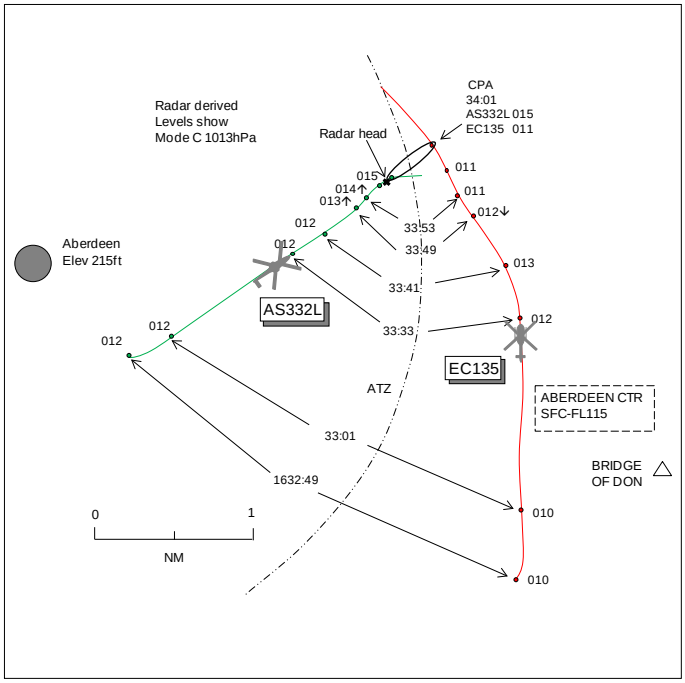
AIRPROX REPORT No 2012173

Date/Time:	20 Dec 2012 1634Z (Night)	
Position:	5713N 00207W (2·5nm ENE Aberdeen - elev 215ft)	
Airspace:	ATZ/CTR	(*Class: D*)
	Reporting Ac	*Reported Ac*
Type:	AS332L	EC135
Operator:	CAT	Civ Comm
Alt/FL:	1000ft QNH (1009hPa)	1000ft QNH (1009hPa)
Weather:	VMC CLBC	VMC CLBC
Visibility:	10km	>10km
Reported Separation:	Nil V/1000m H	100ft V/400m H
Recorded Separation:	100ft V/0·8nm H OR 400ft V/0·3nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE AS332L PILOT reports outbound to an off-shore rig from Aberdeen, VFR and in receipt of an ATS from Aberdeen Tower on 118·1MHz squawking 3671 with Modes S and C; TCAS was not fitted. The visibility was 10km flying 1500ft below cloud in VMC. They departed RW16 on a SHRUB VFR departure. At the same time another flight, the EC135, called departing the Aberdeen Royal Infirmary (ARI) on a VFR departure towards the Bridge of Don for Aberdeen. After take-off they turned L passing 500ft towards SHRUB and climbing through 700ft called 'visual' with the EC135, whose pilot was told to route to the Bridge of Don and join via the radar head. The EC135 pilot was asked if he could see their helicopter and he responded 'yes'. On reaching Bridge of Don the EC135 continued N towards Balmedie and its pilot was asked by ATC again if he could see their helicopter and the pilot replied 'yes'. Heading 090° at 120kt and 1000ft QNH 1009hPa the NHP requested a R turn to slot in behind the EC135 as closure seemed inevitable. The EC135 flight was instructed by ATC to take avoiding action and make a L turn. They did not hear the EC135 pilot respond and the helicopter continued on a N'ly heading. Shortly after this the EC135 flight made a L turn which placed it on a direct collision course. The HP initiated an expeditious climb to 1500ft to avoid, estimating the EC135 passed 1000m ahead with a high risk of collision.

