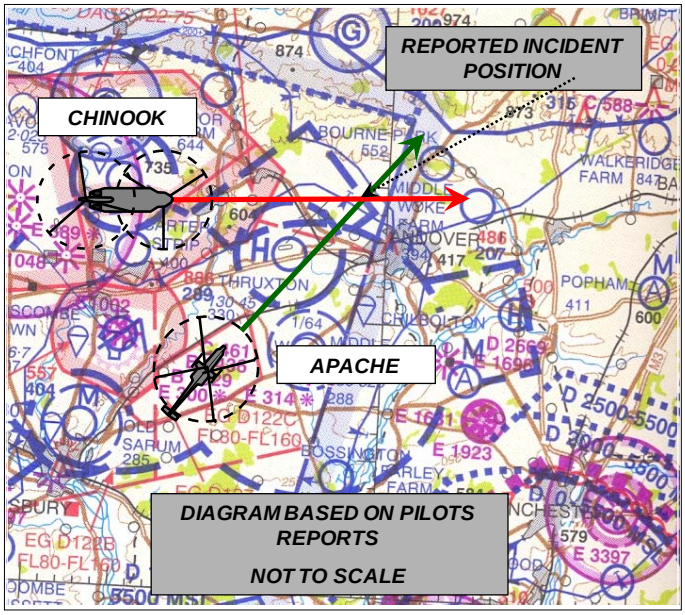
AIRPROX REPORT No 2011006

Date/Time:	24 Jan 2011 2047Z	
Position:	5115N 00132W (2nm NW Andover)	
Airspace:	UKNLFS	(*Class: G*)
	Reporting Ac	*Reported Ac*
Type:	Chinook	Apache
Operator:	HQ JHC	HQ JHC
Alt/FL:	800ft (RPS 1024mb)	NR (NK)
Weather:	VMC NR	NK NR
Visibility:	10km	NR
Reported Separation:	100ft V/0ft H	NR
Recorded Separation:	NR	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE CHINOOK PILOT reports that they were Reversionary Night Flying (RNF) [not on NVGs], transiting in the Night Rotary Region 1 from Lugershall to Odiham at 800ft on the Cotswold RPS [1024mb], routeing to the A34 before climbing for a radar pickup for an approach at Odiham. They had all lights switched on and were heading 090° at 130kt approaching Andover and had reselected the radios and IFF [squawking 3646] from SPTA in preparation for the climb and approach to Odiham. The NHP called *"break"* and at the same time he saw an Apache helicopter crossing from right to left in level flight about 50ft below and 100ft in front of them. He cyclically climbed the ac to avoid the Apache which disappeared under their nose. The No1 crewman picked up the Apache as it cleared to their 9 o'clock and saw it continue away without manoeuvring. RT calls were made to try and establish comms with the Apache on Middle Wallop Approach, low level common and Guard UHF but there was no response.

Comms were then established with Odiham, a radar service was requested and a recovery to Odiham was flown without further incident.

Immediately prior to the incident the HP was RNF with the No2 crewman in the front right hand door, the NHP in the left hand seat, and the No1 crewman all on NVG. None of these crew-members saw the Apache until the NHP called *"break"* and the HP manoeuvred. Both ac involved had full visible lighting switched on and it was the red nav light that he first saw before seeing the full silhouette of the Apache.

He thought that the Apache had been obscured by the cockpit window strut and the ac lights had merged with the background lighting from Andover.

He reported the incident to Odiham on first RT contact and assessed the risk as being very high.

THE CHINOOK SQN CDR commented that this incident was a very high risk Airprox. The Apache lights were not discernable against the urban lights of Andover, they had no relative motion because of the potential risk of collision, and they were obscured by the cockpit window strut. All of these frictions, which make picking up a potential mid-air risk difficult, have been highlighted in many previous Airprox incidents and will continue to do so in the future. Understanding of these factors

and the importance of head movement to achieve effective lookout are key facts to continue to educate our aircrew about; this ASIMS should be used as an illustration of the risk.

Separately, in light of this Airprox, the existing radio procedures and deconfliction measures for this busy piece of low level airspace should be carefully reviewed by the key regional stakeholders, RAF Benson, RAF Odiham and AAC Middle Wallop.

Finally, technology enhancements to help avoid mid-air collisions, such as ACAS, should be considered for fitment to military helicopters.

