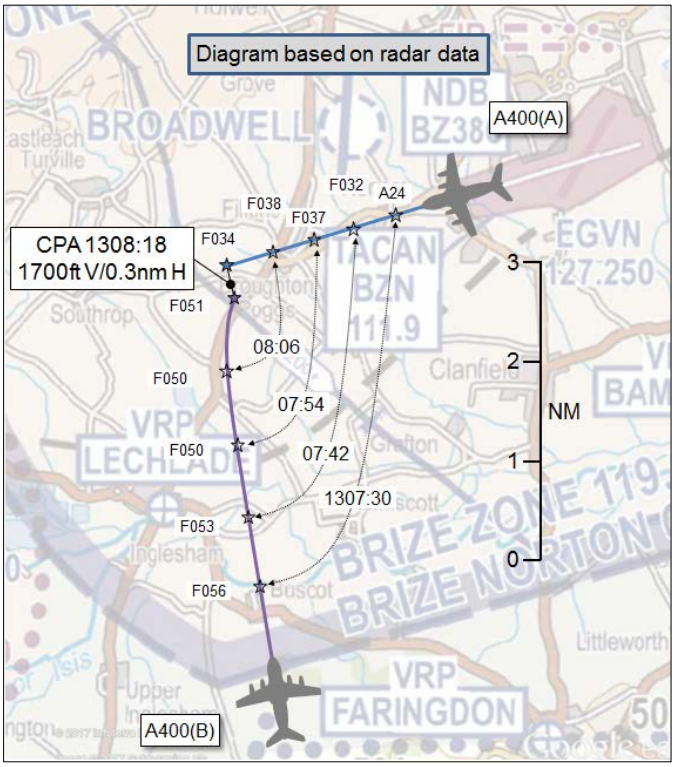
AIRPROX REPORT No 2017029

Date: 01 Mar 2017 Time: 1308Z Position: 5144N 00140W Location: 2nm W Brize Norton airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A400(A)	A400(B)
Operator	HQ Air (Ops)	Foreign Mil
Airspace	Brize CTR	London FIR
Class	D	G
Rules	IFR	IFR
Service	Radar Control	Deconfliction
Provider	Brize Radar	Brize Director
Altitude/FL	FL34	FL51
Transponder	A,C,S	A,C,S
Reported		
Colours	Grey	Grey
Lighting	Nav, beacons, HISL	Beacons, nav, strobes, take off, taxi
Conditions	IMC	VMC
Visibility	Nil	>10km
Altitude/FL	3400ft	4600ft
Altimeter	QNH (997hPa)	Choose an item. (997hPa)
Heading	255°	350°
Speed	NK	210kt
ACAS/TAS	TCAS II	TCAS II
Alert	RA	RA
Separation		
Reported	NK	600ft V/0.5nm H
Recorded	800ft V/1.6nm H (1308:02) 1700ft V/0.3nm H	



THE AIRBUS A400(A) PILOT reports that on departing from Brize Norton his initial clearance was for a standard Lichfield departure; this was amended by Brize Approach to 'after take-off to stop climb at FL50'. The QNH was 997hPa. During the climb-out, passing approximately 2800ft amsl, a TCAS contact was displayed descending in their 11 o'clock. The crew queried this with the controller to confirm that the traffic (now at 1500ft above and descending) was under Brize Control. While the answer was being given, a TCAS RA occurred instructing the pilot to descend and then level off. The other aircraft was visually acquired at the same time as the RA annunciation, but only by the Pilot Monitoring (PM) and a crewmember in the CM3 seat. Whilst the Pilot Flying (PF) followed the RA instructions, the PM reported the RA to ATC. The initiation of the RA was at approx 3400ft amsl and, following the action, the aircraft was levelled at approx 3100ft amsl. Following the action, and when clear of conflict had been announced and the aircraft was level, ATC instructed them to stop climb at FL40. At this stage the aircraft was accelerated, flaps retracted and a climb to FL40 initiated. The crew believe that without following the RA, there was a definite possibility of a mid-air collision.

He perceived the severity of the incident as 'High'.

THE AIRBUS A400(B) PILOT reports he was descending in accordance with a clearance to 2800ft QNH inbound IAF (BZN R279/3) and he had also been cleared for a standard TAC ILS DME Brize RW25. At about 4600ft they received the order from radar 'I need you immediate right turn stop descent 5000ft'. They followed the instruction, started the right turn, stopped descending and began to climb again. At his radio responding call 'in a right turn already below 5000ft climbing back to 5000ft they encountered a TCAS RA CLIMB and followed the RA. This was added to his radio call

'following TCAS RA Climb' They continued turning to heading 090° as instructed, and received the TCAS 'clear of conflict' shortly after a 'Level Off' alert at about 4800ft. During the turn, and following the TCAS RA Climb procedure, the Co-pilot and the CM3 visually detected the other A400(A) below, passing from right to left. Shortly after they received a TCAS 'Clear of Conflict', they informed the controller that they were clear of conflict and still turning to heading 090°. They requested to fly to the BZN TAC climbing to 5000ft to continue the approach. Shortly after this (about 1-2nm north of BZN TAC) they received a clearance to intercept the outbound leg of BZN and continue the published approach, which was accomplished followed by a low approach and departure. In his opinion the deconflicting message from the controller, with the immediate right turn, came too late and was a turn into the traffic (higher closure rate) because they were already too close to the departure sector coming from the south. The Airprox itself was close but not dangerously close.

He assessed the risk of collision as 'Low'.