THE EC135 PILOT reports inbound to Aberdeen, VFR having lifted from Aberdeen Hospital and in communication with Aberdeen Tower on 118·1MHz squawking a discrete code with Modes S and C; TCAS was not fitted. The visibility was >10km flying clear below cloud in VMC and the ac's red strobes, position and landing lights were all switched on. He was told of traffic departing RW16 and proceeding NE'bound and was told to remain to the E and head towards the radar head on downwind L for RW16. He levelled at 1000ft QNH and when approaching the radar head heading 350° at 100kt the paramedic in the LH seat reported visual with an ac in his 8 o'clock at approximately 1nm. It moved closer at the same height appearing to be heading straight for their ac before moving to their 9 o'clock and finally passing close behind, about 400m away and 100ft below, he thought. There was a 220/40kt wind blowing, he thought, which may have meant the closing speed between ac may have been misjudged. Although he had not seen the other helicopter he was not concerned by its proximity as he was sure the other ac's crew had their helicopter visual and that it was bound to pass behind, which it eventually did. He took no evasive action but after the event the Tower controller

was concerned by how close the ac had passed each other and reminded both crews that under the new night VFR rules pilots were responsible for their own collision avoidance.

THE OUTGOING ADC reports the AS332L departed RW16 on a SHRUB VFR and the EC135 flight called lifting ARI, as briefed, not above 500ft. The EC135 flight was instructed to track E with the AS332L departing. The AS332L flight was given TI on the EC135 and both crews reported each other in sight. The EC135 pilot was given joining instructions for RW16. Whilst this was taking place his relief ADC was plugging-in waiting for a handover and once he was satisfied with the situation he commenced the handover. Subsequently the relief controller checked with the AS332L pilot that he was still visual with the EC135 but the AS332L pilot was not. The relief controller issued instructions to the EC135 flight and the AS332L pilot reported he would be filing an Airprox.

THE INCOMING ADC reports he had just plugged-in to the ADC position and was receiving a handover from the out-going ADC. During the handover the AS332L was departing VFR to the E at night in poor Wx conditions but still in VMC. As the AS332L departed an EC135 flight at the ARI reported lifting to return to Aberdeen. TI was passed to, and acknowledged by, both helicopter crews and the EC135 pilot was instructed to initially route towards the Bridge of Don. The EC135 pilot then reported visual with the AS332L and was cleared to route to L base RW16. He accepted the position and the outgoing ADC unplugged. As the EC135 joined downwind the AS332L turned L to the E at about the midpoint of RW16. The AS332L crew then requested to deconflict from the EC135 by "slotting behind". Both ac were continuously visible to him at this point but due to the Wx and light conditions he was unsure of their relative heights. As a precaution he gave avoiding action to the EC135 flight to turn L away from the AS332L, the L turn to allow the pilots to keep the other traffic visual. This was not acknowledged by the EC135 crew who continued downwind. The AS332L was then observed to climb over the EC135 and the AS332L crew reported that they, "would be filing on that one", which he acknowledged.

ATSI reports that the Airprox was reported by the pilot of an AS332L when it came into proximity with a EC135 on the boundary of Aberdeen ATZ within the Class D CTR, airspace extending from the surface to FL115, at 1634:02 UTC (night).

The AS332L was operating VFR departing Aberdeen for an offshore oil rig and was in receipt of an ACS from Aberdeen Tower on frequency 118·1MHz.

The EC135 was operating VFR on a flight from Aberdeen Royal Infirmary to Aberdeen Airport and was in receipt of an ACS from Aberdeen Tower on frequency 118·1MHz.

CAA ATSI had access to written reports from the pilot of the AS332L and the Aberdeen AIR controller, area and local radar recordings together with RT recordings of Aberdeen Tower.

The Aberdeen METARs are provided for 1620 and 1650 UTC:

EGPD 201620Z 12022G34KT 8000 –RA FEW018 SCT022 BKN026 06/03 Q1007 NOSIG= and EGPD 201650Z 13024G37KT 6000 RA FEW018 BKN021 06/03 Q1007 NOSIG=

At 1630:30 the AS332L flight was given take-off clearance with a L turn out from RW16 by the Aberdeen AIR controller.

