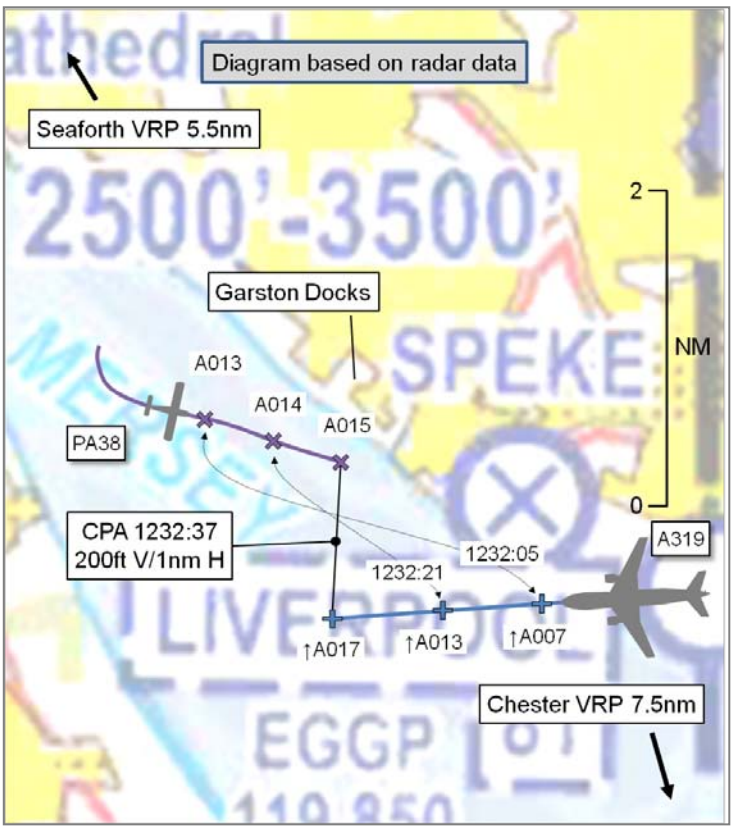
AIRPROX REPORT No 2013022

Date/Time: 25 Apr 2013 1233Z
Position: 5156N 00324W (1nm W Liverpool)

Airspace: Liverpool CTR (*Class:* D)

	Reporting Ac	*Reported Ac*
Type:	A319	PA38
Operator:	CAT	Civ Club
Alt/FL:	1000ft↑ QNH (1019hPa)	1400ft QNH NR
Weather:	IMC	VMC NR
Visibility:	NR	10km
Reported Separation:	0ft V/0.5nm H	2-3nm H
Recorded Separation:	0ft V/1.2nm H 200ft V/1.0nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE A319 PILOT reports conducting the initial climb after T/O from Liverpool John Lennon A/D. He was operating under IFR in IMC through cloud layers with a RCS from Liverpool TWR [126.350MHz], he thought. The ac had beacon and landing lights selected on but the strobe lights were U/S. The SSR transponder was selected on with Modes A, C and S and the ac was fitted with TCAS II. Liverpool TWR advised him of light ac traffic approaching the visual cct from the W, not above altitude 1500ft. Almost immediately afterwards, whilst IMC at a position 1nm W of the RW09 threshold, heading 280° at 160kt and climbing through altitude 850ft, he received a TCAS TA. He became visual with traffic in his R 1 o'clock shortly afterwards, whilst between cloud layers, on a reciprocal heading, as he climbed through its level at altitude 1000ft and at a range of about 0.5nm. He advised Liverpool TWR of the Airprox after reaching cruise level and was informed that the conflicting traffic had been cleared to 'Garston Docks' and to remain VMC and within sight of the A319. The A319 pilot did not believe this would have been achievable under the meteorological conditions prevailing at the time.

He assessed the risk of collision as 'Medium'.

