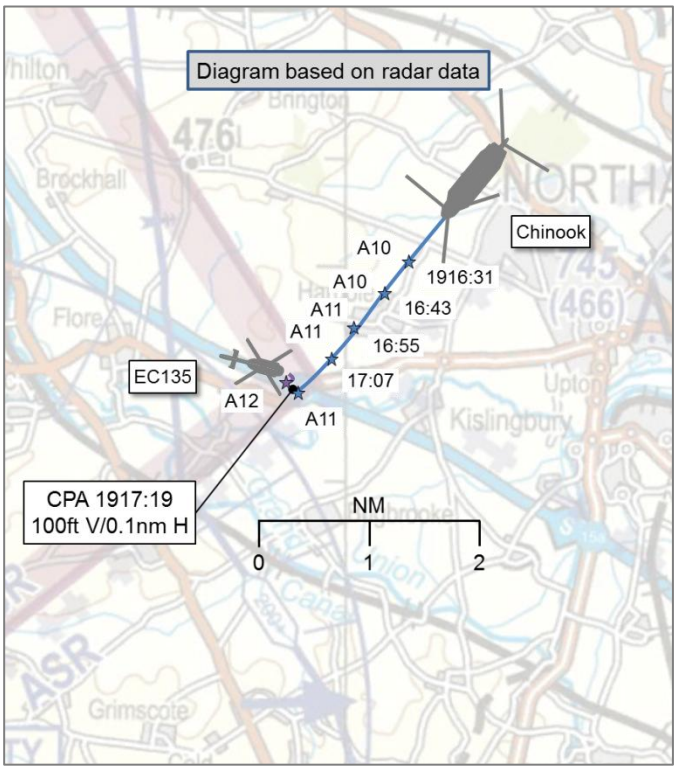
AIRPROX REPORT No 2014011

Date/Time: 28 Jan 2014 1917Z (Night)

Position: 5214N 00101W (5nm SSW Northampton)

Airspace: Lon FIR (*Class*: G)

	Aircraft 1	*Aircraft 2*
Type:	Chinook	EC135
Operator:	HQ JHC	NPAS
Alt/FL:	1100ft QNH (985hPa)	800ft Rad Alt
Conditions:	VMC	VMC
Visibility:	10km	>10km
Reported Separation:	0ft V/400m H	0ft V/500m H
Recorded Separation:	100ft V/185m H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE CHINOOK PILOT reports returning to base after an Air Weapons Range sortie at Holbeach Range. The green helicopter had upper and lower strobes selected to red and the landing lights on, as was the SSR transponder with Modes A, C and S. The aircraft was not fitted with a TAS or ACAS. The pilot was operating under VFR in VMC below an 1800ft cloudbase, not under an ATS as he had been unable to raise a unit to request a Traffic Service. In straight and level flight, heading 230° at 120kt, the handling pilot, in the right hand seat and wearing NVD[1], called another aircraft to the crew in the 3 o'clock position at a range of 400-500m at the same height and passing behind on an approximate heading of 120°. The aircraft was spotted just as it went aft of abeam and it was apparent that it would pass behind. The other aircraft was not seen in sufficient time to prevent the distance from reducing to about 400m. The other aircraft was a small to medium sized helicopter and appeared to make no manoeuvre.

He assessed the risk of collision as 'Medium'.

THE EC135 PILOT reports on a police task. The blue and yellow helicopter had red strobes and navigation lights selected on, as was the SSR transponder with Modes A and C. The aircraft was fitted with TCAS. In the hover, at about 800ft agl over the M1, a target was picked up at 10nm on the TCAS at the same height. At 5nm the target was still tracking towards, he maintained his position in the hover, spot turned and visually picked up the strobe and navigation lights of the target. He continued the spot turn to keep it in his 12 o'clock as the target passed to the south.

He assessed the risk of collision as 'None'.

Factual Background

The weather at Birmingham was recorded as follows:

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METAR EGBB 281850Z 14011KT 9999 BKN018 05/04 Q982
METAR EGBB 281920Z 14010KT 9999 BKN020 BKN037 05/04 Q982
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[1] Night Vision Device.