THE BRIZE RADAR CONTROLLER reports that he plugged in at 1300 to take a handover for the Radar position. Radar was also working DIR and Zone frequencies, with traffic/pre-notes on all 3 frequencies. He was working 3 tracks on Zone, 1 pre-noted inbound from SIREN on DIR (A400(B)), 1 outbound C130 released for TAC NW departure and 1 pre-note Standard Lichfield departure (A400(A)) on Radar frequency. Speaking traffic on all 3 frequencies all at once, including a foreign pilot, led to a significantly increased workload. He was unable to listen and respond to traffic on all frequencies. The Supervisor handed over the DIR frequencies to another controller as he did not have capacity to complete a handover himself. The A400(B) pilot was then worked by the DIR controller and was inbound for a TAC/ILS approach. Whilst the A400(B) was still in the airway, he released the A400(A) on a standard Lichfield approach. The A400(B) pilot was stopped in the descent at FL50 and, once airborne, he stopped the A400(A) pilot at FL40 to maintain standard separation. Due to increased workload on both himself and the DIR controller, the outbound A400(A) was mistaken for the previous outbound (a C130 TAC NW, not above 1800ft) and called as 'C130 outbound to the west not above altitude 1800ft'. At this point he informed the DIR controller that this was not the case and that the outbound A400(A) pilot was climbing to FL40. He was unaware that the DIR controller had mistaken the outbound traffic and had descended their inbound traffic to 2800ft for the TAC/ILS procedure. Avoiding action was correctly issued by the DIR controller to the A400(B) pilot to stop descent (indicating FL55 at the time) and turn right immediately heading 090°. His outbound traffic had levelled at FL40 at this stage and the pilot reported that they had had a TCAS RA and would be submitting their required paperwork. On-going poor manning levels over the past several months has resulted in controller numbers being below that required for a day shift. He was not aware that there was a spare controller to alleviate his workload, hence why he had accepted the handover of all 3 frequencies because one controller working Radar/DIR/Zone has recently become the norm. Prior to taking over the position, he had completed administrative tasks throughout his lunch hour along with receiving his OJAR de-brief. This resulted in an insufficient break following a full morning's training with a trainee in the Radar/Zone position. He believed these issues to be contributory factors to the incident.

He perceived the severity of the incident as 'Medium'.

THE BRIZE RADAR DIRECTOR/ZONE CONTROLLER reports that at approximately 1300 he had returned from a lunch break and was due to take the DIR/Zone position from the Radar controller who, at the time, had all 3 frequencies. As he looked to take the DIR position, Radar was working 6/7 tracks across all the frequencies and did not have time to hand over officially, so he took control with an aircraft due to come off the airway at any moment. The pilot of the aircraft (A400(B)) had already made contact with DIR but the Radar controller was unable to respond due to workload. He then took control and gave a right turn on own navigation for the initial approach fix and a descent to FL50. As he did this he looked across to see what traffic there was to effect and saw a flight strip with a C130 C/S conducting a TAC NW departure. He then called this traffic to the A400(B) pilot and told him that this would be not above 1800ft, departing to the north-west, and cleared the pilot for the TAC-ILS approach descending to 2800ft. As he said this the Supervisor, via the Radar controller, informed him that it was a different aircraft to the one he had thought and that it was actually climbing to FL40. Immediately he stopped the A400(B) pilot at FL50 and gave an avoiding action turn heading 090°.

The A400(B) pilot called visual after informing him of an RA instruction. Once clear, the rest of the procedure was then given. At this point he instructed an FOA to find a controller so they could take the Zone position. The Approach controller was working to full capacity with multiple aircraft talking at once as well as trying to hand over the positions. For the past several months manning at Brize has been poor with not enough people around to afford breaks or relief, particularly during busy periods and over lunch time. In this instance the Radar controller was of the understanding there was no-one around to help with the workload and was doing the best he could. In his opinion, people are getting fatigued and are working longer and harder in positions and he believed this to have been a contributory factor in this incident.

He perceived the severity of the incident as 'Medium'.

THE BRIZE SUPERVISOR reports that there was a Director/Zone controller available at 1300, therefore they should have been in position. Because he was dealing with another issue he was not in the Approach room at the time of the handover. The manning levels were correct, based on the levels of traffic that was expected; which were no airfield movements after 1310 with an embargo time starting at 1315. Had he not been in the VCR trying to sort out issues with a pilot trying to depart within the embargo time, then he would have been more able to proactively manage the lunch time manning change-over, thereby reducing the likelihood of the radar controller becoming over loaded with multiple frequencies in use.

Factual Background

The weather at Brize was recorded as follows:

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METAR EGVN 011250Z 23006KT 9999 FEW028 BKN090 09/02/Q0997 BLU NOSIG
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The Brize CTR is Class D airspace from surface to an altitude of 3500ft.

4.1 CAP 774, Chapter 4, states:

'A Deconfliction Service is a surveillance based ATS where, in addition to the provisions of a Basic Service, the controller provides specific surveillance-derived traffic information and issues headings and/or levels aimed at achieving planned deconfliction minima, or for positioning and/ or sequencing. However, the avoidance of other traffic is ultimately the pilot's responsibility. A controller shall provide traffic information, accompanied with a heading and/or level aimed at achieving a planned deconfliction minima against all observed aircraft in: Class G airspace'

Analysis and Investigation

Military ATM

An Airprox occurred 2nm W of Brize Norton, between an A400(A) and an A400(B). The A400(A) was receiving a Radar Control Service from Brize Approach while conducting an IFR departure and the A400(B) was receiving a Deconfliction Service from the Brize Director positioning for a TAC-ILS approach.

