook crew, there was little more that ATC could have done given that the aircraft was receiving a Traffic Service. There was no indication given to the Odiham controller that the Chinook crew felt there was a risk of collision until afterwards, and nor did the controller feel that the situation required a suggested heading change/deconfliction advice, particularly given the vertical separation between the 2 aircraft.

Summary

This Airprox occurred between a Chinook and a PA23 in Class G airspace 3.8nm east-south-east of RAF Odiham. The Chinook was positioning downwind in the Odiham Radar Training Circuit, at 1600ft QFE (2050ft QNH), in receipt of a Traffic Service from Odiham Approach. The PA23 was flying VFR northbound, at 2300ft QNH, in receipt of a Traffic Service from Farnborough LARS West.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

Board Members agreed that both air traffic controllers had passed accurate and timely Traffic Information to their respective pilots, and that both pilots had assimilated that information well and taken effective and appropriate actions to ensure separation of their aircraft: in the case of the Chinook crew, they descended to maintain VMC; and in the case of the PA23 pilot, he maintained his altitude, despite his wish to descend, because he realised that this would keep him above the helicopter.

Both pilots reported borderline weather conditions and having to manoeuvre to maintain VMC; several Members noted that, perhaps, they may have been better served by each requesting a Deconfliction Service, which would have elicited Deconfliction Advice from the controllers.

There was considerable debate about the degree of risk; some Members felt that there had been a definite conflict of flight paths but that effective and timely action had been taken to resolve it and, therefore, a risk of C was appropriate. Others opined that this was normal business in Class G

airspace and that there had not been a conflict because everyone had done what they would reasonably be expected to do, and resolved the situation in an effective and timely manner, which would indicate a risk of E (normal procedures, safety standards and parameters pertained). The Chairman took a vote, and it was agreed by a small majority that the degree of risk was E.

Because both pilots had taken effective action to control the situation, the Board agreed that the cause was a potential conflict resolved by both pilots following appropriate Traffic Information from ATC. Several Members felt that this was, in fact, an excellent example of all of the people in the system working as effectively as they should do, albeit the comment about selection of appropriate ATS for the conditions pertaining at the time remained relevant.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A potential conflict resolved by both pilots following effective Traffic Information from ATC.

Degree of Risk: E

ERC Score[5]: 2

[5] 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.