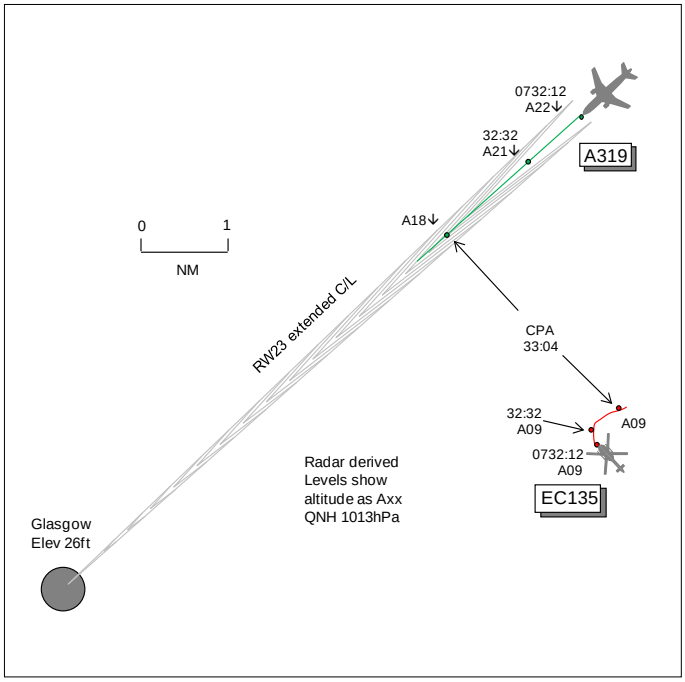
AIRPROX REPORT No 2012146

Date/Time:	13 Sep 2012 0733Z	
Position:	5555N 00416W (6nm FIN APP RW23 Glasgow - elev 26ft)	
Airspace:	CTR	(*Class: D*)
	Reporting Ac	*Reported Ac*
Type:	A319	EC135
Operator:	CAT	Civ Comm
Alt/FL:	2000ft↓ (QNH)	800ft (agl)
Weather:	IMC KLWD	VMC CLBC
Visibility:		10km
Reported Separation:	400ft V/2·4nm H	500ft V/3nm H
Recorded Separation:	900ft V/2·8nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE A319 PILOT reports inbound to Glasgow, IFR and in communication with Glasgow Tower on 118·8MHz squawking an assigned code with Modes S and C. Established on the ILS RW23 heading 231° at 180kt in cloud, traffic was seen on TCAS indicating 100ft below, he thought, approaching from 5nm and reducing. At 6nm from touchdown descending through 2000ft QNH, the traffic was seen on TCAS to pass 400ft below and 2·4nm clear on their LHS but was not seen visually. No avoiding action was taken as the traffic was passing behind.

THE EC135 PILOT reports being unaware of an Airprox until contacted by RAC Mil. At the time of the incident he was in receipt of an Approach Control Service, he thought [actually a RCS], from Glasgow on 119·1MHz, squawking a discrete code with Modes S and C; TCAS 1 was fitted. The Wx under the cloudbase was fine in VMC with 10km visibility and the helicopter was coloured dark blue with strobe lights and 2 landing lights switched on. The flight involved flying orbits around a lake approx 080° range 6nm Glasgow at 800ft agl and 15kt. All CAT traffic was being warned of his presence, location and altitude and he was being informed of ac on the approach. He did not see the other ac visually but noted it on TCAS some 8nm range and estimated it passed 500ft vertically clear and 3nm horizontally.

THE GLASGOW TOWER CONTROLLER reports operating as the Air controller when the A319 flight was transferred to his frequency at approximately 7nm on the ILS RW23. After initial contact the pilot requested information on a return he had on TCAS approximately 2·5nm away. He replied it was a helicopter, VFR just under 3nm away moving away. He advised the pilot that he would pass on to the Radar controller that the pilot felt that TI should have been passed.

ATSI reports that the Airprox occurred at 0733:05 UTC, 6nm to the NE of Glasgow Airport, on final approach for RW23, within the Glasgow Control Zone (CTR) Class D airspace, between an A319 and an EC135. The Glasgow CTR extends from the surface to an altitude of 6000ft.