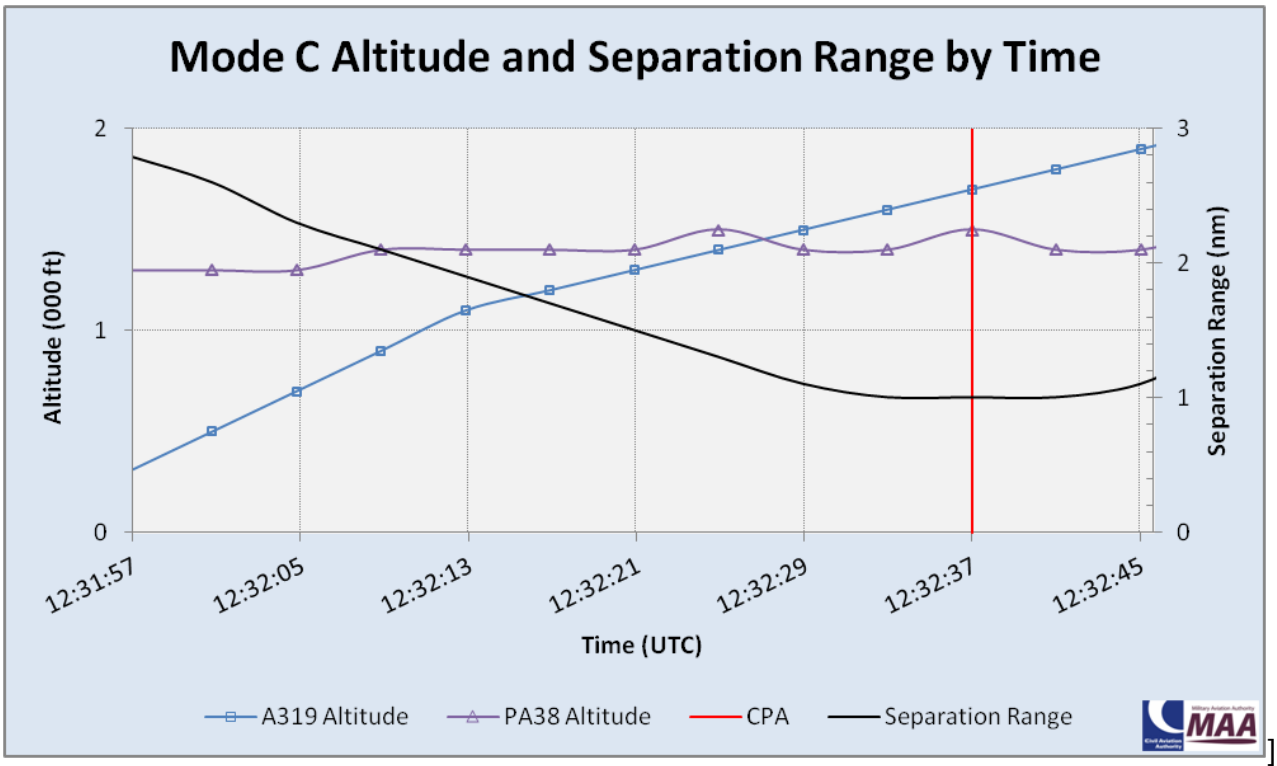
THE PA38 PILOT reports conducting a trial flying lesson, seated in the RH seat with the customer in the LH seat. He was operating under VFR in VMC in contact with Liverpool APP [119.850MHz]. The white and red ac had navigation, landing and strobe lights selected on, as was the SSR transponder with Modes A and C. The ac was not fitted with an ACAS. He had planned to route via the River Mersey to the Seaforth VRP but after departure from RW27 could see that the weather to the N was not suitable. He assessed the weather to the S as CAVOK and requested a zone departure via the Chester VRP. He was re-cleared to the Garston Docks VRP and advised to report when visual with a departing A319, which was routeing to the Wallasey VOR. On completion of his turn on to track for the 'Garston Docks', heading 120° at 85kt and altitude 1400ft, he reported visual with the A319, some 2-3nm to the SW, and was re-cleared behind it to the 'Chester' VRP.

He assessed the risk of collision as 'None'.

THE LIVERPOOL ATC INVESTIGATOR reports that the PA38 pilot intended to leave Liverpool CAS to the N under VFR, having departed from RW27, and was initially routeing to the N. However, due to showers in the vicinity, the pilot requested to change routeing to the S towards Chester. The controller cleared him to Garston Docks, an intermediate VRP within the CTR, which is approximately 1nm N of the climb out path. This is not a normal route for VFR ac when Liverpool operates from RW27, but the controller specified this VRP as a clearance limit and had given TI on the departing A319. The PA38 pilot advised the controller that he had the A319 in sight. The PA38 pilot maintained visual separation from the departing A319 iaw VFR in Class D airspace. However, this was not sufficient to avoid a TCAS TA being activated, which caused some concern to the A319 crew. No avoiding action was required, and the A319 pilot was able to continue the climb without further incident. ATC acknowledged that the use of Garston Docks 'VRP' under these circumstances was inadvisable.

