

AIRPROX REPORT No 2010054

Date/Time: 24 May 2010 1530Z

Position: 5337N 00016E (14nm
ESE OTR)

Airspace: HMR7/LFIR (Class: G)

Reporting Ac Reported Ac

Type: AS365 Hawk

Operator: CAT HQ AIR (OPS)

Alt/FL: 1500ft 1300ft
(RPS 1010mb) (agl)

Weather: VMC CLNC VMC CLNC

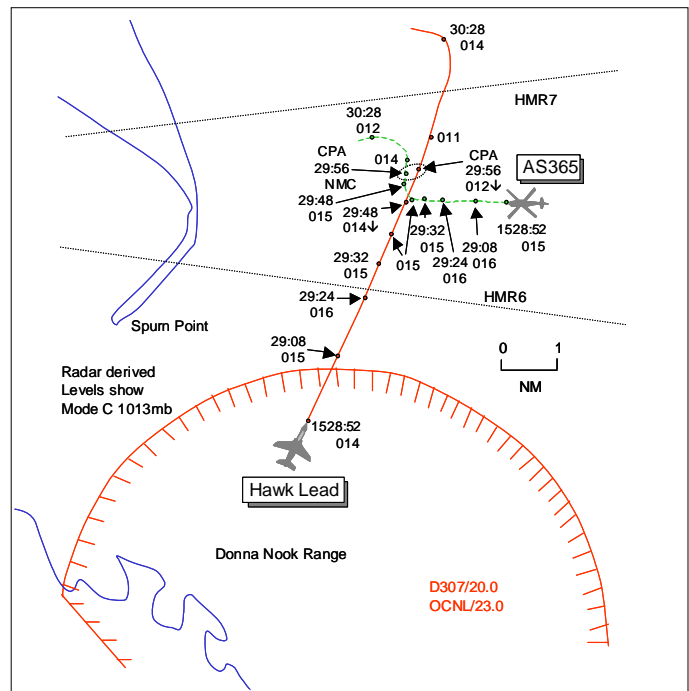
Visibility: >10km 20km

Reported Separation:

NR 500ft V/600ft H

Recorded Separation:

0-2nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE AS365 PILOT reports returning to Humberside from Amethyst A2D platform on HMR7 heading 265° at 1500ft Humber RPS 1010mb and 135kt, and in receipt of an Offshore DS (SSR) from Anglia Radar on 125-275MHz squawking 0234 with Mode C; TCAS was not fitted. The visibility was >10km in VMC and the ac was coloured red/white/blue with strobe, nav and searchlight all switched on. They were informed of activity in Donna Nook range of 2, possibly 3 ac; they set the range frequency on Box 2 to inform them of their position but before contact could be made Anglia informed them of possible conflicting traffic leaving the range. Flying into sun they saw this ac, a black Hawk, in their 10 o'clock range 2nm and closing, appearing to be level and at the same altitude. He immediately took avoiding action by turning N and descending 400ft but, owing to the AOB, visual contact was lost. At the same time they contacted Donna Nook range to advise that they were close to their outbound traffic. On a N'y track they became visual with a Hawk in their 3 o'clock below their level on a parallel track and then diverging. They re-established their course and height and made visual contact on a second Hawk which turned W'bound and climbed with no conflict. He assessed the risk as medium to high.

THE HAWK PILOT reports completing a training sortie in Donna Nook range and initiating a 2-ship formation rejoin, and in receipt of a BS from Donna Primary squawking 7002 with Mode C. The visibility was 20km in VMC and the ac was coloured black with nose light and HISLs switched on. Heading 024° at 300kt and 1300ft QFE 1013mb his wingman had completed his safety checks and as they acknowledged they were told of helicopter traffic and to standby for further details. By the time the update on the helicopter was called they had already seen it 15° R of the nose and 1000m ahead about 200ft higher turning across his nose from R to L to roll out parallel to his heading, now in his 11 o'clock. He descended 300ft and maintained wings-level in order to remain visual with the helicopter, estimating they passed 500ft vertically and 600ft horizontally at the CPA. He rocked his wings as he passed the helicopter on its RHS to acknowledge the fact of his visual sighting. He assessed that there was no risk of collision.