At 1631:20 the EC135 pilot contacted the Aberdeen AIR controller, lifting out of Aberdeen Royal Infirmary (situated approximately 3·5nm SE of Aberdeen Airport) requesting joining instructions for Aberdeen Airport. The Aberdeen AIR controller advised, *"(EC135 c/s) roger I've just got a helicopter joining er just lifting will be going left er V F R not above a thousand feet sort of tracking northeast so if you can just track towards Bridge of Don for the moment"*; the EC135 pilot replied, *"(EC135 c/s) wilco"*. The ATSU advised that the routeing to the Bridge of Don for the EC135 was to give both pilots time to be given TI and to visually acquire each other.

At 1631:50 the Aberdeen AIR controller passed TI to the AS332L flight, *"(AS332L c/s) EC135 c/s just lifting A R I just tracking east at the moment V F R not above a thousand feet"*; the pilot replied, *"yeah copied that traffic (AS332L c/s)"*.

At 1632:30 the AS332L crew reported turning E and at 1632:35 the pilot of the EC135 advised, *"and (EC135 c/s) that's us Bridge of Don are we happy you happy for us to come inbound now"*. The AIR controller replied, *"(EC135 c/s) yeah that traffic's just airborne tracking northeast now so if you track east of the radar head and then left base for runway one six V F R not above a thousand feet Q N H one zero zero seven"*.

At 1632:50 the pilot of the EC135 replied, *"one zero zero seven set visual with that traffic and er we'll continue er north around the head er for er one six (EC135 c/s)"*. The ac were 2·6nm apart.

At 1633:00 the Aberdeen AIR controller updated the TI to the AS332L flight, *"(AS332L c/s) er the EC135 c/s er just I believe west of Bridge of Don this time tracking north he's visual with you"*. The crew replied, *"we're visual with him as well (AS332L c/s)"*.

The written report from the Aberdeen AIR controller stated that both ac had reported having each other in sight and a handover of controllers took place.

At 1633:30 the pilot of the AS332L transmitted, *"yeah (AS332L c/s) so we slot in behind that er (EC135)"*. The in-coming Aberdeen AIR controller asked of the AS332L, *"(AS332L c/s) do you have him visual he's not above a thousand at the moment".* At 1633:33 the EC135 was tracking N with the AS332L 1·5nm W, tracking NE, converging. The crew of the AS332L stated, *"er he's er he might not be above a thousand feet but we're gonna nail him so we're gonna turn right now"*.

At 1633:41 the 2 ac were 1·2nm apart, converging, the EC135 having turned L about 30°. The Aberdeen AIR controller gave avoiding action to the EC135 flight (1633:45), *"???? ???? (unintelligible words) (EC135 c/s) avoiding action please turn left immediately left immediately"*; this was not acknowledged by the pilot of the EC135.

The ATSU advised that the incoming Aberdeen AIR controller was watching both ac out of the window prior to the Airprox. He became concerned at the relative positions of the 2 ac and believed that neither pilot was taking sufficient action to avoid the other. Based on the AIR controller's visual sighting of the 2 ac, he gave avoiding action to the EC135 to turn to the L. The GMC controller, who was watching the situation at the time, confirmed that turning the EC135 L appeared to be the most appropriate course of action to resolve the situation.

[UKAB Note (1): The 2 ac close and at 1633:49, separation is 0·8nm with the AS332L having commenced a climb, passing FL013, and the EC135 having commenced a descent, indicating FL012. Four seconds later at 1633:53 the AS332L is climbing through FL014, 0·6nm to the W of the EC135 which is level at FL011. The CPA occurs at 1634:01 as AS332L continued to climb to FL015 and turned R with the EC135 passing to its NE tracking NW'ly at a range of 0·3nm maintaining FL011.]

The pilot of the AS332L reported on frequency that he would be filing an Airprox.

CAP493, the Manual of Air Traffic Services Part 1, Section 3, Chapter 4, Paragraph 3.1 states:

> 'Separation standards are not prescribed for application by ATC between VFR flights or between VFR and IFR flights in Class D airspace. However, ATC has a responsibility to prevent collisions between known flights and to maintain a safe, orderly and expeditious flow of traffic. This objective is met by passing sufficient traffic information and instructions to assist pilots to 'see and avoid' each other....'