Portions of the tape transcripts between the Brize Director and the A400(B) are below:

From	To	Speech Transcription	Time
Director	A400(B)	[A400(B) C/S] descend to altitude two thousand eight hundred feet QNH nine nine seven hectopascals	13:06:04
A400(B)	Director	Two thousand eight hundred err nine nine err seven hectopascals	13:06:12
Sec 23	Director	Twenty three planner	13:06:35
Director	Sec 23	Err Brize Director I've got err [A400(B) C/S] six one zero just making an approach at Brize before coming out for the MALBY	13:06:36
Sec 23	Director	Alright ok	13:06:41

From	To	Speech Transcription	Time
Director	Sec 23	Err can I get the clearance for him please	13:06:42
Sec 23	Director	Oh for him to come back out	13:06:43
Director	Sec 23	Yeah	13:06:44
Sec 23	Director	Err can you give me a call when he's ready to go back out	13:06:46
Director	Sec 23	Err yeah it'll only be about ten minutes he said thanks	13:06:49
Sec 23	Director	Alright give us a call when he's ready to go	13:06:51
Director	Sec 23	Will do thank you	13:06:52
Director	A400(B)	[A400(B) C/S] Hercules err right two o clock climbing out of Brize not above altitude one thousand eight hundred feet err departing VFR to the north west	13:07:03
A400(B)	Director	Copied	13:07:14
Director	A400(B)	[A400(B) C/S] cleared ILS DME approach runway two five QNH nine nine seven hectopascals report bravo zulu november outbound descending to altitude two thousand eight hundred feet	13:07:20
A400(B)	Director	Currently descending two thousand eight hundred err feet cleared for TACAN ILS DME runway two five and call you Brize Norton TACAN outbound to start the approach	13:07:33
Director	A400(B)	[A400C/S] avoiding action turn right immediately heading zero nine zero degrees and stop descent flight level five zero	13:07:43
A400(B)	Director	Stopping descent five zero we are presently at four five and we got a TCAS advisory climbing five	13:07:51
Director	A400(B)	[A400(B) C/S] roger	13:07:58
Director	A400(B)	[A400(B) C/S] that traffic right one o clock two miles err crossing right left erm one thousand five hundred feet below	13:08:07
A400(B)	Director	We got him in sight right now so we'll hold	13:08:12
Director	A400(B)	Oh roger	13:08:14
A400(B)	Director	OK err can we ……. to Brize Norton now and err further down two eight	13:08:17
Director	A400(B)	[A400(B) C/S] standby	13:08:23
A400(B)	Director	And we are clear of conflict	13:08:28

Portions of the tape transcripts between Brize Radar and the A400(A) are below:

From	To	Speech Transcription	Time
A400(A)	Approach	Approach good afternoon [A400(A) C/S] is with you passing seventeen hundred feet on the err standard Lichfield	13:07:11
Approach	A400(A)	[A400(A) C/S] Brize Approach identified err radar control stop climb flight level five zero	13:07:18
A400(A)	Approach	Radar control stopping climb flight level five zero looking for traffic service outside of controlled airspace	13:07:23
Approach	A400(A)	[A400(A) C/S] roger	13:07:28
PA28	Approach	Brize zone this is [PA28 C/S]	13:07:26
A400(A)	Approach	[A400(A) C/S] we have traffic descending fifteen hundred feet above confirm that is with you	13:07:49
Approach	A400(A)	[A400(A) C/S] affirmative Director is err currently tracking out to the east	13:07:52
A400(A)	Approach	[A400(A) C/S] following TCAS RA standby	13:07:56
Approach	A400(A)	[A400(A) C/S] stop climb flight level four zero	13:08:08
A400(A)	Approach	Ah [A400(A) C/S] is now err recovering from TCAS RA stopping climb four zero	13:08:12
PA28	Approach	Brize zone [PA28 C/S]	13:08:38:
Approach	PA28	[PA28 C/S] Brize zone remain outside controlled airspace standby	13:08:41
Approach	C130	[C130 C/S]	13:09:00
Approach	C130	[C130 C/S] radar contact lost basic service	13:09:02
Approach	A400(A)	[A400(A) C/S] now clear of previously called traffic climb flight level one four zero	13:09:42

Figures 1-6 show the positions of the A400(B) and the A400(A) in the lead up to and during the Airprox. The screen shots were taken from a replay of the All Swanwick Radar feed, which is not the feed the controllers were using.

At 13:06:04 (Figure 1), the Brize Director instructed the inbound A400(B) pilot to descend to 2800ft before calling the appropriate civil sector to pass departure details.