Analysis and Investigation

CAA ATSI

An Airprox was reported by the pilot of a Boeing CH47 Chinook when it came into proximity at night with a Eurocopter EC135 approximately 9.2nm to the west-southwest of Sywell Aerodrome in Class G airspace. The Chinook pilot was operating under VFR, was not in receipt of an Air Traffic Service and was displaying SSR code 7000. The EC135 pilot was operating under VFR on a local flight, was in receipt of a Basic Service from Coventry APP, and was displaying SSR code 0057. The Coventry APP position was combined with Coventry TWR. An ATM is available for use by the Coventry Tower controller but the Approach service was being provided without the use of surveillance equipment.

ATSI had access to area radar recordings, written reports from both pilots, information from the unit together with RTF recording and transcript of the Coventry Approach frequency.

At 1901:50, the EC135 pilot contacted Coventry APP, stated where he was operating (at 2000ft) and requested a Basic Service. A Basic Service was agreed and the Coventry QNH of 983hPa was passed.

At 1916:00, the Chinook was 2.7nm northeast of the EC135 and was tracking southwest (see Figure 1).

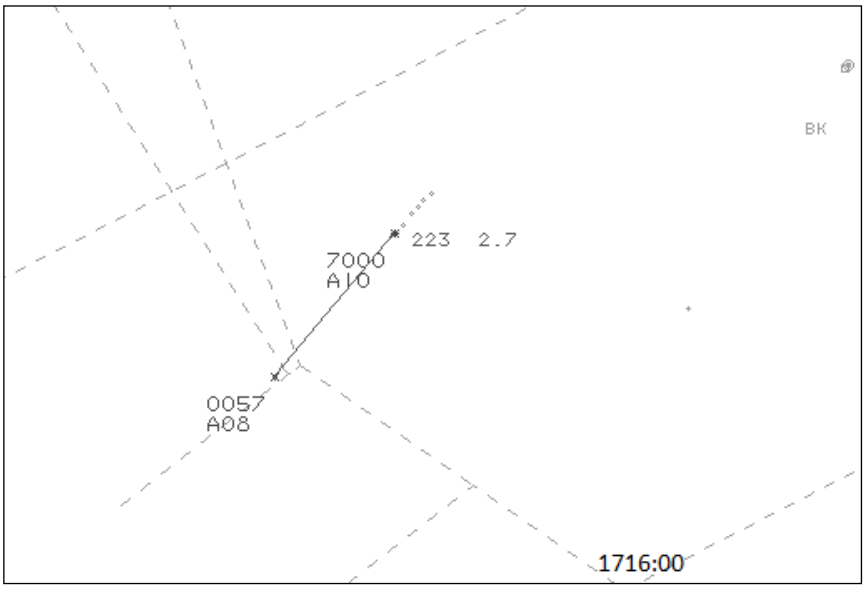

Figure 1

At 1916:17, the SSR label from the EC135 was not visible on the Clee Hill radar source (the Clee Hill radar provides the SSR data to Coventry). At 1916:40, in response to a query from the Coventry APP, the EC135 reported being north of Milton Keynes by about 4nm. At 1917:07, as the EC135's SSR label became visible again, the Chinook was 0.4nm northeast of the EC135, tracking towards it.

The two aircraft continued to converge until 1917:19 when the Chinook passed 0.1nm to the southeast of the EC135 (see Figure 2).

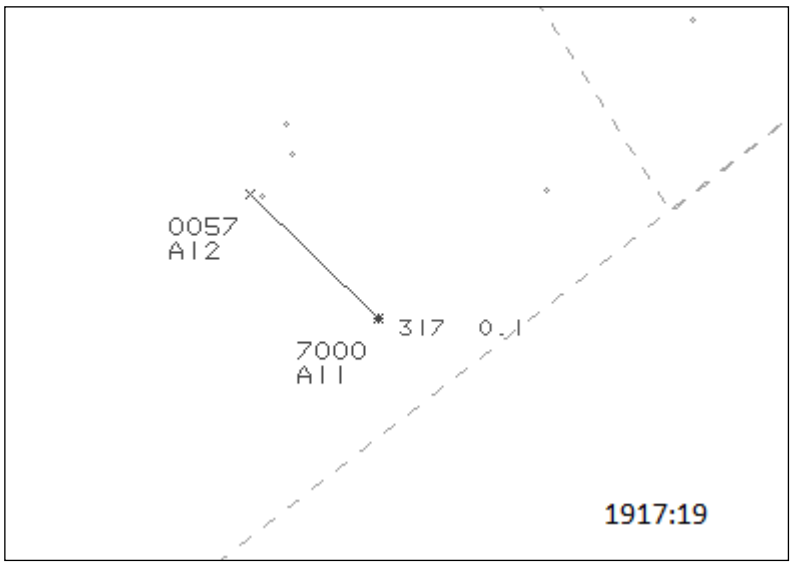

Figure 2

The EC135 subsequently remained in position and the Chinook continued on a southwesterly track. There was no Airprox report on the Coventry frequency and the response from the unit indicated that the controller was not aware of any incident taking place.

