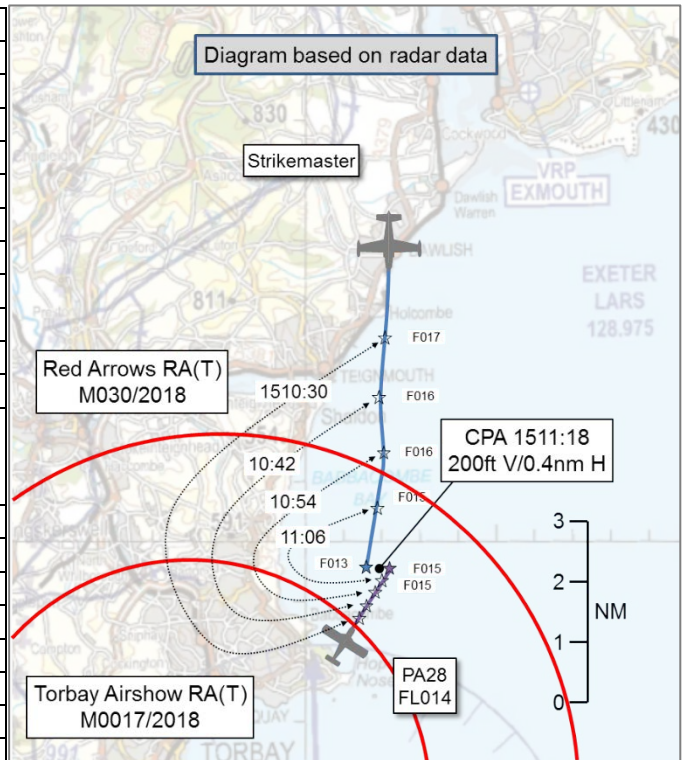


AIRPROX REPORT No 2018104

Date: 02 Jun 2018 Time: 1511Z Position: 5029N 00328W Location: Torquay

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Strikemaster	PA28
Operator	Civ Pte	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	NK
Provider	Torbay Radio	NK
Altitude/FL	1500ft	1700ft
Transponder	A, C, S	A, C
Reported		Not reported
Colours	Grey	
Lighting	Landing, nav, upper and lower beacon	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1500ft	
Altimeter	QFE (1018hPa)	
Heading	186°	
Speed	300kt	
ACAS/TAS	Not fitted	
Separation		
Reported	0ft V/100m H	NK
Recorded	150ft V/0.5nm H	



THE STRIKEMASTER PILOT reports that he was en-route to the Torbay Airshow ‘under a radar service’, until approaching the RA(T). He remained at 2300ft to deconflict with a Blenheim, also en-route to the airshow. After passing well ahead of the Blenheim, and approaching the RA(T), he changed frequency to the display frequency and was cleared to display. On entering the RA(T) he started a descent and was accelerating to 330kt when he observed a blue and white PA28 aircraft, co-altitude and displaced to the left on a reciprocal heading. He observed that the aircraft had obviously flown straight through the eastern side of the RA(T) and that its pilot did not seem to see him.

He assessed the risk of collision as ‘High’.

THE PA28 PILOT did not respond to requests to complete an Airprox report.

THE TORBAY AIRSHOW FLIGHT DISPLAY DIRECTOR (FDD) reports that the PA28 was not observed from the FDD/AGCS position and consequently that display pilots could not be warned of its presence.

Factual Background

The weather at Exeter was recorded as follows:

EGTE 021520Z 18012KT 150V210 9999 FEW034 18/13 Q1019=

Analysis and Investigation

CAA ATSI

The Strikemaster pilot had departed Exeter en-route the Torbay airshow and associated RA(T) and on contacting Exeter Radar, at 1508:50, requested a Basic Service. The Exeter controller passed Traffic Information to the Strikemaster pilot on a Blenheim, also en-route to the display area. At 1509:40 the Strikemaster pilot reported visual with the Blenheim and advised that he was changing to the display frequency, but would maintain a listening watch on the Exeter Radar frequency. At 1510:15, the Exeter controller attempted to contact the Strikemaster pilot to advise him that an unidentified aircraft was in transit through the display area, last seen on their radar to be at 1500ft, but there was no response from the Strikemaster pilot. Figure 1 shows the situation at 1510:43.

