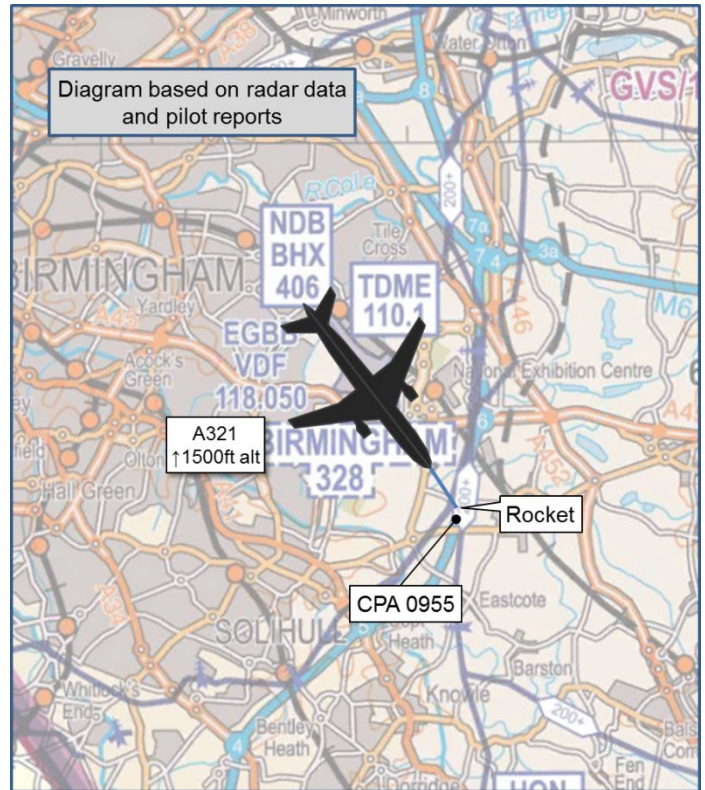


## AIRPROX REPORT No 2015143

Date: 18 Aug 2015 Time: 0950Z Position: 5226N 00143W Location: Birmingham Airport

### PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A321	Unknown
Operator	CAT	Unknown
Airspace	Birmingham CTZ	
Class	D	D
Rules	IFR	
Service	Radar Control	
Provider	Birmingham	
Altitude/FL	1500ft	
Transponder	A,C,S	
<b>Reported</b>		
Colours	White, Indigo, Yellow	
Lighting	Strobes, Nav, landing	
Conditions	VMC	
Visibility	10km	
Altitude/FL	1500ft	
Altimeter	QNH)	
Heading	147°	
Speed	210kt	
ACAS/TAS	TCAS II	
Alert	None	
<b>Separation</b>		
Reported	100ft V/200m H	NK
Recorded		NK



**THE A321 PILOT** reports departing from Birmingham when, on passing 1500ft, the first officer noticed an unidentified object, described as rocket shaped and the size of 2 x 2l fizzy drink bottles. It passed very close to the starboard side of the aircraft, although didn't actually hit it. The incident was reported to ATC.

The assessed the risk of collision as 'Medium'.

**The Rocket operator** could not be traced.

### **Factual Background**

The weather at Birmingham was recorded as follows:

METAR EGBB 180850Z 31009KT CAVOK 16/08 Q1014

### **Analysis and Investigation**

#### **UKAB Secretariat**

Although there is a midland rocketry club, they have confirmed that they only operate on specific open days (normally weekends) with the correct notification; this was not one of their open days. The incident did not show on the NATS radar, so the exact separation could not be ascertained. CAP658 'Model Aircraft: A guide to safe flying' states:

### 3 Rockets

**NOTE:** Article 137 of the ANO 2009 (Endangering Safety of an Aircraft) applies to all rockets: the operator of a model rocket must ensure that it does not endanger a real aircraft.

#### 3.1 General

Only fly on sites that are clear and open with adequate open space downwind of the launch point and in good visibility.

No person shall launch a rocket unless he has reasonably satisfied himself that:

- the flight can be safely made; and
- the airspace within which the flight will take place is, and will throughout the flight remain, clear of any obstructions including any aircraft in flight.<sup>1</sup>

In addition rockets which have a motive power exceeding 160 Newton-seconds (G rating) must adhere to the above and

for a flight within controlled airspace, has obtained the permission of the appropriate air traffic control unit for aircraft flying in that airspace.<sup>2</sup>

### Summary

An Airprox was reported when a rocket shaped flying object and an A321 flew into proximity at 0950 on Tuesday 18th August 2015. The A321 was operating under IFR, in VMC, and receiving a Radar Control Service from Birmingham.

### **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the A321 pilot and radar photographs/video recordings.

The Board noted that investigations had been unable to ascertain the release source of the reported 'rocket', or indeed whether the reported object was a rocket at all. The unknown object should not have been operated within the Birmingham CTR, Class D airspace, without the prior permission of the CAA. Operating as it was in airspace within which it was not entitled to operate meant that the Board considered that the cause of the Airprox was that the unknown object was launched into conflict with the A321. The incident did not show on the NATS radars and so the exact separation could not be ascertained. However, the Board noted that the A321 pilot had estimated that the object was 100ft vertically and 200m horizontally from his aircraft, and that he had been able to give a clear description of its size, which indicated that it had flown very close to the aircraft. The Board used this estimate of separation for their assessment of the risk and determined that the risk was Category B; safety margins had been much reduced below the norm.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The unknown object was launched into conflict with the A321.

Degree of Risk: B.

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<sup>1</sup> CAP658 Chap7.3

<sup>2</sup> CAP658Chap7.32