Under the terms of a Basic Service there is no requirement for the controller to monitor the flight or to pass traffic information; the avoidance of other traffic is solely the pilot's responsibility.

Military ATM

This incident occurred at 1917 on 28 Jan 14 between a Chinook and an EC135. The EC135 pilot was under a Basic Service from Coventry and the Chinook pilot was not in receipt of an ATS.

The Chinook crew commented on not being able to obtain a Traffic Service at their height in that part of the country. The incident took place between the Holbeach Helicopter Landing Site and the Daventry VOR/DME at 1100 feet on 985hPa. At the time of the incident, the Chinook was on the 038 radial from RAF Brize Norton at 34nm. Given the range and height, it is unlikely that Brize could have identified the Chinook on primary or secondary radar and that RT contact may not have been possible in any case. Assuming successful RT contact, a Basic Service could have been available to the Chinook pilot but, given the location and height, a Traffic Service was highly unlikely.

UKAB Secretariat

Both pilot's shared an equal responsibility for collision avoidance and for not flying into such proximity as to create a danger of collision[2]. If the geometry is considered 'converging' then the Chinook pilot was required to give way[3]. The base of the lowest CAS in the vicinity of the incident location is 4500ft amsl.

Comments

JHC

The Chinook crew were operating iaw extant military orders including conspicuity measures with landing light and red anti-collision lights. Unfortunately the pilot was unable to raise the relevant air traffic service which would have prevented this occurrence. Although there was a perceived risk of collision by the Chinook crew the NPAS helicopter TCAS worked as advertised and alerted

[2] Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).
[3] ibid., Rule 9 (Converging).

the NPAS crew to the other aircraft in good time. JHC is currently pursuing the fitment of an ACAS to all fleets and this would have undoubtedly prevented this Airprox.

Summary

The incident occurred when a Chinook and an EC135 flew into proximity at night at 1917 on 28th January 2014. Both pilots were operating under VFR in VMC in Class G airspace, the Chinook pilot not in receipt of an ATS and the EC135 pilot in receipt of a Basic Service from Coventry APP.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both aircraft, a transcript of the relevant RT frequency, radar photographs/video recordings and reports from the appropriate ATC and operating authorities.

The Board first considered the actions of the Chinook crew. Having completed their range detail, the crew were returning to base at low-level on NVD. The Board assumed that the training requirement for low-level transit at night had been weighed against the potential collision risk and opined that although the use of NVDs provided some mitigation, in this case this mitigation proved not to operate as expected even though the EC135 was displaying red strobes and navigation lights which should have been prominent on NVDs. The Board noted that the Chinook pilot was unable to raise Brize Norton for an ATS but opined that Coventry was available, was being used by the EC135 pilot, and wondered whether there was a reluctance for military pilots to call civilian units: the Board concluded that the Chinook pilot would have been better served by trying to obtain an ATS from Coventry.

The EC135 pilot was on task and gained visual contact with the Chinook with the assistance of his TCAS. He then maintained visual contact, whilst spot-turning to keep the Chinook in his 12 o'clock. The Board noted that the EC135 pilot had not considered the approaching Chinook to be a collision risk. However, given the range at CPA (185m recorded), and the fact that both pilot's perceived the other aircraft was level with them, the Board opined that he would have been better advised to have positively generated greater separation (either horizontally or vertically or both) not least to accommodate any potential turn towards him by the Chinook pilot (who he could not know whether or not had seen the EC135).

In the event, although the Chinook pilot did not see the NPAS helicopter until after CPA, the NPAS pilot was visual with the Chinook well before this and was effectively able to 'see-and-avoid' to prevent aircraft collision whilst maintaining position. As such, although the Board emphasised that this was a valid Airprox submission, the event was considered to be a sighting report.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A sighting report.

Degree of Risk: C.

ERC Score[4]: 10

[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.