THE ANGLIA RADAR CONTROLLER reports the AS365 lifted from Amethyst field climbing to altitude 1500ft inbound to Humberside and there was no traffic to affect. The flight was provided with an Offshore DS using SSR only. Two ac in Donna Nook range were observed orbiting at 1500ft so the AS365 crew were given a 'heads-up' as the helicopter would pass about 3-4nm N of Donna Nook; the crew acknowledged. As the AS365 approached the range he gave TI on the 2 ac at which point 1

of the ac turned N towards the helicopter and the pilot reported visual with the military ac. He asked the pilot if he was "happy to continue" and he replied, "affirm". The next radar sweep showed the AS365 turning hard R (90°) with the returns merging at similar levels. The AS365 Capt reported that he was, "...going to file on that one".

ATSI comments that the AS365 flight established communication with Anglia Radar (situated at Aberdeen) at 1521. The pilot reported airborne from the Amethyst inbound to Humberside, requesting 1500ft. The helicopter was identified and provided with an Offshore DS, SSR only; altitude 1500ft was approved.

Just over 2min later, Anglia Radar informed the pilot of the AS365, "*Just a heads up there's at least two aircraft in Donna Nook err might be three actually and all indicating er fifteen hundred feet at the moment doing the usual er up and down the coast so er keep a lookout that way.*" The pilot reported copying the information. At the time, the helicopter was approximately 12nm ENE of Donna Nook, on a projected track that would pass about 1.5nm N of the Danger Area boundary.

At 1528:48, Anglia Radar contacted the AS365 flight, "*traffic in Donna Nook is er just er I was about to say maintaining quite a tight ????? about four miles south of Spurn but one's just er gone off towards you he's indicating thirteen hundred feet that's in your er ten o'clock about four miles.*" The pilot commented, "*we're good VFR.*" Anglia updated the TI at 1529:10, "*Okay he's tracking towards you now fourteen hundred feet if nothing sighted right twenty degrees report the heading.*" The pilot responded, "*We are visual.*" After the controller asked, "*are you happy to carry on*", the pilot replied, "*Affirm.*" Thereafter, the military traffic continued towards the AS365, resulting in the helicopter pilot taking avoiding action.

The AS365 pilot stated, in his subsequent filed report, that he had been inbound on HMR 7. By definition, HMRS have no lateral dimensions but in the Anglia Radar Area of Responsibility the vertical operational limits are from 1500ft amsl up to and including FL60. Inbound flights will normally plan to fly at 1500ft or 3000ft amsl. Under the MOU between Aberdeen ATC and the helicopter companies operating in the North Sea, the default FIS which will be provided, within surveillance coverage, is an Offshore DS. Signatory helicopters will automatically be provided with the appropriate default FIS and there is no need for a pilot to request the service.

The MATS Part 1, Section 1, Chapter 11, states the definition of a DS: 'A Deconfliction Service is a surveillance based ATS where, in addition to the provisions of a Basic Service, the controller provides specific surveillance derived traffic information and issues headings and/or levels aimed at achieving planned deconfliction minima, or for positioning and/or sequencing. However, the avoidance of other traffic is ultimately the pilot's responsibility'. Additionally: 'A controller shall provide traffic information, accompanied with a heading and/or level aimed at achieving a planned deconfliction minima against all observed aircraft in: Class F/G airspace, active TRAs, active MTAs. The deconfliction minima against uncoordinated traffic are: -

5nm laterally (subject to surveillance capability and CAA approval); or

3000ft vertically and, unless SSR Mode 3A indicates that the Mode C data has been verified, the surveillance returns, however presented, should not merge.

High controller workload or RT loading may reduce the ability of the controller to pass deconfliction advice and the timeliness of such information. Furthermore, unknown aircraft may make unpredictable or high-energy manoeuvres. Consequently, it is recognised that controllers cannot guarantee to achieve these deconfliction minima; however, they shall apply all reasonable endeavours'.

On this occasion, it was reported that the Anglia Radar workload was medium to high. The controller issued early TI about activity in Donna Nook and, subsequently, offered an avoiding turn to the pilot of the AS365. In the event, the pilot reported visual with the traffic and opted to continue with it in sight.

