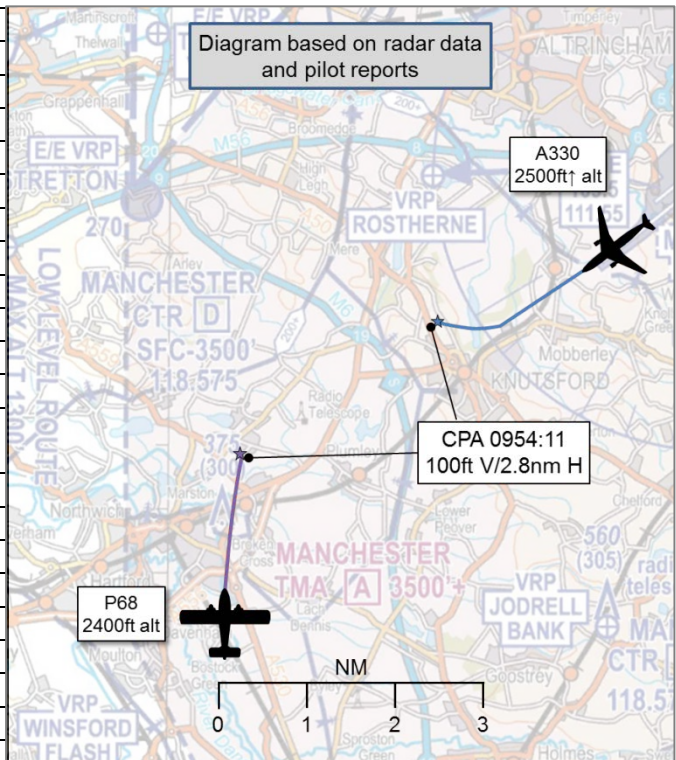


AIRPROX REPORT No 2015189

Date: 9 Oct 2015 Time: 0954Z Position: 5318N 00227W Location: 6nm SW Manchester Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A330	P68
Operator	CAT	Civ Pte
Airspace	Manchester CTR	Manchester CTR
Class	D	D
Rules	IFR	VFR
Service	Radar Control	Radar Control
Provider	Scottish	Manchester
Altitude/FL	2400ft	2800ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White/Blue	Blue/White
Lighting	Wingtip, Strobe, Landing	Beacon, Nav
Conditions	VMC	VMC
Visibility	10km	>10km
Altitude/FL	NK	2400ft
Altimeter	QNH (1003hPa)	QNH (1023hPa)
Heading	275°	NK
Speed	NK	120kt
ACAS/TAS	Unknown	Not fitted
Alert	Unknown	N/A
Separation		
Reported	100ft V/0.5nm H	NK
Recorded	100ft V/2.8nm H	



THE A330 PILOT reports departing from Manchester on an EKLAD1R SID; he changed frequency from Manchester Tower to Scottish at 2000ft. Scottish immediately issued ‘avoiding action turn right 10°’. The Captain became visual with the conflicting traffic on the left-hand side, same level, inside 2nm. The light aircraft was in his 10 o’clock position but at a point where he was about to turn 20° left on the SID, putting him on a collision course. He quizzed Scottish control and they confirmed that the aircraft was working Manchester; they could not understand why Manchester had not briefed them and let the other aircraft fly into the path of departing traffic. He thought it might be of note that the Tower controller was under pressure as he departed an A320 in front of them, then them, at the same time as one inbound (below 1500ft) with further traffic behind that also established on approach.

He assessed the risk of collision as ‘None’.

THE P68 PILOT reports he has no recollection of the reported incident, nor was he informed of an incident by ATC at the time.

THE MANCHESTER TOWER CONTROLLER reports he was operating as the Air controller, RW23R, single runway operations. APP S had coordinated VFR traffic southwest of the airfield (7350 squawk) to operate through an 8 mile climb-out and return to the south. Traffic on final approach was slowed to facilitate two departures, of which the second was the A330 on an EKLAD departing north. He was focussed on the separation between the northerly departure and the A330 and, when resolved, he transferred the first aircraft to APP N, and the A330 to Wallasey; his concentration then turned to the 2 aircraft on final approach. His attention was brought back to the VFR traffic and A330 by a phone call from APP S advising him that the 7350 squawk was visual with the A330. This prompted him to speak to Wallasey to pass on this information; they advised that they had had to take avoiding action.

Factual Background

The weather at Manchester was recorded as follows:

METAR EGCC 090850Z 0000KT CAVOK 12/09 Q1023 NOSIG

Analysis and Investigation

CAA ATSI

The Airprox was reported by the pilot of an Airbus A330 (A330) who was departing RW23 at Manchester when a Partenavia P68B (P68) was tracking northbound at 2500ft through the Manchester Control Zone. CAA ATSI had access to RTF and radar recordings, together with the written reports from the pilots of the aircraft involved, and the Manchester Approach and Tower controllers.