The A319 flight was IFR and inbound to Glasgow from Belfast International Airport, in receipt of a RCS initially from Glasgow Radar on 119·1MHz before being transferred to Glasgow Tower on frequency 118·8MHz. The EC135 flight departed a heliport 4·75nm E of Glasgow Airport, VFR and was tasked to conduct a search in the vicinity of a small lake 6·5nm ENE of Glasgow Airport. The

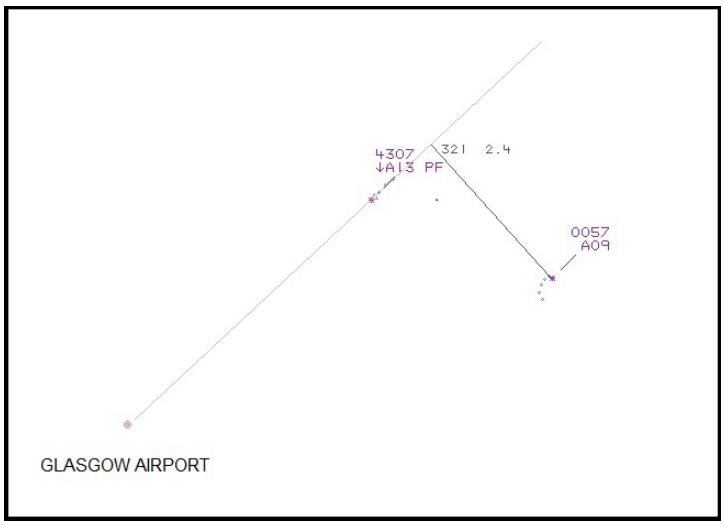
EC135 flight was in receipt of a RCS from Glasgow Radar on frequency 119·1MHz. The controller workload for Radar and Aerodrome Control was reported as low with no unserviceabilities.

CAA ATSI had access to RT recordings for Glasgow Tower and Radar together with area radar recording and written reports from the controller, ATSU and from the 2 pilots concerned. The A319 pilot did not advise ATC of his intention to file an Airprox.

The Glasgow METAR was: EGPF 130720Z 23013KT 8000 VCSH SCT025 BKN037 11/09 Q1013=

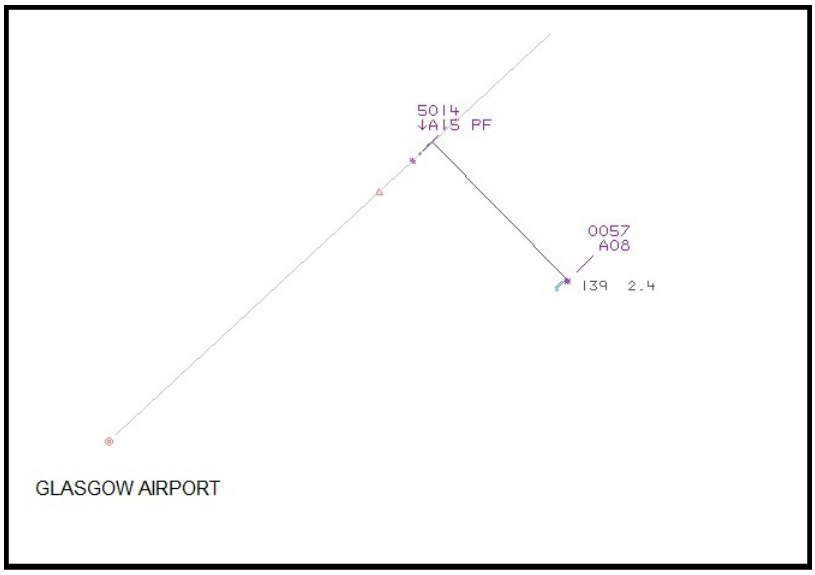
At 0708:32, the EC135 pilot contacted Radar and reported getting airborne on task from a Helipad 4·75nm E Glasgow Airport. This required the EC135 crew to search for a missing person in the vicinity of a small lake situated 3NM SE of the RW23 C/L at a point 4·6nm from touchdown. The EC135 starts to show on radar at 0710:26 as it passes an altitude of 100ft in the climb, 4·4nm E of the airfield.

At 0712:17, the EC135 (squawk 0057), is shown on task commencing a RH orbit over the lake at an altitude of 900ft and position, 2·4nm SE of the RW23 C/L. An earlier inbound (squawk 4307) is shown on the ILS (Picture 1).