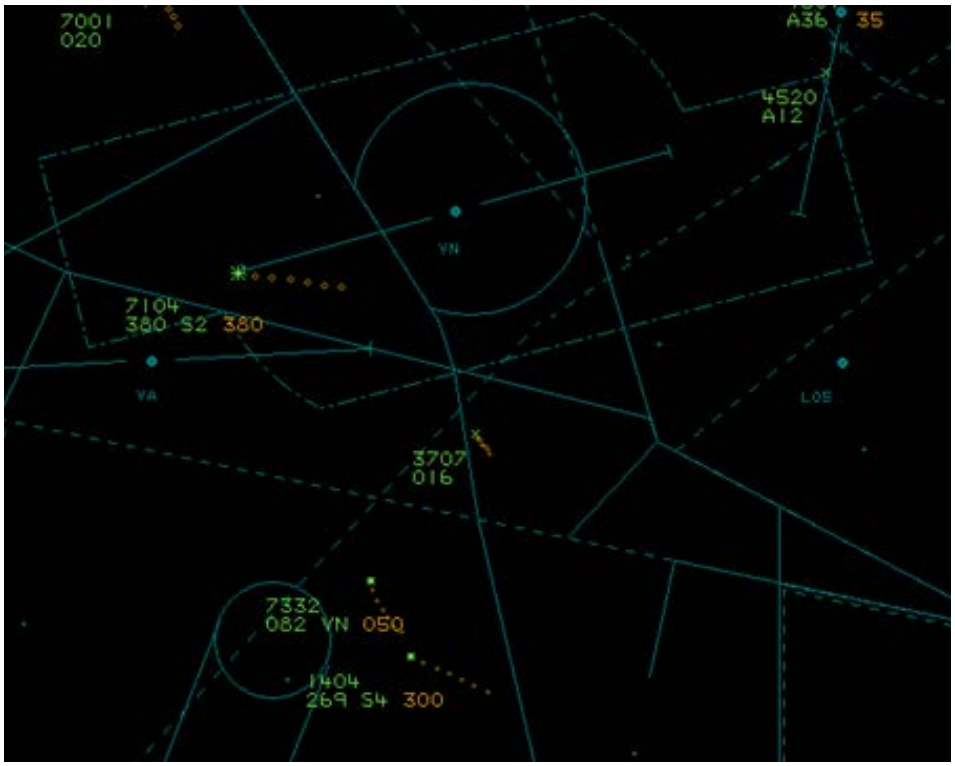


Figure 1: Geometry at 13:06:04 (A400(A) not on screen; A400(B) 7332).

At 13:07:03, the Brize Director passed Traffic Information to the A400(B) pilot on traffic right, 2 o'clock, climbing out of Brize, not above 1800ft (not seen on replay), a C130 departing VFR. This was, in fact, the A400(A) climbing out IFR. At 13:07:18 (Figure 2), the Brize Approach controller identified the A400(A), agreed a Radar Control Service and instructed the pilot to stop climb at FL50. Simultaneously, the Brize Director cleared the A400(B) pilot for an ILS DME approach, descending to 2800ft.

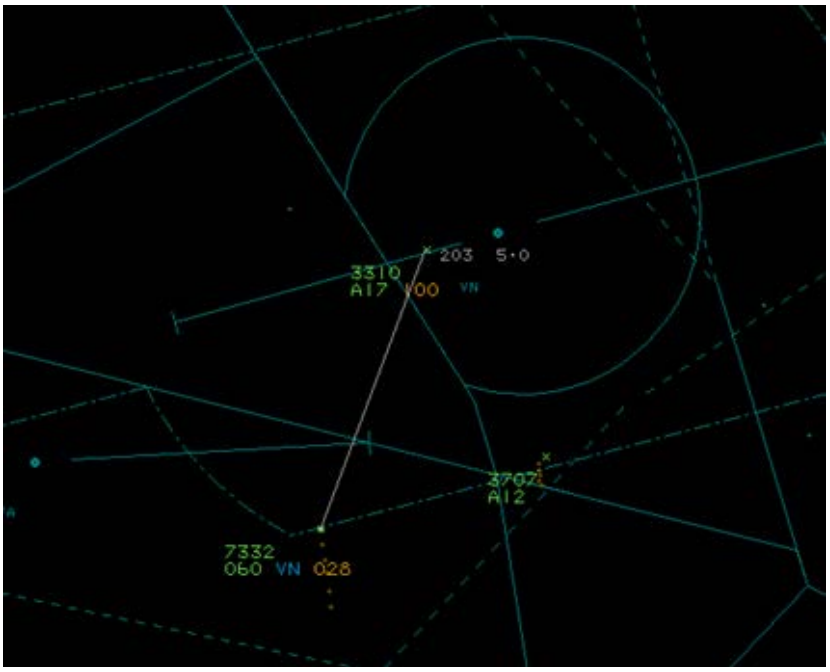


Figure 2: Geometry at 13:07:18 (A400(A) 3310; A400(B) 7332).

At 13:07:43 (Figure 3), the Brize Director instructed the A400(B) pilot to take an avoiding action turn to the right onto heading 090° and to stop descent at FL50. The A400(B) pilot responded that they were stopping descent at FL50, though presently at FL45 and receiving a TCAS Advisory. At the same time, the A400(A) pilot queried traffic descending 1500ft above his aircraft. The Brize Approach controller responded that the traffic was with Director and tracking out to the east.