The A330 was a CAT IFR flight from Manchester and was climbing to 5000ft on the EKLAD1R SID. The A330 pilot was in receipt of a Radar Control Service from Scottish Control (to whom Manchester departure traffic is transferred). The P68 pilot was operating under VFR on a survey flight. The P68 pilot was in receipt of a Radar Control Service from Manchester Approach. Although both pilots were being provided with a service by Radar controllers at the time of the occurrence, it was the Manchester Tower controller who had been working the departing A330 just prior to a transfer of communications to Scottish Control.

At 0930:14, the P68 pilot called Manchester Approach and requested a Basic Service and entry into the Control Zone. A Basic Service was agreed, and the pilot was asked to squawk 7350. Further details were not obtained at this point and no entry clearance was issued.

At 0937:20, the P68 pilot was requested to pass his details. It was established that he wished to carry out a survey flight through the Manchester Control zone, which was broken into a number of shorter details which involved routing north and southbound. The P68 pilot was issued a clearance to enter controlled airspace not above 2500ft, and instructed to carry out the detail remaining south of the town of Northwich and to specifically report before routing north of this.

At 0940:10, the Approach controller ascertained from the P68 pilot that his routing would keep the aircraft parallel with, and to the east of, the Manchester Low-Level route. Figure 1 depicts the approximate projected survey of the P68 (in red) and the extended runway centreline (in yellow), to a distance of 10nm.



Figure 1: Projected Route of the P68

At 0950:00, the P68 pilot completed a turn in the vicinity of Winsford at the southern end of one of the survey details. At 0951:26, the Manchester Tower controller cleared the A330 pilot for take-off from RW23R. Figure 2 (0953:15) shows the A330 (code 7662) passing 1900ft on the climb from RW23R. The P68 (code 7350) had just crossed through the centreline of the departure runway.

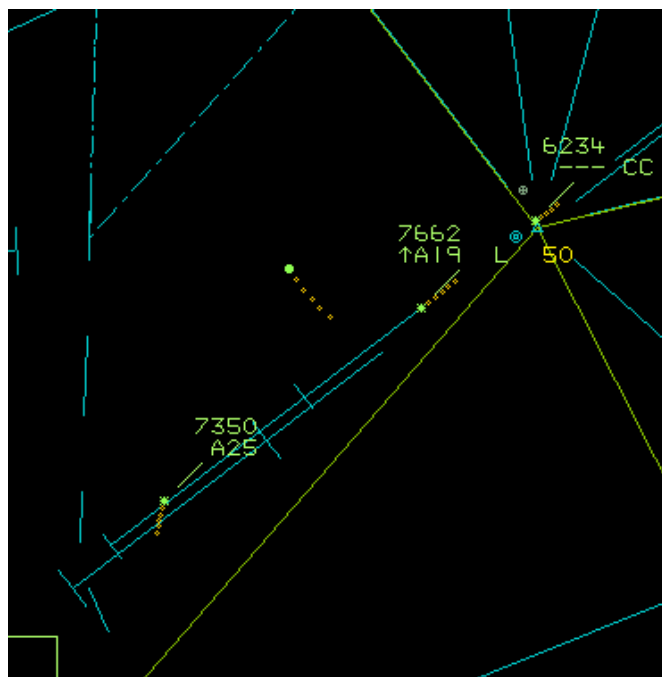


Figure 2: Prestwick Radar 0953:15

At 0953:29, the Manchester Tower Controller transferred the A330 to Scottish Control. No Traffic Information about the P68 was passed.

At 0953:35 (Figure 3), the Manchester Approach controller issued Traffic Information to the P68 pilot on the A330. The P68 pilot reported visual with the A330 and also having completed the short survey runs. The controller acknowledged this and ensured the P68 made a left turn to return to the south.

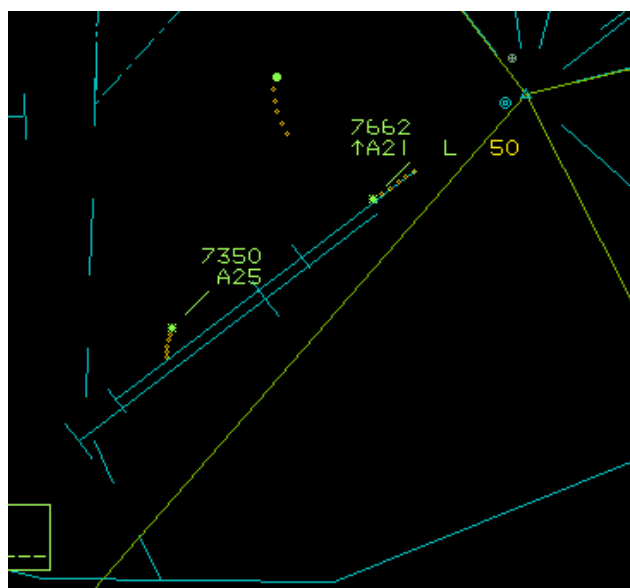


Figure 3: Prestwick Radar 0953:35

At 0953:48, having just received the first call from the A330 pilot, the Scottish controller issued an avoiding action turn to him. The A330 captain reported visual with the light aircraft, the controller then passed Traffic Information.