Picture 1. (0712:17)

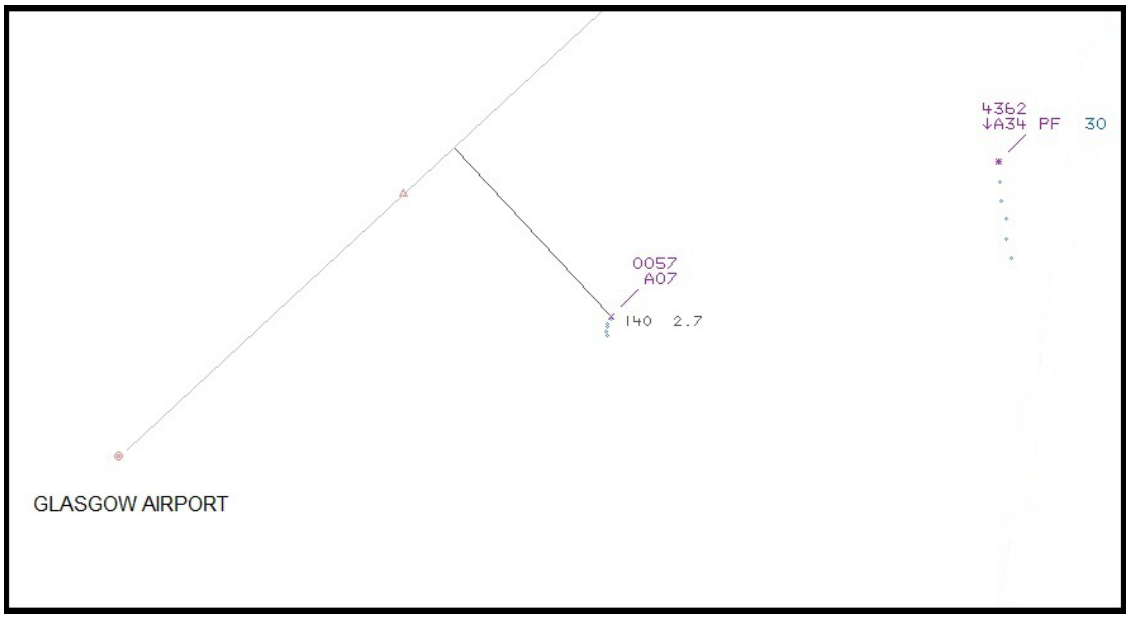
At 0715:57, another earlier inbound (squawk 5014) is shown on the ILS, with the EC135, 2·4nm SE of the RW C/L at 800ft.



Picture 2. (0715:57)

At 0722:02, the A319 flight contacted Glasgow Radar and the controller advised, *"(A319 c/s) vectors for the ILS approach Runway two three information mike you're number one in traffic there's no speed restriction and you're approximately 46 miles from touchdown.*"

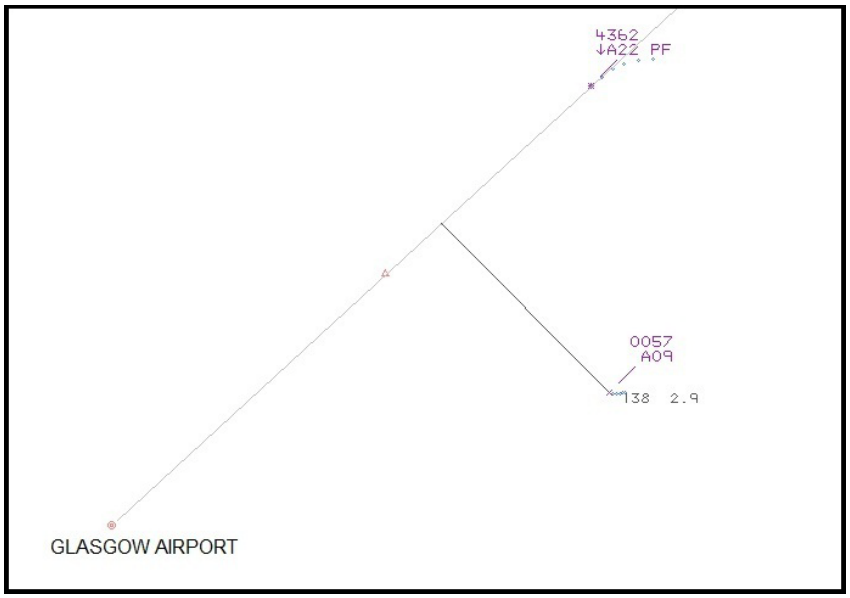
At 0730:01, radar shows the A319 (squawk 4362) passing an altitude of 3400ft, 10·9nm NE of the airfield. The EC135 is shown in a RH orbit around the lake at 700ft and positioned 2·7nm SE of the RW C/L (Picture 3).