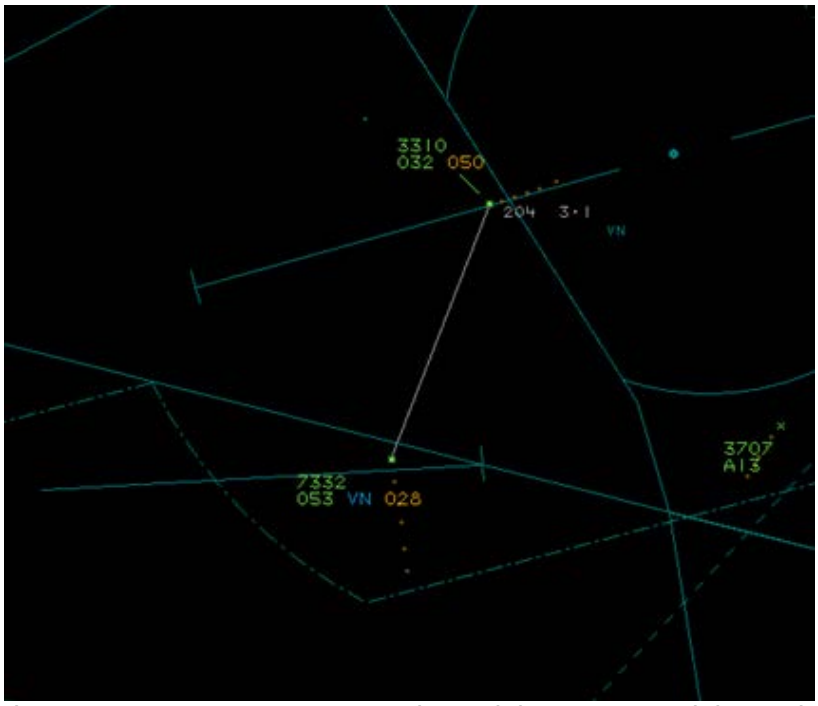


Figure 3: Geometry at 13:07:43 (A400(A) 3310; A400(B) 7332).

At 13:07:56 (Figure 4), the A400(A) pilot told the Brize Approach controller that he was following a TCAS RA. The Brize Approach controller instructed the A400(A) to stop climb at FL40. The A400(A) pilot stated that they were recovering from the TCAS RA, stopping climb FL40.

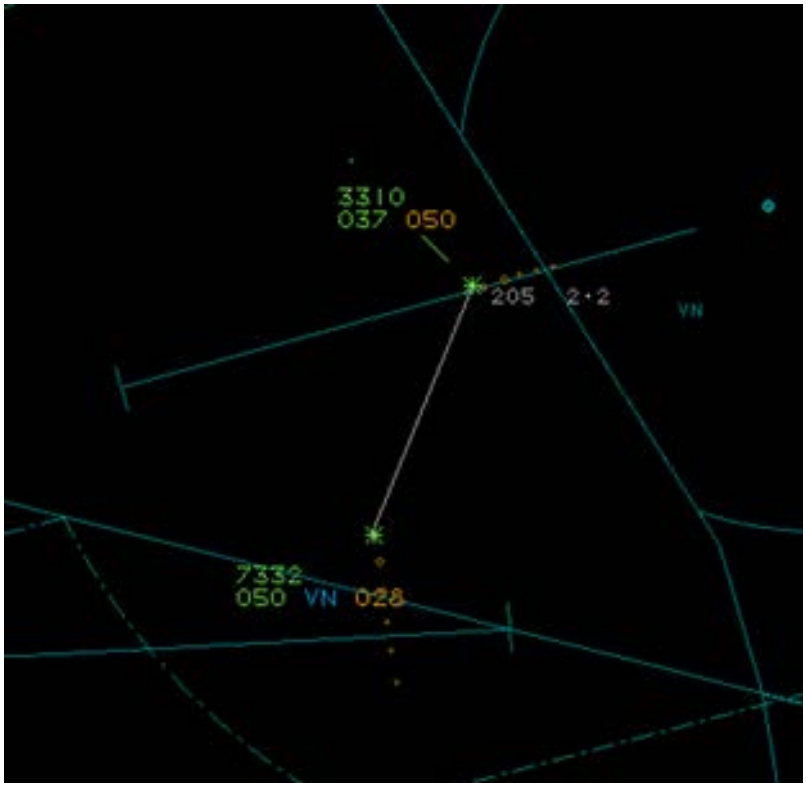


Figure 4: Geometry at 13:07:56 (A400(A) 3310; A400(B) 7332).

At 13:08:07 (Figure 5), the Brize Director passed Traffic Information to the A400(B) pilot on traffic right, 1 o'clock, 2nm, crossing right to left, 1500ft below. The A400(B) pilot responded that the traffic was in sight and that the aircraft would hold.

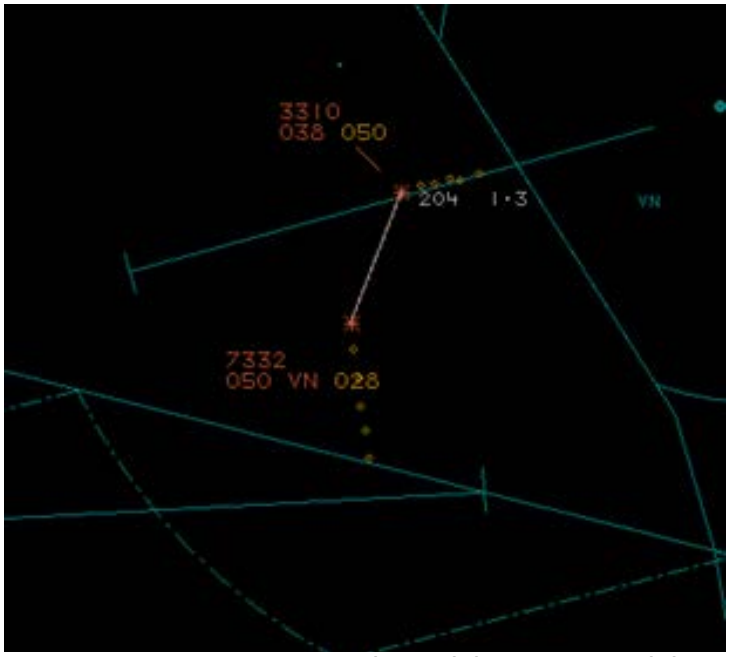


Figure 5: Geometry at 13:08:07 (A400(A) 3310; A400(B) 7332).