There is no LoA between Anglia Radar and Donna Nook. The Aberdeen MATS Part 2, with reference to the Donna Nook Danger Area, states 'The Range Controller is not providing an ATC

service to aircraft using the weapons ranges and coordination cannot be effected to assist in the resolution of traffic conflicts’.

THE DONNA NOOK RSO reports a pair of Hawks was booked traffic and had been on range for 20min prior to the incident. Both ac were requested to squawk 7002 (Danger Area conspicuity) on joining the range and were on Range Primary UHF frequency. The Hawk pair moved from the Southern cct into the Northern cct (closer to Spurn Head) at 1515 and then completed 4-5 patterns before Hawk 2 pilot reported downwind for a last pass before departing the range. As there was no conflicting traffic in the area he took no further action. As Hawk Lead pilot called ‘switches safe, departing N’ a helicopter flight called on VHF but, because of the overlapping transmissions, he misheard the c/s; however, he immediately informed Hawk Lead of the helicopter’s presence on the Heli-route and that he would obtain a height. He called the helicopter flight using the wrong c/s, however the pilot responded that he had a military ac flying directly towards his ac. He requested the helicopter’s height and then transmitted on UHF that 1 of the formation was flying directly at the helicopter. The helicopter pilot replied he was at 1500ft but that it was too late as the other ac had just missed him. He told Hawk Lead of this and was told that he had the helicopter visual and had taken avoiding action. This information was passed to the helicopter pilot who replied he too had taken avoiding action and because, “he was carrying passengers he would be filing”. He informed Hawk Lead of this before the formation left his frequency going enroute. He then called Humberside to ascertain the helicopter’s direction of travel and was told the helicopter’s correct c/s, that it was inbound and that the miss distance for the Airprox was very close. Anglia Radar then telephoned to ascertain the details of the range traffic. He opined that the first information about the helicopter’s presence had been the pilot’s initial call which coincided with the Hawks checking in with a ‘switches safe’ transmission, a mandatory call. He thought that there was not enough time to gain accurate position information from the helicopter flight and he had elected to notify the departing Hawks that it was in the area before interrogating the helicopter flight further.

HQ AIR ATM SAFETY MANAGEMENT reports the transmission from the AS365 pilot to Donna Nook at 1529:20 was co-incident with the transmission from Hawk Lead that they were, “departing to the N via Yankee.” [UKAB Note (1): At this point, the Claxby radar replay shows that the AS365 is approximately 15° R of the Hawk’s track at a range of 2.2nm, both ac showing FL016 (1500ft RPS 1010mb).] Approximately 5sec elapsed between the end of the Hawks Lead’s transmission and the beginning of the transmission at 1529:31 in which the RSO passed a warning to Hawk Lead on the AS365, “Hawk c/s roger the Barnsley 1009, the Humber 1010 one helicopter on the route just calling me now I’ll find out what he’s doing standby.” At this time, the relative bearing was similar, with approximately 1.5nm separation existing.

[UKAB Note(2): The RSO then asked the AS365 pilot to pass his details and was told that a military ac was pointing at them. The radar shows the AS365 is just passing through the Hawk’s 12 o’clock range 0.7nm both ac indicating FL015 (1400ft RPS 1010mb). The RSO then asked the AS365 pilot for his height which was given as 1500ft. Immediately afterwards at 1529:47 the RSO transmitted, “Helicopter’s at 1500ft on the route believed to be 12 o’clock to one of you;” the Hawk Lead replied, “Yeah, passing him now.” As the RSO starts his transmission the AS365 is seen to have executed a hard R turn rolling out on a N’ly heading at FL015 in the Hawks 11 o’clock range 0.3nm, the Hawk indicating FL014. The CPA occurs on the next sweep at 1529:56, the Hawk having overtaken the AS365 on its RHS, the AS365 showing NMC with the Hawk indicating FL011, separation 0.2nm. The Hawk levels at FL011 before then climbing up to FL014 and executing a L turn when 2.2nm to the NNE of the AS365, which is turning L through a heading of 260°, having descended to FL012.]