Picture 3. (0730.01)

At 0730:03, the A319 flight is given a closing heading and instructed to report established on the LOC. Shortly afterwards the A319 flight is instructed to descend altitude 2000ft and cleared for the ILS approach RW23.

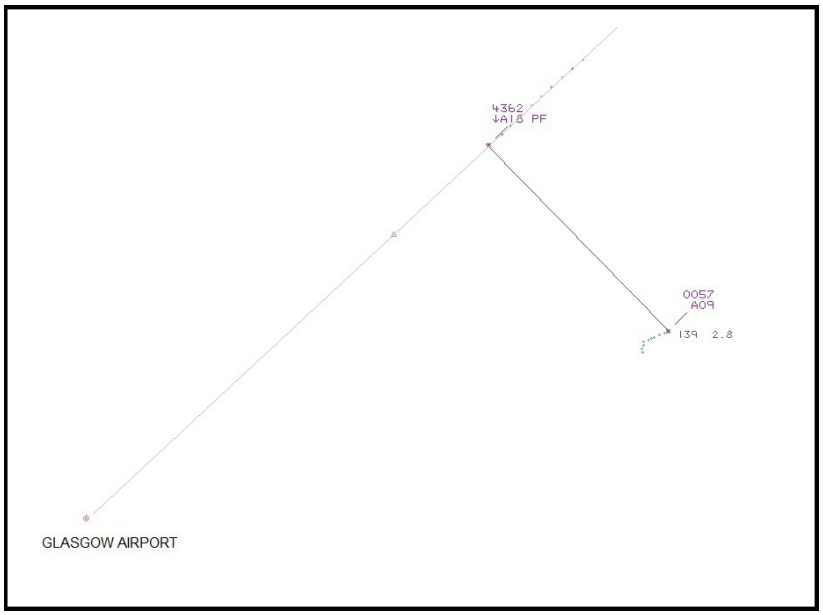
At 0732:12, the A319 is established on the localiser 7·5nm from touchdown at 2200ft, with the EC135 in the A319's half past 10 at a range of 3·7nm. The EC135 is in the RH orbit around the lake at 900ft and positioned 2·9nm from the C/L (Picture 4).



Picture 4. (0732:12)

The A319 was transferred to Glasgow Tower on frequency 118.8MHz. At 0732:31, the A319 flight is instructed to continue approach and 20sec later is cleared to land. At this point the distance between the 2 ac is 3·2nm.

At 0733:04, the A319 is 5·8nm from touchdown indicating 1800ft, with the EC135 in the A319's 9 o'clock at a range of 2·8nm (CPA), indicating 900ft. The EC135 is shown tracking NE (Picture 5).



Picture 5. (0733:04)

At 0733:11, the A319 crew advised, *"Glasgow Tower (A319 c/s) th – there's traffic on our TCAS two and a half miles away at seven hundred feet ????? six hundred feet are you working the traffic."* The Tower controller replied, *"(A319 c/s) there's traffic er working approach in your er nine o'clock at the moment just coming into your eight o'clock I think er er range about three miles moving away."* The A319 pilot responded, *"Yeah you might be able to see him but we can't see him."* The Tower controller informed the A319 pilot that he would pass on the message to the radar controllers.

At 0736:38, the Tower controller advised the A319 crew that the traffic mentioned was the EC135 operating VFR and just under 3nm away. The Tower controller added that TI would not normally be passed on such traffic, but that radar had agreed to pass TI to further inbounds if it was of concern.

At 0737:26, the EC135 pilot reported task complete and was shown to depart the area, landing at the City site at 0741:05.

During the ILS approach the crew of the A319 became concerned about the relative position of unknown traffic approaching them from the L and considered that the traffic was too close. The A319 pilot's written report indicated that TCAS showed the other ac 100ft below, approaching from 5nm, but that no avoiding action was required as the traffic was passing behind.