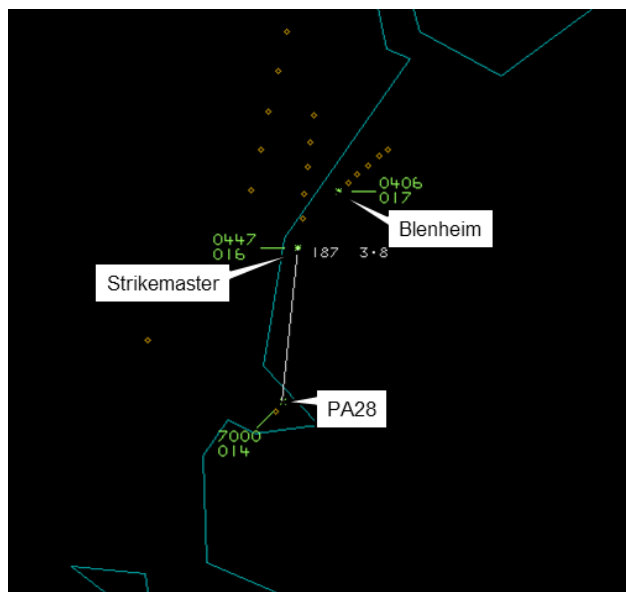


Figure 1 – 1510:43

The Exeter controller made a further unsuccessful attempt to contact the Strikemaster pilot at 1510:55. At 1511:10 the controller asked the Blenheim pilot if he was in communication with the Strikemaster pilot on the display frequency, but the Blenheim pilot stated that he was not whilst still on the Exeter Radar frequency. The controller then went on, at 1511:20, to pass Traffic Information to the Blenheim pilot on the PA28. CPA between the Strikemaster and the PA28 took place between radar sweeps at about 1511:16 (see Figures 2 & 3).

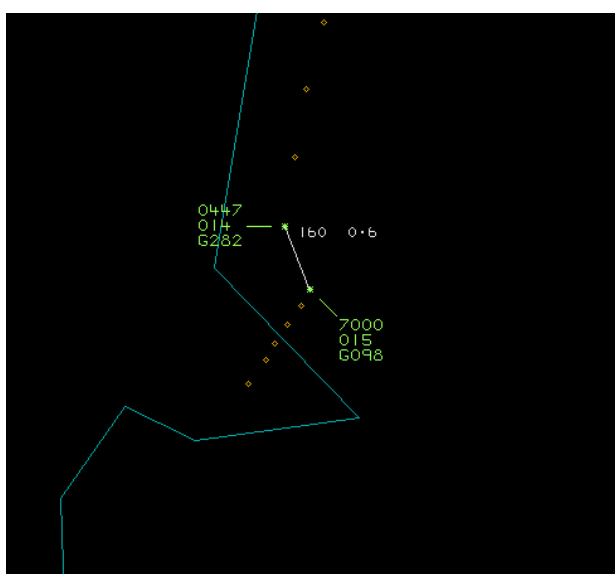


Figure 2 - 1511:12

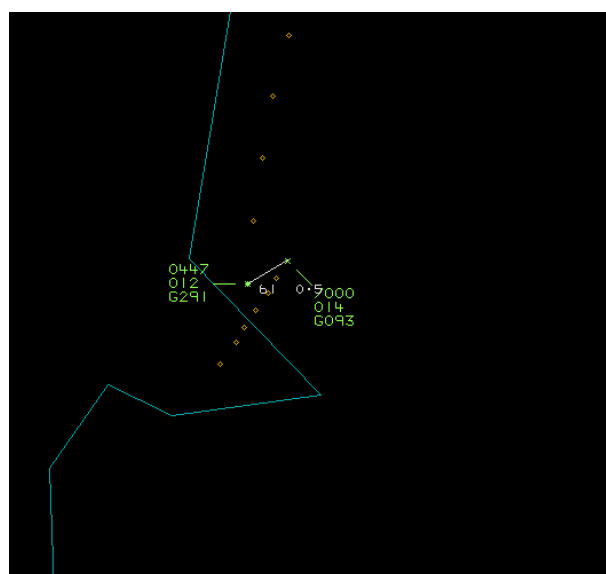


Figure 3 – 1511:20

UKAB Secretariat

The Strikemaster and PA28 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. The Torbay Airshow temporary restricted area was notified by NOTAM J0112/18, as follows:

