

## AIRPROX REPORT No 2010040

Date/Time: 28 Apr 2010 (Wednesday) 1144Z

Position: 5216N 00127E (20nm  
ENE of Wattisham A/D -  
elev 283ft)

Airspace: London FIR (Class: G)

Reporting Ac Reported Ac

Type: Sea King HAR3 Rockwell 112

Operator: HQ Air (Ops) Civ Pte

Alt/FL: 2000ft 1500-2000ft  
QFE (1010mb) QNH (1021mb)

Weather: VMC Sleet VMC NR

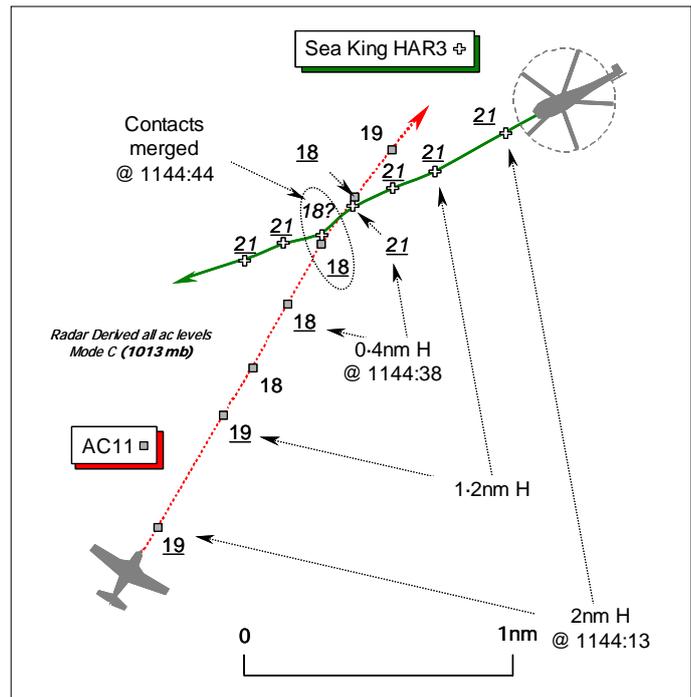
Visibility: 10km >10km

Reported Separation:

200ft V/100m H NR

Recorded Separation:

Nil V – contacts merged see UKAB Note



## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

**THE WESTLAND SEA KING HAR 3 CAPTAIN** reports he was conducting a local VFR training flight from Wattisham and in receipt of a TS from Wattisham APPROACH (APP) on UHF 277-725MHz. His ac has a yellow colour-scheme and the HISLs were on. A squawk of A4523 was selected with Mode C.

The PF was using an IF visor and flying the helicopter from the RHS, whilst being vectored for an instrument approach to RW23 at Wattisham in VMC at 2000ft QFE (1010mb). APP passed TI about an ac in their 11 o'clock, 6nm, some 200ft below, also working Wattisham APP, which they acknowledged with, 'copied, looking'. About 1min later, heading 245°(M) at 105kt, whilst the pilot in the LHS was carrying out the instrument approach cockpit checks in accordance with the Flight Reference Cards (FRCs), the ac captain saw an aircraft passing 100m to port and 200ft below his Sea King flying straight and level on a reciprocal heading with a 'high' Risk of a collision. The low-wing single-engine aeroplane, predominantly blue in colour, was spotted 100m away but no avoiding action was taken as the other ac was abeam and drawing aft when first seen. He queried if APP had the traffic on their radar; the controller confirmed it was the ac that TI was passed about earlier. The instrument approach was then completed.

**THE ROCKWELL COMMANDER 112 (AC11) PILOT** reports that he was in transit to Beccles under VFR at 1500-2000ft amsl. A BS and MATZ penetration approval had been obtained from Wattisham APP on VHF 125-8MHz and the assigned squawk was selected with Modes C and S on.

Wattisham APP informed him of an approaching helicopter, but gave no warning to take avoiding action. Heading 020° in the vicinity of Framlingham at about 110kt, he saw the bright yellow helicopter from a good distance away, which passed to port and above his ac but he could not remember the distance. He did, however, have a clear sight of the helicopter at all times, felt no rotor wash or down draft and no avoiding action was taken. He assessed the Risk as 'low'.

His ac has a blue/gold & white colour-scheme.

**THE WATTISHAM APPROACH RADAR CONTROLLER (APR)** reports that the Sea King was recovering to Wattisham for an ILS approach on UHF 277.725MHz. The ac was identified and placed under TS at 2000ft Wattisham QFE (1010mb). The AC11 was transiting to Beccles under BS at 2000ft Wattisham QNH (1020mb) on VHF 125.8MHz. The trainee Approach controller accurately called the AC11 to the Sea King crew as - 'traffic L 11 o'clock, 6 miles, northbound, a Commander with me at 2000ft Wattisham QNH', to which the Sea King replied, 'looking'. The trainee then became involved in a radar handover to London Military. As soon as this handover was completed the trainee advised the AC11 pilot about the, 'Sea King traffic on his nose approx half a mile 300ft above'. The AC11 pilot reported that he was just passing that traffic with it in sight; the Sea King pilot then advised that traffic had passed about 100ft below, some 300ft away down his port side and asked if anything was shown on radar. The trainee controller advised that it was the traffic that had been called to him earlier - the AC11. After he had landed the Sea King pilot advised he was filing an Airprox; no Airprox report was made on RT by the AC11 pilot. The APR estimated the minimum separation to be ¼nm horizontally and 200ft vertically.