At 13:08:18 (Figure 6), the 2 aircraft passed at their CPA at 0.3nm horizontally and 1700ft vertically.

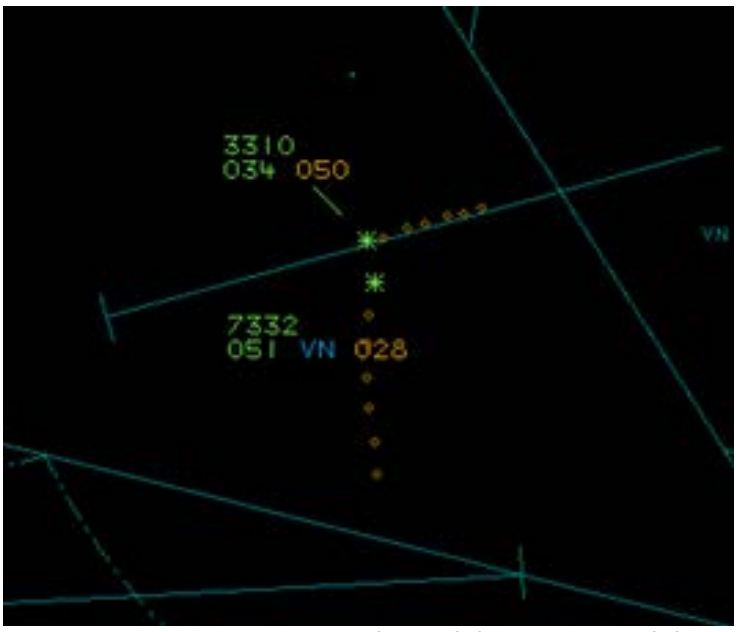


Figure 6: Geometry at 13:08:18 (A400(A) 3310; A400(B) 7332).

The Brize Radar controller, initially bandboxed to also include Director and Zone, was working 6/7 aircraft across the 3 frequencies and was reaching capacity. He was not aware that there were controllers available to split the positions if required, and therefore accepted the busy, bandboxed position. When another controller attempted to take control of the Director frequency, with the inbound A400(B) being released from airways, the Radar controller did not have the capacity to conduct the handover.

The Brize Director, who had unsuccessfully attempted to accept a formal handover of the position from the Radar controller, heard the A400(B) pilot calling on the Director frequency. With the Radar controller being unable to respond due to workload, the Director took control of the position without going through the standard console handover procedure, though the Supervisor handed over the A400's flight strip and passed the aircraft's intentions. In normal circumstances, due to the airways arrival approaching from the west and being affected by any departing traffic, the Radar controller would pass Traffic Information to the Director when splitting out the position, but in this case the information was not passed.

To gain Situational Awareness prior to descending the A400(B) pilot below FL50, the Director looked over at the Radar controller's flight strips and saw that there was a C130 planned to depart, not above 1800ft, remaining inside Class D, which appeared to correlate with an aircraft appearing on the radar screen. In fact, the departing traffic was the A400(A) climbing on a SID to FL100. Due to the misidentification, the Director instructed the A400(B) pilot to descend to 2800ft for the procedure and passed (incorrect) Traffic Information on the departing A400(A).

The Supervisor, who had been in the Visual Control Room (VCR) until shortly prior to the Airprox, heard the Director issue the descent to 2800ft and recognised the error, immediately intervening to inform the Director that the departing traffic was climbing to FL40 (it was actually climbing to FL50 at the time). This allowed the Director to issue an avoiding action turn and stop descent at FL50, though by this time the A400(B) had already descended through FL50.

The Radar controller had instructed the departing A400(A) pilot to stop climb at FL50 in order to deconflict against inbound traffic (though they reported issuing climb to FL40 to achieve standard separation). The A400(A) pilot queried the traffic 1500ft above but the RA did not act at that time. When he became aware that the A400(B) pilot was taking avoiding action to stop descent at FL50, he amended the instruction to stop climb at FL40, which coincided with the A400(A) pilot reporting that he was responding to a TCAS RA. Although controllers are to allow aircraft to take their own response to TCAS RA, it is believed that the Radar controller had already mentally committed to the instruction prior to hearing the pilot's transmission.

The Supervisor reported that, had he not been required in the VCR to resolve issues with aircraft departing around an embargo, he would have been more able to proactively manage the manning in the Approach Control Room (ACR). The Radar controller reaching capacity, possibly due to a combination of perceived normalisation of bandboxing multiple positions with high traffic levels and pressure to facilitate departures prior to the embargo, prevented the standard handover that would have given the Director the required situational awareness to plan and coordinate the A400(B) pilot's descent. That said, the Supervisor's eventual presence and intervention enabled the Director to issue avoiding action to the A400(B) pilot and was, therefore, a successful barrier.

UKAB Secretariat

The A400(A) and A400(B) 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]. Because the incident geometry is considered as converging then the A400(B) pilot was required to give way to the A400(A)[2]; notwithstanding, ATC were required to maintain separation between the aircraft.

Comments

HQ Air Command

It appears that, unfortunately, the balance between appropriately managed ATC workload and available personnel was on this occasion sub-optimal. It is recognised that individual efforts were being made to alleviate this; however, owing to the oncoming Director controller misidentifying the

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

Atlas (A400(A)) for a departing C130 (with different climb out details) he cleared the descending A400(B) through the departing Atlas's level. Fortunately the barriers of onboard warning/collision avoidance equipment, see & avoid (cued by TCAS) and flight crew situational awareness were all effective and prevented the incident becoming a closer encounter than was the case.