THE APACHE PILOT reports that he was Captain/Instructor of an Apache NVS training sortie from Middle Wallop routeing clockwise around Andover at 700ft on the 1028mb Portland RPS into an operational training phase near Barton Stacey Trg Area and recovering to Middle Wallop after 2hrs. The sortie was uneventful and flown as briefed. On return the pilot was informed that he had been involved in an Airprox with a Chinook to the NW of Andover at 2047hrs. At the time he was heading 042° at 100kt.

On reviewing the cockpit FLIR tape on a large screen, a heat source could be seen to the SE of their position at a similar height and at the time and location of the reported occurrence confirming that they were the ac involved in the Airprox reported by the Chinook pilot.

UKAB Note (1): The Chinook first appears on the recording of the Clee Hill Radar at 2048 (after the incident), squawking 3646 at FL006, and tracking about 100° towards Odiham. The Apache does not show at any time.

HQ JHC comments that that this is a known choke point where ac departing or arriving at SPTA will transit Easterly or Westerly at 90^{o} to Middle Wallop traffic departing to the North, so both pilots should have been conducting a particularly meticulous lookout. Further information would have been available to the Chinook crew from Middle Wallop APR about potential conflicting traffic had they called. While all lighting SOPs were being followed, and it is assumed that both ac had planned to deconflict using the CADS system, the use of a common frequency at the time of the incident may have added another layer to the mitigation measures in place to reduce the risk of a collision in Night Rotary Region 1 (NRR1).

The NHP saw the conflicting ac across the cockpit on NVG which, as the Chinook Sqn Cdr highlighted demonstrated the importance of head movement to achieve effective lookout.

As a consequence of this and 2 other recent Airprox near Middle Wallop at night, all JHC stakeholders in NRR1 were brought together to establish a way forward and better risk mitigation processes. The CADS trial period came to an end at the beginning of Apr and increased the need for more procedural deconfliction. As a result, soft boundaries have been established between the 3 JHC main operating bases (using the A34 and M4) with the SW area being used primarily for 7 Regt AAC (training) affording students a better degree of protection. All users of the SW area now monitor MW App and use an ATS from the appropriate ATC on request when in the other areas (noting the effect of terrain at low level). Each user unit exchanges night flying routes and sortie data 3 hours prior to entry, including C130s using Keevil/SPTA. These measures have already been seen to improve the situational awareness of users.

It is anticipated that CADS will be available again within 3 months, which will once again enhance the ability of all users to plan to deconflict. In addition, JHC is pursuing actively the expansion of the RW LFAs areas, perhaps to join LFA 9, subdividing LFA1 and actively pursuing the fitment of a CWS in all JHC RW ac.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar recordings and reports from the helicopter operating authority.

The Board was reminded that this is the 3rd recent Airprox to have taken place at night in the Andover area involving military helicopters [201096 and 2010097 last July].

This was a serious incident that again highlighted the difficulty of operating under 'see and avoid' at night in a busy area with significant cultural lighting on the ground. The Board understood the operational imperatives for military aircrew to train effectively both with and without NVS and welcomed the HQ JHC initiatives to mitigate the risk. The Board was informed by the HQ JHC Member that this is a very busy choke point with SPTA, Boscombe Down and occasionally Thruxton traffic, both by day and by night, and crews should be very vigilant, particularly at night. She was surprised that the Chinook pilot did not request TI from Middle Wallop APP who would have been aware of the departing Apache (even if it had left their frequency). Radar coverage in the Andover area from Middle Wallop is good and ac returning to from the SPTA to Odiham regularly call them.

Nevertheless, the two ac involved in this incident were, in however difficult circumstances, operating under the 'see and avoid' principle; in this case, unlike the two previous incidents, the Apache crew did not see the opposing ac, but the Chinook crew (acting together) saw the Apache just early enough to initiate effective (in the Board's view) avoidance thus increasing the small vertical separation extant. This action, Members agreed, just removed any actual collision risk although safety had clearly been eroded below normally accepted levels.

There is little scope for significant expansion of the LFS and therefore measures to use the existing airspace more effectively and safely would be of great benefit. Having identified that CWS in many circumstances can assist crews significantly in identifying potential collisions, the Board agreed unanimously to recommend that the MoD should investigate with some haste the fitment of such equipment. In the mean time, Members agreed with HQ JHC that some limited physical deconfliction is needed. While crews can be busy operating their ac, RT air-air and ground-air information exchange can increase their SA significantly and this initiative was welcomed by Members.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A non-sighting by the Apache crew and a late sighting by the Chinook crew.

Degree of Risk: B.

Recommendation: The MoD is recommended to consider fitting CWS to its helicopters.