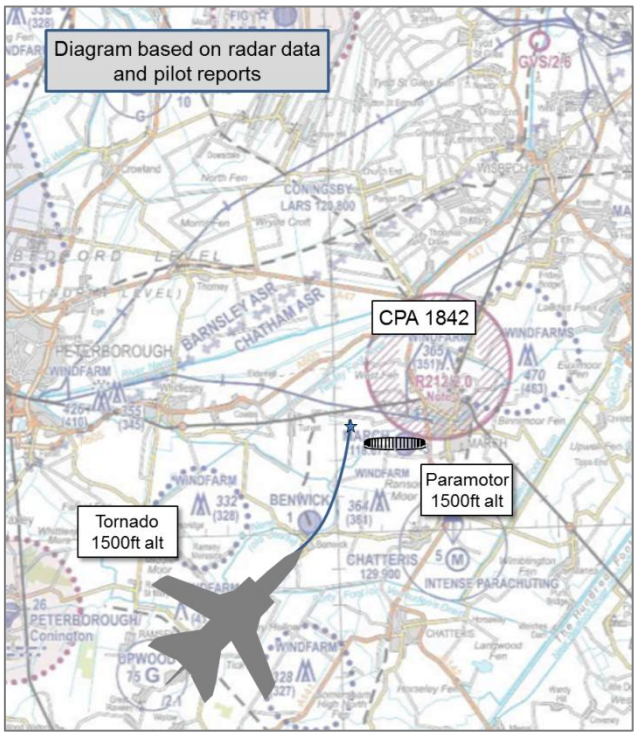
AIRPROX REPORT No 2015098

Date: 25 Jun 2015 Time: 1842Z Position: 5234N 00001W Location: IVO March

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Tornado	Paramotor
Operator	HQ Air (Ops)	Civ Pte
Airspace	Lon FIR	Lon FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	Nil
Provider	Marham	NA
Altitude/FL	1500ft	1500ft
Transponder	A,C,S	Not fitted
Reported		
Colours	Grey	Burgundy/white/orange
Lighting	HISLs	Nil
Conditions	VMC	VMC
Visibility	30km	25km
Altitude/FL	1500ft	1550ft
Altimeter	QFE (1017hPa)	QFE
Heading	360°	350°
Speed	400kt	26kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	0ft V/50-100ft H	350ftV/300ft H
Recorded	NK	



THE TORNADO PILOT reports that he was holding over March prior to undertaking a flypast at Marham. Upon leaving the hold, a paraglider [UKAB note – later found to be a paramotor] was seen to pass down the right-hand side of the aircraft, at the same level, and displaced by an estimated 50-100ft. Due to the late sighting, no evasive action was taken.

He assessed the risk of collision as 'High'.

THE PARA-MOTOR PILOT had foot-launched from UKPPG March and climbed out at approximately 250ft/minute; he reported that he carries a Garmin GPS and so was able to assess accurately his flight details. At 1500ft the air was calmer, so he levelled out to head towards Holbeach. He had been in the cruise for about 3-4 minutes when he saw a Tornado pass him in his 10 o'clock, at the same height, and heading as he was. He noted that because it approached from behind him he hadn't seen it earlier. He watched it initially remain on heading before making a 90° turn right, heading towards Kings Lynn. It is common paramotor practise to fly hands off the controls when the air is stable but, once the Tornado had passed, he took hold of the controls in case wake turbulence caused the wing to collapse. He also practised a front reserve chute deployment just in case. After about 20 seconds, he felt some minor wash and experienced some minor rocking, but the glider was unaffected. Having seen the Tornado disappear near to Kings Lynn, he decided to descend to 1000ft and continued his flight to Holbeach. He commented that he believed that sport aviation airfields are not marked on the RAF maps, and noted that the Tornado had descend down in a spiral to 1500ft in an area where skydiving and para-motoring sports are registered.

He assessed the risk of collision as 'High'.

THE MARHAM CONTROLLER reports that the pilot of the Tornado did not report the Airprox on frequency, and so the controller did not find out about it until the following day. He had no

recollection of the incident, and was unable to offer any further information, although he perceived the severity of the incident as 'High'.

Factual Background

The weather at Marham was recorded as:

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METAR EGYM 251750Z 24007KT CAVOK 22/11 Q1020 BLU NOSIG
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Marham issued a NOTAM covering the flypast at Marham as follows:

H2594/15

Q) EGTT/QWALW/IV/M/AW/000/020/5239N00032E005FLYPAST BY 1 TORNADO ACFT AT PSN 5239N 00032E (RAF MARHAM)
LOWER: SFC
UPPER: 2000FT AMSL
FROM: 25 JUN 2015 18:36 **TO:** 25 JUN 2015 18:56

Analysis and Investigation

Military ATM

The incident was investigated locally by RAF Marham. The paramotor did not appear on radar, and ATC were therefore unable to provide Traffic Information. The investigation found that the paramotor also provided a small visual cross-section, especially when viewed from astern, as per the view from the Tornado cockpit. Furthermore, the paramotor provided no initial relative movement to the Tornado crew, and these characteristics would have imposed limitations to 'see-and-avoid'. The investigation also found that there was no way for Marham's radar to detect a non-transponding paramotor, and that the Fenland Centre involved had not attended the East Anglia Airspace User Working Group (EAAUWG).

Following on from the investigation, it was agreed that the Fenland Centre would be invited to the next EAAUWG in order to promote a better understanding of operating practices and a potential means to deconflict movements. The Tornado simulator procedures would also be reviewed to scope the inclusion of 'foot-launched' air vehicles, such as paragliders and microlights, to highlight the difficulty in acquiring and avoiding these particular types.