He reported the Liverpool weather as follows:
METAR EGGP 251220Z 27014KT 240V300 9999 BKN030 12/08 Q1019=
METAR EGGP 251250Z 29015KT 9999 -SHRA SCT007 BKN015 10/09 Q1019=

[UKAB Note (1): A graph of altitude and separation range was constructed, as follows:



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ATSI reports that this Airprox occurred at 1232:38, 2.5nm to the W of Liverpool A/D, on the edge of the Liverpool ATZ and within the Liverpool CTR Class D CAS, between an Airbus A319 and a Piper PA-38-112 Tomahawk (PA38). The Liverpool ATZ comprises a circle radius 2.5nm, centred on the midpoint of RW09/27 and extending to a height of 2000ft aal (elevation 81ft).

Background

The A319 was departing under IFR and was in receipt of an ACS from Liverpool Tower [126.350MHz] subject to a radar release from RAD.

The PA38 was departing on a local flight to the N but due to poor weather had been instructed to hold at Garston Docks which lies 1.62nm to the NW of the RW09 threshold and 1nm N of the extended C/L. The PA38 was operating on a VFR clearance and in receipt of a RCS from Liverpool RAD.

CAA ATSI had access to RTF recordings for Liverpool TWR and RAD, area radar recording, written reports from the two pilots concerned and a report from the ATSU.

Factual History

The PA38 departed from RW27 and contacted Liverpool RAD at 1229:23, reporting on track for VRP Seaforth which lies to the NW of Liverpool at the mouth of the River Mersey.

At 1229:07, the RAD contacted TWR and released the A319 for departure climbing straight ahead to 4000ft. At 1230:50, the TWR cleared the A319 for take-off RW27. Meanwhile, due to low cloud in the area, the PA38 pilot requested a reversal of routeing to leave the CTR at Chester (S of the A/D). The RAD instructed the PA38 pilot to remain at Garston Docks, which was acknowledged by the PA38 pilot.

At 1231:09, RAD advised the TWR that the PA38 pilot had requested to reverse course and route direct to Chester. The TWR reported the A319 would be airborne at 1232. At 1231:30 the RAD passed TI to the PA38 pilot, reporting that an A319 was departing from RW27 to the W and to expect onward clearance to Chester once the A319 had passed abeam. The RAD instructed the PA38 pilot to remain N of Garston docks, which was acknowledged correctly.

At 1232:08, as the A319 approached 1000ft, the TWR advised the A319 pilot that he "*may see traffic on TCAS in* [his] *R 1 o'clock at a range of 3nm, a Tomahawk at not above 1500ft remaining in that location*". The A319 pilot acknowledged with, "*Copied*". Radar showed the range between the two aircraft as 2.3nm (see Figure 1 below).