**ATSI** reports that the Wattisham Approach Radar position was being operated by a mentor and trainee, using both UHF and VHF frequencies. All the RT transmissions by the controllers were made on both frequencies. However, the RT recording confirms that any transmissions from the pilots were only made on the respective frequencies; i.e. the Sea King on UHF and the AC11 on VHF. Consequently, the ATC transmissions were received by both pilots but they would not have been able to hear the calls made by the other pilot.

The AC11 pilot established communication with Wattisham APP at 1133, requesting a BS, *"A-C 11 out of Earls Colne inbound to Beccles presently just coming up abeam the Orwell ????? re-checking the 0-6-0 I'm level at 2 thousand feet on 1-0-2-0 four souls on board and request a Basic Service"*. The controller confirmed the provision of a BS and issued the Wattisham QNH (1021mb).

The Sea King crew returning from a local VFR flight contacted Wattisham APP at 1138 to, *"request..radar pick up for an I-L-S before our crew drop off..."*. The helicopter was identified, placed under a TS, with the proviso that the crew were responsible for their own terrain clearance and instructed to climb to 2000ft Wattisham QFE (1010mb) [about 2330ft QNH (1021mb)]. The height and ATS were read back correctly by the Sea King pilot and shortly afterwards he reported reaching a height of 2000ft, heading 235°. About 2min later, at 1142:45, TI was issued to the Sea King crew, *"traffic left 11 o'clock 6 miles crossing left right indicating..2 hundred feet below your level is a..Commander 11 with me at 2 Thousand feet on the Regional on the Wattisham QNH 1-0-2-1"*. The pilot responded *"copy looking"* at 1143:00.

The trainee controller then became busy dealing with an ac routeing out to the NW of Wattisham on the VHF frequency, which involved carrying out a handover to London Military. As soon as the radar handover was completed, the pilot of the AC11 was warned, at 1144:39, *"Sea King traffic on your nose about half a mile..indicating 3 hundred feet above your level"*. The pilot replied, *"Yeah seen him he's just gone past sir"*.

[UKAB Note (1): Just after 1145:00, the Sea King crew enquired on UHF, *"[C/S] we had a..puddle jumper white aircraft pass us about..1 hundred feet below about 3 hundred feet down our port side..did you have any [radar] return on him?"*. The APR replied *"[Sea King C/S] affirm that was the traffic called about a minute ago"*.]

At 1144:38, the radar recording shows the 2 ac on conflicting tracks, 0.4nm apart. The AC11, indicating 1800ft Mode C, is 300ft below the Sea King, which is maintaining 2100ft Mode C. The next frame at 1144:44, shows that the Sea King has descended to the same level as the AC11, 1800ft (1013mb) [about 2040ft QNH (1021mb)] and the radar contacts of the two ac have merged. At 1144:50, the Sea King indicates 2100ft (1013mb) [2340ft QNH], with the AC11 in its 6 o'clock, at 0.3nm, 300ft below it.

[UKAB Note (2): The validity of the Sea King's Mode C indication, based on the foregoing Debden Radar data, when the contacts merged at 1144:44 is questionable. Once level, the helicopter

consistently maintains 2100ft Mode C, from 4min before the Airprox until the end of the available data, with the exception of two returns – one being at the CPA and the other well after the event. The Sea King pilot's report does not mention any descent nor was any avoiding action taken in the time available. Moreover, he states that the AC11 passed abeam some 200ft below his helicopter. The Debden Radar gives consistently 'valid' data throughout that is replicated by the Cromer Radar recordings, but analysis of the Stansted 10cm Radar recording shows that the Mode C return for 1144:46, was an invalid indication (---). Notwithstanding the tolerances applicable to verified Mode C, it is feasible, therefore, that the Sea King maintained 2100ft (1013mb) and that the close proximity (<200yd) of the two ac has resulted in a spurious Mode C indication being displayed – the SSR processor possibly taking the more reliable altitude data from the enhanced capability Mode S equipped AC11 and relating it, incorrectly, to both ac.]

The MATS Part 1, Section 1, Chapter 11, Paragraph 4, defines a Traffic Service:

'A Traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the avoidance of other traffic is ultimately the pilot's responsibility. The controller shall pass traffic information on relevant traffic, and shall update the traffic information if it continues to constitute a definite hazard, or if requested by the pilot. However, high controller workload and RTF loading may reduce the ability of the controller to pass traffic information, and the timeliness of such information'.