The Manual of Air Traffic Services (MATS) Part 1, states:

> 'Section 3, Chapter 4, Page 1, Paragraph 3:
>
> The minimum services provided to VFR flights in Class D airspace are specified at Section 1, Chapter 2, paragraph 2. 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 as specified at Section 3, Chapter 1, paragraph 2.'

The UK AIP ENR 1-4-5 (23 Aug 12) states:

> 'Separation within Class D Airspace:
>
> IFR Flights
>
> Separation provided between all IFR flights by ATC. Traffic information provided on conflicting VFR Flights.
>
> VFR Flights
>
> Traffic information provided on IFR and other VFR flights to enable pilots to effect own traffic avoidance and integration.'

Had the EC135 flight been IFR, the required separation would have been 3nm or 1000ft. However, the EC135 flight was operating VFR and was being monitored by radar as it operated over the fixed geographical location. When the A319 flight was transferred to the Tower, separation was in excess of 3nm and 1000ft. The controller had judged that TI was not required. At the closest point the minimum separation was 2·8nm and 900ft.

The A319 crew was not aware of the EC135. The controller's workload was light and TI regarding the position and intentions of the EC135 would have aided the SA of the A319 crew. However, 3 previous arriving ac had not commented on the presence of the EC135 and this probably added weight to the controller's perception that the EC135 was not in conflict with traffic on the ILS. In response to the comment and concern of the A319 crew, the radar controller indicated that he would advise further inbounds.

The Airprox occurred when the A319 crew, unaware of the EC135, became concerned about the relative position and intentions of the EC135, which was operating O/H a geographical position, situated approximately 3nm SE of RW23 C/L. TI would have been helpful and would have aided the A319 crew's SA regarding the presence and intentions of the EC135. However the controller considered that the EC135, operating VFR at a safe distance, was not in conflict with ac on the ILS and judged that TI was not required.

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.

CAT pilot Members noted that the EC135 was operating at an 'awkward' range from the RW23 FAT. The helicopter was orbiting a fixed location located 3nm away but during the orbit it flew <3nm from the C/L. The A319 crew operating under IFR would have been expecting 3nm separation from other IFR flights in CAS. However, within Class D airspace separation is not afforded to IFR flights from VFR flights; only TI will be passed on conflicting VFR traffic and traffic avoidance issued if requested. The Radar controller judged that the EC135 was operating at a safe distance from the C/L and was not a conflicting ac to the inbound IFR flights so that passing TI was not needed. This perception was reinforced by the lack of any comment from the crews of the previous 3 ac, also under IFR, landing ahead of the A319. The A319 flight was IMC in cloud during the ILS descent phase whilst the EC135 pilot was in VMC, clear below cloud. This would have made visual acquisition by either crew impossible until their ac were close to the CPA. However, the EC135's flightpath had caused the A319 crew concern when TCAS indicated the helicopter was converging and in confliction (<5nm and 100ft) whilst the A319 flight was established on the ILS. Members were acutely aware of the inaccuracies of TCAS equipment in azimuth when pilots are trying to gauge the relative bearing of traffic, particularly when one or both ac are turning and when at close range; the A319 crew's recollection of 100ft vertical separation could not be resolved as the EC135 is shown maintaining

900ft throughout the evolution. The EC135 was perceived to close to <2·5nm away from the A319 and 400ft below which had 'encroached' into the A319 crew's comfort zone. The helicopter, the intentions of which were unknown to the A319 crew and unsighted to them, although orbiting well clear of the A319's flightpath, had distracted them during the final approach phase. Members agreed that if TI had been passed by the controller to the A319 crew, this would have almost certainly allayed their fears. As it was, Members agreed that all parties had discharged their responsibilities correctly, and that the controller's decision to not pass TI to inbound flights had been a reasonable 50/50 judgement call which, on this occasion, resulted in the A319 crew filing a report. The recorded radar reveals 900ft and 2·8nm separation at the CPA (a marginal loss of standard separation minima if both flights were IFR). Taking all of these elements into account, the Board elected to classify this incident as a sighting report (TCAS) where normal procedures and safety standards pertained and where no risk collision existed during the encounter.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Sighting report (TCAS).

Degree of Risk: E.