CPA occurred at 0954:11, with the P68 and A330 separated by 2.8nm horizontally and 100ft vertically (Figure 4).

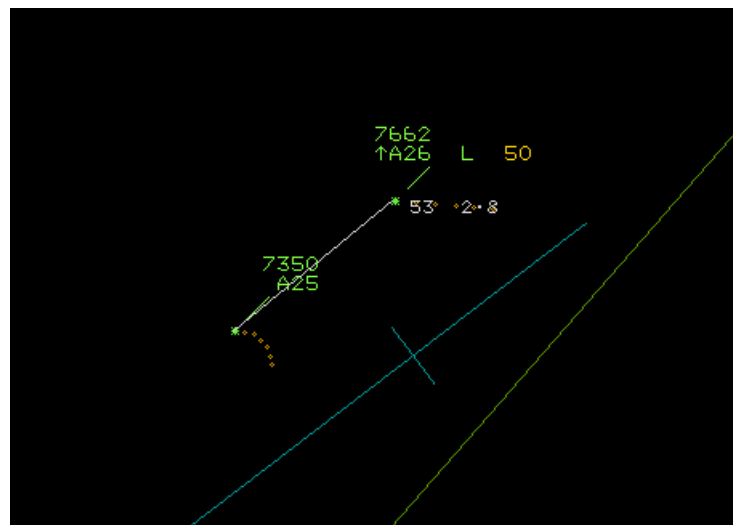


Figure 4: CPA - Prestwick Radar 0954:11

The Manchester Approach controller had coordinated the P68 with the Manchester Tower controller to operate through an 8 mile departure lane and return to the south. The Manchester Tower controller had prepared a flight progress strip to act as a reminder, although he did not transfer this strip to a position that would highlight the confliction.

The Tower controller was working with a complex situation at the time of the occurrence. The A330 was the second of two successive departing aircraft ahead of a landing DH8 which had been slowed to a minimum approach speed earlier, in order to facilitate the two departures. The P68 was intending to carry out some survey runs between Winsford in the south and Lymm in the north (approximately 7nm west of Manchester). The Approach controller had issued specific instructions to ensure the P68 remained south of Northwich. This instruction was not fully read-back by the P68 or corrected by the controller.

The Airprox occurred the second time the P68 completed a south to north pass, both of which showed the P68 turning in a position which was just to the north of Northwich, contrary to the initial clearance issued. The EKLAD1R SID involves a slight right turn initially followed by a left turn to intercept the 255 radial from the Manchester VOR. This left turn would have taken the A330 back towards the projected track of the P68.

The Scottish controller was not aware of the flight rules of the P68, or the fact that the northbound routing was being completed so, on receiving the first call from the A330, issued an avoiding action turn to the right. Although the CPA in Figure 3 shows the closest point, the Short Term Conflict Alert (STCA) had indicated for approximately 20 seconds prior to this screenshot. However, all avoiding action and traffic information had taken place prior to STCA activating.

Although there is no requirement to separate IFR and VFR aircraft in Class D airspace, ATC 'shall pass traffic information to IFR flights on VFR flights and give traffic avoidance when requested.'¹

Traffic Information about the P68 was not passed to the departing A330 pilot by the Aerodrome controller because:

- The controller had not utilised the reminder strip they had prepared
- The controller became distracted by a landing and departure separation sequence.

¹ CAP493 Section 1 Chapter 2, Flight Rules.

Traffic Information on the P68 was not passed to the Scottish Controller by either the Manchester Tower or Manchester Approach controllers. The Scottish controller issued avoiding action to the A330 pilot, and the Manchester Approach controller issued timely Traffic Information to the P68.

UKAB Secretariat

The A330 and P68 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard². If the incident geometry is considered as converging then the P68 pilot was required to give way to the A330³, notwithstanding that in Class D (Controlled Airspace) it is the Air Traffic Service Units (ATSU) responsibility⁴ to:

- a) Separate IFR flights from other IFR flights;
- b) Pass traffic information to IFR flights and SVFR flights on VFR flights and give traffic avoidance advice when requested;
- c) Pass traffic information to VFR flights on all other flights and provide traffic avoidance advice when requested.