Summary

An Airprox was reported when 2 A400M aircraft flew into proximity at 1308 on Wednesday 1st March 2017. Both pilots were operating under IFR, the A400(A) in IMC and the A400(B) under VMC. The A400(A) pilot was in receipt of a Radar Control Service from the Brize Radar controller and the A400(B) pilot was in receipt of a Deconfliction Service from the Brize Director. The Director mis-identified the departing A400(A) and cleared the A400(B) to descend through its level. The Supervisor warned him of the confliction and avoiding action was issued to the A400(B) pilot. Both pilots received a TCAS RA; CPA was 1700ft vertical and 0.3nm horizontal.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, the controllers concerned, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

The Board first noted that the two aircraft involved were on IFR flights to and from Brize Norton airfield. A400(A) was outbound routeing towards Lichfield and A400(B) was inbound from airways from the south for a TAC ILS DME approach to RW25. At the time of the Airprox, A400(A) was within the Class D airspace of the Brize CTR (surface-3500ft), in receipt of a Radar Control Service and had been cleared to FL50. A400(B) was above the upper limit of the CTR, in Class G airspace, in receipt of a Deconfliction Service. Although controller's are only aiming to achieve a planned deconfliction minima against traffic in Class G airspace, a Military Controller member commented that, in his opinion, in the circumstances of this incident, where aircraft were in the process of entering and leaving Controlled Airspace, the controller was responsible for providing standard separation of 3nm laterally or 1000ft vertically between the two A400s.

The Board was aware that in the period leading up to the Airprox the Brize Radar controller had been operating bandboxed with the Director (DIR) and Zone positions. He was speaking on three frequencies, with traffic and pre-notes on each one. He reported that his workload was such that he was unable to listen and respond on all frequencies. This included not being able to respond to the A400(B) pilot who had called on the DIR frequency.

At approximately 1300, a controller had arrived to take over the DIR/Zone position. However, the Radar controller's very high workload prevented him from officially handing over these positions. In order to assist his colleague, the oncoming controller decided to take over the DIR/Zone positions without a formal handover. He contacted the A400(B) pilot and cleared him to descend to FL50 on his own navigation for the initial approach fix. His next action was to look across at the Radar controller's flight progress strips to check on the departing aircraft. He noted that there was a C130 to depart, climbing to 1800ft. Accordingly, he cleared the A400(B) pilot to descend to 2800ft to provide separation from what he thought on the radar display was the departing C130 climbing to 1800ft. However, he had misidentified the departing aircraft, which was actually A400(A), resulting in him vectoring the A400(B) into conflict with A400(A). Although not ideal, military ATC members could understand why the oncoming controller had taken over the position without a handover because his intention had been to reduce the Radar controller's workload. However, it was considered that it would have been prudent not to have taken any immediate action, certainly not to descend A400(B), until he was completely aware of the traffic situation. It was suggested that a safe defensive option would have been to turn the A400(B) away from the departing aircraft to ensure some lateral separation because he would not have been aware of the level that the departing aircraft was climbing to. This information would have been handed over if a formal handover had taken place. The Board considered that the lack of a formal handover resulted in subsequent assumptions and confusion and that this was a contributory factor to the Airprox.

The DIR was advised early of his error although there was a discrepancy in the reports about who actually informed him and it has not been possible to establish whether it was the Radar controller or the Supervisor. Nevertheless, the important factor was that he had been told and, using this information, he had issued the A400(B) pilot with an avoiding action turn, together with an instruction to stop descent at FL50, (he had been informed incorrectly that A400(A) was climbing to FL40) albeit he had already descended through that level. The A400(A) pilot was instructed to stop his climb at FL40. Both pilots received and acted on their respective TCAS RAs.

It was apparent to the Board that the Radar controller's workload was such that it was excessive and this was also considered to be a contributory factor. The Board deliberated at length why the Radar controller's workload had been so high and were informed that there had been an instruction banning airfield movements after 1310, with an embargo time starting at 1315. Military Controller members commented that this would have meant that, in the period leading up to the embargo, movements would undoubtedly have increased whilst pilots took the opportunity to move before the time restriction. Members wondered, bearing this in mind, why the DIR position had not been opened sufficiently early to prevent the radar controller's workload increasing significantly (the Supervisor had commented in his report that there was a DIR/Zone controller available at 1300). ATC members noted that the Supervisor had felt it necessary, at about this time, to visit the VCR to resolve issues with departing aircraft affected by the embargo. They considered that had he been able to remain in the ACR he may have been able to proactively manage the manning of the radar positions, thereby reducing the likelihood of the radar controller becoming overloaded with multiple frequencies in use.

The Board noted that both the Radar and DIR/Zone controllers had commented about the 'poor' ATC manning at Brize over the past several months. This had apparently led to difficulties in arranging relief breaks, especially during busy periods. Additionally, they had been expected at times to carry out administrative duties during their lunch break. The radar controller explained that, as a result of the normally poor manning he had not been aware that there had been a spare controller to alleviate his workload and this was why he had accepted all three radar positions. In view of this and the fact that it seemed that band-boxing 3 frequencies had become the norm at Brize Norton, the Board resolved to recommend that HQ Air Command reviews ATC tasking with regard to current manning at Brize Norton.