RSOs at AWRs operate without the aid of surveillance equipment. Consequently, their awareness of ac operating on the fringes of the AWR is wholly dependent upon the pilots of such ac making information calls to them, under the auspices of the Danger Area Activity Information Service (DAAIS). As a result of this limitation and the fact that ac operating within the area are unable to comply with Rule 17 (Rules of the Air and ATC Regulations, 1985), the Military AIP entry for EGD307 (Donna Nook) states that ‘pilots in the vicinity (of the range) are strongly advised to make use of a radar service’. Furthermore, whilst RSOs do not formally agree the provision of a type of service with aircrew using the ranges, in effect they provide a BS.

CAP 774 states that under a BS, 'if a controller considers that a definite risk of collision exists, a warning may be issued to the pilot'. In this case, the RSO recognised the c/s of the helicopter as being that of one of the North Sea ac that operated from Humberside airport. He quickly perceived the risk of collision with the Hawk formation departing the AWR to the N and passed this information to them as quickly as possible, before returning to the helicopter to ascertain further information. This further information, however, was obtained and passed at around the CPA and immediately after, thereby having no bearing on the occurrence.

From an ATM perspective, the RSO reacted quickly and correctly to what he perceived to be a risk of collision, under the terms of a BS within CAP774.

HQ AIR (OPS) comments that the AS365 was visual with the Hawk ac very early on and could have taken the DS suggested heading change to maximise separation, however he elected to continue on track until the separation margins were eroded beyond what he was prepared to accept. Unfortunately, his choice of turn direction for separation put him unsighted on the Hawk and on the same heading, this would have been an uncomfortable situation; maintaining track and adjusting height would have been far more effective at maximizing separation. The Hawk (on a BS) was nonetheless given TI on the helicopter and took avoiding action to achieve an acceptable separation. Greater separation would probably have been achieved were it not for the simultaneous transmissions of the AS365 and Hawk Lead.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

Although there had been a good exchange of information between Anglia and the AS365 flight, which gave the crew early warning of the Hawks presence on the AWR, a combination of the helicopter's planned track (3-4nm N of the range boundary) and the Hawk's rapid departure N'bound from the range led Members to agree that the time available to resolve the conflict was minimal. Anglia had passed updated TI at 1528:48, when the controller noticed Hawk Lead tracking N'ly, and had then immediately given a further updated TI and an avoiding action R turn of 20°; the Board noted that, although it did not affect the outcome, the controller did not use the term "avoiding action". One controller Member thought that Anglia, whilst providing an Offshore DS, was late in giving avoiding action and that it should have been passed during the first updated TI transmission when separation had already reduced to 4nm. Another Member believed that the service should have been limited owing to the helicopter's planned track passing less than 5nm from the Danger Area with known activity inside it as Anglia was endeavouring to provide Deconfliction minima. However, in the end Members agreed that owing to the short time period available Anglia, who was unaware of the Hawk pair's intentions, had discharged his responsibilities and when the AS365 crew reported that they were happy to carry on after sighting the Hawk, they then became responsible for maintaining their own separation from it. The AS365 crew had then become concerned about the Hawk Lead's flightpath and elected to turn hard R whilst they were trying to establish RT contact with Donna Nook. The RSO had done well in the limited time available and informed the Hawk Lead pilot that there was a helicopter on the HMR as the formation reported departing the range. Hawk Lead had seen the AS365 and had taken adequate visual separation on the helicopter as he passed clear to its R and below. The Hawk had become unsighted to the AS365 crew as they turned away until they re-sighted it passing on their RHS, understandably uncomfortable, as its proximity was closer than they expected. In the end Members agreed that all parties had acted appropriately during this rapidly unfolding evolution. This allowed the Board to conclude that the incident had been a conflict in the Class G airspace where the Hawk Lead's visual sighting and action had ensured that any risk of collision was removed. Although there is no compunction to do so, both flights could mitigate similar risks in future: the helicopter crew by adjusting their routeing and/or making an earlier call to the Range, and the Hawk crews by flying over or under the normal operating levels of the HMR.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Conflict in Class G airspace.

Degree of Risk: C.