A Basic Service is:

'.....an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. Basic Service relies on the pilot avoiding other traffic, unaided by controllers. It is essential that a pilot receiving this service remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight. Pilots should not expect any form of traffic information from a controller, as there is no such obligation placed on the controller under a Basic Service outside an ATZ, and the pilot remains responsible for collision avoidance at all times. A controller with access to surveillance derived information shall avoid the routine provision of traffic information on specific aircraft, and a pilot who considers that he requires such a regular flow of specific traffic information shall request a Traffic Service. However, if a controller considers that a definite risk of collision exists, a **warning** may be issued to the pilot'.

Timely TI was issued to the Sea King crew about the AC11. Ideally, the information could have been updated as both ac approached each other. However, the controller was occupied handing over another ac and up to the last moment they were 300ft apart vertically. Although there was no requirement under a Basic Service to pass TI to the AC11 pilot, a warning was issued by the controller about the Sea King, albeit at a late stage.

**HQ AIR (OPS)** comments that once informed about the conflicting traffic the Sea King crew appears to not have assimilated the implications and had then become focused on internal cockpit husbandry. Fortunately the AC11 pilot was visual throughout and passed the Sea King by what he considered a safe margin; a wider berth would have been more comfortable and, arguably, demonstrated better airmanship.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequency, radar video recordings, a report from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

It was evident that APP had passed accurate TI about the AC11 to the Sea King crew under the TS when the ac were 6nm apart, including the relative bearing, the fact that the AC11 was on a crossing track and that it was only 200ft below the helicopter's indicated level; the TI did not, however, include the AC11's heading. A CAT pilot Member opined that the Sea King crew would not have been able to spot the AC11 at this range and it seemed that the trainee controller's transmission had either not 'painted' a satisfactory picture for the Sea King crew, or they had apparently not absorbed the full gist of the TI nor understood that the AC11 posed a significant conflict. A controller Member, himself an experienced instructor, opined that if APP had emphasised this or that it was closing steadily it might have had more impact on the Sea King crew. Nevertheless, after acknowledging the TI, the Sea King crew started their cockpit checks, which may have detracted from their lookout. The radar recording reflected that the AC11 continued to constitute a definite hazard after the TI had been passed and there was widespread agreement amongst controller Members that a second transmission of TI would have been helpful and should have been issued, which would likely have prompted the Sea King crew to redouble their efforts to see the other ac. A Member emphasised that controllers should take into account other traffic when issuing vectors and not inadvertently generate a conflict by steering an ac under their control towards another; however, in this instance APP had not issued a vectoring instruction before the Airprox and had merely asked the Sea King crew to report their heading. The ATSI report shows that the controllers were busy with a radar handover after TI was issued, but any requirement for an update must take precedence and an experienced area controller Member stressed that Mentors should take care to ensure that priorities are allocated correctly without detriment to the overall ATS provided. Clearly the Sea King crew had a mutual responsibility to 'see and avoid' the other ac under the TS and could have asked for an update of TI themselves as they had not acquired the AC11 beforehand at a suitable range. A CAT pilot Member suggested that the Sea King pilots might have had different expectations under the TS and stressed that pilots receiving a TS should request updates on notified traffic that they cannot see. Nevertheless, pilots are expected to discharge their collision avoidance responsibilities under a TS without assistance from ATC; generally, the controller would proffer no form of deconfliction advice and if the pilots required deconfliction advice they should ask for an upgrade to a DS.

The AC11 pilot was transiting under a BS from APP and it was clear that APP had passed a warning to him of the presence of the Sea King at a range of ½nm. This was about 5sec before the contacts merged so this was barely in time, but the RT transcript revealed that the AC11 pilot had already seen the helicopter before it flew above him. As it was, the horizontal separation that did obtain was minimal as the contacts merged with, it would seem, the AC11 no more than 300ft vertically beneath the Sea King. The Board accepted that the Sea King's recorded Mode C data at the merge, which suggested that it was at the same level as the AC11, in all probability was incorrect.

In determining the primary cause of the Airprox, one Member considered that 300ft vertical separation did not pose a definite hazard and this Airprox had stemmed from the late sighting of the AC11 by the Sea King crew, who had not assimilated the TI provided. However, it was clear from his own account that the AC11 pilot had seen the helicopter from a good distance away and had watched it as the two ac converged. He was therefore, able to give the Sea King a wider berth if he chose to do so, and the Board routinely recommends pilots to avoid other aircraft both laterally and vertically. The Board concluded, therefore, that the cause of this Airprox was that the AC11 pilot flew close enough to the Sea King to cause its crew concern. However, as the AC11 had the Sea King continually in sight and could have manoeuvred if necessary, the Board agreed that no risk of a collision had existed.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The AC11 pilot flew close enough to the Sea King to cause its crew concern.

Degree of Risk: C.