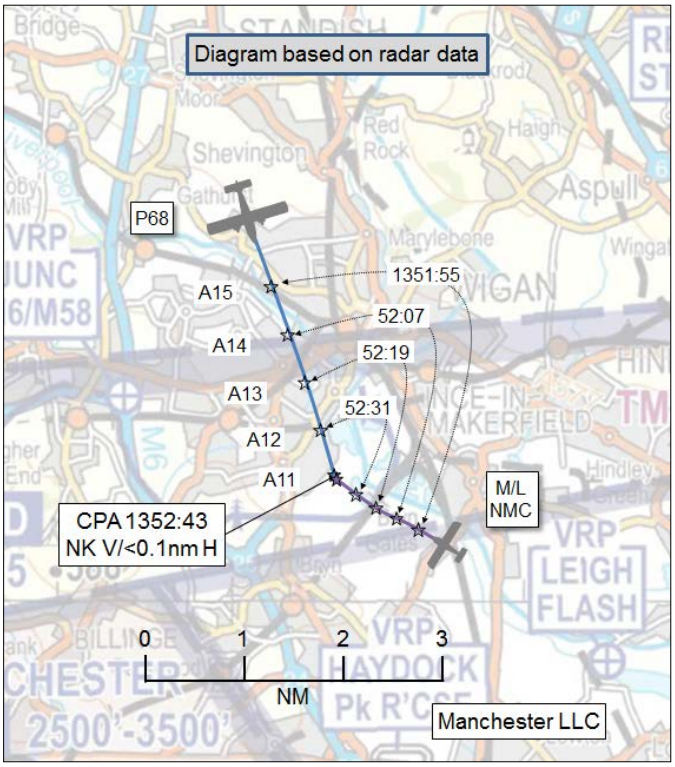
AIRPROX REPORT No 2016269

Date: 18 Dec 2016 Time: 1353Z Position: 5331N 00238W Location: 9.5nm WNW Barton

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	P68	Microlight
Operator	Civ Comm	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	
Service	None	
Provider	(Liverpool)	
Altitude/FL	1300ft	
Transponder	A, C, S	
Reported		Not reported
Colours	White, blue	
Lighting	Strobes, landing	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1300ft	
Altimeter	QNH (1034hPa)	
Heading	165°	
Speed	140kt	
ACAS/TAS	Not fitted	
Alert	N/A	
Separation		
Reported	200ft V/0m H	
Recorded	NK V/<0.1nm H	



THE P68 PILOT reports setting course for Hawarden with the aim of gaining a VFR transit through the Liverpool CTR via the LPL NDB. Radar were busy with R/T, and a timely request for a Traffic Service couldn't be made. As he approached the CTA, having been unable to establish a service, he initiated a descent and turned towards the Manchester low-level corridor (LLC). Although he could not recall the details of his transit entirely, he considered it possible that one of his heading changes either allowed the other aircraft to come into view from behind the 'A' pillar, or that some relative movement became apparent. His recollection was that the other aircraft, which he assessed to be a '3-axis microlight', was in the left 1030 position, growing in size rather than moving across the windscreen, and at the same altitude, with a relative track of about 120° to his own (i.e. heading northwest-bound). He initiated a descent to gain vertical separation; the other aircraft may have given a small wing-waggle, but it was subtle and may have been turbulence. Shortly after, Liverpool called back for his request. After passing his message, he advised the controller that he'd had an Airprox.

He assessed the risk of collision as 'Medium'.

THE MICROLIGHT PILOT could not be traced.

THE LIVERPOOL CONTROLLER reports conducting a handover to replace his colleague on Liverpool Radar. The P68 pilot checked in on frequency, requesting to transit Liverpool CAS north to south, inbound to Hawarden. As they were in the middle of the handover the pilot was instructed to remain outside CAS by the outbound controller and that he would be called back. The handover took approximately one minute followed by a lengthy co-ordination call with regard to an inbound Hawarden aircraft and conflicting Liverpool outbound. The Hawarden inbound traffic checked in at about this time and was given routing instructions and descent. Approximately 2 minutes after the P68 pilot had called on frequency, the controller was able to call him back and provide crossing instructions. After this was read back the P68 pilot stated "We just passed underneath a Breezer

aircraft by about 50-100ft. Just in case he comes up, that may have been an Airprox." The P68 was still on a 7000 squawk at this time. The controller asked the pilot to confirm if he wished to report an Airprox over the radio and he stated "I'm happy with where we were but if he reports it this is a good time stamp for us." The other aircraft did not call on frequency and could not be traced. The P68 pilot telephoned at around 1700 to state he would be filing an Airprox.

Factual Background

The weather at Manchester was recorded as follows:

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METAR COR EGCC 181350Z VRB02KT CAVOK 07/05 Q1034 NOSIG=
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Analysis and Investigation

UKAB Secretariat

The P68 and microlight pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[2]. If the incident geometry is considered as converging then the microlight pilot was required to give way to the P68[3].

Summary

An Airprox was reported when a P68 and an unknown microlight flew into proximity at 1353 on Sunday 18th December 2016. Both pilots were operating in VMC, the P68 pilot under VFR, awaiting receipt of an Air Traffic Service from Liverpool.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the P68 pilot, radar photographs/video recordings and a report from the air traffic controller involved.

Members agreed that it was unfortunate that the P68 pilot could not obtain a prompt Traffic Service from ATC; however, this was simply a reality of operations in a busy environment. Members commented that the P68 pilot's report highlighted the importance of mitigating the effects of cockpit obscuration through robust lookout and scanning techniques. Most aircraft have blind spots that can only be overcome by pro-active measures to ensure that they are negated, and this was the case with this incident. The adoption of increasingly affordable electronic conspicuity equipment can also help in such circumstances (e.g. P-FLARM, PilotAware etc), although these rely on suitable cooperative equipment being installed in the other aircraft, which was not known in this case.