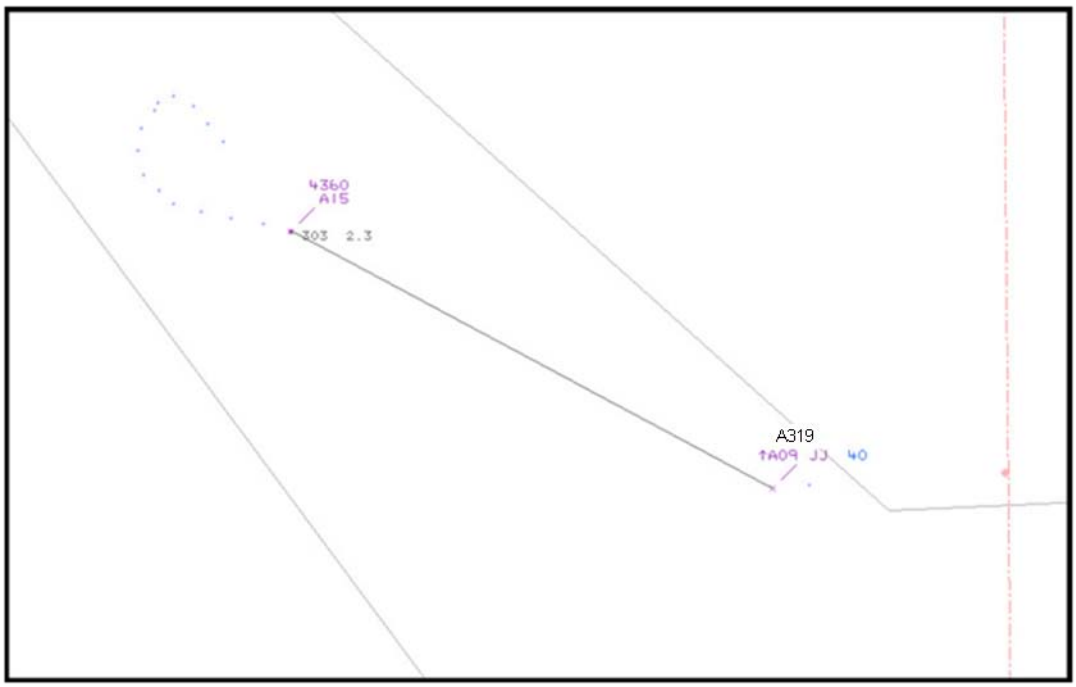

Figure 1: Composite Radar Picture at 1232:08

At 1232:21, the RAD asked the PA38 pilot if he was visual with the departing A319 to which the pilot confirmed that he was. At this point the TWR contacted RAD to report that there was very low cloud and rain in the vicinity of the two ac. The RAD confirmed that the PA38 pilot had sighted the A319 but would be held N of Garston Docks.

At 1232:38, the PA38 pilot reported that he was in visual contact with the A319. The RAD cleared the PA38 pilot to route behind the departing A319 and cautioned him that the recommended Wake Turbulence separation distance was 5nm, which was acknowledged (see Figure 2 below).

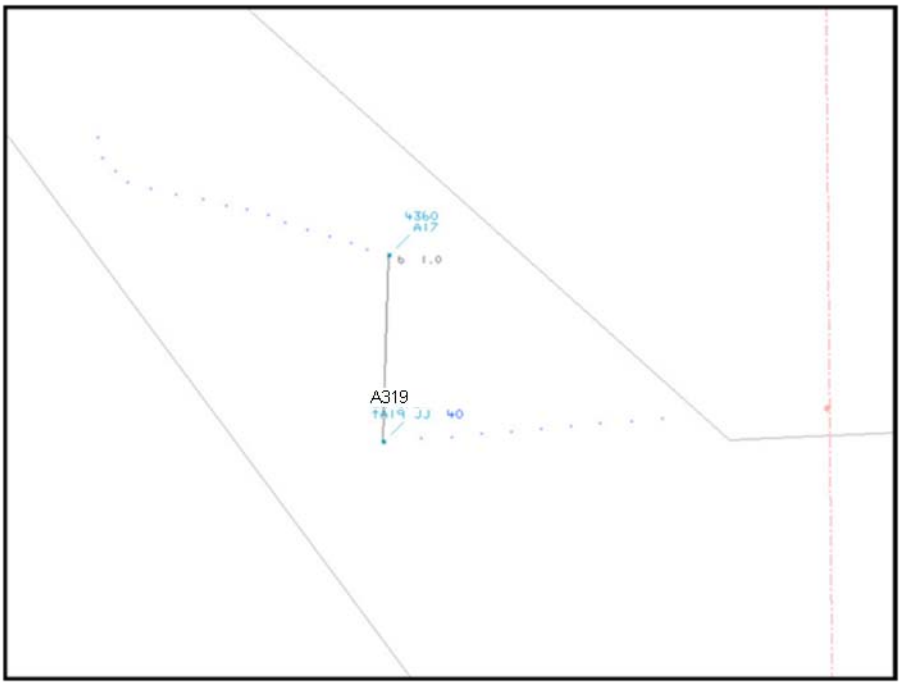

Figure 2: Composite Radar Picture at 1232:38

At 1232:55, the TWR instructed the A319 pilot to contact Scottish Control [128.050MHz]. At 1238:10, the PA38 pilot reported leaving the CTR at Chester and a BS was agreed.

At 1245:01, the A319 pilot contacted the TWR and requested details on the conflicting traffic, advising that on departure the PA38 had come within 0.5nm of the A319 in IMC at 1000ft. The A319 pilot advised that he would contact ATC if he intended to file a report.