RESTRICTED AREA (TEMPORARY) FOR TORBAY AIR SHOW. RESTRICTION OF FLYING REGULATIONS HAS BEEN MADE UNDER ARTICLE 239 OF THE AIR NAVIGATION ORDER 2016. AIC M0017/2018 WHICH INCLUDES A MAP WILL REFER. NO ACFT IS TO FLY WI AREA BOUNDED BY CIRCLE RADIUS 4NM CENTRED AT 502546N 0033257W (PAIGNTON, DEVON) EXCEPT ACFT FLYING WITH THE PERMISSION OF THE TORBAY AIR SHOW FLYING DISPLAY DIRECTOR WHO MAY BE CONTACTED ON TELEPHONE 07979 593941. THIS RESTRICTION OF FLYING ALSO RELATES TO THE OPERATION OF ALL UNMANNED AIRCRAFT SYSTEMS.

AIC M0017/2018 states in part as follows:

- 2 Subject to paragraph 4 below, and during the times stated in paragraph 3, no aircraft is to fly below Flight Level 65 within the area of a circle having a radius of 4 nm whose centre is at 502546N 0033257W (Paignton, Devon).
- 3 The restrictions stated in paragraph 2 are valid between:
 - (a) 1300 hours and 1600 hours on 1 June 2018, and
 - (b) 1100 hours and 1630 hours on 2 and 3 June 2018.
- 4 Paragraph 2 does not apply to any aircraft flying in accordance with a permission issued by the Torbay Air Show flying display director who may be contacted on telephone number 07979-593941.

The Red Arrows temporary restricted area was also notified by NOTAM J0239/18, as follows:

RESTRICTED AREA (TEMPORARY) AT TORBAY, DEVON FOR A RED ARROWS DISPLAY WI 6NM RADIUS 502548N 0033210W. AREA ESTABLISHED UNDER ARTICLE 239 OF THE AIR NAVIGATION ORDER 2016. AIC M 030/2018 PUBLISHED 10 MAY 2018 WILL REFER. SEE SEPARATE J SERIES NOTAM FOR DETAILS OF TORBAY AIR SHOW RA(T) AT SAME LOCATION.

LOWER: Surface
 UPPER: 8,000 Feet AMSL
 FROM: 02 Jun 2018 13:55 GMT (14:55 BST)
 TO: 03 Jun 2018 14:35 GMT (15:35 BST)

AIC M030/2018 states in part as follows:

Subject to paragraph 4, and referring to Table 1 at paragraph 11 below, no aircraft is to fly:

- (a) on the days specified in Column 2 during such periods of time as are notified. by NOTAM;
- (b) within the area bounded by a circle of 6 nm radius, centred on the position specified in column 4;
- (c) below the altitude (above mean sea level) as specified in Column 5.

4 Paragraph 3 does not apply to any aircraft flying:

- (a) within controlled airspace or within an aerodrome traffic zone in respect of which there is an appropriate air traffic control unit if it flies in accordance with a clearance or permission of the unit controlling that airspace or zone; or
- (b) in accordance with a permission issued by the relevant flying display director.

Paragraph 11, Table 1 states in part as follows:

¹ SERA.3205 Proximity.

TABLE 1

Column 1 Number (Refers to Charts)	Column 2 Date	Column 3 Place	Column 4 Position	Column 5 Altitude (Above Mean Sea Level)
1	31 May 2018	RAF Valley	531517N 0043135W	8,100 ft
2	2 and 3 June 2018	Torbay	502548N 0033210W	8,000 ft

Summary

An Airprox was reported when a Strikemaster and a PA28 flew into proximity at 1511hrs on Saturday 2nd June 2018. Both pilots were operating under VFR in VMC, the Strikemaster pilot in receipt of an AGCS from Torbay Radio and the PA28 pilot probably not in receipt of a Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the Strikemaster pilot, radar photographs/video recordings and a report from the appropriate ATC authority.

The Board members quickly agreed that the cause of the Airprox had been that the PA28 pilot had flown into the RA(T)s without clearance and into conflict with the Strikemaster. Members commented that it had been unfortunate that the PA28 was not observed visually by the Torbay Airshow support staff thereby denying them the opportunity to pass a warning to the Strikemaster pilot. In this respect, the Board noted that the Exeter controller had observed the PA28 on radar and had attempted, unsuccessfully, to pass Traffic Information to the Strikemaster pilot; they wondered whether a telephone link could have been arranged between Exeter and the airshow AGCS in order to facilitate Traffic Information on any conflicting traffic within the RA(T). Alternatively, a radio plan including listening out on a frequency with a surveillance capability (i.e. the Exeter frequency in this case), would have assisted the Strikemaster pilot, but members acknowledged that this would also depend on radio fit and functionality, and might have led to possible distractions during the display routine. In considering the risk, members felt that the Strikemaster pilot had seen the PA28 early enough to ensure that sufficient lateral displacement had existed and so, although safety had been compromised, they agreed that there had not been a risk of collision.