It was agreed that the full circumstances could not be ascertained without the microlight pilot's narrative but that there was sufficient information to assess a likely cause and risk. The Board felt that the situation was converging and therefore that the microlight pilot was required to give way to the P68. That the aircraft passed in such proximity indicated that the microlight pilot was probably not aware of the converging P68 at least until a very late stage.

The Board felt that the Airprox had been caused by the late sighting of the microlight by the P68 pilot and the late or possibly non-sighting of the P68 by the microlight pilot. Although the P68 pilot had seen the microlight in sufficient time to take avoiding action, members felt that separation at CPA was such that safety had been much reduced.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(1) Approaching head-on.
[3] SERA.3210 Right-of-way (c)(2) Converging.

PART C: ASSESSMENT OF CAUSE, RISK AND SAFETY BARRIERS

Cause: A late sighting by the P68 pilot and a possible late or non-sighting by the microlight pilot.

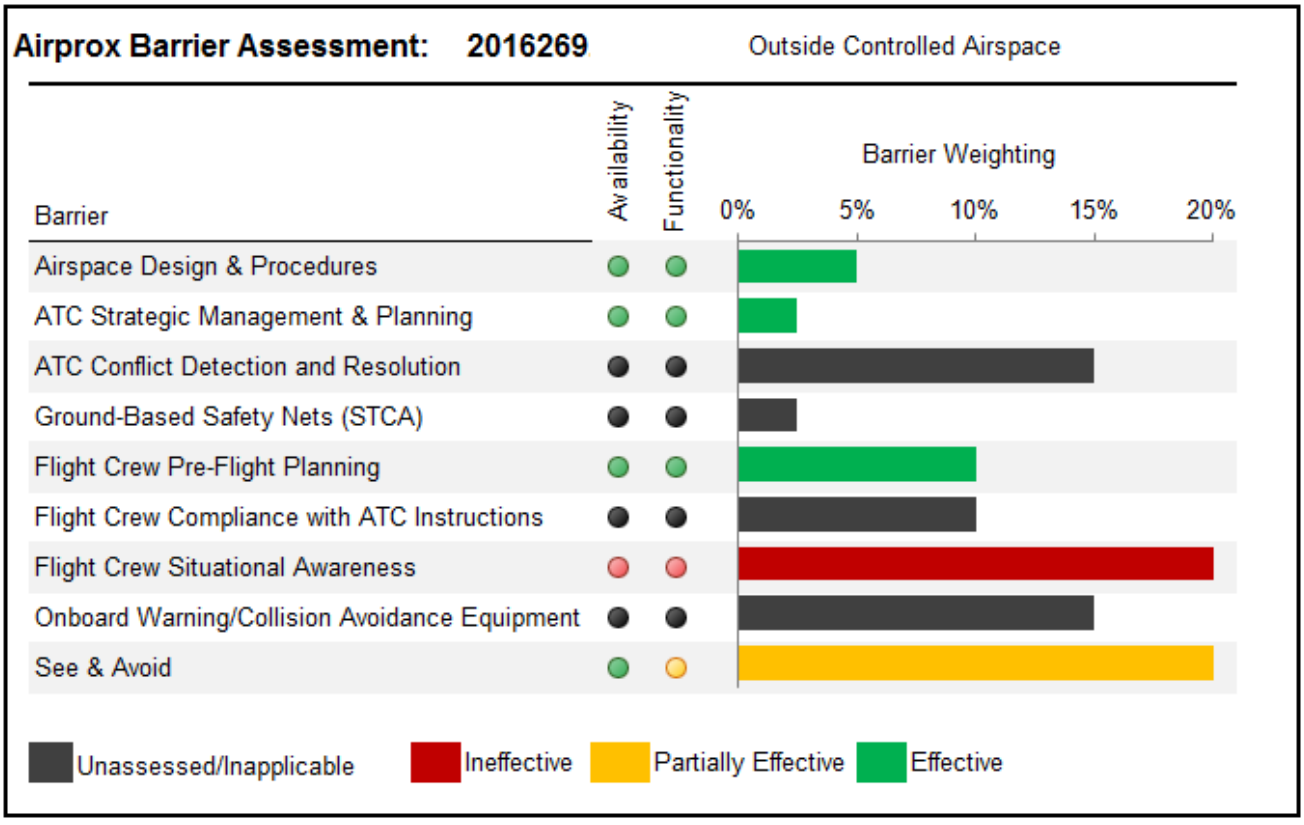
Degree of Risk: B.

Safety Barrier Assessment[4]

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew Situational Awareness was assessed as **ineffective** because no systems were present to give the pilots information to improve SA, the P68 pilot was unaware of the microlight until very shortly before CPA and, by virtue of separation at CPA, it was considered likely that the microlight pilot was unaware of the P68.

See and Avoid was assessed as **partially effective** because the P68 pilot saw the microlight, albeit at a late stage.



[4] Modern safety management processes employ the concept of safety barriers that prevent contributory factors or human errors from developing into accidents. Based on work by EASA, CAA, MAA and UKAB, the following table depicts the barriers associated with preventing mid-air-collisions. The length of each bar represents the barrier's weighting or importance (out of a total of 100%) for the type of airspace in which the Airprox occurred (i.e. Controlled Airspace or Uncontrolled Airspace).[4] The colour of each bar represents the Board's assessment of the effectiveness of the associated barrier in this incident (either Fully Effective, Partially Effective, Ineffective, or Unassessable/Absent). The chart thus illustrates which barriers were effective and how important they were in contributing to collision avoidance in this incident. The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the UKAB Website.