Analysis

The PA38 pilot had planned to leave the Liverpool VFR via Seaforth VRP but became concerned about the low cloud and requested an alternative clearance. The RAD instructed the PA38 pilot to route initially to Garston Docks. For VFR flights within Class D airspace the Manual of Air Traffic Services (MATS) Part 1, Section 3, Chapter 4, Page 1, Paragraph 3.4 states:

'When issuing instructions to VFR flights, controllers should be aware of the over-riding requirements for the pilot to remain in VMC, to avoid obstacles and to remain within the privileges of his licence. This may result in the pilot requesting an alternative clearance, particularly in marginal weather conditions.'

The A319 was already rolling when the TWR was made aware of the change of routeing for the PA38, and the TWR passed TI to the A319 pilot at the earliest opportunity, once he was safely airborne.

The RAD was content that there was sufficient separation between the A319, climbing straight ahead, and the PA38, operating VFR and holding 1nm N of the C/L. This belief would have been reinforced when the PA38 pilot reported the A319 in sight and confirmed he was holding N of Garston Docks.

The A319 pilot was not aware of the PA38 pilot's change of routeing prior to departure and the late TI in the low cloud and rain most likely caused him some concern. MATS Part 1, Section 1, Chapter 2, Paragraph 2 defines the minimum services that are to be provided in each airspace classification. The relevant part of the table is reproduced below:

Class	Flight Rules	Aircraft Requirements	Minimum Services by ATC Unit
D	IFR and VFR	ATC clearance before entry. Comply with ATC instructions.	(a) Separate IFR flights from other IFR flights; (b) Pass traffic information to IFR flights on VFR flights and give traffic avoidance advice if requested; (c) Pass traffic information to VFR flights on IFR flights and other VFR flights.

The TWR was not able to pass timely TI to the A319 pilot and there would have been little opportunity for him to assess the situation or request avoiding action had he considered it appropriate. The PA38 pilot had reported the A319 in sight and both the TWR and RAD were content that safety would not be compromised. Due to the limited time available and the weather conditions, the A319 pilot was advised about the situation at the earliest opportunity. This occurred just after the A319 became airborne and the A319 pilot was understandably concerned about the relative position of the other traffic in what he considered to be IMC conditions.

Conclusions

The PA38 pilot elected to reverse direction due to low cloud NW of the A/D which resulted in him being held at Garston Docks. The PA38 pilot, operating under VFR, was passed appropriate TI and reported visual with the A319. The late change of plan, which occurred as the A319 was rolling, resulted in the late passing of TI to the A319 pilot, as soon as he was safely airborne. Whilst the PA38 pilot and the two controllers were content that safety was not compromised, the A319 pilot became concerned about the relative position of the PA38 in IMC conditions immediately after T/O.

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 photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

Board Members agreed that the A319 pilot had been startled by the proximity of the PA38, to which the TI and TCAS had drawn his attention. This was aggravated by his perception of the weather conditions and he had, quite correctly, decided to file an Airprox. The PA38 pilot had been faced with deteriorating weather to the N and had changed his routeing intentions, which he communicated to ATC. He was issued with a re-clearance and, whilst the Liverpool ATC report concluded that 'the use of Garston Docks 'VRP' under these circumstances was inadvisable', Board Members were of the opinion that both pilots and ATC were operating correctly and that the incident was precipitated by the timing of TI to the A319 pilot, which unavoidably occurred after T/O and at a high workload phase of the flight. The Board noted that the PA38 pilot did not remain to the N of Garston Docks, as cleared, but opined that his position did not materially alter the situation. It was noted that separation minima do not apply between VFR and IFR traffic in Class D, deconfliction being achieved by the VFR pilot being visual with the IFR traffic and/or the IFR pilot requesting traffic avoidance, after the passing of TI to both flights. Both pilots were entitled airspace users, operating normally within the requirements of Class D airspace under VFR and IFR. The CAA SRG Advisor noted that this was a good example of Class D airspace being used as designed.

The Board unanimously agreed that the ATC and pilot safety barriers functioned correctly and that normal procedures, safety standards and parameters applied.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause:	The A319 crew was concerned by the presence of the PA38 to the north.
Degree of Risk:	E.
ERC Score:	1.