Having passed TI and received reports from both pilots that they had each other in sight when they were 2·6nm apart, the outgoing Aberdeen AIR controller had a reasonable expectation that the pilots would discharge their responsibility for collision avoidance appropriately.

When the pilot of the AS332L reported that they were in conflict with the EC135 and needed to take action to avoid, the incoming Aberdeen AIR controller became concerned that the confliction between the 2 ac was not being resolved and issued avoiding action to the pilot of the EC135. As the instruction was not acknowledged by the pilot of the EC135 and no discernible track difference can be observed on radar it is not possible to tell if the pilot of the EC135 responded to the instruction.

The Airprox occurred in Class D airspace when an EC135 and an AS332L flew into conflict with each other while both flights were operating VFR not above 1000ft. Both flights were passed appropriate TI and reported each other in sight prior to the Airprox. When the pilot of the AS332L advised that they needed to turn R to avoid the EC135 and it appeared that the confliction had not been resolved the incoming Aberdeen AIR controller gave avoiding action in an attempt to resolve the situation.

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 authorities.

There appeared to be different viewpoints of this incident by all parties. ATC had assimilated the potential for conflict when the EC135 pilot reported lifting from the ARI and the flight was issued routeing instructions towards the Bridge of Don, away from the AS332L's intended track on the SHRUB departure. This action gave the ADC time to discharge his responsibilities by passing TI to both VFR flights on each other and, after ensuring both crews were visual with each other, he issued the EC135 pilot inbound routeing instructions towards the downwind leg for RW16; this had placed the ac on converging tracks. Although this incident occurred within Class D CAS both crews were VFR and were responsible for maintaining their own separation from each other. Members noted that prior to the change in night VFR rules, both of these helicopter flights would have been SVFR at night in the CTR and would have been afforded separation from each other by ATC. The incoming controller was concerned as he could see the potential for confliction with the helicopters continuing towards each other but without any resolution visible. The AS332L crew asked if they had to "slot-in" behind the EC135 (turn R and give-way), apparently expecting confirmation that they could turn off their assigned routeing. Members agreed that at this stage the crew should have executed the turn to resolve the conflict and informed ATC of their actions. The ADC had asked the crew if they were visual with the EC135 and reiterated that the helicopter was not above 1000ft to which the crew replied that they were going to turn R. The ADC did not acknowledge the AS332L crew's intended turn but instead gave the EC135 pilot a L turn towards the AS332L as, from his position in the VCR, this was the best way to resolve the situation. However, the EC135 had picked up a strong tailwind when routeing N'ly which had led to the geometry changing whereby the EC135 was going to cross ahead of the AS332L and this was not apparent to the ADC. Similarly, the AS332L crew would have had to execute a large heading change into the strong SE'ly wind to effect a significant change of flight path. The EC135 pilot did not acknowledge the instruction to turn L but it almost certainly placed doubt in the AS332L crews mind as to his intentions. In the end, at a late stage, the AS332L crew executed a climb to resolve the confliction, the R turn only becoming apparent on the radar recording at the CPA. This led the Board to agree that the AS332L crew did not take timely action to give-way to the EC135, as required by the RoA, which had caused the Airprox.

Looking at the risk element, although the EC135 had right of way it appeared its pilot was content to follow the ATC routeing instruction towards the downwind leg, perhaps in the mistaken belief that positive control from ATC would resolve any traffic confliction. The pilot reported being sure the AS332L was going to avoid his helicopter, without visually acquiring it himself, content with the information from the paramedic in the LH seat. It is unknown why the EC135 pilot did not

acknowledge the avoiding action L turn issued as they approached the CPA. That said, the Board acknowledged that the AS332L crew had good SA, were fully aware of the deteriorating situation and had eventually taken positive action which ensured that any risk of collision was effectively removed.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The AS332L crew did not take timely action to give way to the EC135.

Degree of Risk: C.