Lastly, members expressed their disappointment that the PA28 pilot had not responded to the Board's requests to complete an Airprox report. Although he should not have entered the RA(T)s without permission, members presumed he had not done so deliberately and noted that his contribution could have highlighted valuable human factors issues for all aviators to consider and incorporate into their thinking, in order to improve safety of flight for all.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA28 pilot flew into the RA(T)s without clearance and into conflict with the Strikemaster.

Degree of Risk: C.

Safety Barrier Assessment²

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

ANSP:

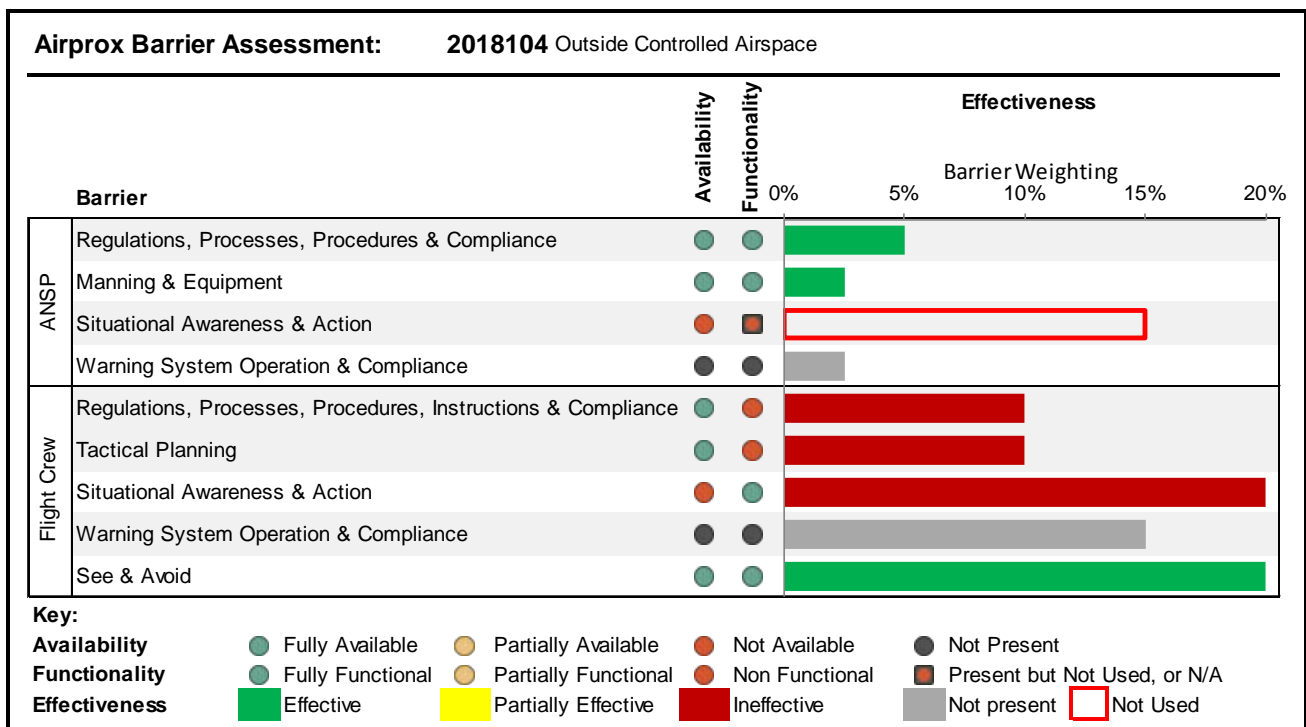
Situational Awareness and Action were assessed as **not used** because an AGCS is not required to provide deconfliction advice.

Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the PA28 pilot entered the RA(T)s without permission.

Tactical Planning was assessed as **ineffective** because the PA28 pilot routed through the active and promulgated RA(T)s.

Situational Awareness and Action were assessed as **ineffective** because the Strikemaster pilot was not aware of the proximity of the PA28, and the PA28 was presumably not aware of the Strikemaster.



² The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).