UKAB Secretariat

Both 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]. When two aircraft are converging at approximately the same level, the aircraft that has the other on its right shall give way, except as follows: (i) power-driven heavier-than-air aircraft shall give way to … sailplanes...[2] The ANO states that the definition of a sailplane includes self-propelled hang-gliders.[3]

Comments

HQ Air Command

This incident once again highlights the importance of lookout, by all parties, as mitigation to MAC. It was a very late sighting by the Tornado crew that left them with no time to increase separation, and the para-motor pilot did not see the Tornado prior to CPA because it approached him from behind. It is once again disappointing that the Airprox was not filed on frequency as this would

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way.
[3] ANO 2009 Article 255

have prompted the controller to take certain actions, including preparing a statement, although it is acknowledged that since there was no radar contact with the paramotor, the controller's input would be very limited.

The unit investigation identified recommendations which have now been implemented; notably, a representative from the BHPA will be invited to attend future East Anglian Airspace User Working Group meetings in order for all parties to better understand each other's capabilities (with respect to detection of other aircraft) and the Tornado simulator will now include 'foot-launched vehicles' as part of the synthetic lookout training provided to Tornado crews. A more detailed NOTAM specifying the ingress route to the flypast location (in particular the Initial Point and final LOA) may have increased awareness of where the Tornado might reasonably have been expected to be seen.

BHPA

Although the BHPA was able to assist in the tracing action, this pilot and the operators of the location that they were flying from both choose to operate outwith the BHPA. Through the latest phase of the ANO consultation, the CAA has indicated that it is content for such operations to continue without any form of external validation or oversight. The BHPA believes that for the benefit of those under training, and fellow Class G users, all paramotor training operations should be subject to external validation and oversight. Had the operator been part of the BHPA they would have been part of the on-going liaison work with the military.

UKPPG Operator

UKPPG (March Airfield) is a full time professional PPG (Powered Paragliding) training organisation, operating under the auspices of APPI PPG, a Worldwide recognised training syllabus, specifically for Paragliding and Powered Paragliding. UKPPG and its instructors pro-actively engage other airspace users to enable everyone to operate safely within our area via NOTAMS and radio / telephone communications, these include liaisons with the Parachute and Microlight Centre at Chatteris Airfield, Upwood and Crowland Gliding Clubs, Benwick Airfield and the Local Military Air-Bases including RAF Marham, Lakenheath and Mildenhall. March Airfield was also added to the CAA Air Charts as an unlicensed Airfield for additional safe guarding to other airmen and we have our own radio frequency of 118.675mHz (PPR). Following this incident, we have also taken the initiative to add High Powered Self Contained LED Strobe Lights to our Training Paramotors for added awareness to other aircraft. The pilot in question has also followed our initiative with his own Paramotor.

Summary

An Airprox was reported on 25th June 2015 at 1842 between a Tornado and a para-motor. The Tornado was flying VFR in VMC at 1500ft when the pilot saw the para-motor pass down the right-hand side of his aircraft. The para-motor pilot didn't see the Tornado until it had passed him from behind and was in his 10 o'clock. The incident did not show on the NATS radars, and so the exact separation is not known.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings, and reports from the appropriate ATC and operating authorities.

The Board first discussed the NOTAM, issued by RAF Marham, warning of the Tornado fly-past. They were split on the merits of issuing such a NOTAM, with some members noting that Tornados fly around that area at various levels all the time and so, in their opinion, there was little value in issuing a NOTAM at all; in contrast, others believed that a more detailed NOTAM, indicating the area the aircraft was in the hold, would have been useful to other airspace users given that the Tornado pilot

specifically planned to fly that track and hold in that area, and that this information might have alerted others to sharpen their lookout as they flew nearby.

The Board then looked at the assertion made by the para-motor pilot that para-gliding sites are not marked on RAF charts; the military ATC member informed them that this is not the case; any such sites listed in the AIP are marked on military charts. However, neither March, nor the UKPPG, are listed in the AIP under para-gliding activities, nor do they appear in any other publications; this led the Board to wonder how they then came to be annotated on the CAA charts, for which the CAA Airspace advisor was unsure. Given that March is not a licensed airfield and therefore does not have a ATZ, military members opined that if every sport aviation site was marked on the maps they would soon become unreadable, and so the information displayed had to be carefully selected. Despite this discussion centred around the marking of sites on the charts, the Board noted that the Tornado pilot did not overfly the site anyway, so, even if it had been marked on his charts, the Airprox may well have still occurred.

Members noted that this incident had occurred in see-and-avoid airspace, where both pilots were entitled to fly, but which required good look-out from all pilots concerned. They also noted that the Tornado pilot was receiving a Traffic Service from Marham ATC, but it was thought that the para-motor would be moving too slowly, and present too weak a radar target, for the Marham radar to pick it up; therefore, for this incident they agreed that the controller would not have been able to assist.

When it came to determining the cause of the Airprox, the Board agreed that it was effectively a non-sighting by the Tornado pilot (because he didn't see the para-motor in time to take any avoiding action), and a non-sighting by the para-motor pilot (who only saw the Tornado after it had passed by). This led the Board to assess the risk as Category A; in their opinion, chance had played a major part in the event, and separation had been reduced to a minimum.

The Board were heartened to hear that RAF Marham had taken steps to reach out to the UKPPG at March and include them in their EAAUWG activities; such opportunities for information exchange and education about each other's activities provided a real opportunity to help prevent further incidents by enhancing the awareness of all aviation operators in the local area.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Effectively a non-sighting by the Tornado crew and a non-sighting by the para-motor pilot.

Degree of Risk: A.