Note: When the controller considers that more immediate action is required by the pilot, traffic avoidance advice may be passed by ATC before traffic information.

Summary

An Airprox was reported when an A330 and a P68 flew into proximity at 0954 on Friday 9th October 2015. The A330 pilot was operating under IFR in IMC and the P68 pilot under VFR in VMC, the A330 pilot was in receipt of a Radar Control Service from Manchester initially, then Scottish, and the P68 pilot was in receipt of a Radar Control Service from Manchester.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings, reports from the air traffic controllers involved and a report from the appropriate ATC authority.

The Board first discussed the provision of Traffic Information to both pilots, and the liaison from Manchester to Scottish regarding the departing A330 and the P68. Acknowledging that both pilots were operating in Class D airspace, the Board noted that the controller was not required to separate IFR (the A330) from VFR (the P68) traffic but ATC members highlighted that the controller did have a responsibility to ensure that each aircraft's pilot was given Traffic Information on the other. The NATS representative commented that their investigation had revealed that the Manchester Aerodrome controller had omitted to pass Traffic Information on the P68 to the A330 due to the workload at the time. Noting also the lack of effective liaison between the Manchester APP controller and Scottish regarding the P68, the Board commended the performance of the Scottish controller for his actions in quickly resolving a situation where they had not been given all the relevant information regarding the intentions of the aircraft.

The debate moved on to the actions of the pilots, and the Board discussed, in general terms, the possibility that, when transiting quickly from Class D to Class A, pilots might have a false perception of the level of protection they were afforded when IFR and VFR traffic were operating together in Class D airspace. A Civil Airline pilot member commented that he often has to remind pilots that there are many airports where they transit through Class D airspace before they enter the full protection of Class A; this was especially a factor given that electronic cockpit navigation displays did not generally highlight which class of airspace an aircraft was flying within. Although, in this instance, the A330 crew were fully aware of the implications of the airspace they were in, the Board felt that

² SERA.3205 Proximity.

³ SERA.3210 Right-of-way (c) (2) Converging.

⁴ CAP493, Section 1, Chapter 2

this incident highlighted the need for pilots to ensure that they were familiar with the airspace they are in, and the differences in their responsibilities and the separation criteria for each.

Turning back to the incident itself, the Board then discussed the clearance limit that the P68 pilot had been issued. They discussed the lack of a proper read-back of the clearance by the P68 pilot, and the fact that the Manchester controller had not obtained from him a corrected read-back when his response had been incomplete. The NATS representative pointed out that the Manchester controller was aware that the P68 pilot was not adhering to the clearance limit but that the controller was satisfied that this was not an issue with the traffic situation at the time. A Civil ATC member also felt that whilst there was a VFR aircraft operating close to the departure lane, the Manchester Departures controller should have controlled the departing aircraft until it was clear of the P68, rather than allowing the Manchester Aerodrome controller to pass departing traffic directly to Scottish. He believed that even if the correct information had been passed to the Scottish controller, it would have been difficult to maintain confidence in the P68's track whilst the aircraft was not adhering to a known area. The Board debated these elements at great length and were split on whether these issues were contributory or not. After a vote, a majority decided that they were; the lack of effective control of the P68 and the lack of a corrected read-back were agreed as contributory factors to the Airprox.

Concerning the P68 pilot, members highlighted that he had effectively broken his clearance limit and flown further north than he was permitted to do; this had led to his aircraft's track being closer to the Manchester departure lane and therefore in a position where there was the potential to cause concern to departing IFR traffic. The Board quickly agreed that the fact that the P68 pilot had not adhered to his clearance limit was also a contributory factor.

After considerable debate, the Board agreed that the root cause of the Airprox was the lack of traffic information by Manchester ATC to the A330 and Scottish regarding the P68. Turning to the risk, the Board also discussed this in detail: some members thought that there had been no risk of collision and that effective and timely action had been taken, making it Category C; others thought that although the incident met the criteria for reporting, normal procedures and safety standards had pertained, which would have resulted in a Category E. In the end, a vote was taken which was tied between the 2 points of view. The Chair reviewed the factors again and cast his deciding vote. On the basis that Traffic Information had not been passed on the P68; the P68 pilot's read-back had not been corrected; the P68 had not been effectively controlled; and the P68 pilot had not complied with his clearance, the Chair decided that this did not represent a situation where normal procedures and safety standards had pertained; he therefore classified the risk as Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Manchester Air Traffic Control did not provide traffic information on the P68 to the A330 or Scottish ATC.

Contributory Factor(s):

- (1) The P68 did not comply with his clearance limit.
- (2) Manchester ATC did not effectively control the P68 in relation to his clearance limit.
- (3) Manchester ATC did not ensure a correct read-back of the P68's clearance limit.

Degree of Risk: C.