The Board then turned its attention to the cause and risk of the Airprox. The Board quickly agreed that the DIR had misidentified the departing aircraft and that this had led him into vectoring the A400(B) into conflict with A400(A). This action was considered by the Board to be the cause of the Airprox. Members then discussed at some length the risk of the Airprox. Some members believed that safety had not been assured because both pilots had received a TCAS RA, indicating that they were closer than should be expected when the controller's responsibility was to provide standard separation. In their view, they believed that the risk should be assessed as Category B because this indicated that safety was much below the norm. However, other members thought that the risk should be assessed as Category C because, although safety had been degraded, they opined that the avoiding action issued by the controllers and the TCAS RAs received by both pilots had demonstrably prevented the aircraft coming into close proximity; they pointed out that at CPA the aircraft were vertically separated by 1700ft. In view of the differing opinions the UKAB Chairman decided that a vote should be taken to ensure the majority opinion. Although not a unanimous decision, the majority view was that the risk should be assessed as Category C.

PART C: ASSESSMENT OF CAUSE, RISK AND SAFETY BARRIERS

Cause: The Brize Norton Director vectored the A400(B) pilot into conflict with A400(A).

Contributory Factor: 1) Lack of a formal handover resulted in subsequent assumptions and confusion.

2) The Approach controller's workload was such that it was excessive.

Degree of Risk: C.

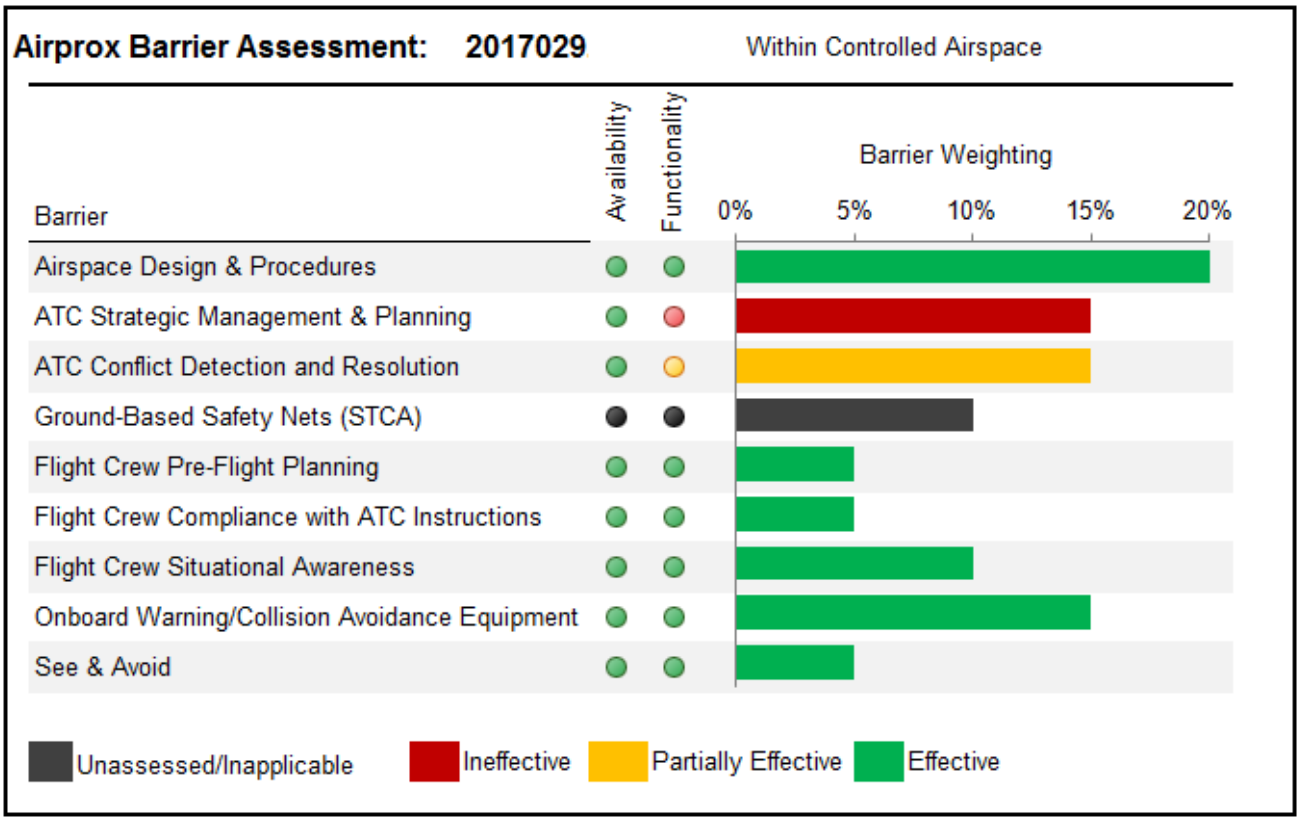
Recommendation: HQ Air Command reviews the ATC tasking with regard to current manning at Brize Norton.

Safety Barrier Assessment[3]

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

ATC Strategic Management & Planning was assessed as **ineffective** because the ATC Supervisor was not able to ensure that the radar positions were appropriately manned by the available staff in order to reduce the Radar controller's workload to an acceptable level.

ATC Conflict Detection and Resolution was assessed as **partially effective** because the Director/Zone controller, having misidentified a departing aircraft, unknowingly cleared A400(B)'s pilot to descend into confliction with A400(A). He only realised his error after being notified by other operational staff.



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